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GOVERNMENT OF INDIA.

India METEOROLOGICAL DEPARTMENT.

MONTHLY India WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, JANUARY, 1919.

INTRODUCTION.

THIS review of the weather in India during the month of January, 1919, is based on observations taken daily at 8 hrs. at 213 stations, and on additional observations taken at 10 hrs. and 16 hrs. at 12 stations. In the rainfall summary have been utilized the data furnished by the meteorological observatories, and the rainfall statements of the month published by the Provincial Governments.

The brief notes on solar, magnetic and seismic disturbances are supplied by the chief observatories in the Indian area.

In the remaining monthly reviews of the present year the brief statements of the methods of recording and tabulating the data, for each of the elements of observation, given in the present number at the commencement of each section, will not be repeated.

New normals of pressure, temperature, humidity and cloud derived from the records of the years prior to 1911 have been used from January 1915 in Tables B and C of the review.

Summary of the chief features of the weather in India during the month.

2. Four winter disturbances appeared in northwest India during the month. The precipitation due to the first was insignificant except on one day, the 5th, when there was nearly general rain or snow along the western Himalayas. The rainfall caused by the second and third extended to the central parts of the country as well as to northeast India. The last disturbance was exceptionally active, it was deep barometrically, and caused, between the 27th and the 29th remarkably widespread rain in northern and central India. Weather was also more disturbed than usual in the south of the Indian seas, and caused heavy rain in the peninsula. The total fall of the month was thus greatly in excess over most of the country: the only areas where rainfall was in defect were the Bay Islands, Burma, Assam, Baluchistan and Sind.

Cloud amount was in defect in the North-West Frontier Province, Baluchistan and Sind and was normal in Mysore; elsewhere it was in moderate to very great excess. Humidity was in appreciable excess in Central India and the Central Provinces. Temperature was high in the central parts of the country between the 5th and the 10th; on the mean of the month maximum temperature was about normal everywhere, though the minimum was above the average generally with the exception of northwest India.

The mean barometric pressure over the plains of India was 0·028″ in excess.

Solar, magnetic and seismic disturbances.

KODAIKANAL OBSERVATORY.

3. *Solar Observations.*—There was one day on which spot observation was not possible. The prominence record was complete on 28 days and imperfect on one day.

Sunspots.—24 new spot groups were recorded during the month, the daily average being 3·5 and the average life of a spot 5·2 days. The latitude distribution was as follows:—

TABLE 1.

—	1°—10°	11°—20°	21°—30°	Mean latitude.	Extreme latitude.
North	4	6	1	12·°9	3° & 25°
South	6	6	1	13·°2	6° & 22°

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September 14, 1999

Prominences.—74 prominences a minute or more in height, 29 metallic and 2 eruptive prominences were recorded during the month. An eruptive prominence photographed on the southwest limb on the 13th reached a height of 390″.

Magnetic disturbances.—" Great " disturbances were recorded on the 3rd, 4th, 13th and 14th and " moderate " disturbances on the 5th, 6th, 16th to 22nd and 31st.

J. EVERSHED,

Director,

Kodaikanal and Madras Observatories.

Seismic records.

$\phi = 10° \ 13' \ 50''$; $\lambda = 77° \ 28' \ 00''$; $h = 2{,}343$ m. Subsoil *Rock.*

Apparatus.—Milne's Horizontal Pendulum Seismograph.

TABLE 2.

	V	To	ϵ	$\frac{r}{To^2}$
AN:				
AE:	9·76	17·3	1	2·9
AZ:				

Date.	Phase.	Time G. M. T.	Period. (Sec.)	Amplitude (μ) An.	Ae.	Az.	Distance Δ (Km.)	Remarks.
1919.		h. m. s.						
Jan. 1st	e P	1 42 18	...	...	...	...	...	*There was another maximum (amplitude 2·0 mm.) at 3 h. 23·8 m. and a fresh series of comparatively large oscillations commenced then and lasted for about an hour.
	i L	1 49 30	...	...	...	...	...	
	M	1 50 00*	...	...	220	...	...	
	F	5 47 24	...	...	...	...	...	
" 6th	e P	22 47 24	...	...	..	...	...	
	e L	23 20 18	...	...	...	...	...	
	M	23 28 00	...	...	60	...	...	
	F	23 39 42	...	...	...	...	...	
" 18th	e P	6 03 18	...	...	...	...	...	
	e L	6 08 30	...	...	...	...	...	
	M	6 09 30	...	...	240	...	...	
	F	6 28 42	...	...	...	...	...	

S. SITARAMAYYA,

Officiating Assistant Director.

BOMBAY OBSERVATORY.

Alibag magnetic record.

4. During the month of January, 1919, the traces showed 6 calm days, 22 days of small and 3 days of moderate disturbances.

The days of the month selected as "quiet" for the purposes of the Magnetic Survey of India are 2nd, 10th, 11th, 26th and 27th.

The following table represents the magnetic character of each day during the month :—

TABLE 3.

Day.	Character.	Day.	Character.	Day.	Character.	Day.	Character.
1	S	9	S	17	S	25	C
2	C	10	C	18	S	26	C
3	S	11	C	19	S	27	C
4	M	12	S	20	S	28	S
5	M	13	M	21	S	29	S
6	S	14	S	22	S	30	S
7	S	15	S	23	S	31	S
8	S	16	S	24	S		

C=calm ; S=small ; M=moderate ; G=great ; V. G.=very great.

The mean observed absolute values of the several magnetic elements reduced to the mean monthly tabulations of the magnetograms, as also the ranges and the summed ranges of the horizontal force and declination for the month are as follows :—

Easterly declination	0° 26′ 26″.
Horizontal force	0·36887 C.G.S. unit.
Vertical force	0·17026 C.G.S. "
Inclination	24° 46′·6.
Horizontal force range . . .	0·00041 C.G.S. unit.
" " summed range . .	0·00238 C.G.S. "
Declination range	1′·8.
" summed range . .	9′·3.

(NOTE.—Summed range means sum without regard to sign of twenty-four ordinates of diurnal inequality.)

Seismic records.

$\phi = 18° 53' 36''$; $\lambda = 72° 48' 56''$; $h = 11$ m. Subsoil *Trap.*

Apparatus.—Omori-Ewing Horizontal Pendulum Seismograph.

TABLE 4.

	V	To	ϵ	$\frac{r}{To^2}$
AN:				
AE:	20	32		
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) An.	Ae.	Az.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
Jan. 1st	P	1 43 7	...	...	...	...	...	
	S	1 50 42	...	...	...	...	...	
	M	1 52 22	...	...	760	...	...	
" "	P	*3 18 33	...	...	...	...	...	Disturbance lost owing to stoppage of clock.
" "	P	*5 0 56	...	...	...	...	...	Ditto
" 6th	P	*22 41 0	...	...	...	...	...	Ditto
" 18th	P	5 59 37	...	...	...	...	...	Beginning doubtful.
	M	6 13 8	...	...	25	..	...	

*These times are shown by the float record (Tilt Seismograph).

MUKUND V. UNAKAR,
Acting Director,
Bombay and Alibag Observatories.

5.—CALCUTTA (ALIPORE) OBSERVATORY.

Seismic records.

$\phi = 22° 32'$ N ; $\lambda = 88° 20'$ E ; $h = 6{\cdot}4$ m. Subsoil *Alluvial.*

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs.

TABLE 5.

	V	To	ϵ	$\frac{r}{To^2}$
AN:	29	18	1	
AE:	29	30	1	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) An.	Ae.	Az.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
Jan. 1st	P	1 41 24	5	...	...	...	...	
	S	1 47 30	7	...	...	...	...	
	L	1 53 48	12	...	...	...	...	
	M	2 2 36	...	...	759	...	...	
	F	2 23 48	...	...	...	...	...	
" "	P	3 15 18	4	...	...	...	...	
	S	3 23 54	6	...	...	...	...	
	L	3 31 48	...	...	...	...	...	
	F	4 7 54	...	...	...	...	...	

6.—SIMLA OBSERVATORY.

Seismic records.

$\phi = 31° 6' N$; $\lambda = 77° 11' E$; $h = 2{\cdot}1$ km. Subsoil *Rock*.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs (Masses 50 kg.).

TABLE 6.

	V	To	ϵ	$\frac{r}{To^2}$
AN:	14	45	1	
AE:	14	45	1	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) An.	Ae.	Az.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
Jan. 1st	e P	1 42 24	...	...	...	...	...	
	S	1 49 42	...	...	...	...	...	
	L	1 54 42	36	...	...	...	...	
	M	1 57 54	...	714	...	...	...	
	F	?	...	...	...	...	...	
„ „	e P	3 19 0	...	...	...	...	...	
1919.	S	h. m. s. 3 26 18	...	...	...	...	...	
	L	3 34 12	40	...	...	...	...	
	M	?	...	>2893	...	...	...	Pendulum was striking against both stops between 3 hrs. 50 mins. and 3 hrs. 51 mins.
	F	4 53 24	...	...	...	...	...	

The following table contains a list of earthquakes that were reported :—

TABLE 7.

Place at which felt.	Date.	G. M. T. of earthquake.	Duration.	Intensity. (Rossi-Forel scale).	No. of shocks.	Remarks.
	1919.	h. m.	sec.			
Gauhati . .	Jan. 12th	9 55	10	7	2	
Drosh . . .	„ 14th	7 00	4	6	1	
„ . . .	„ 15th	17 48	8	6	1	
Shillong . .	„ 21st	7 10	About 3-5th of a second.	5	1	
Port Blair . .	„ 25th	10 14	10	4	1	
Drosh . . .	„ 27th	12 50	4	6	1	
Kabul (Afghanistan).	„ 30th	1 24	20	6	3	

Weather in the Indian Ocean.

7. The following table gives the departures from normal of pressure and rainfall, as well as the actual and normal wind direction and velocity at the three representative stations.

TABLE 8.

—	Mauritius.	Zanzibar.	Seychelles.
Departure from normal of mean pressure	+·015	+·022	+·037
Actual mean wind direction . .	N 51° E	N 29° E	N 13° E
Normal mean wind direction . .	S 87° E	N 28° E	N 39° W
Actual mean wind velocity (miles per diem).	89	122	75
Normal mean wind velocity (miles per diem).	137	137	107
Rainfall departure from normal . .	—1·73	—1·06	+0·89

Depressions and cyclonic storms.

8. Weather was rough during the first week of the month in the Gulf of Aden, and in the south of the Arabian Sea and of the Bay of Bengal; but no depression formed in those areas.

Four winter disturbances passed into northwest India during the month, and began to affect the weather there on the 2nd, 15th, 21st and 27th, respectively. The last one was a deep depression; it appeared at the mouth of the Persian Gulf on the morning of the 26th, passed eastwards along the coast on the next two days, lay over the Punjab on the 29th and 30th and disappeared there on the latter date. While passing along the Mekran coast the depression caused very strong winds and rough seas in the north Arabian Sea.

Pressure.

9. In most of the observing stations in India mercurial barometers on Fortin's principle of fiducial point adjustment, with tubes of 0·4″ bore throughout, have always been in use. But of late years there has been an increasing number of barometers on the Kew principle, which has its scale divided to compensate for the change of level of the mercury in the cistern as the pressure alters.

The following list contains the names of all stations equipped with instruments of the latter class :—

Aden.	Gangtok.	Noakhali.
Akyab.	Gopalpur.	Nowgong.
Amini Divi.	Gorakhpur.	Rangoon.
Barisal.	Jalpaiguri.	Ratnagiri.
Bhamo.	Kyaukpyu.	Saugor C. P.
Bushire.	Magnalore.	Tavoy.
Cochin.	Midnapore.	Toungoo.
Cox's Bazar.	Minbu.	Victoria Point.
Cuddapah.	Monywa.	Yamethin.
Delhi.	Mymensingh.	Zanzibar.
Dinajpur.	Negapatam.	

The instruments at the following stations are by various makers and of various kinds :—

Colombo.	Katmandu.	Panjgur.
Dalbandin.	Kurnool.	Trincomalee.
Fort Sandeman.	Lyallpur.	Trivandrum.
Kalat.	Patiala.	

At Calcutta and Bombay the standards are Newman instruments on the Fortin principle, with adjustable scales and fiducial points, and tubes of large bore.

All instruments are compared at Calcutta before issue, and their corrections determined to the Calcutta standard, which was until 1910, ·011″ higher than the Kew standard. The present difference is probably less than this, but the determination of the exact amount is a matter of considerable difficulty (see the Departmental Memoirs, Vol. XXI, pp. 127—8, 1916).

The barometers are in all cases situated in masonry buildings to protect them as much as possible from rapid changes of temperature.

Those heights above mean sea-level of the barometers of all stations given in Table B or Table A, which have been obtained accurately by actual measurement, are given in Roman figures. In the great majority of cases they have been referred to datum levels determined by the Great Trigonometrical Survey of India; of the remaining stations those heights which have been determined barometrically are printed in italics.

The readings of the barometers are reduced to 32°F., and from 1st January 1905, have been corrected to constant gravity in all cases. They are reduced to sea-level in the cases of stations the elevations of which are accurately known and are below 3,200 feet. Each reading is separately corrected and the means of the month are the means of the daily corrected readings.

In table B (2), columns 4 to 10, under the general heading "Pressure, 8 hrs. in inches," are given for each station the 8 hrs. barometric data of the month, including—

(1) The mean 8 hrs. pressure reduced to 32°F., and its departure from the normal mean pressure (reduced to 32°F.) of the month.

(2) The mean 8 hrs. pressure corrected to sea-level and to constant gravity, or to constant gravity only in cases of stations the elevations of which are above 3,200 feet.

(3) The highest and lowest pressures (reduced to 32°F.) recorded during the month with their respective dates of occurrence.

In Table A, columns 4 to 9, under the general heading "Pressure," are given for all stations recording observations at 10 hrs. and 16 hrs.—

(1) The monthly means of the two hours of observation at 10 hrs. and 16 hrs. reduced to 32°F.

(2) The mean daily range.

(3) The mean of daily mean pressure reduced to 32°F., and its departure from the normal.

(4) The mean of daily mean pressures reduced to 32°F., and corrected to constant gravity and to sea-level, or to constant gravity only in cases of stations the elevations of which are above 3,200 feet.

The means of daily pressures in Table A have been obtained by taking the means of the 10 hrs. and 16 hrs. observations and applying corrections for each month, derived from a series of hourly observations recorded at the same or neighbouring stations, to give true daily means.

The distribution of the mean 8 hrs. pressure of the month is shown on two charts. The first chart (Plate I) gives the distribution of the mean pressure of the month reduced to sea-level and to constant gravity (that of lat. 45°) by means

of isobars drawn for differences of pressure 0·05 or $\frac{1}{20}$ of an inch. The second chart (Plate II) gives the departures from the normal of the actual mean 8 hrs. pressure reduced to 32°F.

The greater part of the normal 8 hrs. daily and monthly means of pressure utilized in Table B of the review have been deduced from the barometric observations of the whole of the twenty-two years period 1889-1910, and in all except 24 cases the periods employed equalled or exceeded five years.

The monthly means employed in the determination of the departures of the mean actual from the mean normal pressures of the month given in Table A are derived from all the available trustworthy pressure data down to 1899 for each station. These normal means are given in the "Indian Meteorological Memoirs," Volume XVII, pages 66 to 69.

The more important barometric changes and movements during the month are described in the statement of depressions and cyclonic storms of the month. The data that are chiefly used in that discussion are the 8 hrs. reduced observations and the departures derived from comparison of these observations with the normal daily 8 hrs. values.

The following table gives the departure from normal of the mean 8 hours pressure in the 15 chief political divisions of India.

TABLE 9.

DIVISION.	Departure from normal of mean 8 hrs. pressure.
	"
Burma	+·043
Assam	+·051
Bengal	+·045
Bihar and Orissa	+·044
United Provinces	+·045
Punjab	+·035
North-West Frontier Province	+·025
Sind	+·036
Rajputana	+·021
Bombay	+·004
Central India	+·012
Central Provinces	+·013
Hyderabad	+·019
Mysore	+·018
Madras	+·015

The following table gives a comparison of the departure from normal of mean 8 hours pressure at 9 hill stations with the departure at an adjoining station in the plains.

TABLE 10.

HILL STATION.	Departure from normal pressure. A.	PLAIN STATION.	Departure from normal pressure. B.	Departure of pressure difference B—A.
	"		"	"
Quetta	+·021	Jacobabad	+·041	+·020
Leh	+·014	Lahore	+·027	+·013
Murree	—·010	Peshawar	+·031	+·041
Simla	+·036	Ludhiana	+·033	—·003
Mukteswar	+·051	Bareilly	+·053	+·002
Darjiling	+·045	Dhubri	+·055	+·010
Mount Abu	+·001	Deesa	+·017	+·016
Pachmarhi	+·007	Khandwa	—·005	—·012
Kodaikanal	+·022	Madura	+·010	—·012

Temperature.

10. The mean temperature data are given in Tables A and B under the heading "Temperature of air." In Table B they are based upon observations of the dry bulb and wet bulb thermometers recorded at 8 hrs., and of the maximum and minimum thermometers. In the great majority of cases the normals of maximum and minimum temperature for the stations in Table B are derived from the data of the 33 years, 1878—1910; in the case of some of the most recently started observatories the period is shorter, but it is never less than five years. The normals are given in the "Indian Meteorological Memoirs," Volume XXII, Part III, pages 426-457. The monthly mean of the mean between maximum and minimum, as given in this table, differs from the true mean of the day by a small amount which varies from month to month.

It should be noted for the purposes of Table B that the mean temperature of the day really denotes the mean temperature of the 24 hrs. preceding 8 hrs. of the day in question and that therefore the month for which the means are given in this table terminates at 8 hrs. of the last day of the month. In the case of Table A, however, the day or 24 hrs. period terminates at midnight (and not at 8 hrs.

as in Table B) and the monthly means apply therefore to monthly periods ending at midnight of the last day of the month in question.

In Table A the mean of daily mean temperatures for each month is obtained by taking the mean of the maximum and minimum temperatures and applying a correction given on pages XV to XXI of Volume XVII of the "Indian Meteorological Memoirs." This correction was determined from the hourly observation data given in Volumes V, IX and X of the "Indian Meteorological Memoirs." The data at once furnish the necessary corrections for the stations at which these observations were recorded. At the remaining stations the corrections were determined from the values at the nearest stations with similar condition of exposure, etc., at which the hourly observations were recorded.

The departures from normal of the mean daily mean temperature of the month given in Table A have been obtained by a comparison of the actual means with normal means given in the "Indian Meteorological Memoirs" Volume XVII, pages 16 to 20.

The methods of exposing thermometers will be found fully described in the Hand-book of instructions to observers in India, or briefly in the Annual Report on the Meteorology of India for the year 1887, page 37. All thermometers in use have been verified by comparison with Kew standard thermometers at Calcutta and are re-standardised from time to time; all thermometer readings are corrected to their true values, and hence are strictly comparable.

The mean distribution of temperature in India in each month is exhibited by the help of three charts, which show the departures of the mean maximum, mean minimum and mean daily temperatures from their normal values for the month. These charts are given in Plates III and IV. In them equal departures of temperature are indicated by lines, the lines being drawn for differences of 2 degrees of departure. A continuous line indicates that the temperature was in excess by the amount shown by the number given near the line, and a broken line that it was in defect by the amount indicated by the number similarly placed. The line of no departure, separating areas of excessive from areas of deficient temperature, consists of a continuous and of a broken line placed parallel and near to each other, the broken line being on the side of deficient temperature, and the continuous line on that of excessive temperature. The departures of the temperature of the month from the normal at the hill stations are given in figures with a positive or negative sign to indicate excess or defect; they are not taken into account when the lines are drawn.

Table 11 gives the actual temperature and its departure from normal in the 33 sub-divisions, while table 12 gives only the departures from normal in the 15 chief political divisions.

TABLE 11.

Sub-division.	Actual temperature.				Departure from normal of		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
1. Bay Islands	84·8	77·5	81·1	7·3	—0·1	+2·3	—2·4
2. Lower Burma	86·8	66·7	76·8	20·1	+1·2	+1·9	—0·7
3. Upper Burma	80·4	54·9	67·6	25·5	+0·1	+2·5	—2·4
4. Assam	74·8	53·1	63·9	21·6	+1·6	+2·3	—0·7
5. Bengal	78·2	56·7	67·4	21·5	+0·7	+2·7	—2·0
6. Orissa	82·0	62·0	72·0	20·0	+0·3	+3·8	—3·5
7. Chota Nagpur	76·9	55·8	66·5	21·1	—1·3	+3·7	—5·0
8. Bihar	74·3	52·8	63·6	21·5	+0·1	+3·2	—3·1
9. United Provinces, East	73·1	50·1	61·6	23·0	0	+2·1	—2·1
10. Do. do., West	71·3	48·5	59·9	22·8	—0·2	+1·9	—2·1
11. Punjab, East and North	66·6	44·1	55·3	22·5	—0·7	+1·2	—1·9
12. Do., South-west	67·5	42·1	54·8	25·3	—0·7	+0·6	—1·3
13. Kashmir	38·0	20·9	29·5	17·1	—1·9	+0·3	—2·2
14. North-West Frontier Province	65·5	39·4	52·5	26·1	—0·3	—0·5	+0·2

Sub-division.	Actual temperature.				Departure from normal of		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
15. Baluchistan	56·8	31·8	44·3	24·9	—2·7	—3·1	+0·4
16. Sind	73·8	49·7	61·7	24·1	—1·2	—1·1	—0·1
17. Rajputana, West	73·0	48·3	60·7	24·7	—1·0	+1·7	—2·7
18. Do., East	72·8	50·2	61·5	22·6	—1·3	+2·3	—3·6
19. Gujarat	81·9	56·6	69·5	25·9	+0·3	+1·4	—1·1
20. Central India, West	77·9	52·3	65·1	25·6	—0·5	+3·3	—3·8
21. Do. do., East	73·4	51·7	62·5	21·7	—1·0	+4·1	—5·1
22. Berar	84·6	60·6	72·6	24·0	+0·7	+4·8	—4·1
23. Central Provinces, West	79·0	56·2	67·6	22·9	—0·9	+4·2	—5·1
24. Do. do., East	82·3	58·3	70·3	24·0	+0·8	+4·9	—4·1
25. Konkan	85·2	68·1	76·6	17·1	0	+1·4	—1·4
26. Bombay Deccan	86·6	58·7	72·7	27·9	+0·9	+2·9	—2·0
27. Hyderabad, North	86·9	60·9	73·9	26·1	+1·5	+5·0	—3·5
28. Do., South	87·0	65·5	76·3	21·5	+0·7	+3·7	—3·0
29. Mysore	84·3	62·4	73·4	21·9	+1·3	+3·6	—2·3
30. Malabar	87·9	73·7	80·8	14·2	+0·5	+2·9	—2·4
31. Madras, South-east	86·9	71·4	79·1	15·5	+1·4	+3·5	—2·1
32. Do. Deccan	88·6	66·9	77·8	21·7	+0·1	+3·8	—3·7
33. Do. Coast, North	82·1	68·8	75·5	13·3	—0·4	+3·7	—4·1

TABLE 12.

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·7	+2·1	+1·4
Assam	+1·6	+2·3	+2·0
Bengal	+0·7	+2·7	+1·7
Bihar and Orissa	0	+3·5	+1·7
United Provinces	—0·1	+2·0	+1·0
Punjab	—0·7	+1·0	+0·2
North-West Frontier Province	—0·3	—0·5	—0·4

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Sind	—1·2	—1·1	—1·1
Rajputana	—1·2	+2·1	+0·4
Bombay	+0·4	+1·9	+1·2
Central India	—0·7	+3·7	+1·5
Central Provinces	—0·1	+4·5	+2·3
Hyderabad	+1·0	+4·1	+2·6
Mysore	+1·3	+3·6	+2·4
Madras	+0·7	+3·4	+2·1

Surface and upper air winds.

11. *Surface.*—The 8 hrs. wind data, consisting of observations of the direction of the wind and of the air movement as registered by Robinson anemometers, are given in Table B under the heading "Wind direction" "Wind velocity" and "Wind Steadiness." In these columns are shown the number of days the wind at 8 hrs. blew from each of eight points, and the resultant direction of the wind, the mean hourly air movement and the steadiness derived from these observations. The wind resultant is calculated in all cases by the use of Lambert's formula, in which equal values are given to each wind observation irrespective of velocity. The mean wind directions are shown in Plate I by means of arrows in the usual manner.

The wind data for 10 hrs. and 16 hrs. are given in a similar form in Table A. Under the heading "Wind direction" are shown the number of times that each of eight wind directions was observed at the hours of record, and the directions of the resultant of winds of unit strength in these directions. The ratio of the magnitude of the resultant so obtained to that which it would have if the wind always blew from the same direction (*i.e.*, throughout the whole of the observations), is called the wind steadiness and is given as a percentage, with a table of normals, under the heading "Wind steadiness." The mean diurnal movement of the air at each station and the average monthly value are to be found under the heading "Wind velocity."

The figures of the normal values for wind used in Tables A and B are computed from all available data previous to 1899, or in some cases 1902, and have been published in Volume XVII of the "Indian Meteorological Memoirs."

All anemometers used in India are compared before issue with the standard Beckley anemograph at Calcutta Observatory, but as only the instruments with small corrections are issued no correction has been applied to the values given in Tables B and C.

Up to 1911 the factor representing the ratio of air movement to travel of Beckley cups had, in India, as in other countries, been taken as 3·0; but as in that year it had been generally accepted that the factor should be 2·2, the change to 2·2 was made in the Monthly Weather Review of January 1912 (see note on page 8 there).

The following table gives the mean wind velocity and steadiness with their departures from normal.

TABLE 13.

DIVISION.	HOURLY WIND VELOCITY.		WIND STEADINESS.	
	Actual.	Departure from normal.	Actual.	Departure from normal.
Burma	2·3	0	52	+12
Assam	1·6	—0·2	42	+19
Bengal	1·3	—0·4	21	—13
Bihar and Orissa	1·9	—0·2	30	—12
United Provinces	1·5	—0·3	8	—18
Punjab	2·0	+0·3	19	+ 3
North-West Frontier Province.	0·8	—0·7	18	—11
Sind	3·3	—1·2	52	+ 4
Rajputana	2·9	+0·3	25	+ 4
Bombay	4·5	—0·2	45	—13
Central India	2·4	—0·2	32	+ 1
Central Provinces	3·1	+0·7	41	+ 7
Hyderabad	4·0	—0·6	47	+10
Mysore	4·0	—0·3	54	—15
Madras	4·4	+0·4	63	+ 1

Upper air.—Table 14 gives the monthly mean velocities and direction at different heights above Agra, Simla, Lahore and Bangalore. The results are based upon observations of pilot balloons by a single theodolite, heights being determined by the tail method. Details of the method will be published in a separate memoir together with the results obtained up to the end of 1917. The results of 1918 are published together in the Annual Summary for that year.

TABLE 14.—*Mean velocity and direction of upper winds.*

Height above sea level Kms.	AGRA. Height above sea level 0·17 km.				SIMLA. Height above sea level 2·13 kms.				LAHORE. Height above sea level 0·21 km.				BANGALORE. Height above sea level 0·92 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
0·18	28	2·7	0·5	291	...	...	...	...	...	...	...	...	...	...	...	...
0·22	...	...	...	...	...	...	...	...	26	1·2	0·5	338	...	...	...	...
0·5	31	5·1	1·3	29	...	...	...	...	26	4·3	2·5	340	...	...	...	...
1·0	31	4·6	0·9	274	...	...	...	...	26	4·1	0·7	336	...	...	...	...
1·5	29	4·4	2·3	250	...	...	...	...	26	3·8	1·0	137	26	4·4	3·4	95

Height above sea level Kms.	Agra.				Simla.				Lahore.				Bangalore.			
	Height above sea level 0·17 km.				Height above sea level 2·13 kms.				Height above see level 0·21 km.				Height above sea level 0·92 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
2·0	28	6·4	4·5	255	..	...	...	...	26	4·0	2·3	154	26	3·9	2·7	87
2·13	...	...	...	...	18	1·7	1·3	122	...	...	...	...	...	...	...	...
2·3	...	...	...	...	16	4·0	3·6	139	...	...	...	...	...	...	...	...
2·5	27	7·4	5·3	260	18	4·5	3·7	139	26	4·4	2·1	177	26	3·5	1·9	119
3·0	28	9·0	8·0	258	18	4·9	3·7	149	26	4·7	2·3	212	24	4·1	0·7	178
3·5	26	10·8	10·1	254	18	4·5	2·7	171	26	6·2	3·5	227	24	4·8	1·5	241
4·0	26	12·7	12·0	255	18	6·3	3·1	207	24	6·8	5·5	262	24	5·5	2·4	246
4·5	25	13·4	13·0	257	17	6·6	4·8	241	24	8·4	7·2	267	23	6·2	3·9	248
5·0	24	15·5	14·7	259	16	8·8	7·6	255	24	10·1	9·0	269	21	7·3	5·2	253
5·5	22	17·0	16·1	259	14	11·4	10·4	255	22	11·3	10·3	268	21	8·2	5·9	261
6·0	21	19·5	18·5	259	13	13·4	12·8	264	22	12·6	11·6	268	20	9·7	7·3	265
6·5	17	20·6	19 6	266	12	16·0	15·4	261	21	13·8	13·1	271	20	11·5	8·5	269
7·0	15	21·9	21·1	266	10	18·3	17·6	263	22	16·8	15·7	269	20	13·2	10·0	263
7·5	15	24·0	23·1	265	9	22·3	21·8	264	18	18·3	17·8	274	19	13·2	11·1	259
8·0	11	22·9	21·6	268	6	24·5	23·6	262	18	19·8	19·0	275	19	14·7	12·6	261
8·5	9	26·4	24·2	272	3	25·3	24·6	274	17	21·8	21·2	276	19	16·2	13·6	258
9·0	6	27·8	25·7	265	3	28·5	27·7	275	17	25·0	23·9	281	18	16·7	14·3	250
9·5	4	24·1	22·7	257	2	29·3	28·1	280	17	30·0	28·4	279	17	16·7	14·5	242
10·0	4	26·4	25·5	257	2	29·3	28·7	278	12	30·8	28·6	279	15	16·2	13·5	233
10·5	3	27·3	27·0	267	1	48·5	48·5	285	10	33·5	29·5	278	13	15·5	12·7	231
11·0	2	28·5	28·3	267	1	50·5	50·5	285	5	34·7	30·5	277	10	17·2	15·9	231
11·5	1	36·5	36·5	275	1	46·5	46·5	285	1	25·0	25·0	265	9	16·8	15·2	232
12·0	1	47·0	47·0	275	...	..	...	...	1	28·0	28·0	260	6	15·7	15·1	229
12·5	...	...	...	...	...	...	...	...	...	...	...	...	3	14·2	13·7	218
13·0	...	...	...	...	...	...	...	...	...	...	...	...	3	15·3	15·0	218
13·5	...	...	...	...	...	...	...	...	...	...	...	...	2	10·7	10·2	220
14·0	...	...	...	...	...	...	...	...	...	...	...	...	1	14·0	14·0	205
14·5	...	...	...	...	...	...	...	...	...	...	...	...	1	13·5	13·5	200
15·0	...	...	...	...	...	...	...	...	...	...	...	...	1	13·0	13·0	210
15·5	...	...	...	...	...	...	...	...	...	...	...	...	1	13·0	13·0	210
16·0	...	...	...	...	...	...	...	...	...	...	...	...	1	13·5	13·5	210
16·5	...	...	...	...	...	...	...	...	...	...	...	...	1	14·0	14·0	210
17·0	...	...	...	...	...	...	...	...	...	...	...	...	1	15·0	15·0	215

N—Number of flights.
V—Velocity of wind, regardless of direction, meter per Sec.
v—Velocity of Resultant Wind, taking account of direction, metre per Sec.
L—Direction of Resultant Wind; North Wind =0° or 360°, East Wind = 90°.

Humidity and cloud.

12. The hygrometric data of the month registered at certain stations are given in Table A. In that table appear columns giving the means of the wet bulb readings at 10 hrs. and at 16 hrs., of the minimum wet bulb readings, of the vapour tension and humidity at the same hours, and also the mean of daily means of these elements and of its departure from the normal mean. The hygrometric data are taken from the departmental "Tables for the reduction of meteorological observations." The means of daily means, are obtained by taking the means of the minimum, 10 hrs. and 16 hrs. observations and reducing them to true means, by applying, in case of vapour tension, the corrections given on pages 38 to 42, and in case of humidity the corrections given on pages 44 to 48 of Volume XVII of the "Indian Meteorological Memoirs." These corrections were determined from the hourly observation data given in Volumes V, IX and X of the "Indian Meteorological Memoirs." The normal values, which have been used for obtaining the departures, are the means calculated in the same way.

The distribution of humidity in each month in India is exhibited by means of two charts in Plate V. The first chart shows the departure from normal of 8 hrs. absolute humidity, and the second that of the relative humidity.

The proportion of cloud is estimated in tenths of the sky expanse, an overcast sky being denoted by 10 and a cloudless sky by O. The monthly means in Table A are the arithmetical means of the cloud amounts at 10 hrs. and 16 hrs., and the normal means, with which the actual monthly means are compared, are derived from the available cloud data for the same hours.

The departure from normal of the mean distribution of cloud amount at 8 hrs. in each month in India is shown in chart No. 1 of Plate VI, and the discussion of this and of the hygrometric features is based on the data given in Table B.

Normal values for most of the stations in Table B have been derived from the 8 hrs. records of the period 1889-1910.

The following table gives the mean humidity, vapour tension and cloud amount at 8 hours with their departures from normal.

TABLE 15.

DIVISION.	HYGROMETRY; 8 HRS.				CLOUD.	
	Mean humidity.	Departure from normal.	Mean vapour tension in inches of mercury.	Departure from normal in inches of mercury.	Mean cloud amount at 8 hrs.	Departure from normal.
	%					
Burma . .	84	0	·562	+·024	3·5	+1·7
Assam . . .	92	— 2	·429	+·028	4·8	+0·9
Bengal . .	86	+ 1	·468	+·033	4·0	+2·6
Bihar and Orissa .	82	+ 4	·445	+·061	4·7	+2·9
United Provinces .	80	0	·334	+·023	4·2	+1·8
Punjab . .	79	+ 2	·265	+·016	3·8	+0·3
North-West Frontier Province.	69	— 3	·199	—·007	2·8	—1·1
Sind . . .	57	— 5	·237	—·039	2·0	—0·7
Rajputana . .	61	0	·250	+·016	3·3	+0·6
Bombay . .	60	+ 1	·388	+·016	1·9	+0·6
Central India .	71	+ 5	·331	+·042	4·6	+2·4
Central Provinces .	70	+ 9	·407	+·083	3·9	+2·4
Hyderabad . .	67	+ 4	·492	+·058	3·1	+1·4
Mysore . .	75	+ 3	·524	+·050	3·0	0
Madras . .	82	+ 3	·709	+·076	3·6	+0·6

Rainfall.

13. Rainfall observations are made at about 2,900 stations in India. The time of observation is 8 hrs. The rainfall data for each province are generally tabulated in the office of the local Meteorologist, Director of Land Records, or other officer in the province, and published in the provincial gazettes. The data of Baluchistan, Kashmir, Rajputana, North-West Frontier Province and Central India are however published by the Simla Meteorological Office.

The charts illustrating the distribution of rainfall in the month under discussion are based in part upon the rainfall data of the meteorological observatories throughout India, and in part upon the rainfall statements of the month published by the Local Governments.

Plate VII is based on all the rainfall data available at the time of publication and shows the normal average rainfall and the departure of the rainfall from the normal of the month in the 33 meteorological or rainfall divisions.

The distribution of the total number of rainy days in each month is exhibited in chart No. 2 of Plate VI, and is based entirely on the data furnished by the meteorological observatories. A "rainy day" is one on which 0·10 inch or more of rain is received within 24 hours.

The normal figures of rainfall, and of the numbers of "rainy days," in Table B are based on observations which extend in most cases over a period of 40 or 50 years ending in 1910.

There was abundant rain over almost the whole country, the only areas with a deficiency being the Bay Islands, Burma, Assam, Baluchistan and Sind. The falls in Orissa, Chota Nagpur, Central India and the Central Provinces proper varied between five and nine times the normal amount. The excess over the plains of India as a whole was about 200 per cent.

Rainfall was in excess at Baghdad, and on the whole at the Persian stations also; but it was in defect at Kashgar and Kabul.

TABLE 16.

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
1. Bay Islands	2·0	1·1	0·37	0·91	— 0·54	— 59
2. Lower Burma	0·1	0·3	0·02	0·17	— 0·15	— 88
3. Upper Burma	0·1	0·3	0·02	0·10	— 0·08	— 80
4. Assam	1·5	1·8	0·40	0·75	— 0·35	— 47
5. Bengal	2·4	0·8	0·91	0·38	+ 0·53	+139
6. Orissa	3·9	0·8	2·52	0·41	+ 2·11	+515
7. Chota Nagpur	7·6	1·3	4·32	0·65	+ 3·67	+565
8. Bihar	3·8	1·0	1·81	0·47	+ 1·34	+285
9. United Provinces, East	4·1	1·4	1·79	0·65	+ 1·14	+175
10. Do. do., West	4·5	2·0	3·26	0·98	+ 2·28	+233
11. Punjab, East and North	4·8	2·3	2·94	1·25	+ 1·69	+135
12. Do., South-west	2·2	1·3	0·97	0·52	+ 0·45	+ 87
13. Kashmir	7·9	5·3	6·19	4·04	+ 2·15	+ 53
14. North-West Frontier Province	3·1	2·7	1·84	1·45	+ 0·39	+ 27
15. Baluchistan	2·3	3·2	0·85	1·49	— 0·64	— 43
16. Sind	0·3	0·7	0·08	0·25	— 0·17	— 68
17. Rajputana, West	1·3	0·5	0·58	0·19	+ 0·39	+205
18. Do., East	2·3	0·9	1·19	0·36	+ 0·83	+231
19. Gujarat	0·6	0·1	0·23	0·05	+ 0·18	+360
20. Central India, West	3·2	0·6	1·57	0·27	+ 1·30	+481
21. Do. do., East	5·3	1·1	2·98	0·53	+ 2·45	+462
22. Berar	3·3	0·6	1·54	0·33	+ 1·21	+367
23. Central Provinces, West	6·2	0·9	4·33	0·46	+ 3·87	+841
24. Central Provinces, East	4·8	0·7	2·97	0·33	+ 2·64	+800
25. Konkan	0·2	0·1	0·09	0·09	0	0
26. Bombay Deccan	0·4	0·2	0·13	0·12	+ 0·01	+ 8
27. Hyderabad, North	1·4	0·3	0·58	0·14	+ 0·44	+314
28. Do., South	0·8	0·3	0·38	0·16	+ 0·22	+137
29. Mysore	0·5	0·2	0·22	0·11	+ 0·11	+100
30. Malabar	1·9	0·7	1·75	0·47	+ 1·28	+272
31. Madras, South-east	1·7	1·1	0·85	0·81	+ 0·04	+ 5
32. Do. Deccan	0·9	0·3	0·49	0·14	+ 0·35	+250
33. Do. Coast, North	1·9	0·4	1·20	0·29	+ 0·91	+314

TABLE 17.

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Burma	0·02	0·13	—0·11	—84
Assam	0·40	0·75	—0·35	—47
Bengal	0·91	0·38	+0·53	+139
Bihar and Orissa	2·61	0·50	+2·11	+422
United Provinces	2·58	0·83	+1·75	+211
Punjab	2·44	1·07	+1·37	+128
North-West Frontier Province	1·84	1·45	+0·39	+27
Sind	0·08	0·25	—0·17	—68
Rajputana	0·98	0·30	+0·68	+227
Bombay	0·15	0·09	+0·06	+67
Central India	2·00	0·35	+1·65	+471
Central Provinces	3·02	0·37	+2·65	+716
Hyderabad	0·49	0·15	+0·34	+227
Mysore	0·22	0·11	+0·11	+100
Madras	1·08	0·54	+0·54	+100
Mean of India	1·33	0·44	+0·89	+202

Snowfall.

I.—CENTRAL ASIA.

14. *Kashgar* :—Half an inch of snow fell on the 17th and another half inch on the 18th.

II.—PERSIA.

Meshed :—7 inches fell on the 27th and 4½ inches on the 28th.

III.—AFGHANISTAN.

Kabul :—5 inches fell at Kabul on the 5th, 1 inch on the 15th, 3 inches on the 21st, 2 inches on the 29th and 4 inches on the 30th. About 3 feet of snow was said to have fallen at Ghazni, Tangi Ganu, Paghman and Hazarajat and it was reported that very heavy falls had occurred on different passes on the Hindu Kush Range. At the end of the month about a foot of snow was lying in the vicinity of Kabul, more than 3 feet at Ghazni and Hazarajat, and about a foot and a half at Paghman. Both the actual falls and accumulations were above the average.

IV.—NORTH-WEST FRONTIER PROVINCE.

(*a*) *Wano* :—Snowfall during the month was as shown below :—

TABLE 18.

Locality.	Date.	Total Amount.
Marwatti	21st, 22nd, 29th	14 inches.
Pirghal	21st, 22nd, 29th	14 "
Bosh	22nd, 29th	12 "
Drenashtar	22nd, 29th	12 "
Jani Mela	29th	5 "
Kundighar	29th	5 "
Spera	29th	5 "
Kotkun	29th	4 "
Surrounding hillocks	29th	2 "
Wano plain	29th	1 "

Three inches were lying at the end of the month on the highest peaks and in sheltered ravines. This was above the average.

(*b*) *Tochi* :—A slight fall occurred on the hills of north Waziristan on the 15th and a considerable fall from the 28th to the 30th.

(*c*) *Kohat*.—Snow fell on the Samana Range from the 28th to the 31st, the total depth being 10 feet.

(*d*) *Hazara*.—Snowfall during the month was as follows :—

TABLE 19.

Locality.	Height.	Total Depth of snowfall.	
	Feet.	Feet.	inches.
Narang	8,000	12	1
Paludran	7,300	9	4
Kagan	6,600	7	1
Jared	5,000	3	10
Malkandi	4,500	2	7
Sundigali	7,000	7	6
Jachha	6,500	6	4
Thandiani	8,800	16	0
Dungagali	8,000	20	7

V.—Kashmir.

(*a*) *Gilgit Agency*.—There was heavy snow at the end of the month.

(*b*) *Srinagar*.—The month's fall was considerably above the normal.

(*c*) *Skardu*.—Snowfall during the month was as follows :—

TABLE 20.

Date	At station.	On surrounding mountains.
1st	Moderate	4 or 5 inches.
2nd, 5th, 6th, 7th	Light	3 or 4 inches on each day.
9th	No snow	2 inches.
15th	Light	4 or 5 inches.
18th, 19th	No snow	2 or 3 inches on each day.
21st, 22nd, 23rd, 24th	Light to moderate	About 1¾ feet on the whole.
27th, 28th, 29th	About foot	More than 2 yards.
30th	Light	Nearly 1 inch on high ranges.

A foot of snow was lying at the station at the end of the month and more than nine feet on the surrounding ranges. The monthly fall was much above the average.

(*d*) *Dras*.—About 3 feet of snow fell at the station.

(*e*) *Kargil*.—Snow fell on 8 days, the total amount being about 13 inches on the ground and nearly 2½ feet on the surrounding mountains.

VI.—PUNJAB.

(*a*) *Murree*.—Snow fell on 8 days to a total depth of nearly 3 feet.

Dalhousie.—Snow fell on the 6th, 18th, 23rd, 27th, 28th, 29th, and 30th; at the end of the month there was 5′ 9″ at Kalatop (7,500 feet) and 9″ at Surkhigalli (5,500 feet). This is much above normal. The snowline descended to 5,000 feet.

Bhandal.—There were several fells before the 28th but they appear to have been light. Eight inches fell on the 28th and a foot on the 29th. The snowline descended to about 3,000 feet. The month's fall was above normal.

Bhattiyat.—Heavy snow fell on the 7th, 28th, 29th and 30th, down to 5,000 feet. The snowline descended to 3,500 feet on the 31st.

Tissa Forest Range.—Snowfall of the month was as shown below.

TABLE 21.

Station.	Height.	Days.	Total depth of snow.	
			Feet	Inches.
Khangoo	6,500	10	7	0
Alwas	6,800	11	9	0
Basa	7,500	14	13	2
Tissa	4,500	2	0	11
Chhatri	6,500	13	8	7

Chamba Forest Range.—Snow fell on 10 days; the heaviest fall occurred on the 29th and on that occasion the snowline came down to 3,000 feet.

Bharmaur.—Snow fell on 15 days to a total depth of 8 to 9 feet.

Kilar (*8,562 feet*).—Snow fell on 11 days and the total fall was 6 feet. This was less than usual. Jat Sach was covered with snow at the end of the month.

(*b*) *Kulu*.—The tables below give a rough estimate of snowfall on various mountains in the Kulu Sub-division.

TABLE 22.

Actual falls.

Station.	Total number of falls.	Total fall.
Kulu	11	about 4½ feet.
Saraj	10	„ 4½ feet.
Nagar	11	„ 4½ feet.

TABLE 23.

ACCUMULATIONS.

KULU TAHSIL.			SARAJ TAHSIL.		
	Actual on the 25th.	Normal at the end of the month.		Actual on the 25th.	Normal at the end of the month.
	Feet.	Feet.		Feet.	Feet.
Rohtang	16	15	Siri Khand	22	12½
Hamta	18	15¼	Chul	12	6⅓
Barsai	4	7	Maghin	6	5½
Chanderkhani	6	8	Dundku	5	7
Boja Dhar	10¼	6¾	Tikkar	2	5⅔
Lohri Achhri	14	8¼	Ram Garh	4	1¾
Sari	12	9	Nuhnon	5	3½
Bhubu	8	6	Raghopur	6	5½
Bastari	5	5	Jalori	5	5¾
Majhang	2	2	Lambri	5½	6
			Sakrin	7	6¼
			Gargarasan	11	8½
			Supakun	9	6½
			Bashleo	6½	6⅓
			Placha	7	7½
			Tirath	9	8½

The falls are considered to have been heavier than in the previous 9 or 10 years.

(c) *Kilba* (*Simla Hills*).—Snow fell on 16 days and on most of those days reached down to the river bed (5,750 feet): the total depth was nearly 7 feet. The fall is considered to have been the heaviest since 1905.

TABLE 24.

Name of pass or peak.	ACCUMULATIONS AT THE END OF THE MONTH (VERY MUCH ABOVE THE AVERAGE).	
	Reported.	Normal.
	Feet.	Feet.
Charang pass	30	...
Rupin "	25	9½
Brua "	20	3½
Shatul "	20	10
Harang "	12	6
Kilba "	3¾	...

(d) *Poo* (*Bashahr State*).—Snow fell on 10 days to a total depth of about 4 feet.

VII.—THE UNITED PROVINCES.

(a) *Garhwal*.—Snow fell on the 29th and 30th and reached down to 4,000 feet, the amount varying from half a foot to 2 feet.

(b) *Almora*.—Snowfall reported by Patwaris was as given below.

TABLE 25.

Locality.	MONTH'S FALL.	
	Depth.	Descent of snow line below perpetual snow.
Malla Danpur	7 feet	3 or 4 miles.
Malla Darma	16⅔ "	7 miles.
Malla Johar	7⅔ "	...
Chandas	12½ "	3 miles.
Byans	18¼ "	...

TABLE 26.

Name of pass or peak.	DEPTH OF ACCUMULATION AT THE END OF THE MONTH.	
	Reported.	Normal.
	Feet.	Feet.
Lampia pass	39 or 40	14½
Lipulekh pass	26 or 27	16
Nuwe pass	22	33¾
Binkaru pass	18	19¼
Pindari peak	7	8

Name of pass or peak.	Depth of accumulation at the end of the month.	
	Reported.	Normal.
	Feet.	Feet.
Kaphini peak	7	7½
Nandakot	7	18?
Untadhura	4½	15
Balamdhura	3	10

VIII.—EASTERN HIMALAYAS.

No snow fell at or in the vicinity of Gangtok ; 13¾ feet fell at Yatung.

Northeast Frontier District.—The Langing Range averaging 10,000 feet in height was observed to be under snow.

Kamrup.—There was no fall of importance during the month.

Summary.

15. The month's fall was in excess in Afghanistan, the North-West Frontier Province, Kashmir and the Punjab hills, as well as over the greater part of the hills of the United Provinces.

S. SITARAMAYYA,
Scientific Assistant.

Table A.—Abstract of observations taken at 10 hrs. and 16 hrs. at 12 stations in India, etc., in January, 1919.

Table

Abstract of observations taken at 10 hrs. and 16 hrs. at 12

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hrs.	Mean of 16 hrs.	Mean daily range.	Mean of daily mean pressures.	Departure from normal.	Mean reduced to sea-level and to gravity at 45° Lat.	Temperature of air. Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Temperature, Wet-bulb. Mean minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of three previous columns.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal.																					
5	Calcutta	21	30·129	29·998	·131	30·053	+·035	30·021	78·2	58·9	19·3	83·4	49·4	34·0	70·6	76·6	67·6	+2·4	57·5	63·3	65·3	62·0
	VI.—Punjab.																					
11	Lahore	702	29·406	29·320	·086	29·354	+·028	30·066	66·4	44·2	22·2	72·6	35·1	37·5	55·0	65·1	53·4	+0·4	42·3	50·1	55·5	49·3
	IX.—Rajputana.																					
18	Jaipur	1,431	28·674	28·570	·104	28·613	+·029	30·044	71·9	50·3	21·6	81·5	38·5	43·0	63·9	69·8	59·7	−0·2	45·8	52·3	54·8	50·9
	X.—Bombay.																					
25	Bombay	37	30·011	29·900	·111	29·960	+·005	29·938	82·7	68·8	13·9	86·7	61·1	25·6	74·8	79·0	74·9	+0·4	62·4	67·5	70·0	66·6
	XIV.—Mysore.																					
29	Bangalore	3,021	27·074	26·953	·121	27·011	+·025	29·870	83·2	61·5	21·7	87·9	51·2	36·7	73·6	81·1	71·3	+3·8	60·1	64·8	64·7	63·2
	XV.—Madras.																					
31	Trivandrum		29·817	29·705	·112	29·764		29·891	85·1	73·8	11·3	86·9	69·9	17·0	80·6	84·2	78·7			74·9	76·5	
	Pudukkottai	318	29·737	29·609	·128	29·673		29·920	88·0	71·4	16·6	92·1	65·2	26·9	80·2	85·4	79·7			72·1	72·6	
	Madras	22	30·056	29·945	·111	29·993	+·002	29·951	85·3	72·1	13·2	87·4	64·5	22·9	81·5	82·5	77·9	+2·6	70·6	74·8	74·7	73·4
	Hill stations, excluding Kashmir and Baluchistan.																					
	Katmandu	4,388	25·800	25·705	·095	25·747	+·060	25·700	64·3	36·4	27·9	71·2	29·4	41·8	49·1	61·0	49·6	0	34·6	44·6	49·9	43·0
	Kodaikanal	7,688	22·903	22·841	·062	22·872		22·807	64·2	47·8	16·4	69·6	42·4	27·2	60·2	58·6	56·0		43·1	51·4	53·5	49·3
	a India.																					
	Seychelles	15	30·000	29·903	·097	29·962	+·037*	29·900	84·5	78·6	5·9	87·0	76·2	10·8	82·1	83·3	80·3	+1·8*	72·5	77·7	78·0	76·1
	Mauritius	181				29·779	+·015	29·844	89·8	73·4	16·4	94·8	68·7	26·1			80·4	+1·6				

N.B.—Elevations in italics indicate barometric determinations.

Note.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,300 feet.

* Departure from old normals.

A.

stations in India, etc., in January, 1919.

Vapour tension in inches of mercury.					Humidity.					Cloud.				Wind direction.											Wind steadiness.		Wind velocity.		Rainfall.			
														Total number of 10 hrs. and 16 hrs. winds from																		
From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns.	Departure from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.	Station.	Number of sub-division.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																															III.—Bengal.	
·461	·487	·476	·492	+·061	91	65	52	72	+ 2	4·6	4·6	4·6	+3·1	1	8	8	7	3	1	4	6	24	N 24° W	N 30° W	43	44	50	45	0·58	0·45	Calcutta	5
																															VI.—Punjab.	
·250	·299	·314	·291	+·022	84	69	52	71	+ 1	3·6	4·9	4·3	+0·6	10	3	3	5	7	0	4	7	23	N 46° W	N 30° W	32	21	33	30	2·24	1·13	Lahore	11
																															IX.—Rajputana.	
·257	·254	·248	·259	—·009	70	43	35	53	− 3	3·6	5·1	4·3	+1·0	7	6	8	21	4	1	3	4	8	N 42° E	N	24	18	84	58	1·53	0·96	Jaipur	18
																															X.—Bombay.	
·482	·577	·615	·576	—·015	68	67	62	70	− 2	1·9	1·5	1·7	+0·6	0	4	8	14	4	1	1	11	19	N 8° W	N 6° E	31	56	133	174	0·11	0·11	Bombay	25
																															XIV.—Mysore.	
·507	·513	·423	·435	+·077	93	62	40	67	+ 5	2·8	2·8	2·8		2	1	8	32	16	2	0	0	1	S 83° E	N 88° E	79	78	142	93	0·62	0·31	Bangalore	29
																															XV.—Madras.	
	·787	·806				75	69			5·1	4·7	4·9		17	2	5	2		1	21	12	2	S 68° E		39		65		2·57	1·45	Trivandrum.	31
	·694	·632				67	52			5·8	5·3	5·5		11	11	27	10	2	1	0	0	0	N 48° E		66		104		0·35	0·14	Pudukkottai	
·732	·765	·756	·769	+·084	92	72	68	80	+ 1	4·9	3·5	4·2	+0·1	0	7	30	13	12	0	0	0	0	N 65° E	N 51° E	76	76	64	100	0·37	0·20	Madras.	
																															Hill stations, excluding Kashmir and Baluchistan.	
·183	·243	·232	·227	—·026	84	70	45	70	− 7	4·6	4·7	4·7	+1·3	0	1	0	29	0	1	0	31	0	W	N 78° W	3	46	9	15	0·80	0·36	Katmandu.	
·234	·290	·358	·293		70	57	73	67		3·1	5·1	4·1		0	8	6	9	16	8	0	6	9	S 37° E		19		182		5·24	2·06	Kodaikanal.	
																															Extra India.	
·715	·889	·890	·849	+·016	73	81	78	80	− 4	6·3	6·5	6·4	—0·6*	0	8	8	5	16	1	0	5	19	N 13° E	N 39° W	24	61	75	107	17·98	8·51	Seychelles.	
			·750	+·003				74	− 2			6·3	+0·1										N 51° E	S 37° E			89	137	5·76	1·24	Mauritius.	

* Departure from old normals.

Table B.—Abstract of observations taken at 8 hrs. at 213 stations in India, etc., in January, 1919.

(1) Provincial means.

(2) Data of stations.

(1) Provincial means based on the material in Table B (2) except that the statement of rainfall depend on the complete data of about 2,300 stations.

Division.	Pressure departure from normal.	Temperature of air.							Wind.		Hygrometry.				Cloud.		Rainfall.		
		Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Departure of velocity from normal.	Departure of steadiness from normal.	Mean humidity.	Departure from normal.	Mean vapour tension.	Departure from normal.	Mean cloud amount.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.
	"	°	°	°	°	°	°	°					"	"			"	"	"
Burma	+·043	84·2	+0·7	61·9	+2·1	73·0	+1·4	22·3	0	+12	84	0	·562	+·024	3·5	+1·7	0·02	0·13	−0·11
Assam	+·051	74·8	+1·6	53·1	+2·3	63·9	+2·0	21·6	−0·2	+19	92	− 2	·429	+·028	4·8	+0·9	0·40	0·75	−0·35
Bengal	+·045	78·2	+0·7	56·7	+2·7	67·4	+1·7	21·5	−0·4	−13	86	+ 1	·468	+·033	4·0	+2·6	0·91	0·38	+0·53
Bihar and Orissa	+·044	77·2	0	56·2	+3·5	66·7	+1·7	21·0	−0·2	−12	82	+ 4	·445	+·061	4·7	+2·9	2·61	0·50	+2·11
United Provinces of Agra and Oudh	+·045	72·2	−0·1	49·3	+2·0	60·8	+1·0	22·9	−0·3	−18	80	0	·334	+·023	4·2	+1·8	2·58	0·83	+1·75
Punjab	+·035	66·9	−0·7	43·5	+1·0	55·2	+0·2	23·4	+0·3	+ 3	79	+ 2	·265	+·016	3·8	+0·3	2·44	1·07	+1·37
North-West Frontier Province	+·025	65·5	−0·3	39·4	−0·5	52·5	−0·4	26·1	−0·7	−11	69	− 3	·199	−·007	2·8	−1·1	1·84	1·45	+0·39
Sind	+·036	73·8	−1·2	49·7	−1·1	61·7	−1·1	24·1	−1·2	+ 4	57	− 5	·237	−·039	2·0	−0·7	0·08	0·25	−0·17
Rajputana	+·021	72·9	−1·2	49·5	+2·1	61·2	+0·4	23·4	+0·3	+ 4	61	0	·250	+·016	3·3	+0·6	0·98	0·31	+0·67
Bombay	+·004	84·4	+0·4	59·4	+1·8	71·9	+1·2	25·1	−0·2	−13	60	+ 1	·388	+·016	1·9	+0·6	0·15	0·09	+0·06
Central India	+·012	75·7	−0·7	52·0	+3·7	63·8	+1·5	23·7	−0·2	+ 1	71	+ 5	·331	+·042	4·6	+2·4	2·00	0·35	+1·65
Central Provinces	+·013	81·3	−0·1	57·8	+4·5	69·6	+2·3	23·5	+0·7	+ 7	70	+ 9	·407	+·083	3·9	+2·4	3·02	0·37	+2·65
Hyderabad	+·019	87·0	+1·0	63·9	+4·1	75·5	+2·6	23·0	−0·6	+10	67	+ 4	·492	+·058	3·1	+1·4	0·49	0·15	+0·34
Mysore	+·018	84·3	+1·3	62·4	+3·6	73·4	+2·4	21·9	−0·3	−15	75	+ 3	·524	+·050	3·0	0	0·22	0·11	+0·11
Madras	+·015	86·0	+0·7	70·5	+3·4	78·3	+2·1	15·5	+0·4	+ 1	82	+ 3	·709	+·076	3·6	+0·6	1·08	0·54	+0·54

Table

(2) Abstract of observations taken at 8 hrs. at 213

Number of sub-division.	Station.	Height of barometer above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	I.—Burma.																					
2	Victoria Point	147	29·868		29·946	29·943	5th	29·798	11th	78·4	73·5	88·0		74·0		81·0		14·0	93·0	25th	71·8	7th
	Mergui	66	29·980	+·042	29·976	30·070	5th	29·902	11th	73·9	70·4	88·1	−0·1	70·0	+2·0	79·0	+0·9	18·1	92·7	27th	65·1	7th & 8th.
	Tavoy	19	30·024	+·024	29·975	30·124	5th	29·953	11th	71·1	68·7	90·1	+0·3	64·6	−0·6?	77·3	−0·1?	25·5	93·2	30th	57·0	8th
	Moulmein	94	29·980	+·033	29·997	30·091	5th	29·909	11th	70·7	67·6	89·3	+0·4	67·1	+1·6	78·2	+1·0	22·2	93·5	20th	61·9	8th
	Rangoon	18	30·045	+·041	30·001	30·150	5th	29·980	11th	70·0	66·0	90·9	+1·9	67·2	+2·5	79·1	+2·2	23·7	94·9	26th, 27th & 29th.	63·2	12th
	Bassein	27	30·047	+·043	30·011	30·116	6th	29·981	13th	70·9	68·3	89·3	+3·5	65·8	+3·3	77·5	+3·4	23·5	93·7	30th & 31st.	61·8	15th
	Diamond Island	41	30·002	+·020	29·978	30·106	6th	29·912	11th & 13th.	77·6	71·8	86·1	+2·4	73·3	+1·7	79·7	+2·1	12·8	89·4	29th	71·0	19th & 20th.
	Toungoo	164	29·906	+·042	30·019	30·019	6th	29·832	25th	64·0	62·4	85·1	+0·3	58·3	+0·8	71·7	+0·5	26·8	90·5	31st	53·7	11th
	Kyaukpyu	18	30·044		30·002	30·148	6th	29·983	11th	71·4	68·0	80·0		66·4		73·2		13·6	82·3	28th	62·8	3rd & 9th.
	Akyab	20	30·043	+·022	30·004	30·145	6th	29·973	13th	64·8	62·6	81·2	+0·1	60·6	+1·2	70·9	+0·7	20·6	85·8	12th	53·4	16th
	Minbu	*165*	29·923	+·035	30·037	30·061	6th	29·847	31st	65·8	61·0	83·2	−1·4	60·5	+3·1	71·8	+0·9	22·7	89·3	31st	56·0	16th
	Yamethin	644	29·424	+·047	30·047	29·545	6th	29·353	31st	62·7	59·5	84·4	−1·6	57·9	+2·3	71·2	+0·3	26·5	91·1	31st	50·8	16th
	Mandalay	250	29·861	+·070	30·069	29·989	6th	29·756	31st	66·6	61·9	86·0	+1·8	59·1	+2·7	72·5	+2·3	26·9	92·1	31st	51·7	16th
	Monywa	*280*	29·835	+·050	30·076	29·951	19th	29·742	31st	63·6	60·4	83·4	+1·7	59·5	+3·0	71·4	+2·3	23·9	88·8	31st	52·9	5th
	Lashio	*2,820*	27·266	+·054	27·212	27·402	6th	27·195	31st	52·4	51·2	73·1	−1·5	48·1	+2·5	60·6	+0·5	25·0	77·5	31st	40·8	16th
	Bhamo	*361*	29·734	+·062	30·072	29·872	19th	29·639	31st	55·1	54·6	77·0	+1·1	48·6	−0·1?	62·8	+0·5?	28·4	82·6	30th	41·2	16th
	Myitkyina	458	29·640	+·055	30·090	29·771	6th	29·536	31st	56·1	54·8	75·8	+1·4	50·7	+1·2	63·2	+1·3	25·1	81·2	29th	43·6	16th
	II.—Assam.																					
4	Dibrugarh	353	29·772	+·042	30·111	29·894	19th	29·660	31st	54·4	53·6	72·4	+1·8	50·5	+1·2	61·4	+1·5	21·9	79·1	30th	42·3	7th
	Sibsagar	333	29·803	+·043	30·118	29·931	19th	29·684	31st	54·3	53·6	70·9	+0·9	51·2	+1·5	61·0	+1·2	19·7	77·2	30th	43·2	17th
	Tezpur	252	29·884	+·059	30·111	30·015	19th	29·777	31st	55·5	54·4	74·9	+1·9	53·8	+2·1	64·3	+2·0	21·1	79·8	30th	48·9	17th
	Gauhati	196	29·943	+·048	30·106	30·044	19th	29·845	13th	57·8	56·6	75·7	+1·6	52·6	+2·9	64·1	+2·3	23·1	79·8	27th & 28th.	45·2	15th
	Dhubri	115	30·012	+·055	30·087	30·105	5th	29·931	13th	59·9	57·4	74·9	+1·2	55·8	+3·3	65·4	+2·3	19·1	79·3	13th	49·2	16th
	Silchar	104	30·033	+·056	30·095	30·141	6th	29·960	31st	61·0	58·8	79·9	+2·2	55·0	+2·7	67·5	+2·5	24·9	84·5	19th	48·2	15th & 17th.
	Srimangal	66	30·074		30·094	30·165	6th	29·994	11th	57·1	55·6	81·8	+1·9	48·6?	−0·1?	65·2?	+0·9?	33·2	85·7	13th & 27th.	38·5	15th
	III.—Bengal.																					
5	Cox's Bazar	36	30·048		30·030	30·154	6th	29·987	29th	64·4	62·0	81·0		58·4		69·7		22·6	87·1	28th	51·5	17th
	Chittagong	87	30·011	+·041	30·048	30·127	19th	29·941	13th	62·1	59·9	80·2	+1·9	57·1	+1·8	68·7	+1·9	23·1	81·1	31st	48·4	16th
	Noakhali	43	30·076	+·061	30·068	30·161	6th	30·003	11th	62·4	60·1	79·5	+1·8	57·3	+4·5?	68·4	+3·1?	22·2	83·8	30th	46·6	16th
	Barisal	12	30·092	+·043	30·051	30·194	19th	30·012	11th	62·3*	60·3*	77·6*	+0·3*	56·0*	+1·7*	66·8*	+1·0*	21·6*	82·8	13th	45·9	16th
	Narayanganj	26	30·089	+·049	30·065	30·185	6th	30·006	11th	61·5	59·0	77·8	+0·2	57·8	+2·5	67·8	+1·3	20·0	82·1	28th & 29th.	48·0	16th
	Mymensingh	63	30·051	+·047	30·069	30·142	6th	29·867	11th	60·2	58·0	77·1	+2·0	56·7	+3·7	66·9	+2·9	20·4	82·6	28th	48·5	16th
	Bogra	75	30·040	+·041	30·070	30·132	6th	29·953	11th	58·3	56·6	76·4	+0·7	54·9	+3·0	65·7	+1·9	21·5	81·8	13th	46·3	15th
	Dinajpur	123	29·984	+·040	30·070	30·094	6th	29·900	11th	56·0	54·2	78·9	+1·6	52·6	+3·7	64·7	+2·7	24·3	81·3	13th & 28th.	41·2	15th
	Jalpaiguri†	283	29·842	+·062	30·100	29·975	6th	29·748	13th	55·3	54·0	77·0	+4·4?	51·7	+0·8	64·4	+2·6?	25·3	80·5	20th	45·1	14th

N.B.—Elevations in italics indicate barometrical determinations.

*Mean of 21 days.
† " " 22 "

B.

stations in India, etc., in January, 1919.

Wind direction. Number of winds from Calm. (24)	N. (25)	N.E. (26)	E. (27)	S.E. (28)	S. (29)	S.W. (30)	W. (31)	N.W. (32)	Resultant direction. (33)	Normal direction. (34)	Wind velocity. Mean velocity, miles per hour. (35)	Normal. (36)	Departure from normal. (37)	Wind steadiness. Actual percentage. (38)	Departure from normal. (39)	Hygrometry 8 hrs. Mean humidity at 8 hrs. (40)	Departure from normal. (41)	Mean vapour tension at 8 hrs. in inches of mercury. (42)	Departure from normal. (43)	Cloud. Mean cloud amount at 8 hrs. (44)	Departure from normal. (45)	Rainfall. Number of rainy days. (46)	Departure from normal. (47)	Rainfall of month. (48)	Normal rainfall of month. (49)	Departure from normal. (50)	Total rainfall from 1st Dec., 1918 to 31st January, 1919. (51)	Normal rainfall for this period. (52)	Departure from normal of this period. (53)	Heaviest rainfall during month. (54)	Station. (55)
																															I.—Burma.
2	3	17	5	2	0	0	0	2	N 49° E		5·9			76		79		·764		0·9		0	− 1·3	0·07	0·48	− 0·41	1·31	2·64	−1·33	0·04	Victoria Point.
31	0	0	0	0	0	0	0	0	Calm	S 4° W	?	1·5		(a)		83	+ 1	·704	−·017	1·4	−1·4	0	− 1·6	0·06	1·01	− 0·95	2·51	1·42	+ 1·09	0·06	Mergui.
26	1	2	2	0	0	0	0	0	N 54° E	N 9° W	1·3	0·9	+0·4	10	+ 3	88	− 1	·671	+·008	3·7	+2·8	0	− 0·4	0	0·19	− 0·19	1·16	0·43	+ 0·73	0	Tavoy.
5	0	11	14	1	0	0	0	0	N 72° E	N 48° E	2·0	1·8	+0·2	76	+15	85	0	·639	+·025	1·2	−0·5?	0	− 0·3	0	0·28	− 0·28	0·45	0·49	−0·04	0	Moulmein.
0	12	15	4	0	0	0	0	0	N 33° E	N 29° E	3·3	2·8	+0·5	89	+57	80	− 2	·584	+·009	5·2	+3·4	0	− 0·4	0	0·23	− 0·23	0·41	0·59	− 0·18	0	Rangoon.
18	4	7	0	0	0	0	0	2	N 19° E	N 2° W	3·3	2·6	+0·7	33	+ 1	87	− 1	·654	+·078	4·5	+3·1	0	− 0·1	0	0·13	− 0·13	0·22	0·52	− 0·20	0	Bassein.
0	12	16	2	0	0	0	0	1	N 28° E	N 14° E	6·5	5·8	+0·7	89	+ 8	74	+ 1	·703	+·041	3·5	+1·3	0	− 0·3	0	0·20	− 0·20	0·76	1·04	− 0·28	0	Diamond Island.
3	17	8	0	0	1	0	0	2	N 10° E	N 9° W	2·5	1·2	+1·3	79	+14	91	+ 3	·539	+·023	2·3	+1·9	0	− 0·4	0	0·23	− 0·23	0·73	0·65	+0·08	0	Toungoo.
26	2	2	1	0	0	0	0	0	N 36° E		0·2			13		84		·542		3·7		0	− 0·4	0	0·08	− 0·08	0·23	0·37	−0·14	0	Kyaukpyu.
9	7	14	1	0	0	0	0	0	N 32° E	N 21° E	2·4	2·0	+0·4	66	−21	88	− 1	·538	+·028	3·4	+2·3	0	− 0·2	0	0·07	− 0·07	3·88	0·77	+3·11	0	Akyab.
4	2	0	0	0	0	0	1	24	N 44° W	N 52° W	1·7	4·2	−2·5	86	+36	75	0	·477	+·037	2·3	+1·0	0	− 0·2	0	0·05	− 0·05	0·66	0·55	+ 0·11	0	Minbu.
																82	+ 2	·470	+·025	2·2	+1·0	0	− 0·2	0	0·09	− 0·09	0·19	0·58	− 0·39	0	Yamethin.
20	0	0	0	0	1	0	0	0	S	N 13° E	1·1	1·5	−0·4	3	−10	75	− 8	·491	+·029	4·0	+2·7	0	− 0·1	0	0·04	− 0·04	0·41	0·40	+ 0·01	0	Mandalay.
4	19	0	0	0	0	0	0	8	N 12° W		1·9			86		82	− 4	·481	+·020	4·9	+3·2	0	0	0	0	0	0·45	0·42	+ 0·03	0	Monywa.
21	0	0	0	0	0	5	3	2	S 75° W		1·6			27		92	+ 1	·361	+·018	0·9	−2·5	1	+ 0·3	0·10	0·31	− 0·21	1·45	1·24	+ 0·21	0·10	Lashio.
31	0	0	0	0	0	0	0	0	Calm	N 18° W	0·2	1·9	−1·7	(a)		96	+ 1	·418	+·033	8·2	+5·7?	0	− 1·2	0	0·54	− 0·54	0·03	1·15	− 1·12	0	Bhamo.
29	0	0	1	0	0	0	0	1	N 23° E		2·1			2		92	+ 2	·413	+·006	6·2	+2·8	0	− 1·3	0·09	0·50	− 0·41	0·09	0·97	− 0·88	0·09	Myitkyina.
																															II.—Assam.
29	0	0	1	0	0	1	0	0	S 23° E		0·2			2		95	− 1	·404	+·028	6·4	+1·7	3	− 0·5	0·63	1·58	− 0·95	0·63	2·02	− 1·39	0·26	Dibrugarh.
21	4	4	0	1	1	0	0	0	N 35° E	N 82° E	0·6	1·3	−0·7	20	− 3	96	− 2	·407	+·009	8·3	+1·2	3	− 0·7	0·69	1·34	− 0·65	0·88	1·87	− 0·99	0·32	Sibsagar.
15	0	9	7	0	0	0	0	0	N 65° E		1·0			48		92	0	·413	+·025	3·5	+0·7	1	− 0·5	0·16	0·53	− 0·37	0·16	0·82	− 0·66	0·14	Tezpur.
30	0	0	9	1	0	0	0	0	S 45° E		0·4			3		93	− 3	·442	+·043	6·9	+0·2	3	+ 2·0	0·44	0·34	+ 0·10	0·44	0·55	0·11	0·21	Gauhati.
4	0	14	12	0	1	0	0	0	N 68° E	N 55° E	4·0	2·8	+1·2	79	+40	85	− 7	·438	+·026	3·2	+1·3	1	+ 0·2	0·36	0·32	+ 0·04	0·36	0·40	− 0·04	0·24	Dhubri.
31	0	0	0	0	0	0	0	0	Calm	S 72° E	0·1	1·2	−1·1	(a)		88	− 3	·471	+·042	3·3	+0·6	1	− 0·7	0·36	0·88	− 0·52	0·36	1·31	− 0·95	0·36	Silchar.
																91	0	·428	+·022	1·8		1	− 0·2	0·11	0·65	− 0·54	0·29	0·96	− 0·67	0·11	Srimangal.
																															III.—Bengal.
12	0	18	0	0	0	0	0	0	N 45° E		1·6			59		87		·526		3·0		0	−0·3	0·13	0·09	+ 0·04	0·13	1·15	−1·02	0·09	Cox's Bazar.
18	0	12	1	0	0	0	0	0	N 48° E	N 28° E	2·0	2·3	−0·3	40	−15	87	− 1	·483	+·021	3·2	+1·7	1	+ 0·5	0·19	0·31	− 0·12	0·19	1·11	−0·92	0·16	Chittagong.
13	11	7	0	0	0	0	0	0	N 17° E		0·9			55		87	− 2	·492	+·032	3·5	+2·0	1	+ 0·3	0·22	0·30	− 0·08	0·74	0·61	+ 0·13	0·20	Noakhali.
22	5	3	1	0	0	0	0	0	N 23° E	N 4° E	1·2	1·2	0	27	+16	85*	− 2	·482*	+·004	5·1	+3·8	1	+ 0·3	0·22	0·47	− 0·25	0·29	0·91	− 0·62	0·20	Barisal.
30	0	0	1	0	0	0	0	0	E	N 10° W	0·2	1·7	−1·5	3	−36	86	− 2	·471	+·021	3·5	+1·3	2	+ 1·1	0·31	0·33	− 0·02	0·46	0·52	−0·06	0·16	Narayanganj.
28	0	2	0	0	0	0	0	1	N 18° E	N 54° E	0·4	0·9	−0·5	7	−22	87	− 3	·456	+·034	4·1	+2·7	1	0	0·45	0·37	+ 0·08	0·50	0·45	+0·05	0·43	Mymensingh.
24	4	1	0	0	0	0	1	1	N 10° W	N 18° W	0·5	1·2	−0·7	17	−17	90	+ 6	·441	+·049	5·0	+3·8	3	+ 2·0	1·33	0·40	+ 0·93	1·34	0·46	+0·88	0·71	Bogra.
17	1	4	1	0	0	1	5	2	N 36° W	N 61° W	1·3	1·7	−0·4	20	−16	89	+ 1	·400	+·023	3·5	+1·7	2	+ 1·2	0·59	0·35	+ 0·24	0·59	0·42	+0·17	0·30	Dinajpur.
26	3	0	0	0	0	0	0	0	N	N 18° E	0·6			10	−33	91	0	·403	+·008	1·4	−0·3?	2	+ 1·3	0·63	0·32	+0·31	0·63	0·45	+0·18	0·31	Jalpaiguri.

(a) Indeterminate.

* Mean of 21 days.

Table

(2) Abstract of observations taken at 8 hrs. at 213 stations

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity, at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal—*concld.*																					
	Saugor Island	10	30·113	+·051	30·069	30·223	6th	30·025	11th	64·6	62·8	78·7	+1·8	59·6	+0·4	69·1	+1·1	19·1	82·6	13th	52·1	17th
	Midnapore	149	29·954	+·029	30·059	30·053	5th & 6th.	29·861	11th	64·0	59·6	80·6	−0·2	59·1	+3·2	69·8	+1·5	21·5	87·8	10th	52·7	17th
	Calcutta	21	30·094	+·036	30·063	30·190	5th	29·997	11th	61·5	59·6	78·3	+1·0	58·5	+3·0	68·4	+2·0	19·8	83·4	13th	49·4	17th
	Jessore	30	30·093	+·049	30·071	30·187	5th & 19th.	30·010	11th	62·4	59·0	77·2	−0·1	56·8	+3·6	67·0	+1·7	20·4	82·1	13th	44·7	16th
	Burdwan	99	30·011	+·031	30·063	30·106	6th & 15th.	29·936	11th	60·5	57·5	78·3	−0·3	57·4	+2·4	67·8	+1·1	20·9	84·6	9th	49·0	16th & 17th.
	Berhampore	67	30·063	+·052	30·083	30·163	15th	29·981	11th	60·1	57·8	76·2	−0·3	56·9	+3·4	66·5	+1·5	19·3	81·5	13th	48·0	16th
	IV.—Bihar and Orissa.																					
6	Balasore	50	30·038	+·037	30·065	30·170	5th	29·978	9th	63·4	60·6	82·5	+1·8	58·9	+2·7	70·7	+2·3	23·6	89·6	10th	52·1	17th
	Hukitala (False Point)	29	30·089	+·043	30·059	30·194	6th	30·015	24th													
	Cuttack	80	30·040	+·044	30·064	30·152	6th	29·968	10th	66·4	64·3	82·1	−1·7	63·7	+3·5	72·9	+0·9	18·4	88·5	10th	58·2	18th
	Puri	24	30·096	+·044	30·061	30·209	6th	30·017	11th	69·3	67·1	80·8	+0·8	66·7	+3·1	73·7	+1·9	14·1	82·9	15th	60·5	18th
	Angul	455	29·644	+·049	30·064	29·755	6th	29·566	29th	66·5	62·6	82·4	+0·5	60·3	+4·4	71·4	+2·5	22·1	90·4	10th	54·0	4th
	Sambalpur	486	29·605	+·020	30·062	29·718	6th	29·513	29th	65·1	61·2	82·3	+0·3	60·5	+5·2	71·4	+2·7	21·8	87·2	12th	52·7	1st & 3rd
7	Chaibasa	*733*	29·250	+·032	30·074	29·447	6th	29·250	11th	60·1	57·8	78·7	−1·2	56·9	+4·4	67·8	+1·6	21·8	86·4	9th, 10th & 11th.	49·8	16th
	Ranchi	2,128	27·921	+·018	30·071	28·024	6th	27·845	30th	58·2	54·3	72·4	−1·4	54·4	+3·0	63·4	+0·8	18·0	81·2	9th	47·2	16th
	Purulia	*816*	29·267	+·033	30·077	29·348	6th	29·180	9th	60·7	56·7	80·1	+2·6?	54·4	+0·5?	67·3	+1·5?	25·7	89·3	9th	47·6	16th
	Daltonganj	*730*	29·373	+·032	30·100	29·493	15th	29·265	10th	58·1	55·8	76·3	+0·9	57·6*	?* +10·7	67·3*	+5·8?	18·7	83·9	8th	44·5	1st
8	Purnea	124	29·997	+·044	30·085	30·103	15th	29·908	11th	53·9	52·6	75·0	+0·7	50·6	+2·6	62·8	+1·7	24·4	79·4	19th & 27th.	39·8	15th
	Monghyr	155	29·966		30·082	30·068	19th	29·876	9th	58·9	55·5	74·7		54·5		64·6		20·2	79·2	12th & 28th.	45·9	16th
	Darbhanga	165	29·979	+·073	30·108	30·036	5th	29·903	24th	60·2	56·5	73·4	+0·6	50·6	−0·7?	62·0	−0·1?	22·8	78·0	10th	40·7	15th
	Pusa	188	29·926		30·082	30·040	5th	29·852	11th	54·9	53·5	74·5		49·9		62·2		24·6	79·5	10th & 12th.	40·3	16th
	Patna	183	29·953	+·056	30·102	30·070	15th	29·862	10th	53·9	55·4	72·2	−0·5	53·8	+3·1	63·0	+1·3	18·4	77·9	3rd, 4th & 28th.	45·3	21st
	Buxar	239	29·884†	+·046†	30·094†	30·003	15th	29·785	10th	57·2	54·3	74·0	+0·1	53·0	+2·7	63·5	+1·4	21·0	81·2	12th	41·1	15th
	Gaya	372	29·754	+·052	30·104	29·868	5th & 15th.	29·662	24th	58·6	55·2	74·8	−0·6	55·5	+4·0	65·2	+1·7	19·3	80·7	9th	46·8	16th
	Naya Dumka	489	29·627	+·057	30·095	29·726	5th & 15th.	29·538	10th	60·7	56·9	76·2	+0·8	54·7	+3·5	65·5	+2·1	21·5	83·8	9th	44·1	16th
	V.—United Provinces of Agra and Oudh.																					
9	Gorakhpur	257	29·856	+·055	30·089	29·958	5th & 6th.	29·774	10th	53·3	51·2	72·6	0	49·5	+0·5	61·1	+0·3	23·1	79·1	8th & 9th	40·1	15th
	Benares	267	29·850	+·043	30·088	29·954	15th	29·742	29th	56·8	54·6	73·4	−0·6	51·3	+3·3	62·3	+1·3	22·1	80·1	8th	38·7	15th
	Allahabad	309	29·829	+·062	30·115?	29·933	15th	29·716	29th	55·5	52·4	73·9	−0·3	51·2	+3·3	62·6	+1·5	22·7	82·2	8th	39·1	15th
	Cawnpore	416	29·696	+·049	30·101	29·791	5th	29·541	29th	52·4	50·3	72·7	+0·2	49·6	+1·7	61·1	+0·9	23·1	78·6	8th	40·9	15th
	Lucknow	368	29·752	+·055	30·096	29·862	15th	29·602	29th													
	Bahraich	407	29·683	+·040	30·080	29·780	5th	29·566	30th	52·8	49·9	72·9	+0·7	48·9	+1·6	60·9	+1·1	24·0	81·1	8th	39·2	15th
10	Jhansi	824	29·259	+·010	30·093	29·857	20th	29·064	29th	54·7	50·3	73·8	−2·1?	50·2	−1·3?	62·0	−1·7?	23·6	87·1	7th	40·8	15th
	Agra	556	29·552	+·039	30·105	29·647	20th	29·314	29th	55·6	51·0	71·4	−1·4	50·2	+1·6	60·8	+0·1	21·2	76·8	6th & 8th	42·9	15th
	Mainpuri	516	29·580	+·036	30·092	29·672	15th	29·377	29th	52·6	48·8	72·9	+1·2	48·2	+2·0	60·5	+1·6	24·7	80·1	8th	39·3	15th
	Bareilly	568	29·524	+·053	30·094	29·622	5th	29·353	30th	53·0	50·3	71·0	+0·8	48·3	+2·2	59·6	+1·5	22·7	78·1	2nd	40·0	15th
	Roorkee	899	29·178	+·054	30·115	29·273	20th	28·980	29th	49·4	47·5	67·6	−1·2	45·7	+1·8	56·7	+0·3	21·9	73·8	3rd	37·7	18th

N. B.—Elevations in italics indicate barometrical determinations.

* Mean of 21 days.
† „ „ 30 „

B—*continued.*

in India, etc., in January, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 31st Jan. 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															III.—Bengal—*concld.*
4	10	9	2	1	1	2	0	2	N 23° E	N 13° E	4·6	4·4	+0·2	53	−11	90	0	·552	+·024	4·1	+1·8	3	+2·2	0·70	0·30	+0·40	0·76	0·60	+ 0·16	0·33	Saugor Island.
29	0	1	0	0	0	0	0	1	N		1·6			3		76	+ 5	·456	+·063	4·4	+2·9	4	+3·1	1·40	0·48	+0·92	1·54	0·77	+ 0·77	0·38	Midnapore.
10	3	2	1	2	1	2	2	8	N 40° W	N 6° W	2·2	1·9	+0·3	27	− 5	89	+ 4	·493	+·047	4·5	+2·7	1	+0·2	0·58	0·37	+0·21	1·07	0·59	+ 0·48	0·45	Calcutta.
31	0	0	0	0	0	0	0	0	Calm	N 14° W	0·4	1·2	−0·8	(a)		80	− 6	·458	+·026	4·3	+2·7	1	+0·1	0·20	0·40	−0·20	0·48	0·62	− 0·14	0·14	Jessore.
22	5	0	0	0	0	0	1	3	N 23° W	N 23° W	0·8	1·2	−0·4	27	+ 1	82	+ 7	·437	+·051	5·6	+5·4	7	+6·3	1·80	0·36	+1·44	1·83	0·53	+ 1·30	0·57	Burdwan.
21	4	0	0	1	1	0	0	4	N 23° W	N 67° W	0·8	1·2	−0·4	20	− 6	86	0	·463	+·033	5·0	+2·9	3	+2·1	1·13	0·37	+0·76	1·13	0·51	+ 0·62	0·42	Berhampore.
																															IV.—Bihar and Orissa.
12	9	4	1	1	1	0	1	2	N 10° E	N 27° W	1·1	2·0	−0·9	37	−13	84	+ 3	·498	+·055	3·7	+2·2	4	+3·0	1·62	0·54	+1·08	1·64	0·78	+ 0·86	0·66	Balasore.
5	12	7	1	1	0	2	0	3	N 10° E		4·4			56	−12					5·1	+2·5	1	+0·2	0·56	0·48	+0·08	0·62	1·15	− 0·53	0·46	Hukitala (False Point).
26	0	4	1	0	0	0	0	0	N 53° E	N 8° W	1·2	1·0	+0·2	17	+ 7	89	+ 8	·580	+ 097	4·4	+2·3	3	+2·4	3·19	0·23	+2·96	3·22	0·55	+ 2·67	2·40	Cuttack.
3	13	10	1	0	1	3	0	0	N 19° E		6·9			58		89	+ 7	·640	+·083	4·3	+2·8	1	+0·4	1·50	0·30	+1·20	1·55	0·65	+ 0·90	1·36	Puri.
15	1	0	3	2	0	1	1	8	N 31° W		2·9			19		79	− 1	·522	+·081	4·5	+2·4	5	+4·3	1·95	0·46	+1·49	2·01	0·77	+ 1·24	0·75	Angul.
0	15	12	2	0	0	0	0	2	N 20° E	N 32° E	3·1	1·9	+1·2	89	+15	79	+ 6	·493	+·063	4·7	+2·6	5	+4·2	4·08	0·35	+3·73	4·29	0·59	+ 3·70	1·62	Sambalpur.
18	1	0	0	0	0	10	0	2	S 61° W	S 68° W	1·2	0·9	+0·3	39	−10	86	+ 1	·454	+·071	5·1	+3·4	6	+4·7	1·98	0·68	+1·30	1·93	0·89	+ 1·09	0·74	Chaibasa.
13	1	1	0	2	4	2	3	5	S 74° W	N 73° W	2·4	3·8	−1·4	23	−13	77	+12	·378	+·070	5·2	+2·9	10	+8·6	6·63	0·67	+5·96	6·72	0·68	+ 5·84	1·98	Ranchi.
13	0	0	0	1	1	0	8	8	N 73° W		1·0			45		77	+ 4	·413	+·054	5·6	+3·4	8	+6·5	3·54	0·73	+2·81	3·56	0·87	+ 2·69	0·76	Purulia.
27	0	1	2	1	0	0	0	0	E		1·3*			10		85	+ 4	·416	+·077	3·3	+1·9	9	+7·2	5·30	0·81	+4·49	5·30	1·04	+ 4·26	1·15	Daltonganj.
8	2	1	3	1	1	7	5	3	S 76° W	S 74° W	1·5	1·5	0	27	− 2	91	0	·383	+·027	5·6	+4·0	1	+0·2	1·05	0·41	+0·64	1·05	0·55	+ 0·50	0·97	Purnea.
9	0	0	2	6	1	12	1	0	S 12° W		2·6			45		80		·398		4·7		2	+1·5	0·51	0·24	+0·27	0·51	0·70	− 0·19	0·25	Monghyr.
25	0	0	2	1	0	2	1	0	S 9° E	S 84° W	1·3	1·9	−0·6	7	−24	79	− 9	·410	+·032	4·5	+2·7	1	−0·1	1·09	0·49	+0·60	1·09	0·58	+ 0·51	0·99	Darbhanga.
15	1	0	3	4	1	3	2	2	S 5° E		1·6			12		81		·394		4·2		3	+2·6	1·29	0·12	+1·17	1·29	0·25	+ 1·04	1·04	Pusa.
17	1	0	4	2	0	3	4	0	S 15° W	S 70° W	1·8	1·8	0	10	−38	78	0	·395	+·034	5·5	+3·4	3	+1·9	1·82	0·55	+1·27	1·82	0·65	+ 1·17	1·26	Patna.
13	2	0	3	3	0	3	4	3	S 88° W		5·2			10		81	+ 7	·364	+·046	5·9	+3·5	4	+2·7	3·10	0·67	+2·43	3·10	0·88	+ 2·22	1·64	Buxar.
21	0	3	2	0	1	3	1	0	S 45° E	S 16° W	1·4	2·2	−0·8	3	−29	79	+ 4	·396	+·047	4·7	+2·4	8	+6·8	2·77	0·64	+2·13	2·77	0·79	+ 1·98	0·93	Gaya.
30	0	0	0	0	0	0	0	1	N 45° W		1·0			3		78	+ 3	·418	+·066	4·0	+2·3	7	+6·0	3·76	0·49	+3·27	3·76	0·61	+ 3·15	1·03	Naya Dumka.
																															V.—United Provinces of Agra and Oudh.
16	1	0	7	1	0	0	6	0	N 79° E	N 84° W	1·3	1·2	+0·1	5	−31	86	+ 4	·354	+·007	2·7	+0·7	3	+1·6	1·28	0·72	+0·56	1·28	0·87	+ 0·41	0·08	Gorakhpur.
19	0	3	3	1	0	3	1	1	E	S 49° W	0·8	2·1	−1·3	6	−30	86	+ 3	·400	+·054	5·0	+2·8	5	+3·5	3·32	0·67	+2·65	3·52	0·90	+ 2·62	1·12	Benares.
22	0	0	6	0	0	0	3	0	E	N 74° W	1·3	2·8	−1·5	10	−16	80	+ 1	·357	+·027	5·7	+3·2	5	+3·3	3·48	0·76	+2·72	3·48	1·01	+ 2·47	0·97	Allahabad.
17	1	1	3	4	0	0	2	3	N 67° E	N 79° W	1·5	2·2	−0·7	7	−25	85	− 8	·341	+·020	3·3	+1·4	4	+2·5	0·65	0·57	+0·08	0·65	0·76	− 0·11	0·23	Cawnpore.
27	0	0	2	0	0	0	2	0	Calm	N 84° W	1·1	1·6	−0·5	(a)						5·4	+2·9	4	+2·5	1·08	0·83	+0·25	1·08	1·14	− 0·06	0·47	Lucknow.
17	3	0	4	1	1	0	3	2	N 7° E	N 45° W	1·5	1·6	−0·1	9	−14	81	− 6	·324	−·016	5·0	+3·1	4	+1·9	1·58	1·03	+0·55	1·66	1·33	+ 0·53	0·50	Bahraich.
12	1	4	4	1	0	2	2	5	N 7° E	N 68° W	3·0	1·5	+1·5	17	− 1	72	+ 7	·312	+·010	2·5	+0·8	4	+2·7	1·39	0·62	+0·77	1·45	0·87	+ 0·58	0·47	Jhansi.
9	0	5	5	3	1	2	3	3	N 75° E	N 56° W	3·0	2·6	+0·4	13	−19	71	0	·317	+·040	4·2	+1·6	2	+0·6	1·06	0·55	+0·51	1·06	0·84	+ 0·22	0·79	Agra.
15	3	1	4	4	0	1	1	2	N 69° E	N 59° W	1·2	1·2	0	13	−15	74	− 3	·301	+·020	4·8	+1·7	4	+2·5	1·41	0·66	+0·75	1·41	1·04	+ 0·37	0·57	Mainpuri.
28	0	0	0	2	1	0	0	0	S 31° E	N 45° W	0·5	1·6	−1·1	7	−18	81	− 2	·331	+·032	4·4	+1·8	4	+1·7	2·17	1·06	+1·11	2·27	1·39	+ 0·88	1·20	Bareilly.
27	0	1	0	1	0	0	0	2	N	N 53° W	1·8	1·5	+0·3	5	−11	86	+ 1	·307	+·031	3·5	+0·4	9	+6·0	6·12	1·70	+4·42	6·14	2·27	+ 3·87	1·32	Roorkee.

(a) Indeterminate.

*Mean of 30 days.

Table

(2) Abstract of observations taken at 8 hrs. at 213 stations

Number of sub-division.	Station.	Height of barometer above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
.	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	VI.—Punjab.																					
11	Delhi	718	29·361	+·029	30·096	29·449	20th	29·108	29th	52·1	47·3	68·3	−1·7	49·1	+1·4	58·7	−0·1	19·2	74·0	8th	41·6	13th
	Hissar	725	29·374	+·043	30·125	29·493	20th	29·070	29th	47·5	45·2	69·2	−0·9	42·8	+0·1	56·0	−0·4	26·4	75·5	4th	33·4	13th
	Patiala	*818*	29·240	+·021	30·089?	29·337	20th	28·983	29th	49·3	46·7	67·0	−0·6	46·1	+2·6	56·5	+1·0	20·9	73·8	5th	37·4	15th
	Ambala	892	29·172	+·039	30·103	29·267	20th	28·921	29th	49·0	46·6	68·4	+0·4	45·0	+1·9	56·7	+1·1	23·4	75·7	3rd, & 5th.	37·3	16th
	Ludhiana	812	29·255	+·033	30·103	29·390	20th	28·970	29th	47·4	45·2	66·9	+0·5	44·9	+0·7	55·9	+0·6	22 0	73·1	4th & 5th.	36·8	15th
	Lahore	702	29·371	+·027	30·107	29·497	20th	29·032	29th	45·5	44·1	66·6	−1·8	42·9	+1·8	54·8	0	23·7	72·6	3rd & 4th.	35·1	14th
	Sialkot	830	29·251	+·044	30·123	29·361	20th	28·913	29th	48·1	46·5	64·7	−1·1	43·0	0	53·8	−0·5	21·7	71·7	6th	33·9	13th
	Rawalpindi	1,674	28·398	+·048	30·169	28·509	7th	28·040	29th	45·4	42·5	61·8	−0·6	39·1	+1·1	50·4	+0·3	22·7	67·4	4th & 17th.	31·4	14th
12	Khushab	612	29·498	+·035	30·136	29·620	31st	29·133	29th	46·6	42·9	67·9	+0·4	41·0	−0·3	54·4	+0·1	26·9	75·2	3rd	33·2	14th
	Lyallpur	605	29·477		30·106	29·603	20th	29·117	29th	44·7	42·7	66·2		40·8		53·6		25·4	73·7	3rd	33·6	12th
	Montgomery	558	29·533	+·026	30·110	29·659	20th	29·170	29th	46·9	43·4	66·9	−1·5	42·4	+1·1	54·7	−0·2	24·5	73·4	6th	32·8	11th
	Multan	426	29·693	+·033	30·121	29·821	7th	29·327	29th	48·3	44·2	68·8	−0·9	44·4	+1·1	56·6	+0·1	24·4	75·9	4th	37·7	11th
	VII.—North-West Frontier Province.																					
14	Peshawar	1,113	28·994	+·031	30·182	29·123	7th	28·660	29th	42·9	39·2*	63·6	+0·6	38·8	−0·8	51·1	−0·1	24·8	70·0	4th	31·9	10th
	D. I. Khan	590	29·523	+·020	30·140	29·644	31st	29·128	29th	44·0	40·7†	67·5	−1·1	40·0	−0·2	53·8	−0·7	27·5	75·3	4th	32·6	10th
	VIII.—Sind.																					
16	Jacobabad	186	29·956	+·041	30·116	30·082	7th	29·653	29th	48·3	42·1†	72·3	−0·7	42·8	−0·4	57·6	−0·5	29·5	77·1	6th & 9th.	34·8	11th & 12th.
	Hyderabad	96	30·039	+·033	30·092	30·171	7th	29·786	29th	53·5	47·8	73·8	−2·4	50·2	−0·4	62·0	−1·4	23·6	79·1	9th	40·0	13th
	Karachi	13	30·128	+·033	30·093	30·261	19th	29·897	29th	59·3	51·1	75·2	−0·5	56·0	−2·5	65·6	−1·5	19·2	79·9	5th	50·1	30th
	IX.—Rajputana.																					
17	Bikaner	*771*	29·325	+·035	30·118	29·443	20th	29·022	29th	50·4	45·7	70·9	−0·5	45·4	−3·1?	58·1	−1·8?	25·5	82·2	6th	36·9	11th
	Jodhpur	780	29·300	+·019	30·090	29·415	7th	29·076	29th	54·5	46·2	75·1	−1·0	51·3	+1·7	63·2	+0·3	23·8	86·0	6th	43·1	13th
18	Jaipur	1,431	28·644	+·031	30·113	28·741	20th	28·393	29th	55·1	47·9	72·2	−1·8	50·0	+2·2	61·1	+0·2	22·2	81·5	7th	38·5	14th
	Ajmer	1,611	28·439	+·004	30·106	28·565	20th	28·200	29th	49·4	44·8	70·4	−3·0?	47·4	+1·8	58·9	−0·6?	23·0	79·8	6th	37·7	15th
	Kotah	832	29·245	+·015	30·080	29·345	20th	29·021	29th	58·5	51·9	75·9	−0·9	53·2	+2·3	64·5	+0·7	22·7	88·2	6th	46·4	15th
	X.—Bombay.																					
19	Deesa	466	29·605	+·017	30·052	29·714	20th	29·432	29th	58·8	49·5	82·2	−0·8	53·1	+1·9	67·6	+0·5	29·1	90·0	5th	42·7	31st
	Bhuj	334	29·754	+·017	30·059	25·859	2nd	29·545	29th	58·4	50·8	77·0	−2·6	?	?	?	?	?	85·6	5th	?	?
	Jamnagar	61	30·028	−·002	30·038	30·132	7th	29·852	29th	60·9	54·0	78·9	+0·3	52·6	−0·7	65·7	−0·2	26·3	84·5	6th	47·8	14th
	Dwarka	37	30·057	+·007	30·042	30·148	19th	29·881	28th	63·9	58·0	77·7	+0·4	59·1	−0·2	68·4	+0·1	18·6	83·0	16th	55·1	13th
	Rajkot	429	29·618	−·012	30·020	29·721	7th	29·467	28th	58·7	47·5	83·0	−0·5	53·0	+2·3	68·0	+0·9	30·0	91·2	5th	43·9	13th
	Veraval	*18*	30·039	−·002	30·060	30·124	7th	29·932	28th	65·6	55·7	81·7	+0·5	61·2	+2·4	71·4	+1·5	20·5	89·4	8th	53·6	12th
	Bhavnagar Para	55	30·002	−·012	30·005	30·096	31st	29·839	29th	61·8	54·0	85·2	+1·7	55·1	+1·1	70·2	+1·4	30·1	90·8	5th	49·2	13th & 14th
	Surat	39	30·014	−·003	29·997	30·099	31st	29·919	29th	64·7	58·2	85·4‡	−1·2‡	59·5	+2·6	72·4‡	+0·7	25·9	91·5	8th	52·1	13th
	Ahmadabad	163	29·912	+·005	30·031	30·011	20th	29·766	29th	64·9	55·4	85·8	+1·8	59·1	+2·0	72·5	+1·9	26·7	92·0	5th	50·0	12th
25	Bombay	37	30·002	−·001	29·980	30·078	7th	29·918	17th	70·9	65·7	82·8	+0·3	68·7	+0·8	75·7	+0·5	14·1	86·7	8th	61·1	13th
	Ratnagiri	207	29·870	+·009	29·971	29·896	7th	29·761	21st	74·6	65·3	86·0	−0·9	68·6	+2·2	77·2	+0·7	17·4	94·1	3rd & 6th	62·1	13th
	Marmagao	*60*	29·974	+·015	29·970	30·032	6th	29·924	17th	72·8	69·5	83·5	−1·4						88·7	7th		
	Karwar	44	29·986	+·013	29·965	30·046	7th	29·937	26th	69·1	66·7	86·9	+0·5	67·0	+1·2	76·9	+0·9	19·9	91·2	6th	61·5	16th

N B Elevations in italics indicate barometrical determinations.

* Mean of 29 days.
† " " 30 "
‡ " " 24 "

B—*continued.*

in India, etc., in January, 1919—*continued.*

Wind Direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st December 1918 to 31st January 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															VI.—Punjab.
19	1	0	2	0	0	1	5	3	N 68° W	S 87° W	1·9	2·1	−0·2	23	−12	67	− 1	·268	+·011	4·3	+0·9	3	+0·8	2·54	1·08	+1·46	2·54	1·51	+1·03	1·30	Delhi.
7	0	2	7	5	2	2	4	2	S 51° E	N 36° W	3·8	2·5	+1·3	23	+12	82	+ 6	·276	+·030	3·7	+0·3	5	+3·3	1·71	0·73	+0·98	1·73	1·03	+0·70	0·64	Hissar.
9	2	8	1	4	1	0	1	5	N 36° E		3·3			29		82	+ 3	·291	+·016	4·2	+0·9	7	+4·3	3·85	1·41	+2·44	3·85	1·75	+2·10	1·19	Patiala.
14	4	1	3	4	1	0	0	4	N 45° E	N 48° W	3·0	1·4	+1·6	20	+ 2	82	− 3	·291	+·013	4·2	+0·7	6	+2·6	3·37	1·62	+1·75	3·37	2·21	+1·16	1·07	Ambala.
30	0	0	0	0	1	0	0	0	S	N 59° W	0·7	1·2	−0·5	3	−16	83	+ 1	·276	+·007	3·2	−0·6	6	+3·1	2·78	1·82	+0·96	2·83	2·51	+0·32	1·61	Ludhiana.
19	0	2	1	3	0	1	2	3	N 23° W	N 83° W	1·4	1·2	+0·2	2	− 1	89	+ 5	·278	+·024	4·0	+0·3	4	+1·8	2·24	1·09	+1·15	2·48	1·47	+1·01	1·13	Lahore.
8	7	4	4	2	0	0	3	3	N 17° E	N 49° E	1·0	0·9	+0·1	73	+29	89	+ 8	·300	+·038	3·7	+0·5	6	+2·9	4·44	2·21	+2·23	4·94	2·86	+2·08	1.82	Sialkot.
17	0	3	2	1	0	2	4	2	N 56° W	N 40° W	1·4	1·5	−0·1	7	− 7	78	− 4	·238	+·013	4·4	−0·1	3	−0·9	3·73	2·65	+1·08	5·65	3·65	+2·00	1·89	Rawalpindi.
18	2	3	2	0	2	3	1	0	E	N 18° E	2·9	2·1	+0·8	3	− 8	71	+ 3	·230	+·017	3·8	+0·8	4	+2·3	1·92	0·81	+1·11	2·66	1·22	+1·44	0·83	Khushab.
11	1	4	2	0	3	5	2	3	S 78° W		1·5			10		85		·253		4·4		3	+1·7	1·33	0·50	+0·83	2·34	0·69	+1·65	0·75	Lyallpur.
12	6	2	1	2	0	0	4	4	N 19° W	N 18° E	2·5	2·5	0	30	+16	73	+ 2	·239	+·012	3·1	−0·2	2	+0·3	0·71	0·60	+0·11	0·94	0·93	+0·01	0·46	Montgomery.
19	8	4	0	0	0	0	0	0	N 15° E	N 45° E	0·6	0·9	−0·3	37	+14	70	− 1	·239	0	2·2	−0·7	1	−0·3	0·54	0·44	+0·10	0·57	0·66	−0·09	0·37	Multan.
																															VII.—North-West Frontier Province.
18	1	0	0	2	10	0	0	0	S 8° E	S 18° W	0·7	1·8	−1·1	33	− 6	66†	− 6	·188†	−·014	3·2	−1·4	3	−0·1	2·21	1·53	+0·63	2·92	2·08	+0·84	1·06	Peshawar.
30	0	0	0	0	0	0	0	1	N 45° W	N 37° W	0·6	1·0	−0·4	3	−15	72‡	+ 1	·209‡	−·001	2·4	−0·8	2	+0·6	0·64	0·52	+0·12	0·74	0·72	+0·02	0·42	D. I. Khan.
																															VIII.—Sind.
27	0	2	1	1	0	0	0	0	N 77° E	N 22° E	1·1	1·6	−0·5	10	− 8	54‡	−10	·186‡	−·033	2·6	−0·5	1	+0·2	0·19	0·28	−0·09	0·33	0·42	−0·09	0·11	Jacobabad.
11	18	1	0	0	0	0	1	0	N 1° W	N 7° E	2·1	5·1	−3·0	60	+ 9	63	+ 6	·257	+·004	0·6	−2·1	2	+1·4	0·23	0·22	+0·01	0·58	0·28	+0·30	0·13	Hyderabad.
1	6	20	3	0	0	0	0	1	N 38° E	N 50° E	6·5	6·7	−0·2	86	+12	53	−10	·268	−·088	2·9	+0·4	3	+1·9	0·34	0·56	+0·28	1·24	0·69	+0·55	0·47	Karachi.
																															IX.—Rajputana.
10	0	2	6	6	2	1	4	0	S 51° E	N 22° W	2·7	2·7	0	27	+ 5	68	+12	·250	+·034	2·9	−0·2	3	+2·0	0·87	0·35	+0·52	0·98	0·55	+0·43	0·66	Bikaner.
3	3	22	1	0	0	2	0	0	N 41° E		4·4			72		48	+ 2	·207	+·012	4·3	+1·3	1	+0·6	0·33	0·15	+0·18	0·33	0·28	+0·05	0·24	Jodhpur.
8	4	7	9	1	0	1	1	0	N 60° E.	N 6° E	3·5	2·4	+1·1	46	+17	57	− 5	·246	−·003	3·7	+0·7	4	+2·9	1·53	0·46	+1·07	1·53	0·68	+0·85	0·96	Jaipur.
28	0	0	0	1	0	2	0	0	S 18° W	N 9° W	1·4	1·6	−0·2	7	−11	69	− 2	·245	−·012	1·2	−1·5	3	+1·9	0·65	0·37	+0·28	0·65	0·68	−0·03	0·40	Ajmer.
16	2	1	2	2	0	4	0	4	N 49° W		1·1			3		61	+ 4	·302	+·051	4·2	+2·8	1	+0·3	0·94	0·27	+0·67	0·94	0·55	+0·39	0·82	Kotah.
																															X.—Bombay.
2	2	15	7	2	1	1	1	0	N 61° E	N 56° E	6·8	6·2	+0·6	62	+ 4	47	0	·234	+·011	2·5	+0·9	1	+0·7	0·15	0·12	+0·03	0·15	0·17	−0·02	0·12	Deesa.
20	4	0	2	0	1	0	4	0	N 34° W	N 45° W	3·7	4·7	−1·0	13	− 5	56	− 4	·275	−·055	2·0	+0·5	2	+1·8	0·46	0·06	+0·40	0·46	0·10	+0·36	0·30	Bhuj.
0	0	15	12	0	2	1	0	1	N 78° E		6·6			74		61	+ 1	·327	+·006	1·6	+0·8	1	+0·8	0·56	0·03	+0·53	0·56	0·08	+0·48	0·56	Jamnagar.
0	5	9	2	1	1	0	2	2	N 27° E*		9·3			59		68	− 1	·404	−·044	1·0	−0·5	2	+1·9	0·97	0·04	+0·93	0·97	0·09	+0·88	0·80	Dwarka.
4	11	4	2	1	0	3	1	5	N 4° W	N 55° E	5·7	3·8	+1·9	49	+ 7	37	−15	·185	−·095	2·3	+1·2	0	−0·2	0	0·04	−0·04	0	0·08	−0·08	0	Rajkot.
1	15	7	1	1	1	0	2	3	N 7° E	N 20° E	6·3	4·3	+2·0	66	− 9	50	− 3	·321	−·008	1·5	+0·2	0	0	0·13	0·02	+0·11	0·13	0·11	+0·02	0·08	Veraval.
0	3	2	0	3	0	2	8	13	N 56° W	N 85° W	5·1	5·0	+0·1	66	+ 1	57	+ 4	·319	+·035	2·1	+0·8	0	0	0·01	0·03	−0·02	0·01	0·11	−0·10	0·01	Bhavnagar Para.
13	7	6	1	2	1	0	0	1	N 33° E	N 5° E	2·0	3·6	−1·6	37	− 5	66	+ 2	·401	+·026	2·2	+1·3	0	−0·2	0·01	0·06	−0·05	0·01	0·10	−0·09	0·01	Surat.
8	0	19	0	1	0	1	1	1	N 42° E	N 48° E	3·0	3·1	−0·1	56	−15	51	+ 4	·316	+·049	2·0	+0·5	1	+1·0	0·18	0·02	+0·16	0·18	0·05	+0·13	0·18	Ahmadabad.
0	5	9	12	4	0	0	1	0	N 67° E	N 58° E	5·5	7·2	−1·7	72	− 9	75	+ 3	·569	+·018	1·4	+0·1	1	+0·9	0·11	0·08	+0·03	0·11	0·14	−0·03	0·11	Bombay.
6	1	6	9	6	2	1	0	0	S 85° E	S 88° E	5·7	5·6	+0·1	56	+ 1	58	− 5	·503	+·005	0·9	−0·1	1	+0·8	0·20	0·10	+0·10	0·20	0·19	+0·01	0·20	Ratnagiri.
1	4	13	6	3	0	0	0	4	N 46° E	S 84° E	5·2	6·0	−0·8	66	−11	84	+ 2	·669	+·020	2·4	+1·1	0	0	0	0·03	−0·03	0	0·22	−0·22	0	Marmagao.
21	4	2	0	0	0	0	0	1	N 7° E	N 62° E	1·6	2·8	1·0	20	−67	88	+ 7	·621	+·061	2·1	+1·2	0	−0·1	0	0·06	−0·06	0	0·30	−0·30	0	Karwar.

* Wind observations for 22 days. † Mean of 29 days. ‡ Mean of 30 days.

Table

(2) Abstract of observations taken at 8 hrs. at 213 stations

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XV.—Madras.																					
30	Mangalore	72	29·950	+·004	29·953	30·001	8th	29·900	1st	77·9	71·2	89·0	—0·1	72·7	+4·1	80·9	+2·0	16·3	93·2	8th	68·1	4th
	Calicut	27	29·985	+·008	29·941	30·044	8th	29·942	17th	77·4	73·9	87·8	+0·4	73·9	+3·6	80·8	+2·0	13·9	89·4	25th	69·6	4th
	Cochin	9	30·003	+·014	29·940	30·055	8th	29·961	17th	78·1	72·5	89·6	+0·3	74·4	+2·6	82·0	+1·5	15·2	93·7	8th	69·8	1st
	Trivandrum	198	29·806	+·027	29·936	29·850	8th	29·764	17th	76·6	73·9	85·2	+1·5	73·7	+1·2	79·5	+1·3	11·5	87·0	24th & 25th	69·8	3rd
31	Pamban	37	29·985	—·003?	29·950	30·045	8th	29·946	28th	78·6	75·7	84·5	+1·8	76·8	+2·3	80·6	+2·1	7·7	86·0	27th	74·3	3rd
	Madura	447	29·593	+·010	29·977	29·653	8th	29·545	28th	77·6	72·7	89·1	+1·7	72·5	+3·7	80·8	+2·7	16·6	92·9	29th	65·8	3rd
	Tuticorin	318	29·730	+·015	29·985	29·799	8th	29·684	25th	75·2	71·1	87·8	+1·0	71·4	+3·7	79·6	+2·3	16·4	92·1	24th	65·2	2nd
	Negapatam	31	30·012	+·014	29·972	30·079	8th	29·972	26th	77·4	73·0	83·5	+1·1	74·1	+2·7	78·8	+1·9	9·4	86·8	25th	68·2	3rd
	Trichinopoly	255	29·808	+·022	29·997	29·873	8th	29·762	25th	77·5	72·7	90·2	+2·7	71·2	+3·7	80·7	+3·2	19·0	94·2	25th	65·1	8th
	Coimbatore	1,341	28·708	+·024	30·000	28·771	6th	28·663	25th	73·0	68·4	87·3	+0·6	67·9	+3·5	77·6	+2·1	19·4	91·2	25th	58·3	3rd
	Salem	913	29·136	+·021	29·998	29·199	8th	29·081	26th	73·9	69·3	90·8*	+2·2*	68·3*	+3·5*	79·5*	+3·1*	22·5*	94·6	20th & 25th	59·6	3rd
	Cuddalore	37	30·019	+·013	29·986	30·098	6th	29·975	26th	75·6	72·5	84·0	+0·7	71·9	+3·9	78·0	+2·3	12·1	87·0	26th	65·2	2nd
	Vellore	707	29·343	+·005	30·005	29·429	7th	29·276	26th	71·3	69·6	86·2	+1·5	67·6	+2·6	76·9	+2·1	18·6	90·8	31st	59·8	2nd
	Madras	22	30·039	+·007	29·992	30·123	7th	29·975	24th	77·0	73·8	85·2	+0·5	72·2	+4·6	78·7	+2·5	13·0	87·4	31st	64·5	2nd
32	Cuddapah	428	29·627	+·010	30·000	29·724	7th	29·557	26th	75·3	70·7	88·7	—0·2	69·0	+3·6	78·8	+1·7	19·7	95·0	30th	62·1	3rd
	Bellary	1,475	28·564	+·014	29·998	28·663	6th	28·497	26th	72·1	65·6	88·5	+0·3	65·6	+4·0	77·1	+2·1	22·9	92·1	27th	60·5	11th
	Kurnool	923	29·126	+·019	30·010	29·225	6th	29·061	26th	71·3	66·1	88·7	0	66·2	+6·0?	77·4	+3·0?	22·5	92·3	31st	57·4	15th
33	Nellore	66	29·996	+·007	29·997	30·089	7th	29·930	24th	74·1	73·2	84·4	—1·5	70·6	+3·6	77·5	+1·1	13·8	88·4	31st	66·1	1st
	Masulipatam	15	30·073	+·013	30·022	30·180	6th	30·004	25th	74·2	71·1	83·4	—0·1	69·7	+3·8	76·6	+1·9	13·7	85·8	29th	63·0	10th
	Cocanada	26	30·067	+·021	30·030	30·169	6th	29·999	25th	73·1	70·3	81·3	—0·3	69·2	+2·9	75·3	+1·3	12·1	84·4	14th	62·6	9th & 10th.
	Vizagapatam	*226*	30·051	+·020	30·028	30·162	6th	29·985	25th	73·7	69·4	80·8	+2·3?	70·1	+2·6	75·5	+2·5?	10·7	85·2	11th	64·2	11th
	Calingapatam	19	30·076		30·033	30·177	6th	30·009	24th	69·5	67·3	82·3		66·2		74·3		16·1	89·5	12th	60·8	4th & 11th.
	Gopalpur	33	30·051	+·037	30·049	30·164	6th	29·978	11th	70·6	67·6	80·4	+0·2	66·8	+4·6	73·6	+2·4	13·6	83·4	12th	63·0	18th
	Bay Islands.																					
1	P. V. Fraser	8	30·090		30·070	30·212	6th	30·016	10th	73·9	68·4											
	Port Blair	58	29·970	+·031	29·958	30·049	7th	29·922	11th	81·7	75·9	86·1	—0·3	78·4	+2·8	82·2	+1·3	7·7	90·4	30th	74·7	10th
	Table Island		29·944	+·009	29·967	30·016	7th	29·885	11th	78·9	74·1	83·5	0	76·7	+1·8	80·1	+0·9	6·8	85·2	30th	73·5	9th
	Kashmir.																					
13	Muzaffarabad		27·782			27·908	29th	27·622	10th	45·7	41·9	57·7		39·2		48·5		18·5	66·3	4th	33·9	11th
	Srinagar	5,204	25·011	+·023	24·982	25·273	4th	24·616	30th	32·2	33·0†	40·5	—0·1	30·4	+3·9	35·4	+1·9	10·1	47·1	27th	18·7	4th
	Gulmarg	*8,569*																				
	Dras	*10,059*	20·828	+·057	20·796	21·199	4th	20·450	30th	—4·0		14·1	—5·1	—13·4	—2·8	0·4	—3·9	27·5	29·7	1st	—34·0	15th
	Leh	*11,503*	19·663	+·014	19·631	19·984	4th	19·322	30th	11·5				7·9	—0·6						— 0·5	14th
	Skardu	*7,505*	22·968	+·016	22·938	23·346	4th	22·583	30th	19·4		31·5	—3·0	16·0	—0·6	23·7	—1·8	15·5	36·0	3rd	6·6	12th
	Gilgit	4,890	25·317	+·045	25·290	25·695	4th	24·967	30th	35·3	33·4†	46·4	+0·8	32·5	+0·5	39·4	+0·7	13·9	51·7	20th	25·7	12th

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

* Mean of 30 days.
† „ „ 14 „

B—*continued.*

in India, etc., in January, 1919—*continued.*

Wind direction. Number of winds from: Calm	N.	N.E.	E	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st December 1918 to 31st Jan. 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XV.—Madras.
0	5	7	19	0	0	0	0	0	N 67° E	S 85° E	5·2	2·3	+2·9	86	+ 8	71	+ 5	·673	+·094	2·0	−0·2	0	− 0·1	0	0·07	− 0·07	0·85	0·57	+ 0·28	0	Mangalore.
14	0	4	5	4	1	0	2	1	S 88° E	N 80° E	3·5	6·1	−2·6	25	−58	83	+ 5	·783	+·104	1·5	−0·2	1	+ 0·5	0·89	0·37	+ 0·52	1·51	1·52	− 0·01	0·88	Calicut.
2	1	9	19	0	0	0	0	0	N 74° E	N 42° E	4·4	3·7	+0·7	86	+ 5	75	+ 2	·725	+·072	1·8	0	6	+ 5·3	5·18	0·59	+ 4·59	8·02	2·35	+ 5·67	2·40	Cochin.
13	0	6	11	1	0	0	0	0	N 77° E	N 44° E	2·7	2·9	−0·2	53	+ 3	87	+10	·796	+·115	3·5	+0·4	4	+ 2·6	2·57	0·63	+ 1·94	6·76	3·03	+ 3·73	1·45	Trivandrum.
0	8	15	4	0	0	0	0	4	N 29° E	N 15° E	8·0	8·3	−0·3	79	+35	87	+ 2	·848	+·048	3·3	−0·4	2	− 1·0	1·19	1·76	− 0·57	8·71	9·40	− 0·69	0·57	Pamban.
1	9	11	6	0	0	0	0	4	N 29° E	N 3° E	4·7	3·7	+1·0	72	− 7	78	+ 1	·739	+·078	6·0	+3·1?	1	+ 0·1	0·27	0·45	− 0·18	1·49	2·26	− 0·77	0·12	Madura.
6	11	12	1	0	0	0	0	1	N 24° E		4·4			71		80	− 3	·712	+·023	4·7	−0·3	2	+ 0·6	0·35	0·83	− 0·48	3·13	3·75	− 0·62	0·14	Pudukkottai.
0	2	13	5	0	0	0	0	11	N 19° E	N 1° W		5·7		66	+ 5	80	− 1	·757	+·027	4·2	−1·0	2	− 0·4	0·75	1·61	− 0·86	9·85	13·45	− 3·60	0·53	Negapatam.
1	5	20	0	0	0	0	1	4	N 25° E	N 18° E	3·2	3·2	0	79	+31	79	0	·743	+·082	2·9	−0·2	1	0	0·30	0·54	− 0·24	3·21	3·23	− 0·02	0·26	Trichinopoly.
6	3	14	6	0	0	0	1	1	N 46° E	N 67° E	2·8	2·1	+0·7	62	−10	78	− 6?	·635	+·009	5·0	+0·7	2	+ 1·1	0·58	0·55	+ 0·03	3·03	1·77	+ 1·26	0·43	Coimbatore.
5	2	15	9	0	0	0	0	0	N 58° E	N 50° E	4·4	3·5	+0·9	76	+34	78	+ 1	·656	+·042	1·7	−1·2	1	+ 0·5	0·27	0·30	− 0·03	1·10	1·31	− 0·21	0·27	Salem.
3	8	2	1	1	0	0	0	16	N 22° W	N 21° W	5·6	1·9	+3·7	69	−10	86	− 2	·759	+·037	4·2	+0·8	0	− 1·8	0·05	1·22	− 1·17	8·84	8·87	− 0·03	0·05	Cuddalore.
30	0	0	0	1	0	0	0	0	S 45° E		2·2			3		90	+ 5	·696	+·076	3·7	+0·8	3	+ 1·4	0·62	1·38	− 0·76	1·45	4·53	− 3·08	0·37	Vellore.
18	4	3	2	2	0	0	0	2	N 34° E	N 16° E	2·6	4·2	−1·6	23	−35	85	+ 2	·792	+·083	3·5	+0·2	1	− 0·5	0·37	1·14	− 0·77	7·27	7·11	+ 0·16	0·30	Madras.
5	0	1	3	16	3	0	0	3	S 49° E	S 65° E				56	+ 2	79	+ 4	·689	+·091	3·0	+0·9	2	+ 1·6	0·68	0·34	+ 0·34	1·26	1·33	− 0·07	0·45	Cuddapah.
4	1	1	5	11	4	2	1	2	S 44° E	S 36° E	2·7	2·6	+0·1	46	+ 4	70	+ 6	·550	+·099	2·7	+0·3	1	+ 0·8	0·13	0·10	+ 0·03	0·18	0·22	− 0·04	0·13	Bellary.
10	0	1	4	9	4	0	2	1	S 43° E	S 80° E	3·0			40	+36	75	+ 4	·577	+·087	2·8	+1·5	1	+ 0·6	0·50	0·15	+ 0·35	0·60	0·42	+ 0·18	0·47	Kurnool.
25	1	2	1	0	1	0	0	1	N 39° E	N 51° W	2·4	2·7	−0·3	10	−41	96	+ 9	·803	+·117	4·5	+0·2	3	+ 1·7	1·32	1·58	− 0·26	4·02	4·58	− 0·56	0·67	Nellore.
2	6	17	2	3	1	0	0	0	N 47° E	N 14° E	3·9	3·4	+0·5	72	− 3	85	− 1	·718	+·055	3·1	+0·9	0	− 0·3	0	0·21	− 0·21	1·85	1·14	+ 0·71	0	Masulipatam.
0	6	16	5	0	0	0	0	4	N 34° E	N 7° W	7·6	5·7	+1·9	79	− 2	86	+ 9	·710	+·123	5·3	+2·8	2	+ 1·7	0·76	0·15	+ 0·61	0·76	1·12	− 0·36	0·41	Cocanada.
4	3	3	1	0	0	1	11	8	N 54° W	N 78° W	5·0			56	+ 7	79	+ 7	·664	+·110	5·4	+2·9	2	+ 1·5	0·92	0·73	+ 0·19	0·84	1·99	− 1·05	0·66	Vizagapatam.
1	6	4	3	1	0	0	4	12	N 19° W		5·8			58		88		·641		4·2		3	+ 2·3	0·43	0·23	+ 0·20	0·43	1·72	− 1·29	0·15	Calingapatam.
0	14	3	0	0	0	0	0	14	N 17° E	N 21° W	5·1	6·1	−1·0	92	+11	85	+ 5	·635	+·108	4·2	+3·5	3	+ 2·6	1·70	0·21	+ 1·49	1·78	1·05	+ 0·73	0·95	Gopalpur.
																															Bay Islands.
1	7	14	3	0	0	1	2	2	N 24° E					65		74		·622		4·0		4	+ 3·4	0·71	0·24	+ 0·47	0·71	1·57	− 0·86	0·32	P. V. Fraser.
1	4	11	10	4	0	0	0	1	N 64° E	N 23° E	6·2	4·7	+1·5	72	+ 6	76	− 5	·816	+·027	3·0	−1·1	2	0	0·40	1·62	− 1·22	7·29	8·49	− 1·20	0·27	Port Blair.
0	11	11	9	0	0	0	0	0	N 41° E		6·9			82		79	+ 5	·780	+·071	3·0	−1·9	0	− 0·7	0	0·86	− 0·86	2·23	3·17	− 0·94	0	Table Island.
																															Kashmir.
22	0	0	0	3	0	5	1	0	S 18° W		1·8			19		73		·221		4·8		10	+ 3·0	5·12	4·58	+ 0·54	7·39	6·87	+ 0·52	1·40	Muzaffarabad.
12	1	2	2	5	5	2	0	2	S 34° E	S 26° E	1·8	2·3	−0·5	23	+ 5	92*		·177*		9·5	+1·8	7	+ 0·8	5·42	2·89	+ 2·53	8·80	4·25	+ 4·55	1·70	Srinagar.
																															Gulmarg.
27	0	0	1	0	0	1	0	2	N 57° W		0·3			3						6·6	+0·5	9	+ 0·1	2·96	2·98	− 0·02	5·86	4·64	+ 1·22	0·73	Dras.
21	3	4	2	0	0	0	1	0	N 34° E	S 13° W	1·5	0·7	+0·8	23	−15					7·3	+0·6	0	− 1·1	0·28	0·38	− 0·10	0·39	0·55	− 0·16	0·07	Leh.
26	0	0	1	0	1	2	1	0	S 31° W		0·3			7						7·8	+1·1	3	+ 0·1	1·22	1·02	+ 0·20	2·01	1·40	+ 0·61	0·49	Skardu.
25	0	0	0	0	1	3	0	2	S 63° W		0·5			10		74*		·158*		6·7	−0·6	2	+ 1·1	0·68	0·25	+ 0·43	0·80	0·36	+ 0·44	0·32	Gilgit.

* Mean of 14 days.

Table

(2) Abstract of observations taken at 8 hrs. at 213 stations

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Baluchistan.																					
15	Fort Sandeman	4,614	25·499		25·468	25·637	7th	25·177	29th	32·9	34·6*	56·8		29·8		43·3		27·0	74·9	1st	23·3	11th & 12th.
	Quetta	5,502	24·715	+·021	24·675	24·860	2nd	24·434	29th	28·9	35·3†	48·0	−2·9	25·7	−3·0	36·8	−2·9	22·3	58·1	15th	16·7	11th
	Chaman	4,311	25·791	+·027	25·753	25·943	7th	25·515	28th	35·8	36·4‡	50·1	−2·4	32·4	−3·2	41·2	−2·8	17·7	62·7	4th	25·5	30th
	Kalat	6,630	23·777		23·739	23·939	2nd	23·482	29th	26·2	34·9§	47·7	−3·0	26·7		35·2		25·0	62·3	4th	14·2	10th
	Dalbandin	2,772	27·288		27·251	27·456	2nd	27·007	28th	36·4	38·1‖	58·6		37·7		45·7		25·9	70·2	15th	23·5	12th
	Pasni		30·128		30·088	30·256	7th	29·901	28th	56·7	54·9	75·7		50·2		62·9		25·5	82·6	16th	43·6	30th
	Panjgur		26·873		26·831	27·000	7th	26·610	26th	36·7	38·0¶	60·8		35·5		48·2		25·3	70·0	4th	27·4	11th
	Robat (§§)		27·008		26·966	27·210	15th	26·728	27th	39·3	36·9‖	58·2		26·2		42·2		32·0	69·0	15th	20·4	29th
	Seistan		28·441			28·600	2nd	28·110	27th	34·8	37·4**	55·0		31·3		43·1		23·7	64·5	7th	23·7	12th
	Hill stations, excluding Kashmir and Baluchistan.																					
	Parachinar	6,000	24·509	+·018	24·485	24·619	7th	24·177	29th	33·0	(n) 33·7	50·4	+0·7	29·1	+0·4	39·7	+0·5	21·3	59·4	4th	20·5	10th
	Cherat	*4,256*	25·814	+·046	25·782	25·936	6th	25·477	29th	42·0	35·9**	48·6	−0·8	37·2**	−0·8**	42·1**	−0·8	11·4	55·6	6th	31·5	31st
	Drosh (c)		25·263			25·425	4th	24·925	30th	33·3	32·9††	41·9	−6·9	31·1	+0·5	[illegible]	−3·2	10·8	50·1	4th	26·4	12th
	Murree	6,333	23·842	−·010	23·810	23·952	6th	23·556	29th	37·1	34·0‡‡	45·4	−5·0	34·4	0	39·9	−1·5	9·0	54·2	4th & 5th	24·8	9th
	Simla	7,232	23·131	+·036	23·093	23·252	4th	22·875	30th	36·9	33·9‖‖	44·4	−1·3	34·4	−0·7	39·4	−1·0	10·0	55·7	5th	24·5	31st
	Chakrata	7,072	23·409		23·369	23·548	6th	23·192	30th	39·0	35·5§§	47·8	−2·9	34·7	−1·2	41·2	−2·1	13·1	61·7	5th	23·3	31st
	Mukteswar	7,592	22·896	+·051	22·855	23·028	6th	22·715	30th	38·5	34·7‖‖	47·4	−2·4	32·6	−2·7	40·0	−2·5	14·8	65·5	5th	23·8	31st
	Darjiling	7,432	23·016	+·045	22·971	23·163	19th	22·943	31st	35·0	36·9	50·1	+3·5	36·3	+1·6	43·2	+2·5	13·8	55·9	7th	32·9	15th
	Shillong	4,920	25·259	+·069	25·211	25·361	6th	25·196	13th	49·7	44·9	61·8	+1·2	41·8	+3·3	51·8	+2·3	20·0	67·2	19th	37·0	15th
	Cherrapunji	4,309	25·816	+·066	25·767	25·936	19th	25·752	11th	53·8	48·4	61·8	+2·4	46·0	+2·3	54·9	+2·3	13·8	66·9	19th	43·9	21st
	Netarhat		26·232		26·181	26·250	29th & 30th	26·211	5th	54·8	46·6	60·6		?		?		?	62·2	16th	?	
	Maymyo	3,546	26·554	+·054	26·499	26·654	19th	26·501	13th	50·6	50·0	71·2	+0·4	42·9	+4·2	57·0	+2·3	28·3	75·4	31st	36·0	16th
	Pachmarhi	3,528	26·564	+·007	26·511	26·678	7th	26·448	29th	57·9	53·6	71·2	−0·5	51·6	+4·1	61·4	+1·8	19·6	80·6	7th	45·1	14th
	Mount Abu	3,945	26·128	+·001	26·078	26·228	7th	25·940	29th	56·1	46·9	64·3	−1·6	50·1	−0·9	57·2	−1·3	14·2	72·0	5th	39·9	30th
	Mercara	2,781	26·304	+·014	26·237	26·370	6th	26·272	26th	62·6	59·8	78·8	+1·0	57·8	+0·8	68·3	+0·9	21·0	86·0	22rd	53·0	8rd
	Ootacamund	*7,327*	23·125	+·040	23·061	23·182	7th	23·070	17th	55·5	49·1	67·4	+2·5	44·1	+0·9	55·8	+1·7	23·3	71·7	31st	38·2	14th & 18th.
	Kodaikanal	7,688	22·887	+·022	22·822	22·940	7th	22·840	17th	55·2	48·6	64·4	+1·4	47·8	+0·7	56·1	+1·1	16·6	69·6	2nd	42·4	17th
	Extra India.																					
	Singapore (a)	10	29·914	−·046	29·845	29·988	21st	29·857	25th, 26th & 30th.	81·7		86·9	0	74·1	+1·1	80·5	+0·5	12·8	90·0	4 days.	72·0	14th
	Penang (a)	17	29·814	−·111	29·756	29·896	17th	29·742	5th	82·6		90·0	+0·7	72·6	−0·7	81·3	0	17·4	92·0	9 days.	70·0	4 days
	Trincomalee	99	29·909	+·009	29·937	29·973	8th	29·855	17th	77·6	74·7	83·3	−0·1	75·7	+1·4	79·5	+0·7	7·6	88·7	27th	70·0	12th
	Colombo	24	29·970	+·010	29·920	30·045	8th	29·922	17th	73·6	72·1	88·0	+0·4	73·0	+0·8	80·5	+0·6	15·0	91·8	17th	65·9	12th
	Hambantota	64	29·932		29·923	30·002	8th	29·881	17th	73·8	72·1§§	85·9		75·2		79·6		12·7	90·5	17th	70·2	2nd
	Minicoy	7	30·021	+·036		30·063	19th	29·992	24th													
	Amini Divi	*13*	30·004	+·005	29·945	30·061	6th	29·946	17th	82·5	75·7	88·3	+2·9P	75·7	+1·5	82·0	+2·2P	12·6	90·8	29th	71·3	1st
	Gyantse	13,110																				
	Pharijong	14,400																				
	Gangtok	5,667	24·392	−·027	24·347	24·526	7th	24·262	23rd	46·1	43·1	61·1	+3·6	44·1	+11·9	52·6	+7·7	17·0	66·6	1st	39·9	27th

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

(a) 9 hrs. observations.
(c) Aneroid.

* Mean of 7 days.
† " " 6 "
‡ " " 17 "
§ " " 4 "
‖ " " 19 "
¶ " " 21 "
** " " 16 "
†† " " 11 "
‡‡ " " 10 "
§§ " " 30 "
‖‖ " " 24 "

B—*continued.*

in India, etc., in January, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 31st January 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
21	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Baluchistan.
16	0	1	4	5	2	2	1	0	S 43° E		2·7			27		75*		·168*		2·9		2	−0·6	0·39	0·82	−0·43	0·92	1·21	−0·29	0·20	Fort Sandeman.
25	0	0	1	1	2	0	1	1	S	N 13° W	2·2	2·1	+0·1	6	+1	79†		·177†		5·0	+1·2	3	−1·8	0·85	2·01	−1·16	3·25	2·93	+0·32	0·38	Quetta.
8	1	0	12	6	2	1	0	0	S 69° E (b)	S 58° E	3·6	5·0	−1·4	53	−7	72‡	+1	·174‡	−·004	4·7	−0·3	3	−1·0	0·94	1·53	−0·59	3·80	2·61	+1·19	0·28	Chaman.
27	0	0	0	1	0	0	1	2	N 66° W	S 30° W	3·5			7	−42	74§		·167§		5·0		3	−0·6	0.51	1·31	−0·80	1·78	2·35	−0·57	0·30	Kalat.
17	0	7	4	1	0	0	2	0	N 61° E		2·8			30		82‖		·207‖		5·6		3	+1·7	1·22	0·58	+0·64	2·49	0·96	+1·53	0·91	Dalbandin.
1	8	3	1	1	1	0	2	14	N 24° W		5·1			66		89		·412		3·6		3	+1·3	6·80	1·12	+5·68	6·80	1·83	+4·97	4·47	Pasni.
5	1	12	10	2	1	0	0	0	N 71° E		4·5			69		70¶		·186¶		4·9		2		1·16			1·77			0·88	Panjgur.
5	0	0	0	1	0	12	12	0	S 65° W		2·3			72		60‖ **		·161‖ **		2·2		2	+0·7	0·72	0·62	+0·10	2·36	1·42	+0·96	0·57	Robat.
21	1	0	0	0	0	0	0	9	N 41° W		4·4			30		81		·199		2·1		3		0·71			1·08			0·49	Seistan.
																															Hill stations, excluding Kashmir and Baluchistan.
31	0	0	0	0	0	0	0	0	Calm		0·1			(a)		73 ††		·158 ††		3·9	−0·1	4	−0·6	1·29	2·26	−0·97	3·06	3·47	−0·41	0·47	Parachinar.
10	12	0	0	1	0	0	0	8	N 16° W	N 12° W	7·4 ‡‡	9·8	−2·4	59	−11	57 §§	0	·144 §§	−·002	4·0	−0·2	3	−1·1	4·93	2·62	+2·31	6·07	3·97	+2·10	2·78	Cherat.
24	0	1	4	2	0	0	0	0	S 83° E		3·8			20		79 ‖‖		·159 ‖‖		5·3	+1·1	4	+1·1	1·18	0·92	+0·26	2·65	1·93	+0·72	0·38	Drosh.
9	2	3	0	10	7	0	0	0	S 43° E	N 62° E	5·5	6·6	−1·1	46	−3	61‡ ‡‡	−1	·139‡ ‡‡	+·003	4·7	−0·2	6	0	2·73	3·99	−1·26	4·99	5·48	−0·49	1·10	Murree.
																65 ¶¶	+12	·115 ¶¶	+·025	5·0	+0·2	11	+6·2	7·35	2·79	+4·56	7·69	4·00	+3·69	1·74	Simla.
10	2	11	5	0	0	1	1	1	N 47° E	N 34° E	3·5	4·2	−0·7	46	+1	62 §§	+3	·155 §§	+·021	5·2	+1·3	11	+5·7	14·35	4·43	+9·92	15·51	5·74	+9·77	4·45	Chakrata.
4	0	2	13	6	2	1	3	0	S 70° E		5·6			53		71 †††	+16	·156 †††	+·030	6·2	+2·4	9	+5·1	8·83	2·21	+6·62	9·14	2·99	+6·15	2·16	Mukteswar.
13	1	1	3	2	1	6	2	1	S 13° W	S 57° E	2·2	2·7	−0·5	17	−6	83	+2	·197	+·010	6·4	+2·3	3	+1·6	0·89	0·61	+0·28	1·00	0·89	+0·11	0·50	Darjiling.
22	0	0	3	1	0	5	0	0	S 3° E		1·6			14		69	−1	·244	+·026	2·9	+1·5	2	+1·2	0·82	0·37	+0·45	0·82	0·60	+0·22	0·51	Shillong.
7	2	5	4	1	2	5	5	0	S 23° W		3·4			2		68	−4	·280	+·009	2·5	+0·6	1	−0·3	0·68	0·54	+0·14	0·73	0·95	−0·23	0·63	Cherrapunji.
0	3	0	0	0	0	1	14	13	N 65° W		4·5			84		54		·226		2·9		9		9·00			9·00			2·15	Netarhat.
31	0	0	0	0	0	0	0	0	Calm		0·6			(a)		96	+8	355	+·041	2·5	+0·7	0	−0·4	0	0·11	−0·11	1·00	0·75	+0·25	0	Maymyo.
12	0	0	2	7	4	5	1	0	S 11° E	S 3° E	2·6	2·6	0	40	+22	77	+16	364	+·076	3·2	+1·3	8	+6·8	5·43	0·55	+4·88	5·49	1·06	+4·43	1·83	Pachmarhi.
11	3	4	3	2	2	3	3	0	N 81° E	N 2° W	5·0	3·3	+1·2	7	−11	49	+6	·220	+·024	2·8	+0·9	2	+1·4	0·39	0·28	+0·11	0·39	0·42	−0·03	0·24	Mount Abu.
8	2	19	10	0	1	0	0	0	N 65° E	N 74° E	2·6	3·6	−1·0	62	−12	85	+6	·483	+·051	3·3	−0·8	0	−0·3	0·09	0·17	−0·08	0·91	0·95	−0·04	0·09	Mercara.
6	0	1	12	9	2	0	0	1	S 69° E		2·3			62		65	+9	·283	+·056	2·7	+0·3	2	+0·4	0·67	1·43	−0·76	1·38	3·59	−2·21	0·39	Ootacamund.
1	2	4	7	8	2	0	1	6	N 82° E		7·7			33		64	+6	276	+·040	2·9	−0·1	6	+2·3	5·24	2·43	+2·81	10·09	7·45	+2·64	2·06	Kodaikanal.
																															Extra India.
7	6	16	0	0	0	0	0	2	N 27° E					72						7·4	+2·4	16	+2·7	12·82	12·33	+0·49	22·15	23·47	−1·32	3·87	Singapore.
0	26	6	0	0	0	0	0	5	N 1° E					92								5	−2·0	2·09	3·76	−1·67	14·92	9·36	+5·16	1·02	Penang.
11	5	9	4	0	0	1	0	1	N 38° E	N 30° E	5·0	5·6	−0·6	46	−19	87	+2	·821	+·021	5·2	+1·2	10	+2·6	8·91	5·58	+3·33	23·72	19·85	+3·87	2·58	Trincomalee.
22	1	8	0	0	0	0	0	0	N 41° E	N 37° E	3·0	6·3	−3·3	30	−51	93	+13	·467 †††	−·006	6·3	+2·7	5	+0·2	3·09	3·50	−0·41	7·16	9·05	−1·89	1·04	Colombo.
5	12	12	0	1	0	0	0	1	N 22° E		7·3			69		91		·762		4·2		2		0·80			3·01			0·42	Hambantota.
0	12	14	3	1	0	1	0	0	N 32° E	N 42° E	2·7	4·7	−2·0	78	+13					1·1	−2·1	3	+0·5	2·93	1·70	+1·23	8·19	5·29	+2·90	1·87	Minicoy.
1	12	11	2	0	0	0	0	5	N 15° E		3·9			78		72	−1	·797	+·013	4·3	+0·3	2	+1·2	0·28	0·46	−0·18	5·76	1·59	+4·17	0·18	Amini Divi.
																									0·01			0·01			Gyantse.
																									0·04			0·09			Pharijong.
29	0	1	0	1	0	0	0	0	E		?			6		79	+1	·248	+·013	1·3	−1·8	3	+0·3	1·38	0·91	+0·47	1·74	2·03	−0·29	0·90	Gangtok.

* Mean of 7 days.
† " " 6 "
‡ " " 17 "
§ " " 4 "
‖ " " 19 "
¶ " " 21 "

** Mean of 16 days.
†† " " 12 "
‡‡ " " 16 "
§§ " " 20 "
‖‖ " " 11 "
¶¶ " " 24 "

††† Mean of 30 days.

(a) Indeterminate.
(b) Wind observation for 30 days.

Table

(2) Abstract of observations taken at 8 hrs. at 213

Number of sub-division.	Station.	Height of barometer above sea level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Extra India—*concld.*																					
	Gartok (*c*)	15,100																				
	Kashgar (*c*)	4,255	25·686	—·044		26·250	4 days	25·350	28th	14·3	?	29·5	−3·9	10·0	−1·8	19·8	−2·9	19·5	50·3	16th	4·8	2nd
	Kabul (*c*)	...	24·263	—·072		24·400	2nd	23·860	29th	22·0	33·7?‡	38·9	−6·8	17·3	—0·5	28·1	−3·7	21·6	45·6	7th	8·0	26th
	Meshed	3,104																				
	Jask	13	30·116	+·027	30·083	30·256	7th	29·780	26th	63·6	59·5	74·9	+1·1	60·2	−0·4	67·6	+0·2	14·7	78·0	9th	53·4	29th
	Muscat	20	30·171	+·007	30·089	30·248	7th	29·886	26th	68·0	62·0	76·7	+3·2	66·1	—1·0	71·4	+1·1	10·6	84·4	27th	62·6	30th
	Bushire	14	30·100	—·008	30·076	30·216	7th	29·892	26th	58·1	55·7	66·5	+2·1	55·3	+3·9	60·9	+3·0	11·2	74·3	13th	47·8	29th
	Busrah	25	30·131	—·049	30·125	30·301	9th	29·894	19th	52·0	52·0	65·2	+5·3	48·6	+4·9	56·9	+5·1	16·6	72·7	13th	39·0	28th
	Ispahan (*c*)	*5,817*	24·281	+·041		24·490	8th	23·980	26th	32·7	(*a*) 34·0?	50·0	+2·7	31·0	+7·2	40·5	+4·9	19·0	57·4	20th	21·2	29th
	Tehran (*c*)	*4,002*	25·870	—·050		26·080	8th	25·650	26th	36·4	(*b*) 32·8	46·0	+2·4	32·6	+6·5	39·3	+4·5	13·4	53·3	15th	24·2	29th
	Baghdad	127	30·001	—·048		30·154	15th	29·542	19th	49·7	47·9	61·9	+2·4	48·3	+10·1	55·1	+6·3	13·6	67·0	9th	39·2	29th
	Aden	94	29·970	—·014	29·997	30·040	9th	29·880	27th	75·5	70·4	79·4	—0·7	74·0	+1·5	76·7	+0·4	5·4	82·8	27th	70·1	2nd
	Zanzibar	72	29·938	+·022	29·936	30·016	7th	29·884	22nd	82·1	77·6	86·0	—0·1	79·9	+0·5	83·0	+0·2	6·1	88·3	29th	76·2	1st

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level, in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.
(*c*) Aneroid.

* Mean of 30 days.
† " " 28 "
‡ " " 3 "
(*a*) " " 15 "
(*b*) " " 26 "

C.

and fifth class stations in India, etc., in January, 1919.

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st December 1918 to 31st January 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				II.—Assam.
...	...	...	...	...	85	− 9	·364	+·001	...	...	0	−2·2	0·09	0·96	−0·87	0·09	1·43	−1·34	0·09	Bishnath.
...	...	...	...	...	87	− 4	·482	+·128	...	...	0	−1·8	0·07	0·72	−0·65	0·07	0·95	−0·88	0·07	Borjuli.
...	...	...	...	...	88	+ 4	·445	+·029	...	...	1	−0·8	0·27	1·38	−1·11	0·55	1·84	−1·29	0·25	Chandkhira.
...	...	...	...	...	92	− 3	·370	+·019	...	...	1	−2·5	0·61	1·62	−1·01	0·71	2·15	−1·44	0·25	Doom Dooma.
...	...	...	...	...	92	− 4	·377	+·034	...	...	0	−4·0	0·25	1·41	−1·16	0·27	1·98	−1·71	0·07	Dikom.
...	...	...	...	...	91	− 1	·407	+·016	...	...	1	−2·1	0·16	1·00	−0·84	0·16	1·54	−1·38	0·13	Golaghat.
...	...	...	...	...	95	+ 1	·461	+·053	...	...	1	−0·7	0·18	1·54	−1·36	0·18	2·06	−1·88	0·18	Hailakandi.
...	...	...	...	...	93	− 2	·412	+·013	...	...	1	−1·5	0·15	1·14	−0·99	0·43	1·80	−1·37	0·10	Jorehat.
...	...	...	...	...	90	...	·430	...	...	...	2	+1·0	0·53	·047	+0·06	0·59	0·77	−0·18	0·23	Lumding.
...	...	...	...	...	76	− 2	·437	+·061	...	...	1	−0·4	0·32	0·65	−0·33	0·32	1·19	−0·87	0·25	Messa.
...	...	...	...	...	88	− 7	·378	+·046	...	...	0	−1·2	0·13	0·39	−0·26	0·13	0·82	−0·69	0·05	Panerihat.
																				III.—Bengal.
...	...	...	...	...	...	...	...	...	...	...	0	−0·9	0	0·32	−0·32	0	0·58	−0·58	0	Comilla.
...	...	...	...	...	80	− 7	·438	−·027	...	...	0	−1·0	0·14	0·29	−0·15	0·27	0·73	−0·46	0·07	Brahmanbaria.
...	...	...	...	...	...	...	...	...	...	...	2	+1·0	0·85	0·49	+0·36	0·94	0·63	+0·31	0·60	Faridpur.
...	...	...	...	...	70	−16	·457	+·051	...	...	2	+1·2	0·57	0·25	+0·32	0·64	0·58	+0·06	0·30	Goalundo.
...	...	...	...	...	82	+ 1	·454	+·044	...	...	2	+1·4	0·80	0·32	+0·48	0·83	0·59	+0·24	0·51	Pabna.
...	...	...	...	...	...	...	...	...	...	...	2	+1·3	0·54	0·35	+0·19	0·54	0·47	+0·07	0·42	Sirajganj.
...	...	...	...	...	...	...	...	...	...	...	2	+1·1	1·73	0·35	+1·38	1·75	0·42	+1·33	1·05	Rampur Boalia.
...	...	...	...	...	...	...	...	...	...	...	3	+2·0	1·58	0·59	+0·99	1·58	0·65	+0·93	0·73	Malda.
...	...	...	...	...	...	...	...	...	...	...	2	+1·1	0·44	0·38	+0·06	0·44	0·43	+0·01	0·24	Rangpur.
...	...	...	...	...	90	− 6	·361	+·032	...	...	2	+0·9	0·40	0·49	−0·09	0·40	0·70	−0·30	0·28	Dam Dim.
...	...	...	...	...	63	−17	·367	−·028	...	...	1	+0·1	0·33	0·40	−0·07	0·33	0·78	−0·45	0·25	Kalchini.
...	...	...	...	...	65	−16	·388	+·013	...	...	2	+0·8	0·29	0·62	−0·23	0·39	0·99	−0·60	0·23	Nagrakata.
...	...	...	...	...	...	...	...	...	...	...	1	+0·5	0·55	0·21	+0·34	0·55	0·34	+0·21	0·40	Cooch Behar.
...	...	...	...	...	...	...	...	...	...	...	2	+1·0	0·68	0·49	+0·19	0·73	0·60	+0·13	0·31	Krishnagar.
...	...	...	...	...	...	...	...	...	...	...	9	+7·9	4·89	0·43	+4·46	4·89	0·52	+4·37	1·50	Bankura.
...	...	...	...	...	...	...	...	...	...	...	7	+5·9	2·97	0·48	+2·49	2·97	0·60	+2·37	0·94	Raniganj (Asansol).
																				IV.—Bihar and Orissa.
...	...	...	...	...	...	...	...	...	...	...	9	+7·5	4·45	0·69	+3·76	4·51	0·92	+3·59	1·68	Hazaribagh.
...	...	...	...	...	...	...	...	...	...	...	3	+1·9	0·79	0·52	+0·27	0·79	0·62	+0·17	0·45	Bhagalpur.
...	...	...	...	...	...	...	...	...	...	...	2	+0·8	1·06	0·57	+0·49	1·06	0·64	+0·42	0·65	Muzaffarpur.
...	...	...	...	...	...	...	...	...	...	...	2	+0·8	0·80	0·52	+0·28	0·80	0·68	+0·12	0·65	Motihari.
...	...	...	...	...	...	...	...	...	...	...	4	+2·7	1·35	0·60	+0·75	1·35	0·73	+0·62	0·65	Chapra.
...	...	...	...	...	...	...	...	...	...	...	4	+2·8	2·26	0·65	+1·61	2·28	0·82	+1·46	1·12	Arrah.
...	...	...	...	...	...	...	...	...	...	...	7	+5·7	2·80	0·58	+2·22	2·83	0·83	+2·00	0·84	Dehri.

Table C.—Abstract of observations taken at 8 hrs. at 59 fourth and fifth class stations in India, etc., in January, 1919.

Table

Abstract of observations taken at 8 hrs. at 59 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	II.—Assam.																								
9	Bishnath	54·5	52·2	75·3	+2·5	48·2	+3·3	61·7	+2·9	27·1	81·5	30th	41·3	3rd	...	...	...	...	...	...	...	...	...	...	...
	Borjuli	61·8	59·6	76·7	+1·9	48·7	+0·8	62·7	+1·3	28·0	81·0	7th, 30th & 31st.	40·4	17th	...	...	...	...	...	...	...	...	...	...	...
	Chandkhira	56·1	55·8	80·6	+2·7	56·0	+0·7	65·3	+1·7	30·6	85·6	4 days	40·1	15th	...	...	...	...	...	...	...	...	...	...	...
	Doom Dooma	52·6	51·5	76·6	+12·5	49·0	+3·9	62·8	+8·2	27·6	82·1	7th & 30th.	41·0	16th	...	...	...	...	...	...	...	...	...	...	...
	Dikom	53·3	52·1	74·0	+2·5	47·3	+1·9	60·7	+2·2	26·7	82·0	30th	38·6	18th	...	...	...	...	...	...	...	...	...	...	...
	Golaghat	55·8	54·4	73·5	+1·4	48·3	...	60·9	...	25·2	78·1	30th	39·6	16th	...	...	...	...	...	...	...	...	...	...	...
	Hailakandi	58·2	57·4	79·2	+1·9	?	...	?	...	?	88·4	28th	?	?	...	...	...	...	...	...	...	...	...	...	...
	Jorehat	55·6	54·4	74·3	+1·9	50·5	+1·3	62·4	+1·6	23·8	80·3	30th	41·2	1 th	...	...	...	...	...	...	...	...	...	...	...
	Lumding*	57·9*	56·2	74·7	...	49·2	...	61·9	...	25·5	78·9	28th	41·0	16th & 17th.	...	...	...	...	...	...	...	...	...	...	...
	Messa	63·0	58·7	79·0	−0·3	44·2	−0·4	61·6	−0·3	34·8	81·7	28th	39·8	21st	...	...	...	...	...	...	...	...	...	...	...
	Panerihat	54·7	52·8	76·8	+2·4	45·8	−0·4	61·3	+1·0	31·0	80·4	1st	38·8	14th	...	...	...	...	...	...	...	...	...	...	...
	III.—Bengal.																								
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Brahmanbaria	61·7	58·2	80·1	+2·4	54·5	+1·6	67·3	+2·0	25·6	83·6	13th	50·4	17th	...	...	...	...	...	...	...	...	...	...	...
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Goalundo	66·7	61·0	78·2	+0·9	52·5	+2·2	65·3	+1·5	25·7	84·0	12th	41·3	16th	...	...	...	...	...	...	...	...	...	...	...
	Pabna	61·5	58·5	80·1	+0·9	55·7	+4·7	67·9	+2·8	24·4	85·2	13th	47·2	16th	...	...	...	...	...	...	...	...	...	...	...
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dam Dim	52·6	51·1	82·3	+1·6	44·2	+0·3	63·3	+0·9	38·1	89·1	6th	38·0	14th	...	...	...	...	...	...	...	...	...	...	...
	Kalchini	62·9	56·2	77·5	+2·4	46·8	+1·2	62·1	+1·8	30·7	81·1	6th & 7th.	39·0	14th	...	...	...	...	...	...	...	...	...	...	...
	Nagrakata	64·3	57·6	76·1	+1·8	52·1	+0·3	64·1	+1·1	24·0	81·6	6th	43·0	14th	...	...	...	...	...	...	...	...	...	...	...
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raniganj (Asansol)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IV.—Bihar and Orissa.																								
7	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzaffarpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Motihari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Mean of 28 days.

Table

Abstract of observations taken at 8 hrs. at 59 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	V.—United Provinces of Agra and Oudh.																								
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehra Dun	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...	...
	IX.—Rajputana.																								
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XII.—Central Provinces.																								
23	Chhindwara	58·8	53·9	77·4	...	54·4	...	65·9	...	23·0	84·7	7th	49·9	13th	12	4	6	3	1	1	1	0	3	N 32° W	...
	XIII.—Hyderabad.																								
27	Parbhani	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XV.—Madras.																								
31	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Anantapur	72·2	69·9	88·2	...	66·2	...	77·2	...	22·0	96·0	26th	56·2	10th	...	...	...	...	...	...	...	...	...	...	...
33	Guntur	72·3	70·3	87·7	...	67·4	...	77·5	...	20·3	90·2	21st	60·0	9th	...	...	...	...	...	...	...	...	...	...	...
	Korapat	61·3	59·3	80·2	...	56·4	...	68·3	...	23·8	84·8	13th	48·3	1st	...	...	...	...	...	...	...	...	...	...	...
	Bay Islands.																								
1	Car Nicobar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kashmir.																								
13	Jammu	50·7	47·1	64·0	...	48·2	...	56·1	...	15·8	75·7	3rd	43·3	11th	0	13	15	1	2	0	0	0	0	N 31° E	...
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kargil	7·5	...	22·8	...	−10·4	...	6·2	...	33·2	36·7	3rd	−27·0	14th	9	0	0	0	20	0	0	0	2	S 45° E	...
	Baluchistan.																								
15	Harnai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill stations, exclusive of Kashmir.																								
	Panighatta	59·0	53·8	75·0	+1·7	54·8	+2·7	64·9	+2·2	20·2	78·1	27th	48·9	14th	...	...	...	...	...	...	...	...	...	...	...
	Kurseong	54·4	53·4	59·4	+3·1	45·1	+0·3	52·3	+1·7	14·3	64·3	6th	40·0	21st	...	...	...	...	...	...	...	...	...	...	...
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ringim	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dharampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mussooree	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Poo	...	...	36·7	−3·4	20·1	−2·7	28·4	−3·1	16·6	44·1	1st	10·2	13th	12	3	2	4	1	0	3	1	5	N 6° W	...
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bakloh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pishin	...	...	42·3	−1·9	22·0	−2·3	35·6	−2·1	27·3	60·2	5th	15·0	10th & 11th	...	...	...	...	...	...	...	...	...	...	...

C—*continued.*

and fifth class stations in India, etc., in January, 1919—*continued.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st December 1918 to 31st January, 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				V.—United Provinces of Agra and Oudh.
...	...	...	...	...	...	...	...	...	...	...	6	+3·6	5·70	1·26	+4·44	5·70	1·70	+ 4·00	1·57	Meerut.
...	...	...	...	...	...	...	...	...	...	...	10	+6·2	6·25	2·35	+3·90	6·38	3·16	+ 3·22	1·38	Dehra Dun.
																				IX.—Rajputana.
...	...	...	...	...	...	...	...	...	...	...	0	−0·3	0·09	0·13	−0·04	0·09	0·23	− 0·14	0·05	Udaipur.
																				XII.—Central Provinces.
3·3	...	...	32	...	72	...	·360	...	4·4	...	5	+4·1	3·23	0·52	+2·71	3·71	1·14	+ 2·57	1·65	Chhindwara.
																				XIII.—Hyderabad.
...	...	...	...	...	...	...	...	...	...	...	2	+1·7	0·99	0·09	+0·89	1·81	0·39	+ 1·42	0·70	Parbhani.
																				XV.—Madras.
...	...	...	...	...	...	...	...	...	...	...	3	+1·0	5·11	1·13	+3·98	11·61	5·39	+ 6·22	4·08	Tinnevelly.
...	...	...	...	...	89	...	·703	...	3·3	...	0	−0·2	0	0·03	−0·03	0	0·30	− 0·30	0	Anantapur.
...	...	...	...	...	90	...	·717	...	1·0	...	2	+1·4	0·31	0·28	+0·03	0·38	0·28	+ 0·10	0·18	Guntur.
...	...	...	...	...	89	...	·485	...	...	...	2	...	1·32	...	...	1·42	...	...	1·20	Koraput.
																				Bay Islands.
...	...	...	...	...	...	...	...	...	...	...	4	−0·6	0·87	4·43	−3·56	10·95	11·99	− 1·04	0·29	Car Nicobar.
																				Kashmir.
...	...	...	81	...	76	...	·282	...	3·9	...	6	+1·0	5·46	3·26	+2·20	7·20	3·93	+ 3·27	2·62	Jammu.
...	...	...	...	...	...	...	...	...	...	...	16	+4·1	11·50	11·53	−0·03	20·31	17·36	+ 2·95	3·43	Sonamarg.
...	...	...	58	...	...	...	...	...	6·1	...	4	−1·3	1·14	1·99	−0·85	2·48	2·78	− 0·30	0·24	Kargil.
																				Baluchistan.
...	...	...	...	...	...	...	...	...	...	...	2	− 0·5	0·67	1·15	−0·48	0·88	1·83	− 0·95	0·40	Harnai.
																				Hill stations, exclusive of Kashmir.
...	...	...	...	...	69	0	·346	+·008	...	...	2	+1·1	0·74	0·52	+0·22	0·76	0·99	− 0·23	0·40	Panighatta.
...	...	...	...	...	94	+18	·398	+·151	...	...	2	+0·6	0·64	0·51	+0·13	0·64	1·07	+0·43	0·46	Kurseong.
...	...	...	...	...	...	...	...	...	...	...	4	+1·6	5·10	1·72	+3·38	5·90	3·12	+ 2·78	2·30	Gnatong.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·45	...	...	1·05	...	...	Lachung.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2·28	...	...	4·45	...	...	Ringim.
...	...	...	...	...	...	...	...	...	...	...	11	...	7·85	...	...	8·16	...	...	2·15	Dharampur.
...	...	...	...	...	...	...	...	...	...	...	11	+6·8	7·34	2·81	+4·53	7·61	3·83	+ 3·78	2·30	Mussooree.
...	...	...	16	...	...	...	...	...	6·3	+1·0	11	+5·7	4·75	2·18	+2·57	5·14	2·95	+ 2·19	1·04	Poo.
...	...	...	...	...	...	...	...	...	...	...	9	+3·4	4·09	2·95	+1·14	5·67	4·00	+ 1·67	0·77	Kailang.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Bakloh.
...	...	...	...	...	...	...	...	...	4·0	...	3	−1·0	1·04	1·88	−0·84	3·82	3·13	+ 0·69	0·35	Pishin.

Table

Abstract of observations taken at 8 hrs. at 59 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Extra India.																								
	Chumbi . . .	24·8	...	47·8	...	19·5	...	32·6	...	28·3	58·5	3rd	13·2	22nd	...	...	...	...	...	...	...	...	...	...	...
	Pemba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abadan . . .	60·3	55·2	75·3	...	52·2	...	63·7	...	23·1	81·0	10th	45·0	27th	0	18	0	0	2	7	0	0	2	N*	...

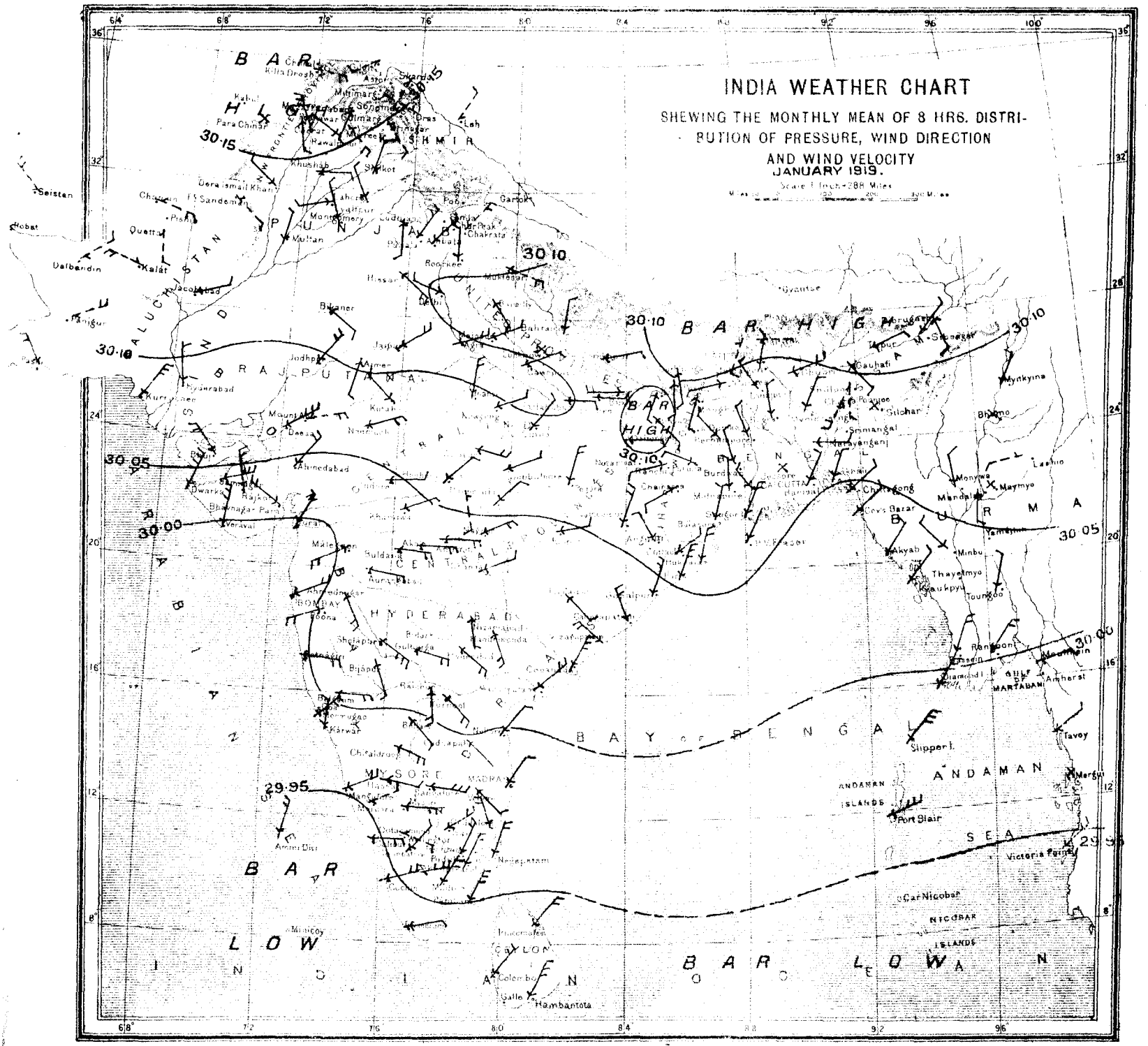
* 2 winds variable.

C—*concluded.*

and fifth class stations in India, etc., in January, 1919—*concluded.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st December 1918 to 31st January, 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				Extra India.
...	...	...	...	...	...	...	...	...	0·6	...	0	−1·4	0	0·37	−0·37	0	0·48	−0·48	0	Chumbi.
...	...	...	...	...	...	...	...	...	...	...	6	+1·1	1·52	2·74	−1·22	13·14	9·62	+3·52	0·40	Pemba.
...	...	...	...	...	78	...	·395	...	...	...	3	...	1·74	...	...	4·65	...	...	1·10	Abadan.

SGPI-21-444DGObs.-5-5-22-325.

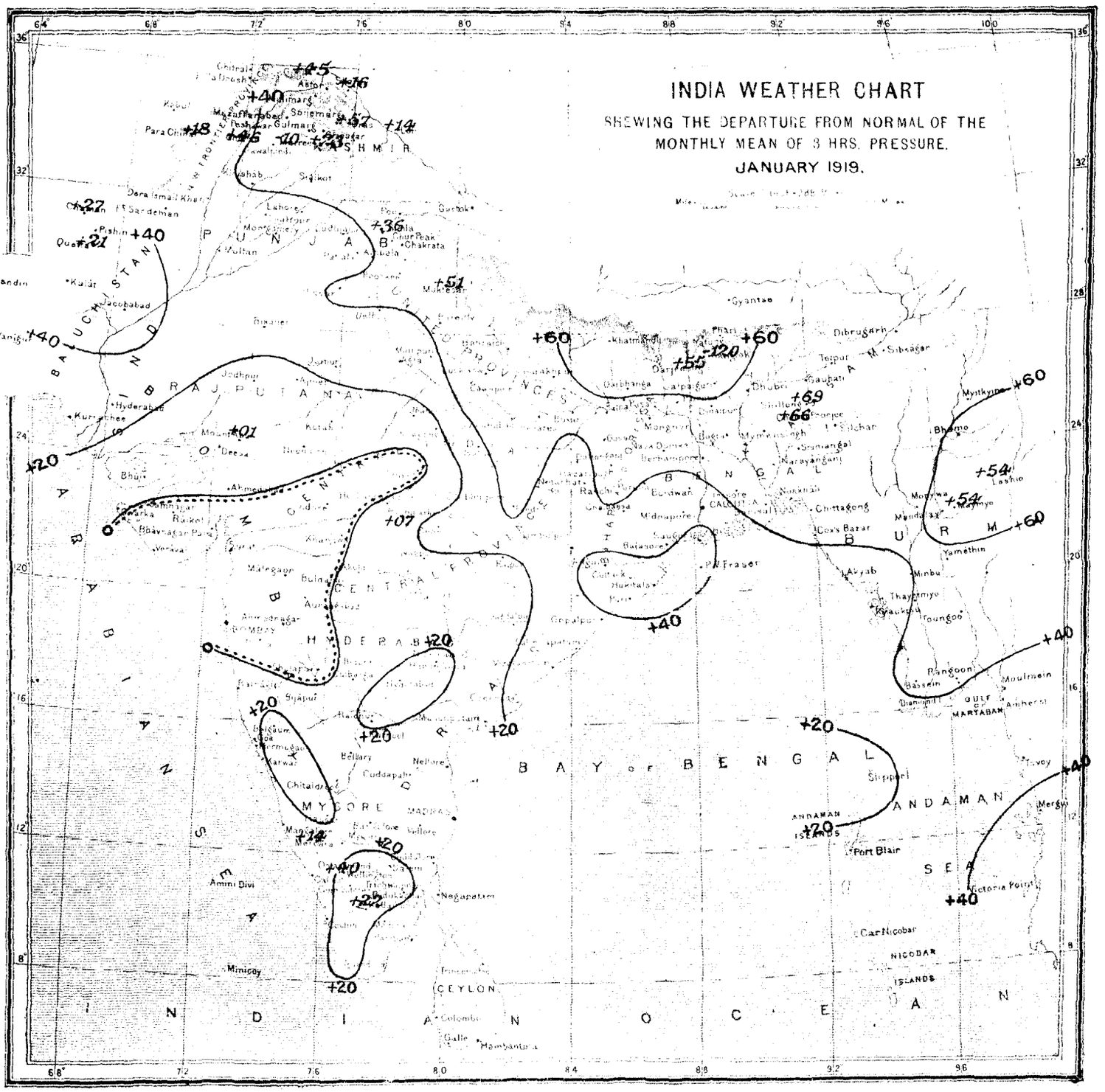


The lines of the above chart represent isobars or lines of equal barometric pressure, the numbers attached indicating the barometric pressure in inches and being drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the normal distribution of pressure.

The mean 8 hrs. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table B of the 8 hrs. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	...	one	feather added to the wind arrow.
,, ,,	2 to 5 ,, ,, ,,	...	two	feathers ,, ,, ,, ,,
,, ,,	5 to 10 ,, ,, ,,	...	three	,, ,, ,, ,, ,,
,, ,,	10 to 20 ,, ,, ,,	...	four	,, ,, ,, ,, ,,
	over 20 ,, ,, ,,	...	five	,, ,, ,, ,, ,,

Wind strengths are based on factor 2·2 for the standard type of Beckley Robinson anemograph, instead of 3·0 as used for this plate up to December 1911 inclusive.



The chart shows the departure from normal of the mean during the month of 8 hrs. pressure by means of lines drawn for equal amounts of departure. The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no departure, the dotted line facing the area of deficient pressure or negative departures.

CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MAXIMUM TEMPERATURE.

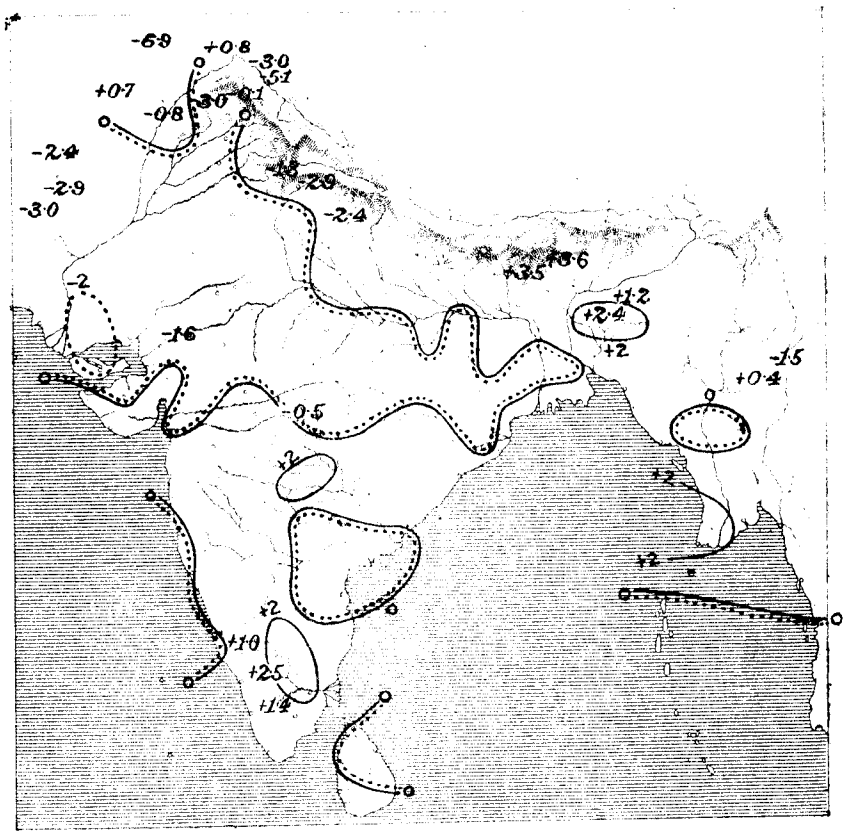


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MINIMUM TEMPERATURE.

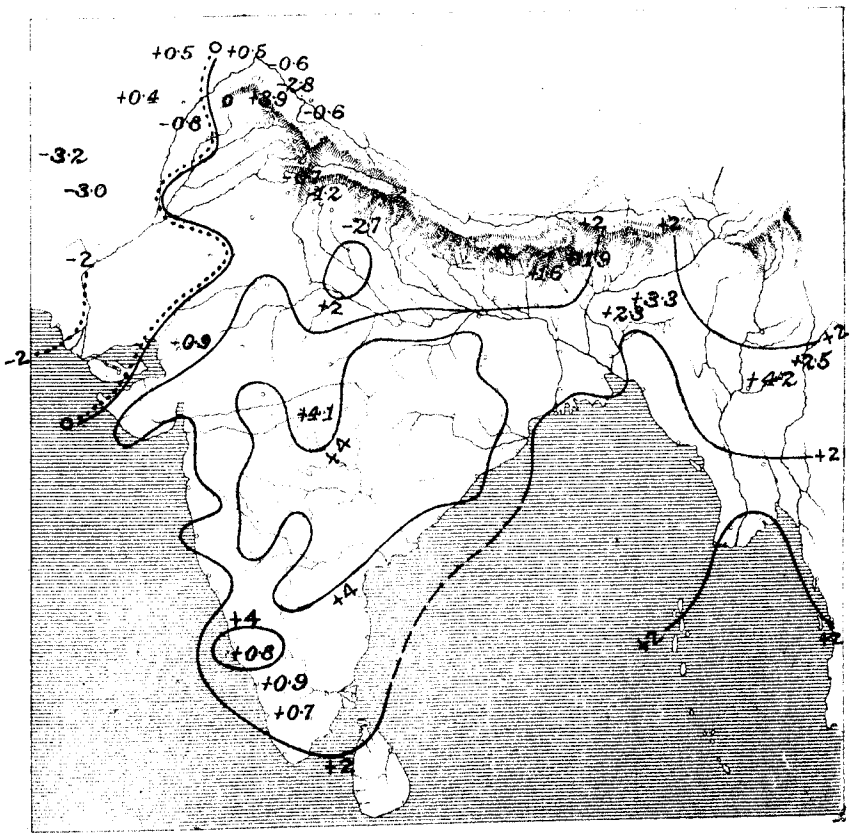


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MEAN TEMPERATURE.

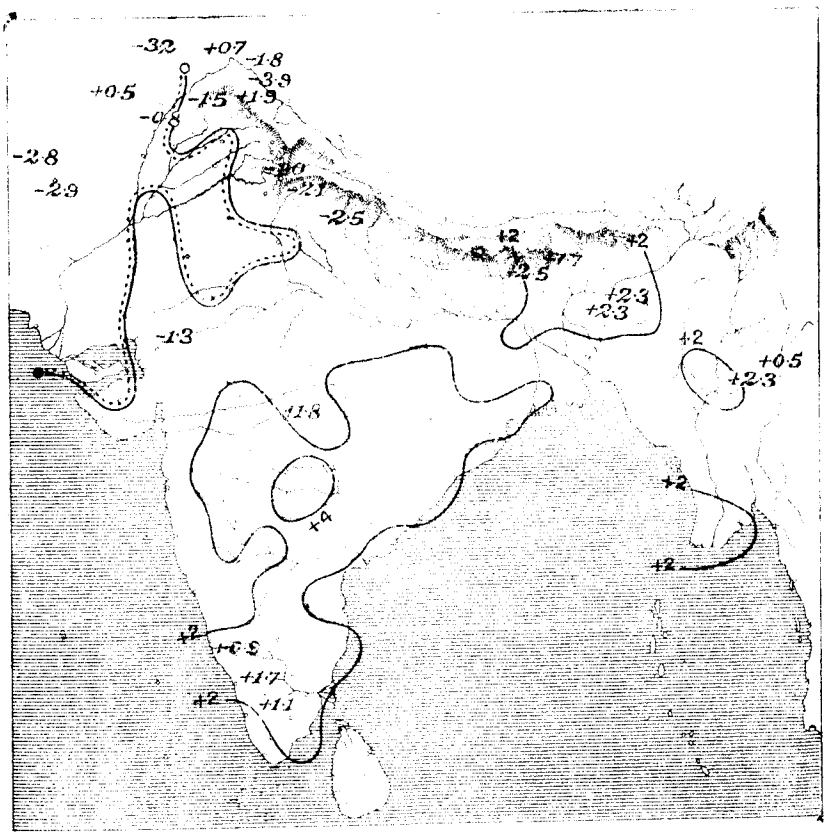


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF ABSOLUTE HUMIDITY AT 8 HRS.

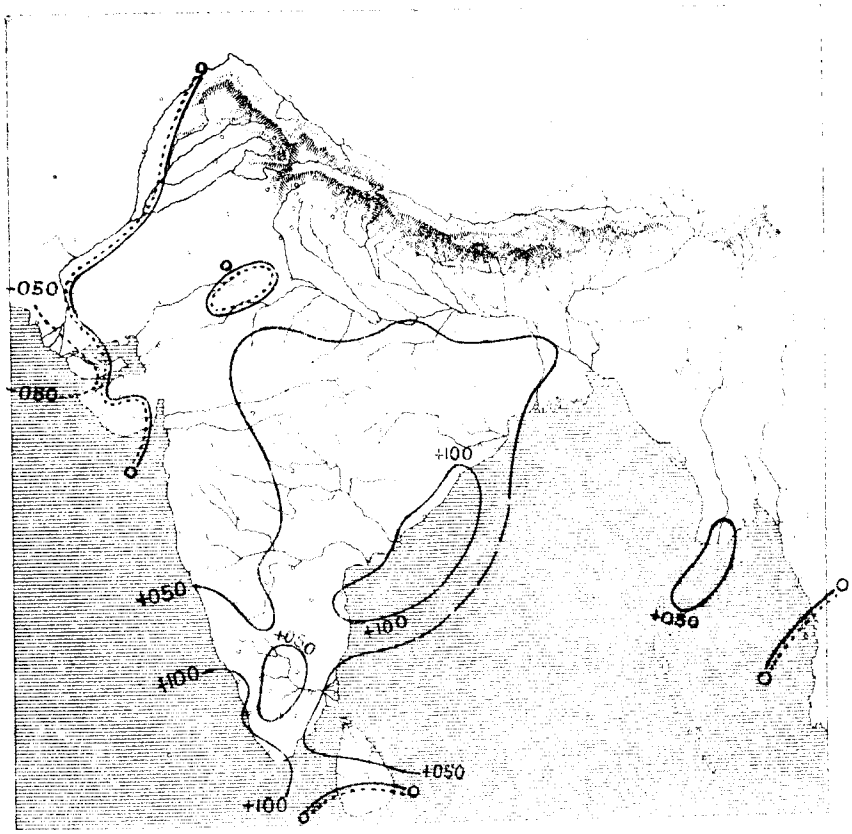


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF RELATIVE HUMIDITY AT 8 HRS.

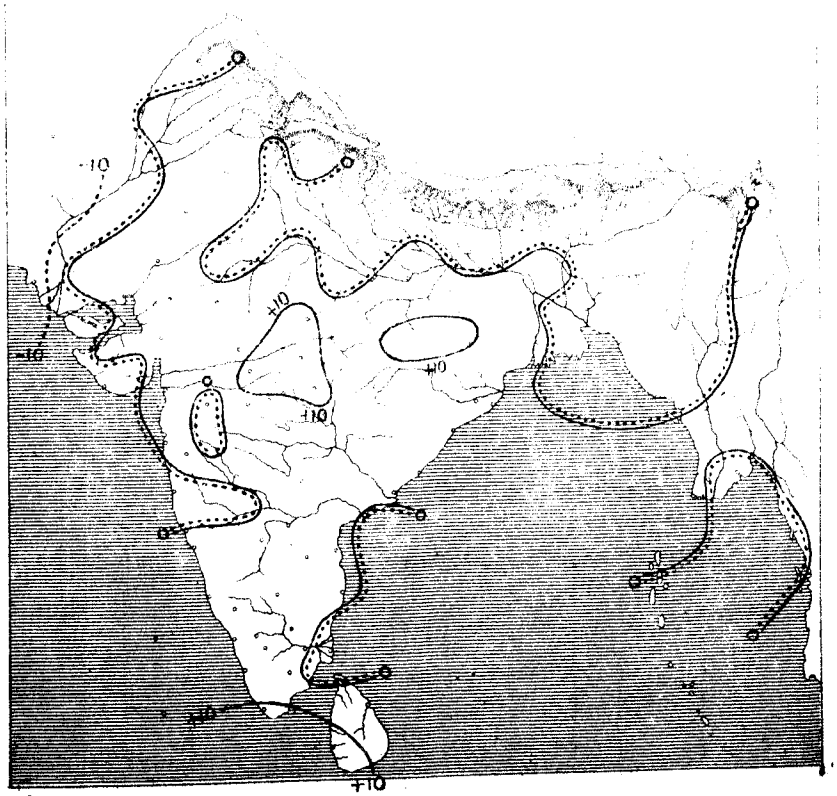


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF CLOUD AMOUNT AT 8 HRS.

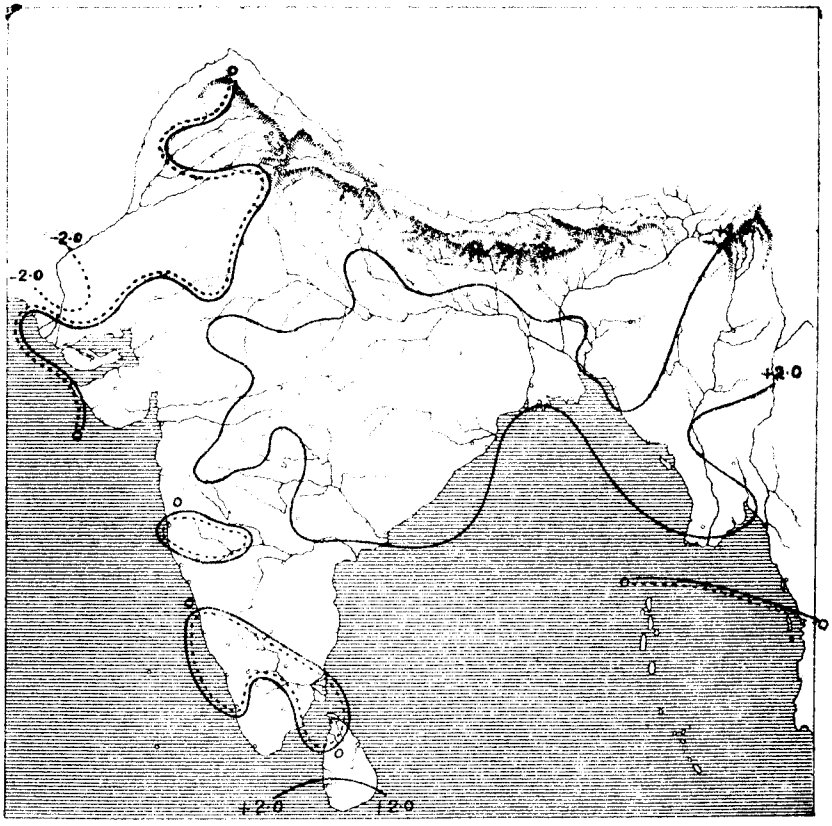
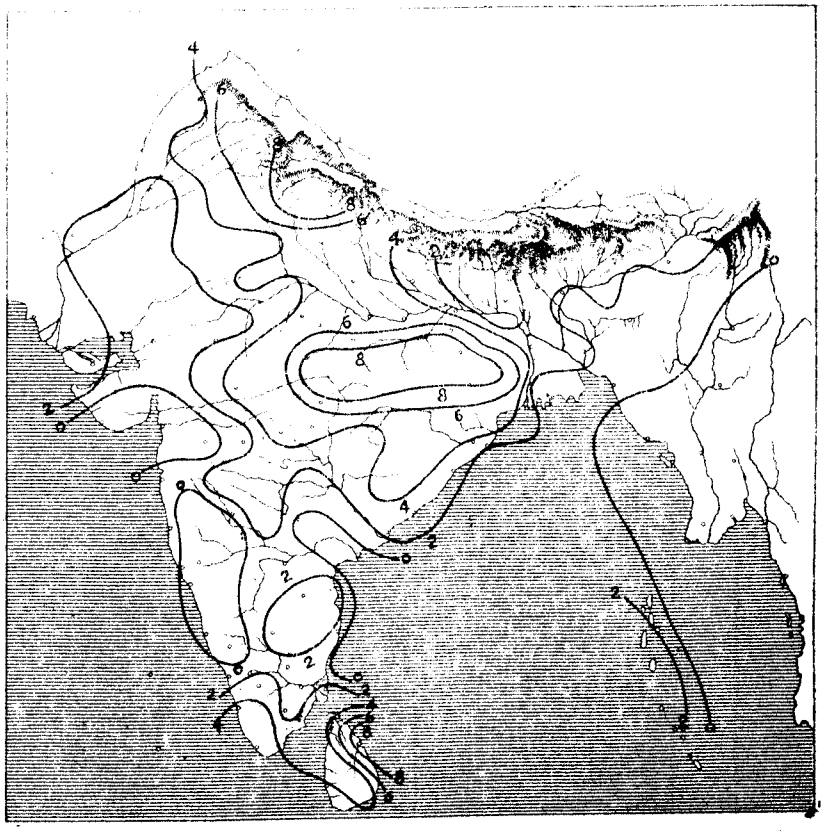
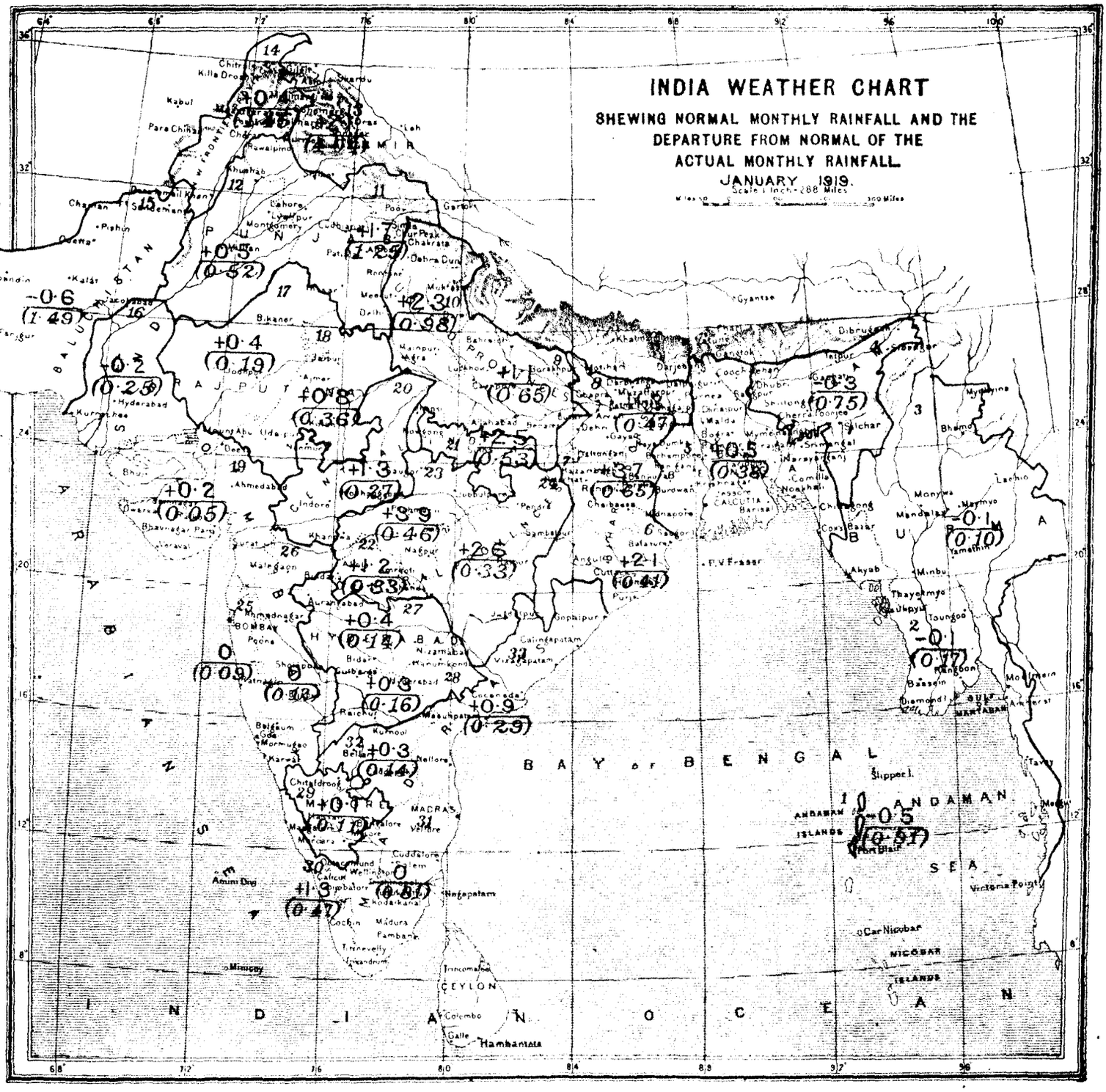


CHART SHEWING THE TOTAL NUMBER OF DAYS IN THE MONTH ON WHICH RAINFALL EQUALLED OR EXCEEDED 0·10 INCH.

(BASED ON THE RETURNS OF TABLE B.)





The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal monthly rainfall, the numbers above these give the departures from normal of the average actual rainfall over the divisions.

1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North

GOVERNMENT OF INDIA

METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA

CALCUTTA, FEBRUARY, 1919.

INTRODUCTION.

THIS review of the weather in India during the month of February, 1919, is based on observations taken daily at 8 hrs. at 213 stations, and on additional observations taken at 10 hrs. and 16 hrs. at 12 stations. In the rainfall summary have been utilized the data furnished by the meteorological observatories, and rainfall statements of the month published by the Provincial Governments.

The brief notes on solar, magnetic and seismic disturbances are supplied by the chief observatories in the Indian area.

For a statement of the methods adopted in recording and tabulating the data, for each of the elements of observation, reference should be made to the introductory portion of the review for January.

Summary of the chief features of the weather in India during the month.

2. Five disturbances of the cold weather type entered northern India from the west, but only two of them caused appreciable precipitation. The first of these two appeared during the third week, and gave rise to fairly widespread rain in Baluchistan and the plains from the North-West Frontier Province to Assam, with snow in the western Himalayas; the second appeared near the end of the month and was productive of general precipitation in Kashmir, the north Punjab and the hills of the North-West Frontier Province. Unsettled conditions developed on several occasions in the Central Provinces and resulted in more than the usual amount of rain there as well as in Orissa, north Hyderabad and on the north Madras coast. With the exception of these areas the month's fall was in defect over the whole country.

Cloud amount was in excess in Burma and in the tract of the country defined roughly by Mangalore, Poona, Jubbulpore, Midnapore and Cocanada, and in defect generally elsewhere. Humidity was in excess in the Central Provinces East and the surrounding areas, the Punjab and the west coast of India. Maximum and minimum temperatures were well below the average in Kashmir, and maximum temperature alone in the east of the Central Provinces; minimum temperature was above the average over the Peninsula generally.

The mean barometric pressure over the plains of India was 0·035 inch in excess.

Solar, magnetic and seismic disturbances.

KODAIKANAL OBSERVATORY.

3. *Solar Observations.*—The weather was favourable and complete spot and prominence records were obtained during the month.

Sunspots.—Only 16 new groups were recorded during the month, and the daily average of sunspots visible was 4·2. The average life of a spot was long, namely, 7·75 days. The distribution of the spots in latitude is given below; it will be noticed that the mean latitude is low.

TABLE I.

—	1°–10°	11°–20°	21°–30°	Mean latitude.	Extreme latitudes.
North . . .	6	14	1	10°·7	6° & 22°
South . . .	2	3	...	11°·6	6° & 19°

B

Prominences.—59 prominences a minute or more in height, 28 metallic and 2 eruptive prominences were recorded during the month. The tallest of them was 200″ in height and was photographed near the east limb on the 16th.

Magnetic disturbances.—'Great' disturbances were recorded on the 14th and 28th and 'Moderate' ones from the 1st to the 6th on the 13th, 15th, 16th, 21st, 22nd, 23rd and 27th.

J. EVERSHED,
Director,
Kodaikanal and Madras Observatories.

Seismic records.

$\phi = 10° 13' 50''$; $\lambda = 77° 28' 00''$; $h = 2343$ m.
Subsoil—Rock.

Apparatus.—Milne's Horizontal Pendulum Seismograph.

TABLE 2.

	V	To	C	$\frac{r}{To^2}$
AN:				
AE:	9·76	17·4	1	3·0
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ) An.	Ae.	Az.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
Feb. 12th	P	13 26 24	...	...	...	...	...	
	F	13 43 48	...	...	...	...	...	Widening of line.
„ 17th	P	18 30 30	...	...	...	...	...	
	F	18 41 18	...	...	...	...	...	Widening of line.
„ 18th	P	16 39 06	...	...	...	...	...	
	F	16 42 30	...	...	...	...	...	Widening of line.
„ 22nd	P	5 4 54	...	...	...	...	...	
	F	5 10 00	...	...	...	...	...	Widening of line.

S. SITARAMAYYA,
Officiating Assistant Director.

BOMBAY OBSERVATORY.

Alibag Magnetic Record.

4. During the month of February 1919, the traces showed 9 calm days, 17 days of small and 2 days of moderate disturbance.

The days of the month selected as "quiet" for the purposes of the Magnetic Survey of India are 8th, 9th, 11th, 19th and 25th.

The following table represents the magnetic character of each day during the month:—

TABLE 3.

Day.	Character.	Day.	Character.	Day.	Character.	Day.	Character.
1	S	8	C	15	S	22	S
2	S	9	C	16	S	23	S
3	S	10	C	17	S	24	S
4	S	11	C	18	S	25	C
5	S	12	C	19	C	26	C
6	S	13	S	20	S	27	S
7	C	14	S	21	M	28	M

C=calm; S=small; M=moderate; G=great; V. G.=very great.

The mean observed absolute values of the several magnetic elements reduced to the mean monthly tabulations of the magnetograms, as also the ranges and the summed ranges of the horizontal force and declination for the month are as follows:—

Easterly declination	0° 25′ 54″.
Horizontal force	0·36888 C.G.S. unit.
Vertical force	0·17031 C.G.S. „
Inclination	24° 47′·0.
Horizontal force range	0·00046 C.G.S. unit.
Horizontal force summed range	0·00297 C.G.S. „
Declination range	2′·1.
Declination summed range	7′·7.

(NOTE.—Summed range means sum without regard to sign of 24 ordinates of diurnal inequality.)

Seismic records.

$\phi = 18° 53' 36''$; $\lambda = 72° 48' 56''$; $h = 11$m. *Subsoil*—Trap.

Apparatus.—Omori-Ewing Horizontal Pendulum Seismograph.

TABLE 4.

	V	To	ϵ	$\frac{r}{To^2}$
AN :				
AE :	20	32		
AZ :				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ)			Distance Δ (Km.).	Remarks.
				AN.	AE.	AZ.		
1919.		h. m. s.						
Feb. 12th	P	13 15 56	...	...	...	...	...	
	M	13 24 23	...	...	20	...	...	

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5.—CALCUTTA (ALIPORE) OBSERVATORY.

There was no seismic displacement in February 1919.

6.—SIMLA OBSERVATORY.

There was no seismic displacement in February 1919.

Weather in the Indian Ocean.

7. The following table gives the departures from normal of pressure and rainfall, as well as the actual and normal wind direction and velocity at the three representative stations.

TABLE 5.

—	Mauritius.	Zanzibar.	Seychelles.
Departure from normal of mean pressure in inches.	—·015	+ ·032	+ ·022
Actual mean wind direction . .	S 66° E	N 29° E	N 1° W
Normal mean wind direction . .	S 82° E	N 27° E	N 21° W
Actual mean wind velocity (miles per diem).	121	127	107
Normal mean wind velocity (miles per diem).	133	118	107
Rainfall departure from normal in inches	—1·40	—1·16	—0·83

Depressions and cyclonic storms.

8. No depressions formed in the Indian seas. Five western disturbances appeared during the month, and they began to affect the weather in north-west India on the 3rd, 9th, 14th, 19th and 25th. The third one was fairly active, and on the 14th and 15th when it passed through Baluchistan heavy seas and winds of gale force were experienced in the Gulf of Oman. Somewhat rough weather extended also further south in the Arabian Sea about this time.

Pressure.

9. The following table gives the departure from normal of the mean 8 hours pressure in the 15 chief political divisions of India :—

TABLE 6.

DIVISION.	Departure from normal of mean 8 hrs. pressure.
	"
Burma	+·029
Assam	+·037
Bengal	+·044
Bihar and Orissa	+·048
United Provinces	+·053
Punjab	+·037
North-West Frontier Province	+·021
Sind	+·028
Rajputana	+·043
Bombay	+·019
Central India	+·037
Central Provinces	+·030
Hyderabad	+·030
Mysore	+·029
Madras	+·028

The following table gives a comparison of the departure from normal of mean 8 hours pressure at 9 hill stations with the departure at an adjoining station in the plains :—

TABLE 7.

HILL STATION.	Departure from normal pressure. A	PLAIN STATION.	Departure from normal pressure. B	Departure of pressure difference B.—A.
	"		"	"
Quetta	+·031	Jacoba bad	+·030	—·001
Leh	+·080	Lahore	+·031	—·049
Murree	+·001	Peshawar	+·020	+·019
Simla	+·041	Ludhiana	+·039	—·002
Mukteswar	+·038	Bareilly	+·047	+·009
Darjiling	+·022	Dhubri	+·042	+·020
Mount Abu	+·045	Deesa	+·044	—·001
Pachmarhi	+·016	Khandwa	+·021	+·005
Kodaikanal	+·026	Madura	+·025	—·001

Temperature.

10. Table 8 gives the actual temperature and its departure from normal in the 33 sub-divisions, while table 9 gives only the departures from normal in the 15 chief political divisions :—

TABLE 8.

SUB-DIVISION.	ACTUAL TEMPERATURE.				DEPARTURE FROM NORMAL OF		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
1. Bay Islands	85·1	75·7	80·4	9·3	—1·1	+0·5	—1·6
2. Lower Burma	88·9	68·2	78·6	20·7	+0·5	+0·9	—0·4
3. Upper Burma	85·9	57·6	71·8	28·3	—0·1	+0·3	—0·4
4. Assam	78·0	53·7	65·8	24·4	+1·9	—0·5	+2·4
5. Bengal	81·0	57·2	69·1	23·8	—0·6	—0·9	+0·3
6. Orissa	83·0	65·4	74·2	17·5	—3·3	+2·0	—5·3
7. Chota Nagpur	78·9	54·8	66·8	24·0	—3·3	+0·2	—3·5
8. Bihar	77·3	52·5	64·9	24·9	—1·3	—1·3	0
9. United Provinces, East	76·3	50·0	63·2	26·3	—1·7	—1·3	—0·4

Sub-division.	Actual temperature.				Departure from normal of		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
10. United Provinces, West	75·3	49·2	62·3	26·2	—1·1	—0·7	—0·4
11. Punjab, East and North	70·1	46·5	58·3	23·6	—1·1	0	—1·1
12. Do., Southwest	73·1	46·7	59·9	26·3	+1·5	+1·5	0
13. Kashmir	39·4	18·3	28·9	21·1	—5·1	—5·2	+0·1
14. North-West Frontier Province	69·6	44·1	56·9	25·5	+0·9	+0·7	+0·2
15. Baluchistan	65·2	37·9	51·5	27·4	+2·5	—0·9	+3·4
16. Sind	80·5	55·4	68·0	25·1	+1·7	+0·8	+0·9
17. Rajputana, West	79·7	52·1	65·9	27·5	+1·9	—0·5	+2·4
18. Do., East	78·1	50·8	64·5	27·4	—0·8	—1·3	+0·5
19. Gujarat	84·9	57·4	71·2	27·5	+1·1	—0·7	+1·8
20. Central India, West	82·1	51·9	67·1	30·1	+0·4	+0·2	+0·2
21. Do. do., East	76·0	51·1	63·5	24·9	—3·3	—0·4	—2·9
22. Berar	88·7	62·2	75·4	26·5	0	+2·0	—2·0
23. Central Provinces, West	81·8	56·2	69·0	25·6	—2·9	+0·7	—3·6
24. Do. do., East	82·1	59·9	71·0	22·3	—4·1	+1·6	—5·7
25. Konkan	84·1	67·9	76·0	16·2	—0·8	+0·4	—1·2
26. Bombay Deccan	92·1	60·3	76·2	31·8	+1·8	+1·7	+0·1
27. Hyderabad, North	92·5	63·3	77·9	29·1	+1·5	+3·3	—1·8
28. Do., South	92·5	69·0	80·7	23·5	+1·3	+3·5	—2·2
29. Mysore	89·3	65·0	77·2	24·3	+1·8	+2·8	—1·0
30. Malabar	88·7	74·8	81·7	13·9	+0·6	+1·7	—1·1
31. Madras, Southeast	90·5	71·8	81·2	18·7	+1·3	+2·6	—1·3
32. Do., Deccan	94·9	70·6	82·8	24·3	+0·5	+3·9	—3·4
33. Do., Coast, North	86·1	72·4	79·2	13·7	+0·3	+3·1	—2·8

TABLE 9.

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·2	+0·7	+0·4
Assam	+1·9	—0·5	+0·7
Bengal	—0·6	—0·9	—0·7
Bihar and Orissa	—2·4	+0·2	—1·1
United Provinces	—1·4	—1·1	—1·2
Punjab	—0·3	+0·4	0
North-West Frontier Province	+0·9	+0·7	+0·9

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Sind	+1·7	+0·8	+1·2
Rajputana	+0·3	—1·0	—0·3
Bombay	+1·0	+0·4	+0·7
Central India	—1·5	—0·1	—0·8
Central Provinces	—2·5	+1·3	—0·6
Hyderabad	+1·3	+3·4	+2·4
Mysore	+1·8	+2·8	+2·2
Madras	+0·8	+2·7	+1·8

Surface and upper air winds.

11. *Surface.*—The wind directions had an abnormal easterly component at some stations in Central India and Rajputana.

The following table gives the mean wind velocity and steadiness with their departures from normal :—

TABLE 10.

Division.	Hourly wind velocity.		Wind steadiness.	
	Actual.	Departure from normal.	Actual.	Departure from normal.
Burma	2·7	+0·1	39	0
Assam	1·6	—0·6	20	— 5
Bengal	1·6	—0·6	30	+ 7
Bihar and Orissa	2·4	—0·3	36	— 1
United Provinces	1·9	—0·4	25	— 1
Punjab	2·0	0	21	+ 3
North-West Frontier Province	0·9	—1·0	15	—17
Sind	2·9	—1·9	30	—10
Rajputana	2·1	—0·8	34	+10
Bombay	4·5	—0·7	41	— 6
Central India	2·2	—0·9	27	+ 3
Central Provinces	3·2	+ 0·4	47	+21
Hyderabad	4·5	—0·1	49	+27
Mysore	3·7	—0·3	42	+ 6
Madras	4·2	+ 0·2	60	+10

Upper air.—Table 11 gives the monthly mean velocities and directions at different heights above Agra, Simla, Lahore, Bangalore and Akyab.

TABLE 11.—*Mean velocity and direction of upper winds.*

Height above sea, kms.	Agra. Height above sea 0·17 km.				Simla. Height above sea 2·13 kms.				Lahore. Height above sea 0·21 km.				Bangalore. Height above sea 0·92 km.				Akyab. Height above sea 0·01 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
0·18	24	2·6	0·6	265	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
0·22	...	...	...	...	...	...	...	...	26	0·7	0·2	277	...	...	...	...	...	...	...	...
0·5	26	5·6	3·6	334	...	...	...	...	26	4·8	3·4	322	...	...	...	...	2	4·5	3·9	318
1·0	27	6·9	5·4	315	...	...	...	...	26	5·1	4·3	317	...	...	...	...	2	5·0	4·9	337
1·5	27	7·2	6·2	307	...	...	...	...	26	5·3	4·3	321	27	5·2	3·9	111	2	3·7	3·7	319
2·0	27	7·6	6·6	294	...	...	...	...	26	5·4	4·1	318	27	4·9	4·1	75	2	5·7	5·7	304
2·13	...	...	...	...	24	1·7	0·5	49	...	...	...	...	...	...	...	...	...	...	...	...

Height above sea, kms.	AGRA.				SIMLA.				LAHORE.				BANGALORE.				AKYAB.			
	Height above sea 0·17 km.				Height above sea 2·13 kms.				Height above sea 0·21 km.				Height above sea 0·92 km.				Height above sea 0·01 km			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
2·3	...	...	...	...	21	3·9	1·1	17	...	...	...	...	...	...	...	...	...	...	...	...
2·5	27	8·2	6·7	285	22	4·0	1·2	340	26	5·7	4·2	306	27	4·6	4·1	58	2	9·0	8·9	294
3·0	27	9·4	7·9	283	23	3·8	1·2	301	26	6·8	4·9	399	27	4·0	2·3	55	2	10·3	9·9	285
3·5	26	11·0	9·7	278	24	4·7	2·2	295	26	8·0	6·1	292	27	3·7	0·1	119	2	12·5	12·1	279
4·0	26	12·6	11·6	276	24	5·5	3·6	287	26	8·9	7·2	291	27	4·5	0·8	234	2	14·0	13·9	277
4·5	26	15·1	14·1	275	21	6·9	4·9	277	25	10·4	9·1	288	26	5·8	2·1	255	2	14·7	14·3	275
5·0	24	17·3	16·3	277	20	9·6	7·7	278	25	12·3	11·2	285	26	6·6	2·5	263	2	17·3	16·9	273
5·5	24	19·6	18·6	276	20	12·2	10·0	274	25	14·3	12·8	283	25	6·9	3·1	268	2	21·0	20·9	278
6·0	23	21·6	20·9	277	18	13·6	12·2	271	24	15·5	13·9	282	24	7·6	4·1	273	2	24·0	23·9	280
6·5	23	24·5	23·5	277	17	15·5	14·2	270	24	18·2	16·5	283	25	8·8	6·0	272	1	25·0	25·0	275
7·0	19	27·6	26·5	277	13	18·2	16·9	274	23	20·5	18·6	282	24	9·9	7·6	270	...	...	...	...
7·5	15	26·3	25·3	273	12	21·2	19·9	273	22	22·1	19·7	281	24	10·0	8·5	267	...	...	...	...
8·0	13	27·4	26·1	271	11	24·9	23·5	274	22	24·7	21·8	279	24	10·7	8·9	266	...	...	...	...
8·5	11	28·6	27·8	272	8	26·7	24·1	279	19	25·8	23·6	274	23	11·5	9·3	267	...	...	...	...
9·0	8	25·7	24·6	271	5	17·9	16·4	279	15	25·3	24·0	273	22	11·6	9·9	266	...	...	...	...
9·5	6	25·2	24·5	264	5	21·9	20·1	282	11	24·5	23·4	269	20	12·5	10·6	262	...	...	...	...
10·0	6	29·3	28·7	265	5	25·8	23·5	276	9	27·8	26·6	265	17	13·4	11·7	252	...	...	...	...
10·5	6	32·5	31·7	268	3	19·3	17·9	279	7	26·6	25·4	273	14	14·7	11·9	248	...	...	...	...
11·0	4	35·8	35·2	266	3	23·6	22·5	280	5	23·1	22·1	275	12	14·1	9·4	244	...	...	...	...
11·5	3	35·5	35·5	275	3	28·2	27·5	278	4	22·4	22·3	282	6	10·2	9·3	231	...	...	...	...
12·0	3	39·5	39·4	274	2	31·7	31·1	278	1	27·0	27·0	280	4	10·0	9·1	215	...	...	...	...
12·5	3	43·0	47·7	277	1	24·0	24·0	300	...	...	...	...	3	9·7	8·2	209	...	...	...	...
13·0	2	46·7	46·6	281	1	27·5	27·5	295	...	...	...	...	2	11·0	10·6	183	...	...	...	...
13·5	2	51·5	51·3	280	...	...	...	...	...	...	...	...	2	11·7	11·7	182	...	...	...	...
14·0	1	58·0	58·0	285	...	...	...	...	...	...	...	...	1	8·5	8·5	180	...	...	...	...
14·5	1	59·5	59·5	280	...	...	...	...	...	...	...	...	1	11·0	11·0	180	...	...	...	...
15·0	...	...	...	...	...	...	...	...	...	...	...	...	1	14·0	14·0	175	...	...	...	...
15·5	...	...	...	...	...	...	...	...	...	...	...	...	1	17·0	17·0	175	...	...	...	...
16·0	...	...	...	...	...	...	...	...	...	...	...	...	1	20·5	20·5	170	...	...	...	...
16·5	...	...	...	...	...	...	...	...	...	...	...	...	1	22·5	22·5	165	...	...	...	...
17·0	...	...	...	...	...	...	...	...	...	...	...	...	1	27·0	27·0	160	...	...	...	...

N—Number of flight.
V—Velocity of wind, regardless of direction, metre per sec.
v—Velocity of Resultant Wind, taking account of direction, metre per sec.
L—Direction of Resultant Wind; North Wind=0° or 360°, East Wind=90°.

Humidity and cloud.

12. The following table gives the mean humidity, vapour tension and cloud amount at 8 hours with their departures from normal :—

TABLE 12.

Division.	Hygrometry; 8 hrs.				Cloud.	
	Mean humidity.	Departure from normal.	Mean vapour tension in inches of mercury.	Departure from normal in inches of mercury.	Mean cloud amount at 8 hrs.	Departure from normal.
	%					
Burma . .	78	— 2	·568	—·004	3·0	+1·0
Assam . . .	83	— 6	·416	—·026	2·6	—1·3
Bengal . . .	76	- 5	·451	—·044	2·2	—0·1
Bihar and Orissa .	75	+ 3	·440	+·021	3·1	+0·8
United Provinces .	71	0	·313	—·016	1·2	—1·3
Punjab . .	76	+ 4	·289	+·014	2·4	—1·3
North-West Frontier Province.	75	+ 5	·258	+·014	1·5	—2·4
Sind . . .	56	— 4	·312	—·005	1·2	—1·4
Rajputana . .	50	— 2	·229	—·015	1·5	—1·2
Bombay . .	57	0	·393	—·006	1·4	+0·1
Central India .	60	+ 5	·298	+·012	1·3	—0·9
Central Provinces .	63	+11	·404	+·077	2·3	+0·5
Hyderabad . .	58	+ 3	·485	+·057	2·1	+0·6
Mysore . .	66	+ 1	·505	+·024	2·7	+0·4
Madras . .	77	+ 1	·726	+·050	2·7	+0·1

Rainfall.

13. The month's fall was in defect over the whole country with the exception of Orissa, the Central Provinces, north Hyderabad and the north Madras coast.

The fall at Baghdad and at the Persian stations did not differ much from the normal. Kabul and Kashgar had no rain during the month.

TABLE 13.

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
1. Bay Islands	1·[illegible]	0·8	0·45	0·54	—0·09	— 17
2. Lower Burma	0·4	0·4	0·23	0·25	—0·02	— 8
3. Upper Burma	0·3	0·4	0·09	0·14	—0·05	— 36
4. Assam	1·4	3·3	0·48	1·49	—1·01	— 68
5. Bengal	1·1	1·7	0·56	1·01	—0·45	— 45
6. Orissa	4·7	1·7	2·17	1·08	+1·09	+101
7. Chota Nagpur	1·8	2·4	0·66	1·37	—0·71	— 52
8. Bihar	0·9	1·6	0·36	0·77	—0·41	— 53
9. United Provinces, East	1·1	1·3	0·34	0·56	—0·22	— 39

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
10. United Provinces, West	0·8	1·7	0·41	0·93	—0·52	— 56
11. Punjab, East and North	1·3	2·2	0·59	1·09	—0·50	— 46
12. Do., Southwest	1·1	1·4	0·41	0·58	—0·17	— 29
13. Kashmir	2·8	5·3	3·35	3·81	—0·46	— 12
14. North-West Frontier Province	2·1	3·0	0·98	1·37	—0·39	— 28
15. Baluchistan	1·2	3·1	0·61	1·46	—0·85	— 58
16. Sind	0·2	0·8	0·03	0·32	—0·29	— 91
17. Rajputana, West	0·2	0·6	0·05	0·31	—0·26	— 84
18. Do., East	0	0·8	0	0·35	—0·35	—100
19. Gujarat	0	0·2	0	0·11	—0·11	—100
20. Central India, West	0·1	0·7	0·03	0·33	—0·30	— 91
21. Do., East	1·0	1·4	0·36	0·68	—0·32	— 47
22. Berar	1·1	0·7	0·53	0·31	+0·22	+ 71
23. Central Provinces, West	2·1	1·3	1·02	0·64	+0·38	+ 59
24. Do., East	5·3	1·6	2·85	0·96	+1·89	+197
25. Konkan	0	0·1	0	0·04	—0·04	—100
26. Bombay Deccan	0	0·2	0·01	0·07	—0·06	— 86
27. Hyderabad, North	1·0	0·4	0·53	0·18	+0·35	+194
28. Do., South	0·1	0·4	0·04	0·24	—0·20	— 83
29. Mysore	0	0·2	0	0·11	—0·11	—100
30. Malabar	0·6	0·9	0·26	0·57	—0·31	— 54
31. Madras, Southeast	0	0·7	0·02	0·49	—0·47	— 96
32. Do., Deccan	0	0·2	0	0·08	—0·08	—100
33. Do., Coast, North	1·7	0·6	1·16	0·37	+0·79	+214

TABLE 14.

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Burma	0·14	0·18	—0·04	— 22
Assam	0·48	1·49	—1·01	— 68
Bengal	0·56	1·01	—0·45	— 45
Bihar and Orissa	0·88	1·00	—0·12	— 12
United Provinces	0·38	0·76	—0·38	— 50
Punjab	0·55	0·97	—0·42	— 43
North-West Frontier Province	0·98	1·37	—0·39	— 28

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Sind	0·03	0·32	—0·29	— 91
Rajputana	0·02	0·34	—0·32	— 94
Bombay	0	0·08	—0·08	—100
Central India	0·13	0·44	—0·31	— 70
Central Provinces	1·69	0·69	+1·00	+145
Hyderabad	0·29	0·21	+0·08	+ 38
Mysore	0	0·11	—0·11	—100
Madras	0·35	0·44	—0·09	— 20
Mean of India	0·44	0·56	—0·12	— 21

Snowfall.

I.—CENTRAL ASIA AND ASIATIC TURKEY.

(*a*) *Baghdad.*—The snow line in the middle of the month, on the hills above Mosul was estimated to be at 5,000 feet —1,000 feet higher than usual; these are rough estimates.

The winter was very mild and wet.

(*b*) *Kashgar.*—No snow fell.

II.—PERSIA.

Meshed.—6 inches of snow fell on the 3rd.

III.—AFGHANISTAN.

Kabul.—Snow fell on the 5th and the 14th at Kabul and in the Koh Sofaid, Paghman and Hindu Kush mountains. 5½ inches fell at Kabul on the 5th and 1½ feet on the 14th.

IV.—THE NORTH-WEST FRONTIER PROVINCE.

(*a*) *Wana.*—The undermentioned falls occurred during the month:—

TABLE 15.

Locality.	Height.	Depth of snowfall on	
		5th.	15th.
	Feet.	Inches.	Inches.
Marwatti . . .	11,000	5	6
Pirghal . . .	11,000	5	6
Jani Mela . . .	9,000	3	...
Spera	9,000	3	4
Kundighar . . .	9,000	3	4
Kotkun . . .	7,900	1	3
Bosh	11,000	...	6
Drenashtar . . .	11,000	...	6

An inch of snow was lying on the highest peaks and in sheltered ravines at the end of the month.

(*b*) *Kohat.*—Two feet of snow fell on the Samana Range on the 15th and 2½ feet on the 16th.

(*c*) *Drosh.*—Lowarai Pass was closed after the 6th owing to heavy snowfall.

(*d*) *Hazara.*—The following falls occurred during the month:—

TABLE 16.

Locality.	Height.	Total depth of snowfall.	
	Feet.	Feet.	Inches.
Narang	8,000	19	7
Paluderan	7,300	14	11
Kagan	6,600	11	9
Jared	5,000	3	10
Malkandi	4,500	2	6
Sundigali	7,000	9	6
Jachha	6,500	8	9
Thandiani	8,800	6	6
Dungagli	8,000	9	0

V.—KASHMIR.

(*a*) *Srinagar.*—Two heavy falls and a light one occurred during the month.

(*b*) *Skardu.*—Snow fell on 11 days at the station or in the neighbouring mountains; the total fall was about a foot at the station and about 7 feet on the mountains. There was more snow on the mountains to the south and west than elsewhere. The accumulations at the end of the month were a foot at the station, over 6 feet on the lower ranges and 9 to 12 feet on the higher peaks.

The actual fall and accumulations were heavier than usual.

(*c*) *Dras.*—Snow fell on the 5th, 6th, 16th, 17th and 21st, the total depth being nearly 3 feet; over 2 feet of it fell on the 17th.

(*d*) *Kargil.*—Snow fell on the 5th, 15th, 16th and 17th to a total depth of about 10 inches on the ground, and about 20 inches on the mountains.

VI.—THE PUNJAB.

(*a*) *Murree.*—3 inches of snow fell on the 16th, 7½ inches on the 17th and 1 inch on the 26th.

(*b*) *Dalhousie Forest Range.*—6 inches of snow fell on the 17th at Kalatop (7,500 feet) and 1 inch on the same day at Surkhigala (5,500 feet).

Chamba Forest Range.—About 5 inches fell between the 14th and the 17th, and about 4 inches on the last four days of the month. The snow line descended to about 5000 feet.

Bharmaur Forest Range.—Snow fell at Jhararoo on the 17th, 18th, 19th, and 27th, the amounts being 6 inches,

29 inches, 5 inches and 6 inches respectively. It was lying to a depth of 3 feet 10 inches at the end of the month. The snowfall of the month was above normal.

Bhandal Forest Range.—4 inches fell on the 15th and 1 inch on the 17th. The snow descended to about 6,000 feet.

Tissa Forest Range.—Snow fell on the 15th, 16th, 17th and 25th, the total amounts being about 2 feet at Chhatri and Bara, about a foot and a half at Alwas and Khangoo and an inch at Tissa.

Kilar Forest Range.—Snow fell on the 5th, 15th, 16th, and 28th, the total fall being 4¼ feet. There was much snow lying at Jot Sach.

Bhattiyat Forest Range.—No snow fell in the range but 3½ feet fell at Chuari Jot.

(*c*) *Kilba* (*Simla Hills*).—Snowfall reached the level of the river bed (Sutlej) on the 15th, 16th and 17th and the total depth was 31 inches. The accumulations at the end of the month were as follows:—

Charang Pass	30 feet.
Rupan "	25 "
Brua "	25 "
Shatul "	25 "
Harang "	15 "

Poo (*Bashahr State*).—Light snow (a quarter of an inch on each day) fell on the 5th and 7th. The report extends only to the 7th and the whole district was covered on that date with 1 to 2 feet of snow.

VII.—THE UNITED PROVINCES.

(*a*) *Garhwal.*—Snow fell on the 17th, 24th and 28th about one foot deep on the high peaks in the north of the district.

(*b*) *Almora.*—Actual falls during the month.

TABLE 17.

Locality.	Depth.	Distance below perpetual snowline.
	Feet.	
Malla Danpur	12	3 or 4 miles.
Malla Durma	10⅓	6 miles.
Byans	10⅓	
Chaudas	8½	2½ miles.

TABLE 18.

Name of pass or peak.	Accumulations at the end of the month.	
	Reported.	Normal.
	Feet.	Feet.
Lampia Pass	31 or 32	21½
Lipulekh "	20 or 21	19
Nuwe "	20	37
Binkaru "	15	24
Pindari Peak	12	9
Kaphini "	12	9
Kuntela "	12	9

VIII.—EASTERN HIMALAYAS.

No snow fell at or in the vicinity of Gangtok, 13¼ inches fell at Yatung.

North-East Frontier District.—There were several heavy snow storms which brought the snowline on the slopes facing the plains to about 8,500 feet.

Kamrup.—There was no fall of importance.

Summary.

15. The month's fall in Afghanistan, the North-West Frontier Province and the western and central Himalayas was roughly normal or somewhat above it.

S. SITARAMAYYA,
Scientific Assistant.

Table A.—Abstract of observations taken at 10 hrs. and 16 hrs. at 12 stations in India, etc., in February, 1919.

Table

Abstract of observations taken at 10 hrs. and 16 hrs

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure.						Temperature of air.										Temperature, wet-bulb.			
			Mean of 10 hrs.	Mean of 16 hrs.	Mean daily range.	Mean of daily mean pressures.	Departure from normal.	Mean reduced to sea-level and to gravity at 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of three previous columns.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal.																					
5	Calcutta	21	30·075	29·947	·128	30·003	+·046	29·971	82·1	60·3	21·8	87·3	52·4	34·9	74·0	80·5	70·3	0	57·9	63·6	65·2	62·2
	VI.—Punjab.																					
11	Lahore	702	29·355	29·268	·087	29·303	+·022	30·006	70·6	46·2	24·4	83·3	39·3	44·0	59·6	70·2	57·3	0	44·3	53·3	57·9	51·8
	IX.—Rajputana.																					
18	Jaipur	1,431	28·648	28·540	·108	28·583	+·045	29·994	78·0	50·6	27·4	90·0	39·3	50·7	69·4	76·7	63·2	−1·0	45·5	53·6	55·7	51·6
	X.—Bombay.																					
25	Bombay	37	29·997	29·880	·117	29·945	+·012	29·922	82·6	68·6	14·0	85·1	64·0	21·1	74·9	78·5	74·7	−0·1	62·8	67·9	69·7	66·8
	XIV.—Mysore.																					
29	Bangalore	3,021	27·066	26·943	·123	27·002	+·033	29·822	88·3	62·6	25·7	91·6	58·6	32·0	78·0	86·7	74·7	+2·7	59·3	64·1	64·1	62·5
	XV.—Madras.																					
	Trivandrum		29·819	29·703	·116	29·763		29·890	87·1	74·3	12·8	88·9	72·1	16·8	82·7	85·9	79·8			74·3	76·2	
31	Pudukkottai	318	29·747	29·593	·154	29·670		29·817	92·4	71·9	20·5	97·1	68·7	28·4	82·9	90·2	82·1			72·8	73·1	
	Madras	22	30·042	29·928	·114	29·983	+·017	29·936	87·7	71·4	16·3	93·5	68·4	25·1	83·9	84·7	78·6	+2·0	70·3	75·1	75·3	73·6
	Hill stations, excluding Kashmir and Baluchistan.																					
	Katmandu	4,388	25·749	25·662	·087	25·702	+·054	25·657	68·5	40·0	28·5	75·0	32·8	42·2	53·4	65·5	54·0	+1·5	38·3	48·4	53·3	46·7
	Kodaikanal	7,688	22·912	22·852	·060	22·882		22·817	67·4	47·9	19·5	70·9	43·9	27·0	62·7	61·0	57·6		41·0	49·9	54·0	48·3
	Extra India.																					
	Seychelles	15	29·986	29·899	·087	29·951	+·022†	29·889	84·4	78·4	6·0	86·5	75·9	10·6	82·5	83·1	80·3	+1·2†	72·0	77·6	77·6	75·7
	Mauritius	181				29·720	−·015	29·785	86·9	73·9	13·0	91·2	70·3	20·9			79·7	+1·3				

N.B.—Elevations in italics indicate barometric determinations.
Note.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,300 feet.
† Departure from old normal.

A.

at 12 stations in India, etc., in February, 1919.

Vapour tension in inches of mercury.					Humidity.					Cloud.				Wind direction.											Wind steadiness.		Wind velocity.		Rainfall.		Station.	Number of sub-division.
														Total number of 10 hrs. and 16 hrs. winds from																		
From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns.	Departure from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																															III.—Bengal.	
·454	·456	·421	·470	−·015	86	54	41	63	−3	2·0	2·9	2·5	+0·3	1	9	5	3	1	2	4	8	23	N 40° W	N 73° W	55	25	62	58	1·16	1·10	Calcutta . .	5
																															VI.—Punjab.	
·270	·323	·317	·311	+·024	86	64	44	68	+6	3·1	2·2	2·7	−1·2	6	2	1	3	4	1	4	10	25	N 61° W	N 30° W	50	30	34	39	0·93	0·65	Lahore . .	11
																															IX.—Rajputana.	
·244	·219	·188	·224	−·038	67	31	21	43	−4	1·7	2·1	1·9	−1·2	6	8	3	7	6	2	5	5	14	N 27° W	N 20° W	21	33	57	66	0	0	Jaipur . .	18
																															X.—Bombay.	
·494	·590	·607	·587	−·032	71	68	62	71	0	1·3	1·4	1·3	+0·1	0	2	7	10	1	0	0	8	28	N 25° W	N 1° W	52	57	149	183	0	0	Bombay . .	25
																															XIV.—Mysore.	
·469	·437	·337	·419	+·012	83	47	27	54	0	1·3	2·6	1·9		2	1	9	21	17	4	0	1	1	S 78° E	S 69° E	68	59	150	88	0	0	Bangalore . .	29
																															XV.—Madras.	
	·735	·769				66	62			4·9	5·2	5·1		10	4	2	4	0	0	18	12	6	S 82° W		43		76		0·17	0·15	Trivandrum .	31
	·669	·582				60	41			1·3	3·4	3·9		8	0	21	12	11	4	0	0	0	N 85° E		62		87		0	0	Pudukkottai .	
·725	·750	·749	·765	+·050	94	64	63	77	−1	4·5	2·7	3·6	+0·4	0	0	1	24	28	2	1	0	0	S 63° E	S 84° E	89	72	66	88	0	0	Madras.	
																															Hill stations, excluding Kashmir and Baluchistan.	
·216	·286	·266	·266	+·006	85	71	43	69	0	3·9	4·5	4·2	+0·7	0	1	0	26	0	2	0	27	0	S 45° W	N 87° W	3	47	11	21	0·79	0·52	Katmandu.	
·188	·227	·345	·253		57	41	65	54		1·8	5·8	3·8		0	10	12	14	10	2	1	0	7	N 60° E		48		185		0·33	0·31	Kodaikanal.	
																															Extra India.	
·700	·880	·875	·841	−·001	72	80	78	80	−3	6·5	7·0	6·7	+0·2†	0	13	13	5	2	0	0	0	23	N 1° W	N 21° W	66	53	107	107	11·77	3·70	Seychelles.	
			·780	+·003				76	−4			6·0	0										S 66° E	S 82° E			121	133	5·71	1·79	Mauritius.	

† Departure from old normal.

Table B.—Abstract of observations taken at 8 hrs. at 213 stations in India, etc., in February, 1919.

(1) Provincial means.

(2) Data of stations.

(1) Provincial means based on the material in Table B (2) except that the statement of rainfall depends on the complete data of about 2,300 stations.

Division.	Pressure departure from normal.	Temperature of air.							Wind.		Hygrometry.				Cloud.		Rainfall.		
		Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Departure of velocity from normal.	Departure of steadiness from normal.	Mean humidity.	Departure from normal.	Mean vapour tension.	Departure from normal.	Mean cloud amount.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.
	"	°	°	°	°	°	°	°					"	"			"	"	"
Burma	+·029	87·8	+0·2	64·3	+0·7	76·0	+0·4	23·5	+0·1	0	78	− 2	·568	−·004	3·0	+1·0	0·14	0·18	−0·04
Assam	+·037	78·0	+1·9	53·7	−0·5	65·8	+0·7	24·4	−0·6	− 5	83	− 6	·416	−·026	2·6	−1·3	0·48	1·49	−1·01
Bengal	+·044	81·0	−0·6	57·2	−0·9	69·1	−0·7	23·8	−0·6	+ 7	76	− 5	·451	−·044	2·2	−0·1	0·56	1·01	−0·45
Bihar and Orissa	+·048	79·3	−2·4	56·8	+0·2	68·1	−1·1	22·5	−0·3	− 1	75	+ 3	·440	+·021	3·1	+0·8	0·88	1·00	−0·12
United Provinces of Agra and Oudh	+·053	75·8	−1·4	49·6	−1·1	62·7	−1·2	26·2	−0·4	− 1	71	0	·313	−·016	1·2	−1·3	0·38	0·76	−0·38
Punjab	+·037	71·1	−0·3	46·6	+0·4	58·8	0	24·5	0	+ 3	76	+ 4	·289	+·014	2·4	−1·3	0·55	0·97	−0·42
North-West Frontier Province	+·021	69·6	+0·9	44·1	+0·7	56·9	+0·9	25·5	−1·0	−17	75	+ 5	·258	+·014	1·5	−2·4	0·98	1·37	−0·39
Sind	+·028	80·5	+1·7	55·4	+0·8	68·0	+1·2	25·1	−1·9	−10	56	− 4	·312	−·005	1·2	−1·4	0·03	0·32	−0·29
Rajputana	+·043	78·8	+0·3	51·3	−1·0	65·0	−0·3	27·4	−0·8	+10	50	− 2	·229	−·015	1·5	−1·2	0·02	0·34	−0·32
Bombay	+·019	87·3	+1·0	60·3	+0·4	73·8	+0·7	27·0	−0·7	− 6	57	0	·393	−·006	1·4	+0·1	0	0·08	−0·08
Central India	+·037	79·1	−1·5	51·5	−0·1	65·3	−0·8	27·5	−0·9	+ 3	60	+ 5	·298	+·012	1·3	−0·9	0·13	0·44	−0·31
Central Provinces	+·030	83·5	−2·5	58·7	+1·3	71·1	−0·6	24·8	+0·4	+21	63	+11	·404	+·077	2·3	+0·5	1·69	0·69	+1·00
Hyderabad	+·030	92·5	+1·3	67·1	+3·4	79·8	+2·4	25·4	−0·1	+27	58	+ 3	·485	+·057	2·1	+0·6	0·29	0·21	+0·08
Mysore	+·029	89·3	+1·8	65·0	+2·8	77·2	+2·2	24·3	−0·3	+ 6	66	+ 1	·505	+·024	2·7	+0·4	0	0·11	−0·11
Madras	+·028	89·6	+0·8	72·3	+2·7	81·0	+1·8	17·3	+0·2	+10	77	+ 1	·726	+·050	2·7	+0·1	0·35	0·44	−0·09

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	I.—Burma.																					
2	Victoria Point	147	29·851		29·929	29·940	5th	29·770	22nd	79·4	73·9	91·0		75·5		83·3		15·5	94·9	26th	73·4	3rd
	Mergui	66	29·953	+·028	29·949	30·046	6th	29·857	23rd	76·4	74·5	90·5	+1·0	72·7	+2·9	81·6	+1·9	17·8	92·8	25th	69·2	6th
	Tavoy	19	29·999	+·012	29·949	30·105	6th	29·901	23rd	73·9	71·5	92·5	+1·3	69·7	+2·1	81·1	+1·7	22·8	96·8	26th	62·0	23rd
	Moulmein	94	29·949	+·028	29·964	30·051	5th	29·853	22nd	74·9	70·5	92·2	+0·6	70·1	+2·0	81·2	+1·3	22·1	94·5	26th	64·2	23rd
	Rangoon	18	30·008	+·037	29·964	30·110	5th	29·894	23rd	70·9	67·8	93·2	+0·7	67·4	+0·9	80·3	+0·8	25·8	96·0	2nd	61·1	13th
	Bassein	27	30·006	+·035	29·970	30·116	5th	29·890	23rd	72·6	68·9	90·7	+0·8	65·8	−0·1	78·3	+0·3	24·9	94·8	25th	60·9	13th
	Diamond Island	41	29·973	+·018	29·950	30·076	5th	29·875	22nd & 23rd.	77·7	71·0	83·9	−0·1	73·7	+0·8	78·8	+0·3	10·2	86·6	11th	71·2	15th
	Toungoo	164	29·854	+·032	29·965	29·967	5th	29·749	22nd	68·8	66·4	91·2	+0·8	61·9	+0·8	76·5	+0·8	29·3	94·5	19th	56·3	12th
	Kyaukpyu	18	30·013		29·971	30·128	8th	29·899	18th	71·4	67·2	81·1		66·0		73·5		15·1	86·7	25th	59·5	6th
	Akyab	20	30·014	+·027	29·975	30·119	8th	29·893	18th	65·3	61·6	83·1	−1·4	59·5	−1·9	71·3	−1·7	23·6	87·6	25th	53·2	4th
3	Minbu	*165*	29·850	+·021	29·963	29·981	4th	29·721	18th	68·4	59·7	89·5	−1·0	61·3	+0·1	75·4	−0·5	28·2	96·7	19th	52·8	21st
	Yamethin	644	29·358	+·031	29·973	29·462	4th	29·239	22nd	67·2	61·3	90·0	−1·5	60·8	+0·7	75·4	−0·4	29·2	94·2	1st	54·4	4th
	Mandalay	250	29·774	+·035	29·979	29·900	4th	29·625	18th	69·7	61·4	90·9	+1·0	60·8	+0·5	75·9	+0·7	30·1	96·5	19th	54·1	5th
	Monywa	*280*	29·756	+·031	29·995	29·888	4th	29·611	18th	66·0	59·8	88·9	+1·7	60·3	+0·6	74·6	+1·1	28·6	93·8	19th	54·9	4th
	Lashio	*2,820*	27·200	+·031	27·146	27·315	5th	27·106	22nd	56·2	53·1	75·9	−2·7	50·3	+1·4	63·1	−0·7	25·6	80·5	18th	44·0	5th
	Bhamo	*361*	29·655	+·038	29·990	29·780	4th	29·489	18th	57·5	56·0	82·2	+1·3	49·6?	−3·2?	65·9?	−0·9?	32·6?	86·8	19th	42·0	4th
	Myitkyina	458	29·555	+·035	30·000	29·678	5th	29·379	18th	59·3	56·2	80·1	+1·8	52·3	−1·4	66·2	+0·2	27·8	84·6	17th & 23rd.	46·4	5th
	II.—Assam.																					
4	Dibrugarh	353	29·714	+·024	30·049	29·840	3rd	29·525	18th	57·5	56·0	74·9	+2·7	53·4	−0·5	64·1	+1·1	21·5	82·1	18th	45·6	3rd
	Sibsagar	333	29·737	+·026	30·050	29·878	3rd	29·551	18th	56·0	54·9	74·6	+1·8	52·8	−0·4	63·7	+0·7	21·8	79·9	17th	47·2	4th
	Tezpur	252	29·828	+·043	30·053	29·955	4th	29·643	26th	57·8	55·4	78·8	+3·0	54·9	+0·1	66·8	+1·5	23·9	84·0	17th	48·9	2nd
	Gauhati	196	29·881	+·031	30·043	30·016	3rd	29·712	26th	59·6	56·5	79·3	+1·6	51·5	−0·4	65·4	+0·6	27·8	84·8	18th	45·3	4th
	Dhubri	115	29·948	+·042	30·023	30·081	3rd	29·769	18th	60·9	56·7	76·4	+0·8	55·6	+0·1	67·0	+0·5	22·8	82·7	23rd	50·3	11th
	Silchar	104	29·990	+·054	30·051	30·111	3rd	29·836	18th	62·7	58·8	82·2	+1·7	53·8	−1·7	68·0	0	28·4	88·6	25th	46·7	3rd
	Srimangal	66	30·025		30·044	30·139	4th	29·873	18th	58·5	54·9	84·1	+1·5	46·7?	−5·4?	65·4?	−1·9?	37·4?	89·9	18th	38·8	3rd
	III.—Bengal.																					
5	Cox's Bazar	36	30·008		29·990	30·110	5th	29·861	18th	65·3	63·5	82·0		58·1		70·1		23·9	87·1	17th & 26th.	50·5	4th
	Chittagong	87	29·976	+·043	30·012	30·075	6th	29·820	18th	62·9	59·3	82·5	+0·3	55·5	−2·2	69·5	−0·9	26·0	88·8	26th	48·5	4th
	Noakhali	43	30·033	+·056	30·025	30·142	3rd	29·898	18th	64·8	60·6	81·0	+0·2	57·1	−0·2	69·1	0	23·9	86·4	25th	51·2	4th
	Barisal	12	30·048	+·041	30·007	30·157	3rd	29·913	18th	65·4*	60·6*	80·3*	−1·2	58·5*	−0·9	69·4*	−1·1	21·8*	85·8	27th	51·6	5th
	Narayanganj	26	30·039	+·043	30·015	30·161	3rd	29·804	18th	62·4	57·1	81·1	−0·5	56·7	−1·8	68·9	−1·1	24·4	86·5	27th	50·2	3rd
	Mymensingh	63	30·002	+·043	30·020	30·116	3rd	29·846	18th	59·4	55·8	80·3	+1·7	55·0	−0·8	67·7	+0·5	25·3	85·1	17th & 25th.	49·1	2nd
	Bogra	75	29·990	+·043	30·021	30·130	3rd	29·849	26th	59·3	55·6	80·0	+0·1	53·3	−1·1	66·6	−0·5	26·7	85·3	18th	46·2	3rd
	Dinajpur	123	29·928	+·037	30·012	30·070	4th	29·771	26th	57·6	53·7	79·8	+0·5	51·4	−0·9	65·6	−0·2	28·4	84·8	17th	45·0	2nd
	Jalpaiguri	283	29·759†	+·031	30·013†	29·884	5th	29·589	18th	58·7?‡	56·2?‡	80·9?‡	‡ +1·6?	53·0?‡	‡ −1·9?	66·9?‡	‡ −0·1?	27·9‡	82·4	25th	50·0	27th
	Saugor Island	10	30·056	+·044	30·012	30·207	4th	29·913	18th	69·0	66·1	79·9	−1·0	63·7	−1·3	71·8	−1·1	16·2	85·4	23rd	53·5	4th
	Midnapore	149	29·908	+·033	30·011	30·041	4th	29·764	18th	67·5	60·4	83·7	−1·7	61·2	+0·1	72·5	−0·8	22·5	90·0	28th	53·7	4th
	Calcutta	21	30·052	+·049	30·020	30·186	3rd	29·905	18th	64·0	60·4	81·7	−0·3	60·1	+0·1	70·9	−0·1	21·6	87·3	28th	52·4	4th

* Mean of 27 days.
† „ „ 24 „
‡ „ „ 4 „

N.B.—Elevations in italics indicate barometrical determinations.

B.

at 213 stations in India, etc., in February, 1919.

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 28th Feb. 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															I.—Burma.
3	0	21	2	0	0	0	0	2	N 43° E		5·6			74		76		·767		0·5		0	−0·3	0	0·07	− 0·07	1·31	2·71	− 1·40	0	Victoria Point.
28	0	0	0	0	0	0	0	0	Calm	N 8° W		1·5		(a)		91	+ 6	·833	+·066	2·8	−0·3	4	+1·2	4·70	2·07	+ 2·63	7·21	3·49	+ 3·72	2·20	Mergui.
15	5	6	0	1	1	0	0	0	N 34° E	N 54° W	1·7	1·0	+0·7	32	+28	88	− 1	·738	+·038	4·0	+2·8	0	−0·9	0·02	0·51	− 0·49	1·18	0·94	+ 0·24	0·02	Tavoy.
7	0	8	13	0	0	0	0	0	N 73° E	N 84° E	2·1	1·7	+0·4	70	+22	80	− 4	·690	+·017	1·4	−0·6	0	−0·4	0	0·17	− 0·17	0·45	0·66	− 0·21	0	Moulmein.
6	6	6	2	0	1	2	3	2	N 3° E	S 67° W	3·7	2·8	+0·9	33	−14	82	− 2	·621	−·008	5·0	+3·3	1	+0·7	0·19	0·25	− 0·06	0·60	0·84	− 0·24	0·14	Rangoon.
19	1	3	0	0	0	1	0	4	N 15° W	N 43° W	3·3	3·3	0	18	−41	82	− 5	663	−·004	4·0	+2·4	0	−0·3	0·01	0·31	− 0·30	0·23	0·83	− 0·60	0·01	Bassein.
0	14	1	1	0	0	0	1	11	N 18° W	N 9° W	9·0	6·4	+2·6	82	+ 7	71	− 4	·669	− ·037	3·0	+0·8	0	−0·2	0	0·18	− 0·18	0·76	1·22	− 0·46	0	Diamond Island.
10	7	6	0	2	3	0	0	0	N 40° E	N 6° E.	1·9	1·4	+0·5	32	− 2	88	+ 4	·615	+·047	2·7	+1·3	1	+0·7	0·12	0·19	− 0·07	0·85	0·84	+ 0·01	0·12	Toungoo.
25	1	0	0	0	0	0	0	2	N 31° W		1·0			7		80		·611		5·1		0	−0·4	0	0·13	− 0·13	0·23	0·50	− 0·27	0	Kyaukpyu.
7	7	12	2	0	0	0	0	0	N 34° E	N 24° E	3·3	2·6	+0·7	63	−20	80	− 4	·500	−·042	2·7	+1·5	1	+0·7	0·12	0·13	− 0·01	4·00	0·90	+ 3·10	0·12	Akyab.
7	1	0	0	1	0	1	0	18	N 46° W	N 70° W	2·0	4·6	−2·6	63	+45	58	− 7	·398	−·043	2·6	+1·4	0	−0·2	0	0·08	− 0·08	0·66	0·63	+ 0·03	0	Minbu.
										S 63° E		2·3				71	0	·468	−·006	1·7	+0·5	1	+0·6	0·14	0·25	− 0·11	0·33	0·83	− 0·50	0·14	Yamethin.
25	0	0	0	2	1	0	0	0	S 31° E	S 30° W	1·5	1·8	−0·3	7	− 4	60	− 9	·433	−·024	2·6	+1·2	0	−0·2	0·04	0·07	− 0·03	0·45	0·47	− 0·02	0·04	Mandalay.
2	17	0	0	1	1	0	0	7	N 12° W		1·8			74		68	− 6	·435	−·024	2·1	+0·5	0	−0·1	0	0·02	− 0·02	0·45	0·44	+ 0·01	0	Monywa.
17	0	0	0	2	0	4	4	1	S 60° W		2·0			25		81	− 1	·365	+·002	2·2	−1·2	2	+1·0	0·20	0·31	− 0·11	1·65	1·55	+ 0·10	0·10	Lashio.
25	1	2	0	0	0	0	0	0	N 31° E	N 18° W	0·6	2·0	−1·4	7	−17	91	+ 2	·431	−·007	5·0	+2·2?	2	+0·7	0·46	0·45	+ 0·01	0·49	1·60	− 1·11	0·13	Bhamo.
23	2	3	0	0	0	0	0	0	N 28° E		3·0			18		82	− 4	·413	−·033	3·5	+0·1	2	−0·4	0·91	0·80	+ 0·11	1·00	1·77	− 0·77	0·48	Myitkyina.
																															II.—Assam.
20	0	1	4	1	1	0	0	1	S 87° E		0·4			17		91	− 1	·430	+·001	3·8	−1·2	4	−1·7	1·86	2·27	− 0·41	2·49	4·29	− 1·80	0·99	Dibrugarh.
19	1	6	0	0	1	1	0	0	N 45° E	N 48° E	1·1	1·7	−0·6	14	−22	93	− 4	·417	−·037	6·5	+0·3	3	−2·3	0·70	1·39	− 1·29	1·58	3·86	− 2·28	0·31	Sibsagar.
12	0	7	8	1	0	0	0	0	N 73° E		1·4			53		85	− 3	·409	−·014	2·1	−1·3	0	−2·9	0·07	1·20	− 1·13	0·23	2·02	− 1·79	0·04	Tezpur.
27	0	6	0	0	0	1	0	0	S 45° W		0·5			4		82	− 7	·416	−·005	3·3	−2·0	1	−1·7	0·26	1·43	− 1·17	0·70	1·98	− 1·28	0·23	Gauhati.
1	0	9	10	1	0	7	0	0	N 87° E	N 67° E	3·3	3·1	+0·2	42	+11	76	− 8	·406	−·022	1·0	−1·3	0	−1·5	0	0·77	− 0·77	0·36	1·17	− 0·81	0	Dhubri.
28	0	0	0	0	0	0	0	0	Calm	S 63° E	0·4	1·8	−1·4	(a)		78	− 8	·443	−·038	0·9	−2·4	0	−3·6	0·02	2·13	− 2·11	0·38	3·44	− 3·06	0·02	Silchar.
																79	− 8	·392	−·065	0·5		0	−2·7	0·05	1·64	− 1·59	0·34	2·60	− 2·26	0·03	Srimangal.
																															III.—Bengal.
17	0	7	4	0	0	0	0	0	N 61° E		1·8			36		89		·564		1·2		1	+0·6	0·26	0·10	+ 0·16	0·39	1·25	− 0·86	0·19	Cox's Bazar.
16	0	11	1	0	0	0	0	0	N 48° E	N 45° E	1·9	2·8	−0·9	42	−12	80	− 3	·462	−·048	1·6	−0·6	1	−0·2	0·46	1·04	− 0·58	0·65	2·15	− 1·50	0·38	Chittagong.
5	5	14	1	0	0	1	0	2	N 29° E		1·1			64		78	− 7	·430	−·052	2·3	0	2	+0·1	0·62	1·25	− 0·63	1·36	1·86	− 0·50	0·48	Noakhali.
23	1	1	1	0	0	0	0	2	N 6° E	N 13° W	1·1	1·5	−0·4	11	+ 3	74*	−10	·464*	−·082	2·3	+0·2	3	+1·1	1·09	1·11	− 0·02	1·38	2·02	− 0·64	0·70	Barisal.
21	0	0	0	1	0	0	3	3	N 72° W	N 27° W	1·0	2·1	−1·1	14	+ 6	73	−10	·415	−·085	1·9	−1·0	0	−2·0	0	1·36	− 1·36	0·46	1·88	− 1·42	0	Narayanganj.
28	0	0	0	0	0	0	0	0	Calm	N 74° E	0·7	1·4	−0·7	(a)		79	− 4	·402	−·052	1·5	−0·6	0	−1·7	0	0·99	− 0·99	0·50	1·44	− 0·94	0	Mymensingh.
18	1	1	0	0	1	3	4	0	S 75° W	N 27° W	1·0	1·8	−0·8	18	+ 7	78	0	·394	−·024	1·6	+0·1	0	−1·7	0·02	0·85	− 0·83	1·36	1·31	+ 0·05	0·02	Bogra.
5	1	1	1	0	0	3	13	4	N 81° W	N 83° W	2·0	2·6	−0·6	56	+27	76	− 4	·364	−·034	1·2	−1·2	0	−1·3	0·03	0·60	− 0·57	0·62	1·02	− 0·40	0·03	Dinajpur.
18	1	2	1	0	1	0	0	1	N 39° E	N 40° E	0·9†			11	−22	85§		·412§		1·0‡	−0·8	0	−1·3	0·06	0·73	− 0·67	0·69	1·18	− 0·49	0·04	Jalpaiguri.
2	10	9	2	1	0	2	0	2	N 22° E	N 3° W	5·1	5·3	−0·2	60	+36	85	− 1	·611	−·016	3·5	+0·3	2	+0·2	1·95	1·13	+ 0·82	2·72	1·73	+ 0·99	1·04	Saugor Island.
22	2	2	1	1	0	0	0	0	N 45° E		2·0			14		64	− 4	·437	−·012	3·5	+1·5	2	+0·1	1·31	1·28	+ 0·03	2·85	2·05	+ 0·80	0·83	Midnapore.
6	7	3	2	0	1	0	2	7	N 12° W	S 46° W	2·7	2·4	+0·3	46	+30	80	− 1	·479	−·034	3·5	+1·0	1	−0·7	1·16	1·14	+ 0·02	2·23	1·73	+ 0·50	1·10	Calcutta.

(a) Indeterminate.

* Mean of 27 days.
† " " 23 "
‡ " " 24 "
§ " " 4 "

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal—*concld.*																					
	Jessore	30	30·049	+·055	30·027	30·175	4th	29·906	18th	63·5	58·0	80·1	−2·1	55·0	−2·2	67·5	−2·1	25·1	85·5	18th	46·9	3rd
	Burdwan	99	29·966	+·038	30·017	30·104	4th	29·814	18th	64·0	58·2	81·7	−1·5	57·7	−0·9	69·7	−1·2	24·0	87·1	17th & 27th.	52·0	24th
	Berhampore	67	30·015	+·056	30·035	30·158	4th	29·856	26th	61·8	57·4	79·5	−1·9	56·2	−0·2	67·8	−1·1	23·3	85·8	27th	50·2	3rd
	IV.—Bihar and Orissa.																					
6	Balasore	50	30·019	+·040	30·016	30·163	4th	29·891	18th	66·9	62·8	83·0	−1·6	62·5	+1·0	72·8	−0·3	20·5	87·8	23rd	55·9	24th
	Hukitala (False Point)	29	30·041	+·045	30·011	30·174	4th	29·886	18th													
	Cuttack	30	29·990	+·049	30·013	30·120	4th	29·862	18th	70·2	67·5	84·3	−4·9	67·6	+2·1	75·9	−1·4	16·7	91·5	28th	62·4	20th
	Puri	24	30·045	+·047	30·010	30·176	4th	29·883	18th	73·4	70·4	82·9	−0·1	70·9	+1·9	76·9	+0·9	12·0	85·9	28th	65·0	20th
	Angul	455	29·596	+·066P	30·013	29·725	4th	29·486	18th	69·4	65·7	83·1	−4·1	64·0	+2·6	73·5	−0·7	19·1	90·8	28th	54·0	20th
	Sambalpur	486	29·569	+·040	30·023	29·677	4th	29·456	18th	67·0	63·2	81·5	−5·6	62·1	+2·2	71·8	−1·7	19·4	88·9	24th	54·0	20th
7	Chaibasa	*733*	29·310	+·040	30·029	29·432	4th	29·151	18th	61·8	59·1	81·5	−3·0	58·0	+0·9	69·7	−1·1	23·5	89·0	28th	51·9	20th
	Ranchi	2,128	27·887	+·046	30·028	28·008	4th	27·769	18th	59·5	53·1	73·5	−3·6	54·4	−0·5	63·9	−2·1	19·1	82·9	17th	47·9	3rd & 4th.
	Purulia	*816*	28·222	+·028	30·027	29·378	4th	29·096	18th	62·6	56·4	82·3	+0·8P	54·4	−3·2P	68·3	−1·2P	27·9	91·8	22nd	48·3	4th
	Daltonganj	*730*	29·338	+·052	30·064	29·474	3rd & 4th.	29·215	26th	58·0	55·1	78·1	−0·9P	52·5	+1·1	65·3	+0·1P	25·6	87·5	17th	43·0	10th
8	Purnea	124	29·912	+·048	30·029	30·094	4th	29·777	18th	56·0	53·1	77·8	−0·9	50·5	−0·8	64·1	−0·9	27·3	85·3	17th	45·6	10th
	Monghyr	155	29·912		30·028	30·058	4th	29·759	18th & 26th.	59·6	54·1	77·7		54·1		65·9		23·6	85·7	17th	48·9	1st & 2nd
	Darbhanga	165	29·912	+·062	30·037	30·063	4th	29·768	18th	61·4	55·6	76·1	−0·5	50·3	−3·2	63·2	−1·9	25·8	83·5	17th	44·7	3rd
	Pusa	188	29·870		30·025	30·018	4th	29·737	22nd	56·1	53·1	77·6		49·4		63·5		28·2	84·7	17th	44·7	10th
	Patna	183	29·900	+·061	30·048	30·060	4th	29·771	26th	60·7	54·4	76·0	−1·6	53·1	−0·7	64·6	−1·1	22·9	83·8	17th	47·2	5th
	Buxar	239	29·831	+·053	30·040	29·995	4th	29·711	26th	58·1	53·7	77·2	−1·1	52·0	−2·0	64·6	−1·5	25·2	87·4	17th	45·9	4th
	Gaya	372	29·707	+·059	30·055	29·856	4th	29·588	18th & 26th.	60·5	54·8	77·9	−2·6	55·7	−0·1	66·8	−1·3	22·2	87·7	17th	50·0	4th
	Naya Dumka	489	29·574	+·055	30·039	29·708	3rd	29·422	18th	63·1	56·8	78·4	−1·2	54·5	−1·3	66·5	−1·3	23·9	84·8	17th	47·8	4th
	V.—United Provinces of Agra and Oudh.																					
9	Gorakhpur	257	29·795	+·052	30·027	29·955	4th	29·670	22nd	55·5	51·5	76·6	−0·8	50·0	−2·2	63·3	−1·5	26·6	84·9	17th	44·8	3rd
	Benares	267	29·806	+·053	30·043	29·960	4th	29·688	26th	58·4	54·4	76·2	−3·2	50·1	−1·2	63·3	−2·2	25·8	85·9	17th	44·1	4th
	Allahabad	309	29·783	+·070	30·068	29·940	4th	29·668	17th & 26th.	57·7	53·0	76·0	−3·5	50·9	−0·8	63·4	−2·1	25·1	85·5	17th	45·3	4th
	Cawnpore	416	29·658	+·063	30·060	29·805	4th	29·539	17th	54·5	49·5	76·9	−0·7	50·0	−0·9	63·4	−0·8	26·9	86·2	17th	41·9	4th
	Lucknow	368	29·704	+·061	30·047	29·861	4th	29·596	17th													
	Bahraich	407	29·622	+·034P	30·017	29·775	4th	29·507	22nd	55·0	50·8	75·9	−0·4	48·8	−1·6	62·4	−1·0	27·1	81·9	23rd	43·1	3rd
10	Jhansi	824	29·235	+·032	30·064	29·369	4th	29·114	25th	57·3	50·2	79·1	−1·6	50·5	−5·1P	64·8	−3·3P	28·6	89·8	17th	43·2	3rd
	Agra	556	29·514	+·053	30·061	29·670	4th	29·381	16th	60·3	52·3	77·0	−0·7	50·9	−1·3	63·9	−1·0	26·1	89·1	17th	46·2	2nd
	Mainpuri	516	29·538	+·048	30·048	29·700	4th	29·411	17th	54·0	48·6	75·9	−0·6	48·5	−1·0	62·2	−0·8	27·4	87·3	17th	42·3	4th
	Bareilly	568	29·465	+·047	30·032	29·636	4th	29·351	17th	54·5	50·4	74·7	−0·1	49·1	−0·5	61·9	−0·3	25·6	81·1	17th	43·0	3rd
	Roorkee	899	29·121	+·045	30·051	29·292	4th	29·005	27th	51·1	49·3	70·0	−2·8	46·9	−0·1	58·5	−1·5	23·1	77·6	17th	40·6	2nd
	VI.—Punjab.																					
11	Delhi	718	29·325	+·043	30·036	29·471	4th	29·200	16th	54·6	48·8	72·2	−2·6	51·4	−0·1	61·8	−1·3	20·8	78·6	25th	44·7	3rd
	Hissar	725	29·340	+·060P	30·082	29·488	5th	29·151	16th	52·6	47·7	75·3	+0·8	46·3	−0·3	60·5	+0·3	29·0	83·4	25th	38·0	4th

N.B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

at 213 stations in India, etc., in February, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of metcury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 28th Feb. 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															III.—Bengal—*concld.*
28	0	0	0	0	0	0	0	0	Calm	N 18° W	0	1·5	−1·5	(a)		70	−11	·411	−·084	2·5	+0·2	2	+ 0·1	1·02	1·40	− 0·38	1·50	2·02	− 0·52	0·88	Jessore.
21	3	0	0	0	0	0	0	4	N 26° W	N 27° W	1·0	1·5	−0·5	25	+ 5	69	− 2	·413	−·018	3·0	+0·2	1	− 0·8	1·16	1·28	− 0·12	2·99	1·81	+ 1·18	1·16	Burdwan.
18	0	1	1	0	0	6	1	1	S 56° W	S 83° W	1·2	1·6	−0·4	18	−13	75	− 5	·414	−·024	2·4	−0·1	1	− 0·8	0·75	0·93	− 0·18	1·88	1·44	+ 0·44	0·75	Berhampore.
																															IV.—Bihar and Orissa.
10	4	4	1	0	1	1	2	5	N 16° W	N 42° W	1·4	2·8	−1·4	32	− 3	82	+ 5	·552	+·037	3·5	+1·4	4	+ 1·7	2·95	1·48	+ 1·47	4·59	2·26	+ 2·33	1·50	Balasore.
3	7	5	1	1	2	4	1	4	N 16° W		4·9			29	−14					4·4	+1·0	8	+ 6·6	3·49	1·00	+ 2·49	4·11	2·15	+ 1·96	1·22	Hukitala (False Point).
23	0	3	2	0	0	0	0	1	N 62° E	N 36° E	1·3	1·5	−0·2	14	+ 7	86	+ 6	·641	+·066	5·6	+2·9	4	+ 2·7	0·65	0·69	− 0·04	3·87	1·24	+ 2·63	0·23	Cuttack.
3	10	8	1	0	2	3	0	1	N 18° E		7·4			46		86	+ 5	·708	+·047	5·3	+3·2	4	+ 3·2	1·84	0·70	+ 1·14	3·39	1·35	+ 2·04	0·65	Puri.
17	0	3	1	1	0	1	2	3	N 18° W		2·5			11		81	+ 5	·585	+·077	5·9	+2·7	5	+ 2·9	1·45	1·55	− 0·07	3·49	2·32	+ 1·17	0·51	Angul.
0	12	11	0	0	0	0	0	5	N 10° E	N 27° E	3·0	2·1	+0·9	85	+23	80	+14	531	+·092	3·3	+1·0	3	+ 1·3	0·85	0·80	+ 0·05	5·14	1·39	+ 3·75	0·23	Sambalpur.
20	0	2	1	0	1	4	0	0	S 10° W	S 86° W	1·3	1·1	+0·2	9	−48	85	+ 9	·470	+·055	3·3	+1·1	3	+ 0·4	0·85	1·60	− 0·75	2·83	2·49	+ 0·34	0·56	Chaibasa.
11	1	0	1	1	0	1	5	8	N 61° W	N 68° W	3·4	4·2	−0·8	39	+ 4	64	+ 4	·330	+·013	2·6	0	2	− 1·0	0·97	1·74	− 0·77	7·69	2·62	+ 5·07	0·62	Ranchi.
8	1	0	0	0	0	0	11	5	N 68° W		2·1			64		66	+ 1	·379	+·001	2·8	+0·5	0	− 2·9	0·09	1·56	− 1·47	3·65	2·43	+ 1·22	0·07	Purulia.
25	0	0	0	0	0	1	2	0	S 72° W		1·3*			11		82	+ 7	·398	+·024	1·7	−0·3	2	− 0·4	0·55	1·22	− 0·67	5·85	2·26	+ 3·59	0·30	Daltonganj.
5	0	1	1	1	1	9	9	1	S 64° W	S 64° W	2·6	2·3	+0·3	53	+33	82	− 2	·366	−·024	4·3	+2·7?	1	− 0·3	0·14	0·63	− 0·49	1·19	1·18	+ 0·01	0·14	Purnea.
9	0	0	1	2	0	16	0	0	S 35° W		4·0			57		68		·347		2·3		0	− 1·6	0·05	1·10	− 1·05	0·56	1·80	− 1·24	0·03	Monghyr.
13	0	0	3	1	1	1	8	1	S 73° W	N 89° W	1·9	2·7	−0·8	25	− 6	68	−11	·370	−·020	1·3	−0·4	0	− 1·4	0	0·55	− 0·55	1·09	1·13	− 0·04	0	Darbhanga.
9	1	0	2	0	2	7	7	0	S 59° W		2·6			43		81		·367		1·4		0	− 2·1	0·02	0·89	− 0·87	1·31	1·14	+ 0·17	0·01	Pusa.
10	0	0	1	0	1	7	9	0	S 65° W	S 70° W	2·5	2·4	+0·1	49	+ 2	64	− 5	·343	−·030	1·7	−0·8	1	− 0·5	0·20	0·73	− 0·53	2·02	1·38	+ 0·64	0·17	Patna.
10	0	1	1	0	0	10	8	0	S 61° W		3·2			46		73	+ 7	·354	+·006	2·3	−0·2	0	− 1·8	0·10	0·73	− 0·63	3·22	1·61	+ 1·59	0·08	Buxar.
15	0	0	1	0	4	5	2	1	S 38° W	S 37° W	1·6	2·6	−1·0	32	− 3	68	− 1	·361	−·021	2·2	−0·4	2	+ 0·2	0·76	0·89	− 0·13	3·53	1·68	+ 1·85	0·44	Gaya.
25	0	0	0	1	0	0	2	0	S 60° W		1·4			4		66	+ 1	·380	−·009	1·5	−0·4	1	− 0·9	0·86	0·72	+ 0·14	4·62	1·33	+ 3·29	0·83	Naya Dumka.
																															V.—United Provinces of Agra and Oudh.
7	0	1	7	0	0	0	13	0	N 88° W	N 73° W	2·0	1·6	+0·4	18	−21	75	+ 3	·331	−·026	0·4	−1·8	1	− 0·8	0·24	0·57	− 0·33	1·52	1·44	+ 0·08	0·24	Gorakhpur.
12	0	2	0	0	1	5	5	2	S 79° W	S 52° W	1·6	2·8	−1·2	32	− 2	77	+ 2	·371	−·002	2·0	−0·5	2	+ 0·2	0·39	0·69	− 0·30	2·91	1·59	+ 2·32	0·25	Benares.
18	0	0	2	0	0	2	4	2	W	S 81° W	1·9	3·3	−1·4	17	− 7	72	+ 4	·343	−·007	1·6	−1·1	2	+ 0·6	0·68	0·55	+ 0·13	4·16	1·56	+ 2·60	0·37	Allahabad.
6	3	0	0	3	0	4	9	4	W	N 81° W	1·8	2·8	−1·0	45	+21	69	− 1	·290	−·030	0·7	−1·3	1	− 0·7	0·22	0·67	− 0·45	0·87	1·43	− 0·56	0·20	Cawnpore.
18	0	0	2	0	0	0	8	0	W	N 74° W	1·3	2·2	−0·9	21	− 9					1·3	−1·5	0	− 1·5	0·07	0·63	− 0·56	1·15	1·77	− 0·62	0·07	Lucknow.
9	1	0	3	1	0	1	6	7	N 60° W	N 68° W	1·9	2·3	−0·4	32	+ 1	74	− 3	·315	−·041	1·2	−0·9	0	− 2·2	0	0·98	− 0·98	1·86	2·31	− 0·45	0	Bahraich.
12	1	2	0	0	0	6	3	4	N 84° W	S 81° W	2·8	1·8	+1·0	32	+ 9	58	+ 2	·271	−·039	0·7	−0·9	0	− 1·2	0	0·47	− 0·47	1·45	1·34	+ 0·11	0	Jhansi.
5	1	1	2	2	0	6	8	2	S 73° W	N 53° W	3·0	3·1	−0·1	32	− 7	56	− 7	·289	−·006	1·2	−1·4	0	− 1·1	0	0·49	− 0·49	1·96	1·23	− 0·27	0	Agra.
12	1	0	2	1	0	2	5	5	N 72° W	N 63° W	1·5	1·5	0	25	+ 5	65	− 5	·273	−·024	1·4	−1·3	1	− 0·6	0·20	0·72	− 0·52	1·61	1·76	− 0·15	0·20	Mainpuri.
24	0	0	1	0	0	0	3	0	W	N 51° W	0·6	2·3	−1·7	7	−19	74	− 1	·313	−·004	1·4	−1·5	0	− 1·8	0	0·93	− 0·93	2·27	2·32	− 0·05	0	Bareilly.
19	0	0	0	1	0	0	0	3	N 45° W	N 40° W	2·4	2·0	+0·4	29	+17	88	+ 9	·329	+·029	1·0	−1·3	2	− 0·7	0·51	1·53	− 1·02	6·65	3·30	+ 2·85	0·30	Roorkee.
																															VI.—Punjab.
7	1	0	1	1	1	0	11	6	N 76° W	N 86° W	2·4	2·6	−0·2	46	+13	61	+ 1	·270	−·004	0·7	−2·7	0	− 1·7	0·07	0·80	− 0·73	2·61	2·31	+ 0·30	0·07	Delhi.
2	3	1	3	3	2	5	6	2	S 55° W	S 76° W	3·9	3·0	+0·9	21	+17	69	− 2	·267	−·009	1·8	−1·6	0	− 1·1	0·02	0·38	− 0·36	1·75	1·41	+ 0·34	0·02	Hissar.

(a) Indeterminate.
* Mean of 26 days.

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	VI.—Punjab—*concld.*																					
	Patiala	*818*	29·189	+·024?	30·081	29·342	4th	29·030	16th	51·9	45·9	70·1	−1·1	47·8	+0·5	58·9	−0·3	22·3	77·4	25th	43·5	8th
	Ambala	892	29·121	+·037	30·046	29·287	4th	29·012	23rd	51·5	48·7	71·4	−0·4	47·2	+0·3	59·3	−0·1	24·2	79·1	25th	41·2	1st
	Ludhiana	812	29·213	+·039	30·054	29·369	4th	29·038	16th	50·7	47·9	70·0	−0·6	47·8	+0·2	58·9	−0·2	22·2	76·5	24th	42·0	1st
	Lahore	702	29·329	+·031	30·057	29·490	4th & 5th.	29·153	16th	49·4	47·1	69·8	−2·3	45·7	+1·2	57·8	−0·5	24·1	76·8	28th	39·3	3rd
	Sialkot	830	29·199	+·037	30·062	29·369	4th	29·011	16th	51·0	49·4	67·3	−2·2	44·4	−1·5	55·9	−1·9	22·9	73·6	13th	38·3	3rd
	Rawalpindi	1,674	28·362	+·050	30·115	28·519	4th	28·184	16th	49·2	45·3	64·8	0	41·2	0	53·0	0	23·6	73·7	28th	34·8	9th
12	Khushab	612	29·448	+·036	30·079	29·604	5th	29·244	16th	51·3	48·0	72·4	+1·9	45·7	0	59·0	+0·9	26·7	80·2	23rd	38·2	3rd
	Lyallpur	605	29·453		30·055	29·586	5th	29·246	16th	48·4	46·4	71·1		44·1		57·6		27·0	78·2	28th	39·0	1st & 3rd.
	Montgomery	558	29·490	+·031	30·058	29·660	5th	29·296	16th & 28th.	53·2	48·5	73·1	+0·6	46·4	+1·0	59·8	+0·8	26·7	82·4	28th	39·5	3rd
	Multan	426	29·636	+·028	30·057	29·803	5th	29·397	28th	55·3	49·8	75·7	+2·1	50·8	+3·5	63·3	+2·8	24·9	84·7	28th	42·5	2nd
	VII.—North-West Frontier Province.																					
14	Peshawar	1,113	28·944	+·020	30·122	29·115	2nd	28·786	16th	46·0	43·2	67·1	+1·4	42·3	−0·2	54·7	+0·6	24·8	77·4	28th	37·9	1st & 9th.
	Dera Ismail Khan	590	29·482	+·023	30·089	29·656	5th	29·278	28th	50·9	46·9	72·1	+0·5	46·0	+1·7	59·0	+1·1	26·1	79·3	23rd	38·4	3rd
	VIII.—Sind.																					
16	Jacobabad	186	29·885	+·030	30·043	30·094	2nd	29·628	28th	57·3	47·2	81·5	+3·7	50·0	+1·8	65·8	+2·7	31·5	91·7	28th	37·6	18th
	Hyderabad	96	29·976	+·023	30·030	30·174	2nd	29·810	28th	61·3	53·1	83·5	+3·0	55·3	+1·3	69·4	+2·1	28·2	93·8	25th	44·9	15th
	Karachi	13	30·077	+·030	30·042	30·258	2nd	29·954	14th & 28th.	64·7	59·2	76·6	−1·6	60·9	−0·6	68·8	−1·1	15·7	84·2	12th	53·1	1st & 18th.
	IX.—Rajputana.																					
17	Bikaner	*771*	29·284	+·052	30·066	29·434	2nd & 5th.	29·076	16th	56·0	49·1	78·0	+2·3	50·3	−2·1	64·1	+0·1	27·7	88·6	25th	42·7	3rd
	Jodhpur	780	28·274	+·044	30·054	29·438	2nd	29·112	25th	59·7	47·7	81·4	+1·4	54·0	+1·0	67·7	+1·2	27·4	90·4	28th	42·3	17th
18	Jaipur	1,431	28·623	+·051	30·082	28·725	2nd & 3rd.	28·473	16th	58·4	49·2	77·2	−0·8	50·3	−1·1	63·8	−0·9	26·9	85·6	25th	39·3	3rd
	Ajmer	1,611	28·425	+·030	30·089	28·545	5th	28·271	16th	50·7	45·0	75·8	−1·5	47·9	−1·7	61·9	−1·6	27·9	84·6	16th	40·9	3rd
	Kotah	832	29·220	+·040	30·047	29·336	2nd	29·073	25th	62·2	51·5	81·4	−0·1	54·1	−1·0	67·7	−0·5	27·3	93·2	16th	48·0	2nd
	X.—Bombay.																					
19	Deesa	466	29·595	+·044	30·038	29·711	6th	29·481	25th	63·2	50·5	87·8	+1·6	53·5	−1·0	70·6	+0·3	34·3	95·4	28th	43·0	17th
	Bhuj	334	29·730	+·032	30·030	29·869	2nd	29·623	14th	64·6	59·3	83·6	−0·1	55·4	−2·1	69·5	−1·1	28·2	91·0	28th	46·9	18th
	Jamnagar	61	30·010	+·009	30·019	30·135	2nd	29·913	24th	64·3	58·1	82·9	+0·8	54·4	−1·4	68·6	−0·3	28·5	89·9	23rd	47·6	18th
	Dwarka	37	30·047	+·017	30·031	30·179	1st	29·951	23rd	68·3	64·4	77·7	−0·4	64·6	+2·6	71·1	+1·1	13·1	85·2	27th	56·7	2nd
	Rajkot	429	29·605	+·005	30·105	29·712	2nd	29·501	23rd	62·2	52·1	86·9	+0·3	54·6	+0·6	70·8	+0·5	32·3	93·9	28th	46·9	2nd
	Veraval	*18*	30·074	+·023	29·996	30·136	1st	29·938	23rd	64·7	56·5	82·5	+1·0	60·0	−0·6	71·3	+0·2	22·5	90·9	10th	53·1	19th
	Bhavnagar Para	55	29·994	+·012	29·996	30·096	6th	29·885	23rd	64·7	56·0	88·3	+1·7	56·8	−1·1	72·5	+0·3	31·5	93·8	23rd & 28th.	51·6	8th & 18th.
	Surat	39	30·003	+·012	29·986	30·082	1st	29·897	23rd	66·4	57·6			59·8	+0·7						54·3	19th
	Ahmadabad	163	29·898	+·030	30·017	30·010	6th	29·798	24th	68·3	55·5	89·7	+2·3	60·2	+0·7	75·0	+1·5	29·5	96·1	28th	51·9	19th
25	Bombay	37	29·994	+·013	29·972	30·072	17th	29·900	23rd	70·8	66·1	82·4	−0·4	68·4	0	75·4	−0·2	14·0	85·1	10th & 23rd.	64·0	19th
	Ratnagiri	207	29·804	+·015	29·954	29·873	5th	29·706	23rd	73·9	66·6	83·4	−2·6	67·4	+0·3	75·4	−1·1	16·0	86·2	28th	60·5	19th
	Marmagao	*60*	29·963	+·024	29·959	30·042	5th	29·878	23rd	73·2	70·5	84·0	−0·8						87·0	25th		
	Karwar	44	29·985	+·029	29·964	30·058	5th	29·895	23rd	69·9	67·9	86·6	+0·6	67·9	+0·9	77·2	+0·7	18·7	89·7	12th	62·4	19th

N.B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

at 213 stations in India, etc., in February, 1919—*continued.*

Wind direction. Number of winds from Calm. (23)	N. (25)	N.E. (26)	E. (27)	S.E. (28)	S. (29)	S.W. (30)	W. (31)	N.W. (32)	Resultant direction. (33)	Normal direction. (34)	Wind velocity. Mean velocity, miles per hour. (35)	Normal. (36)	Departure from normal. (37)	Wind steadiness. Actual percentage. (38)	Departure from normal. (39)	Hygrometry, 8 hrs. Mean humidity at 8 hrs. (40)	Departure from normal. (41)	Mean vapour tension at 8 hrs. in inches of mercury. (42)	Departure from normal. (43)	Cloud. Mean cloud amount at 8 hrs. (44)	Departure from normal. (45)	Rainfall. Number of rainy days. (46)	Departure from normal. (47)	Rainfall of month. (48)	Normal rainfall of month. (49)	Departure from normal. (50)	Total rainfall from 1st Dec., 1918 to 28th Feb., 1919. (51)	Normal rainfall for this period. (52)	Departure from normal of this period. (53)	Heaviest rainfall during month. (54)	Station. (55)
																															VI.—Punjab—*concld.*
3	1	1	1	4	0	0	4	14	N 45° W		4·2			46		81	+ 6	·309	+ ·008	1·5	−2·1	1	−1·3	0·45	1·44	−0·99	4·30	3·19	+1·11	0·45	Patiala.
5	6	0	4	2	0	0	1	10	N 12° W	N 39° W	4·3	1·7	+2·6	42	+17	82	+ 2	·308	+ ·002	2·3	−1·4	1	−2·3	0·74	1·91	−1·17	4·11	4·12	−0·01	0·67	Ambala.
22	1	1	0	0	1	0	1	2	N 39° W	N 52° W	1·2	1·4	−0·2	11	−17	81	+ 5	·299	+ ·007	1·4	−2·4	1	−1·7	0·47	1·39	−0·92	3·30	3·90	−0·60	0·40	Ludhiana.
15	1	1	2	1	1	0	4	3	N 52° W	N 23° W	1·4	1·6	−0·2	11	+ 2	83	+ 4	·294	+ ·005	3·5	−0·1	2	−0·2	0·93	1·00	−0·07	3·41	2·47	+0·94	0·65	Lahore.
11	3	4	3	0	0	2	2	3	N 2° E	N 18° E	0·9	1·3	−0·4	23	+ 9	89	+12	·333	+ ·040	2·9	−0·1	3	−0·1	1·56	1·69	−0·13	6·50	4·55	+1·95	0·72	Sialkot.
16	1	0	0	1	0	3	6	1	S 82° W	N 45° W	1·2	1·7	−0·5	29	+ 5	73	− 6	·255	+ ·005	3·5	− 0·7	2	−1·9	1·19	2·35	−1·16	6·84	6·00	+0·84	0·80	Rawalpindi.
21	1	2	1	0	1	1	1	0	N 45° E	N 29° E	1·8	2·4	−0·6	3	− 8	77	+11	·293	+ ·050	2·8	−0·3	1	−1·2	0·73	0·99	−0·26	3·39	2·21	+1·18	0·68	Khushab.
5	1	1	1	4	1	11	1	3	S 39° W		1·9			36		79		·276		4·5		2	+0·3	0·30	0·69	−0·39	2·64	1·38	+1·26	0·20	Lyallpur.
11	1	1	1	6	1	0	3	4	S 8° E	N 18° E	2·4	3·1	−0·7	3	−13	70	+ 6	·281	+ ·032	2·5	−0·8	1	−0·5	0·29	0·51	−0·22	1·23	1·44	−0·21	0·16	Montgomery.
19	6	2	0	0	0	0	0	1	N 5° E	N 37° E	0·7	1·3	−0·6	29	+ 9	66	+ 1	·284	+ ·021	1·3	−1·7	1	−0·3	0·40	0·38	+0·02	0·97	1·04	−0·07	0·35	Multan.
																															VII.—North-West Frontier Province.
21	0	0	0	2	5	0	0	0	S 12° E	S 27° W	0·8	2·3	−1·5	21	−18	78	+ 6	·244	+ ·005	2·2	−2·2	2	−1·2	0·83	1·44	−0·61	3·75	3·52	+0·23	0·53	Peshawar.
24	1	0	1	0	0	0	0	2	N 10° W	N 22° W	0·9	1·4	−0·5	9	−15	73	+ 4	·272	+ ·023	0·7	−2·6	1	−0·8	0·12	0·71	−0·59	0·26	1·43	−0·57	0·12	Dera Ismail Khan.
																															VIII.—Sind.
21	1	3	1	1	0	0	0	1	N 45° E	N 37° E	1·3	2·2	−0·9	14	− 6	42	−14	·195	− ·050	0·9	−2·1	0	−1·0	0	0·35	−0·35	0·33	0·77	−0·44	0	Jacobabad.
19	7	0	0	0	1	0	1	0	N 9° W	N 21° W	1·5	5·0	−3·5	21	−19	55	− 1	·301	+ ·014	0·6	−1·9	0	−0·6	0	0·30	−0·30	0·58	0·58	0	0	Hyderabad.
4	6	9	2	0	0	0	3	4	N 9° E	N 39° E	5·9	7·2	−1·3	53	− 6	70	+ 4	·439	+ ·021	2·0	−0·3	0	−1·1	0	0·44	−0·44	1·24	1·13	+0·11	0	Karachi.
																															IX.—Rajputana.
3	1	0	9	9	5	0	1	0	S 54° E	N 39° W	2·2	3·3	−1·1	60	+36	58	+ 6	·260	+ ·025	1·2	−1·9	1	+0·2	0·26	0·31	−0·05	1·24	0·86	+0·38	0·26	Bikaner.
8	0	18	0	0	0	2	0	0	N 45° E		2·7			53		34	− 8	·175	− ·034	2·6	−0·3	0	−0·6	0	0·20	−0·20	0·33	0·48	−0·15	0	Jodhpur.
12	2	4	7	0	0	1	0	2	N 54° E	N 2° W	2·3	2·8	−0·5	32	+ 1	50	− 3	·236	− ·020	1·7	−1·3	0	−0·8	0	0·32	−0·32	1·53	1·00	+0·53	0	Jaipur.
27	0	0	0	0	0	0	1	0	W	N 2° W	1·1	1·8	−0·7	4	− 7	63	+ 1	·232	− ·038	0·3	−2·2	0	−0·8	0	0·28	−0·28	0·65	0·96	−0·31	0	Ajmer.
21	2	1	0	1	0	1	1	1	N 27° W		1·3			7		43	− 4	·241	− ·010	1·5	−0·4	0	−0·6	0	0·36	−0·36	0·94	0·91	+0·03	0	Kotah.
																															X.—Bombay.
5	3	9	7	1	1	1	1	0	N 61° E	N 30° E	4·8	6·3	−1·5	46	+10	35	− 6	·205	− ·027	1·6	−0·3	0	−0·4	0	0·15	−0·15	0·15	0·32	−0·17	0	Deesa.
15	3	0	0	0	0	1	9	0	N 77° W	N 69° W	3·7	5·3	−1·6	36	+ 1	71	−10	·449	+ ·068	1·4	−0·1	0	−0·4	0	0·16	−0·16	0·46	0·26	+0·20	0	Bhuj.
1	9	6	4	2	2	4	6	3	N 85° W		5·1			5		67	+ 4	·311	− ·065	0·8	−0·4	0	−0·3	0	0·13	−0·13	0·56	0·21	+0·35	0	Jamnagar.
1	9	8	1	0	0	0	3	6	N 2° W		9·2			67		80	+10	·557	+ ·063	0·9	−1·1	0	−0·6	0	0·39	−0·39	0·97	0·48	+0·49	0	Dwarka.
8	5	2	1	1	2	3	4	3	N 45° W	N 2° W	4·9	4·5	+0·4	21	−10	45	−11	·286	− ·071	1·9	+0·8	0	−0·3	0	0·11	−0·11	0	0·19	−0·19	0	Rajkot.
1	16	3	0	0	0	0	0	8	N 9° W	N 7° E	6·9	5·2	+1·7	35	+13	57	0	·358	− ·022	1·4	−0·1	0	−0·2	0	0·05	−0·05	0·13	0·16	−0·03	0	Veraval.
0	4	2	0	0	1	2	6	13	N 51° W	S 85° W	5·1	5·9	−0·8	70	+ 5	54	+ 2	·344	+ ·017	1·5	0	0	−0·3	0	0·10	−0·10	0·01	0·21	−0·20	0	Bhavnagar Para.
12	6	5	0	2	3	0	0	0	N 44° E	N 27° W	2·5	3·7	−1·2	29	−14	56	− 6	·367	− ·042	1·0	0	0	−0·2	0	0·07	−0·07	0·01	0·17	−0·16	0	Surat.
4	0	16	5	1	0	0	0	2	N 52° E	N 11° E	3·0	2·9	+0·1	67	+ 9	39	− 6	·276	− ·022	1·3	−0·3	0	−0·3	0	0·10	−0·10	0·18	0·15	+0·03	0	Ahmadabad.
3	6	10	5	2	0	0	0	2	N 43° E	N 47° E	6·4	7·6	−1·2	60	−11	77	+ 6	·578	+ ·017	1·1	−0·2	0	−0·1	0	0·04	−0·04	0·11	0·18	−0·07	0	Bombay.
7	11	2	2	3	1	0	0	2	N 21° E	N 73° E	7·1	6·0	+1·1	42	+ 2	66	+ 1	·555	+ ·030	0·6	−0·3	0	−0·1	0	0·02	−0·02	0·20	0·21	−0·01	0	Ratnagiri.
6	8	9	0	1	0	0	0	4	N 14° E	N 80° E	5·8	6·8	−1·0	69	+12	87	+ 5	·706	+ ·024	3·1	+2·0	0	−0·1	0	0·02	−0·02	0	0·24	−0·24	0	Marmagao.
15	13	0	0	0	0	0	0	0	N	N 55° E	2·4	3·0	−0·6	46	−37	90	+ 7	·657	+ ·053	2·5	+1·7	0	0	0	0·01	−0·01	0	0·31	−0·31	0	Karwar.

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	X.—Bombay —concld.																					
26	Malegaon	1,430	28·581	+·011	30·000	28·666	8th	28·493	23rd	66·1	52·1	91·6	+1·9	55·1	+0·3	73·4	+1·1	36·5	96·7	15th	41·8	18th
	Ahmadnagar	2,154	27·860	+·007	29·976	27·915	6th	27·782	23rd	67·4	54·0	91·1	+2·8	57·5	+2·4	74·3	+2·6	33·6	95·2	28th	43·8	18th
	Poona	1,846	28·149	—·009	29·988	28·197	6th	28·065	23rd	63·0	54·6	91·9	+1·0	58·9	+0·7	74·4	+0·9	35·0	96·8	11th	46·1	18th
	Sholapur	1,590	28·409	+·005	29·952	28·488	5th	28·329	23rd	73·1	56·8	94·3	+1·1	65·2	+3·0	79·8	+2·1	29·1	97·2	28th	53·9	19th
	Bijapur	*1,948*	28·064	+·024	29·952	28·131	5th	27·979	22nd	74·0	61·1	92·7	+1·7	66·5	+2·9	79·6	+2·3	26·2	95·2	15th	56·9	19th
	Belgaum	2,562	27·476	+·027	29·981	27·555	5th	27·403	22nd	67·7	58·4	90·7	+2·4	60·4	+1·0	75·5	+1·7	30·3	93·1	14th	53·1	19th
	XI.—Central India.																					
20	Neemuch	1,626	28·416	+·034	30·049	28·5·6	6th	28·298	25th	62·1	49·9	80·0	−0·6	51·8	0	65·8	−0·3	28·4	87·3	26th & 28th.	40·2	18th
	Indore	1,823	28·193	+·018	30·021	28·3·5	8th	28·092	25th	62·5	54·1	84·2	+1·4	52·3	+0·4	68·3	+0·9	31·9	91·6	24th & 25th.	42·1	18th
21	Nowgong	754	29·299	+·044	30·057	29·426	4th	29·174	26th	55·2	49·9	77·0	−2·5	50·0	−0·8	63·5	−1·7	27·0	87·5	17th	44·6	3rd
	Sutna	1,041	29·011	+·054	30·055	29·121	4th	28·847	25th	57·3	53·4	75·0	−4·1	52·1	0	63·5	−2·1	22·9	85·3	17th	46·8	3rd & 8th.
	XII.—Central Provinces.																					
22	Buldana	2,134								70·1	59·1	86·4	+0·5	62·3	+0·4	74·3	+0·5	24·1	94·2	15th	52·5	18th
	Akola	925	29·099	+·027	29·998	29·213	8th	29·001	2.rd	69·5	60·6	91·4	+0·9	61·1	+4·0	76·2	+2·5	30·3	99·0	15th	47·1	19th
	Amraoti	1,215	28·799	+·021	29·990	28·909	8th	28·707	26th	70·7	60·0	88·3	−1·4	63·2	+1·5	75·7	+0·1	25·1	95·8	15th	54·5	18th
23	Khandwa	1,044	28·976	+·021	30·010	29·090	8th	28·871	2.rd	64·5	51·2	88·9	+0·4	56·6	+1·0	72·7	+0·7	32·3	96·6	24th	43·3	18th
	Hoshangabad	1,006	29·037	+·033	30·039	29·152	8th	28·925	26th	61·8	55·3	82·1	−3·0	55·1	−0·3	68·7	−1·7	27·0	90·5	24th	45·8	19th
	Saugor	1,807	28·213	+·021	30·030	28·317	8th	28·085	25th	61·1	50·3	79·6	−0·9	54·8	−0·4	67·2	−0·7	24·8	90·9	13th	45·6	2nd
	Jubbulpore	1,327	28·686	+·023	30·021	28·803	8th	28·531	25th	60·5	54·9	77·4	−4·3	54·5	+2·5	65·9	−0·9	22·9	85·8	17th	47·7	19th
	Seoni	2,033	27·998	+·047	30·037	28·096	8th	27·889	26th	62·1	58·0	78·1	−5·5	55·8	−1·0	67·0	−2·3	22·3	84·4	24th	49·3	19th
	Nagpur	1,017	29·017	+·036	30·018	29·135	8th	28·918	25th	66·3	59·4	81·5	−4·3	60·2	+0·6	72·4	−1·9	24·3	91·6	17th	50·0	19th
24	Pendra	2,040	27·997	+·060	30·0 6	28·096	3rd	27·896	27th	59·6	54·2	74·8	−3·4	54·1	+0·2	64·4	−1·6	20·7	83·1	24th	47·8	3rd
	Raipur	970	29·059	+·032	30·013	29·162	8th	28·956	25th	65·5	61·5	79·7	−6·8	60·6	+0·5	70·2	−3·1	19·1	88·1	24th	54·1	19th
	Chanda	*634*	29·381	+·014	29·980	29·199	8th	29·278	25th	71·4	65·4	89·0	−2·1	63·1	+4·0	76·0	+0·9	25·9	98·1	13th	48·0	19th
	Jagdalpur	1,813	28·208		29·992	28·288	5th	28·115	26th	68·2	64·1	85·1		61·7		73·4		23·4	89·3	24th	54·6	20th
	XIII.—Hyderabad.																					
27	Aurangabad	1,905	28·113	+·005	29·982	28·186	8th	28·025	23rd	70·1	56·8	90·4	+1·5	61·4	+3·3	75·9	+2·4	29·0	99·3	16th	53·1	19th
	Nizamabad	1,248	28·757		29·963	28·841	5th	28·3.9	22nd	74·5	63·6	94·5	+3·8P	65·2	+4·2	79·8	+4·0P	29·3	98·8	14th & 28th.	49·9	19th
	Bidar	*2,165*																				
28	Gulbarga	1,503	28·510	+·023	29·972	28·598	5th	28·437	26th	72·3	63·3	94·3	+1·8	66·5	+2·6	80·4	+2·2	27·8	98·0	27th	56·2	19th
	Raichur	*1,311*	28·702	+·043	29·961	28·801	5th	28·618	26th	76·8	66·9	93·7	+1·5	71·5	+3·3	82·6	+2·4	22·2	98·3	28th	64·2	19th
	Hyderabad (Deccan)	1,738	28·310	+·040	29·983	28·395	5th	28·233	27th	72·4	65·7	90·6	+0·4	67·9	+2·9	79·3	+2·1	22·7	96·0	27th	60·5	19th
	Hanamkonda	877	29·156	+·041	29·991	29·243	8th	29·061	23rd	75·4	68·4	91·4	+1·3	70·1	+4·0	80·7	+2·7	21·3	95·5	28th	61·2	20th
	XIV.—Mysore.																					
29	Chitaldrug	2,405	27·617	+·023	29·926	27·692	5th	27·551	22nd	74·9	63·6	91·3	+1·8	68·5	+2·8	79·9	+2·3	22·8	93·5	15th	64·2	20th
	Hassan	3,149	26·922	+·032	29·934	27·009	5th	26·849	22nd	70·0	64·8	87·6	+0·9	62·6	+4·7P	75·1	+2·8P	25·0	90·0	28th	57·2	19th
	Bangalore	3,021	27·053	+·034	29·971	27·140	5th	26·982	22nd	68·7	63·1	88·1	+2·1	62·6	+2·6	75·3	+2·3	25·5	90·3	27th & 28th.	58·6	24th
	Mysore	2,518	27·527	+·026	29·951	27·608	5th	27·451	22nd	73·2	65·0	90·4	+1·4	66·4	+2·9	78·4	+2·1	24·0	92·2	27th	62·0	24th

N. B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

at 213 stations in India, etc., in February, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st December, 1918, to 28th February, 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															X.—Bombay—*concld.*
8	1	3	0	0	1	11	2	2	S 65° W	N 63° W	4·3	4·5	−0·2	36	−25	34	−12	·219	−·066	1·1	−0·2	0	−0·2	0	0·07	−0·07	0·21	0·42	−0·21	0	Malegaon.
23	2	0	0	0	0	0	0	3	N 27° W	N 13° W	3·6	6·1	−2·5	13	−17	39	−11	·258	−·069	0·7	−0·3	0	−0·3	0	0·15	−0·15	0·86	0·75	+0·11	0	Ahmadnagar.
19	0	0	0	0	1	3	3	2	S 75° W	N 76° W	4·9	5·2	−0·3	25	+ 9	56	+ 5	·328	+·027	1·3	+0·3	0	−0·1	0	0·04	−0·04	0·14	0·27	−0·13	0	Poona.
6	1	2	3	5	3	2	0	6	S 60° E	N 72° E	6·2	5·5	+0·7	7	− 9	32	− 6	·266	−·026	1·5	+0·4	0	−0·1	0	0·05	−0·05	0·53	0·70	−0·17	0	Sholapur.
8	3	2	1	2	4	1	0	7	N 30° W	N 79° W	2·5	3·5	−1·0	14	− 8	45	− 8	·384	−·026	0·6	−0·6	0	−0·3	0	0·06	−0·06	0·06	0·41	−0·35	0	Bijapur.
25	1	1	0	0	0	0	0	1	N	N 68° E	2·7	7·1	−4·4	9	−15	56	+ 8	·376	+·031	2·1	+0·8	0	−0·1	0·08	0·03	+0·05	0·08	0·56	−0·48	0·08	Belgaum.
																															XI.—Central India.
3	4	0	20	0	0	0	1	0	N 73° E	N 30° E	4·7	5·1	−0·4	67	+36	38	− 9	·214	−·032	1·3	−0·5	0	−0·4	0	0·20	−0·20	0·67	0·60	+0·07	0	Neemuch.
14	1	6	4	0	0	1	2	0	N 50° E	N 29° W	1·4	2·0	−0·6	29	+17	56	+ 7	·318	+·040	0·4	−1·3	0	−0·5	0	0·17	−0·17	3·09	0·53	+2·56	0	Indore.
14	0	1	5	0	1	3	2	2	S 11° E	N 85° W	1·3	1·5	−0·2	4	−15	67	+ 2	·281	−·028	2·0	−0·8	0	−1·1	0·07	0·51	−0·44	3·06	1·60	+1·46	0·06	Nowgong.
25	0	0	2	0	1	0	0	0	S 63° E	N 30° W	1·1	3·5	−2·4	7	−28	78	+19	·370	+·038	1·5	−1·1	2	+0·3	1·01	0·74	+0·27	5·33	2·01	+3·32	0·32	Satna.
																															XII.—Central Provinces.
1	1	3	8	6	0	0	4	5	N 74° E		4·3	4·7	−0·4	25		51		·372		1·9		0	−0·5	0·07	0·26	−0·19	1·10	1·10	0	0·07	Buldana.
6	0	5	11	1	1	3	0	1	N 88° E	S 34° E	4·0	3·1	+0·9	44	+36	57	+14	·417	+·139	3·5	+1·8	2	+1·5	0·74	0·24	+0·50	1·54	1·25	+0·29	0·42	Akola.
6	1	6	10	5	0	0	0	0	N 85° E	S 83° E	4·5	3·5	+1·0	63	+31	51	+ 5	·388	+·064	2·2	+0·7	2	+1·4	1·14	0·29	+0·85	3·02	1·24	+1·78	0·88	Amraoti.
2	2	10	7	1	0	1	4	1	N 38° E	N 18° W	4·3	3·0	+1·3	42	+18	47	+ 4	·290	+·040	1·6	+0·2	0	−0·3	0	0·12	−0·12	1·54	0·64	+0·90	0	Khandwa.
5	0	19	1	3	0	0	0	0	N 56° E	N 60° E	2·2	2·1	+0·1	67	+27	64	+ 9	·354	+·052	1·1	−0·7	1	+0·1	0·24	0·34	−0·10	4·86	1·06	+3·80	0·21	Hoshangabad.
1	0	8	19	5	2	0	1	1	N 87° E	S 72° E	5·0	2·7	+2·3	60	+29	44	− 3	·234	−·022	1·3	−0·5	0	−1·1	0	0·42	−0·42	3·30	1·45	+1·85	0	Saugor.
14	3	3	0	5	2	0	1	0	S 85° E	S 63° E	1·7	1·8	−0·1	16	− 4	69	+ 4	·366	+·033	2·4	+0·4	5	+3·2	0·87	0·81	+0·06	9·01	1·78	+7·23	0·18	Jubbulpore.
17	4	4	1	1	1	0	0	0	N 42° E	N 31° E	0·9	2·1	−1·2	29	− 7	78	+21	·439	+·105	2·7	+0·6	5	+3·0	2·47	0·88	+1·59	7·86	1·94	+5·92	0·85	Seoni.
2	3	7	12	1	0	0	1	2	N 60° E	N 18° E	3·6	3·2	+0·4	60	+24	65	+15	·424	+·089	1·9	−0·2	3	+1·7	1·64	0·52	+1·12	6·83	1·45	+5·38	0·56	Nagpur.
18	1	1	2	0	2	2	0	0	N 18° E		3·6			1		69	+13	·358	+·056	1·2	−1·0	4	+0·6	1·52	1·80	−0·28	8·09	2·80	+5·29	0·58	Pendra.
5	4	7	6	1	1	2	0	2	N 51° E	N 4° W	1·7	2·9	−1·2	39	+27	79	+24	·497	+·139	4·6	+2·5	5	+3·5	2·89	0·75	+2·14	6·52	1·23	+5·29	1·46	Raipur.
1	3	6	9	4	0	1	1	3	N 64° E	N 76° E	2·8	2·0	+0·8	46	+26	72	+14	·557	+·156	2·9	+1·3	2	+0·9	2·25	0·69	+1·56	3·49	1·20	+2·29	1·56	Chanda.
20	1	0	0	0	4	0	3	0	S 45° W		1·6			14		79		·551		2·5		5	+3·8	7·97	0·88	+7·09	10·01	1·36	+8·65	4·74	Jagdalpur.
																															XIII.—Hyderabad.
6	1	4	8	6	0	1	1	1	S 88° E		6·0			45		41	+ 3	·302	+·020	1·5	+0·5	1	+0·7	0·14	0·14	0	1·50	0·71	+0·79	0·14	Aurangabad.
1	2	4	4	5	6	5	1	0	S 35° E		2·8			36		52	− 3	·448	+·008	1·3	0	1	−0·9	0·17	0·53	−0·36	2·32	0·79	+1·53	0·17	Nizamabad.
																															Bidar.
6	5	2	5	1	8	1	0	0	S 65° E	N 89° E	4·1	5·6	−1·5	25	− 1	59	+ 8	·469	+·065	0·2	−0·7	0	−0·5	0	0·17	−0·17	1·88	0·53	+1·35	0	Gulbarga.
3	0	0	1	7	11	5	0	1	S 5° E	S 23° E	5·2	5·1	+0·1	67	+36	58	+ 5	·534	+·035	2·0	+0·8	0	−0·5	0	0·23	−0·23	0·28	0·50	−0·22	0	Raichur.
8	1	1	3	14	0	1	0	0	S 55° E	S 68° E	4·0	3·0	+1·0	56	+47	70	+ 5	·552	+·079	2·7	+0·9	0	−0·7	0·05	0·30	−0·25	1·81	0·65	+1·16	0·05	Hyderabad (Deccan).
1	1	1	0	12	12	0	0	1	S 25° E		3·5			70		69	+ 2	·607	+·082	4·8	+2·1	1	+0·3	0·20	0·34	−0·14	1·78	0·90	+0·88	0·20	Hanamkonda.
																															XIV.—Mysore.
14	1	0	1	3	2	3	3	1	S 39° W	S 6° E	2·9	4·6	−1·7	21	+ 5	52	− 1	·447	+·009	3·1	+1·6	0	−0·2	0	0·03	−0·03	1·07	0·57	+0·50	0	Chitaldrug.
20	0	1	2	4	0	0	1	0	S 68° E	S 72° E	2·3	2·0	+0·3	12	−33	76	+ 7	·551	+·068	2·6	−0·2	0	−0·3	0	0·12	−0·12	0·25	0·96	−0·71	0	Hassan.
1	1	0	8	15	1	2	0	0	S 55° E	S 62° E	5·7	3·7	+2·0	70	+15	73	+ 2	·507	+·023	2·1	+0·2	0	−0·2	0	0·16	−0·16	2·21	0·87	+1·34	0	Bangalore.
2	0	1	3	10	8	2	1	1	S 27° E	S 39° E	4·2	5·8	−1·6	60	+38	63	− 6	·515	−·004	3·0	−0·1	0	−0·4	0	0·12	−0·12	0·31	0·64	−0·33	0	Mysore.

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XV.—Madras.																					
30	Mangalore	72	29·948	+·015	29·951	30·027	5th	29·878	23rd	79·6	74·1	89·1	+0·6	74·0	+2·5	81·5	+1·5	15·1	91·3	25th	68·8	19th
	Calicut	27	29·981	+·016	29·937	30·055	5th	29·912	23rd	78·6	75·0	88·8	+0·4	74·9	+2·1	81·9	+1·3	13·9	90·1	24th	71·9	19th
	Cochin	9	30·004	+·022	29·941	30·082	5th	29·940	23rd	79·0	73·7	89·7	−0·5	76·0	+2·0	82·8	+0·7	13·7	94·7	13th	73·2	6th
	Trivandrum	198	29·816	+·041	29·914	29·900	5th	29·751	19th	77·7	73·6	87·1	+1·8	74·2	+0·2	80·7	+1·0	12·9	88·4	27th	72·0	6th
31	Pamban	37	29·981	+·012	29·946	30·077	5th	29·910	22nd	80·7	76·0	86·6	+1·9	78·3	+3·7	82·4	+2·8	8·3	87·7	24th	76·5	17th
	Madura	447	29·588	+·025	29·971	29·665	5th	29·511	19th	78·8	73·3	92·8	+0·9	72·6	+2·7	82·7	+1·8	20·2	95·9	19th & 20th.	69·8	4th
	Pudukkottai	318	29·725	+·045	29·979	29·803	5th	29·657	18th	76·5	71·7	92·2	+0·7	71·9	+2·8	82·1	+1·7	20·3	97·1	19th	68·7	7th
	Negapatam	31	30·006	+·028	29·966	30·093	5th	29·930	22nd	79·6	73·2	87·0	+2·2	76·0	+3·3	81·5	+2·7	11·0	88·5	26th	71·9	27th
	Trichinopoly	255	29·801	+·040	29·991	29·889	5th	29·727	19th	79·1	73·2	94·5	+2·2	70·7	+1·9	82·6	+2·1	23·8	99·1	19th	67·5	7th
	Coimbatore	1,341	28·701	+·037	29·986	28·788	5th	28·623	22nd	75·4	68·5	91·9	+0·2	69·0	+3·1	80·5	+1·7	22·9	95·5	19th	67·1	7th
	Salem	913	29·130	+·039	29·988	29·221	5th	29·058	22nd	75·5	70·3	94·9	+1·3	69·4	+3·2	82·2	+2·3	25·5	100·2	19th	65·6	4th
	Cuddalore	37	30·010	+·031	29·978	30·107	5th	29·941	22rd	76·1	73·0	86·2	+0·5	71·4	+1·5	78·8	+1·0	14·8	88·1	19th	68·4	7th
	Vellore	707	29·328	+·016?	29·987	29·434	5th	29·248	22nd	72·6	69·3	91·6	+2·6	67·4	+0·7	79·5	+1·7	24·2	96·4	20th	64·0	14th
	Madras	22	30·026	+·025	29·979	30·129	5th	29·950	18th	78·2	74·1	87·6	+0·8	71·4	+2·9	79·5	+1·9	16·2	93·5	19th	68·5	23rd
32	Cuddapah	428	29·596	+·023	29·965	29·698	5th	29·497	28th	79·2	71·4	95·1	+0·1	72·3	+3·0	83·7	+1·5	22·8	99·8	28th	69·1	24th
	Bellary	1,475	28·581	+·017	29·948	29·625	5th	28·460	22nd	77·1	66·1	95·5	+1·3	69·1	+3·2	82·3	+2·3	26·4	100·1	28th	63·5	5th
	Kurnool	923	29·097	+·032	29·971	29·201	5th	29·018	26th	75·9	67·0	94·1	0	70·5	+5·6	82·3	+2·8	23·6	98·7	28th	60·6	19th
33	Nellore	66	29·971	+·022	29·972	30·071	5th	29·877	26th	76·8	75·3	89·2	−0·9	72·5	+3·2	80·8	+1·1	16·7	93·9	19th	70·2	24th
	Masulipatam	15	30·039	+·023	29·988	30·143	5th	29·951	26th	79·1	73·6	87·4	+0·7	71·7	+3·1	79·6	+1·9	15·7	91·1	20th	68·2	25th
	Cocanada	26	30·034	+·031	29·997	30·129	5th	29·947	18th	77·3	73·5	86·3	+0·7	72·4	+2·7	79·3	+1·7	13·9	93·1	19th	70·5	7th & 25th.
	(Vizagapatam)	*226*	30·009	+·026	29·986	30·114	5th	29·900	18th	77·9	73·1	83·4	+1·6	74·8	+2·4	79·1	+2·0	8·6	86·4	26th	70·8	16th
	Calingapatam	19	30·031		29·988	30·143	5th	29·908	18th	75·2	71·9	88·0		71·6		79·8		16·4	92·0	24th	66·8	20th
	Gopalpur	33	29·995	+·035	29·993	30·118	4th	29·868	18th	74·4	70·8	82·4	−0·8	71·2	+3·9	76·8	+1·5	11·2	85·5	19th	67·0	20th
	Bay Islands.																					
1	P. V. Fraser	8	30·079		30·002	30·200	4th	29·930	18th	75·6	71·2											
	Port Blair	58	29·958	+·029	29·946	30·053	5th	29·883	23rd	79·7	75·1	86·8	−1·1	76·1	+1·0	81·4	−0·1	10·7	90·0	1st	71·5	23rd
	Table Island		29·929	+·029	29·954	30·022	5th & 6th.	29·827	23rd	77·8	72·1	83·4	−1·0	75·4	+0·1	79·4	−0·5	8·0	86·0	11th & 28th.	72·4	22nd
	Kashmir.																					
13	Muzaffarabad		27·672			27·838	4th	27·505	1st	48·3	42·6	61·3		39·5		50·4		21·8	69·8	23rd	33·9	2nd
	Srinagar	5,204	25·049	+·096	25·020	25·208	3rd	24·727	16th	26·6		34·9	−8·6	23·4	−5·0	29·2	−6·8	11·5	43·6	28th	10·7	1st
	Gulmarg	*8,569*																				
	Dras	*10,059*	20·884	+·126	20·852	21·083	3rd	20·546	16th	−10·6		13·4	−9·7	−20·2	−9·4	−3·4	−9·5	33·6	24·8	17th & 18th.	−29·0	2nd
	Leh	*11,503*	19·704	+·030	19·672	19·903	3rd	19·425	17th	14·5				10·0	+0·2						−1·0	3rd
	Skardu	*7,505*	23·010	+·090	22·980	23·246	3rd	22·682	16th	16·9		33·8	−4·4	12·1	−6·7	23·0	−5·5	21·7	40·7	27th	1·3	2nd
	Gilgit	4,890	25·314	+·100	25·287	25·501	13th	25·024	16th	41·1	35·2†	53·8	+2·4	36·8	+0·3	45·3	+1·3	17·0	59·7	26th & 27th.	30·2	3rd & 4th.

N.B.—Elevations in italics indicate barometrical determinations.

† Mean of 22 days.

NOTE.—The barometric readings are not reduced to sea-level in the case of

B—*continued.*

at 213 stations in India, etc., in February, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec., 1918, to 28 Feb., 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XV.—Madras.
1	5	7	15	0	0	0	0	0	N 63° E	N 76° E	5·0	2·1	+2·9	78	+11	76	+ 4	·766	+·084	2·6	+0·5	0	−0·1	0	0·02	− 0·02	0·85	0·59	+ 0·26	0	Mangalore.
17	3	4	2	0	0	0	0	2	N 25 E	N 69° E	4·4	7·2	−2·8	29	−28	84	+ 5	·819	+·077	0·5	−1·0	0	−0·2	0	0·17	− 0·17	1·51	1·69	− 0·18	0	Calicut.
1	0	7	19	0	0	0	0	1	N 76° E	N 41° E	4·7	4·0	+0·7	85	+14	76	+ 1	·759	+·025	2·4	+0·6	3	+1·8	0·75	0·83	− 0·08	8·77	3·18	+ 5·59	0·43	Cochin.
12	3	7	6	0	0	0	0	0	N 54° E	N 55° E	3·1	3·4	−0·3	49	+ 2	81	+ 4	·791	+·078	3·8	+1·3	1	−0·1	0·17	0·63	− 0·46	6·93	3·66	+ 3·27	0·15	Trivandrum.
0	0	18	15	0	0	0	0	0	N 69° E	N 56° E	4·0	6·6	−2·6	88	+13	80	0	·836	+·035	2·7	−0·4	0	−1·2	0·03	0·82	− 0·79	8·74	10·22	− 1·48	0·03	Pamban.
0	7	11	8	0	0	0	0	2	N 41° E	N 14° E	4·5	3·3	+1·2	74	+11	76	0	·747	+·043	4·4	+1·5	0	−0·7	0	0·40	− 0·40	1·49	2·66	− 1·17	0	Madura.
9	10	5	1	0	0	0	0	3	N 7° E		3·7			57		78	− 3	·716	+·006	2·6	−2·1	0	−0·8	0	0·38	− 0·38	3·13	4·13	− 1·00	0	Pudukkottai.
1	1	13	4	1	0	0	1	7	N 29° E	N 18° E	7·5*	4·7	+2·8	56	+16	73	− 5	·733	−·025	4·7	+0·3	0	−0·8	0·05	0·68	− 0·63	9·90	14·13	− 4·23	0·05	Negapatam.
2	9	17	0	0	0	0	0	0	N 30° E	N 27° E	2·7	2·8	−0·1	85	+49	75	− 3	·738	+·038	2·5	−0·1	0	−0·7	0	0·61	− 0·61	3·21	3·84	− 0·63	0	Trichinopoly.
4	4	16	3	1	0	0	0	0	N 46° E	N 63° E	3·0	2·1	+0·9	74	+11	69	?−13	·604	−·055?	2·7	−1·4	0	−0·6	0·01	0·32	− 0·31	3·04	2·09	+ 0·95	0·01	Coimbatore.
3	1	16	8	0	0	0	0	0	N 58° E	N 53° E	5·3	3·9	+1·4	78	+23	76	+ 1	·674	+·013	0·4	−1·8	0	−0·6	0	0·28	− 0·28	1·10	1·59	− 0·49	0	Salem.
8	8	0	0	0	0	2	3	7	N 39° W	N 60° W	4·3	1·6	+2·7	49	− 2	86	− 1	·708	−·004	3·6	+0·8	0	−1·3	0	0·98	− 0·98	8·84	9·85	− 1·01	0	Cuddalore.
26	0	0	0	0	0	0	2	0	W		2·8			7		84	+ 2	·673	+·027	1·7	−0·7	0	−0·6	0	0·36	− 0·36	1·45	4·89	− 3·44	0	Vellore.
13	0	1	1	4	1	1	6	1	S 43° W	S 34° W	2·7	3·7	−1·0	14	− 2	82	− 1	·782	+·030	2·6	−0·2	0	−0·6	0	0·30	− 0·30	7·27	7·41	− 0·14	0	Madras.
3	0	0	6	18	1	0	0	0	S 54° E	S 72° E				82	+19	67	0	·666	+·044	2·3	+1·1	0	−0·2	0	0·12	− 0·12	1·26	1·45	− 0·19	0	Cuddapah.
1	0	0	3	10	5	2	3	4	S 15° E	S 11° E	3·1	2·9	+0·2	39	+19	55	+ 1	·501	+·054	1·7	+0·1	0	−0·2	0	0·08	− 0·08	0·18	0·30	− 0·12	0	Bellary.
8	0	1	3	9	4	1	2	0	S 36° E	S 58° E	4·2			42	+34	61	0	·549	+·060	1·0	−0·1	0	−0·2	0	0·14	− 0·14	0·60	0·56	+ 0·04	0	Kurnool.
10	0	0	0	2	11	4	0	1	S 8° W	S 14° E	2·9	3·4	−0·5	53	+37	94	+ 9	·253	+·116	3·0	−0·3	0	−0·4	0	0·13	− 0·13	4·02	4·71	− 0·69	0	Nellore.
3	2	1	3	13	6	0	0	0	S 46° E	N 41° E	3·7	3·4	+0·3	63	+39	76	?−10	·748	−·006?	2·3	−0·4	0	−0·5	0	0·42	− 0·42	1·85	1·56	+ 0·29	0	Masulipatam.
8	6	4	1	3	2	0	0	4	N 23° E	N 17° W	4·9	5·3	−0·4	29	−38	83	+ 6	·774	+·107	3·4	+0·7	2	+1·5	0·25	0·24	− 0·09	1·01	1·46	− 0·45	0·14	Cocanada.
5	2	1	1	0	1	1	10	7	N 66° W	N 86° W	6·3			53	−10	78	+ 5	·751	+·098	5·0	+2·2	1	+0·2	0·97	0·59	+ 0·38	1·91	2·58	− 0·67	0·90	(Vizagapatam).
4	6	4	1	0	1	1	4	7	N 27° W		5·3			50		84		·740		3·7		2	+1·4	0·47	0·15	+ 0·32	0·90	1·87	− 0·97	0·20	Calingapatam.
2	10	2	0	0	2	3	1	8	N 29° W	N 37° W	5·6	8·0	−2·4	53	− 9	83	+ 5	·705	+·091	3·0	+2·0	7	+6·0	7·13	0·49	+ 6·64	8·91	1·54	+ 7·37	3·37	Gopalpur.
																															Bay Islands.
6	7	6	0	0	3	4	1	1	N 3° W					22		80		·711		2·6		3	+2·2	0·64	0·54	+ 0·10	1·35	2·11	− 0·76	0·29	P. V. Fraser.
7	7	7	3	0	0	0	0	4	N 19° E	N 9° E	5·0	3·7	+1·3	56	+ 5	80	− 4	·811	−·002	3·7	0	2	+0·7	0·71	0·95	− 0·24	8·00	9·44	− 1·44	0·58	Port Blair.
0	18	3	2	0	1	0	0	4	N 4° E		7·7			78		75	− 3	·712	−·045	3·7	−1·5	0	−0·3	0·01	0·14	− 0·13	2·24	3·31	− 1·07	0·01	Table Island.
																															Kashmir.
16	0	1	1	4	1	5	0	0	S 8° E		3·0			25		61		·205		4·0		3	−3·5	4·02	4·47	− 0·45	11·41	11·34	+ 0·07	2·50	Muzaffarabad.
8	1	1	1	3	3	4	3	4	S 55° W	S 24° E	2·1	2·6	−0·5	21	− 2					8·9	+2·3	2	−4·4	2·68	2·88	− 0·20	11·48	7·13	+ 4·35	1·81	Srinagar.
																															Gulmarg.
29	0	0	0	0	0	0	0	0	Calm.		0·5			(a)						4·6	−0·7	3	−4·4	2·74	2·64	+ 0·10	8·60	7·28	+ 1·32	2·02	Dras.
18	1	4	2	1	2	0	0	0	N 79° E	S 27° W	2·0	0·9	+1·1	18	−18					5·7	−0·7	0	−0·8	0	0·32	− 0·32	0·29	0·57	− 0·28	0	Leh.
27	0	0	0	0	0	0	1	0	W		0·3			4						7·7	+1·3	3	+0·5	0·85	0·75	+ 0·10	2·86	2·15	+ 0·71	0·42	Skardu.
26	0	0	0	0	0	2	0	0	S 45° W		0·4			4		51‡	− 4	·128*	−·006	5·9	−1·0	2	+1·2	0·33	0·21	+ 0·12	1·13	0·57	+ 0·56	0·19	Gilgit.

hill or plateau stations, the elevations of which exceed 3,200 feet. * Mean of 12 days. ‡ Mean of 22 days. (a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Baluchistan.																					
15	Fort Sandeman	4,614	25·476		25·445	25·619	5th	25·316	15th	37·5	36·6*	61·1		34·1		47·6		27·0	71·1	28th	25·5	1st
	Quetta	5,502	24·700	+·031	24·670	24·836	6th	24·553	28th	34·1	33·7†	56·0	+3·1	29·9	−1·3	43·0	+0·9	26·1	71·3	28th	20·7	1st
	Chaman	4,311	25·755	+·004	25·717	25·924	6th	25·558	28th	41·7	39·3‡	59·2	+1·8	37·4	−0·5	48·3	+0·7	21·8	75·0	28th	25·3	17th
	Kalat	6,630	23·781		23·743	23·895	6th	23·645	15th	32·0	30·45	54·9	+1·7	28·2		41·6		26·7	69·3	27th	17·4	17th
	Dalbandin	2,772	27·224		27·187	27·405	6th	27·034	28th	44·8	43·2‖	69·1		40·6		54·8		28·5	84·4	27th	29·2	17th
	Pasni		30·078		30·038	30·231	1st	29·885	14th	61·3	59·7	78·8		55·4		67·1		23·4	87·6	8th	44·1	17th
	Panjgur		26·837		26·795	26·990	6th	26·704	14th	45·9	43·4¶	70·1		43·0		56·6		27·1	79·8	27th	32·8	16th
	Robat		26·925		26·883	27·161	16th	26·603	13th	49·0	43·7¶	70·6		34·4		52·5		36·2	80·6	28th	21·3	16th
	Seistan		28·366			28·570	16th	27·970	27th	42·1	39·8**	67·2		37·7		52·4		29·5	89·5	26th	27·7	18th
	Hill stations, excluding Kashmir and Baluchistan.																					
	Parachinar	6,000	24·492	+·042	24·468	24·603	5th	24·308	16th	37·3	35·2††	53·2	+3·0	32·0	+1·7	42·2	+2·3	21·2	60·4	13th & 14th.	20·3	1st
	Cherat	*4,956*	25·792	+·047	25·760	25·911	5th	25·613	16th	45·1	37·1‖	50·9	−1·4	42·0	+1·6	46·5	+0·1 §§	8·9	61·2	28th	33·0	1st
	Drosh (c)		25·230			25·375	2nd	25·000	16th	36·8	34·21‡	49·1§§	−1·0 §§	33·6	+0·9	41·5§§	−0·1	15·5	57·3	26th	28·2	8th
	Murree	6,333	23·830	+·001	23·798	23·943	5th	23·664	16th	39·9	34·1††	47·3	+0·2	36·8	+3·0	42·0	+1·6	10·5	55·4	12th	27·2	1st
	Simla	7,232	23·110	+·041	23·072	23·225	5th	22·993	17th	40·3	33·9‖‖	47·4	+1·2	36·6	+1·2	42·0	+1·2	10·8	54·7	15th	28·0	18th
	Chakrata	7,072	23·379		23·339	23·540	5th	23·274	18th	42·5	37·2‖	51·2	+0·1	36·[illegible]	+0·7	43·9	+0·4	14·7	59·3	15th	26·2	1st
	Mukteswar	7,592	22·864	+·038	22·823	22·966	4th	22·741	18th	41·3	35·8‡	51·0	+1·1	34·3	−0·9	42·7	+0·1	16·7	58·5	24th	24·4	18th
	Darjiling	7,432	22·970	+·022	22·925	23·087	16th	22·835	18th & 19th.	40·2	37·8§§	50·7	+2·3	36·8	−1·3	43·7	+1·8	13·9	57·6	16th	31·7	2nd
	Shillong	4,920	25·212	+·047	25·164	25·300	4th	25·073	26th	50·9	44·4	63·8	+1·7	40·7	−0·8	52·2	+0·5	23·1	67·8	17th	31·6	2nd
	Cherrapunji	4,309	25·763	+·028	25·714	25·856	8th	25·643	26th	54·5	47·1	62·5	+1·6	47·8	+0·6	55·2	+1·1	14·7	67·6	18th & 25th.	41·1	2nd
	Netarhat		26·235		26·184	26·251	1st & 2nd.	26·225	20th	61·6	51·4	65·0		?		?			71·2	28th	?	
	Maymyo	3,546	26·495	+·010	26·440	26·586	5th	26·407	22nd	52·4	50·6	73·6	−1·4	44·3	+1·1	59·0	0	29·3	78·4	25th	35·8	4th
	Pachmarhi	3,528	26·543	+·016	26·490	26·636	8th	26·445	26th	58·3	53·2	73·5	−1·7	51·4	+0·6	62·4	−0·5	22·1	80·5	24th	43·1	19th
	Mount Abu	3,945	26·149	+·045	26·099	26·228	6th	26·045	25th	60·7	56·7	68·7	+1·0	52·8	−0·3	60·8	+0·3	15·9	77·0	25th	43·4	2nd
	Mercara	3,781	26·303	+·017	26·236	26·385	5th	26·232	22nd	65·1	61·1	82·3	+1·1	59·4	+0·5	70·8	+0·8	22·9	84·7	4th	57·0	19th
	Ootacamund	*7,327*	23·124	+·044	23·070	23·198	5th	23·060	23rd	57·8	49·4	69·5	+2·8	45·4	+1·1	57·4	+1·9	24·1	72·5	10th	42·4	25th
	Kodaikanal	7,688	22·895	+·026	22·830	22·958	5th	22·816	22nd	57·2	46·9	67·1	+1·6	47·9	−0·1	57·5	+0·7	19·2	70·7	12th	43·9	23rd
	Extra India.																					
	Singapore (a)	10	29·925	−·025	29·856	29·997	13th	29·791	25th	83·8		88·8	+0·9	74·6	+2·2	81·7	+1·5	14·2	92·0	27th	71·5	25th
	Penang (a)	17	29·858	−·067	29·800	29·952	5th	29·759	11th	82·7		91·5	+1·7	72·8	−1·0	82·1	+0·3	18·7	94·0	4 days	69·0	28th
	Trincomalee	99	29·919	+·029	29·947	30·005	5th	29·850	22nd	78·7	74·1	87·2	+1·8	76·9	+2·2	82·1	+2·0	10·3	90·0	22nd	73·3	18th & 19th.
	Colombo	24	29·972	+·013	29·921	30·071	5th	29·909	24th	74·1	72·3	89·6	+1·0	73·6	+0·6	81·6	+0·8	16·0	91·8	6th, 7th & 12th.	69·0	7th
	Hambantota	64	29·941		29·932	30·025	5th	29·873	24th	74·1	72·0	86·8		73·6		80·2		13·2	88·5	6 days	70·4	20th
	Minicoy	7	30·032	+·053		30·091	5th	29·970	12th													
	Amini Divi	*13*	30·001	+·007	29·942	30·085	5th	29·913	23rd	82·3	75·2	89·4	+3·0	76·8	+0·9	83·1	+1·9	12·6	91·8	24th	71·2	20th
	Gyantse	12,110																				
	Pharijong	14,400																				
	Gangtok	5,667	21·252	−·038	24·207	24·467	4th	24·206	19th	46·1	42·9	60·1	+1·0	?	?	?	?	?	68·1	17th		

N.B.—Elevations in italics indicate barometrical determinations.

(a) 9 hrs. observations.

(c) Aneroid.

NOTE.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevation of which exceed 3,200 feet.

* Mean of 17 days.
† " 13 "
‡ " 23 "
§ " 7 "
‖ " 26 "
¶ " 25 "
** " 22 "
†† " 20 "
‡‡ " 16 "
§§ " 27 "
‖‖ " 19 "

B—*continued.*

at 213 stations in India, etc., in February, 1919—*continued.*

Wind direction. Number of winds from: Calm	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec., 1918, to 28th Feb. 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
21	25	25	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Baluchistan.
16	0	0	6	3	1	1	1	0	S 59° E		3·3			29		66*		·169*		1·4		2	−1·2	0·53	1·07	−0·49	1·50	2·28	−0·78	0·48	Fort Sandeman.
18	1	0	2	3	2	2	0	0	S 32° E	S 4° W	2·3	2·3	−0·3	21	+ 9	74†		·179†		3·8	+ 0·1	3	−1·6	1·15	1·95	−0·80	4·40	4·88	−0·48	0·60	Quetta.
4	0	2	12	6	2	2	0	0	S 69° E	S 46° E	4·9	6·1	−1·2	60	− 1	66‡	+ 1	·188‡	+ ·003	3·5	−0·3	3	−1·1	0·76	1·52	−0·76	4·56	4·13	+0·43	0·54	Chaman.
26	0	0	0	0	0	2	0	0	S 45° W	S 32° W	4·3			4	−56	73§		·181§		2·4		2	−1·3	0·77	1·17	−0·40	2·55	3·52	−0·97	0·61	Kalat.
8	2	11	3	2	1	0	0	1	N 55° E		4·0			49		80‖		·250‖		2·5		4	+1·3	0·82	1·16	−0·64	3·31	2·42	+0·89	0·38	Dalbandin.
3	4	0	1	1	0	0	5	14	N 45° W		3·6			63		91		·498		1·3		1	−1·6	1·67	2·71	−1·04	8·47	4·54	+3·93	1·67	Pasni.
6	1	12	8	0	0	0	1	0	N 59° E		4·4			60		76‖		·242‖		3·3		1		0·40			2·17			0·39	Panjgur.
5	0	0	1	1	0	11	10	0	S 62° W		3·8			63		¶ 58		¶ ·208		1·3		0	−2·2	0·03	0·82	−0·79	2·41	2·24	+0·17	0·03	Robat.
22	0	0	0	1	0	0	0	5	N 45° W		3·3			14		** 76		** ·229		2·1		0		0·12			1·20			0·08	Seistan.
																															Hill stations, excluding Kashmir and Baluchistan.
28	0	0	0	0	0	0	0	0	Calm		1·1			(a)		†† 66	− 7	†† ·158	+ ·003	2·7	−1·4	5	+0·2	4·02	2·15	−1·87	7·08	5·62	+1·46	2·00	Para Chinar.
8	14	0	1	0	0	0	0	5	N 8° W	N 15° W	8·4	9·9	−1·5	60	+ 4	‡‡ 48	−12	‡‡ ·131‖	−·023	3·7	−0·4	2	−2·6	1·62	3·31	−1·72	7·69	7·31	+0·38	1·00	Cherat.
24	0	1	2	1	0	0	0	0	E		2·2			12		‡‡ 67	− 4	‡‡ ·152	−·001	4·5	+0·6	4	+0·8	1·87	1·13	+0·74	4·52	3·06	+1·46	0·78	Drosh.
12	1	0	4	9	0	0	0	2	S 65° E	S 68° E	4·3	6·5	−1·9	36	− 4	†† 51	−13	†† ·126	−·016	3·5	−1·1	3	−3·1	1·93	4·31	−2·38	6·92	9·79	−2·87	0·94	Murree.
																‖‖ 49	− 7	‖‖ ·120	−·008	2·8	−1·7	5	−0·9	1·98	3·29	−1·31	9·67	7·29	+2·38	1·09	Simla.
11	0	10	4	0	0	3	0	0	N 61° E	N 66° E	3·1	4·6	−1·5	36	+ 5	59‖	− 5	·159‖	+·013	2·9	−0·9	4	−2·0	3·86	4·57	−0·71	19·37	10·31	+9·06	1·95	Chakrata.
4	0	1	7	5	2	2	5	2	S 35° E		4·9			21		56‡	− 3	‡ ·146‡	+ ·005	2·2	−1·9	3	−1·8	1·17	2·69	−1·52	10·31	5·68	+4·63	0·82	Mukteswar.
19	1	2	2	1	2	0	1	0	S 84° E	S 53° E	2·0	4·0	−2·0	11	− 9	§§ 83	0	§§ ·205	+·002	4·6	+0·3	3	+0·4	2·19	1·11	+1·08	3·19	2·00	+1·19	1·58	Darjiling.
10	0	2	3	0	6	6	0	1	S 4° W		2·4			29		59	− 9	·221	−·018	1·7	−1·0	1	−1·8	0·28	1·40	−1·12	1·10	2·00	−0·90	0·23	Shillong.
5	2	4	4	0	0	8	5	0	S 78° W		5·1			14		57	−11	·241	−·037	2·1	−1·0	0	−3·5	0·09	3·10	−3·01	0·82	4·06	−3·24	0·09	Cherrapunji.
0	2	0	0	0	0	1	12	13	N 63° W		5·1			86		48		·263		0		0		0			9·00			0	Netarhat.
26	0	0	0	0	0	1	1	0	S 66° W		1·2			7		89	+ 6	·350	−·004	1·7	+0·2	0	−0·6	0	0·17	−0·17	1·00	0·92	+0·08	0	Maymyo.
10	0	3	1	7	4	1	2	0	S 25° E	S 23° W	2·4	3·2	−0·8	32	+16	72	+22	·355	+·079	1·6	−0·5	4	+2·5	1·03	0·65	+0·38	6·52	1·71	+4·81	0·58	Pachmarhi.
12	3	3	1	1	1	2	1	4	N 17° W	N 45° W	3·3	4·5	−1·2	18	−10	33	− 6	·166	−·023	1·6	−0·5	0	−0·6	0	0·31	−0·31	0·39	0·73	−0·34	0	Mount Abu.
13	3	6	5	1	0	0	0	0	N 57° E	N 60° E	2·2	3·1	−0·9	42	0	79	+ 6	·491	+·034	2·7	−0·8	0	−0·4	0	0·17	−0·17	0·91	1·12	−0·21	0	Mercara.
7	0	2	8	9	2	0	0	0	S 66° E		3·0			60		51	0	·242	+·018	2·6	+0·6	0	−0·9	0	0·54	−0·54	1·38	4·13	−2·75	0	Ootacamund.
0	6	6	9	5	0	0	1	1	N 64° E		7·0			56		47	− 9	·213	−·026	1·7	−0·6	1	−1·1	0·33	1·36	−1·03	10·42	8·81	+1·61	0·31	Kodaikanal.
																															Extra India.
2	5	20	0	0	0	0	0	1	N 33° E					85						5·6	+1·0	6	−3·9	4·65	7·24	−2·59	26·80	30·71	−3·91	2·05	Singapore.
0	16	7	1	0	0	0	1	3	N 7° E					82								4	−2·3	1·54	3·98	−2·44	16·46	13·84	+2·62	0·67	Penang.
8	0	9	7	1	0	2	1	0	N 70° E	N 7° E	5·4	5·0	+0·4	46	+25	80	− 5	·779	−·038	4·8	+1·8	2	−0·4	2·90	1·93	+0·97	26·62	21·78	+4·84	1·43	Trincomalee.
22	2	3	1	0	0	0	0	0	N 37° E	N 58° E	2·4	4·7	−2·3	18	−35	92	+13	·770	−·020	6·7	+3·9	3	−0·5	2·01	2·14	−0·10	9·20	11·19	−1·99	1·70	Colombo.
0	15	12	0	0	0	0	0	1	N 17° E		9·6			92		90		·752		4·4		0		0·11			3·12			0·06	Hambantota.
1	11	14	1	1	0	0	0	0	N 31° E	N 20° E	2·5	3·8	−1·3	82	+16					3·3	+0·2	0	−1·1	0·05	0·63	−0·58	8·24	5·92	+2·32	0·03	Minicoy.
1	11	10	1	0	0	0	0	5	N 13° E		4·5			82		71	− 2	·777	−·025	4·1	+0·3	0	−0·1	0	0·05	−0·05	5·76	1·64	+4·12	0	Amini Divi.
																									0·03			0·04			Gwantse.
																									0·56			0·65			Pharijong.
19	1	5	1	1	0	0	0	1	N 45° E		1·1			29		79	0	·247	−·011	3·1	−0·1	4	−1·8	1·43	2·71	−1·28	3·17	4·74	−1·57	0·42	Gangtok.

* Mean of 17 days.
† „ „ 13 „
‡ „ „ 23 „
§ „ „ 7 „
‖ „ „ 26 „
¶ „ „ 25 „

** Mean of 22 days.
†† „ „ 20 „
‡‡ „ „ 16 „
§§ „ „ 27 „
‖‖ „ „ 19 „

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs.

Number of Sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Extra India—*concld.*																					
	Gartok (*c*)	15,100																				
	Kashgar (*c*)	4,255	25·605	−·085		25·775	6th	25·320	15th	25·5		44·9	+2·3	20·6	+1·8	32·8	+2·1	24·3	63·3	23rd	8·3	1st
	Kabul (*c*)*		24·309			24·390	2nd	24·250	9th	21·4		41·4	−3·6	16·3	−2·1	28·9	−2·9	25·1	49·6	13th	11·0	5th
	Meshed	3,104																				
	Jask	13	30·074	+·033	30·040	30·276	16th	29·933	27th	65·2	61·9	76·4	+1·6	62·0	0	69·2	+0·8	14·4	80·1	24th	57·0	16th & 17th.
	Muscat	20	30·097	+·033	30·065	30·243	16th	29·949	13th	69·5	64·0	78·1	+4·2	67·3	−0·2	72·7	+2·0	10·8	83·7	25th	61·7	17th
	Bushire	14	30·078	+·033	30·055	30·248	16th	29·829	26th	58·6	55·6	68·0	+2·5	55·1	+2·2	61·6	+2·3	12·9	82·9	27th	48·4	15th
	Busrah	25	30·118	−·021	30·113	30·308	15th	29·834	26th	54·0	52·0	67·5	+2·1	46·3	−2·7	56·9	−0·3	21·2	80·1	26th	37·1	16th
	Kerman (*c*)																					
	Ispahan (*c*)	*5,817*	24·210	−·010		24·440	16th	23·820	13th	35·6	35·3‡	53·7	+4·8	32·9	+4·2	45·8	+4·5	25·8	68·4	26th	23·2	16th
	Tehran (*c*)	*4,002*	25·747	−·123		26·030	15th	25·310	13th	41·1†	38·8§	54·2†	+3·3	35·7†	+2·6	45·0†	+3·5	18·5	66·8	23rd	23·6	15th
	Baghdad	127	29·975			30·246	15th	29·702	26th	49·0	47·0	64·2		47·9		56·1		16·3	71·8	24th	37·4	14th
	Beirut (*a*)																					
	Aden	94	29·959	+·003	29·987	30·026	10th	29·882	14th	75·5	71·0	80·4	−0·6	74·0	+0·7	77·2	+0·1	6·4	83·6	15th	70·8	14th
	Zanzibar	72	29·942	+·032	29·939	29·988	7th	29·858	27th	82·9	78·0	87·9	+1·2	81·0	+1·6	84·4	+1·4	6·9	92·2	25th	78·2	20th

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level, in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

† Mean of 27 days.
(*a*) 8½ hrs. observations.
‡ Mean of 15 days.
§ Mean of 22 days.
(*c*) Aneroid.
* Mean of 13 days.

B—*concluded.*

at 213 stations in India, etc., in February, 1919—*concluded.*

Wind direction.											Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Number of winds from									Resultant direction.	Normal direction.	Mean velocity, miles per hour.	Normal.	Departure from Normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st December, 1918, to 28th February 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.																							
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Extra India—*concld.*
																									0			0			Gartok.
27	0	0	0	0	0	0	1	0	W	N 28° W	1·0	1·1	−0·1	4	− 6					3·2	−1·2	0	−0·5	0	0·20	−0·20	1·10	0·48	+0·62	0	Kashgar.
0	1	0	0	3	5	2	1	1	S 8° W	S 51° E				54						6·2		0		0	1·43	−1·43	0	3·07	−3·07	0	Kabul.
																									0·91			2·34			Meshed.
4	7	2	6	0	0	0	3	6	N 1° E	N 10° E	7·5	8·9	−1·4	45	−23	82	+ 6	·515	+·061	1·8	−0·6	3	+1·1	1·05	0·91	+0·14	5·18	2·94	+2·24	0·52	Jask.
16	0	1	1	1	0	0	3	6	N 49° W	S 82° W	3·0	3·4	−0·4	25	−16	72	+ 3	·525	+·020	2·4	+0·1	1	−0·7	0·86	0·88	−0·02	3·23	2·57	+0·66	0·86	Muscat.
3	6	6	2	2	0	0	0	9	N 5° E	N 48° E	7·6	5·8	+1·8	53	+ 6	82	0	·406	+·040	2·9	−0·7	4	+0·4	1·85	1·93	−0·08	7·16	7·63	−0·47	0·65	Bushire.
5	3	3	1	2	3	4	5	2	S 82° W		3·5			18		87		·369		2·7		2	−0·6	1·32	0·97	+0·35	6·70	3·37	+1·50	0·71	Basrah.
																															Kerman.
20	2	0	0	0	0	3	2	1	N 80° W	S 82° W	2·2	3·4	−0·6	18	−24	63*	− 8	·159*	+·023	1·9	−0·7	2	+0·6	0·49	0·40	+0·09	1·78	1·89	−0·11	0·22	Ispahan.
14	4	5	2	0	0	1	1	1	N 23° E	N 22° E	3·7	2·6	+1·1	29	− 1	69†	− 6	·192†	+·046	4·0	+1·0	4	+1·0	1·19	0·98	+0·21	4·81	3·90	+0·91	0·40	Tehran.
0	1	2	2	7	4	4	5	2	S 13° W	N 8° E	6·7	3·2	+3·5	23	0	86	+15	·300	+·065	5·5	+2·0	2	−0·5	1·14	1·31	−0·17	5·72	3·63	+2·09	0·51	Baghdad.
																															Beirut.
4	2	21	1	0	0	0	0	0	N 43° E	N 81° E	12·6	1·2	+2·4	78	− 1	79	+ 2	·702	+·025	5·1	−0·8	0	−0·4	0	0·21	−0·21	0·03	0·68	−0·65	0	Aden.
1	11	15	1	0	0	0	0	0	N 29° E	N 27° E	5·3	4·9	+0·4	89	+17	79	0	·889	+·021	4·0	−2·5	2	−1·5	1·07	2·23	−1·16	9·88	10·78	−0·90	0·73	Zanzibar.

* Mean of 15 days.
† " 22 "

Table C.—Abstract of observations taken at 8 hrs. at 60 fourth and fifth class stations in India, etc., in February, 1919.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

Number of Sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	II.—Assam.																								
4	Bishnath	56·9	53·8	78·7	+4·1	50·2	+1·9	64·5	+3·0	28·5	85·1	18th	43·7	5th	...	...	...	...	...	...	...	...	...	...	...
	Borjuli	64·5	61·6	79·9	+3·3	49·1	+1·2	64·5	+2·3	30·8	86·2	18th	41·8	5th	...	...	...	...	...	...	...	...	...	...	...
	Chandkhira	55·4	54·4	84·2	+3·2	46·7	−4·9	65·5	−0·9	37·5	90·6	26th	39·1	3rd	...	...	...	...	...	...	...	...	...	...	...
	Doom Dooma	54·5	53·3	78·6	+13·8	49·7	0	64·1	+6·9	28·9	86·1	17th	41·2	4th	...	...	...	...	...	...	...	...	...	...	...
	Dikom	57·6	55·8	76·6	+3·8	50·8	+0·5	63·7	+2·1	25·8	84·2	18th	41·2	3rd	...	...	...	...	...	...	...	...	...	...	...
	Golaghat	57·1	56·1	77·5	+3·5	49·3	...	63·4	...	28·2	83·3	17th	42·2	4th	...	...	...	...	...	...	...	...	...	...	...
	Hailakandi	58·8	56·4	81·6	+2·1	*52·4	+0·2	*67·0	+1·1	29·2	86·4	25th	47·2	12th	...	...	...	...	...	...	...	...	...	...	...
	Jorehat	56·6	55·2	77·4	+3·4	51·0	−1·3	64·2	+1·1	26·4	82·5	17th	45·4	4th & 5th	...	...	...	...	...	...	...	...	...	...	...
	Lumding†	58·2	55·8	79·1	...	46·6	...	62·9	...	32·5	84·7	19th	41·0	3rd & 11th	...	...	...	...	...	...	...	...	...	...	...
	Messa	67·8	62·1	81·6	+1·8	47·6	−0·3	64·6	+0·7	34·0	84·6	18th	39·8	5th	...	...	...	...	...	...	...	...	...	...	...
	Panerihat	55·9	52·9	79·1	+4·0	46·5	−1·8	62·8	+1·1	32·6	85·1	17th	38·6	2nd	...	...	...	...	...	...	...	...	...	...	...
	III.—Bengal.																								
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Brahmanbaria	63·2	58·2	82·5	+2·0	52·5	−3·1	67·5	−0·5	30·0	87·6	18th	46·9	4th	...	...	...	...	...	...	...	...	...	...	...
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Goalundo	69·6	59·7	81·3	+1·2	49·9	−2·2	65·6	−0·5	31·4	88·9	18th	43·5	3rd	...	...	...	...	...	...	...	...	...	...	...
	Pabna	63·2	59·5	82·1	−0·5	56·6	+3·7	69·3	+1·6	25·5	87·8	25th	48·9	4th	...	...	...	...	...	...	...	...	...	...	...
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dam Dim	50·8	49·5	85·0	+4·1	45·7	0	65·3	+2·1	39·3	90·1	9th	41·0	4th & 5th	...	...	...	...	...	...	...	...	...	...	...
	Kalchini	63·6	58·0	79·5	+3·3	47·2	−1·6	63·3	+0·9	32·3	84·1	17th	43·0	4th & 5th	...	...	...	...	...	...	...	...	...	...	...
	Nagrakata	66·7	57·7	78·5	+2·0	52·5	−1·3	65·5	+0·3	26·0	83·6	17th	48·0	1st & 2nd	...	...	...	...	...	...	...	...	...	...	...
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raniganj (Asansol)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IV.—Bihar and Orissa.																								
7	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzaffarpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Motihari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Mean of 22 days.
† „ 26 „

C.

and fifth class stations in India, etc., in February, 1919.

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st December 1918 to 28th February 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				II.—Assam.
...	...	...	...	...	81	−13	·375	− ·037	...	...	2	− 1·5	0·45	1·47	− 1·02	0·54	2·90	− 2·36	0·16	Bishnath.
...	...	...	...	...	84	− 5	·515	+ ·109	...	...	0	− 3·1	0·14	1·35	− 1·21	0·21	2·30	− 2·09	0·07	Borjuli.
...	...	...	...	...	94	+ 1	·413	− ·042	...	...	1	− 1·8	0·26	1·76	− 1·50	0·81	3·60	− 2·79	0·26	Chandkhira.
...	...	...	...	...	92	− 2	·392	− ·021	...	...	5	− 2·5	1·96	2·82	− 0·86	2·67	4·97	− 2·30	0·76	Doom Dooma.
...	...	...	...	...	89	− 5	·423	+ ·013	...	...	5	− 1·6	2·37	2·42	− 0·05	2·64	4·40	− 1·76	0·98	Dikom.
...	...	...	...	...	93	0	·436	+ ·002	...	...	3	− 1·4	0·57	1·74	− 1·17	0·73	3·28	− 2·55	0·20	Golaghat.
...	...	...	...	...	85	− 5	·423	− ·005	...	...	0	− 3·4	0·08	1·83	− 1·75	0·26	3·89	− 3·63	0·04	Hailakandi.
...	...	...	...	...	91	− 3	·419	− ·015	...	...	3	− 1·6	0·99	1·71	− 0·72	1·42	3·51	− 2·09	0·53	Jorebat.
...	...	...	...	...	85	...	·410	...	...	...	2	− 0·8	0·69	1·20	− 0·51	1·28	1·97	− 0·69	0·30	Lumding.
...	...	...	...	...	70	−12	·478	+ ·049	...	...	0	− 3·5	0·04	1·42	− 1·38	0·36	2·61	− 2·25	0·04	Messa.
...	...	...	...	...	82	− 7	·367	+ ·018	...	...	3	0	0·78	1·43	− 0·65	0·91	2·25	− 1·34	0·44	Panerihat.
																				III.—Bengal.
...	...	...	...	...	...	...	...	...	...	...	0	− 2·0	0	1·13	− 1·13	0	1·71	− 1·71	0	Comilla.
...	...	...	...	...	73	− 9	·420	− ·064	...	...	0	− 2·0	0·08	1·38	− 1·30	0·35	2·11	− 1·76	0·04	Brahmanbaria.
...	...	...	...	...	...		...		...	...	0	− 2·2	0·04	1·28	− 1·24	0·98	1·91	− 0·93	0·04	Faridpur.
...	...	...	...	...	53	−28	·380	− ·062	...	...	1	− 1·5	0·14	1·29	− 1·15	0·78	1·87	− 1·09	0·11	Goalundo.
...	...	...	...	...	79	+ 5	·463	+ ·028	...	...	1	− 0·8	0·30	0·84	− 0·54	1·13	1·43	− 0·30	0·29	Pabna.
...	...	...	...	...	...	...	...	...	...	...	0	− 1·7	0·03	0·82	− 0·79	0·57	1·29	− 0·72	0·03	Sirajganj.
...	...	...	...	...	...	...	...	...	...	...	1	− 0·6	0·37	0·61	− 0·24	2·12	1·03	+ 1·09	0·37	Rampur Boalia.
...	...	...	...	...	...	...	...	...	...	...	1	− 0·8	0·28	0·92	− 0·64	1·86	1·57	+ 0·29	0·28	Malda.
...	...	...	...	...	...	...	...	...	...	...	0	− 1·3	0·02	0·64	− 0·62	0·46	1·07	− 0·61	0·02	Rangpur.
...	...	...	...	...	91	− 2	·339	− ·030	...	...	0	− 2·3	0·18	1·08	− 0·90	0·58	1·78	− 1·20	0·07	Dam Dim.
...	...	...	...	...	69	− 8	·412	− ·013	...	...	0	− 2·9	0·11	1·39	− 1·28	0·44	2·17	− 1·73	0·06	Kalchini.
...	...	...	...	...	56	−19	·359	− ·011	...	...	1	− 2·4	0·19	1·37	− 1·18	0·58	2·36	− 1·78	0·19	Nagrakata.
...	...	...	...	...	...	...	...	...	...	...	0	− 1·9	0·02	0·93	− 0·91	0·57	1·27	− 0·70	0·02	Cooch Behar.
...	...	...	...	...	...	...	...	...	...	...	2	+ 0·3	0·78	1·28	− 0·50	1·51	1·88	− 0·37	0·68	Krishnagar.
...	...	...	...	...	...	...	...	...	...	...	1	− 1·0	0·35	1·12	− 0·77	5·24	1·64	+ 3·60	0·35	Bankura.
...	...	...	...	...	...	...	...	...	...	...	0	− 1·8	0·04	0·97	− 0·93	3·01	1·57	+ 1·44	0·04	Raniganj (Asansol).
																				IV.—Bihar and Orissa.
...	...	...	...	...	...	...	...	...	...	...	2	− 0·3	0·64	1·18	− 0·54	5·15	2·10	+ 3·05	0·50	Hazaribagh.
...	...	...	...	...	...	...	...	...	...	...	1	− 0·7	0·60	0·76	− 0·16	1·39	1·38	+ 0·01	0·60	Bhagalpur.
...	...	...	...	...	...	...	...	...	...	...	1	− 0·6	0·17	0·54	− 0·37	1·23	1·18	+ 0·05	0·12	Muzaffarpur.
...	...	...	...	...	...	...	...	...	...	...	0	− 1·3	0·10	0·57	− 0·47	0·90	1·25	− 0·35	0·08	Motihari.
...	...	...	...	...	...	...	...	...	...	...	1	− 0·6	0·31	0·61	− 0·30	1·66	1·34	+ 0·32	0·20	Chapra.
...	...	...	...	...	...	...	...	...	...	...	2	+ 0·5	0·27	0·76	− 0·49	2·55	1·58	+ 0·97	0·12	Arrah.
...	...	...	...	...	...	...	...	...	...	...	2	+ 0·2	0·34	0·82	− 0·48	3·17	1·65	+ 1·52	0·22	Dehri.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

Number of Sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from: Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	V.—United Provinces of Agra and Oudh.																								
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehra Dun	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IX.—Rajputana.																								
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XII.—Central Provinces.																								
23	Chhindwara	60·4	56·0	79·9	...	55·4	...	67·6	...	24·5	86·0	24th	47·7	19th	16	2	4	1	1	0	1	1	2	N 11° E	...
	XIII.—Hyderabad.																								
27	Parbhani	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XV.—Madras.																								
31	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Anantapur	75·4	71·6	94·6	...	68·6	...	81·6	...	26·0	98·3	28th	62·0	24th	...	...	...	...	...	...	...	...	...	...	...
33	Guntur	76·3	73·7	91·5	...	70·6	...	81·1	...	20·9	97·2	20th	67·5	12th	...	...	...	...	...	...	...	...	...	...	...
	Koraput	63·8	61·7	81·1	...	60·0	...	70·5	...	21·1	84·5	28th	54·8	9th	...	...	...	...	...	...	...	...	...	...	...
	Bay Islands.																								
1	Car Nicobar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kashmir.																								
13	Jammu	53·2	49·3	67·6	...	49·5	...	58·6	...	18·1	77·1	23rd	41·1	2nd	0	13	12	0	0	0	1	1	1	N 16° E	...
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kargil	6·0	...	24·7	...	−12·4	...	6·1	...	37·1	36·8	18th	−22·5	2nd	8	0	0	0	17	0	0	0	3	S 45° E	...
	Baluchistan.																								
15	Harnai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill stations, exclusive of Kashmir.																								
	Panighatta	60·5	52·7	77·3	+2·2	55·5	+2·0	66·4	+2·1	21·8	83·1	17th	50·1	2nd	...	...	...	...	...	...	...	...	...	...	...
	Kurseong	56·6	55·7	69·9	+2·5	47·1	+1·4	54·0	+1·9	13·8	67·5	16th	40·3	2nd	...	...	...	...	...	...	...	...	...	...	...
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ringim	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dharampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mussooree	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Poo	...	...	32·4	−8·1	13·3	−10·1	22·8	−9·1	19·1	41·9	18th	3·8	2nd	4	5	3	5	0	0	3	2	6	N 6° W	...
	Kallang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pishin	...	...	56·7	+1·4	24·6	−3·0	40·7	−0·8	32·1	73·3	28th	17·0	17th	...	...	...	...	...	...	...	...	...	...	...

C—*continued.*

and fifth class stations in India, etc., in February, 1919—*continued.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st December 1918 to 28th February 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				V.—United Provinces of Agra and Oudh.
...	...	...	...	...	...	...	...	...	...	...	1	−0·8	0·24	0·93	−0·69	5·94	2·63	+3·31	0·24	Meerut.
...	...	...	...	...	...	...	...	...	...	...	3	−0·7	2·43	2·49	−0·06	8·81	5·65	+3·16	1·35	Dehra Dun.
																				IX.—Rajputana.
...	...	...	...	...	...	...	...	...	...	...	0	−0·5	0	0·16	−0·16	0·09	0·39	−0·30	0	Udaipur.
																				XII.—Central Provinces.
3·0	...	...	18	...	75	...	·402	...	2·4	...	4	+2·3	2·59	0·75	+1·84	6·30	1·89	+4·41	1·23	Chhindwara.
																				XIII.—Hyderabad.
...	...	...	...	...	...	...	...	...	...	...	0	−0·4	0·03	0·12	−0·09	1·84	0·51	+1·33	0·03	Parbhani.
																				XV.—Madras.
...	...	...	...	...	...	...	...	...	...	...	0	−1·5	0	0·92	−0·92	11·61	6·31	+5·30	0	Tinnevelly.
...	...	...	...	...	83	...	·727	...	3·5	...	0	−0·2	0	0·02	−0·02	0	0·32	−0·32	0	Anantapur.
...	...	...	...	...	87	...	·792	...	0·7	...	0	−0·2	0	0·17	−0·17	0·38	0·45	−0·07	0	Guntur.
...	...	...	...	...	89	...	·527	...	...	...	5	...	2·39	...	...	3·81	...	...	1·06	Koraput.
																				Bay Islands.
...	...	...	...	...	...	...	...	...	...	...	2	−0·2	0·37	1·28	−0·91	11·32	13·27	−1·95	0·15	Car Nicobar.
																				Kashmir.
...	...	...	79	...	76	...	·309	...	3·1	...	2	−2·2	1·57	3·21	−1·64	8·77	7·14	+1·63	1·03	Jammu.
...	...	...	...	...	...	...	...	...	...	...	4	−6·1	7·03	9·59	−2·56	27·34	26·95	+0·39	4·70	Sonamarg.
...	...	...	50	...	...	...	...	...	2·8	...	2	−1·5	1·38	1·38	0	3·86	4·16	−0·30	0·70	Kargil.
																				Baluchistan.
...	...	...	...	...	...	...	...	...	...	...	0	−3·2	0·05	1·56	−1·51	0·92	3·39	−2·46	0·05	Harnai.
																				Hill stations, exclusive of Kashmir.
...	...	...	...	...	62	−2	·322	−·018	...	...	2	−0·4	0·26	1·19	−0·93	1·02	2·18	−1·16	0·15	Panighatta.
...	...	...	...	...	94	+22	·430	+·179	...	...	3	−0·3	0·43	1·57	−1·14	1·07	2·64	−1·57	0·13	Kurseong.
...	...	...	...	...	...	...	...	...	...	...	16	+7·2	24·55	4·13	+20·42	30·45	7·25	+23·20	2·50	Gnatong.
...	...	...	...	...	...	...	...	...	...	...	8	+2·0	2·93	3·03	−0·10	...	4·08	...	0·65	Lachung.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	3·75	...	...	8·20	...	...	Ringim.
...	...	...	...	...	...	...	...	...	...	...	3	...	2·94	...	...	11·10	...	...	1·90	Dharampore.
...	...	...	...	...	...	...	...	...	...	...	3	−1·7	2·39	3·25	−0·86	10·00	7·08	+2·92	1·10	Mussooree.
...	...	...	32	...	...	...	...	...	3·3	−1·7	3	−2·6	4·03	2·24	+1·79	9·17	5·19	+3·98	3·10	Poo.
...	...	...	...	...	...	...	...	...	...	...	2	−4·0	3·22	2·79	+0·43	8·89	6·79	+2·10	2·51	Kailang.
...	...	...	...	...	...	...	...	...	2·7	...	2	−1·8	1·12	1·87	−0·75	4·94	5·00	−0·06	0·85	Pishin.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

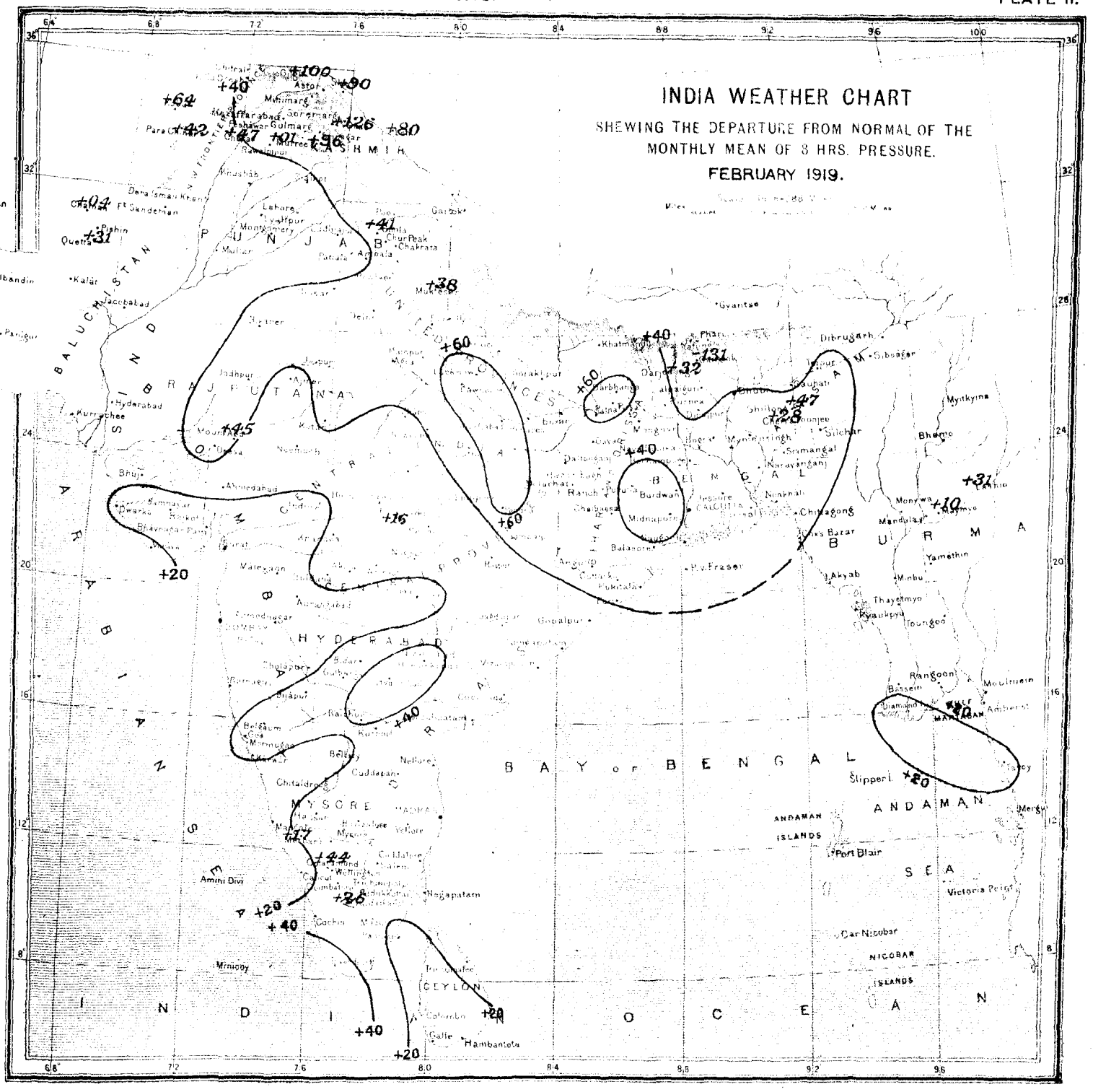
Number of Sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Extra India.																								
	Chumbi	25·2	?	31·1	...	20·0	...	25·5	...	11·1	46·0	3rd	15·2	10th, 13th & 27th.	...	...	...	...	...	...	...	...	...	...	...
	Pemba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abadan	62·6	56·4	79·0	...	51·2	...	65·1	...	27·8	88·0	26th	41·0	14th & 15th.	0	20	0	0	0	8	0	0	0	N	...

C—*concluded.*

and fifth class stations in India, etc., in February, 1919—*concluded.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal	Total rainfall from 1st December 1918 to 28th Feb. 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				Extra India.
...	...	...	...	...	...	...	...	...	1·7	...	3	−0·7	13·05	1·38	+11·67	13·05	1·86	+11·19	6·45	Chumbi.
...	...	...	...	...	...	...	...	...	...	...	0	−3·4	0·09	1·93	−1·84	13·23	11·55	+1·68	0·05	Pemba.
...	...	...	43	...	68	...	·368	...	...	...	2	...	1·18	...	...	5·83	...	...	0·81	Abadan.

SGPI-21-442DGC-12-5-22—325.



The chart shows the departure from normal of the mean during the month of 8 hrs. pressure by means of lines drawn for equal amounts of departure. The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no departure, the dotted line facing the area of deficient pressure or negative departures.

CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MAXIMUM TEMPERATURE.

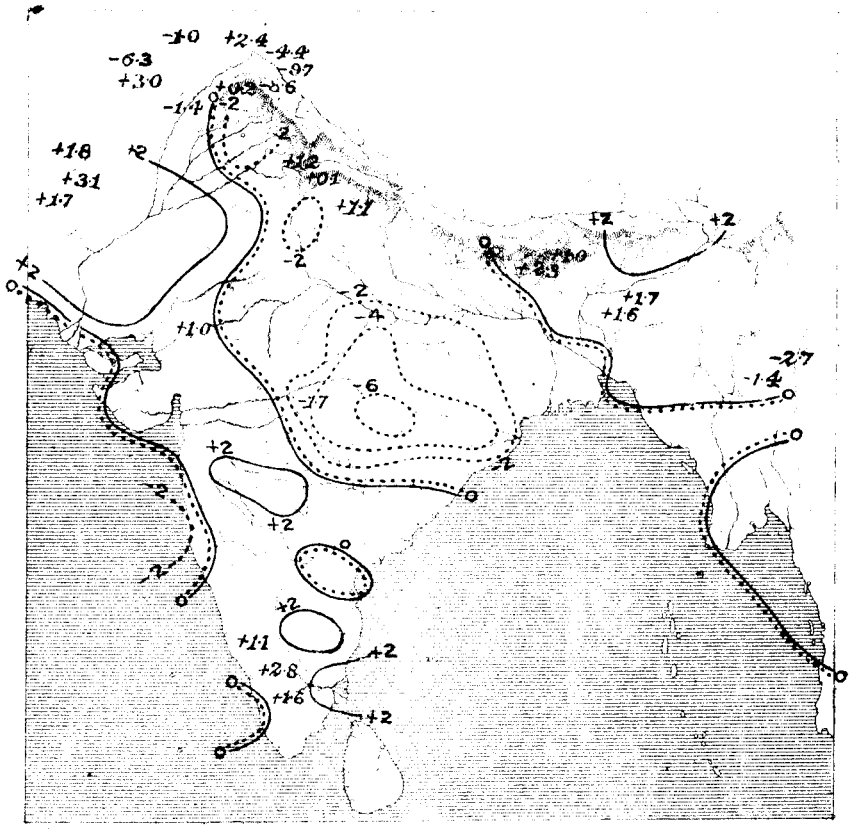


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MINIMUM TEMPERATURE.

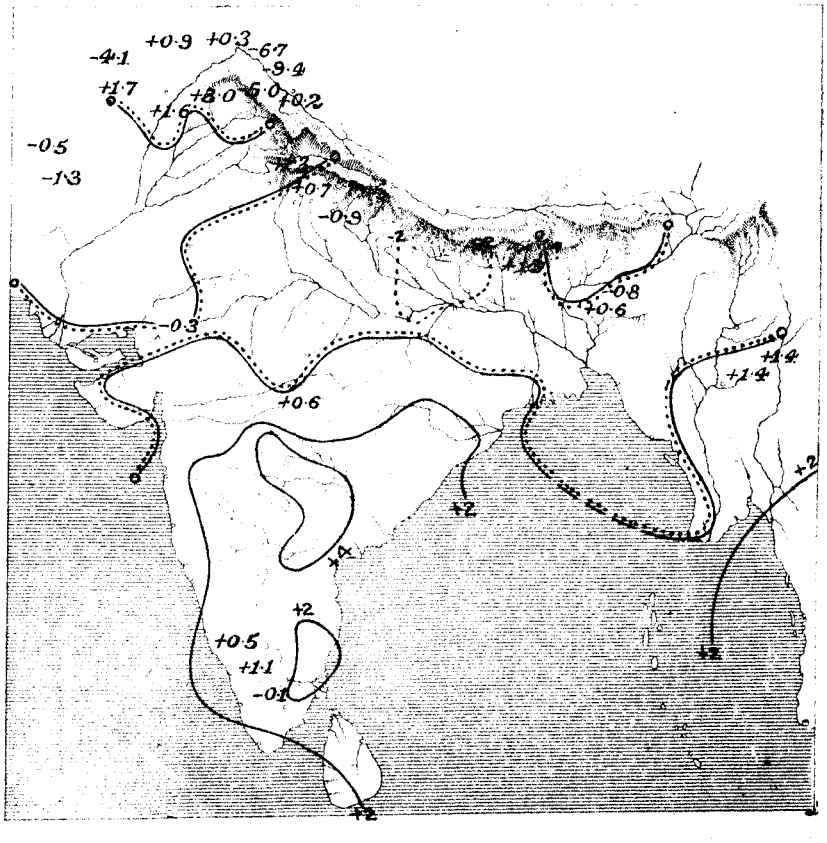


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MEAN TEMPERATURE.

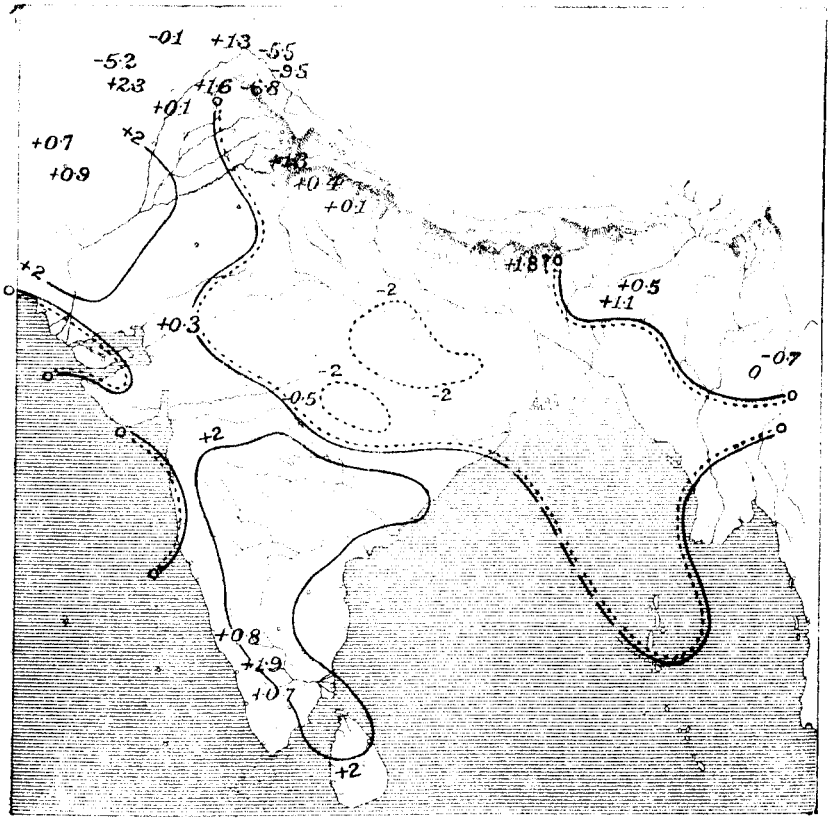


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF ABSOLUTE HUMIDITY AT 8 HRS.

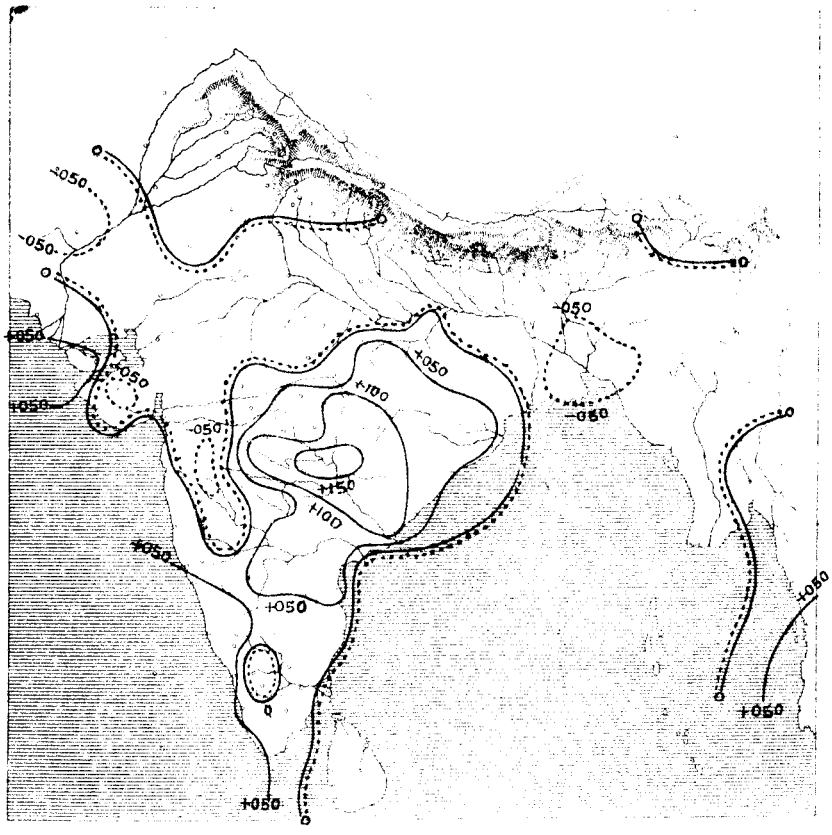


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF RELATIVE HUMIDITY AT 8 HRS.

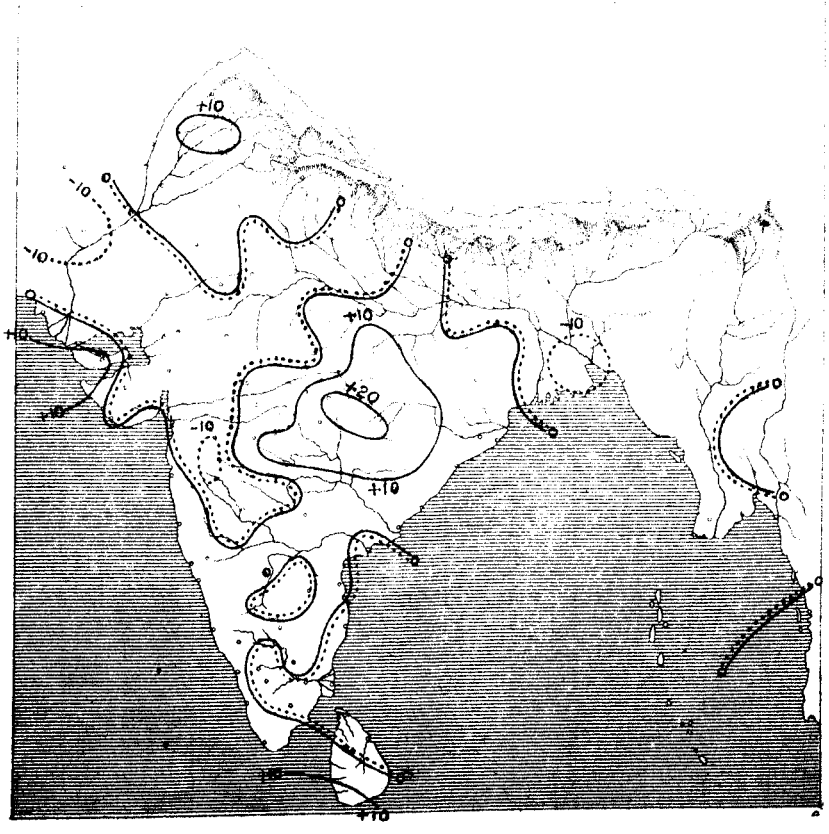


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF CLOUD AMOUNT AT 8 HRS.

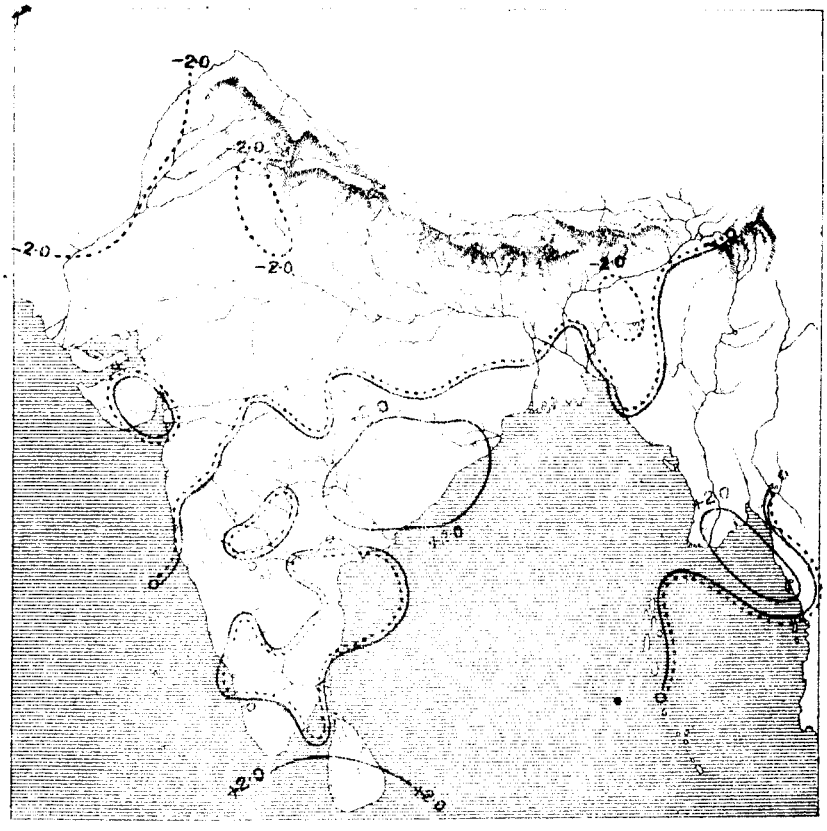


CHART SHEWING THE TOTAL NUMBER OF DAYS IN THE MONTH ON WHICH RAINFALL EQUALLED OR EXCEEDED 0·10 INCH.

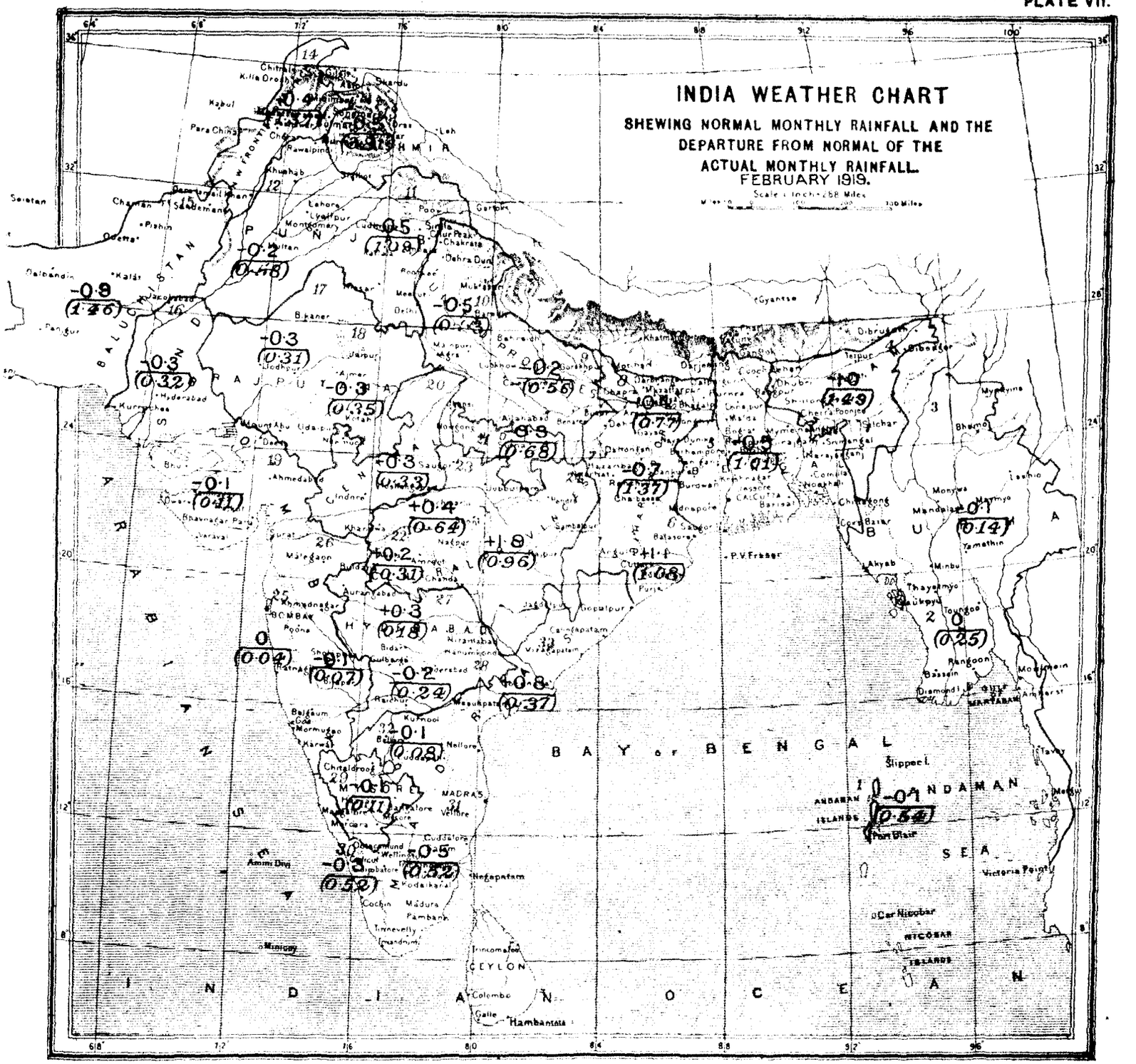
(BASED ON THE RETURNS OF TABLE B.)

The lines of the above chart represent isobars or lines of equal barometric pressure, the numbers attached indicating the barometric pressure in inches and being drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the normal distribution of pressure.

The mean 8 hrs. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table B of the 8 hrs. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	...	one	feather added to the wind arrow.
,, ,,	2 to 5 ,, ,, ,,	...	two	feathers ,, ,, ,, ,,
,, ,,	5 to 10 ,, ,, ,,	...	three	,, ,, ,, ,, ,,
,, ,,	10 to 20 ,, ,, ,,	...	four	,, ,, ,, ,, ,,
	over 20 ,, ,, ,,	...	five	,, ,, ,, ,, ,,

Wind strengths are based on factor 2·2 for the standard type of Beckley Robinson anemograph, instead of 3·0 as used for this plate up to December 1911 inclusive.



The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal monthly rainfall, the numbers above these give the departures from normal of the average actual rainfall over the divisions.

1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North

GOVERNMENT OF INDIA

METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REVIEW

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THE GOVERNMENT OF INDIA.

CALCUTTA, MARCH, 1919.

INTRODUCTION.

THIS review of the weather in India during the month of March, 1919, is based on observations taken daily at 8 hrs. at 210 stations, and on additional observations taken at 10 hrs. and 16 hrs. at 12 stations. In the rainfall summary have been utilized the data furnished by the meteorological observatories, and rainfall statements of the month published by the Provincial Governments.

The brief notes on solar, magnetic and seismic disturbances are supplied by the chief observatories in the Indian area.

For a statement of the methods adopted in recording and tabulating the data, for each of the elements of observation, reference should be made to the introductory portion of the review for January.

Summary of the chief features of the weather in India during the month.

2. The western disturbance which entered northern India about the end of February gave, on the first four days of March, widespread rain or snow in the western Himalayas and rain in Assam and Bengal. Four more such disturbances appeared during the month; the first three caused precipitation in Baluchistan, the North-West Frontier Province and Kashmir, and the fourth in the first two areas. Rainfall due to the third extended also to the Punjab plains and the Kumaon hills. But the total fall of the month was much below normal over almost the whole of northern India and over Central India. In the Central Provinces East, Mysore and Madras thunderstorms occurred fairly frequently, and rainfall was heavier than usual.

Skies were much clearer than usual in Assam and the North-West Frontier Province, and humidity was in decided defect in Assam, Bengal, Bihar and the United Provinces. Maximum temperature was much above the average in Assam and much below it in Kashmir.

The mean barometric pressure over the plains of India was 0·039″ in excess.

Solar, magnetic and seismic disturbances.

KODAIKANAL OBSERVATORY.

3. *Solar Observations.*—The spot and prominence records were complete during the month except on one day, namely, the 20th.

Sunspots.—Twenty-three new groups were recorded; the daily average number was 4·4 and the average life of a spot was 5·8 days. The 23 groups were distributed in latitude as follows:—

TABLE 1.

—	1°—10°	11°—20°	21°—30°	Mean latitude.	Extreme latitude.
North . . .	11	8	...	8°·4	2°, 16
South . . .	4	4	1	12°·3	2°, 21

Prominences.—58 Prominences, a minute or more in height, 28 metallic and 4 eruptive prominences were recorded during the month. An eruptive prominence recorded on the 5th reached a height of 500″ and another on the 22nd of 420″. They were both on the east limb and between 10° and 30° south of the equator.

Magnetic disturbances.—"Moderate" disturbances were recorded from the 1st to the 7th, on the 12th, from the 14th to the 17th, the 20th to the 23rd and 27th to the 31st.

J. EVERSHED,

Director,

Kodaikanal and Madras Observatories.

Seismic records.

$\phi = 10° 13' 50''$; $\lambda = 77° 28' 00''$; $h = 2343$ m. *Subsoil* Rock.

Apparatus.—Milne's Horizontal Pendulum Seismograph.

TABLE 2.

	V	To	ϵ	$\frac{r}{To^2}$
AN:				
AE:	9·76	17·5		3·0
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance. Δ (Km.).	REMARKS.
1919.		h. m. s.						
Mar. 2nd	e P	4 41 48	...	...	...	...	...	
	e L	4 44 18	...	...	...	...	...	
	M	4 59 42	...	...	100	...	...	
	F	5 45 18	...	...	...	...	...	
Mar. 2nd	e P	12 07 24	...	...	...	...	...	
	F	12 58 42	...	...	...	...	...	Several widenings of line.
„ 2nd	e P	13 00 42	...	...	...	...	...	
	e L	13 08 12	...	...	...	...	...	
	M	13 16 06	...	...	70	...	...	
	F	13 58 42	...	...	...	...	...	
„ 9th	e P	3 57 54	...	...	...	...	...	
	e L	4 34 12	...	...	...	...	...	
	M	4 50 30	...	...	100	...	...	
	F	5 05 48?	...	...	...	...	...	Record faint as light was burning low. Light was put out at 5 h. 9 m. for marking the time on the sheet.
„ 16th	e P	7 48 24	...	...	...	...	...	
	e L	7 52 12	...	...	...	...	...	
	M	8 08 12	...	...	60	...	...	
	F	8 24 18	...	...	...	...	...	
„ 21st	e P	18 07 12	...	...	...	...	...	
	F	18 11 54	...	...	...	...	...	Widening of line.

S. SITARAMAYYA,

Offg. Assistant Director.

BOMBAY OBSERVATORY.

Alibag magnetic record.

4. During the month of March, 1919, the traces showed 7 calm days, 21 days of small, and 3 days of moderate disturbance.

The days of the month selected as "quiet" for the purposes of the Magnetic Survey of India are 9th, 11th, 13th, 18th and 26th.

The following table represents the magnetic character of each day during the month :—

TABLE 3.

Day.	Character.	Day.	Character.	Day.	Character.	Day.	Character.
1	M	9	C	17	S	25	S
2	S	10	C	18	C	26	C
3	S	11	C	19	S	27	S
4	S	12	S	20	S	28	S
5	S	13	C	21	M	29	S
6	S	14	S	22	M	30	S
7	S	15	S	23	S	31	S
8	S	16	S	24	C		

C = calm ; S = small; M = moderate ; G = great ; V. G. = very great.

The mean observed absolute values of the several magnetic elements reduced to the mean monthly tabulations of the magnetograms, as also the ranges and the summed ranges of the horizontal force and declination for the month, are as follows :—

Easterly declination . .	0° 26′ 6″.
Horizontal force	0·36890 C. G. S. unit.
Vertical force	0·17046 C. G. S. unit.
Inclination	24° 48′·0.
Horizontal force range . . .	0·00052 C. G. S. unit.
Horizontal force summed range .	0·00347 C. G. S. unit.
Declination range . . .	2′·7.
Declination summed range . .	10′·0.

(NOTE.—Summed range means sum without regard to sign of twenty-four ordinates of the diurnal inequality.)

Seismic records.

$\phi = 18° 53' 36''$ $\lambda = 72° 48' 56''$ $h = 11$ m. *Subsoil* Trap.

Apparatus.—Omori-Ewing Horizontal Pendulum Seismograph.

TABLE 4.

	V	To	ϵ	$\frac{r}{To^2}$
AN :				
AE :	20	32		
AZ :				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance. Δ (Km.).	Remarks.
1919.		h. m. s.						
Mar. 2nd	P	4 38 21	...	...	...	...	...	
	M	4 54 48	...	...	30	...	...	
„ „	P	*12 4 33	...	...	...	...	...	*P as shown by the float record (Tilt Seismograph).
	M	13 13 19	...	...	30	...	...	
„ 21st	P	1 11 15	...	...	...	...	...	
	M	1 34 38	...	...	15	...	...	

MUKUND V. UNAKAR,
Actg. Director,
Bombay and Alibag Observatories.

5.—CALCUTTA (ALIPORE) OBSERVATORY.

Seismic records.

$\phi = 22° 32'$ N ; $\lambda = 88° 20'$ E ; $h = 6·4$ m. *Subsoil* Alluvial.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs.

TABLE 5.

	V	To	ϵ	$\frac{r}{To^2}$
AN :	29	18	1	
AE :	29	30	1	
AZ :				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) An.	Ae.	Az.	Distance. Δ (Km.).	Remarks.
1919.		h. m. s.						
Mar. 1st.	P	17 15 30	...	...	...	...	...	
	S	17 18 30	5	...	...	...	...	
	F	17 30 00	...	...	...	...	...	
„ 2nd	P	16 59 42	...	...	...	...	...	
	S	17 2 12	5	...	...	...	...	
	F	17 28 18	...	...	...	...	...	
„ 3rd	P	6 5 54	...	...	...	...	...	
	S	6 7 18	5	...	...	...	...	
	F	6 23 18	...	...	...	...	...	
„ 16th	P	7 40 42	...	...	...	...	...	
	S	7 46 48	4	...	...	...	...	
	F	8 5 18	...	...	...	...	...	
„ 21st	P	1 9 12	...	...	...	...	...	
	F	1 43 06	...	...	...	...	...	

6.—SIMLA OBSERVATORY.

Seismic records.

$\phi = 31° 6' N$; $\lambda = 77° 11' E$; $h = 2{\cdot}1$ km. *Subsoil* Rock.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs (Masses 50 Kg.).

TABLE 6.

	V	To	ϵ	$\frac{r}{To^2}$
An:	14	45	1	
Ae:	14	45	1	
Az:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) An.	Ae.	Az.	Distance. Δ (Km.).	Remarks.
1919.		h. m. s.						
Mar. 2nd	e P	10 46 30	...	...	...	...	...	
	M	10 52 30	...	...	25	...	...	
	F	11 01 36	...	...	...	...	...	
„ 9th	e P	4 31 54	...	...	...	...	...	
	F	5 33 42	...	...	...	...	...	Slight tremors.
„ 21st	e P	1 16 48	...	...	...	...	...	
	F	1 43 54	...	...	...	...	...	Slight tremors.

The following table contains a list of earthquakes that were reported :—

TABLE 7.

Place at which felt.	Date.	G. M. T. of earthquake.	Duration.	Intensity. Rossi-Forel scale.	No. of shocks.	Remarks.
		h. m.	sec.			
Kabul (Afghanistan)	Mar. 5th	15 38	70	6	3	
Drosh . . .	„ 5th	15 55	55	7	2	
„ . . .	„ 9th	2 25	10	6	1	
Chittagong . .	20th	22 05	5 to 7	7.	1	
Simangal . .	„ 31st	17 00	1	3	1	

Weather in the Indian Ocean.

7. The following table gives the departures from normal of pressure and rainfall, as well as the actual and normal wind direction and velocity at the three representative stations.

TABLE 8.

—	Mauritius.	Zanzibar.	Seychelles.
Departure from normal of mean pressure	—·048	+·035	+·050
Actual mean wind direction	S 51° E	S 45° E	N 11° E
Normal mean wind direction	S 76° E	S 27° E	N 17° W
Actual mean wind velocity (miles per diem).	117	79	88
Normal mean wind velocity (miles per diem).	130	94	86
Rainfall departure from normal	—1·23	+0·77	+2·95

Depressions and cyclonic storms.

8. No depressions formed in the Indian seas. Four western disturbances passed into northern India during the month, and began to affect the weather in northwest India on the 7th, 15th, 20th and 26th respectively. On the 1st 6th, 7th and 8th weather was rough in the Persian Gulf; *S. S. Varsova* experienced winds of force 9 there on the 1st.

Pressure.

9. The following table gives the departure from normal of the mean 8 hours pressure in the 15 chief political divisions of India.

TABLE 9.

DIVISION.	Departure from normal of mean 8 hrs. pressure.
	"
Burma	+·022
Assam	+·023
Bengal	+·033
Bihar and Orissa	+·046
United Provinces	+·049
Punjab	+·046
North-West Frontier Province	+·031
Sind	+·039
Rajputana	+·044
Bombay	+·038
Central India	+·037
Central Provinces	+·038
Hyderabad	+·043
Mysore	+·045
Madras	+·046

The following table gives a comparison of the departure from normal of mean 8 hours pressure at 9 hill stations with the departure at an adjoining station in the plains.

TABLE 10.

HILL STATION.	Departure from normal pressure. A	PLAIN STATION.	Departure from normal pressure. B	Departure of pressure difference. B—A.
	"		"	"
Quetta	+·014	Jacobabad	+·036	+·022
Leh	+·041	Lahore	+·038	—·003
Murree	+·003	Peshawar	+·032	+·029
Simla	+·060	Ludhiana	+·059	—·001
Mukteswar	+·042	Bareilly	+·055	+·013
Darjiling	+·052	Dhubri	+·030	—·022
Mount Abu	+·039	Deesa	+·053	+·014
Pachmarhi	+·027	Khandwa	+·029	+·002
Kodaikanal	+·022	Madura	+·050	+·028

Temperature.

10. Table 11 gives the actual temperature and its departure from normal in the 33 sub-divisions, while table 12 gives only the departures from normal in the 15 chief political divisions.

TABLE 11.

Sub-division.	Actual temperature.				Departure from normal of		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
1. Bay Islands	87·3	75·5	81·4	11·9	—1·4	—0·9	—0·5
2. Lower Burma	92·5	72·5	82·5	19·9	+ 1·1	+0·7	+0·4
3. Upper Burma	94·8	65·3	80·0	29·5	+ 1·9	+1·4	+0·5
4. Assam	88·5	62·8	75·7	25·7	+ 4·9	+1·9	+3·0
5. Bengal	92·1	67·6	79·8	24·5	+ 2·9	+0·7	+2·2
6. Orissa	94·5	70·4	82·4	24·1	+ 1·2	0	+1·2
7. Chota-Nagpur	92·6	64·7	78·7	27·9	+ 1·7	+1·4	+0·3
8. Bihar	92·0	64·1	78·1	27·9	+ 1·7	+1·1	+0·6
9. United Provinces, East	91·6	62·2	76·9	29·5	+ 1·1	+1·2	—0·1
10. Do., do., West	89·2	60·9	75·0	28·4	+ 0·2	+1·2	—1·0
11. Punjab, East and North	82·6	57·1	69·8	25·5	— 0·3	+1·0	—1·3
12. Do., South-west	84·1	57·4	70·8	26·7	+ 0·3	+2·0	—1·7
13. Kashmir	50·5	31·5	41·0	19·0	—4·3	—1·6	—2·7
14. North-West Frontier Province	78·7	53·5	66·1	25·2	+ 0·1	+0·1	0
15. Baluchistan	73·0	45·2	59·1	27·9	+ 2·8	+0·3	+2·5
16. Sind	88·1	65·4	76·7	22·8	—0·2	+2·0	—2·2
17. Rajputana, West	89·9	62·2	76·1	27·7	—0·4	0	—0·4
18. Do., East	90·1	63·1	76·6	27·0	—0·2	+0·8	—1·0
19. Gujarat	91·2	66·1	78·7	25·2	—0·5	+0·2	—0·7
20. Central India, West	92·9	62·3	77·7	30·6	+ 1·3	+1·5	—0·2
21. Do. do., East	90·9	62·3	76·7	28·6	—0·3	+1·4	—1·7
22. Berar	97·8	70·0	83·9	27·8	+ 1·0	+1·7	—0·7
23. Central Provinces, West	93·7	65·1	79·4	28·6	—0·7	+1·0	—1·7
24. Do. do., East	93·1	66·0	79·6	27·1	—1·3	+0·5	—1·3
25. Konkan	85·9	71·5	78·7	14·3	—0·3	—1·1	+0·8
26. Bombay Deccan	97·2	65·5	81·4	31·7	+ 0·5	+0·1	+0·4
27. Hyderabad, North	99·1	70·5	84·8	28·6	+ 3·1	+2·7	+0·4
28. Do., South	98·9	72·2	85·6	26·7	+ 0·8	+0·5	+0·3
29. Mysore	92·9	66·6	79·7	26·2	+ 0·2	+0·5	—0·3
30. Malabar	89·7	76·1	82·9	13·7	+ 0·3	+0·2	+0·1
31. Madras, South-east	93·3	72·5	82·9	20·7	—0·4	0	—0·4
32. Do., Deccan	100·0	73·5	86·8	26·5	—1·1	—0·1	—1·0
33. Do., Coast, North	91·0	73·3	82·2	17·7	+ 0·1	+0·2	—0·1

TABLE 12.

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+1·4	+1·0	+1·2
Assam	+4·9	+1·9	+3·4
Bengal	+2·9	+0·7	+1·8
Bihar and Orissa	+1·5	+0·8	+1·2
United Provinces	+0·7	+1·2	+1·0
Punjab	—0·2	+1·2	+0·5
North-West Frontier Province	+0·1	+0·1	+0·1
Sind	—0·2	+2·0	+0·9
Rajputana	—0·3	+0·6	+0·1
Bombay	—0·1	0	0
Central India	+0·5	+1·5	+1·0
Central Provinces	—0·5	+1·1	+0·3
Hyderabad	+1·3	+1·0	+1·1
Mysore	+0·2	+0·5	+0·3
Madras	—0·2	+0·1	—0·1

Surface and upper air winds.

11. Surface.—The wind directions during the month do not show any systematic deviations from the normal.

The following table gives the mean wind velocity and steadiness with their departures from normal.

TABLE 13.

Division.	Hourly wind velocity.		Wind steadiness.	
	Actual.	Departure from normal.	Actual.	Departure from normal.
Burma	3·6	+0·4	43	— 6
Assam	2·1	—0·9	23	—15
Bengal	2·3	—0·9	32	— 4
Bihar and Orissa	3·2	—0·3	41	+ 5
United Provinces	2·3	—0·3	22	—12
Punjab	3·0	+0·5	24	0
North-West Frontier Province	1·3	—0·8	9	—20
Sind	4·2	—1·6	35	+ 5
Rajputana	3·2	—0·5	36	+15
Bombay	5·2	—0·5	45	+ 1
Central India	2·6	—0·9	19	—20
Central Provinces	3·3	+0·2	33	+ 9
Hyderabad	4·4	—0·3	39	+19
Mysore	4·2	+0·1	36	— 1
Madras	4·4	+0·1	53	+ 6

Upper air.—Table 14 gives the monthly mean velocitie, and direction at different heights above Agra, Simla, Lahore, Bangalore and Akyab.

TABLE 14.—*Mean velocity and direction of upper winds.*

Height above sea, kms.	Agra.				Simla.				Lahore.				Bangalore.				Akyab.			
	Height above sea 0·17 km.				Height above sea 2·13 kms.				Height above sea 0·21 km.				Height above sea 0·92 km.				Height above sea 0·01 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
0·18	29	2·9	0·5	308	...	...	...	...	...	...	...	—	...	...	...	...	...	...	...	...
0·22	...	...	...	...	...	...	...	...	27	1·2	0·2	31	...	...	...	...	...	...	...	...
0·5	29	7·3	4·1	340	...	...	...	...	27	6·5	3·1	333	...	...	...	...	32	6·8	6·0	328
1·0	29	7·1	4·3	317	...	...	...	..	27	5·9	2·8	319	...	...	...	...	32	6·5	6·1	338

Height above sea, kms.	Agra.				Simla.				Lahore.				Bangalore.				Akyab.			
	Height above sea 0·17 km.				Height above sea 2·13 kms.				Height above sea 0·21 km.				Height above sea 0·92 km.				Height above sea 0·01 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
1·5	29	7·2	5·2	296	...	...	...	...	27	6·0	2·2	296	26	5·2	4·1	129	32	6·0	5·4	345
2·0	29	8·1	6·2	281	...	...	...	...	27	6·9	2·7	287	26	6·7	5·9	91	30	6·8	5·9	342
2·13	...	...	...	...	22	2·2	0·4	75	...	...	...	...	...	...	...	...	...	...	...	...
2·3	...	...	...	...	22	5·0	1·5	55	...	...	...	...	...	...	...	...	...	...	...	...
2·5	29	9·7	8·1	272	22	5·4	0·8	34	27	7·9	3·9	287	25	7·0	6·2	77	29	7·8	6·2	336
3·0	28	11·1	9·8	274	22	6·7	1·3	166	27	8·6	5·1	277	25	8·2	7·2	62	28	8·6	6·9	328
3·5	28	12·6	10·9	271	22	7·6	1·2	189	27	9·4	5·9	274	24	7·8	6·2	61	25	8·1	6·5	318
4·0	28	14·2	12·6	267	20	6·8	1·6	290	27	10·3	6·8	265	24	7·1	4·6	70	24	9·9	8·6	300
4·5	28	15·4	13·9	266	19	7·6	4·0	286	26	11·4	8·6	261	24	6·8	3·4	81	22	10·5	9·6	281
5·0	24	16·3	15·1	265	17	8·3	5·8	285	25	12·5	9·3	267	23	6·4	2·1	65	20	11·7	10·6	282
5·5	22	19·0	17·7	267	14	10·6	8·1	284	25	13·7	10·6	267	21	6·4	2·4	11	16	12·6	11·7	276
6·0	21	20·9	18·9	266	13	12·7	11·1	275	24	14·8	12·7	271	20	7·8	2·7	358	16	13·6	12·7	276
6·5	20	23·9	23·2	273	10	13·9	12·0	281	24	16·7	14·8	271	20	8·8	2·9	360	15	15·0	13·9	273
7·0	20	28·3	27·6	274	10	15·1	13·3	277	23	18·8	17·0	269	20	9·9	2·7	328	10	16·9	15·8	267
7·5	18	30·4	29·5	274	7	17·1	15·1	264	19	19·7	18·2	270	19	10·5	4·1	297	9	18·1	17·1	266
8·0	12	31·2	30·1	278	7	18·6	17·5	265	18	21·7	20·4	269	15	10·3	5·8	285	5	17·3	16·9	259
8·5	8	30·8	29·6	273	5	19·7	18·0	263	16	25·3	23·9	272	12	9·2	7·2	296	1	9·0	9·0	270
9·0	5	27·5	26·0	277	5	21·2	19·7	266	11	24·5	23·5	277	9	9·6	8·3	297	...	...	...	...
9·5	3	21·5	20·6	290	5	17·7	16·8	264	9	25·7	24·9	273	9	11·2	9·9	294	...	...	...	...
10·0	2	19·3	18·8	277	2	15·7	13·7	276	7	25·4	24·4	271	8	13·6	12·5	278	...	...	...	...
10·5	1	21·0	21·0	260	2	17·7	16·5	273	6	28·8	27·3	269	6	14·2	13·2	266	...	...	...	...
11·0	1	20·0	20·0	260	1	10·0	10·0	300	3	21·8	19·7	265	4	17·6	17·0	258	...	...	...	...
11·5	...	...	...	...	1	17·0	17·0	295	3	24·3	22·3	265	2	10·3	9·8	239	...	...	...	...
12·0	...	...	...	...	1	20·0	20·0	290	3	26·2	24·5	271	2	10·7	9·7	248	...	...	...	...
12·5	...	...	...	...	1	23·0	23·0	300	3	24·8	22·8	275	2	10·7	9·5	259	...	...	...	...
13·0	...	...	...	...	1	24·0	24·0	300	3	24·5	22·0	275	2	12·5	11·8	269	...	...	...	...
13·5	...	...	...	...	...	...	...	...	1	32·5	32·5	315	2	12·0	11·9	270	...	...	...	...
14·0	...	...	...	...	...	...	...	...	1	36·0	36·0	315	2	12·3	11·8	271	...	...	...	...
14·5	...	...	...	...	...	...	...	...	...	...	...	...	2	12·5	11·6	265	...	...	...	...
15·0	...	...	...	...	...	...	...	...	...	...	...	...	2	14·5	13·7	272	...	...	...	...

N—Number of flights.
V—Velocity of wind, regardless of direction, metres per second.
v—Velocity of Resultant Wind, taking account of direction, metres per second.
L—Direction of Resultant Wind; North Wind=0° or 360°, East Wind=90°.

Humidity and cloud.

12. The following table gives the mean humidity, vapour tension and cloud amount at 8 hours with their departures from normal.

TABLE 15.

Division.	Hygrometry; 8 hrs.				Cloud.	
	Mean humidity.	Departure from normal.	Mean vapour tension in inches of mercury.	Departure from normal in inches of mercury.	Mean cloud amount at 8 hrs.	Departure from normal.
	%					
Burma . . .	72	— 3	·656	—·005	2·8	+0·4
Assam . . .	73	— 9	·527	—·013	2·9	—1·4
Bengal . .	69	— 8	·597	—·047	2·8	—0·4
Bihar and Orissa .	55	— 6	·465	—·027	2·5	+0·4
United Provinces .	48	— 6	·346	—·028	2·0	—0·1
Punjab . .	58	— 4	·344	—·012	3·1	0
North-West Frontier Province.	73	+ 5	·365	+·006	1·9	—2·1
Sind . . .	55	+ 1	·424	+·018	2·4	+0·1
Rajputana . .	42	+ 2	·303	—·014	2·6	+0·3
Bombay . .	59	+ 1	·506	—·011	1·6	0
Central India .	43	+ 1	·351	+·029	2·3	+0·3
Central Provinces .	43	+ 1	·379	+·027	1·6	0
Hyderabad . .	45	— 4	·452	—·027	1·8	+0·5
Mysore . .	62	— 4	·535	—·032	1·7	0
Madras . .	72	— 1	·735	—·018	2·0	—0·5

Rainfall.

13. Rainfall was in excess in the Central Provinces East, Mysore and Madras, and was normal or in defect nearly everywhere else. It was in defect also in Persia.

TABLE 16.

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
1. Bay Islands	0	0·9	0	0·63	—0·63	—100
2. Lower Burma	0·1	0·8	0·10	0·63	—0·53	— 84
3. Upper Burma	0·1	0·9	0·03	0·41	—0·38	— 93
4. Assam	2·1	6·3	0·90	3·85	—2·95	— 77
5. Bengal	0·6	2·6	0·26	1·74	—1·48	— 85
6. Orissa	1·4	1·9	0·72	1·04	—0·32	— 31
7. Chota Nagpur	1·9	1·9	0·92	0·93	—0·01	— 1
8. Bihar	0·5	1·2	0·16	0·56	—0·40	— 71
9. United Provinces, East	0·3	0·8	0·11	0·34	—0·23	— 68
10. Do. do., West	0·6	1·3	0·26	0·63	—0·37	— 59
11. Punjab, East and North	1·4	1·9	0·52	0·91	—0·39	— 43

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
12. Punjab, South-west	0·7	1·6	0·44	0·63	−0·19	− 30
13. Kashmir	5·7	6·0	4·34	4·16	+0·18	+ 4
14. North-West Frontier Province	4·1	4·0	1·85	2·04	−0·19	− 9
15. Baluchistan	1·6	3·3	0·55	1·41	−0·86	− 61
16. Sind	0	0·6	0	0·24	−0·24	−100
17. Rajputana, West	0·2	0·6	0·04	0·23	−0·19	− 83
18. Do., East	0·1	0·7	0·02	0·27	−0·25	− 93
19. Gujarat	0	0·2	0	0·08	−0·08	−100
20. Central India, West	0·1	0·5	0·03	0·22	−0·19	− 86
21. Do., East	0·3	1·0	0·12	0·40	−0·28	− 70
22. Berar	0·3	0·7	0·17	0·35	−0·18	− 51
23. Central Provinces, West	0·9	1·2	0·40	0·56	−0·16	− 29
24. Do., East	2·3	1·2	1·01	0·57	+0·44	+ 77
25. Konkan	0	0·1	0	0·06	−0·06	−100
26. Bombay Deccan	0·1	0·3	0·05	0·15	−0·10	− 67
27. Hyderabad, North	0·8	0·7	0·34	0·37	−0·03	− 8
28. Do., South	0·4	0·7	0·18	0·40	−0·22	− 55
29. Mysore	0·6	0·6	0·36	0·31	+0·05	+ 16
30. Malabar	2·0	1·9	1·33	1·16	+0·17	+ 15
31. Madras, South-east	1·0	0·8	0·70	0·45	+0·25	+ 56
32. Do., Deccan	0·5	0·3	0·46	0·14	+0·32	+229
33. Do. Coast, North	0·9	0·8	0·73	0·46	+0·27	+ 59

TABLE 17.

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Burma	0·06	0·49	−0·43	−88
Assam	0·90	3·85	−2·95	−77
Bengal	0·26	1·74	−1·48	−85
Bihar and Orissa	0·48	0·76	−0·28	−37
United Provinces	0·19	0·50	−0·31	−62
Punjab	0·50	0·84	−0·34	−40
North-West Frontier Province	1·85	2·04	−0·19	− 9

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Sind	0	0·24	−0·24	−100
Rajputana	0·03	0·26	−0·23	− 88
Bombay	0·03	0·11	−0·08	− 73
Central India	0·06	0·27	−0·21	− 78
Central Provinces	0·60	0·51	+0·09	+ 18
Hyderabad	0·26	0·38	−0·12	− 32
Mysore	0·36	0·31	+0·05	+ 16
Madras	0·81	0·56	+0·25	+ 45
Mean of India	0·34	0·67	−0·33	−49

Snowfall.

I.—CENTRAL ASIA.

14. *Kashgar.*—No snow fell.

II.—PERSIA.

Meshed.—Three quarters of an inch fell on the 3rd.

III.—AFGHANISTAN.

Kabul.—About 1½ feet fell at Kabul and its suburbs on the first.

IV.—THE NORTH-WEST FRONTIER PROVINCE.

(*a*) *Wano.*—Actual falls during the month.

TABLE 18.

Locality.	Height.	Depth of Snowfall on			
		9th.	11th.	17th.	24th.
	′	′ ″	′ ″	′ ″	′ ″
Marwatti . . .	11,000	0 2	0 2	0 5	0 5
Pirghal . . .	11,000	0 2	0 2	0 5	0 5
Jani Mela . . .	9,000	0 1	...	0 4	0 4
Bosh	11,000	...	...	0 5	0 5
Drenashtar . . .	11,000	...	...	0 5	0 5
Kundighar . . .	9,000	...	...	0 3	0 2
Kot Kun . . .	7,900	...	...	0 1½	...

(*b*) *Kohat.*—An inch of snow fell on the Samana Range on the 9th, half an inch on the 12th, and an inch on the 21st. This is much below the average.

(*c*) *Hazara.*—Snowfall of the month was as follows:—

TABLE 19.

Locality.	Height.	Total depth of snowfall.	
		Feet.	Inches.
Naran	8,000	25	9
Paluderan	7,300	17	7
Kagan	6,600	8	6
Jared	5,000	0	3
Malkandi	4,500	0	2
Sundigali	7,000	1	0
Jadhba	6,500	0	8
Thandiani	8,800	1	4

In the Kagan valley the snowline came down to 4,000 feet on the 23rd.

V.—KASHMIR.

(*a*) *Srinagar.*—There were two light to moderate falls in the main valley.

(*b*) *Skardu.*—Snow fell on 6 days at the station and on 12 days on the surrounding mountains, the total falls being about a quarter of a foot and eight feet respectively. The depth of accumulations at the end of the month was 4 or 5 feet on the higher mountains and about a foot on the lower ranges; there was no snow lying at the station. Both the actual falls and the accumulations were well above normal.

(*c*) *Dras.*—Snow fell on 13 days to a total depth of about 11 feet.

(*d*) *Kargil.*—Snow fell on 10 days to a total depth of about 20 inches on the ground and over 4 feet on the surrounding mountains.

VI. THE PUNJAB.

(*a*) *Dalhousie and Bhattiyat Forest Ranges.*—No snow fell.

Chamba Forest Range.—Snow fell on the 12th and 18th on higher elevations.

Bharmaur Forest Range.—Snow fell on the 17th, 18th, 19th and 30th; the total fall was 16 inches.

Bhandal Forest Range.—Snow fell on the 1st, 2nd and 12th down to 6,500 feet, and on the 22nd down to 6,000 feet; the total fall at Langera was 16 inches.

Tissa Forest Range.—Snow fell on 6 days in the range, the total amounts being 4″ at Chhatri, 20″ at Bara, 8″ at Alwas and 5″ at Khangoo.

(*b*) *Kulu.*—A foot of snow fell at 10,000 feet towards the end of the month, and the fall reached down to 8,500 feet.

(*c*) *Kilba (Simla hills).*—10 inches fell at Kilba on the first, and there were light falls at 9,000 feet on 6 other days. The accumulations at the end of the month were as follows:—

Chitkul pass	.	25 feet.
Rupan „	.	20 „
Brua „	.	20 „
Shatul „	.	20 „
Harang „	.	10 „

Snow had melted up to 7,000 feet in shady aspects and up to 9,000 feet on sunny aspects.

VII.—THE UNITED PROVINCES.

(*a*) *Garhwal.*—Snow fell frequently during the month, and the total fall of the cold weather was reported to be the heaviest in living memory, probably the heaviest for at least 80 years.

(*b*) *Almora.*—Actual falls during the month.

TABLE 20.

Locality.	Depth.	Distance below perpetual snowline.
	Feet.	Miles.
Malla Darma	7	4¾
Malla Johar	5	½
Chaudas	5	1¾

Accumulations at the end of the month.

TABLE 21.

Name of pass or peak.	Reported.	Normal.
	Feet.	Feet.
Nuwe pass	15	31
Binkaru pass	9	20
Untadhura	8	15
Ralamdhura	8	11⅓
Milamdhura	1¾	7⅓
Bagadwar	½	...

VIII.—EASTERN HIMALAYAS.

No snow fell at or in the vicinity of Gangtok; 4¼ feet fell at Yatung.

North-East Frontier District.—March was an extraordinarily dry month, but the previous accumulation lay through the month down to 10,000 feet.

North-Lakhimpur.—The winter snowfall was far less than usual.

Summary.

15. The month's fall in Afghanistan, the North-West-Frontier Province and the western and central Himalayas was normal or above it.

S. SITARAMAYYA,

Scientific Assistant

Table A.—Abstract of observations taken at 10 hrs. and 16 hrs. at 12 stations in India, etc., in March, 1919.

Table

Abstract of observations taken at 10 hrs. and 16 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hrs.	Mean of 16 hrs.	Mean daily range.	Mean of daily mean pressures.	Departure from normal.	Mean reduced to sea-level and to gravity at 45° Lat.	Temperature of air. Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Temperature, wet-bulb. Mean minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of three previous columns.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal.																					
5	Calcutta	21	29·959	29·825	·134	29·886	+·030	29·854	94·7	70·0	24·7	102·9	60·6	42·3	85·3	93·3	81·4	+2·1	66·2	71·3	70·5	69·4
	VI.—Punjab.																					
11	Lahore	702	29·259	29·173	·086	29·210	+·042	29·892	82·8	56·8	26·0	88·6	49·3	39·5	72·9	81·7	69·1	+0·1	52·6	61·3	64·1	59·4
	IX.—Rajputana.																					
18	Jaipur	1,431	28·576	28·466	·110	28·513	+·060	29·885	89·1	61·8	27·3	95·6	53·2	42·4	81·3	87·5	75·1	+0·2	51·7	59·9	61·1	57·6
	X.—Bombay.																					
25	Bombay	37	29·975	29·852	·123	29·921	+·044	29·899	85·1	72·9	12·2	91·0	70·7	20·3	78·9	81·1	77·4	−0·6	68·2	72·7	73·1	71·3
	XIV.—Mysore.																					
29	Bangalore	3,021	27·049	26·913	·136	26·981	+·049	29·775	92·0	64·9	27·1	95·6	57·5	38·1	82·3	89·7	77·4	+0·7	58·5	64·7	64·1	62·4
	XV.—Madras.																					
31	Trivandrum	198	29·809	29·683	·126	29·750		29·826	88·1	76·2	12·9	90·9	71·5	19·4	84·6	87·4	81·1			75·3	77·6	
	Pudukkottai	318	29·732	29·561	·171	29·647		29·831	96·0	73·1	22·9	99·9	67·1	32·8	85·1	93·0	84·5			73·1	73·1	
	Madras	22	30·005	29·879	·126	29·942	+·037	29·895	88·9	72·0	16·9	94·9	68·4	26·5	85·8	85·8	78·8	−0·7	70·9	75·9	76·0	74·3
	Hill stations, excluding Kashmir and Baluchistan.																					
	Katmandu	4,388	25·701	25·637	·064	25·666	+·055	25·620	79·6	46·2	33·4	85·4	40·1	45·3	63·7	73·2	59·2	+3·4	43·2	55·0	58·1	51·4
	Kodaikanal	7,698	22·915	22·849	·066	22·882		22·817	69·1	49·5	19·6	72·6	42·3	29·3	65·0	69·4	57·4		42·1	50·5	52·7	49·1
	Extra India.																					
	Seychelles	15	30·001	29·899	·102	29·955	+·050†	29·893	85·1	79·5	5·6	87·1	75·6	11·5	82·3	84·2	81·3	+2·4†	72·9	78·0	78·3	74·6
	Mauritius	181				29·720	−·048	29·785	84·7	73·4	11·3	88·5	65·1	23·4			78·6	+1·1				

N. B.—Elevations in italics indicate barometric determinations.

Note.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,000 feet.

† Departure from old normal.

A.

at 12 stations in India, etc., in March, 1919.

Vapour tension in inches of mercury.					Humidity.					Cloud.				Wind direction.											Wind steadiness.		Wind velocity.		Rainfall.		Station.	Number of sub-division.
														Total number of 10 hrs. and 16 hrs. winds from																		
From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal. ‡	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns.	Departure from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																															III.—Bengal.	
·598	·581	·443	·581	−·052	82	48	29	58	− 9	2·0	2·1	2·2	0	0	2	3	0	0	4	24	14	15	S 81° W	S 60° W	64	44	82	86	0·51	0·51	Calcutta.	5
																															VI.—Punjab.	
·344	·389	·364	·377	+ ·017	75	49	34	55	+ 1	3·2	3·2	3·2	−0·3	8	5	2	7	12	1	1	4	22	N 15° W	N 12° W	19	31	48	5	0·53	0·35	Lahore.	11
																															IX.—Rajputana.	
·261	·255	·212	·248	−·057	48	24	16	32	− 7	3·0	4·5	3·7	+0·6	6	6	7	7	3	3	6	11	13	N 44° W	N 46° W	24	30	65	79	0	0	Jaipur.	18
																															X.—Bombay.	
·625	·720	·705	·710	−·027	77	73	66	76	+ 1	1·5	0·7	1·1	−0·2	0	2	3	9	4	2	2	10	30	N 43° W	N 36° W	43	46	157	191	0	0	Bombay.	25
																															XIV.—Mysore.	
·422	·411	·303	·388	−·059	68	38	22	45	− 5	0·6	2·3	1·5		1	0	5	18	19	9	8	2	0	S 48° E	S 36° E	60	46	132	86	0·10	0·10	Bangalore.	29
																															XV.—Madras.	
	·751	·816				63	63			4·7	5·2	4·9		3	3	9	0		1	26	7	12	S 85° W		43		88		0·24	0·16	Trivandrum.	31
	·652	·548				54	36			3·1	1·9	2·5		15	0	1	12	16	15	2	1	0	S 38° E		56		74		0·08	0·08	Pudukkottai.	
·741	·766	·766	·782	−·020	94	63	62	77	− 1	2·4	0·7	1·5	−0·7	0	0	0	3	43	9	6	0	1	S 26° E	S 44° E	61	81	85	109	1·96	1·56	Madras.
																															Hill stations, excluding Kashmir and Baluchistan.	
·246	·309	·231	·260	−·041	79	49	28	53	− 8	3·5	4·3	3·9	+0·6	0	1	0	32	0	1	0	28	0	E	N 82° W	13	47	16	23	0·17	0·12	Katmandu.
·195	·217	·313	·242		59	37	25	50		1·1	3·7	2·4		0	15	14	9	14	5	0	1	4	N 62° E		45		202		1·01	0·41	Kodaikanal.
																															Extra India.	
·716	·893	·915	·868	+·007	71	79	78	80	− 3	5·9	5·8	5·9	−0·8†	0	17	24	4	0	0	1	1	15	N 11° E	N 17° W	72	39	88	86	12·86	2·88	Seychelles.
			·780	+·015				78	− 2			6·3	+0·3										S 51° E	S 76° E			117	130	7·98	1·75	Mauritius.

† Departure from old normal.

Table B.—Abstract of observations taken at 8 hrs. at 210 stations in India, etc., in March 1919.

(1) Provincial means.

(2) Data of stations.

(1) Provincial means based on the material in Table B (2) except that the statement of rainfall depends on the complete data of about 2,300 stations.

Division.	Pressure departure from normal.	Temperature of air.							Wind.		Hygrometry.				Cloud.		Rainfall.		
		Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Departure of velocity from normal.	Departure of steadiness from normal.	Mean humidity.	Departure from normal.	Mean vapour tension.	Departure from normal.	Mean cloud amount.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.
	"	°	°	°	°	°	°	°					"	"			"	"	"
Burma	+·022	93·4	+1·4	69·6	+1·0	81·5	+1·2	23·9	+0·4	− 6	72	− 3	·656	−·005	2·8	+0·4	0·06	0·49	−0·43
Assam	+·023	88·5	+4·9	62·8	+1·9	75·7	+3·4	25·7	−0·9	−15	73	− 9	·527	−·013	2·9	−1·4	0·90	3·85	−2·95
Bengal	+·033	92·1	+2·9	67·6	+0·7	79·8	+1·8	24·5	−0·9	− 4	69	− 8	·597	−·047	2·8	−0·4	0·26	1·74	−1·48
Bihar and Orissa	+·046	92·9	+1·5	66·1	+0·8	79·5	+1·2	26·8	−0·3	+ 5	55	− 6	·465	−·027	2·5	+0·4	0·48	0·76	−0·28
United Provinces of Agra and Oudh	+·049	90·4	+0·7	61·5	+1·2	67·0	+1·0	28·9	−0·3	−12	48	− 6	·346	−·028	2·0	−0·1	0·19	0·50	−0·31
Punjab	+·046	83·1	−0·2	57·2	+1·2	70·1	+0·5	25·9	+0·5	0	58	− 4	·344	−·012	3·1	0	0·50	0·84	−0·34
North-West Frontier Province	+·031	78·7	+0·1	53·5	+0·1	66·1	+0·1	25·2	−0·8	−20	73	+ 5	·365	+·006	1·9	−2·1	1·85	2·04	−0·19
Sind	+·039	88·1	−0·2	65·4	+2·0	76·7	+0·9	22·8	−1·6	+ 5	55	+ 1	·424	+·018	2·4	+0·1	0	0·24	−0·24
Rajputana	+·044	90·0	−0·3	62·8	+0·6	76·4	+0·1	27·3	−0·5	+15	42	+ 2	·303	−·014	2·6	+0·3	0·03	0·26	−0·23
Bombay	+·038	92·3	−0·1	68·8	0	79·6	0	25·5	−0·5	+ 1	59	+ 1	·506	−·011	1·6	0	0·03	0·11	−0·08
Central India	+·037	91·9	+0·5	62·3	+1·5	77·1	+1·0	29·6	−0·9	−20	43	+ 1	·351	+·029	2·3	+0·3	0·06	0·27	−0·21
Central Provinces	+·038	94·5	−0·5	66·5	+1·1	80·5	+0·3	27·9	+0·2	+ 9	43	+ 1	·379	+·027	1·6	0	0·60	0·51	+0·09
Hyderabad	+·043	99·0	+1·3	71·7	+1·0	85·3	+1·1	27·3	−0·3	+19	45	− 4	·452	−·027	1·8	+0·5	0·26	0·38	−0·12
Mysore	+·045	92·9	+0·2	66·6	+0·5	79·7	+0·3	26·2	+0·1	− 1	62	− 4	·535	−·032	1·7	0	0·36	0·31	+0·05
Madras	+·046	92·9	−0·2	73·5	+0·1	83·2	−0·1	19·5	+0·1	+ 6	72	− 1	·735	−·018	2·0	−0·5	0·81	0·56	+0·25

Table

(2) Abstract of observations taken at 8 hrs. at 210

Number of sub-division	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	I.—Burma.																					
2	Victoria Point	147	29·832		29·910	29·869	16th	29·774	31st	81·7	76·6	90·9		77·2		84·0		13·7	94·9	21st	74·8	22nd
	Mergui	66	29·922	+·028	29·917	29·969	20th	29·855	31st	80·2	76·7	93·2	+2·2	74·7	+2·1	84·0	+2·1	18·5	96·7	30th	72·3	21st & 29th.
	Tavoy	19	29·963	+·006	29·914	30·010	4th	29·903	31st	77·6	73·4	95·7	+2·6	71·7	+1·1	83·7	+1·9	24·0	99·0	22nd	66·3	2nd
	Moulmein	94	29·904	+·023	29·920	29·953	15th	29·838	31st	79·6	73·7	95·3	+1·2	73·1	+0·2	84·2	+0·7	22·2	97·0	5th	66·6	2nd
	Rangoon	18	29·958	+·025	29·914	30·012	4th	29·879	31st	74·5	72·0	96·2	+0·1	71·3	+0·1	83·8	+0·1	24·9	100·1	25th & 31st.	66·1	7th
	Bassein	27	29·952	+·027	29·916	30·002	20th	29·864	31st	77·7	74·1	95·4	+1·3	71·8	+0·8	83·5	+1·1	23·6	101·3	28th	64·2	1st
	Diamond Island	41	29·928	+·013	29·904	29·991	16th	29·846	31st	80·0	74·5	84·4	−0·7	76·7	+1·3	80·5	+0·3	7·7	87·2	28th	73·6	2nd
	Toungoo	164	29·8[illegible]2	+·031	29·909	29·856	4th	29·708	31st	77·4	71·9	98·3	+0·9	69·3	+0·8	83·8	+0·9	29·0	103·5	28th	57·7	3rd
	Kyaukpyu	18	29·954		29·912	30·020	4th	29·856	31st	77·8	74·0	85·7		72·1		78·9		13·6	90·9	30th	65·2	8th
	Akyab	20	29·954	+·020	29·915	30·013	4th & 5th.	29·869	31st	74·5	70·7	89·7	+1·1	67·4	−1·3	78·6	−0·1	22·3	96·6	30th	57·6	6th
	Minbu	*165*	29·777	+·014	29·8[illegible]	29·840	4th	29·666	31st	77·2	6[illegible]·4	98·8	+0·3	70·5	+1·0	84·6	+0·7	28·3	103·5	29th	60·8	4th
	Yamethin	644	29·3[illegible]1	+·029	29·900	29·356	19th	29·207	31st	76·8	67·4	98·8	+0·7	69·7	+1·2	84·2	+0·9	29·1	103·7	19th & 28th.	58·6	3rd
	Mandalay (d)	250	29·695	+·023	29·895	29·766	1st	29·587	31st	78·9	65·9	100·6	+2·9	69·9	+1·6	85·3	+2·3	30·7	106·7	15th	61·1	1st
	Monywa	*280*	29·[illegible]81	+·026	29·914	29·762	1st	29·5[illegible]9	31st	76·2	64·7	99·3	+3·6	70·0	+3·0	84·6	+3·3	29·3	106·0	17th	61·1	8th
	Lashio	*2,820*	27·109	+·020	27·105	27·215	19th	27·053	31st	64·6	57·3	86·4	+0·4	56·5	+0·8	71·4	+0·6	29·9	91·7	17th	49·2	1st & 7th.
	Bhamo	*361*	29·584	+·033	29·909	29·667	4th	29·[illegible]37	31st	67·7	63·3	91·4	+3·3	55·6	−1·0?	75·0	+1·[illegible]?	32·8	99·6	15th	48·8	1st
	Myitkyina	458	29·4[illegible]2	+·012	29·916	29·584	4th	29·310	31st	68·4	62·3	88·5	+3·6	61·9	+1·0	75·2	+2·3	26·6	97·4	15th	52·2	8th
	II.—Assam.																					
4	Dibrugarh	353	29·608	+·013	29·934	29·714	7th	29·419	14th	67·3	63·5	83·8	+6·1	61·9	+1·7	72·9	+3·9	21·9	90·5	15th	58·7	7th
	Sibsagar	333	29·630	+·010	29·931	29·733	7th	29·428	14th	65·2	62·5	83·9	+5·1	61·9	+2·2	72·9	+3·7	22·0	93·2	15th	55·6	7th
	Tezpur	252	29·723	+·038	29·942	29·841	19th	29·541	14th	67·7	61·7	87·7	+5·1	63·7	+2·1	75·7	+3·6	24·0	95·2	15th	56·9	1st
	Gauhati	196	29·767	+·017	29·924	29·991	19th	29·584	14th	70·7	63·6	89·8	+4·3	61·1	+2·1	75·5	+3·2	28·7	97·6	15th	54·6	6th
	Dhubri	115	29·834	+·030	29·906	29·981	19th	29·640	31st	71·6	63·2	88·7	+2·6	64·6	+1·9	76·6	+2·3	24·1	97·7	15th	57·3	5th
	Silchar	104	29·887	+·031	29·946	29·936	4th	29·773	31st	72·1	65·7	91·8	+5·7	64·4	+1·3	78·1	+3·5	27·4	97·6	28th	56·8	7th
	Srimangal	66	29·918		29·934	30·005	19th	29·761	31st	72·9	69·1	94·1	+5·5	62·2	+1·7	78·1	+3·6	31·9	100·9	25th	52·2	7th
	III.—Bengal.																					
5	Cox's Bazar	36	29·941		29·922	30·009	4th	29·848	31st	74·6	71·9	87·7		67·1		77·4		20·6	94·1	27th	58·2	6th
	Chittagong	87	29·891	+·029	29·925	29·965	19th	29·708	31st	74·8	70·9	91·2	+4·4	68·6	+1·2	79·9	+2·8	22·6	98·8	27th	59·9	6th
	Noakhali	43	29·938	+·040	29·928	30·011	19th	29·811	31st	77·4	73·1	89·8	+3·4	71·1	+3·6?	80·5	+3·6?	18·7	97·2	28th	62·0	5th
	Barisal	12	29·954	+·031	29·9[illegible]	30·040	19th	29·833	31st	76·4	71·2	92·3	+3·1	70·0	+1·2	81·2	+2·1	22·3	97·9	31st	60·1	5th
	Narayanganj	26	29·932	+·026	29·908	30·034	19th	29·798	31st	75·7	69·8	93·4	+3·9	69·0	+0·8	81·2	+2·8	24·4	98·9	31st	59·2	5th

(d) Mean of 30 days.

N. B.—Elevations in italics indicate barometrical determinations.

B.

stations in India, etc., in March, 1919.

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 31st March 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															I.—Burma.
2	0	25	4	0	0	0	0	0	N 50° E		5·9			89		79		·840		2·4		3	+1·3	1·89	0·97	+ 0·92	3·20	3·68	− 0·48	1·45	Victoria Point.
10	0	0	10	9	1	1	0	0	S 63° E	N 27° W	4·4	1·6	+2·8	59	+ 6	85	+ 2	·874	+·037	2·5	−0·4	2	−2·3	1·43	2·89	− 1·46	8·64	6·38	+ 2·26	1·00	Mergui.
26	0	5	0	0	0	0	0	0	N 45° E	N 34° W	1·9	1·2	+0·7	13	− 5	81	− 5	·764	−·011	2·3	+1·2	0	−2·1	0	1·52	− 1·52	1·18	2·46	− 1·28	0	Tavoy.
5	0	6	13	6	1	0	0	0	S 87° E	S 53° E	3·0	2·4	+0·6	89	+ 4	74	− 6	·755	−·024	0·5	−1·6	0	−0·5	0	0·42	− 0·42	0·45	1·08	− 0·63	0	Moulmein.
3	4	4	2	1	6	3	4	4	N 77° W	S 64° W	4·1	3·3	+0·8	13	−58	88	+ 3	·750	+·010	6·6	+4·2	0	−0·6	0	0·31	− 0·31	0·60	1·18	− 0·58	0	Rangoon.
6	4	0	0	0	0	4	3	14	N 55° W	N 55° W	4·3	4·1	+0·2	62	− 6	84	− 1	·800	+·020	3·0	+1·2	0	−0·2	0	0·16	− 0·16	0·23	0·99	− 0·76	0	Bassein.
0	5	1	0	0	0	0	1	23	N 37° W	N 30° W	11·5	6·8	+4·7	92	+19	77	0	·779	+·008	3·1	+0·5	0	−0·[illegible]	0	0·20	− 0·20	0·76	1·42	− 0·66	0	Diamond Island.
4	5	5	1	11	5	0	0	0	S 71° E	S 51° E	2·2	2·3	−0·1	43	0	76	+ 2	·718	+·011	4·1	+2·2	0	−0·5	0	0·35	− 0·35	0·85	1·19	− 0·34	0	Toungoo.
27	2	0	0	0	0	0	0	2	N 23° W		1·4			10		82		·793		4·8		0	−0·6	0	0·60	− 0·60	0·23	1·10	− 0·87	0	Kyaukpyu.
2	13	13	2	0	0	0	0	1	N 24° E	N 32° E	4·1	2·7	+1·4	82	+ 7	82	− 2	·705	−·004	3·5	+1·1	0	−0·8	0	0·52	− 0·52	4·00	1·42	+ 2·58	0	Akyab.
13	2	0	0	5	2	3	0	6	S 63° W	S 63° E	2·0	5·4	−3·4	10	−13	54	− 3	·509	−·011	2·1	+1·1	0	−0·4	0	0·35	− 0·35	0·66	0·98	− 0·32	0	Minbu.
																59	− 3	·548	−·009	0·5	−0·4	0	−0·5	0	0·40	− 0·40	0·33	1·23	− 0·90	0	Yamethin.
24	0	0	0	2	4	0	0	0	S 15° E	S 8° W	1·7*	3·1	−1·4	17	− 9	47	− 7	·462	−·039	3·7	+2·3*	0	−0·6	0·01	0·22	− 0·21	0·46	0·69	− 0·23	0·01	Mandalay.
3	11	0	0	4	0	0	0	12	N 18° W		1·8			59		51	− 8	·482	−·034	0·8	−0·9	1	+0·1	0·28	0·42	− 0·14	0·73	0·86	− 0·13	0·28	Monywa.
17	0	0	1	0	1	6	2	4	S 75° W		2·2			27		63	− 7	·380	−·031	0·1	−3·0	0	−1·3	0	0·62	− 0·62	1·65	2·17	− 0·52	0	Lashio.
26	2	2	0	0	0	0	0	0	N 28° E	N 2° W	1·0	2·4	−1·4	17	−12	78	− 3	·528	+·006	2·7	−0·2	0	−2·0	0	0·73	− 0·73	0·49	2·33	− 1·84	0	Bhamo.
19	5	6	1	0	0	0	0	0	N 30° E		4·0			33		70	− 9	·481	−·034	4·6	+1·0	1	−2·2	0·10	0·95	− 0·85	1·10	2·72	− 1·62	0·10	Myitkyina.
																															II.—Assam.
15	0	2	9	3	0	9	0	0	N 87° E		0·6			46		80	− 6	·538	+·030	2·9	−2·7	2	−6·7	0·51	4·23	− 3·72	3·60	8·52	− 5·52	0·21	Dibrugarh.
17	3	3	3	0	0	0	0	0	N 45° E	N 51° E	1·5	2·2	−0·7	43	− 7	86	− 6	·532	−·015	5·5	−0·5	3	−6·3	4·34	4·75	− 0·41	5·92	8·61	− 2·69	3·98	Sibsagar.
6	0	12	11	1	0	0	1	0	N 68° E		1·7			69		70	−11	·472	−·034	1·9	−1·2	2	−3·0	0·77	2·01	− 1·24	1·00	4·03	− 3·03	0·34	Tezpur.
24	0	2	2	0	0	0	1	1	N 52° E		1·1			10		68	−11	·497	−·005	3·4	−1·3	1	−3·5	0·25	2·24	− 1·99	0·95	4·22	− 3·27	0·20	Gauhati.
2	0	6	10	1	0	9	1	1	S 73° W	N 72° E	4·5	4·6	−0·1	23	−24	62	−13	·468	−·052	2·6	+0·2	1	−1·6	0·31	1·88	− 1·57	1·17	3·05	− 1·88	0·75	Dhubri.
22	0	0	0	0	0	0	0	0	Calm.	S 83° E	0·4	2·2	−1·8	(a)		70	−11	·554	−·030	1·3	−2·8	3	−6·5	0·73	8·03	− 7·30	1·11	11·47	−10·36	0·42	Silchar.
																78	− 5	·631	+·014	2·6		2	−3·1	0·63	3·91	− 3·28	0·97	6·51	− 5·54	0·42	Srimangal.
																															III.—Bengal.
18	0	0	5	1	0	0	0	1	N 85° E		2·4			23		88		·754		2·2		0	−2·1	0	1·66	− 1·66	0·39	2·91	− 2·52	0*	Cox's Bazar.
10	2	7	9	2	0	0	0	1	N 67° E	N 37° E	1·8	4·0	−2·2	53	− 1	82	0	·710	+·029	2·3	−0·9	0	−2·9	0	2·66	− 2·66	0·65	4·81	− 4·16	0	Chittagong.
8	0	2	2	11	1	3	1	2	S 41° E		2·3			29		81	− 3	·757	+·017	3·4	+0·3	0	−3·5	0·04	2·67	− 2·63	1·40	4·53	− 3·13	0·04	Noakhali.
12	1	0	0	0	2	5	5	5	S 85° W	S 18° W	1·4	2·1	−1·2	49	+27	77	− 7	·696	−·045	5·4	+2·0	1	−2·7	0·31	2·28	− 1·95	1·69	4·28	− 2·59	0·21	Barisal.
7	0	0	1	2	8	4	7	4	S 54° W	S 13° W	1·6	3·7	−1·9	49	+ 1	74	− 9	·655	−·032	3·8	−0·9	1	−2·5	0·48	2·69	− 2·23	0·92	4·37	− 3·65	0·16	Narayanganj.

(a) Indeterminate.

* Mean of 29 days.

Table

(2) Abstract of observations taken at 8 hrs. at 210

Number of Sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to standard gravity.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal—*concld.*																					
	Mymensingh	63	29·900	+·034	29·915	30·010	19th	29·747	31st	72·4	65·3	91·3	+4·1	65·7	+1·3	78·5	+2·7	25·6	98·1	25th	58·2	5th
	Bogra	75	29·872	+·031	29·[illegible]	30·002	19th	29·[illegible]	31st	71·0	61·2	93·9	+3·7	64·5	+1·3	79·2	+2·5	29·4	101·0	15th	54·3	1st
	Dinajpur	123	29·812	+·029	29·[illegible]	29·[illegible]	19th	29·[illegible]	[illegible]	70·0	60·7	92·[illegible]	+3·4	61·7	+1·2	77·0	+2·3	30·7	100·8	14th	52·5	1st
	Jalpaiguri	283	29·667	+·037	29·918	29·735	19th	29·[illegible]	31st	68·6	60·7	88·3	+3·7	58·7	−1·0	72·9	+1·3	29·6	98·9	14th	53·0	5th
	Saugor Island	10	29·952	+·035	29·[illegible]	30·015	19th	[illegible]	31st	[illegible]	74·7	88·0	+1·0	74·8	+0·2	81·4	+0·6	13·2	99·0	31st	67·2	3rd
	Midnapore	149	29·798	+·022	29·[illegible]	[illegible]	4th	[illegible]	[illegible]	79·2	68·2	91·2	+2·4	70·0	+0·7	83·6	+1·5	27·2	105·6	13th	60·1	5th
	Calcutta	21	29·939	[illegible]	[illegible]	[illegible]	19th	29·81[illegible]	31st	75·0	69·4	91·1	+3·2	69·8	+0·5	82·0	+1·9	24·3	100·5	31st	60·6	5th
	Jessore	30	29·937	[illegible]·044	29·[illegible]	[illegible]	19th	29·809	[illegible]	[illegible]	69·3	92·8	+1·2	68·6	+0·2	80·7	+1·0	24·2	99·1	13th	58·1	7th
	Burdwan	99	[illegible]	[illegible]·030	29·[illegible]	29·955	[illegible]	29·714	31st	[illegible]	61·9	93·1	+1·7	67·7	−0·4	81·4	+0·7	27·4	101·8	13th	58·8	5th & 6th
	Berhampore	67	29·892	+·042	29·909	[illegible]	19th	29·743	31st	74·3	62·5	92·5	+2·5	67·2	+1·6	80·3	+2·1	27·3	102·6	13th	58·0	1st
	IV.—Bihar and Orissa.																					
6	Balasore	50	29·92[illegible]	+·041	29·[illegible]	30·012	4th	29·890	31st	76·5	68·9	95·1	+2·3	68·5	−0·9	81·8	+0·9	26·6	103·5	31st	57·9	8th
	Hukitala (False Point)	29	29·956	[illegible]	29·[illegible]	30·049	5th	29·841	31st													
	Cuttack	30	29·8[illegible]	+·047	29·[illegible]	30·035	19th	29·789	31st	76·7	70·3	86·0	+1·2	72·2	−0·3	85·1	+0·5	25·8	105·7	31st	62·8	8th
	Puri	[illegible]	29·970	+·055	29·935	30·065	19th	29·866	31st	79·1	74·6	86·0	+1·7	76·0	+0·8	82·0	+1·3	12·0	90·9	23rd	67·5	8th
	Angul	155	29·511	+·036	29·919	29·617	19th	29·398	31st	77·2	67·5	97·0	+2·2	68·6	+1·1	83·8	+1·7	28·4	103·2	31st	57·0	6th
	Sambalpur	486	29·187	+·040	29·930	29·593	4th	29·293	31st	75·4	69·[illegible]	94·3	−1·9	66·6	−0·7	80·4	−1·3	27·7	101·3	13th	54·7	5th
7	Chaibasa	758	29·221	+·043	29·920	29·210	19th	29·099	31st	73·2	61·7	95·2	+1·9	67·2	+3·0	81·2	+2·5	28·0	102·9	13th	57·7	1st, 5th & 7th.
	Ranchi	[illegible]	27·926	+·055	29·913	27·969	13th	27·739	31st	[illegible]	[illegible]	[illegible]	[illegible]	62·9	+2·2	76·0	+0·5	22·1	99·0	13th	54·9	1st
	Purulia	[illegible]	29·144	+·047	29·924	29·234	19th	29·02[illegible]	31st	79·2	61·7	95·9	+2·5	65·6	+0·6	80·8	+1·1	30·3	103·3	13th & 31st.	55·1	1st
	Daltonganj	[illegible]	29·233	+·055	29·945	29·335	4th	[illegible]	[illegible]	70·[illegible]	62·6	91·2	+2·4	61·2	+1·9	76·7	+2·1	31·1	100·2	13th	52·2	6th
8	Purnea	[illegible]	[illegible]	+·032	29·898	29·926	19th	[illegible]	[illegible]	70·[illegible]	[illegible]	91·2	+1·7	60·7	+0·5	76·0	+1·1	30·6	97·7	[illegible]	49·9	1st
	Monghyr	155	[illegible]	[illegible]	29·899	29·892	20th	[illegible]	[illegible]	73·2	[illegible]	91·[illegible]		65·9		78·9		25·9	[illegible]	13th	51·9	1st
	Darbhanga	165	[illegible]	·047	29·907	29·886	19th	[illegible]	[illegible]	62·3	61·3	90·3	+2·5	61·1	−1·1	75·7	+0·7	29·2	97·5	[illegible]	52·9	1st
	Pusa	188	29·7[illegible]		29·8[illegible]	29·858	19th	[illegible]	[illegible]	71·[illegible]	61·1	92·[illegible]		60·4		76·4		32·1	99·4	[illegible]	51·3	1st
	Patna	183	29·720	+·046	29·912	29·873	19th	[illegible]	[illegible]	75·7	61·5	90·7	+0·5	66·2	+2·3	78·4	+1·4	24·5	98·5	13th & 24th.	58·2	4th
	Bihar	239	29·709	+·045	29·910	29·814	20th	[illegible]	[illegible]	72·1	59·4	92·8	+2·7	64·9	+1·5	78·9	+2·1	28·0	100·0	13th	55·0	4th
	Gaya	372	29·597	+·057	29·931	29·685	19th	[illegible]	[illegible]	[illegible]	61·6	92·9	+0·3	67·8	+2·0	80·3	+1·1	25·1	100·1	12th	59·7	1st
	Naya Dumka	489	29·4[illegible]	+·047	29·911	29·568	19th	[illegible]	31st	76·1	62·6	93·9	+2·7	66·2	+1·3	80·0	+2·0	27·7	102·0	13th	56·0	1st
	V.—United Provinces of Agra and Oudh.																					
	Gorakhpur	257	[illegible]	[illegible]	29·864	29·780	[illegible]	[illegible]	31st	[illegible]	56·7	91·8	+1·8	62·7	+0·7	77·3	[illegible]	[illegible]	[illegible]	[illegible]	53·7	1st
	[illegible]	267	[illegible]	[illegible]·052	29·924	29·777	[illegible]	[illegible]	31st	72·[illegible]	[illegible]·2	91·8	−0·3	61·8	+0·1	76·8	+0·1	30·0	98·6	12th	54·2	1st
	[illegible]	309	[illegible]	[illegible]·060	29·[illegible]	29·762	4th	[illegible]	2nd & 31st.	72·6	59·6	92·6	+0·2	63·1	+1·3	77·8	+0·7	29·5	98·5	13th & 31st.	55·7	4th & 5th.
	[illegible]	416	[illegible]	+·036	29·939	29·644	4th	[illegible]	[illegible]	69·8	58·1	92·0	+2·3	63·2	+2·2	77·6	+2·3	28·8	100·4	12th	50·1	1st

N.B.—[illegible] its ice [illegible] from final determinations.

B—*continued.*

stations in India, etc., in March, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 31st March 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															III.—Bengal—*concld.*
20	0	4	1	3	0	2	0	1	E	S 76° E	1·3	2·3	−1·0	12	−49	68	−11	·536	−·065	3·2	−1·6	2	− 1·5	0·97	2·24	− 1·27	1·47	3·68	− 2·21	0·87	Mymensingh.
12	0	1	5	1	3	6	2	0	S 7° W	S 53° E	1·5	2·6	−1·1	23	− 1	56	−15	·470	−·074	2·5	+0·6	3	+ 0·8	0·75	1·31	− 0·56	2·11	2·62	− 0·51	0·42	Bogra.
0	1	6	4	0	2	4	12	2	N 77° W	S 14° W	2·9	3·6	−0·7	27	+21	57	−10	·411	−·062	1·8	−0·4	0	− 1·6	0·03	0·83	− 0·74	0·71	1·85	− 1·14	0·06	Dinajpur.
24	1	2	4	0	0	0	0	0	N 66° E	N 75° E	1·3			17	−24	70	− 6	·453	−·047	1·0	−0·8	0	− 2·6	0	1·51	− 1·51	0·69	2·69	− 2·00	0	Jalpaiguri.
0	3	2	0	1	2	15	5	3	S 66° W	S 49° W	7·2	6·2	+1·0	53	+14	79	− 4	·800	− ·004	3·2	−0·7	1	− 1·1	0·33	1·47	− 1·14	3·05	3·20	− 0·15	0·32	Sangor Island.
25	1	1	0	1	3	0	0	0	S 27° E		2·3			3		48	−19	·474	−·117	2·2	+0·3	1	− 1·7	0·28	1·43	− 1·15	3·13	3·48	− 0·35	0·24	Midnapore.
1	1	0	1	1	1	15	6	5	S 67° W	S 42° W	3·4	3·6	−0·2	66	+19	75	− 5	·637	−·053	2·7	−0·2	1	− 1·4	0·51	1·39	− 0·88	2·74	3·12	− 0·38	0·51	Calcutta.
23	0	0	0	2	1	1	0	3	S 52° W	S 32° W	1·2	2·1	−0·9	3	−26	72	− 8	·636	−·052	1·2	−2·3	1	− 2·2	0·32	2·05	− 1·73	1·82	4·07	− 2·25	0·32	Jessore.
21	1	0	0	0	1	0	5	3	N 73° W	S 58° W	1·2	2·3	−1·1	23	−14	56	−11	·486	−·071	3·2	+0·2	2	− 0·5	0·53	1·55	− 1·02	3·52	3·36	+ 0·16	0·36	Burdwan.
14	1	1	1	0	2	6	4	2	S 68° W	S 42° W	1·5	2·4	−0·9	27	−16	55	−15	·471	−·084	3·3	+0·6	0	− 2·0	0·09	1·07	− 0·98	1·97	2·51	− 0·54	0·09	Berhampore.
																															IV.—Bihar and Orissa.
11	3	0	1	1	5	7	1	2	S 42° W	S 61° W	2·4	4·2	−1·8	27	− 9	67	−10	·613	−·073	2·6	+0·7	0	− 3·4	0·12	2·05	− 1·93	4·71	4·31	+ 0·40	0·09	Balasore.
0	2	2	0	0	7	12	5	3	S 54° W		7·6			56	+ 2					2·5	−1·7	1	− 0·5	0·10	1·09	− 0·99	4·21	3·24	+ 0·97	0·10	Hukitala (False Point).
17	0	1	1	0	0	5	7	0	S 71° W	S 50° W	1·6	2·4	−0·6	30	+ 1	74	− 4	·686	−·032	2·5	−0·5	0	− 1·5	0	1·10	− 1·10	3·87	2·34	+ 1·53	0	Cuttack.
3	8	2	0	0	5	7	5	1	S 89° W		10·8			28		80	− 4	·830	−·035	2·6	−0·1	0	− 1·0	0·13	0·54	− 0·41	3·52	1·89	+ 1·63	0·08	Puri.
12	2	0	1	2	0	1	2	11	N 45° W		3·6			36		60	− 7	·555	−·011	2·6	−0·4	1	− 1·3	0·64	1·04	− 0·40	4·13	3·36	+ 0·77	0·55	Angul.
0	8	7	3	3	0	3	0	7	N 12° E	N 46° E	3·0	2·3	+0·7	43	0	61	+ 6	·534	+·049	1·9	0	3	+ 1·2	2·48	0·90	+ 1·58	7·62	2·29	+ 5·33	1·20	Sambalpur.
21	0	2	0	0	0	8	0	0	S 45° W	S 69° W	1·8	1·2	+0·6	20	−31	61	− 2	·493	+·031	2·9	+1·1	2	− 0·1	1·19	1·03	+ 0·16	4·02	3·52	+ 0·50	0·90	Chaibasa.
2	2	0	0	0	1	4	8	14	N 69° W	N 86° W	4·5	4·7	−0·2	72	+29	43	− 2	·331	−·008	2·7	+0·9	2	− 0·7	2·14	1·34	+ 0·80	9·83	3·96	+ 5·87	1·14	Ranchi.
7	0	0	0	0	1	1	20	2	S 89° W		2·2			70		43	−12	·373	−·064	2·7	+1·0	1	− 1·4	0·72	1·17	− 0·95	3·87	3·60	+ 0·27	0·20	Purulia.
27	0	0	1	3	0	0	0	0	S 56° E		1·7			10		61	+ 3	·461	+·066	1·5	0	2	+ 0·2	0·95	0·69	+ 0·26	6·80	2·95	+ 3·85	0·54	Daltonganj.
2	1	1	8	0	3	8	6	2	S 38° W	N 45° E	3·5	2·9	+0·6	23	+19	56	−12	·417	−·065	4·1	+2·8	0	− 1·3	0	0·58	− 0·58	1·19	1·76	− 0·57	0	Purnea.
5	0	0	3	2	1	18	1	1	S 36° W		5·1			55		49		·398		2·3		0	− 1·3	0·05	0·50	− 0·45	0·61	2·30	− 1·69	0	Monghyr.
18	0	0	2	0	0	2	9	0	S 81° W	S 82° W	2·0*	3·3	−1·3	27	+ 3	51	−12	·403	−·045	2·0	+0·8	0	− 1·3	0·05	0·53	− 0·48	1·14	1·66	− 0·52	0·05	Darbhanga.
4	0	1	4	2	1	8	7	4	S 61° W		3·5			32		53		·402		2·5		0	− 1·8	0·02	0·58	− 0·56	1·33	1·72	− 0·39	0·02	Pusa.
10	0	0	3	0	0	6	12	0	S 72° W	S 63° E	3·1	2·8	+0·3	46	+17	42	−10	·351	−·052	2·5	+0·8	0	− 1·2	0·09	0·50	− 0·41	2·11	1·88	+ 0·23	0·05	Patna.
3	0	0	2	1	1	11	12	1	S 63° W		4·4			65		43	− 6	·341	−·034	2·8	+0·9	0	− 1·1	0·02	0·39	− 0·37	3·22	2·00	+ 1·22	0·02	Buxar.
6	0	1	1	1	3	15	4	0	S 42° W	S 37° W	2·4	3·1	−0·7	56	+16	40	−15	·343	−·103	2·3	+0·2	2	+ 0·8	0·54	0·47	+ 0·07	4·07	2·15	+ 1·92	0·38	Gaya.
29	1	0	0	0	0	0	0	1	N 44° W		1·8			7		44	− 6	·309	−·024	1·8	+0·4	0	− 1·8	0·08	1·06	− 0·98	4·70	2·39	+ 2·31	0·03	Naya Dumka.
																															V.—United Provinces of Agra and Oudh.
4	1	0	10	1	0	1	14	0	S 84° W	N 72° W	3·2	2·3	+0·9	13	−23	47	−10	·342	−·071	0·9	−0·8	0	− 0·8	0	0·44	− 0·44	1·52	1·88	− 0·36	0	Gorakhpur.
8	0	1	0	1	2	14	2	3	S 52° W	S 54° W	2·4	3·4	−1·0	56	+ 9	47	− 9	·279	−·040	1·6	−0·3	1	+ 0·1	0·34	0·36	− 0·02	4·25	1·95	+ 2·30	0·34	Benares.
11	0	1	5	1	0	1	11	1	W	S 85° W	2·3	3·7	−1·4	19	−20	43	− 4	·340	−·024	2·0	−0·1	1	− 0·3	0	0·32	− 0·32	4·16	1·88	+ 2·28	0	Allahabad.
6	3	2	2	2	2	4	3	7	N 62° W	S 89° W	2·3	3·1	−0·8	23	−13	45	− 9	·331	−·020	1·1	−0·1	0	− 0·9	0·06	0·33	− 0·27	0·93	1·76	− 0·83	0·06	Cawnpore.

* Mean of 20 days.

Table

(2) Abstract of observations taken at 8 hrs. at 210

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	V.—United Provinces of Agra and Oudh—*concld.*																					
	Lucknow	368	29·601	+·065	29·933	29·672	20th	29·471	31st	77·3*	60·2*	93·7?*	−2·0?	65·6?	+1·6?	79·6*?	−0·2*	28·1*	99·1	31st	60·4	26th
	Bahraich	407	29·516	+·035	29·896	29·583	20th	29·422	31st	68·6	58·1	90·2	+1·8	60·1	+1·2	75·2	+1·5	30·1	98·4	12th	51·2	6th
10	Jhansi	824	29·139	+·024	29·941	29·244	4th	29·021	2nd	71·5	58·7	93·6	+0·8	64·3	−2·0?	78·9	−0·6?	29·3	100·6	11th	56·2	3rd & 5th
	Agra	556	29·414	+·049	29·943	29·515	4th	29·294	1st	72·9	59·2	89·7	−0·4	63·3	+0·7	76·5	+0·1	26·4	96·4	11th	55·1	4th
	Mainpuri	516	29·428	+·038	29·919	29·516	4th	29·315	31st	68·7	57·6	91·1	+1·7	60·4	+2·0	75·7	+1·9	30·7	98·9	11th	51·2	3rd
	Bareilly	568	29·371	+·055	29·920	29·487	20th	29·260	31st	67·0	58·1	88·7	+1·2	60·2	+1·7	74·5	+1·5	28·5	97·4	12th	53·7	4th
	Roorkee	899	29·045	+·062	29·947	29·135	20th	28·948	31st	63·8	56·6	83·0	−1·7	56·1	+0·5	69·5	−0·6	26·9	91·2	12th	48·4	4th
	VI.—Punjab.																					
11	Delhi	718	29·239	+·052	29·947	29·335	4th	29·125	1st	67·2	56·4	85·9	−0·5	63·6	+1·7	74·7	+0·6	22·3	92·2	12th	58·4	20th
	Hissar	725	29·252	+·069	29·969	29·375	4th	29·086	1st	66·2	56·2	87·0	−0·3	58·0	+1·1	72·5	+0·4	29·0	93·6	12th	51·3	20th
	Patiala	*818*	29·113	+·034	29·929	29·219	3rd	28·989	1st	65·8	57·1	83·1	+0·4	53·0	+1·3	70·5	+0·9	25·1	91·2	11th	50·8	4th
	Ambala	892	29·048	+·051	29·914	29·139	4th	28·962	31st	64·3	55·8	81·7	+1·6	57·7	+1·7	71·2	+1·7	27·0	93·1	11th	49·3	3rd
	Ludhiana	812	29·140	+·059	29·955	29·210	4th	29·014	31st	63·6	55·2	83·4	+0·2	58·4	+1·4	70·9	+0·8	25·0	89·7	12th	52·4	25th
	Lahore	702	29·240	+·038	29·944	29·365	4th	29·045	1st	63·1	56·5	82·8	−1·1	56·5	+2·0	69·6	+0·5	26·3	88·8	9th	50·1	25th
	Sialkot	830	29·114	+·044	29·858	29·213	4th	28·948	1st	61·3	55·7	78·9	−2·1	54·3	−0·9	66·6	−1·5	24·6	85·7	12th	45·5	3rd
	Rawalpindi	1,674	28·291	+·051	29·998	28·438	4th	28·116	12th	60·5	53·7	74·7	−0·6	50·0	−0·5	62·4	−0·5	24·7	82·1	29th	42·0	2nd
12	Khushab	612	29·349	+·039	29·958	29·513	24th	29·187	12th	65·3	55·8	83·6	+3·1?	57·3	+0·8	70·5	+1·9?	26·3	91·2	29th	51·2	2nd, 3rd & 25th.
	Lyallpur	605	29·339		29·943	29·466	4th	29·153	1st	61·5	55·8	82·0		54·5		68·3		27·5	88·5	29th	47·7	25th
	Montgomery	558	29·390	+·034	29·941	29·523	4th	29·218	1st	64·9	56·6	85·3	+0·8	57·5	+1·8	71·4	+1·3	27·8	92·4	9th	49·3	14th
	Multan	426	29·540	+·036	29·948	29·678	24th	29·337	22nd	65·3	57·3	85·4	−0·4	60·4	+2·2	72·9	+0·9	25·0	92·6	29th	54·5	13th
	VII.—North-West Frontier Province.																					
14	Peshawar	1,113	28·875	+·032	30·027	29·023	4th	28·697	23rd	55·6	52·6	74·8	−0·2	50·8	−0·9	62·8	−0·5	24·0	84·4	29th	46·1	28th & 25th.
	D. I. Khan	590	29·390	+·030	29·979	29·542	24th	29·205	22nd	62·3	56·0	82·5	+0·3	56·1	+1·0	69·3	+0·7	26·4	89·8	28th	49·9	15th
	VIII.—Sind.																					
16	Jacobabad	186	29·779	+·036	29·930	29·881	24th	29·539	22nd	69·7	56·5	92·2	+1·5	62·3	+2·6	77·2	+2·1	29·9	96·5	9th	53·8	2nd
	Hyderabad	96	29·884	+·036	29·934	29·976	4th	29·750		71·6	61·3	91·8	−1·0	65·1	+1·1	78·3	+0·1	26·5	97·4	29th	54·9	13th
	Karachi	13	29·999	+·045	29·962	30·083	4th	29·887	22nd	72·6	66·8	80·6	−1·2	68·7	+2·4	74·6	+0·6	11·9	94·0	28th	61·2	14th
	IX.—Rajputana.																					
17	Bikaner	*771*	29·195	+·056	29·954	29·322	4th	29·046	1st	68·0	59·4	89·2	+0·5	61·5	−2·3?	75·3	−0·9?	27·7	94·0	7th	54·9	13th
	Jodhpur	780	29·194	+·042	29·954	29·286	4th	29·073	1st	70·4	55·4	90·7	−0·4	62·9	0	76·8	−0·2	27·8	97·4	30th	53·2	13th
18	Jaipur	1,431	28·555	+·055	29·967	28·666	4th	28·418	1st	72·0	56·6	89·2	−0·2	61·9	+1·2	75·5	+0·5	27·3	95·6	31st	53·2	3rd
	Ajmer	1,611	28·361	+·034	29·970	28·459	4th	28·219	1st	65·1	56·3	86·9	−1·7	60·8	+0·5	73·8	−0·6	26·1	95·2	31st	51·7	4th
	Kotah	632	29·138	+·034	29·937	29·245	4th	29·032	1st	76·7	58·5	94·2	+1·2	66·7	+0·7	80·4	+0·9	27·5	100·6	31st	58·0	4th

N. B.—Elevations in italics indicate barometrical determinations.

*Mean of 11 days.

B—*continued.*

stations in India, etc., in March, 1919—*continued.*

Wind direction. Number of winds from Calm. (24)	N. (25)	N.E. (26)	E. (27)	S.E. (28)	S. (29)	S.W. (30)	W. (31)	N.W. (32)	Resultant direction. (33)	Normal direction. (34)	Wind velocity. Mean velocity, miles per hour. (35)	Normal. (36)	Departure from normal. (37)	Wind steadiness. Actual percentage. (38)	Departure from normal. (39)	Hygrometry, 8 hrs. Mean humidity at 8 hrs. (40)	Departure from normal. (41)	Mean vapour tension at 8 hrs. in inches of mercury. (42)	Departure from normal. (43)	Cloud. Mean cloud amount at 8 hrs. (44)	Departure from normal. (45)	Rainfall. Number of rainy days. (46)	Departure from normal. (47)	Rainfall of month. (48)	Normal rainfall of month. (49)	Departure from normal. (50)	Total rainfall from 1st Dec. 1918 to 31st March 1919. (51)	Normal rainfall for this period. (52)	Departure from normal of this period. (53)	Heaviest rainfall during month. (54)	Station. (55)
																															V.—United Provinces of Agra and Oudh—*concld.*
21	3	0	1	2	0	0	4	0	N 45° W	N 80° W	1·2	2·8	−1·6	10	−33	32P*	−19P	·298P*	−·069P	2·3	+0·3	0	−1·0	0·03	0·06	−0·33	1·18	2·13	−0·95	0·03	Lucknow.
9	6	0	3	3	0	1	5	4	N 37° W	N 51° W	3·1	2·6	+0·5	23	− 5	49	−13	·348	−·086	1·5	0	0	−1·0	0·09	0·08	−0·49	1·95	2·89	−0·94	0·09	Bahraich.
11	2	2	0	1	1	10	1	3	S 68° W	S 84° W	3·6	2·2	+1·4	27	− 5	42	− 1	·330	−·019	0·9	−0·2	0	−0·9	0·02	0·32	−0·30	1·47	1·66	−0·19	0·02	Jhansi.
6	3	2	4	1	1	4	5	5	N 57° W	N 66° W	3·3	3·5	−0·2	20	−23	40	− 8	·321	−·015	2·8	+0·6	1	+0·1	0·11	0·35	−0·24	1·17	1·68	−0·51	0·10	Agra.
4	4	1	3	1	1	2	5	10	N 46° W	N 63° W	1·9	1·8	+ 0·1	43	+11	47	− 5	·335	−·014	1·5	−0·8	1	+0·1	0·14	0·34	−0·20	1·75	2·10	−0·35	0·11	Mainpuri.
29	0	1	0	1	0	0	0	0	E	N 43° W	0·8	2·7	−1·9	5	−31	56	− 4	·369	−·010	5·2	+2·9P	0	−1·5	0	0·74	−0·74	2·27	3·06	−0·79	0	Bareilly.
22	0	0	0	2	0	0	0	7	N 15° W	N 41° W	2·4	2·2	+0·2	13	− 2	62	0	·365	+·017	2·5	+0·2	2	+0·4	0·50	0·89	−0·39	7·15	4·69	+2·46	0·26	Roorkee.
																															VI.—Punjab.
5	4	2	1	4	1	0	4	10	N 34° W	N 87° W	3·3	2·8	+0·5	37	−13	48	− 3	·318	−·010	3·1	+0·4	1	−0·4	0·26	0·53	−0·27	2·87	2·84	+0·03	0·26	Delhi.
3	4	2	2	4	6	7	2	1	S 11° W	N 24° W	4·4	3·4	+1·0	27	+23	51	− 7	·322	−·035	2·7	0	1	+0·1	0·27	0·44	−0·17	2·02	1·85	+0·17	0·14	Hissar.
3	6	4	1	7	1	0	4	5	N 9° E		4·7			19		57	− 6	·361	−·026	2·5	−0·6	1	−1·3	0·27	1·22	−0·95	4·57	4·41	+0·16	0·27	Patiala.
6	4	1	4	4	1	0	1	10	N 4° W	N 37° W	4·0	2·3	+1·7	27	+ 3	56	− 9	·334	−·040	4·2	+1·4	2	0	0·50	0·94	−0·44	4·61	5·06	−0·45	0·25	Ambala.
22	2	1	0	2	2	0	1	1	E	N 31° W	1·7	1·6	+0·1	1	−21	56	− 6	·326	−·033	2·8	−0·5	2	−0·1	0·76	1·07	−0·31	4·06	4·97	−0·91	0·60	Ludhiana.
5	4	4	1	6	2	2	1	6	N 23° E	N 10° W	2·1	2·1	0	10	− 8	65	− 1	·373	0	3·1	−0·5	2	+0·1	0·53	0·86	−0·33	3·94	3·33	+0·61	0·35	Lahore.
11	6	3	5	3	0	0	2	1	N 44° E	N 7° E	2·0	1·5	+0·5	33	+ 4	69	+ 1	·372	−·004	2·7	−0·1	3	−0·1	1·24	1·54	−0·30	7·74	6·09	+1·65	0·65	Sialkot.
13	4	2	1	1	1	2	4	3	N 45° W	N 39° W	2·2	2·1	+0·1	20	− 6	63	− 7	·327	−·005	3·7	−0·6	4	−0·6	0·96	2·27	−1·31	7·80	8·27	−0·47	0·36	Rawalpindi.
18	2	6	5	0	0	0	0	0	N 56° E	N 22° E	4·5	3·7	+0·8	37	+15	52	− 5	·321	−·010	2·9	−0·3	0	−2·5	0	1·19	−1·19	3·39	3·40	−0·01	0	Khushab.
9	0	3	2	7	0	1	2	7	N 45° E		2·5			3		68		·371		2·8		1	−1·4	0·27	0·81	−0·54	2·91	2·19	+0·72	0·27	Lyallpur.
2	5	5	4	5	4	1	2	3	N 69° E	N 53° E	4·1	3·9	+0·2	23	+ 1	58	+ 7	·349	+ 035	2·8	−0·3	0	−1·6	0·05	0·52	−0·47	1·28	1·96	−0·68	0·05	Montgomery.
12	4	5	0	6	0	0	0	4	N 39° E	N 51° E	1·5	1·4	+0·1	27	+ 2	55	− 3	·353	−·003	3·6	+0·8	1	−0·1	0·27	0·43	−0·16	1·24	1·47	−0·23	0·27	Multan.
																															VII.—North-West Frontier Province.
26	1	0	0	0	2	2	0	0	S 31° W	S 27° W	0·9	2·6	−1·7	7	−18	81	+10	·359	+·008	2·6	−1·9	4	−0·4	1·50	2·20	−0·70	5·25	5·72	−0·47	0·64	Peshawar.
26	0	2	0	0	0	0	0	3	N 12° W	N 13° W	1·6	1·5	+0·1	10	−22	65	0	·370	+·004	1·1	−2·4	1	−1·3	0·14	1·08	−0·94	1·00	2·51	−1·51	0·14	D. I. Khan.
																															VIII.—Sind.
20	0	1	4	4	0	1	0	1	S 71° E	N 83° E	2·1	2·8	−0·7	23	− 2	38	− 7	·278	−·038	2·0	−0·7	0	−0·7	0	·24	−0·24	0·33	1·01	−0·68	0	Jacobabad.
7	7	1	1	0	4	8	2	1	S 80° W	S 83° W	0·8	6·1	−5·3	23	− 5	53	+ 3	·403	+·023	1·7	−0·4	0	−0·6	0	0·27	−0·27	0·58	0·85	−0·27	0	Hyderabad.
5	4	1	1	0	0	2	8	9	N 57° W	N 32° W	9·5	8·3	+1·2	59	+23	73	+ 6	·586	+ 070	3·6	+1·3	0	−0·7	0	0·1	−0·31	1·24	1·44	−0·20	0	Karachi.
																															IX.—Rajputana.
5	1	1	4	12	4	4	0	0	S 38° E	S 46° W	3·3	3·9	−0·6	53	+42	58	+15	·400	+·037P	2·5	−0·3	0	−0·7	0	0·29	−0·29	1·24	1·15	+0·09	0	Bikaner.
10	0	14	0	0	0	7	0	0	N 45° E		2·7			27		33	0	·242	0	3·7	+1·1	0	−0·3	0·08	0·10	−0·02	0·41	0·58	−0·17	0·08	Jodhpur.
8	2	7	5	1	0	0	2	5	N 25° E	N 29° W	2·8	3·3	−0·5	40	0	35	− 7	·268	−·041	3·2	+0·5	0	−0·9	0	0·39	−0·39	1·53	1·39	+0·14	0	Jaipur.
26	0	0	0	0	0	2	3	0	S 72° W	S 63° W	2·5	3·0	−0·5	13	+ 2	57	+ 8	·352	+ ·017	0·9	−1·5	0	−0·7	0·07	0·21	−0·14	0·72	1·17	−0·45	0·07	Ajmer.
19	1	3	1	2	0	3	1	1	N 67° E		1·9			2		27	− 7	·253	−·031	2·9	+1·7	0	−0·3	0	0·14	−0·14	0·94	1·05	−0·11	0	Kotah.

P Mean of 11 days.

Table

(2) Abstract of observations taken at 8 hrs. at 210

Number of sub-division.	Station.	Height of bar-cistern above sea level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	X.—Bombay.																					
19	Deesa	466	29·533	+·053	29·964	29·621	4th	29·463	31st	74·0	59·5	95·7	−0·2	62·7	−0·7	79·3	−0·5	33·0	103·8	30th	53·7	13th
	Bhuj	334	29·660	+·035	29·953	29·763	4th	29·584	22nd	73·5	67·0	91·6	−1·5	65·0	−0·2	78·3	−0·9	26·6	99·2	29th & 30th.	57·1	15th
	Jamnagar	61	29·947	+·026	29·955	30·033	4th	29·888	29th	73·4	67·8	89·5	−0·4	63·5	−0·2	76·4	−0·3	26·0	101·0	30th	56·2	13th
	Dwarka	37	29·989	+·024	29·971	30·065	4th	29·914	29th	74·2	70·2	80·4	−1·1	71·5	+1·6	76·0	+0·3	8·9	95·4	29th	67·4	15th
	Rajkot	429	29·554	+·018?	29·942?	29·623	3rd	29·481	29th	72·6	63·3	94·2	−1·0	64·9	+2·9?	79·6	+0·9?	29·3	103·8	30th	57·1	13th
	Veraval	*18*	29·987	+·038	29·948	30·038	4th	29·898	28th	71·0	65·5	81·6	−4·0?	66·2	+1·1	73·9	−1·5?	15·4	92·4	31st	60·6	13th
	Bhavnagar Para	55	29·945	+·031	29·947	30·007	4th	29·860	29th	74·4	69·4	95·5	+0·5	65·5	−0·5	80·5	0	30·0	104·8	30th	60·2	13th
	Surat	39	29·964	+·036	29·947	30·017	4th & 8th	29·874	29th	75·5	67·8	94·6*	−1·7	67·4	+1·2	81·2*	−0·3	27·2	102·6	29th	61·3	1st
	Ahmadabad	163	29·839	+·041	29·954	29·920	4th	29·774	31st	75·4	61·4	98·0	+1·1	67·8	+0·3	82·9	+0·7	30·2	105·6	30th	59·1	15th
25	Bombay	37	29·974	+·043	29·950	30·009	4th	29·866	28th	75·5	71·3	85·0	−0·7	72·9	−0·3	78·9	−0·5	12·1	91·0	29th	70·7	5th
	Ratnagiri	207	29·787	+·044	29·936	29·823	21st	29·680	28th	77·2	70·1	84·9	−2·5?	71·2	−0·9	78·0	−1·7?	13·7	88·9	28th	66·7	3rd
	Marmagao	*60*	29·945	+·049	29·940	29·989	21st	29·848	23th	77·4	72·9	85·8	−1·0						91·7	29th		
	Karwar	44	29·861	+·048	29·939	30·006	21st	29·883	25th	73·2	70·2	87·7	+0·2	70·5	−1·9	79·1	−0·9	17·2	90·4	10th	64·6	22nd
26	Malegaon	1,430	28·539	+·034	29·923	28·606	4th	28·480	31st	76·5	59·6	99·0	+1·5	63·3	0	81·2	+0·7	35·7	105·3	29th	56·2	1st
	Ahmadnagar	2,154	27·837	+·030	29·907	27·838	5th	27·792	31st	76·4	58·6	96·9	+2·3	64·2	+1·5	80·6	+1·9	32·7	101·9	29th & 30th.	53·5	2nd
	Poona	1,846	28·150	+·039	29·966?	28·186	22nd	28·098	28th	68·5	56·6	95·7	−0·8	62·4	−0·8	79·6	−0·8	34·3	103·0	29th	54·1	3rd
	Sholapur	1,590	28·375	+·027	29·901	28·413	10th	28·303	31st	78·2	60·6	99·6	−0·4	70·1	+0·9	84·9	+0·3	29·5	103·5	27th	62·0	3rd
	Bijapur	*1,948*	28·037	+·040	29·899?	28·088	3rd	27·971	31st	79·2	63·0	97·4	+0·3	70·8	+0·6	84·1	+0·5	26·6	101·2	27th & 31st.	62·9	21st
	Belgaum	2,562	27·460	+·046	29·936	27·497	21st	27·396	28th	72·5	59·2	93·8	−0·1	62·4	−1·5	78·0	−0·8	31·2	97·3	28th	57·2	21st
	XI.—Central India.																					
20	Neemuch	1,626	28·357	+·037	29·946	28·455	4th	28·263	1st	73·8	60·8	91·3	+0·3	62·9	+1·7	77·1	+1·0	28·4	98·1	31st	52·8	14th
	Indore	1,823	28·154	+·031	29·921	28·248	4th	28·082	31st	76·7	62·0	94·6	+2·3	61·8	+1·4	78·2	+1·9	32·8	101·3	31st	51·9	6th
21	Nowgong	754	29·292	+·032	29·934	29·315	4th	29·092	2nd	69·6	57·2	92·5	+0·8	61·9	+1·4	77·2	+1·1	30·6	99·5	11th	52·4	4th
	Satna	1,041	28·922	+·049	29·943	28·983	4th	28·803	2nd	70·5	58·3	89·4	−1·4	62·8	+1·4	76·1	0	26·6	95·8	11th	54·8	4th & 5th.
	XII.—Central Provinces.																					
22	Buldana	2,134								77·9	61·2	94·5	+1·0	70·5	+0·7	82·5	+0·9	24·0	99·8	29th	62·6	21st
	Akola	925	28·045	+·039	29·921	29·136	4th	28·970	31st	79·3	63·2	100·4	+1·4	68·9	+3·0	84·6	+2·2	31·5	105·9	31st	58·5	3rd
	Amraoti	1,215	28·742	+·028	29·906	28·835	4th	28·660	31st	79·6	61·4	98·4	+0·5	70·6	+1·5	84·5	+1·0	27·8	103·2	31st	60·5	21st
23	Khandwa	1,044	28·921	+·029	29·927	29·014	4th	28·848	31st	75·6	58·7	98·6	+1·2	66·3	+1·4	82·5	+1·2	32·3	104·9	29th	55·4	5th
	Hoshangabad	1,006	28·968	+·036	29·939	29·078	4th	28·883	31st	74·5	60·2	95·3	+0·1	65·9	+1·7	80·6	+0·9	29·4	103·3	31st	54·2	6th
	Saugor	1,807	28·142	+·011?	29·909	28·274	4th	28·058	31st	72·6	55·0	91·8	+0·5	65·3	+0·6	78·5	+0·5	26·5	99·4	31st	56·6	20th
	Jubbulpore	1,327	28·616	+·024	29·915	28·739	4th	28·511	31st	71·6	59·8	90·5	−1·9	62·7	+2·2	76·6	+0·1	27·8	97·5	13th	50·9	5th
	Seoni	2,033	27·955	+·051	29·939	28·044	4th	27·864	31st	73·4	59·6	90·5	−2·3	64·0	+1·2	77·2	−0·5	26·5	96·1	30th	54·3	5th
	Nagpur	1,017	28·955	+·047	29·932	29·052	4th	28·843	31st	75·9	63·3	95·8	−2·1	66·5	−1·0	81·1	−1·5	29·3	101·1	30th	56·4	5th
24	Pendra	2,040	27·950	+·053	29·948	28·049	4th	27·846	31st	71·8	60·7	87·0	−0·5	63·0	+0·8	75·0	+0·2	24·0	94·3	12th	56·3	6th

N. B.—Elevations in italics indicate barometrical determinations.

* Mean of 27 days.

B—*continued.*

stations in India, etc., in March, 1919—*continued.*

Wind direction. Number of winds from Calm. (24)	N. (25)	N.E. (26)	E. (27)	S.E. (28)	S. (29)	S.W. (30)	W. (31)	N.W. (32)	Resultant direction. (33)	Normal direction. (34)	Wind velocity. Mean velocity, miles per hour. (35)	Normal. (36)	Departure from normal. (37)	Wind steadiness. Actual percentage. (38)	Departure from normal. (39)	Hygrometry, 8 hrs. Mean humidity at 8 hrs. (40)	Departure from normal. (41)	Mean vapour tension at 8 hrs. in inches of mercury. (42)	Departure from normal. (43)	Cloud. Mean cloud amount at 8 hrs. (44)	Departure from normal. (45)	Rainfall. Number of rainy days. (46)	Departure from normal. (47)	Rainfall of month. (48)	Normal rainfall of month. (49)	Departure from normal. (50)	Total rainfall from 1st Dec. 1918 to 31st March 1919. (51)	Normal rainfall for this period. (52)	Departure from normal of this period. (53)	Heaviest rainfall during month. (54)	Station. (55)
																															X.—Bombay.
5	0	5	7	1	1	4	2	6	N 35° E	N 7° W	5·1	6·3	−1·2	13	−19	39	+ 1	·326	+·009	2·1	+0·3	0	−0·2	0	0·09	− 0·09	0·15	0·41	− 0·26	0	Deesa.
8	1	0	0	0	1	0	17	4	N 82° W	N 60° W	4·8	6·4	−1·6	66	+ 1	70	+10	·581	+·082	1·5	−0·4	0	−0·2	0	0·13	− 0·13	0·46	0·39	+ 0·07	0	Bhuj.
0	1	2	2	0	1	4	12	9	N 74° W		8·0			59		74	+ 5	·608	+·048	1·2	−0·1	0	−0·3	0	0·19	− 0·19	0·56	0·40	+ 0·16	0	Jamnagar.
0	8	1	1	0	0	0	5	15	N 38° W		10·1			29		81	+ 6	·685	+·024	2·0	−0·2	0	−0·5	0	0·27	− 0·27	0·97	0·75	− 0·22	0	Dwarka.
2	2	3	0	0	0	2	13	9	N 64° W	N 25° W	6·9	5·6	+1·3	69	+15	59	− 3	·459	−·040	4·3	+2·9?	0	−0·1	0	0·08	− 0·08	0	0·27	− 0·27	0	Rajkot.
2	12	0	0	1	0	0	1	15	N 27° W	N 13° W	8·0	5·6	+2·4	82	+17	74	+10	·559	+·039	1·6	+0·1	0	−0·2	0	0·08	− 0·08	0·13	0·24	− 0·11	0	Veraval.
2	1	2	0	0	1	3	5	17	N 57° W	N 85° W	5·1	6·3	−1·2	68	+ 3	77	+25?	·664	+·228?	1·8	+0·4	0	−0·3	0	0·13	− 0·13	0·01	0·34	− 0·33	0	Bhavnagar Para.
12	4	3	0	4	4	2	0	2	S 72° E	N 46° W	2·3	4·5	−2·2	7	−29	66	+ 5	·577	+·036	1·7	+0·6	0	−0·1	0	0·02	− 0·02	0·01	0·19	− 0·18	0	Surat.
3	1	6	3	1	0	0	0	17	N 14° W	N 1° E	3·2	3·4	−0·2	56	+22	43	0	·367	−·007	1·7	−0·1	0	−0·3	0	0·09	− 0·09	0·18	0·24	− 0·06	0	Ahmadabad.
2	9	7	7	4	1	0	0	1	N 52° E	N 40° E	6·5	8·0	−1·5	56	+ 2	80	+ 6	·707	+·015	2·0	+0·2	0	−0·1	0	0·04	− 0·04	0·11	0·22	− 0·11	0	Bombay.
1	13	5	1	3	2	2	0	4	N 10° E	N 22° E	8·1	6·1	+2·0	46	+24	69	0	·637	−·029	0·4	+0·8	0	−0·1	0·02	0·04	− 0·02	0·22	0·25	− 0·03	0·02	Ratnagiri.
3	8	5	1	1	1	0	0	12	N 10° W	N 72° E	6·8	6·6	+0·2	59	+34	79	0	·749	−·039	3·2	+1·0	0	0	0·01	0·01	0	0·01	0·25	− 0·24	0·01	Marmagao.
21	8	2	0	0	0	0	0	0	N 9° E	N 43° E	3·2	3·4	−0·2	30	−31	86	+ 4	·701	−·020	1·8	+0·4	9	0	0	0	0	0	0·31	− 0·31	0	Karwar.
9	2	1	0	0	0	4	13	2	N 86° W	N 66° W	5·3	5·6	−0·3	56	− 9	33	− 9	·302	−·071	1·5	+0·1	0	−0·3	0	0·07	− 0·07	0·21	0·49	− 0·28	0	Malegaon.
12	9	2	0	0	0	0	0	8	N 15° W	N 1° W	4·6	6·6	−2·0	56	+ 6	30	−16	·274	−·142	0·6	−0·2	0	−0·3	0·12	0·18	− 0·06	0·98	0·93	+ 0·05	0·07	Ahmadnagar.
17	2	1	0	0	1	2	4	4	N 67° W	S 87° W	6·0	6·2	−0·2	23	−10	54	+13	·381	+·054	0·7	−0·4	1	+0·8	0·90	0·04	+ 0·86	1·04	0·31	+ 0·73	0·90	Poona.
2	3	0	2	8	1	2	1	11	N 43° W	N 14° E	6·8	5·8	+1·0	13	− 9	32	− 1	·316	−·010	1·8	+0·5	0	−0·4	0	0·21	− 0·21	0·53	0·91	− 0·38	0	Sholapur.
8	12	1	0	0	2	2	2	4	N 25° W	N 84° W	3·5	3·6	−0·1	43	+ 3	38	−12	·376	−·114	0·2	−0·9	0	−0·9	0	0·29	− 0·29	0·06	0·70	− 0·64	0	Bijapur.
27	0	0	1	0	0	0	2	1	N 66° W	N 8° E	3·5	8·2	−4·7	7	− 4	43	− 3	·349	−·039	0·7	−0·4	0	−0·7	0	0·30	− 0·30	0·08	0·86	− 0·78	0	Belgaum.
																															XI.—Central India.
8	0	2	14	2	0	0	5	0	E	S 34° E	5·3	5·7	−0·4	38	+13	45	+ 7	·379	+·078	1·5	−0·2	0	−0·3	0	0·08	− 0·08	0·67	0·68	− 0·01	0	Neemuch.
15	1	4	5	2	0	0	4	0	N 65° E	N 7° W	1·6	2·5	−0·9	17	−12	42	+ 2	·377	+·051	1·5	−0·1	0	−0·1	0	0·06	− 0·06	3·09	0·59	+ 2·50	0	Indore.
10	1	5	1	4	4	2	0	4	S 73° E	S 80° W	1·8	1·8	0	10	−33	42	− 7	·319	−·041	3·8	+1·4	0	−0·8	0·02	0·32	− 0·30	3·08	1·92	+ 1·16	0·02	Nowgong.
21	0	0	3	0	1	3	2	1	S 38° W	N 54° W	1·4	3·9	−2·5	10	−47	45	+ 4	·336	+·026	2·2	0	0	−1·2	0·02	0·52	− 0·50	5·35	2·53	+ 2·82	0·02	Sutna.
																															XII.—Central Provinces.
0	2	1	4	3	1	0	3	12	N 51° W		5·6	5·4	+0·2	42		35		·337		2·3		0	−0·6	0·01	0·29	− 0·28	1·11	1·39	− 0·28	0·01	Buldana.
1	2	3	5	1	1	3	4	11	N 37° W	N 45° W	4·1	3·5	+0·6	33	+22	36	+ 3	·362	+·064	2·3	+0·8	1	+0·2	0·24	0·40	− 0·16	1·78	1·65	+ 0·13	0·24	Akola.
9	2	3	7	3	3	2	1	1	S 78° E	N 72° E	4·0	3·5	+0·5	27	+ 5	32	− 7	·316	−·050	0·7	−0·7	0	−0·8	0·04	0·34	− 0·30	3·06	1·58	+ 1·48	0·04	Amraoti.
1	0	4	6	2	2	1	7	8	N 36° W	N 40° W	4·6	3·7	+0·9	17	−12	30	− 4	·271	−·014	1·9	+0·7	0	−0·4	0	0·16	− 0·16	1·54	0·80	+ 0·74	0	Khandwa.
14	0	12	1	1	0	3	0	0	N 55° E	N 63° E	1·9	1·9	0	32	+ 8	39	− 5	·338	−·016	1·7	+0·2	0	−0·5	0	0·28	− 0·28	4·86	1·34	+ 3·52	0	Hoshangabad.
3	0	3	10	4	3	7	1	0	S 46° E	S 69° E	5·5	3·1	+2·4	43	+25	28	− 8	·220	−·069	1·3	−0·1	0	−0·9	0	0·39	− 0·39	3·30	1·84	+ 1·46	0	Saugor.
4	2	3	3	11	4	0	3	1	S 53° E	S 23° E	2·0	2·0	0	37	+ 8	48	+ 1	·374	+·036	1·5	−0·1	0	−1·5	0·13	0·59	− 0·46	9·74	2·37	+ 7·37	0·08	Jubbulpore.
22	4	3	0	1	1	0	0	0	N 32° E	N 37° E	0·8	2·3	−1·5	17	−10	41	− 2	·340	−·007	2·0	+0·3	2	+0·1	0·49	0·67	− 0·18	8·35	2·61	+ 5·74	0·26	Seoni.
2	3	7	11	5	1	0	1	1	N 77° E	N 14° E	3·4	3·6	−0·2	59	+27	47	+ 8	·417	+·064	1·2	−0·6	2	+0·7	0·43	0·53	− 0·10	7·26	1·98	+ 5·28	0·29	Nagpur.
12	3	1	1	2	4	4	0	4	S 55° W		3·7			10		51	+ 9	·396	+·084	1·2	−0·8	3	−0·3	2·77	1·47	+ 1·30	10·86	4·27	+ 6·59	1·25	Pendra.

Table

(2) Abstract of observations taken at 8 hrs. at 210

Number of sub-division.	Station.	Height of barometer above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XII.—Central Provinces —concld.																					
	Raipur	970	28·990	+·035	29·920	29·096	4th	28·884	31st	75·5	65·4	93·1	−2·6	67·6	−0·6	80·4	−1·6	25·5	100·5	31st	58·5	5th
	Chanda	*634*	29·320	+·018?	29·902	29·429	4th	29·219	31st	80·5	67·4	98·8	−0·8	68·2	+1·1	83·5	+0·1	30·5	104·5	16th	56·0	3rd
	Jagdalpur	1,813	28·171		29·928	28·239	20th	28·113	31st	74·6	66·3	93·4		65·3		79·4		28·1	96·6	11th	54·4	7th
	XIII.—Hyderabad.																					
27	Aurangabad	1,905	28·083	+·028	29·909	28·133	5th	28·031	31st	79·4	61·1	97·0	+0·6	70·0	+4·4?	83·5	+2·5?	27·0	102·0	29th	62·0	5th
	Nizamabad	1,248	28·708		29·891?	28·774	4th	28·624	31st	81·8	64·0	101·2	+3·1	71·0	+2·7	85·1	−2·9	30·2	107·4	31st	59·7	3rd
	Bidar	*2,165*																				
28	Gulbarga	1,503	28·469	+·031	29·907	28·516	10th	28·382	31st	78·8	65·5	100·7	+1·3	70·7	−0·1	85·7	+0·6	30·0	104·5	31st	62·4	22nd
	Raichur	*1,311*	28·660	+·059	29·906	28·709	21st	28·591	31st	80·4	66·0	99·3	+0·7	73·6	−0·4	86·5	+0·1	25·7	103·1	31st	69·0	10th & 12th.
	Hyderabad (Deccan)	1,738	28·273	+·054	29·921	28·338	5th	28·212	31st	78·8	65·8	97·8	+0·7	71·6	+1·6	84·7	+1·1	26·2	102·5	31st	67·2	9th
	Hanamkonda	877	29·099	+·039	29·926	29·177	5th	29·023	31st	78·6	63·5	98·0	+0·5	73·0	+1·1	85·5	+0·8	25·0	103·0	14th	66·2	21st
	XIV.—Mysore.																					
29	Chitaldrug	2,405	27·392	+·041	29·894?	27·633	4th	27·513	28th	78·0	68·9	95·1	+0·4	70·8	+0·6	83·0	+0·5	24·3	98·5	29th	63·1	11th
	Hassan	3,149	26·914	−·051	29·927	26·951	5th	26·852	28th	72·2	65·0	91·4	+0·2	63·3	+0·2	77·3	+0·7	28·1	95·4	28th	57·2	11th
	Bangalore	3,021	27·035	+·043	29·915	27·078	20th	26·991	31st	73·9	63·9	91·9	+0·9	64·9	+0·2	78·4	+0·5	27·0	95·3	15th, 27th & 31st.	57·5	11th
	Mysore	2,518	27·515	+·044	29·925	27·547	20th	27·463	28th	75·3	66·5	93·0	−0·7	67·5	+0·2	80·3	−0·3	25·5	96·3	8th & 31st.	61·9	11th
	XV.—Madras.																					
30	Mangalore	72	29·934	+·037	29·937	29·972	5th	29·859	28th	81·3	74·1	90·1	+1·2	75·2	+1·1	82·6	+1·1	14·9	92·3	30th	71·9	22nd
	Calicut	27	29·965	+·035	29·921	30·010	5th	29·899	28th	80·5	75·9	89·6	−0·5	75·8	−1·0	82·7	−0·3	13·8	92·8	29th	72·1	10th
	Cochin	9	29·995	+·047	29·932	30·035	4th	29·944	28th	81·9	75·7	90·2	−1·2	77·2	0	83·7	−0·6	13·0	92·0	30th	73·2	21st
	Trivandrum	198	29·801	+·053	29·930	29·849	6th	29·741	28th	79·9	75·1	89·1	+1·8	76·2	−0·3	82·7	+0·7	12·9	91·0	24th & 27th.	72·8	8th
31	Pamban	37	29·9 5	+·041	29·930	30·014	20th	29·906	31st	80·6	75·4	87·7	−1·8	76·9	+0·9	82·3	−0·5	10·8	88·7	14th	75·0	21st
	Madura	447	29·567	+·050	29·948	29·628	5th	29·504	31st	80·5	74·4	95·8	−0·7	74·0	+1·1	84·9	+0·2	21·8	99·1	31st	68·8	9th & 11th.
	Pudukkottai	318	29·711	+·051	29·963	29·763	20th	29·653	31st	79·3	72·7	95·9	+0·2	73·1	+0·2	84·5	+0·2	22·8	98·6	31st	67·1	10th
	Negapatam	31	29·980	+·048	29·940	30·030	20th	29·924	31st	81·0	73·8	88·8	0	76·2	+0·3	82·5	+0·5	12·6	91·2	20th	71·0	9th
	Trichinopoly	255	29·771	+·057	29·960	29·828	20th	29·706	25th & 31st.	80·3	73·9	97·5	−0·2	71·6	−1·1	84·5	−0·7	25·9	100·3	19th	65·1	9th
	Coimbatore	1,341	28·674	+·055	29·950	28·721	7th	28·621	26th	77·5	69·3	95·9	−0·3	69·9	+0·1	82·9	−0·1	26·0	99·5	27th	61·4	12th
	Salem	913	29·101	+·056	29·953	29·147	20th	29·040	31st	77·9	71·4	98·7	0	71·2	+0·3	84·9	+0·1	27·5	102·9	31st	64·3	9th & 12th.
	Cuddalore	37	29·980	+·052	29·947	30·040	20th	29·921	25th	78·6	74·9	88·0	−1·3	71·9	−0·3	80·6	−0·8	16·1	90·1	18th & 22nd.	66·5	12th
	Vellore	707	29·299	+·039	29·954	29·371	20th	29·223	31st	74·9	69·7	95·8	+1·5	68·4	−1·3	82·1	+0·1	27·4	98·2	18th & 31st.	60·5	10th
	Madras	22	29·989	+·043	29·943	30·039	20th	29·912	31st	79·8	75·1	88·6	−1·2	72·0	−0·2	80·3	−0·7	16·6	90·4	14th	66·3	10th
32	Cuddapah	428	29·553	+·045	29·919	29·620	20th	29·472	31st	82·4	71·9	100·0	−1·9	74·7	−0·1	87·4	−1·0	25·3	102·8	13th & 31st.	68·1	11th

N.B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

stations in India, etc., in March, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 31st March 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41.	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XII.—Central Provinces—*concld.*
2	2	4	4	2	3	5	3	6	N 66° W	N 59° W	2·3	3·6	−1·3	10	− 1	57	+15	·497	+·128	2·2	+0·3	2	+0·3	1·09	0·67	+0·42	7·61	1·90	+ 5·71	0·64	Raipur.
2	1	4	10	9	1	1	1	2	S 89° E	N 46° E	3·0*	2·2	+0·8	53	+21	49	+ 5	·504	+·084	1·7	+0·3	1	−0·3	0·86	0·98	−0·12	4·35	2·18	+ 2·17	0·73	Chanda.
21	2	0	0	1	7	0	0	0	S 7° E		1·5			20		64		·549		1·0		3	+1·8	1·51	0·47	+1·04	11·52	1·83	+ 9·69	1·24	Jagdalpur.
																															XIII.—Hyderabad.
6	4	6	5	4	0	3	2	1	N 61° E		6·9			27		31	− 1	·319	+·017	2·6	+1·7	0	−0·6	0	0·28	−0·28	1·50	0·99	+ 0·51	0	Aurangabad.
2	1	4	3	4	5	8	2	2	S 3° W		2·6			26		34	−17	·365	−·156	2·3	+1·0	1	0	0·24	0·54	−0·30	2·56	1·33	+ 1·23	0·24	Nizamabad.
																															Bidar.
6	3	6	4	6	2	3	0	1	S 88° E	N 79° E	4·1	5·8	−1·7	31	+10	47	+ 2	·463	−·001	0·5	−0·4	0	−0·8	0	0·86	−0·36	1·88	0·89	+ 0·99	0	Gulbarga.
0	1	0	2	8	4	8	5	3	S 23° W	S 3° W	5·4	5·3	+0·1	43	+15	44	− 3	·455	−·035	1·6	+0·3	0	−0·5	0	0·25	−0·25	0·28	0·75	− 0·47	0	Raichur.
8	1	0	3	10	4	3	1	1	S 29° E	S 47° E	3·8	3·1	+0·7	43	+31	53	− 2	·508	+·004	1·9	+0·5	0	−1·0	0	0·66	−0·66	1·81	1·31	+ 0·50	0	Hyderabad (Deccan).
2	0	0	0	14	14	1	0	0	S 21° E		3·2			89		62	− 1	·602	+·067	1·9	−0·1	2	+1·3	1·33	0·28	+1·05	3·11	1·18	+ 1·93	0·98	Hanamkonda.
																															XIV.—Mysore.
9	0	0	2	2	1	8	6	3	S 60° W	S 56° W	3·5	4·7	−1·2	40	+ 3	62	+12?	·593	+·112?	2·0	+1·0	0	−0·6	0	0·24	−0·24	1·07	0·81	+ 0·26	0	Chitaldrug.
19	3	0	2	2	0	0	2	3	N 14° W	S 37° E	3·3	2·2	+1·1	13	−10	68	+ 3	·535	+·003	2·2	+0·2	0	−0·5	0	0·25	− 0·25	0·25	1·21	− 0·96	0	Hassan.
2	0	0	4	11	6	5	3	0	S 17° E	S 12° E	5·6	3·6	+2·0	59	+ 9	57	− 7	·473	−·052	0·7	−0·7	1	+0·1	0·10	0·55	−0·45	2·31	1·42	+ 0·89	0·10	Bangalore.
7	1	1	0	6	4	5	6	1	S 30° W	S 29° W	4·2	5·8	−1·6	33	− 5	62	− 7	·540	−·047	2·1	−0·5	2	+1·5	1·22	0·26	+0·96	1·53	0·90	+ 0·63	0·91	Mysore.
																															XV.—Madras.
1	8	10	9	1	1	1	0	0	N 52° E	N 70° E	5·4	2·2	+3·2	66	+26	70	− 3	·742	−·022	1·6	−0·5	0	−0·2	0	0·09	−0·09	0·85	0·68	+ 0·17	0	Mangalore.
16	2	6	1	1	0	0	0	5	N 15° E	N 42° E	5·4	7·7	−2·3	30	−17	79	+ 3	·829	+·014	0·3	−1·6	0	−0·8	0	0·52	−0·52	1·51	2·21	− 0·70	0	Calicut.
2	0	11	16	2	0	0	0	0	N 76° E	N 31° E	5·4	5·0	+0·4	86	+11	74	− 3	·805	−·028	1·0	−1·2	4	+1·3	3·24	2·01	+1·23	12·01	5·19	+ 6·82	1·65	Cochin.
10	5	10	5	0	0	0	0	1	N 42° E	N 24° E	3·7	4·0	−0·3	56	+ 9	79	+ 3	·806	+·022	1·9	−0·4	1	−1·5	0·34	1·62	−1·28	7·27	5·28	+ 1·99	0·16	Trivandrum.
4	0	4	18	5	0	0	0	0	S 88° E	S 87° E	2·9	5·4	−2·5	79	+10	78	+ 1	·809	−·044	2·8	0	3	+1·9	1·01	0·48	+0·53	9·75	10·70	− 0·95	0·46	Pamban.
1	3	9	9	2	1	1	3	2	N 57° E	N 28° E	3·3	2·8	+0·5	46	− 4	73	− 1	·766	−·009	4·9	+2·2?	2	+1·3	0·43	0·47	−0·04	1·92	3·13	− 1·21	0·24	Madura.
20	5	0	0	1	2	0	1	2	N 27° W		3·1			16		72	− 3	·713	−·044	2·9	−1·2	0	−0·9	0·08	0·27	−0·19	3·21	4·40	− 1·19	0·08	Pudukkottai.
3	0	3	3	9	0	3	2	8	S 66° E	S 85° E	7·4	4·6	+2·8	7	−29	70	− 5	·740	−·085	3·7	−0·[illegible]	0	−0·7	0·09	0·37	−0·28	9·99	14·50	− 4·51	0·07	Negapatam.
5	9	11	1	1	1	1	1	1	N 25° E	N 31° E	2·3	2·8	−0·5	56	+34	73	0	·749	−·006	2·3	−0·[illegible]	1	+0·4	1·60	0·43	+1·17	4·81	4·27	+ 0·54	1·60	Trichinopoly.
10	3	16	2	0	0	0	0	0	N 43° E	N 84° E	2·7	2·1	+0·6	62	+22	65	−14?	·612	−·111?	1·8	−1·[illegible]	0	−1·0	0	0·51	−0·51	3·04	2·60	+ 0·44	0	Coimbatore.
2	1	17	7	0	1	2	1	0	N 58° E	N 66° E	4·9	3·9	+1·0	66	+26	71	− 1	·687	−·043	1·1	−0·[illegible]	1	0	0·13	0·53	−0·40	1·23	2·12	− 0·89	0·10	Salem.
10	1	0	0	0	1	11	5	3	S 70° W	N 86° W	5·1	1·8	+3·3	53	+ 3	83	0	·815	−·032	2·7	+0·4	1	+0·7	0·13	0·19	−0·06	8·97	10·04	− 1·07	0·12	Cuddalore.
28	0	0	2	0	0	0	1	0	E		3·5			3		76	0	·661	−·018	0·9	−0·9	1	+0·7	1·60	0·25	+0·75	2·45	5·14	− 2·69	1·00	Vellore.
3	0	0	0	2	2	22	2	0	S 40° W	S 25° W	3·5	4·5	−1·0	79	+25	79	0	·804	−·011	1·4	−1·0	1	+0·7	1·96	0·16	+1·80	9·23	7·57	+ 1·66	1·96	Madras.
9	1	0	6	8	5	2	0	0	S 43° E	S 72° E				49	− 8	58	0	·648	−·011	0·7	−0·5	1	+0·8	1·25	0·19	+1·06	2·51	1·64	+ 0·87	1·25	Cuddapah.

* Mean of 27 days.

Table

(2) Abstract of observations taken at 8 hrs. at 210

Number of sub-division.	Station.	Height of barometer above sea-level in feet.	Pressure, 8 hrs., in inches. Mean of 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XV.—Madras—*concld.*																					
	Bellary	1,475	28·501	+·040	29·903	28·545	21st	28·448	31st	81·8	66·9	100·1	−0·4	72·1	−0·1	86·1	−0·3	28·0	104·1	31st	66·5	13th
	Kurnool	923	29·052	+·049	29·915	29·110	6th	28·954	26th	80·2	67·8	99·9	−0·9	73·6	+2·1?	86·8	+0·6?	26·3	104·0	31st	64·6	11th
33	Nellore	66	29·929	+·015	29·930	29·990	20th	29·837	31st	78·5	76·8	92·3	−3·0	72·6	+0·1	82·5	−1·5	19·7	95·5	31st	66·5	20th
	Masulipatam	15	29·995	+·043	29·915	30·059	21st	29·887	31st	80·5	75·3	90·6	−0·5	71·7	−0·7	81·2	−0·6	18·9	95·8	31st	66·1	9th
	Cocanada	26	29·987	+·046	29·949	30·048	5th	29·878	31st	79·1	74·3	9[illegible]·8	+0·8	73·5	−0·1	83·2	+0·2	19·3	93·5	31st	70·5	9th
	Vizagapatam	*226*	29·954	+·039	29·930	30·031	20th	29·851	31st	80·5	73·9	88·9	+1·9	76·1	+1·3	82·5	+1·6	12·8	95·9	14th	71·2	8th
	Calingapatam	19	29·973		29·929	30·054	20th	29·863	31st	78·3	72·9	93·7		72·3		83·0		21·4	100·1	31st	65·8	8th
	Gopalpur	33	29·925	+·050	29·922	30·016	5th	29·815	31st	79·6	73·6	87·8	+1·2	73·5	+0·5	80·7	+0·9	14·3	91·1	23rd & 31st.	66·7	7th
	Bay Islands.																					
1	P. V. Fraser	8	29·950		29·925	30·038	5th	29·830	31st	80·9	76·9											
	Port Blair	58	29·934	+·034	29·922	29·985	4th	29·861	31st	80·2	75·3	89·2	−1·4	75·0	−1·4	82·1	−1·4	14·2	93·8	18th & 31st.	70·7	6th
	Table Island		29·896	−·004	29·920	29·958	4th	29·824	31st	78·3	74·3	85·5	−1·4	75·9	−0·4	80·7	−0·9	9·6	89·0	29th	71·9	19th
	Kashmir.																					
13	Muzaffarabad		27·619			27·727	24th	27·479	1st	55·8	50·0	68·7		45·0		56·8		23·7	80·2	20th	38·6	2nd
	Srinagar	5,204	24·930	+·055	24·951	25·115	4th	24·749	1st	42·4	40·4	53·6	−2·2	37·8	+0·5	45·7	−0·9	15·8	6[illegible]·0	11th	32·7	1st
	Gulmarg	*8,569*																	Closed	for		
	Dras	*10,059*	20·849	+·074	20·817	21·017	29th	20·556	1st	8·7	?	25·0	−8·6	1·2	−2·9	13·1	−5·7	23·8	37·3	10th	−18·0	3rd
	Leh	*11,503*	19·707	+·041	19·675	19·858	19th	19·490	1st	28·1	?			21·5	+0·7						12·6	3rd
	Skardu	*7,505*	22·939	+·053	22·9[illegible]9	23·111	29th	22·574	23rd	34·3	34·6?*	46·0	−4·0	30·7	−2·0	38·3	−3·0	15·3	54·1	30th	19·3	5th
	Gilgit	4,890	25·256	+·083	25·229	25·445	18th	24·895	2[illegible]rd	47·4	40·3	59·3	−2·3	43·0	−2·0	51·1	−2·1	16·3	73·2	26th	36·7	2nd
	Baluchistan.																					
15	Fort Sandeman	4,614	25·449		25·418	25·593	4th	25·261	22nd	49·5	41·8	69·8		45·0		57·4		24·8	76·9	9th	39·3	13th
	Quetta	5,502	24·674	+·014	24·634	24·768	4th	24·462	22nd	41·1	38·5†	66·1	+2·4	37·1	−2·1	51·6	+0·1	29·0	72·7	7th	28·3	14th
	Chaman	4,311	25·706	+·001	25·668	25·823	4th	25·422	22nd	51·8	44·9	69·3	+6·2	46·1	+2·8	57·7	+4·5	23·2	77·0	7th	34·3	13th
	Kalat	6,630	23·772		23·734	23·876	4th	23·581	22nd	37·1	38·8‡	63·2	−0·2	32·5		47·8		30·7	71·5	7th	19·5	13th
	Dalbandin	2,772	27·163		27·126	27·268	13th	26·895	22nd	52·6	47·0	78·9		47·1		63·0		31·8	87·2	21st	34·3	13th
	Pasni		29·989		29·959	30·090	4th	29·848	22nd	66·7	64·9	83·6		59·6		71·6		24·0	91·8	31st	50·3	13th
	Panjgur		26·790		26·748	26·883	4th	26·637	22nd	53·0	46·7	77·1		48·3		62·7		28·8	82·6	28th	38·8	9th & 13th.
	Seistan		28·210			28·380	23rd	27·850	22nd	50·5	45·5	76·2		45·6		60·9		30·6	88·5	7th	37·7	13th
	Hill stations, excluding Kashmir and Baluchistan.																					
	Parachinar	6,000	24·493	+·019	24·469	24·581	24th	24·290	12th	46·0	40·5	59·0	+0·9	38·7	+0·3	48·8	+0·6	20·3	70·0	29th	32·1	24th
	Cherat	*4,956*	25·772	+·054	25·740	25·901	4th	25·586	1st	51·8	44·7	58·8	−1·7	47·4	+0·5	53·1	−0·6	11·4	70·5	29th	39·9	1st & 13th.
	Drosh (*a*)		25·202			25·325	16, 26 & 27th.	24·950	23rd	43·3	37·8	54·1	−4·5	38·6	−0·7	46·4	−2·6	15·5	67·7	31st	31·4	13th & 22nd.
	Murree	6,323	23·838	+·003	23·806	23·954	4th	22·653	12th	46·5	38·7	54·3	−2·8	42·4	+0·3	48·4	−1·3	11·9	63·7	29th	31·8	2nd

N.B.—Elevations in italics indicate barometrical determinations.

(*a*) Aneroid.

* Mean of 12 days.
† " " 26 "
‡ " " 16 "

NOTE.—The barometric readings are not reduced to sea-level in the case

B—*continued.*

stations in India, etc., in March, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 31st March 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XV.—Madras—*concld.*
5	4	1	3	4	3	1	3	7	N 34° W	S 45° W	3·2	3·4	−0·2	13	+ 2	44	− 3	·474	−·018	1·0	−0·5	0	−0·6	0	0·22	−0·22	0·18	0·52	−0·34	0	Bellary.
9	1	1	2	6	3	7	0	2	S 4° E	E	4·7			30	+19	50	− 3	·521	−·025	0·3	−0·8	1	+0·1	0·15	0·28	−0·13	0·75	0·84	−0·09	0·15	Kurnool.
1	0	0	0	11	14	4	0	1	S 10° E	S 32° E	4·0	4·7	−0·7	79	+11	91	+10	·892	+·084?	1·8	−1·0	1	+0·7	0·91	0·15	+0·76	4·93	4·86	+0·07	0·91	Nellore.
3	0	3	3	9	9	4	0	0	S 28° E	S 20° E	4·7	4·0	+0·7	59	+16	78	− 5	·809	−·055	2·5	−1·0	1	+0·6	0·90	0·29	+0·61	2·75	1·85	+0·90	0·90	Masulipatam.
14	3	0	0	3	0	3	4	4	N 76° W	N 52° W	4·7	4·7	0	23	−20	79	+ 2	·784	+·006	3·3	+0·5	0	−0·8	0·10	0·52	−0·42	1·11	1·98	−0·87	0·07	Cocanada.
3	2	0	1	1	0	2	13	9	N 72° W	S 88° W	7·4			66	− 9	72	0	·750	−·012	3·9	+1·0	0	−0·6	0·01	0·07	−0·06	1·92	2·65	−0·73	0·01	Vizagapatam.
0	4	1	1	0	0	7	9	9	N 72° W		5·6			65		76		·745		1·8		0	−0·6	0	0·52	−0·52	0·90	2·39	−1·49	0	Calingapatam.
1	7	2	0	0	6	6	1	8	N 68° W	S 89° W	7·6	10·1	−2·5	33	− 9	74	− 4	·754	+·014	1·6	+0·8	0	−1·1	0	0·57	−0·57	8·91	2·11	+6·80	0	Gopalpur.
																															Bay Islands.
1	3	0	0	0	0	17	10	0	S 68° W					78		83		·871		2·3		0	−1·5	0	1·03	−1·03	1·35	3·14	−1·79	0	P. V. Fraser.
12	4	3	0	0	0	0	4	8	N 33° W	N 22° W	3·6	3·1	+0·5	46	+ 6	79	− 5	·809	−·046	1·7	−1·5	0	−0·9	0	0·71	−0·71	8·00	10·15	−2·15	0	Port Blair.
1	13	0	0	0	0	1	1	15	N 29° W		8·2			86		81	+ 4	·793	−·001	1·5	−3·9	0	−0·4	0	0·16	−0·16	2·24	3·47	−1·23	0	Table Island.
																															Kashmir.
23	0	3	0	0	0	5	0	0	S 45° W		2·6			3		66		·293		4·6		11	+3·5	9·38	4·05	+5·33	20·79	15·39	+5·40	2·45	Muzaffarabad.
17	1	1	1	2	2	0	1	6	N 41° W	S 3° W	2·2	3·5	−1·3	13	+ 5	34	− 4	·228	−·002	6·8	+0·5	5	−3·0	2·12	3·55	−1·43	13·60	10·68	+2·92	0·67	Srinagar.
																															Gulmarg.
winter months.																															
27	0	1	1	0	1	0	0	1	N 63° E		0·8			3		?		?		5·7	0	12	+1·7	10·61	3·61	+7·00	19·21	10·89	+8·32	2·55	Dras.
20	1	1	1	2	6	0	0	0	S 29° E	S 63° W	2·8	1·5	+1·3	23	+ 3	?		?		5·5	−0·8	0	−1·1	0·07	0·30	−0·23	0·46	1·17	−0·71	0·04	Leh.
17	0	0	0	0	0	4	10	0	S 77° W		2·7			43		71*		·160*		5·6	−1·0	4	+1·2	1·46	0·83	+0·63	4·32	2·98	+1·34	0·48	Skardu.
23	0	0	0	0	0	6	0	2	S 63° W		0·4			23		55	+ 7	·170	+·001	5·0	−1·8	6	+4·6	3·04	0·43	+2·61	4·17	1·00	+2·17	1·04	Gilgit.
																															Baluchistan.
17	1	1	3	2	3	3	1	0	S 23° E		4·2			20		51		·180		1·0		2	−2·7	0·64	1·78	−1·14	2·14	4·06	−1·92	0·32	Fort Sandeman.
22	0	0	1	3	2	0	2	1	S 7° E	S 12° W	2·8	2·9	−0·1	11	0	60†	− 3	·172†	−·041	3·0	−0·3	3	−1·9	0·58	1·90	−1·32	4·98	6·78	−1·80	0·20	Quetta.
3	0	0	13	6	7	2	0	0	S 51° E	S 31° E	6·1	7·2	−1·1	66	+15	57	− 1	·225	+·010	3·3	−1·2	2	−2·5	0·70	1·58	−0·88	5·26	5·71	−0·45	0·31	Chaman.
29	0	0	0	0	0	2	0	0	S 45° W	S 22° W	5·7			3	−57	70‡	+ 6	·196‡	−·001	3·7		2	−0·9	0·66	0·95	−0·29	3·21	4·47	−1·26	0·42	Kalat.
12	5	5	2	1	2	3	1	0	N 40° E		5·0			17		65		·264		2·1		1	−0·7	0·13	0·37	−·024	3·44	2·79	+0·65	0·13	Dalbandin.
8	6	0	0	0	0	1	4	12	N 44° W		3·5			62		91		·592		3·1		0	−1·2	0	0·47	−0·47	8·47	5·01	+3·46	0	Pasni.
14	0	7	6	0	1	2	0	1	N 70° E		5·2			30		60		·250		2·5		1	−0·8	0·58			2·75			0·52	Panjgur.
22	0	0	0	0	0	0	0	9	N 45° W		3·8			27		67		·248		0·9		0		0			1·20			0	Seistan.
																															Hill stations, excluding Kashmir and Baluchistan.
31	0	0	0	0	0	0	0	0	Calm		0·5			(a)		64	0	·195	+·001	4·0	−0·5	10	+1·1	7·01	4·43	+2·58	14·09	10·05	+4·04	1·22	Parachinar.
11	11	0	1	0	0	0	0	8	N 15° W	N 10° W	6·1	10·4	−4·3	59	+ 3	58	+ 1	·217	+·008	4·8	+0·6	6	0	3·61	4·24	−0·63	11·30	11·55	−0·25	1·30	Cherat.
17	0	5	9	0	0	0	0	0	N 75° E		2·8			43		61	− 8	·164	−·034	4·2	−0·5	10	+3·1	9·65	2·95	+6·70	14·17	6·01	+8·16	2·69	Drosh.
7	6	1	2	14	1	0	0	0	S 72° E	S 83° E	4·6	6·6	−2·0	48	+14	51	− 5	·154	−·023	4·5	−0·3	7	−0·1	6·11	4·55	+1·56	13·03	14·34	−1·31	1·61	Murree.

of hill or plateau stations, the elevations of which exceed 3,200 feet.

* Mean of 12 days.
† „ 26 „
‡ „ 16 „

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs. at 210

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Hill stations, excluding Kashmir and Baluchistan —concld.																					
	Simla	7,232	23·150	+·060	23·112	23·249	10th	23·045	2nd	47·9	39·7*	54·7	−0·8	43·0	−0·9	48·9	−0·9	11·7	62·7	12th	33·2	29th
	Chakrata	7,072	23·412	P	23·372	23·506	10th	23·295	2nd	50·4	42·0	61·6	+0·7	44·2	+0·5	52·9	+0·6	17·4	70·0	12th	34·3	2nd
	Mukteswar	7,592	22·904	+·052	22·863	22·993	11th	22·814	2nd	48·4	40·3*	59·9	−0·3	40·9	−2·0	50·4	−1·1	19·0	67·5	12th	30·8	3rd & 21st
	Darjiling	7,432	22·994	+·042	22·949	23·101	19th	22·874	31st	50·9	43·5	59·8	+3·5	44·9	+2·8	52·4	+3·1	14·9	70·1	16th	36·8	1st
	Shillong	4,920	25·201	+·066	25·153	25·310	19th	25·078	31st	63·1	50·7	73·0	+2·8	53·6	+2·9	63·4	+2·9	19·4	79·7	17th & 15th.	42·5	2nd
	Cherrapunji	4,309	25·737	+·032	25·698	25·863	19th	25·633	31st	64·6	53·8	72·2	+5·1	57·3	+3·4	64·7	+4·3	14·9	77·1	25th & 28th.	50·1	5th
	Netarhat		26·235		26·184	26·330	21st	26·152	14th	67·9	52·6	73·4		P		P		P	77·7	31st	P	
	Maymyo	3,546	26·480	+·010	26·425	26·531	19th	26·295	31st	64·9	58·8	81·9	+0·5	52·1	+2·0	67·0	+1·3	29·8	86·6	15th	42·4	8th
	Pachmarhi	3,528	26·531	+·027	26·478	26·610	4th	26·458	2nd	69·8	58·1	85·0	+0·7	62·3	+2·3	73·7	+1·5	22·7	92·0	31st	50·1	5th
	Mount Abu	3,945	26·127	+·039	26·077	26·215	4th	26·025	1st	68·2	51·4	76·1	−0·8	61·3	+0·1	68·7	−0·3	14·8	82·4	30th	56·2	13th
	Mercara	3,781	26·294	+·026	26·227	26·330	5th	26·240	28th	67·1	61·0	85·4	+0·8	59·8	−1·8	72·6	−0·5	25·6	91·0	28th	55·0	12th
	Ootacamund	7,327	23·131	+·046	23·067	23·158	20th	23·100	28th	61·1	49·9	71·4	+2·1	47·8	−0·2	59·6	+0·9	23·6	77·1	31st	44·7	1st
	Kodaikanal	7,688	22·892	+·022	22·827	22·920	19th	22·859	28th	59·3	47·9	69·0	+0·5	49·8	−1·0	59·4	−0·3	19·2	72·6	31st	42·8	10th
	Extra India.																					
	Singapore (a)	10	29·877	−·068	29·808	29·944	16th	29·809	8th	85·0	...	90·0	+1·3	75·3	+2·0	82·7	+1·7	14·7	92·5	17th	73·5	11th
	Penang (a)	17	29·870	−·050	29·812	29·916	17th & 20th.	29·802	14th	83·7	...	93·5	+2·0	73·2	−0·8	83·3	+0·6	20·3	95·0	9 days	70·0	3rd
	Trincomalee	99	29·900	+·047	29·928	29·950	4th	29·841	31st	77·9	74·5	89·3	+1·2	76·6	−0·4	82·4	+0·4	13·7	92·2	19th	72·2	10th
	Colombo	24	29·970	+·038	29·920	30·010	4th	29·922	28th	74·2	78·0	89·8	+0·1	73·5	−1·5	81·7	−0·7	16·3	93·5	30th	68·6	3rd
	Hambantota	64	29·938		29·928	29·986	4th	29·892	26th	74·4	71·4	88·8		73·7		81·3		15·1	91·5	21st	69·5	9th
	Minicoy	7	30·032	+·076	...	30·065	16th	29·973	28th													
	Amini Divi	13	29·993	+·083	29·934	30·042	6th	29·918	28th	84·4	76·2	92·0	+3·2†	78·4	+0·8	85·2	+2·0†	13·6	94·4	31st	73·3	21st
	Gyantse	13,110																				
	Pharijong	14,400																				
	Gangtok	5,667	24·215	−·031	24·300	24·446	19th	24·212	31st	55·2	49·1	68·7	+2·4	52·9†	+11·2	62·54	+6·8	15·8	77·0	15th	49·4	20th
	Gartok (c)	15,100																				
	Kashgar (c)	4,255	25·479	−·131		25·740	11th	25·040	21st	40·2	36·5‡	58·1	+2·0	28·4	−1·6	45·8	+0·2	24·7	73·3	20th	22·3	13th
	Kabul (c)	...																				
	Meshed	3,104																				
	Jask (b)	13	29·995	+·015	29·962	30·125	12th	29·864	21st	68·4	63·6	80·7	+1·6	65·2	−1·4	72·9	+0·1	15·5	84·5	24th	59·1	4th
	Muscat	20	30·020	+·040	29·992	30·152	12th	29·907	23rd	78·6	66·1	81·4	+3·0	69·7	−2·3	75·6	+0·3	11·7	88·5	23rd	62·3	9th
	Bushire (b)	14	30·020	+·032	29·916	30·184	9th	29·848	21st	62·9	58·3	71·9	−0·5	58·7	−0·3	65·3	−0·4	13·2	88·9	20th	52·4	9th
	Basrah	25																				
	Ispahan (c)	5,817	24·249	+·009	...	24·400	30th	24·040	21st	43·1	38·1§	65·2	+4·5	37·8	+1·3	51·5	+2·9	27·4	76·4	19th	28·2	22nd
	Tehran (c) (b)	4,009	25·748	−·052		25·970	31st	25·440	21st	50·8	42·9	63·9	+5·3	42·2	+3·6	53·0	+4·5	21·7	78·5	31st	31·0	8th
	Baghdad	127	29·934			30·114	10th	29·632	5th	54·4	49·6	74·4		52·7		63·5		21·7	93·8	31st	37·5	7th
	Aden	94	29·917	+·020	29·944	29·976	30th	29·801	23rd	76·7	71·8	81·8	−1·8	74·9	−0·5	78·3	−1·1	6·9	85·7	8th	70·9	13th
	Zanzibar	72	29·945	+·035	29·943	30·005	19th	29·887	22nd	82·7	78·1	87·5	+0·8	79·9	+0·5	83·7	+0·7	7·6	91·9	1st	72·2	2nd

N.B.—Elevations in italics indicate barometrical determinations.

(a) 9 hrs. observations.
(b) 7 hrs. observations.
(c) Aneroid.

* Mean of 30 days.
† " " 17 "
‡ " " 19 "
§ " " 25 "

NOTE.—The barometric readings are not reduced to sea-level in the c

B—*concluded.*

stations in India, etc., in March, 1919—*concluded.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 31st March 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Hill stations, excluding Kashmir and Baluchistan—*concld.*
																48*	+ 3	·159*	+ ·014	4·4	+ 0·2	3	−2·0	2·46	2·69	−0·23	12·13	9·98	+ 2·15	0·79	Simla.
9	1	15	4	0	0	2	0	0	N 52° E	N 13° E	4·0	5·2	−1·2	56	+17	51	− 3	·181	+ ·006	4·1	+1·2	4	−0·9	2·36	3·09	−0·73	21·73	13·40	+ 8·33	0·94	Chakrata.
2	3	7	7	3	0	0	8	1	N 40° E		6·0			30		50*	+ 4	·165*	+ ·002	4·9	+1·3	4	−0·2	1·64	2·24	−0·60	11·95	7·92	+ 4·03	0·49	Mukteswar.
16	3	0	2	1	0	4	3	2	N 76° W	S 37° E	3·4	5·5	−2·1	17	+ 6	58	−15	·208	−·039	3·5	−0·1	4	+0·3	1·16	1·83	−0·67	4·35	3·83	+ 0·52	0·69	Darjiling.
6		1	0	0	10	14	0	0	S 25° W		3·9			69		41	−11	·282	−·027	1·9	−0·4	2	−3·0	0·49	2·23	−1·74	1·59	4·23	− 2·64	0·28	Shillong.
4	1	4	1	0	1	11	8	1	S 72° W		7·6			46		50	−20	·294	−·065	1·6	−2·1	2	−5·3	0·92	9·12	−8·20	1·74	13·18	−11·44	0·64	Cherrapunji.
0	0	0	0	0	1	11	10	9	S 85° W		6·1			78		32		·220		0·1		2		2·02			11·01			1·25	Netarhat.
24	0	1	9	0	0	3	2	1	S 80° W		1·0			13		70	0	·433	+·011	1·3	−0·3	1	−0·1	0·52	0·57	−0·05	1·52	1·49	+ 0·03	0·52	Maymyo.
11	0	0	5	2	2	6	3	2	S 19° W	N 3° W	3·1	3·7	−0·6	20	+16	49	+13	·353	+·082	1·3	−0·4	0	−1·1	0	0·51	−0·51	6·52	2·22	+ 4·30	0	Pachmarhi.
2	4	8	2	3	0	10	0	2	N 24° E	N 23° W	8·3	5·3	+3·0	7	−22	28	− 8	·192	−·040	2·4	+0·3	0	−0·5	0	0·19	−0·19	0·39	0·92	− 0·53	0	Mount Abu.
16	5	2	3	2	0	0	0	3	N 28° E	N 22° E	2·3	2·7	−0·4	30	+ 8	70	+ 1	·463	−·032	1·4	−1·8	0	−1·6	0	0·65	−0·65	0·91	1·77	− 0·86	0	Mercara.
4	0	1	10	12	4	0	0	0	S 59° E		3·5			72		47	0	·245	+·007	1·2	−0·7	2	−0·4	1·01	1·25	−0·24	2·39	5·38	− 2·99	0·78	Ootacamund.
0	9	7	8	5	1	0	0	1	N 57° E		8·4			62		44	− 3	·219	−·010	1·5	−0·3	3	−0·3	1·01	2·35	−1·34	11·43	11·16	+ 0·27	0·41	Kodaikanal.
																															Extra India.
6	1	21	0	2	0	0	0	1	N 46° E					69						5·3	+0·8	10	+0·2	9·79	7·58	+0·21	36·59	38·29	− 1·70	2·05	Singapore.
0	8	15	1	2	0	0	0	2	N 34° E					82								11	+4·2	6·61	4·04	+2·57	23·07	17·88	+ 5·19	2·52	Penang
18	0	2	3	1	1	4	2	0	S 6° E	S 37° W	3·4	4·1	−0·7	10	−13	85	0	·807	−·065	3·0	+0·3	3	+0·8	2·46	1·49	+0·97	29·08	23·27	+ 5·81	1·38	Trincomalee.
27	0	3	1	0	0	0	0	0	N 56° E	S 58° E	2·5	3·9	−1·4	10	−22	94	+15	·794	−·057	3·7	+0·6	5	−0·7	2·63	4·30	−1·67	11·83	15·49	− 3·66	0·99	Colombo.
0	25	3	0	0	0	0	0	3	N		6·0			94		86		·728		2·6		2		0·79			3·91			0·65	Hambantota.
0	17	7	2	2	1	1	0	1	N 20° E	N 20° W	2·8	3·9	−1·1	68	+11					3·0	+0·2	4	+2·4	1·55	0·97	+0·58	9·79	6·89	+ 2·90	0·80	Minicoy.
0	12	11	0	0	0	0	1	7	N 5° E		5·7			81		67	− 6	·791	−·055	4·0	+0·8	0	−0·1	0	0·04	−0·04	5·76	1·68	+ 4·08	0	Amini Divi.
																									0·07						Gyantse.
																									0·83						Phariong.
17	2	10	1	0	0	0	0	1	N 35° E		1·6			39		61	−13	·265	−·044	3·6	+1·4	5	−3·3	1·55	4·99	−3·44	4·72	9·73	− 5·01	0·70	Gangtok.
																									0						Gartok.
23	2	0	1	0	1	0	4	0	N 72° W	N 1° W	1·7	1·8	−0·1	10	+ 2	48†	− 9	·153†	−·020	5·3	+0·5	0	−0·7	0	0·33	−0·33	0	0·81	− 0·81	0	Kashgar.
										N 80° W															3·90						Kabul.
																									2·23						Meshed.
11	5	2	7	1	0	0	2	3	N 33° E	N 23° E	7·7	8·0	−0·3	33	− 3	76	+ 7	·530	+·069	1·3	−1·2	0	−1·6	0	0·72	−0·72	5·18	3·66	+ 1·52	0	Jask.
13	0	0	3	1	0	0	2	12	N 41° W	N 72° W	3·8	3·4	+0·4	33	+ 3	66	− 2	·547	−·036	2·0	−0·3	3	+1·3	0·80	0·65	+0·15	4·93	3·22	+ 0·81	0·50	Muscat.
5	3	2	1	1	2	0	5	12	N 46° W	N 41° E	8·1	6·2	+1·9	46	+ 6	74	− 4	·431	+·002	2·8	−1·1	0	−2·2	0	1·03	−1·03	7·16	8·66	− 1·50	0	Bushire.
																									1·09						Busrah.
21	0	0	6	0	0	4	5	1	S 77° W	S 82° W	2·8	4·6	−1·8	29	−15	53‡	−12	·161‡	−·007	1·0	−2·4	0	−3·0	0	1·05	−1·05	1·78	2·91	− 1·16	0	Ispahan.
13	0	5	2	2	0	2	7	0	N 45° W	N 14° E	3·5	2·8	+0·7	3	−19	51	−19	·188	−·001	2·6	−1·4	1	−4·4	0·13	1·91	−1·78	4·94	5·81	− ·087	0·10	Tehran.
2	6	2	3	1	4	2	9	2	N 66° W	N 11° W	6·4	2·9	+3·5	23	− 1	70	+ 6	·300	+·017	2·1	−0·6	1	−2·5	0·12	1·36	−1·24	5·84	4·99	+ 0·85	0·12	Baghdad.
3	1	23	3	0	0	0	0	1	N 46° E	N 82° E	14·2	11·5	+2·7	82	+ 3	78	+ 1	·720	−·013	5·5	+0·6	0	−0·7	0	0·54	−0·54	0·03	1·22	− 1·19	0	Aden.
8	4	6	1	1	6	5	0	0	S 45° E	S 27° E	3·3	3·9	−0·6	10	−12	81	− 1	·899	+·005	7·0	+1·0	11	+2·0	·27	6·50	+0·77	17·15	17·28	− 0·13	1·54	Zanzibar.

of hill or plateau stations, the elevations of which exceed 3,200 feet.

* Mean of 30 days.
† " " 19 "
‡ " " 25 "

Table C.—Abstract of observations taken at 8 hrs. at 60 fourth and fifth class stations in India, etc., in March, 1919.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	II.—Assam.																								
4	Bishnath	68·6	63·0	87·7	+5·7	59·6	+4·4	73·7	+5·1	28·1	97·3	15th	53·9	7th	...	...	...	...	...	...	...	...	...	...	...
	Borjuli	75·4	72·3	89·4	+6·1	57·9	+0·9	73·7	+3·5	31·5	96·4	18th	48·4	2nd	...	...	...	...	...	...	...	...	...	...	...
	Chandkhira	68·5	67·3	94·9	+7·1	58·5	+1·1	76·7	+4·1	36·4	103·1	29th	50·1	7th	...	...	...	...	...	...	...	...	...	...	...
	Doom Dooma	65·4	61·9	86·9	+12·9	59·2	+2·7	73·1	+7·8	27·7	95·1	15th	50·2	7th	...	...	...	...	...	...	...	...	...	...	...
	Dikom	66·6	61·9	85·3	+7·0	58·5	+1·1	71·9	+4·1	26·8	92·8	15th	50·0	7th	...	...	...	...	...	...	...	...	...	...	...
	Golaghat	66·5	63·4	86·3	+6·0	57·2	...	71·7	...	29·1	97·9	15th	51·6	8th	...	...	...	...	...	...	...	...	...	...	...
	Hailakandi	70·5	65·6	91·1	+5·4	62·7	+2·5	76·9	+3·9	28·4	97·4	28th	54·8	7th	...	...	...	...	...	...	...	...	...	...	...
	Jorehat	67·5	63·4	86·2	+5·9	61·0	+2·3	73·6	+4·1	25·2	96·7	15th	55·2	7th	...	...	...	...	...	...	...	...	...	...	...
	Lumding*	70·9	64·6	88·4	...	57·4	...	72·9	...	31·0	96·1	15th	48·8	30th	...	...	...	...	...	...	...	...	...	...	...
	Messa	79·5	75·5	89·9	+2·8	58·2	+3·0	74·1	+2·9	31·7	96·4	31st	50·0	3rd	...	...	...	...	...	...	...	...	...	...	...
	Panerihat	61·3	57·7	86·7	+4·9	50·4	−4·8	66·5	+0·1	36·3	94·6	15th	46·8	25th	...	...	...	...	...	...	...	...	...	...	...
	III.—Bengal.																								
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Brahmanbaria	76·8	72·8	92·9	+4·8	68·1	+4·2	80·5	+4·5	24·8	98·6	31st	58·1	1st	...	...	...	...	...	...	...	...	...	...	...
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Goalundo	81·6	72·3	96·0	+6·3	63·2	+2·1	79·6	+4·2	32·8	103·7	13th	51·5	5th	...	...	...	...	...	...	...	...	...	...	...
	Pabna	77·2	66·4	95·2	+3·6	63·0	+1·3	79·1	+2·5	32·2	102·5	13th	58·1	7th & 11th	...	...	...	...	...	...	...	...	...	...	...
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dam Dim	61·0	58·6	90·2	+4·5	52·0	−1·1	71·1	+1·7	38·2	98·1	16th	43·8	1st & 2nd	...	...	...	...	...	...	...	...	...	...	...
	Kalchini	73·8	68·0	87·8	+4·1	53·7	−1·4	70·7	+1·3	34·1	92·1	24th & 26th	46·0	4th	...	...	...	...	...	...	...	...	...	...	...
	Nagrakata	75·0	61·8	90·0	+6·4	55·9	−3·3	72·9	+1·5	34·1	95·1	4 days	50·0	1st & 5th	...	...	...	...	...	...	...	...	...	...	...
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raniganj (Asansol)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IV.—Bihar and Orissa.																								
7	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzaffarpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Motihari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Mean of 29 days.

C.

and fifth class stations in India, etc., in March, 1919.

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 31st March 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				II.—Assam.
...	...	...	...	...	72	−20	·502	−·018	...	...	3	−1·9	1·45	2·39	− 0·94	1·99	5·29	− 3·30	1·05	Bishnath.
...	...	...	...	...	90	+12	·774	+·287	...	...	1	−3·6	0·47	1·97	− 1·50	0·68	4·27	− 3·59	0·43	Borjuli.
...	...	...	...	...	94	+ 7	·660	+·074	...	...	0	−4·9	0	3·97	− 3·97	0·81	7·57	− 6·76	0	Chandkhira.
...	...	...	...	...	82	−12	·513	−·011	...	...	4	−6·3	0·80	5·55	− 4·75	3·47	10·52	− 7·05	0·30	Doom Dooma.
...	...	...	...	...	76	−15	·495	−·013	...	...	2	−7·4	0·96	4·59	− 3·63	3·60	8·99	− 5·39	0·61	Dikom.
...	...	...	...	...	84	− 3	·541	+·021	...	...	4	−2·3	0·96	2·63	− 1·67	1·69	5·91	− 4·22	0·53	Golagbat.
...	...	...	...	...	76	−11	·570	+·033	...	...	2	−4·8	0·44	5·57	− 5·13	0·70	9·46	− 8·76	0·25	Hailakandi.
...	...	...	...	...	79	− 7	·533	+·016	...	...	3	−3·8	0·72	3·06	− 2·34	2·14	6·57	− 4·43	0·34	Jorehat.
...	...	...	...	...	71	...	·524	...	...	...	3	−2·4	1·60	2·31	− 0·71	...	4·28	...	0·66	Lumding.
...	...	...	...	...	82	+ 5	·843	+·304	...	...	4	− 0·3	0·98	2·24	− 1·26	1·54	4·85	− 3·51	0·35	Messa.
...	...	...	...	...	79	− 2	·435	+·020	...	...	0	−5·0	0·03	2·68	− 2·65	0·94	4·93	− 3·99	0·02	Panerihat.
																				III.—Bengal.
...	...	...	...	...	...	...	...	...	...	...	0	−3·7	0	2·94	− 2·94	0	4·65	− 4·65	0	Comilla.
...	...	...	...	...	81	+ 2	·762	+·113	...	...	2	−2·4	1·82	3·66	− 1·84	2·17	5·77	− 3·60	1·56	Brahmanbaria.
...	...	...	...	...	...	...	...	...	...	...	0	−3·0	0·06	2·07	− 2·01	1·04	3·98	− 2·94	0·06	Faridpur.
...	...	...	...	...	62	−14	·682	+·089	...	...	0	−3·7	0	2·34	− 2·34	0·78	4·21	− 3·43	0	Goalundo.
...	...	...	...	...	55	−20	·505	−·085	...	...	0	−2·8	0	1·36	− 1·36	1·13	2·79	− 1·66	0	Pabna.
...	...	...	...	...	...	...	...	...	...	...	1	−1·1	0·20	1·30	− 1·10	0·77	2·59	− 1·82	0·20	Sirajganj.
...	...	...	...	...	...	...	...	...	...	...	0	−2·0	0·06	1·21	− 1·15	2·18	2·24	− 0·06	0·05	Rampur Boalia.
...	...	...	...	...	...	...	...	...	...	...	0	−1·4	0·04	0·76	− 0·72	1·90	2·33	− 0·43	0·04	Malda.
...	...	...	...	...	...	...	...	...	...	...	0	−2·0	0·03	1·26	− 1·23	0·49	2·33	− 1·84	0·03	Rangpur.
...	...	...	...	...	87	− 1	·466	−·010	...	...	1	−2·7	0·58	2·13	− 1·55	1·16	3·91	− 2·75	0·58	Dam Dim.
...	...	...	...	...	72	− 2	·614	+·077	...	...	0	−3·5	0·03	1·99	− 1·96	0·47	4·16	− 3·69	0·03	Kalchini.
...	...	...	...	...	44	−28	·376	−·078	...	...	1	−3·2	0·46	2·29	− 1·83	1·04	4·65	− 3·61	0·46	Nagrakata.
...	...	...	...	...	...	...	...	...	...	...	0	−3·0	0·11	2·26	− 2·15	0·68	3·53	− 2·85	0·07	Cooch Behar.
...	...	...	...	...	...	...	...	...	...	...	0	−2·4	0·14	1·66	− 1·52	1·65	3·54	− 1·89	0·03	Krishnagar.
...	...	...	...	...	...	...	...	...	...	...	2	−0·3	0·89	1·21	− 0·32	6·13	2·85	+ 3·28	0·62	Bankura.
...	...	...	...	...	...	...	...	...	...	...	1	−1·1	0·14	1·13	− 0·99	3·15	2·70	+ 0·45	0·12	Raniganj (Asansol)
																				IV.—Bihar and Orissa.
...	...	...	...	...	...	...	...	...	...	...	2	−0·1	1·14	1·05	+ 0·09	6·29	3·15	+ 3·14	0·89	Hazaribagh.
...	...	...	...	...	...	...	...	...	...	...	0	−1·4	0	0·58	− 0·58	1·39	1·96	− 0·57	0	Bhagalpur.
...	...	...	...	...	...	...	...	...	...	...	0	−1·2	0	0·51	− 0·51	1·23	1·69	− 0·46	0	Muzaffarpur.
...	...	...	...	...	...	...	...	...	...	...	1	0	0·27	0·56	− 0·29	1·17	1·81	− 0·64	0·25	Motihari.
...	...	...	...	...	...	...	...	...	...	...	1	−0·1	0·10	0·38	− 0·28	1·76	1·72	+ 0·04	0·10	Chapra.
...	...	...	...	...	...	...	...	...	...	...	1	−0·2	0·15	0·51	− 0·36	2·70	2·09	+ 0·61	0·11	Arrah.
...	...	...	...	...	...	...	...	...	...	...	0	−1·2	0·05	0·51	− 0·46	3·22	2·16	+ 1·06	0·03	Sehri.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from: Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	V.—United Provinces of Agra and Oudh.																								
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehra Dun	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IX.—Rajputana.																								
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XII.—Central Provinces.																								
23	Chhindwara	71·4	61·6	91·3	...	62·7	...	77·0	...	28·6	97·5	31st	52·9	5th	16	3	5	1	1	0	0	2	3	N 7° E	...
	XIII.—Hyderabad.																								
27	Parbhani	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XV.—Madras.																								
31	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Anantapur	79·6	74·9	99·1	...	71·1	...	85·1	...	28·0	102·3	31st	62·1	11th	...	...	...	...	...	...	...	...	...	...	...
33	Guntur	79·0	75·4	95·7	...	72·3	...	84·0	...	23·4	100·2	31st	68·0	11th & 21st	...	...	...	...	...	...	...	...	...	...	...
	Koraput	71·8	64·3	88·9	...	63·2	...	76·1	...	25·7	94·5	13th, 14th & 16th	53·7	23rd	...	...	...	...	...	...	...	...	...	...	...
	Bay Islands.																								
1	Car Nicobar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kashmir.																								
13	Jammu	65·2	57·0	79·3	...	60·3	...	69·8	...	19·0	86·3	12th	53·7	24th	0	13	12	3	1	2	0	0	0	N 32° E	...
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kargil	22·9	?	33·2	...	5·7	...	21·9	...	32·5	50·9	13th	−11·2	3rd	7	0	0	0	18	3	0	0	3	S 38° E	...
	Baluchistan.																								
15	Harnai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill stations, exclusive of Kashmir.																								
	Panighatta	71·9	60·2	87·8	+4·6	64·6	+3·6	76·2	+4·1	23·2	96·7	15th	58·3	1st	...	...	...	...	...	...	...	...	...	...	...
	Kurseong	67·0	63·7	71·5	+4·6	56·7	+3·6	64·1	+4·1	14·8	81·3	15th	48·4	1st	...	...	...	...	...	...	...	...	...	...	...
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ringim	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dharampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mussooree	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Poo	...	...	44·3	−4·4	27·8	−3·3	36·1	−3·9	16·5	50·9	30th	16·7	5th	1	1	5	7	1	1	7	5	3	W	...
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pishin	...	...	67·4	+2·3	31·6	−4·6	49·5	−1·1	35·8	74·3	7th & 21st.	21·0	13th & 14th	...	...	...	...	...	...	...	...	...	...	...

C—*continued.*

and fifth class stations in India, etc., in March, 1919—*continued.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec 1918 to 31st March 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				V.—United Provinces of Agra and Oudh.
...	...	...	...	...	...	...	...	...	...	...	0	− 1·6	0·06	0·64	− 0·58	6·00	3·27	+ 2·73	0·03	Meerut.
...	...	...	...	...	...	...	...	...	...	...	3	+ 0·4	1·30	1·26	+ 0·04	10·11	6·91	+ 3·20	0·65	Dehra Dun.
																				IX.—Rajputana.
...	...	...	...	...	...	...	...	...	...	...	0	− 0·4	0·06	0·12	− 0·06	0·15	0·51	− 0·36	0·05	Udaipur.
																				XII.—Central Provinces.
2·9	...	...	26	...	56	...	·428	...	2·1	...	1	− 1·3	0·85	0·77	+ 0·08	7·15	2·66	+ 4·49	0·73	Chhindwara.
																				XIII.—Hyderabad.
...	...	...	...	...	...	...	...	...	...	...	0	− 0·4	0	0·29	− 0·29	1·84	0·80	+ 1·04	0	Parbhani.
																				XV.—Madras.
...	...	...	...	...	...	...	...	...	...	...	3	+ 1·2	1·92	0·90	+ 1·02	13·53	7·21	+ 6·32	1·14	Tinnevelly.
...	...	...	...	...	80	...	·607	...	0·7	...	1	+ 0·7	0·15	0·18	− 0·03	...	0·50	...	0·15	Anantapur.
...	...	...	...	...	84	...	·833	...	0·3	...	2	+ 1·0	0·31	1·64	− 1·27	0·75	2·09	− 1·34	0·28	Guntur.
...	...	...	...	...	66	...	·520	...	...	...	1	...	1·78	...	...	5·59	...	...	1·60	Koraput.
																				Bay Islands.
...	...	...	...	...	...	...	...	...	...	...	0	− 2·3	0·06	1·32	− 1·26	11·38	14·59	− 3·21	0·06	Car Nicobar.
																				Kashmir.
...	...	...	74	...	59	...	·372	...	3·3	...	2	− 2·8	0·69	3·22	− 2·53	9·46	10·36	− 0·90	0·43	Jammu.
...	...	...	...	...	...	...	...	...	...	...	13	− 1·4	15·79	14·00	+ 1·79	43·13	40·95	+ 2·18	3·37	Sonamarg.
...	...	...	58	...	?	...	?	...	4·4	...	7	+ 5·1	2·13	0·95	+ 1·18	5·99	5·11	+ 0·88	0·85	Kargil.
																				Baluchistan.
...	...	...	...	...	...	...	...	...	...	...	2	− 0·8	0·46	1·50	− 1·04	1·39	4·89	− 3·50	0·28	Harnai.
																				Hill stations, exclusive of Kashmir.
...	...	...	...	...	47	− 8	·369	−·014	...	...	1	− 2·5	0·76	2·35	− 1·59	1·78	4·53	− 2·75	0·74	Panighatta.
...	...	...	...	...	84	+23	·561	+·071	...	...	2	− 1·8	0·48	2·82	− 2·34	1·55	5·46	− 3·91	0·29	Kurseong.
...	...	...	...	...	...	...	...	...	...	...	11	− 0·7	11·17	7·15	+ 4·02	41·62	14·40	+ 27·22	2·35	Gnatong.
...	...	...	...	...	...	...	...	...	...	...	14	+ 4·0	4·04	5·93	− 1·89	...	10·01	...	0·67	Lachung.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	6·32	...	...	14·52	...	...	Ringim.
...	...	...	...	...	...	...	...	...	...	...	4	...	1·75	...	...	12·85	...	...	0·65	Dharampore.
...	...	...	...	...	...	...	...	...	...	...	3	− 1·4	2·29	2·29	0	12·29	9·37	+ 2·92	1·20	Mussooree.
...	...	...	2	...	...	...	...	...	5·3	+ 0·5	8	+ 1·9	4·48	3·15	+ 1·33	13·65	8·34	+ 5·31	0·80	Poo.
...	...	...	...	...	...	...	...	...	...	...	10	+ 2·7	2·96	3·97	− 1·01	11·85	10·76	+ 1·09	0·75	Kailang.
...	...	...	...	...	...	...	...	...	2·1	...	3	− 1·7	1·05	2·06	− 1·01	5·99	7·06	− 1·07	0·61	Pishin.

Table

Abstract of observations taken at 8 hrs. at 60 fourth and

Number of sub-Division.	Station.	Temperature of air.													Wind direction.										
															Number of winds from										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature during month.	Date.	Lowest temperature observed during month.	Date.	Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.*
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Extra India.																								
	Chumbi	30·9	35·9P*	52·6	...	26·0	...	39·3	...	26·6	61·2	30th	16·2	5th	...	...	...	...	...	...	...	...	...	...	...
	Pemba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abadan	70·7	59·6	88·7	...	57·7	...	73·2	...	31·0	100·0	30th	46·0	7th	0	27	0	0	0	4	0	0	0	N	...

* Mean of 9 days.

C—*concluded.*

fifth class stations in India, etc., in March, 1919—*concluded.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 31st March, 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				Extra India.
...	...	...	...	...	89*	...	·198*	...	2·3	...	1	−4·0	0·43	2·25	−1·82	13·48	4·11	+9·37	0·43	Chumbi.
...	...	...	...	...	...	...	...	...	...	...	11	+2·7	9·84	5·90	+3·94	23·07	17·45	+5·62	2·85	Pemba.
...	...	...	7	...	53	...	·370	...	...	...	0	...	0	...	...	5·83	...	...	0	Abadan.

* Mean of 9 days.

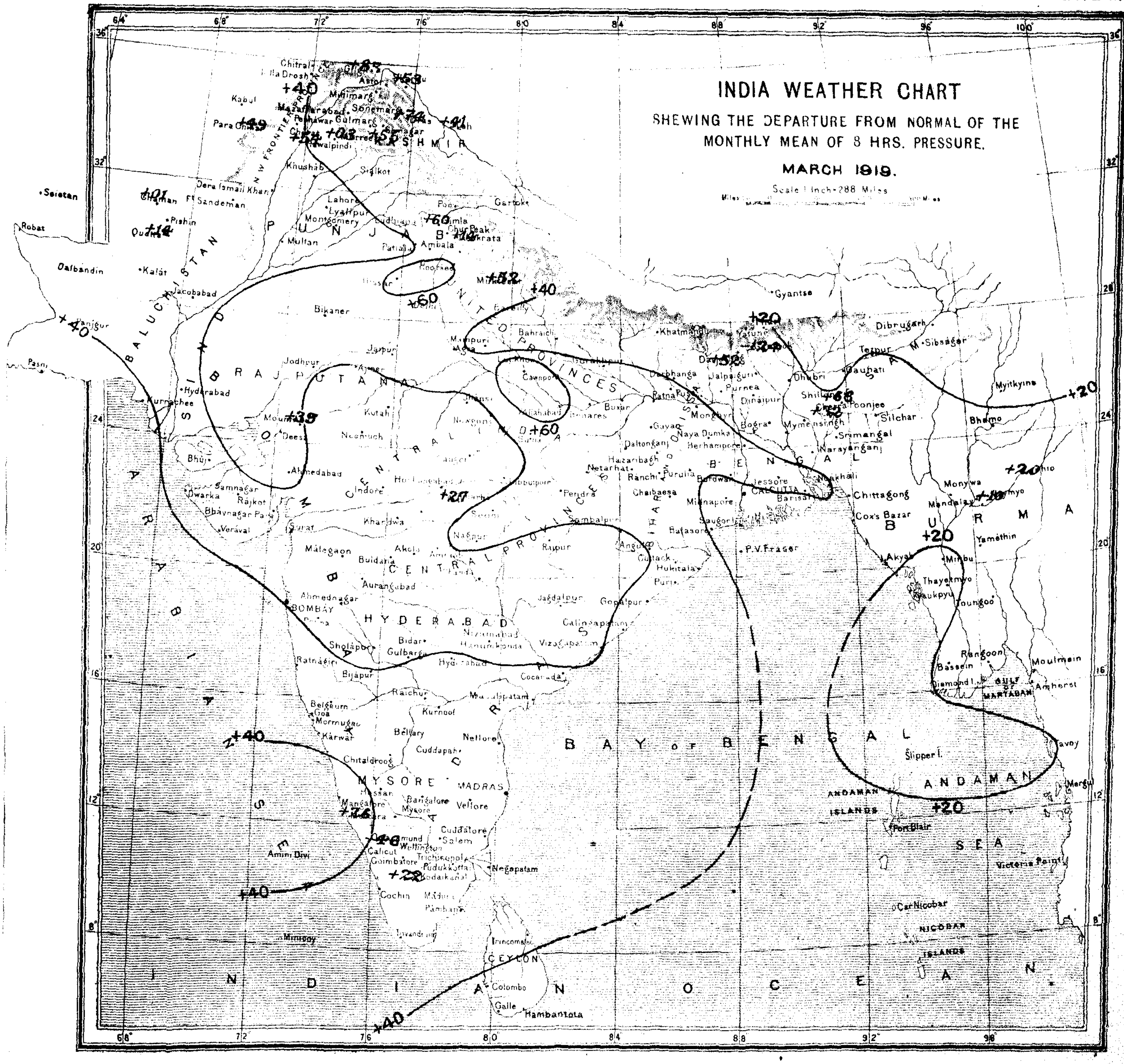
SGPI-21-243DGO-21-6-22-325.

The lines of the above chart represent isobars or lines of equal barometric pressure, the numbers attached indicating the barometric pressure in inches and being drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the normal distribution of pressure.

The mean 8 hrs. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table B of the 8 hrs. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of 0 to 2 miles per hour	...	one feather added to the wind arrow.
,, ,, 2 to 5 ,, ,, ,,	...	two feathers ,, ,, ,, ,,
,, ,, 5 to 10 ,, ,, ,,	...	three ,, ,, ,, ,, ,,
,, ,, 10 to 20 ,, ,, ,,	...	four ,, ,, ,, ,, ,,
,, ,, over 20 ,, ,, ,,	...	five ,, ,, ,, ,, ,,

Wind strengths are based on factor 2·2 for the standard type of Beckley Robinson anemograph, instead of 3·0 as used for this plate up to December 1917 inclusive.



The chart shows the departure from normal of the mean during the month of 8 hrs. pressure by means of lines drawn for equal amounts of departure. The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no departure, the dotted line facing the area of deficient pressure or negative departures.

CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MAXIMUM TEMPERATURE.

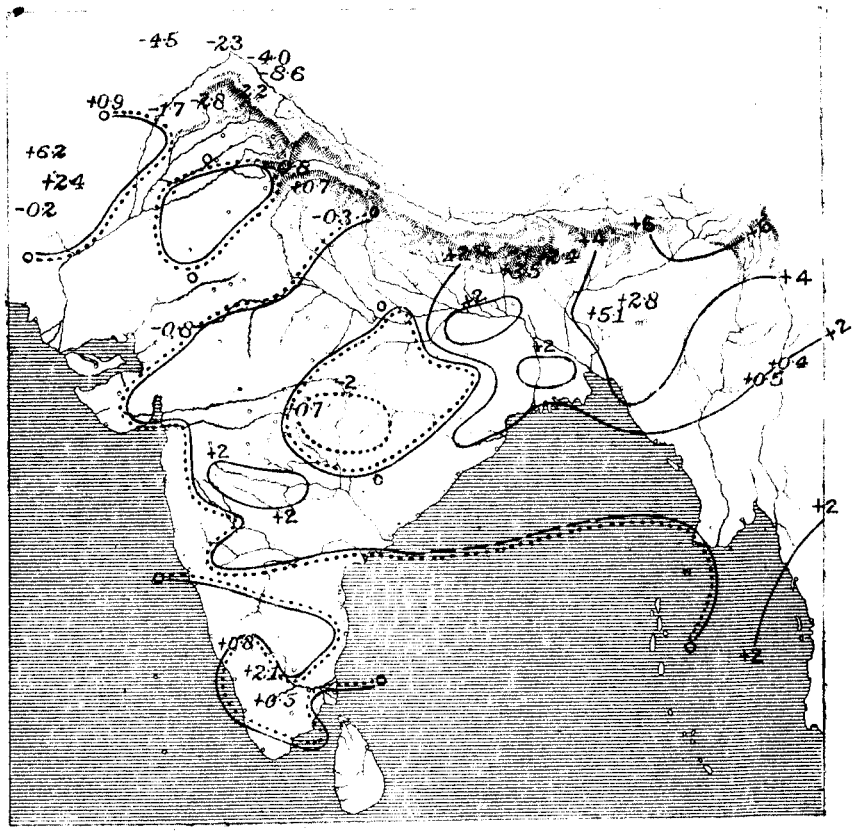


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MINIMUM TEMPERATURE.

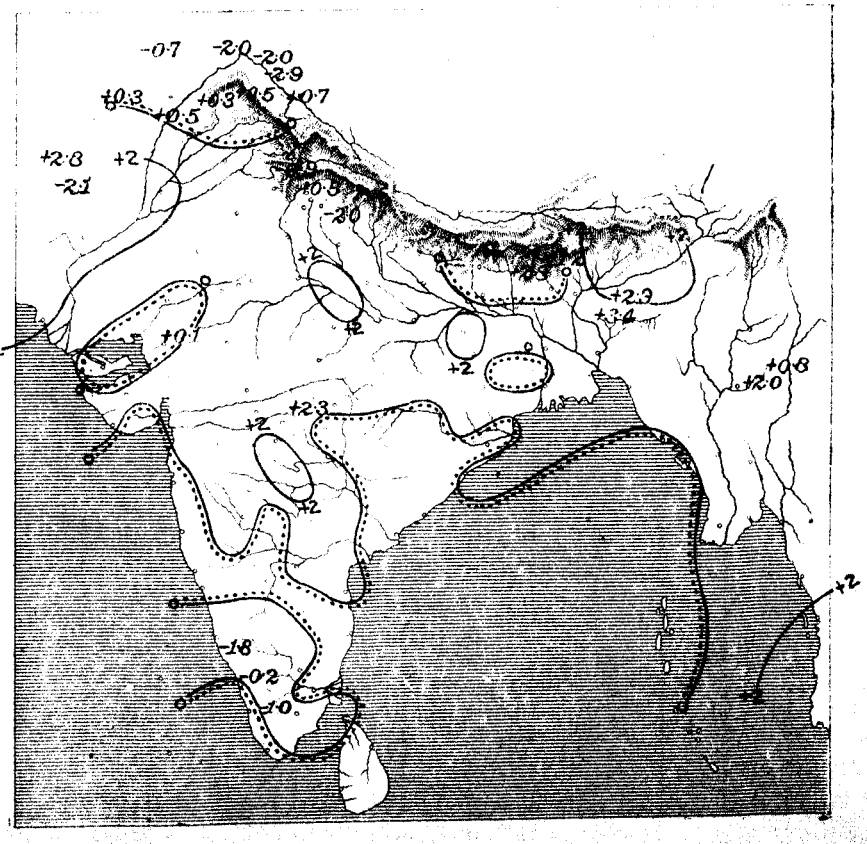


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MEAN TEMPERATURE.

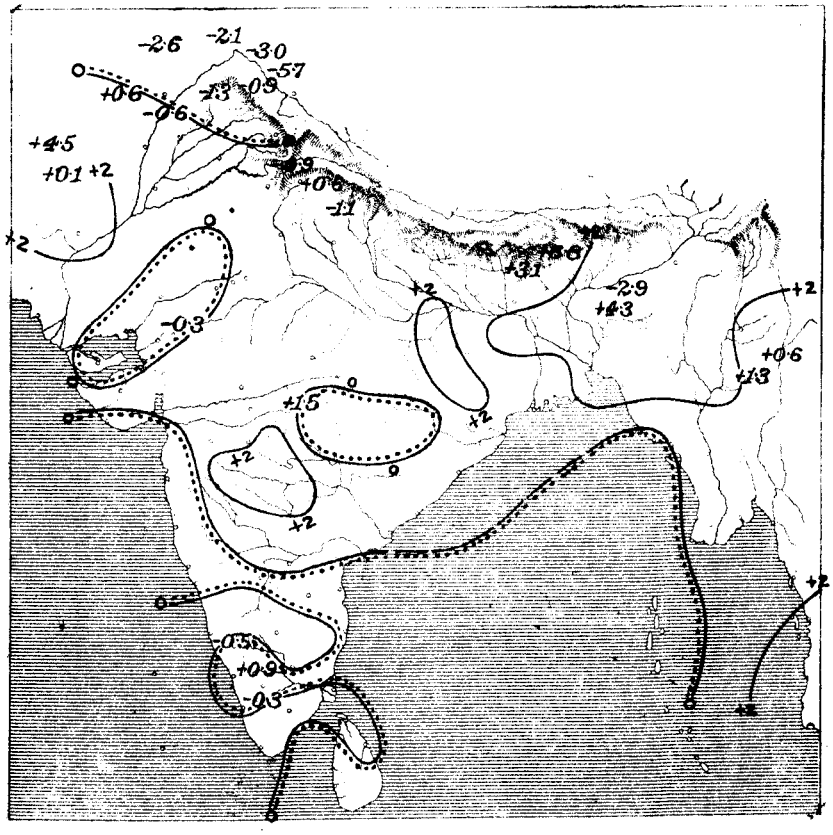


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF ABSOLUTE HUMIDITY AT 8 HRS.

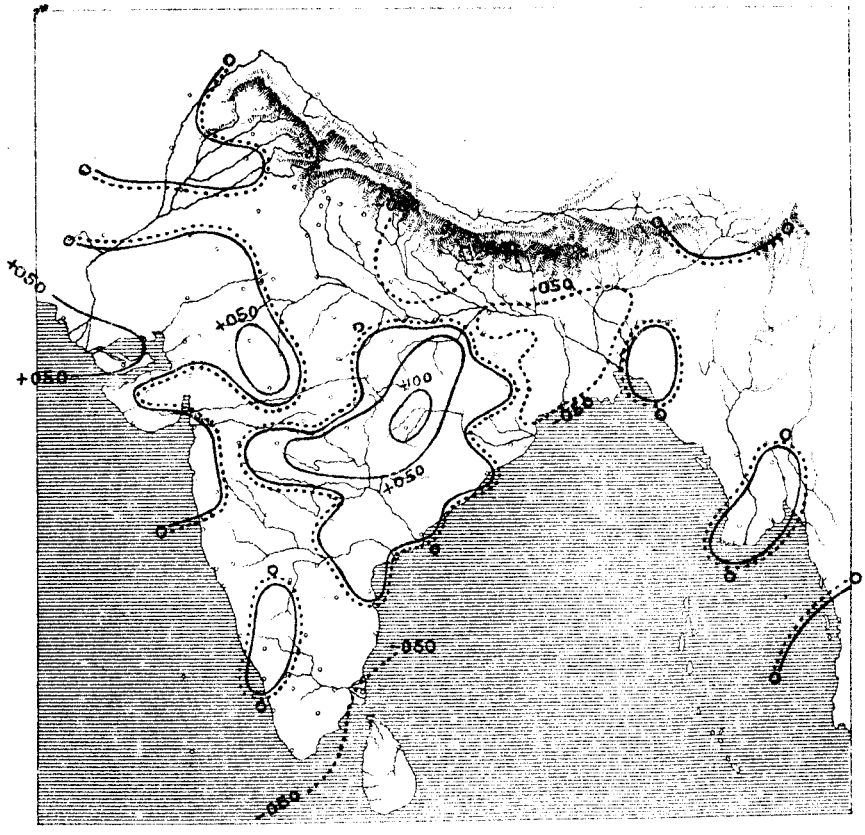


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF RELATIVE HUMIDITY AT 8 HRS.

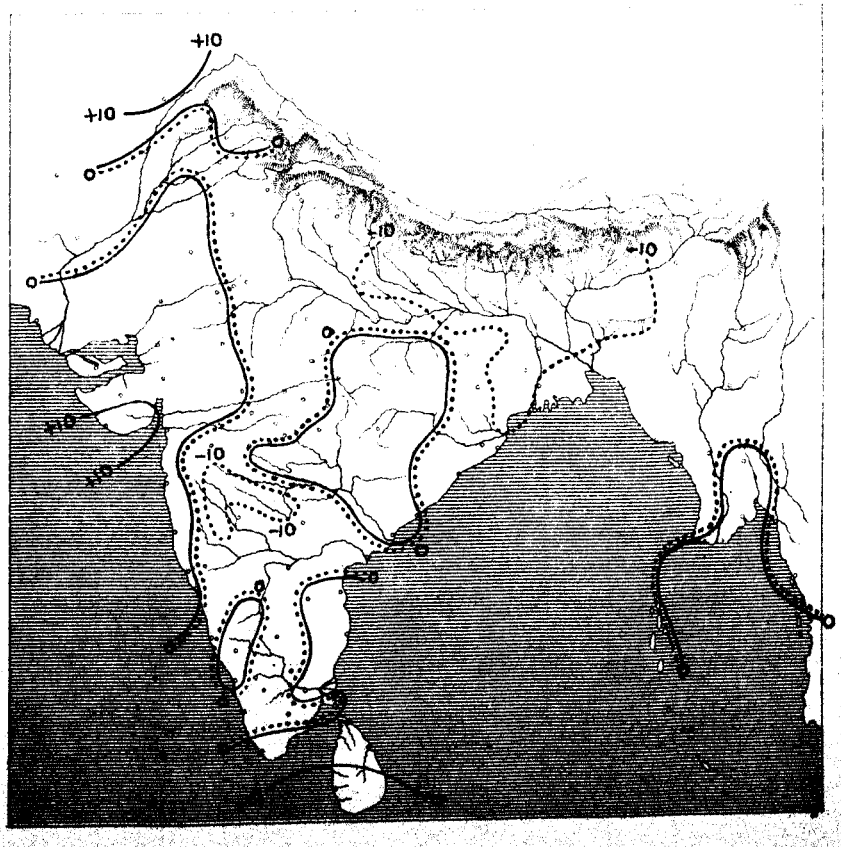


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF CLOUD AMOUNT AT 8 HRS.

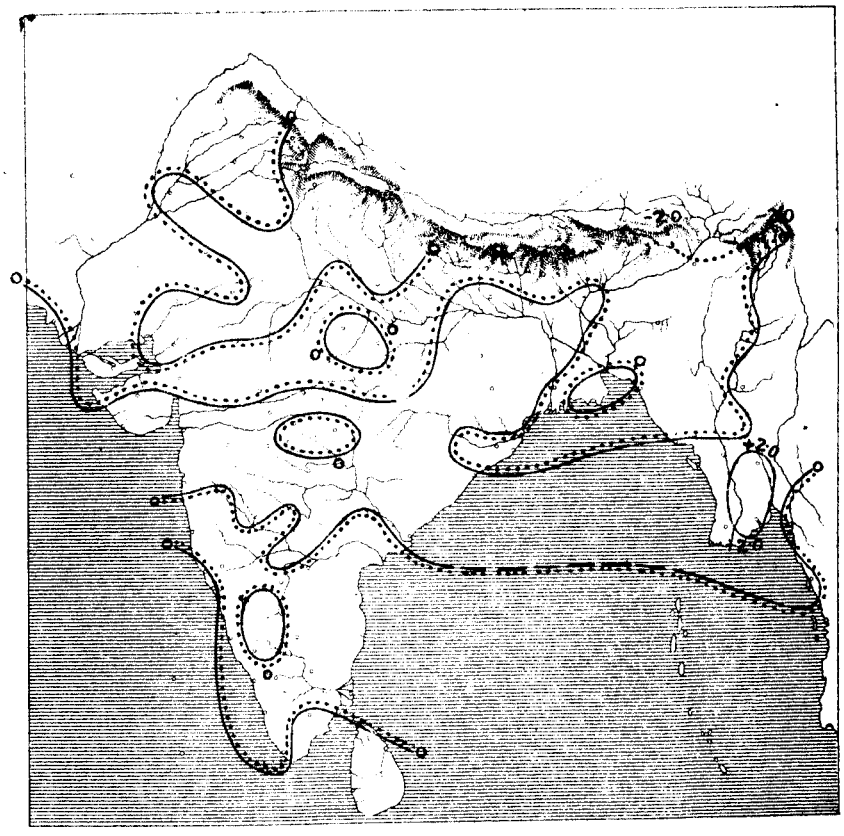
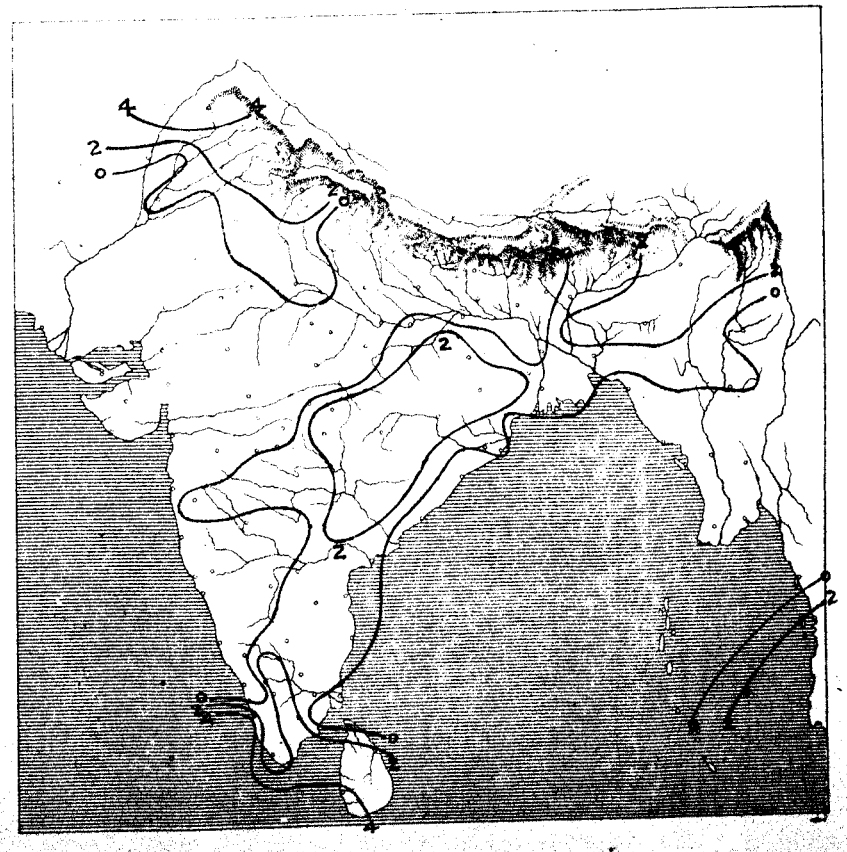
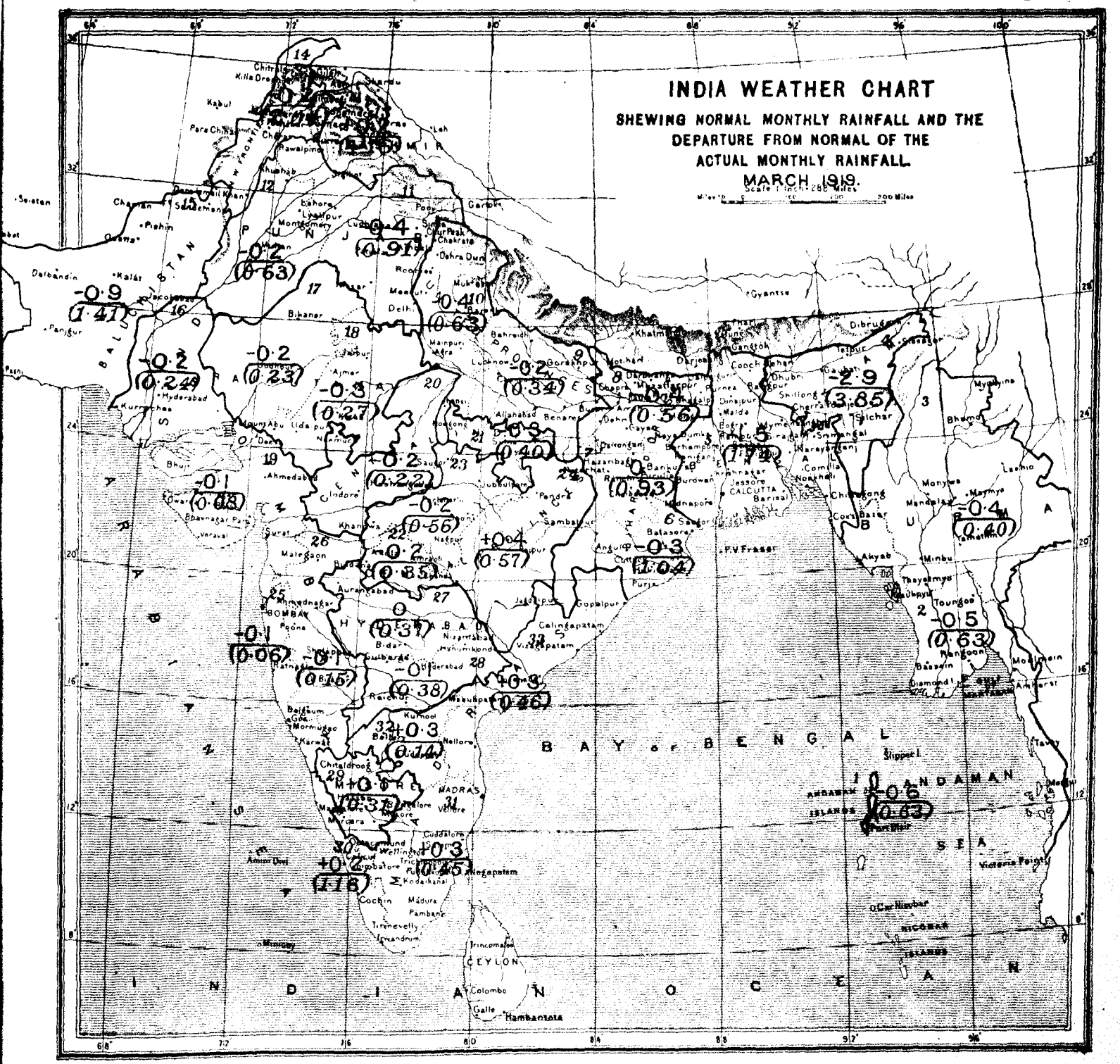


CHART SHEWING THE TOTAL NUMBER OF DAYS IN THE MONTH ON WHICH RAINFALL EQUALLED OR EXCEEDED 0·10 INCH.

(BASED ON THE RETURNS OF TABLE B.)





The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal monthly rainfall, the numbers above these give the departures from normal of the average actual rainfall over the divisions.

1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, APRIL, 1919.

INTRODUCTION.

THIS review of the weather in India during the month of April, 1919, is based on observations taken daily at 8 hrs. at 211 stations, and on additional observations taken at 10 hrs. and 16 hrs. at 13 stations. In the rainfall summary the data furnished by the meteorological observatories, and the rainfall statements of the month published by the Provincial Governments have been utilized.

The brief notes on solar, magnetic and seismic disturbances are supplied by the chief observatories.

For a statement of the methods adopted in recording and tabulating the data, for each of the elements of observation, reference should be made to the introductory portion of the review for January.

Summary of the chief features of the weather in India during the month.

2. Four western disturbances appeared during the month and caused fairly frequent rain in the plains as well as in the hills of northwest India. Rainfall was also fairly heavy locally in the central parts of the country and the Deccan but the total fall of the month was in defect over the country as a whole.

Cloud amount was in decided excess in Burma and Bihar and Orissa, and in decided defect in Assam, the North-West Frontier Province and Kashmir. Humidity was appreciably high in Sind, Rajputana and Baluchistan, and low in Assam, Kashmir, Hyderabad and Mysore. Maximum temperature was below normal in the United Provinces, the Punjab, Rajputana, Central India East and the Central Provinces.

The mean barometric pressure over the plains of India was 0·024″ in excess.

Solar, magnetic and seismic disturbances.

KODAIKANAL OBSERVATORY.

3. *Solar observations.*—The sun was examined for spots and faculae on all days during the month, but the prominence record was incomplete on six days.

Sunspots.—18 new groups were recorded. The mean daily number was 3·5 and the average life of a spot was 6·0 days. The distribution of the spots in latitude was as follows:—

TABLE 1.

—	1°—10°	11°—20°	21°—30°	Mean latitude.	Extreme latitude.
North	5	3	...	9·0	2 & 15
South	2	8	...	13·2	6 & 20

Prominences.—49 prominences, a minute or more in height and 15 metallic prominences were observed. Prominences reaching a height of 150″ were photographed on the 4th and 29th and this was the greatest height recorded during the month.

Magnetic Disturbances.—"Moderate" disturbances were recorded on the 4th, from the 6th to the 8th, 16th to 18th, 21st to 23rd, on the 25th and 30th.

J. EVERSHED,
Director,
Kodaikanal and Madras Observatories.

Seismic records.

$\phi = 10° \ 13' \ 50''$; $\lambda = 77° \ 28' \ 00''$; $h = 2{,}343$ m. Subsoil—*Rock.*

Apparatus.—Milne's Horizontal Pendulum Seismograph.

TABLE 2.

	V	To	∈	$\frac{r}{To^2}$
AN:				
AE:	9·76	17·6	1	2·6
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.).	REMARKS.
1919.		h. m. s.						
April 1nd	e P	0 41 42	...	...	...	...	...	
	i L	0 45 54	...	...	...	...	...	
	M	0 54 54	...	...	180	...	...	
	F	1 10 12	...	...	...	...	...	
„ 7th	e P	10 10 00	...	...	...	...	...	
	F	10 12 06	...	...	...	...	...	Widening of line.
„ 10th	e P	3 39 12	...	...	...	...	...	
	F	3 41 48	...	...	...	...	...	Widening of line.
„ 16th	e L	4 13 48	...	...	...	...	...	
	M	4 15 54	...	...	...	...	...	Light was removed from 3hr. 59m. to 4hr. 3m. for changing sheet. P. T's probably occurred during this interval.
	F	4 23 06	...	...	70	...	...	
„ 16th	e P	17 13 48	...	...	...	...	...	
	F	17 17 42	...	...	...	...	...	Widening of line.
1919.		h. m. s.						
April 17th	e P	11 40 48	...	...	...	...	...	
	e L	12 14 06	...	...	...	...	...	
	M	12 32 12	...	...	650	...	...	
	F	13 59 42	...	...	...	...	...	
„ 17th	e P	21 32 00	...	...	...	...	...	
	e L	22 23 30	...	...	...	...	...	
	M	22 31 36	...	...	80	...	...	
	F	23 14 06	...	...	...	...	...	
„ 21st	e P	12 21 06	...	...	...	...	...	
	i L	12 28 48	...	...	...	...	...	
	M	12 35 00	...	...	110	...	...	
	F	12 54 36	...	...	...	...	...	
„ 23rd	e P	8 08 36	...	...	...	...	...	
	F	8 20 00	...	...	...	...	...	Widening of line.
„ 24th	e P	17 29 00	...	...	...	...	...	
	F	17 37 42	...	...	...	...	...	Widening of line.
„ 27th	e P	0 36 12	...	...	...	...	...	
	e L	0 48 06	...	...	...	...	...	
	M	0 50 24	...	...	110	...	...	
	F	1 16 00	...	...	...	...	...	
„ 30th	e P	7 36 54	...	...	...	...	...	
	e L	7 43 00	...	...	...	...	...	
	M	8 22 48	...	...	1400	...	...	
		8 26 54	...	...	1550	...	...	
		8 31 48	...	...	1480	...	...	
		8 34 36	...	...	1450	...	...	
		8 38 42	...	...	1470	...	...	
		8 46 24	...	...	1350	...	...	
		8 49 30	...	...	1300	...	...	
		8 53 36	...	...	1250	...	...	
	F	12 09 00	...	...	...	...	...	

J. EVERSHED,
Director,
Kodaikanal and Madras Observatories.

BOMBAY OBSERVATORY.

Alibag magnetic record.

4. During the month of April, 1919, the traces showed 8 calm days, and 22 days of small disturbance.

The days of the month selected as "quiet" for the purposes of the Magnetic Survey of India, are 3rd, 5th, 15th, 26th and 28th.

The following table represents the magnetic character of each day during the month.

TABLE 3.

Day.	Character.	Day.	Character.	Day.	Character.	Day.	Character.
1	S	9	C	17	S	25	S
2	C	10	S	18	S	26	C
3	C	11	S	19	S	27	S
4	S	12	S	20	S	28	C
5	C	13	C	21	S	29	S
6	S	14	S	22	S	30	S
7	S	15	C	23	S		
8	S	16	S	24	S		

C=calm ; S=small ; M=moderate ; G=great ; V. G.=very great.

The mean observed absolute values of the several magnetic elements reduced to the mean monthly tabulations of the magnetograms, as also the ranges and the summed ranges of the horizontal force and declination for the month are as follows :—

Easterly declination . . .	0° 25′ 21″
Horizontal force	0·36899 C. G. S. unit.
Vertical force	0·17046 C. G. S. unit.
Inclination	24° 47′·7.
Horizontal force range . . .	0·00058 C. G. S. unit.
Horizontal force summed range .	0·00374 C. G. S. unit.
Declination range . . .	4′·3.
Declination summed range . .	18′·2.

(NOTE.—Summed range means sum without regard to sign of twenty-four ordinates of the diurnal inequality.)

Seismic records.

$\phi = 18° 53' 36''$; $\lambda = 72° 48' 56''$; $h = 11$ m. Subsoil—*Trap.*

Apparatus.—Omori-Ewing Horizontal Pendulum Seismograph.

TABLE 4.

	V	To	ϵ	$\frac{r}{To^2}$
AN:				
AE:	20	32		
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) An.	Ae.	Az.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
April 2nd	P	0 42 28	...	...	...	...	...	
	M	0 53 44	...	...	30	...	...	
„ 17th	P	11 41 50	...	...	...	...	...	
	M	12 27 32	...	...	335	...	...	
„ 21st	P	7 33 21	...	...	...	...	...	
	M	7 42 3	...	...	15	...	...	
„ „	P	9 56 49	...	...	...	...	...	
	M	...	...	...	...	...	...	Maximum not well marked.
„ „	P	...	...	...	...	...	...	Beginning doubtful.
	M	12 26 11	...	...	25	...	...	
„ 27th	P	0 30 44	...	...	...	...	...	
	M	0 53 57	...	...	25	...	...	
„ 30th	P	7 32 47	...	...	...	...	...	
	S	7 47 23	...	...	...	...	...	
	M	8 21 22	...	...	3000	...	...	

T. K. CHINMAYANANDAM,

Director,

Bombay and Alibag Observatories.

5.—CALCUTTA (ALIPORE) OBSERVATORY.

Seismic records.

$\phi = 22° 32'$ N; $\lambda = 88° 20'$ E; $h = 6{\cdot}4$ m. Subsoil—*Alluvial.*

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs.

TABLE 5.

	V	To	ϵ	$\frac{r}{To^2}$
AN:	29	18	1	
AE:	29	30	1	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
April 2nd	P	0 42 00	3	...	...	...	...	
	S	0 46 42	5	...	...	...	...	
	F	1 23 18	...	...	...	...	...	
„ 21st	P	10 3 36	...	...	...	...	...	
	F	10 12 54	...	...	...	...	...	
„ 27th	P	0 28 30		...	...	...	...	
	S	?	...	...	...	...	...	
	L	0 46 18	...	...	...	...	...	
	M	0 49 18	...	...	121	...	...	
	F	1 28 36	...	...	...	...	...	
1919.		h. m. s.						
April 30th	P	7 31 48	...	...	...	...	...	
	S	7 43 06	...	...	...	...	...	
	L	7 50 24	...	...	...	...	...	
	F	11 4 36	...	...	...	...	...	

6.—SIMLA OBSERVATORY.

Seismic records.

$\phi = 31° 6'$ N; $\lambda = 77° 11'$ E; $h = 2{\cdot}1$ km. Subsoil—*Rock.*

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs (Masses 50 kg.).

TABLE 6.

	V	To	ϵ	$\frac{r}{To^2}$
AN:	14	45	1	
AE:	14	45	1	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
April 2nd	e P	0 44 00	...	...	...	...	...	
	S	0 50 00	...	...	...	...	...	
	L	0 58 30	32	...	...	...	...	
	M	0 59 00	...	71	...	...	...	
	F	1 10 54	...	...	...	...	...	
„ 17th	e P	21 15 48	...	...	...	...	...	
	M	22 12 18	...	143	...	...	...	
	F	23 02 36	...	...	...	...	...	Tremors.
„ 21st	e P	12 17 06	...	...	...	...	...	
	M	12 26 12	...	64	...	...	...	
	F	12 54 18	...	...	...	...	...	

Date.	Phase.	Time G. M. T.	Period (sec.).	Amplitude (μ) An.	Ae.	Az.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
April 28th	e P	0 37 00	...	...	...	...	...	
	M	0 51 42	...	...	...	...	...	
	F	1 15 36	...	...	...	...	...	San Salvador earthquake.
„ 30th	P	7 37 24	...	...	...	...	...	
	S	7 47 12	...	...	...	...	...	
	L	8 02 06	?	...	...	...	...	
	M	8 23 42	...	>2804	...	...	...	Pendulum striking against stop on one side at 7 hrs. 55 mins. 6 sec. and against both stops between 8 hrs. 16 mins. 18 sec. and 8 hrs. 17 mins. 18 sec.
	M 1	8 24 42	...	...	...	...	...	
	F	12 07 42	...	...	...	...	...	

The following table contains a list of earthquakes that were reported :—

TABLE 7.

Place at which felt.	Date.	G. M. T. of earthquake.	Duration.	Intensity. (Rossi-Forel scale).	No. of shocks.	Remarks.
	1919.	h. m.	sec.			
Bhavnagar Para (and several villages of its various mahals).	Apl. 21st	9 53	30	7	1	
Wadhwan (Kathiawar).	„ 21st	10 ·00	10	...	...	
Songadh (Kathiawar).	„ 21st	10 05	5	...	...	
Chok Thana (Kathiawar).	„ 21st	10 05	5	...	...	
Bhoika (Kathiawar)	„ 21st	10 30	...	...	...	

S. SITARAMAYYA,

Scientific Assistant.

Weather in the Indian Ocean.

7. The following table gives the departures from normal of pressure and rainfall, as well as the actual and normal wind direction and velocity at the three representative stations.

TABLE 8.

—	Mauritius.	Zanzibar.	Seychelles.
Departure from normal of mean pressure	+ ·030	+ ·004	+ ·004
Actual mean wind direction . .	S 69° E	S 24° W	N 20° W
Normal mean wind direction . .	S 71° E	S 15° W	N 8° E
Actual mean wind velocity (miles per diem).	156	98	93
Normal mean wind velocity (miles per diem).	130	125	82
Rainfall departure from normal . .	—2·07	—4·88	—0·82

Depressions and cyclonic storms.

8. Weather was somewhat rough in the south of the Bay in the middle of the second week, but no depression formed in the Indian seas during the month.

Four western disturbances appeared during the month, and began to affect the weather in north-west India on the 8th, 13th, 18th and 27th respectively.

Pressure.

9. The following table gives the departure from normal of the mean 8 hours pressure in the 15 chief political divisions of India.

TABLE 9.

DIVISION.	Departure from normal of mean 8 hrs. pressure.
	"
Burma	+·011
Assam	+·030
Bengal	+·029
Bihar and Orissa	+·034
United Provinces	+·040
Punjab	+·036
North-West Frontier Province	+·015
Sind	+·019
Rajputana	+·022
Bombay	+·019
Central India	+·020
Central Provinces	+·024
Hyderabad	+·024
Mysore	+·016
Madras	+·015

The following table gives a comparison of the departure from normal of mean 8 hours pressure at 9 hill stations with the departure at an adjoining station in the plains.

TABLE 10.

HILL STATION.	Departure from normal pressure. A.	PLAIN STATION.	Departure from normal pressure. B.	Departure of pressure difference B—A.
	"		"	"
Quetta	—·006	Jacobabad	+·015	+·021
Leh	+·014	Lahore	+·030	+·016
Murree	—·025	Peshawar	+·004	+·029
Simla	—·005	Ludhiana	+·046	+·051
Mukteswar	+·014	Bareilly	+·044	+·030
Darjiling	+·003	Dhubri	+·034	+·031
Mount Abu	+·017	Deesa	+·047?	+·030?
Pachmarhi	+·011	Khandwa	+·021	+·010
Kodaikanal	+·015	Madura	+·018	+·003

Temperature.

10. Table 11 gives the actual temperature and its departure from normal in the 33 sub-divisions, while table 12 gives only the departures from normal in the 15 chief political divisions.

TABLE 11.

SUB-DIVISION.	ACTUAL TEMPERATURE.				DEPARTURE FROM NORMAL OF		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
1. Bay Islands	91·0	79·7	85·4	11·3	+0·1	+0·7	—0·6
2. Lower Burma	94·2	76·7	85·5	17·4	+0·7	+0·5	+0·2
3. Upper Burma	97·4	71·7	84·5	25·7	+0·3	+0·1	+0·2
4. Assam	87·3	67·5	77·4	19·7	+1·5	—0·4	+1·9
5. Bengal	93·3	72·6	82·9	20·7	—0·3	—1·3	+1·0
6. Orissa	98·2	76·7	87·4	21·5	0	+0·4	—0·4
7. Chota Nagpur	98·5	71·0	84·7	27·5	—1·1	—1·4	+0·3
8. Bihar	97·6	71·4	84·5	26·2	—1·6	—1·1	—0·5

Sub-division.	Actual temperature. Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Departure from normal of Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
9. United Provinces, East	99·2	71·5	85·3	27·7	—2·0	+0·2	—2·2
10. Do. do., West	97·6	70·1	83·9	27·5	—2·6	—0·1	—2·5
11. Punjab, East and North	92·4	65·7	79·0	26·7	—3·2	—0·8	—2·4
12. Do., South-west	93·3	66·8	80·1	26·5	—2·6	+0·1	—2·7
13. Kashmir	65·1	43·0	54·0	22·1	+0·3	+0·3	0
14. North-West Frontier Province	89·9	62·9	76·5	27·0	+0·5	+0·2	+0·3
15. Baluchistan	83·3	55·6	69·5	27·7	+2·7	+1·9	+0·8
16. Sind	94·7	72·6	83·7	22·1	—0·9	+0·7	—1·6
17. Rajputana, West	98·3	70·9	84·6	27·4	—2·2	+0·8	—3·0
18. Do., East	97·7	71·4	84·6	26·2	—2·5	—1·5	—1·0
19. Gujarat	96·7	72·6	84·6	24·1	—1·1	+0·1	—1·2
20. Central India, West	98·8	70·5	84·7	28·3	—1·1	+0·1	—1·2
21. Do. do., East	98·9	71·5	85·3	27·4	—2·6	+0·1	—2·7
22. Berar	102·4	75·0	88·7	27·4	—1·0	—0·7	—0·3
23. Central Provinces, West	100·2	72·1	86·1	28·2	—2·5	—1·1	—1·4
24. Do. do., East	99·5	72·6	86·0	26·8	—2·1	—1·7	—0·4
25. Konkan	88·9	76·4	82·6	12·5	—0·4	—1·0	+0·6
26. Bombay Deccan	101·2	70·5	85·9	30·6	+0·3	—0·7	+1·0
27. Hyderabad, North	102·9	73·9	88·3	28·9	+0·1	—0·8	+0·9
28. Do., South	103·3	77·6	90·4	25·7	+1·0	+0·5	+0·5
29. Mysore	96·3	70·9	83·6	25·4	+2·1	+1·3	+0·8
30. Malabar	91·5	79·4	85·5	12·1	+1·0	+1·2	—0·2
31. Madras, South-east	97·4	78·8	88·1	18·6	+0·8	+1·7	—0·9
32. Do., Deccan	104·9	80·3	92·6	24·6	+0·6	+1·5	—0·9
33. Do., Coast, North	94·5	78·5	86·5	15·9	+0·8	+0·1	+0·7

TABLE 12.

Division.	Departure from normal of Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·5	+0·3	+0·4
Assam	+1·5	—0·4	+0·5
Bengal	—0·3	—1·3	—0·8
Bihar and Orissa	—0·9	—0·6	—0·8
United Provinces	—2·3	+0·1	—1·1
Punjab	—3·0	—0·5	—1·8
North-West Frontier Province	+0·5	+0·2	+0·4

Division.	Departure from normal of Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Sind	—0·9	+0·7	—0·1
Rajputana	—2·4	—0·9	—1·7
Bombay	—0·6	—0·4	—0·4
Central India	—1·9	+0·1	—0·9
Central Provinces	—2·0	—1·1	—1·6
Hyderabad	+0·7	0	+0·3
Mysore	+2·1	+1·3	+1·7
Madras	+0·8	+1·2	+1·0

Surface and upper air winds.

11. *Surface.*—There are no systematic deviations in wind directions from the normals.

Wind directions were also roughly normal in the equatorial belt of the Indian Ocean.

The following table gives the mean wind velocity and steadiness with their departures from normal.

TABLE 13.

Division.	Hourly wind velocity.		Wind steadiness.	
	Actual.	Departure from normal.	Actual.	Departure from normal.
Burma	4·0	+0·1	53	0
Assam	2·3	—0·5	44	— 3
Bengal	3·3	—1·1	46	—15
Bihar and Orissa	3·8	—0·7	38	— 9
United Provinces	2·4	—0·2	13	— 4
Punjab	2·7	—0·1	24	+ 2
North-West Frontier Province.	1·2	—1·1	25	+ 3
Sind	6·0	—0·9	51	+ 3
Rajputana	3·5	—0·9	30	0
Bombay	5·8	—0·7	49	+ 7
Central India	3·8	—0·4	26	—1
Central Provinces	3·8	0	29	0
Hyderabad	5·2	—0·1	20	—3
Mysore	4·5	+0·3	59	+ 9
Madras	5·2	+0·5	52	+ 9

Upper air.—The monthly mean velocities and directions at different heights above Agra, Simla, Lahore, Bangalore, Akyab and Calcutta during the month are given in the following table.

TABLE 14.

Height above sea, kms.	Agra. Height above sea 0·17 km.				Simla. Height above sea 2·13 kms.				Lahore. Height above sea 0·21 km.				Bangalore. Height above sea 0·92 km.				Akyab. Height above sea 0·01 km.				Calcutta. Height above sea 0·01 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
Ground level	30	2·3	0·5	297	27	1·5	0·4	342	27	1·2	0·6	63	2	5·0	4·2	216	...	...	...	...	22	3·4	2·3	204
0·5	30	6·7	1·9	333	...	...	...	...	28	5·0	1·4	21	...	...	...	...	32	4·3	2·3	290	22	6·6	5·0	210
1·0	29	6·3	2·6	307	...	...	...	...	28	4·2	1·4	329	2	4·3	3·9	203	32	4·4	2·9	312	15	6·4	4·7	256
1·5	29	6·1	4·1	293	...	...	...	...	28	4·6	1·9	315	26	4·0	1·1	223	31	5·2	3·9	314	14	6·3	5·3	267
2·0	28	6·4	5·1	290	...	...	...	...	27	5·7	3·3	311	26	4·4	2·6	102	31	6·1	4·6	310	11	7·3	6·6	274
2·5	29	8·8	7·1	289	27	4·7	2·5	312	27	6·4	3·7	299	26	6·1	5·3	78	31	7·5	5·8	315	9	8·2	7·7	286
3·0	29	10·8	8·7	285	26	4·5	2·1	294	27	8·2	4·2	295	24	6·9	6·3	65	31	8·6	7·3	315	7	10·1	9·4	287
3·5	29	11·7	9·5	282	26	5·2	2·0	310	26	8·4	4·9	303	24	7·3	6·8	59	28	9·1	7·6	312	5	10·2	10·0	280
4·0	26	12·2	10·3	283	25	6·0	3·7	303	26	8·7	5·4	305	22	6·5	5·4	60	22	9·0	7·8	295	4	11·1	11·0	292
4·5	25	13·1	10·8	281	23	6·2	4·6	300	25	8·7	6·1	295	21	5·9	3·3	69	19	10·9	9·4	288	4	12·5	12·1	285
5·0	24	14·2	12·5	283	22	6·7	5·6	292	24	8·7	6·9	296	19	5·6	1·7	59	12	14·5	13·1	281	2	16·0	15·5	289

Height above sea, kms.	Agra. Height above sea 0·17 km.				Simla. Height above sea 2·13 kms.				Lahore. Height above sea 0·21 km.				Bangalore. Height above sea 0·92 km.				Akyab. Height above sea 0·01 km.				Calcutta. Height above sea 0·01 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
5·5	21	14·7	13·3	285	21	7·1	5·7	289	24	9·6	7·5	290	19	6·2	1·3	64	9	15·8	13·4	278	2	16·5	16·5	280
6·0	19	16·4	14·8	281	20	8·9	7·1	283	24	10·5	8·0	289	19	7·1	0·2	85	8	17·4	15·3	278	1	15·0	15·0	285
6·5	18	17·3	15·8	281	20	9·7	7·8	282	24	11·9	9·1	287	18	7·6	0·6	360	5	19·9	18·1	275	1	13·0	13·0	280
7·0	16	18·8	17·1	283	17	10·5	8·8	279	24	13·2	9·7	288	18	7·5	0·6	47	3	24·2	21·6	266	1	13·0	13·0	280
7·5	16	20·9	19·3	284	15	10·5	7·6	286	22	13·3	10·0	287	17	6·8	1·6	335	1	25·0	25·0	260	1	18·5	18·5	280
8·0	14	23·5	21·5	281	14	12·6	9·2	279	22	14·1	10·8	283	16	8·3	2·8	351	1	27·0	27·0	265	1	18·5	18·5	280
8·5	10	26·7	24·9	277	12	13·5	10·6	287	19	14·8	11·7	291	12	10·2	3·5	355	1	27·5	27·5	265	...	...	...	...
9·0	7	24·5	24·3	281	10	15·3	12·9	287	16	17·1	14·7	284	7	11·6	6·2	325	...	...	...	...	...	...	...	...
9·5	6	28·3	27·9	285	8	13·3	12·4	281	15	19·7	16·6	284	5	12·4	9·1	349	...	...	...	...	...	...	...	...
10·0	5	30·7	30·2	282	7	15·4	14·3	278	13	18·8	17·1	282	1	4·0	4·0	350	...	...	...	...	...	...	...	...
10·5	2	24·3	22·5	272	6	19·0	17·9	273	10	18·9	18·0	284	1	4·0	4·0	345	...	...	...	...	...	...	...	...
11·0	1	26·5	26·5	295	6	21·1	20·2	273	8	20·1	19·3	276	1	6·0	6·0	330	...	...	...	...	...	...	...	...
11·5	1	29·5	29·5	285	5	23·4	22·2	272	6	24·6	24·1	273	1	5·0	5·0	325	...	...	...	...	...	...	...	...
12·0	...	...	...	...	4	24·3	23·1	271	2	23·7	23·7	265	1	4·5	4·5	315	...	...	...	...	...	...	...	...
12·5	...	...	...	...	3	30·3	28·3	267	1	25·5	25·5	265	1	3·5	3·5	305	...	...	...	...	...	...	...	...
13·0	...	...	...	...	1	37·0	37·0	245	1	28·0	28·0	275	1	2·5	2·5	300	...	...	...	...	...	...	...	...

N = Number of flights.
V = Velocity of wind, regardless of direction, metres per Sec.
v = Velocity of Resultant Wind, taking account of direction, metres per Sec.
L = Direction of Resultant Wind; North Wind = 0° or 360°, East Wind = 90°.

Humidity and cloud.

12. The following table gives the mean humidity, vapour tension and cloud amount at 8 hours with their departures from normal.

TABLE 15.

Division.	Hygrometry; 8 hrs.				Cloud.	
	Mean humidity.	Departure from normal.	Mean vapour tension in inches of mercury.	Departure from normal in inches of mercury.	Mean cloud amount at 8 hrs.	Departure from normal.
	%					
Burma . .	71	— 3	·753	—·025	4·1	+ 0·9
Assam . . .	79	— 5	·642	—·041	4·6	—1·1
Bengal . .	77	— 2	·769	—·037	4·0	—0·2
Bihar and Orissa .	57	— 1	·597	—·014	3·1	+ 0·9
United Provinces .	42	0	·439	—·007	1·9	+ 0·3
Punjab . .	50	+ 3	·432	+ ·015	2·7	+ 0·2
North-West Frontier Province.	61	+ 3	·468	—·003	2·2	— 0·9
Sind . . .	62	+ 6	·621	+ ·048	1·7	—0·3
Rajputana . .	38	+ 5	·385	+ ·022	1·8	—0·1
Bombay . .	56	— 2	·592	—·039	1·9	0
Central India .	33	— 3	·355	—·047	2·0	+ 0·1
Central Provinces .	34	— 1	·388	—·025	1·8	—0·2
Hyderabad . .	43	— 4	·507	—·048	2·3	+ 0·1
Mysore . .	64	— 5	·615	—·026	3·2	—0·3
Madras . .	71	— 2	·850	+ ·003	3·5	—0·3

Rainfall.

13. The month's rainfall was in defect over the plains of India as a whole. It was in excess at Baghdad, and was in defect generally in Persia.

TABLE 16.

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
1. Bay Islands	2·7	2·3	1·61	1·40	+ 0·21	+ 15
2. Lower Burma	1·7	2·2	1·19	1·66	— 0·47	— 28
3. Upper Burma	1·9	2·3	0·77	1·24	— 0·47	— 38
4. Assam	11·1	12·1	6·47	9·40	— 2·93	— 31
5. Bengal	5·6	0·5	3·83	3·23	+ 0·60	+ 19
6. Orissa	2·5	2·6	1·50	1·54	— 0·04	— 3
7. Chota Nagpur	2·3	1·5	0·72	0·72	0	0
8. Bihar	1·1	1·2	0·48	0·65	— 0·17	— 26
9. United Provinces, East	0·6	0·5	0·21	0·20	+ 0·01	+ 5
10. Do. do., West	1·0	0·7	0·32	0·29	+ 0·03	+ 10
11. Punjab, East and North	1·0	1·2	0·27	0·53	— 0·26	— 49
12. Do., South-west	2·1	1·2	0·60	0·51	+ 0·09	+ 18
13. Kashmir	4·9	5·3	2·13	3·30	— 1·17	— 35
14. North-West Frontier Province	2·9	3·5	0·94	1·66	— 0·72	— 43
15. Baluchistan	1·5	1·9	0·43	0·76	— 0·33	— 43
16. Sind	0·9	0·3	0·45	0·13	+ 0·32	+246
17. Rajputana, West	0·6	0·4	0·19	0·17	+ 0·02	+ 12
18. Do., East	0·7	0·4	0·22	0·18	+ 0·04	+ 22
19. Gujarat	0·1	0·1	0·03	0·03	0	0
20. Central India, West	0·6	0·4	0·23	0·19	+ 0·04	+ 21
21. Do. do., East	0·4	0·6	0·13	0·30	— 0·17	— 57
22. Berar	1·0	0·7	0·32	0·25	+ 0·07	+ 28
23. Central Provinces, West	1·0	0·8	0·38	0·34	+ 0·04	+ 12
24. Central Provinces, East	0·9	1·8	0·36	0·90	— 0·54	— 60
25. Konkan	0·1	0·7	0·02	0·38	— 0·36	— 95
26. Bombay Deccan	0·5	1·4	0·20	0·67	— 0·47	— 70
27. Hyderabad, North	1·7	1·6	0·50	0·53	— 0·03	— 6
28. Do., South	2·0	1·8	1·08	0·80	+ 0·28	+ 35
29. Mysore	2·1	2·7	1·13	1·50	— 0·37	— 25
30. Malabar	3·6	5·4	2·12	3·86	— 1·74	— 45
31. Madras, South-east	1·5	2·1	0·81	1·37	— 0·56	— 41
32. Do., Deccan	1·0	1·3	0·84	0·65	+ 0·19	+ 29
33. Do., Coast, North	1·6	1·6	0·94	0·97	— 0·03	— 3

TABLE 17.

DIVISION.	RAINFALL.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Burma	0·93	1·41	—0·48	—34
Assam	6·47	9·40	—2·93	—31
Bengal	3·83	3·23	+0·60	+19
Bihar and Orissa	0·79	0·88	—0·09	—10
United Provinces	0·27	0·25	+0·02	+ 8
Punjab	0·35	0·53	—0·18	—34
North-West Frontier Province	0·94	1·66	—0·72	—43
Sind	0·45	0·13	+0·32	+246
Rajputana	0·21	0·18	+0·03	+17
Bombay	0·11	0·42	—0·31	—74
Central India	0·19	0·23	—0·04	—17
Central Provinces	0·35	0·55	—0·20	—36
Hyderabad	0·77	0·66	+0·11	+17
Mysore	1·13	1·50	—0·37	—25
Madras	1·11	1·70	—0·59	—35
Mean of India	0·93	1·19	—0·26	—22

Snowfall.

I.—CENTRAL ASIA.

14. *Kashgar* :—No snow fell at the station during the month. Taking the whole winter season, snowfall on the passes on the Hindu Kush Range and on the Mintaka and Kilik passes was about the average; the passes between Sarikol and Kashgar, *i.e.*, Chichiklik and Kashgasu were covered with snow. The Tirik Pawan between Kashgar and Osh was open for traffic during the whole winter. The fall of the season as a whole in the neighbourhood was considered to be below normal.

II.—THE NORTH-WEST FRONTIER PROVINCE.

Hazara :—A report dated the 15th gives 1′ 7″ of snow at Narang and 8″ at Paluderan; the latter occurred on the 10th and 11th.

III.—KASHMIR.

(*a*) *Srinagar* :—Snow fell occasionally on the higher ranges of the surrounding mountains.

(*b*) *Dras* :—Snow fell on 4 days to a total depth of about 2½ feet.

(*c*) *Skardu* :—Snow fell on 3 days, the depth being 4 or 5 inches on each day on the higher mountains and about an inch on the lower; more snow fell on the ranges towards the west than elsewhere. The accumulations at the end of the month were about a yard on the higher mountains, about a foot on the lower mountains and 3 or 4 inches on very low hills. The actual falls and accumulations were above the average.

(*d*) *Kargil*.—Snow fell on the 10th and 11th to a total depth of about 10 inches on the ground and 16 inches on the mountains.

(*e*) *Leh*.—No snow fell at the station, but the hills down to about 12,000 feet were covered with fresh snow several times during the month.

IV.—PUNJAB.

(*a*) *Chamba*.—There were 13 storms during the month causing snow above 8,000 feet; the snowfall of the month was above normal. The high passes were all closed, and the accumulation there at the end of the month also appears to have been above the average. The snow line at the end of the month was at about 9,000 feet.

(*b*) *Kulu*.—The accumulations on different mountains on the 25th were as follows :—

TABLE 18.

DEPTH OF ACCUMULATION.					
KULU.	Reported.	Normal.	SARAJ.	Reported.	Normal.
	Feet.	Feet.		Feet.	Feet.
Rohtang	10	12¼	Siri Khand	18	13½
Hamta	11	10¼	Chul	6	8

DEPTH OF ACCUMULATION.

Kulu.	Reported.	Normal.	Saraj.	Reported.	Normal.
	Feet.	Feet.		Feet.	Feet.
Barsai	3	3¾	Maghin	5	3
Chanderkhani	7	7	Dundku	2	4
Boja Dhar	6¼	4½	Tikkar	1½	2½
Lohri Achhri	15	6	Ramgarh	1	½
Sari	8	5	Nuhnon	2	1
Bhubu	5	3	Raghopur	3	3
Bastari	1¼	1½	Jalori	5	3
Majhang	*nil*	¼	Lambri	4	2¾
			Sakiran	3	3⅜
			Gargarasan	4	7
			Supakun	4	4½
			Bashleo	5	4
			Placha	7	5
			Tirath	6	7

(c) *Kilba* (*Simla hills*) :—Light snow fell on the 3rd, 14th, 15th, 21st, 23rd, and 24th at 10,000 feet, and on the 14th and 15th descended to 9,000 feet. The accumulations at the end of the month were as follows :—

Charang pass	...	...	15 feet.
Rupin ...	...	...	10 „
Brua ...	...	...	10 „
Harang ...	...	...	5 „

All these passes remained closed at the end of the month.

V.—The United Provinces.

(a) *Garhwal* :—Snow fell frequently during the month, and the total fall of the cold weather was reported to be the heaviest in living memory, probably the heaviest for at least 80 years.

(b) *Almora*.—

TABLE 19.

Locality.	Actual falls during month.	
	Depth.	Distance below perpetual snowline.
Malla Johar	3¼ feet	4½ miles.
Malla Danpur	2¾ „	3 or 4 miles.
Malla Darma	1 „	3½ miles.
„ Byans	8¾ „	10 or 11 miles.
Chaudas	5¼ „	1¾ miles.

TABLE 20.

Name of pass or peak.	Accumulations at the end of the month.	
	Reported.	Normal.
	Feet.	Feet.
Nuwe pass	16	26¼
Lampia „	20 or 21	13¾
Lipulekh „	14 or 15	12¾
Binkaru „	7	17¾
Untadhura	6½	8
Pindari peak	2¾	2½
Kaphini „	2¾	2½
Nandakot	2¾	...

VI.—Eastern Himalayas.

No snow fell at or in the vicinity of Gangtok; 2¼ inches fell at Yatung.

Summary.

15. The month's fall was comparatively light in Kashmir, but was much above normal over the mountains in the Punjab and the United Provinces.

S. Sitaramayya,

Scientific Assistant.

Table A.—Abstract of observations taken at 10 hrs. and 16 hrs. at 13 stations in India, etc., in April, 1919.

Table

Abstract of observations taken at 10 hrs. and 16 hrs. at 13

Number of sub-division	Station.	Height of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hrs.	Mean of 16 hrs.	Mean daily range.	Mean of daily mean pressures.	Departure from normal.	Mean reduced to sea-level and to gravity at 45° Lat.	Temperature of air. Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Temperature, Wet-bulb. Mean minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of three previous columns.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal.																					
5	Calcutta . .	21	29·839	29·706	·133	29·772	+·021	29·739	96·1	75·3	20·8	103·0	66·6	36·4	88·3	92·1	85·0	0	70·0	77·8	76·3	74·7
	VI.—Punjab.																					
11	Lahore . .	702	29·121	29·023	·098	29·066	+·031	29·729	93·0	65·3	27·7	101·6	56·7	44·9	83·5	91·7	78·7	−2·2	59·6	67·3	69·1	65·3
	IX.—Rajputana.																					
18	Jaipur . .	1,421	28·437	28·322	·115	28·373	+·026	29·713	98·2	69·1	29·1	107·9	60·2	47·7	89·4	95·9	83·5	−2·8	57·3	64·7	64·9	62·3
	X.—Bombay.																					
25	Bombay . .	37	29·879	29·757	·122	29·829	+·017	29·806	89·0	76·9	12·1	91·5	74·5	17·0	83·5	84·6	81·9	−0·2	71·6	76·1	76·8	74·8
	XIV.—Mysore.																					
29	Bangalore . .	3,021	26·967	26·834	·133	26·907	+·029	29·671	95·7	70·9	24·8	98·3	66·4	31·9	85·5	92·8	82·0	+2·1	63·6	69·1	68·2	67·0
	XV.—Madras.																					
31	Trivandrum . .	198	29·725	29·606	·119	29·669	+·015	29·794	90·2	78·7	11·5	92·3	77·1	15·2	86·9	87·3	83·5	+1·6		78·3	79·2	
	Pudukkottai .	348	29·617	29·460	·157	29·539		29·779	100·9	79·7	21·2	104·2	75·1	29·1	90·2	96·8	90·3			76·4	77·0	
	Madras . .	22	29·885	29·759	·126	29·829	+·004	29·782	93·6	78·7	14·9	98·3	73·7	24·6	90·4	88·3	85·2	+1·1	76·8	79·5	79·9	78·7
	Kashmir . .																					
14	Srinagar . .	5,204	24·917	24·837	·080	24·877		24·883	67·1	45·2	21·9	76·5	39·0	37·5	57·7	63·4	55·8	+0·1	42·8	52·3	54·8	50·0
	Hill stations, excluding Kashmir and Baluchistan.																					
	Katmandu . .	4,388	25·632	25·602	·060	25·629	+·080	25·584	82·0	51·6	30·4	87·8	41·3	46·5	71·9	77·4	67·4	+0·3	48·8	59·6	60·2	56·2
	Kodaikanal . .	7,688	22·880	22·815	·065	22·847		22·782	70·9	53·9	17·0	75·7	50·3	25·4	67·3	64·4	62·4		48·9	56·5	58·1	54·5
	Extra India.																					
	Seychelles . .	15	29·957	29·857	·100	29·910	+·004*	29·848	86·6	80·5	6·1	89·0	77·4	11·6	84·3	85·7	82·2	+2·8*	73·8	78·7	79·2	77·2
	Mauritius . .	181				29·853	+·030	29·920	81·3	71·1	10·2	84·7	62·6	22·1			75·7	+0·3				

N.B.—Elevations in italics indicate barometric determinations.

Note.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

* Departure from old normals.

A.

stations in India, etc., in April, 1919.

Vapour tension in inches of mercury.					Humidity.					Cloud.				Wind direction.											Wind steadiness.		Wind velocity.		Rainfall.		Station.	Number of sub-division.
														Total number of 10 hrs. and 16 hrs. winds from																		
From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns.	Departure from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																															III.—Bengal.	
·663	·813	·700	·757	—·040	76	61	48	67	− 3	2·6	4·3	3·5	+0·9	0	1	2	2	3	10	28	8	6	S 46° W	S 30° W	62	69	110	123	4·02	1·30	Calcutta	5
																															VI.—Punjab.	
·435	·452	·408	·449	+ ·054	70	40	28	48	+ 7	2·4	2·4	2·4	−0·5	4	7	8	3	7	3	5	6	17	N 32° W	N 15° W	25	28	47	56	0·45	0·18	Lahore	11
																															IX.—Rajputana.	
·320	·301	·230	·299	—·034	46	22	14	29	− 1	2·0	4·4	3·2	+0·7	1	4	4	4	6	4	9	17	11	W	N 57° W	67	50	78	88	0·17	0·10	Jaipur	18
																															X.—Bombay.	
·700	·800	·817	·797	—·044	76	70	69	75	− 2	1·3	1·1	1·2	−0·4	0	1	2	2	2	1	1	23	28	N 64° W	N 60° W	72	56	16[illegible]	185	0	0	Bombay	25
																															XIV.—Mysore.	
·505	·519	·405	·496	—·059	67	43	27	48	− 7	2·6	3·9	3·3		4	5	4	14	7	5	10	6	5	S 41° E	S 27° W	13	38	121	84	0·44	0·28	Bangalore	29
																															XV.—Madras.	
	·848	·887				66	69			6·7	7·6	7·1	+2·3	3	6	3	1	0	1	7	12	27	N 57° W	N 69° W	65	65	107	103	1·65	0·70	Trivandrum	31
	·718	·657				51	38			4·7	4·2	4·5		10	0	0	4	13	15	12	6	0	S 2° W		55		101		0	0	Pudukkottai	
·894	·860	·897	·905	+ ·005	91	60	63	75	− 3	3·3	1·8	2·6	−0·9	0	0	0	0	36	16	8	0	0	S 23° E	S 36° E	85	83	126	133	0	0	Madras.	
																															KASHMIR.	
·247	·329	·333	·303	− ·027	81	70	58	70	− 8	5·0	7·0	6·0	+1·0	15	8	4	2	7	9	0	5	10	N 28° W	N 18° W	8	19	68		3·05	0·80	Srinagar.	14
																															Hill stations, excluding Kashmir and Baluchistan.	
·312	·370	·324	·328	—·032	82	48	37	56	− 2	3·7	5·6	4·7	+0·7	0	0	0	30	0	0	0	30	0	(a)	N 87° W		42	18	26	2·31	0·85	Katmandu.	
·297	·346	·417	·353		71	52	70	64		4·5	7·5	6·0		0	8	19	8	16	6	0	0	3	N 73° E		52		170		4·87	1·18	Kodaikanal.	
																															Extra India.	
·748	·809	·908	·879	+ ·016	72	77	74	77	− 3	5·1	5·4	5·3	+0·2*	0	11	10	2	1	5	0	0	31	N 20° W	N 8° E	58	9	93	82	6·53	1·82	Seychelles.	
			·887	—·015				76	− 4			6·3	+1·2										S 69° E	S 71° E			156	130	2·96	0·76	Mauritius.	

* Departure from old normals.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs. at 211

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	*19	20	21	22	23
	I.—Burma.																					
2	Victoria Point	147	29·779		29·856	29·855	21st	29·696	13th	82·9	78·2	89·5		77·3		83·4		12·2	94·6	7th	74·7	5th
	Mergui	66	29·871	+·014	29·866	29·948	21st	29·786	12th	82·0	78·3	93·2	+1·3	76·1	+1·9	84·6	+1·6	17·1	97·0	7th	72·4	10th
	Tavoy	19	29·912	−·005	29·863	29·997	21st	29·833	13th	82·5	77·5	96·1	+2·3?	76·4	+1·9	86·2	+2·1?	19·7	99·8	6th	72·4	2nd
	Moulmein	77	29·854	+·014	29·869	29·940	21st	29·763	12th	83·4	77·2	95·2	+0·7	77·3	+0·7	86·2	+0·7	17·9	98·0	6th	73·0	10th
	Rangoon	18	29·903	+·016	29·858	29·979	2nd	29·813	12th	81·2	76·1	98·8	+0·6	76·1	−0·2	87·4	+0·2	22·7	103·2	27th	73·9	10th
	Bassein	27	29·892	+·013	29·855	29·955	20th	29·811	13th	82·9	77·0	97·8	+1·7	75·8	−0·1	86·8	+0·8	22·0	101·1	29th	72·2	9th
	Diamond Island	41	29·870	−·003	29·845	29·941	2	29·783	13th	84·5	76·8	88·8	+0·4	80·7	+1·9	84·7	+1·1	8·1	90·6	16th	78·0	9th
	Toungoo	164	29·731	+·019	29·836	29·807	6th	29·648	13th	86·0	78·6	101·8	+1·3	77·4	+1·3	89·6	+1·3	24·4	105·3	27th	69·0	9th
	Kyaukpyu	18	29·882		29·839	29·948	3rd	29·797	13th	82·3	76·8	90·0		76·9		83·5		13·1	95·6	17th	68·2	10th
	Akyab	20	29·878	+·002	29·839	29·949	3rd	29·793	12th	80·9	76·1	90·7	−0·9	73·5	−2·3	82·1	−1·6	17·2	96·0	26th	65·2	9th
3	Minbu	*165*	29·702	+·007	29·809	29·783	3rd	29·613	13th	84·4	72·4	102·5	−0·5	78·4	+1·2	90·4	+0·3	24·1	108·1	17th	70·0	10th
	Yamethin	644	29·232	+·017	29·821	29·305	3rd	29·133	13th	83·7	74·1	100·7	−0·6	77·0	+0·7	88·8	+0·1	23·7	104·8	16th	65·6	10th
	Mandalay	250	29·820	+·019	29·816	29·703	21st	29·491	12th	86·3	72·1	104·2	+2·0	77·7	−0·1	90·9	+0·9	26·5	109·9	18th	69·5	10th
	Monywa	*980*	29·600	+·015	29·829	29·705	3rd	29·453	13th	81·5	69·9	101·8	+0·8	75·8	+0·6	88·8	+0·7	26·0	108·6	17th & 18th.	65·7	10th
	Lashio	*2,890*	27·112	+·013	27·053	27·242	6th	26·976	14th	68·6	65·4	85·9	−2·9	61·7	−1·0	74·3	−1·9	25·2	93·1	16th, 17th & 18th.	56·0	11th
	Bhamo	*361*	29·503	+·022	29·822	29·631	3rd	29·369	13th	74·0	68·4	91·1	+1·3	64·4	−2·6?	79·2	−0·7?	29·7	100·6	30th	59·0	4th
	Myitkyina	463	29·398	+·008	29·826	29·531	3rd	29·263	1 th	72·4	65·7	91·6	+2·9	66·7	−0·5	79·2	+1·2	24·9	98·6	27th	61·4	3rd & 7th
	II.—Assam.																					
4	Dibrugarh	352	29·552	+·027	29·875	29·657	25th	29·386	1st	70·1	67·1	82·0	+2·5	65·6	+0·3	73·8	+1·4	16·4	91·7	5th	69·7	3rd
	Sibsagar	333	29·574	+·029	29·875	29·696	25th	29·401	13th	69·2	66·2	82·5	+0·8	65·5	−0·7	74·0	+0·1	17·0	91·6	3rd	62·0	3rd
	Tezpur	252	29·666	+·046?	29·872	29·780	6th	29·505	13th	71·4	66·8	86·1	+2·3	67·6	+0·3	76·9	+1·3	18·5	94·5	3rd	62·5	3rd
	Gauhati	196	29·694	+·029	29·849	29·846	25th	29·529	13th	73·9	68·5	87·6	+0·9	66·2	−1·1	76·9	−0·1	21·4	96·8	3rd	58·1	3rd
	Dhubri	115	29·756	+·034	29·827	29·877	25th	29·608	13th	74·6	69·1	87·4	−0·8	69·5	−0·5	78·5	−0·7	17·9	95·0	5th	63·3	8th
	Silchar	104	29·812	+·032	29·869	29·896	25th	29·677	13th	74·8	70·2	91·1	+3·0	68·4	−0·6?	79·7	+1·2	22·7	99·6	6th	61·4	8th
	Srimangal	66	29·831		29·847	29·922	3rd	29·660	13th	77·1	72·2	94·2	+3·3	70·0*	+1·2*	82·1*	+2·3?	24·2	101·1	6th	62·0	7th
	III.—Bengal.																					
5	Cox's Bazar	36	29·861		29·842	29·931	21st	29·751	13th	79·6	76·1	87·9		72·5		80·2		15·4	91·1	27th	65·7	8th
	Chittagong	87	29·809	+·019	29·842	29·884	8th	29·687	12th	77·4	74·4	89·1	+0·2	71·9	−1·5	80·5	−0·7	17·2	93·4	30th	64·8	5th
	Noakhali	42	29·848	+·032	29·838	29·940	26th	29·728	13th	80·5	76·1	88·7	−0·2	73·5	−0·2	81·1	−0·2	15·2	92·8	17th	63·8	8th
	Barisal	12	29·862	+·028	29·821	29·963	26th	29·729	13th	81·0	76·6	91·3	−0·5	73·1	−1·8	82·2	−1·1	18·2	98·8	1st	65·2	8th
	Narayanganj	26	29·851	+·033	29·826	29·946	6th	29·696	1	78·9	74·6	91·3	−1·3	72·6	−1·7	81·9	−1·5	18·7	101·3	1st	65·2	8th
	Mymensingh	63	29·814	+·032	29·829	29·814	25th	29·657	13th	77·1	71·6	91·1	+0·4	71·5	−0·1	81·2	0	19·6	98·9	1st	65·4	8th
	Bogra	75	29·780	+·033	29·807	29·908	25th	29·620	13th	78·6	72·6	96·1	+0·4	70·1	−1·7	83·1	−0·7	26·0	106·5	15th	63·9	8th
	Dinajpur	128	29·724	+·034	29·803	29·853	25th	29·568	13th	76·2	68·9	94·6	0	69·2	−0·7	81·9	−0·3	25·4	103·3	15th & 19th.	62·0	2nd
	Jalpaiguri	283	29·582	+·034	29·828	29·713	25th	29·422	13th	72·8	68·0	90·4	+0·9	66·2	−2·0	78·3	−0·5	24·2	98·5	18th	59·2	1st

N.B.—Elevations in italics indicate barometrical determinations.

*Mean of 28 days.

B.

stations in India, etc., in April, 1919.

Wind direction. Number of winds from: Calm	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec., 1918 to 30th April, 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															I.—Burma.
2	1	17	3	6	0	1	0	0	N 66° E		4·9			66		80		·898		5·7		13	+ 8·2	7·10	2·51	+ 4·59	10·30	6·19	+ 4·11	2·45	Victoria Point.
14	0	1	7	8	0	0	0	0	S 70° E	N 8° W	4·1	1·7	+ 2·4	46	−11	84	+ 2	·923	+ ·035	4·8	+1·3	5	− 1·1	5·20	5·47	− 0·27	13·84	11·85	+ 1·99	1·90	Mergui.
19	5	4	1	0	0	0	0	1	N 20° E	N 27° W	2·0	1·2	+ 0·8	30	+26	79	− 5	·869	− ·006	5·6	+3·7	3	− 1·1	1·31	2·97	− 1·66	2·49	5·43	− 2·94	0·74	Tavoy.
10	0	2	7	7	4	0	0	0	S 60° E	S 34° E	3·8	2·8	+1·0	46	+ 1	75	− 3	·852	− ·009	4·1	+0·3	4	0	1·69	2·94	− 1·25	2·14	4·02	− 1·88	1·00	Moulmein.
1	1	1	0	4	5	4	8	6	S 68° W	S 61° W	5·0	4·1	+0·9	40	−30	79	− 1	·832	− ·011	6·3	+3·2	0	− 1·8	0	1·50	− 1·50	0·60	2·68	− 2·08	0	Rangoon.
6	1	0	0	0	0	0	6	17	N 51° W	N 55° W	5·0	4·5	+0·5	72	+ 5	76	− 3	·853	− ·018	4·2	+1·2	0	− 1·6	0	1·19	− 1·19	0·23	2·18	− 1·95	0	Bassein.
2	5	0	0	0	0	1	4	18	N 45° W	N 47° W	7·8	6·2	+1·6	76	+13	69	− 6	·817	− ·041	3·4	−0·2	0	− 1·0	0·06	0·96	− 0·90	0·82	2·38	− 1·56	0·06	Diamond Island.
3	0	0	0	13	14	0	0	0	S 21° E	S 28 E	3·6	3·4	+0·2	82	+ 8	71	− 2	·873	+ ·019	4·3	+1·3	0	− 2·7	0·01	1·97	− 1·96	0·66	3·16	− 2·30	0·01	Toungoo.
28	0	0	0	0	0	0	0	2	N 45° W		1·5			3		77		·849		4·5		0	− 2·1	0·12	1·72	− 1·60	0·35	2·82	− 2·47	0·09	Kyaukpyu.
2	7	9	2	4	3	0	0	3	N 43° E	N 48° E	3·5	2·8	+0·7	46	− 1	83	− 1	·838	− ·044	4·7	+0·5	6	+ 4·2	2·56	1·99	+ 0·57	6·56	3·41	+ 3·15	1·18	Akyab.
3	1	1	0	18	2	0	1	4	S 43° E	S 45° E	2·7	7·1	−4·4	46	− 2	54	− 8	·835	− ·043	2·3	+0·5	0	− 1·2	0	0·87	− 0·87	0·66	1·65	− 1·19	0	Minbu.
																62	− 3	·712	− ·027	1·2	−0·3	4	+ 1·6	2·00	1·50	+ 0·50	2·33	2·73	− 0·40	1·17	Yamethin.
13	0	0	1	4	12	0	0	0	S 14° E	S 3° W	3·8	4·6	−0·8	53	+ 6	49	− 7	·598	− ·078	3·8	+1·9	1	− 1·4	0·29	1·24	− 0·95	0·75	1·93	− 1·18	0·12	Mandalay.
7	12	1	0	3	1	1	1	4	N 9° W		2·1			40		55	− 4	·576	− ·075	3·7	+1·8	3	+ 1·2	0·71	0·90	− 0·19	1·44	1·76	− 0·32	0·31	Monywa.
7	3	8	2	5	0	2	2	1	N 58° E		2·3			27		75	+ 6	·517	+ ·004	2·4	−2·5	8	+ 3·7	4·20	2·10	+ 2·10	5·85	4·27	+ 1·58	1·25	Lashio.
24	3	3	0	0	0	0	0	0	N 23° E	N 14° W	1·7	3·1	−1·4	20	−13	74	− 2	·616	− ·013	4·2	+0·3	4	− 0·7	1·91	1·85	+ 0·06	2·40	4·18	− 1·78	1·13	Bhamo.
21	2	5	1	0	0	0	0	1	N 32° E		5·0			23		69	− 7	·541	− ·071	4·9	0	4	− 1·4	1·50	2·00	− 0·50	2·80	4·72	− 2·12	0·87	Myitkyina.
																															II.—Assam.
10	1	9	8	2	0	0	0	0	N 69° E		0·9			56		86	− 3	·627	− ·006	5·2	−1·3	16	+ 1·1	5·79	11·07	− 5·28	8·79	19·59	−10·80	0·88	Dibrugarh.
7	3	15	2	0	0	0	0	2	N 37° E	N 48° E	2·2	2·4	−0·2	66	+13	85	− 6	·601	− ·070	7·1	−0·1	16	+ 1·5	7·59	10·34	− 2·75	13·51	18·95	− 5·44	1·66	Sibsagar.
5	0	11	13	1	0	0	0	0	N 72° E		2·9			72		78	− 6	·594	− ·046	4·6	−1·0	8	− 5·3	4·00	6·93	− 2·93	5·00	10·96	− 5·96	1·02	Tezpur.
17	2	3	4	2	0	0	0	2	N 56° E		1·4			27		75	− 7	·621	− ·036	3·3	−2·6	10	− 2·3	6·25	7·05	− 0·80	7·20	11·27	− 4·07	1·30	Gauhati.
2	0	10	13	2	0	2	1	0	N 77° E	N 72° E	7·5	6·4	+1·1	82	− 1	75	− 4	·640	− ·039	5·9	+1·0	8	0	5·05	4·90	+ 0·15	6·22	7·95	− 1·73	1·80	Dhubri.
29	0	1	0	0	0	0	0	0	N 45° E	N 82° E	0·2	2·5	−2·3	3	−22	79	− 4	·681	− ·040	3·2	−2·5	10	− 4·5	6·92	14·73	− 7·81	8·03	26·20	−18·17	1·13	Silchar.
																78	− 8	·731	− ·051	3·1		8	− 4·1	8·26	11·59	− 3·33	9·23	18·10	− 8·87	3·13	Srimangal.
																															III.—Bengal.
11	0	3	5	6	5	0	0	0	S 58° E		3·3			43		84		·856		3·7		6	+ 1·4	5·12	4·44	+ 0·68	5·51	7·35	− 1·84	1·80	Cox's Bazar.
6	0	7	6	7	2	1	1	0	S 79° E	S 47° E	3·6	5·0	−1·4	46	−11	86	+ 6	·812	− ·015	4·5	0	8	+ 2·6	4·75	5·08	− 0·33	5·40	9·89	− 4·49	1·18	Chittagong.
5	0	1	2	8	10	4	0	0	S 16° E		3·1			63		81	0	·840	− ·018	4·1	+0·3	10	+ 4·0	8·22	6·05	+ 3·17	10·62	10·58	+ 0·04	2·84	Noakhali.
9	0	0	1	6	9	5	0	0	S 5° E	S 8° W	2·4	4·2	−1·8	56	+ 1	81	− 1	·857	− ·037	5·5	+0·9	14	+ 8·7	11·74	4·33	+ 7·41	13·43	8·61	+ 4·82	3·37	Barisal.
5	0	0	2	6	10	4	1	0	S 14° E	S 10° E	2·5	5·3	−2·8	59	+ 2	81	− 2	·796	− ·049	3·8	−2·2	9	+ 2·3	7·13	5·22	+ 1·91	8·05	9·79	− 1·74	1·67	Narayanganj.
6	0	1	13	8	1	0	0	1	S 74° E	S 68° E	2·2	3·1	−0·9	62	− 8	76	− 5	·767	− ·058	5·0	−0·8	9	+ 1·8	3·87	5·90	− 2·03	5·34	9·58	− 4·21	0·75	Mymensingh.
14	0	3	7	3	2	1	0	0	S 75° E	S 63° E	1·4	3·4	−2·0	37	−22	75	− 2	·722	− ·022	3·9	+0·3	1	− 2·7	1·18	2·30	− 1·12	3·29	4·92	− 1·63	1·08	Bogra.
1	1	4	12	3	1	1	4	2	N 82° E	N 86° E	3·5	4·1	−0·6	40	− 8	68	− 4	·611	− ·054	2·9	−1·3	4	+ 0·9	2·19	2·11	+ 0·08	2·90	3·96	− 1·06	1·23	Dinajpur.
19	0	1	7	2	1	0	0	0	S 75° E	N 88° E	1·4			30	−37	77	+ 2	·628	− ·031	2·8	−0·3	4	−1·6	2·08	3·71	− 1·63	2·77	6·40	− 3·63	0·75	Jalpaiguri.

Table

(2) Abstract of observations taken at 8 hrs. at 211 stations

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity, at 45° lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between and maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal—*concld.*																					
	Saugor Island	10	29·841	+·022	29·796	29·958	25th	29·693	12th	83·6	78·7	89·7	−0·8	78·1	−1·6	83·9	−1·2	11·6	97·2	5th	69·8	9th
	Midnapore	149	29·686	+·019	29·784	29·822	25th	29·539	12th	83·8	74·6	101·3	+0·3	75·3	−0·7	83·3	−0·2	26·0	109·0	13th	68·3	9th
	Calcutta	21	29·827	+·024	29·796	29·960	25th	29·680	12th	80·6	76·0	96·2	+0·6	75·3	−0·4	85·7	+0·1	20·9	103·0	14th	66·6	9th
	Jessore	30	29·834	+·039	29·811	29·963	25th	29·693	13th	81·1	74·8	95·1	−1·6	73·6	−1·3	84·4	−1·5	21·5	101·7	15th	64·9	9th
	Burdwan	99	29·731	+·018	29·778	29·849	25th	29·590	12th	79·6	73·5	98·3	−1·9	73·0	−2·4	85·7	−2·1	25·3	104·6	13th & 14th.	65·4	9th
	Berhampore	67	29·779	+·037	29·795	29·920	25th	29·620	12th	80·5	72·3	98·3	−1·2	73·2	−1·1	85·7	−1·1	25·1	107·1	15th	64·2	9th
	IV.—Bihar and Orissa.																					
6	Balasore	50	29·804	+·030	29·799	29·920	25th	29·671	13th	82·0	76·4	96·0	−0·9	74·7	−1·2	85·3	−1·1	21·3	103·8	1st	67·7	9th
	Hukitala (False Point)	29	29·844	+·027	29·814	29·943	24th	29·715	13th													
	Cuttack	80	29·788	+·034	29·809	29·935	25th	29·657	13th	83·2	78·0	102·5	+0·9	78·4	+0·6	90·4	+0·7	24·1	107·3	22nd	71·2	9th
	Puri	24	29·856	+·024	29·821	29·980	25th	29·738	13th	82·6	79·4	88·8	+0·9	80·2	+1·6	84·5	+1·3	8·6	97·2	6th	71·7	9th
	Angul	455	29·395	+·035	29·794	29·549	25th	29·272	12th	83·3	74·1	102·3	+1·3	75·7	+1·6	89·0	+1·5	26·6	107·8	14th	69·4	3rd
	Sambalpur	485	29·367	+·025	29·799	29·481	26th	29·251	12th	84·3	71·4	101·4	−2·2	74·6	−0·8	88·0	−1·5	26·8	106·0	13th, 14th & 19th.	68·7	3rd
7	Chaibasa	733	29·100	+·026	29·784	29·235	26th	28·935	12th	81·3	70·1	101·4	−1·0	73·9	−0·3	87·6	−0·7	27·5	107·0	13th	61·9	9th
	Ranchi	2,133	27·727	+·031	29·773	27·836	26th	27·590	12th	78·3	63·9	92·2	−4·1?	69·5	−2·4	80·9	−3·3?	22·7	98·5	15th	62·0	21st
	Purulia	816	29·024	+·042	29·791	29·154	25th	28·887	12th	80·9	68·1	100·6	−1·2	71·1	−3·3	85·8	−2·3	29·5	107·5	13th	65·1	9th
	Daltonganj	730	29·110	+·038	29·791	29·267	26th	28·980	12th	82·0	68·1	99·7	−1·2	69·6	−0·7	84·7	−0·9	30·1	106·0	30th	62·6	3rd
8	Purnea	124	29·713	+·028	29·794	29·856	25th	29·553	13th	77·4	68·3	95·7	−1·1	68·5	−1·3	82·1	−1·2	27·2	103·1	15th	62·8	3rd
	Monghyr	155	29·666		29·774	29·812	25th	29·516	13th	79·6	67·8	97·0		72·2		84·6		24·8	103·8	20th	65·9	8th & 9th.
	Darbhanga	165	29·668	+·037	29·790	29·813	26th	29·522	13th	77·3	67·8	95·3	−0·8	68·8	−2·4	82·0	−1·6	26·5	103·5	15th	63·7	27th
	Pusa	188	29·644		29·789	29·788	26th	29·490	13th	78·7	68·3	97·9		68·3		83·1		29·6	105·4	15th	63·1	8th & 9th.
	Patna	183	29·647	+·042	29·786	29·803	26th	29·504	13th	81·2	67·2	97·0	−2·8	72·9	−0·5	84·8	−1·7	24·1	105·0	20th	65·5	9th
	Buxar	239	29·577	+·034	29·773	29·729	26th	29·428	12th	79·3	65·7	99·3	−0·8	72·6	−1·0	85·9	−0·9	26·7	105·4	20th	64·6	26th
	Gaya	372	29·468	+·052	29·792	29·610	25th	29·309	12th	82·4	66·6	99·8	−2·9	75·3	+0·2	87·5	−1·3	24·5	105·8	20th	68·4	9th
	Naya Dumka	489	29·353	+·045	29·789	29·501	25th	29·184	12th	83·3	69·3	98·6	−1·3	72·6	−1·5	85·6	−1·4	26·0	106·5	15th	67·0	8th
	V.—United Provinces of Agra and Oudh.																					
9	Gorakhpur	257	29·565	+·048	29·782	29·745	26th	29·411	12th	80·0	66·3	97·9	−2·0	70·7	−1·2	84·3	−1·6	27·2	105·6	15th	62·0	26th
	Benares	267	29·567	+·047	29·787	29·707	26th	29·433	12th	84·6	68·1	99·2	−3·3	71·1	−0·5	85·1	−1·9	28·1	106·4	30th	65·3	26th
	Allahabad	309	29·534	+·054	29·786	29·678	26th	29·410	12th	83·6	65·5	100·8	−2·4	72·5	+0·3	86·6	−1·1	28·3	108·2	30th	65·6	26th
	Cawnpore	416	29·416	+·051	29·789	29·584	26th	29·291	12th	80·4	65·7	99·6	−1·3	72·7	+0·7	86·1	−0·3	26·9	105·6	12th	65·7	26th
	Lucknow	368	29·461	+·050	29·785	29·633	26th	29·330	12th	83·8	67·5	100·4	−1·4	72·1	+1·4	86·3	0	28·3	105·3	30th	63·5	26th
	Bahraich	407	29·400	+·036	29·769	29·580	26th	29·253	12th	79·1	66·4	97·3	−1·8	69·7	+0·4	83·5	−0·7	27·6	100·1	5th & 14th	58·2	26th
10	Jhansi	824	29·005	+·008	29·783	29·142	26th	28·912	13th	81·5	67·9	101·0	−2·3	73·3	−3·6?	87·2	−2·9?	27·7	108·0	30th	63·8	25th
	Agra	556	29·271	+·032	29·784	29·425	26th	29·149	12th	83·9	66·1	98·9	−2·3	72·5	−0·9	85·7	−1·6	26·4	105·4	30th	63·4	25th
	Mainpuri	516	29·291	+·023	29·767	29·452	26th	29·157	12th	79·8	64·8	99·8	−1·3	70·4	+0·8	85·1	−0·3	29·4	104·6	12th & 21st.	65·0	2nd
	Bareilly	568	29·213	+·044	29·776	29·430	26th	29·116	13th	78·8	64·5	96·3	−2·2	69·6	+0·8	83·0	−0·7	26·7	102·3	21st	62·2	3rd & 26th.
	Roorkee	899	28·917	+·049	29·701	29·092	26th	28·801	12th	75·5	62·3	92·1	−4·7	64·7	−1·0	78·4	−2·9	27·4	97·7	21st	58·2	3rd

N. B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

in India, etc., in April, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 30th Apr. 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
21	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															III.—Bengal—*concld.*
1	2	1	1	0	11	13	1	0	S 26° W	S 18° W	10·1	8·5	+1·6	62	−15	80	−1	·913	−·012	9·5	−1·0	4	+1·9	1·35	1·19	+0·16	4·40	4·39	+0·01	0·54	Saugor Island.
17	0	1	0	4	7	1	0	0	S 17° E		3·6			33		64	−5	·735	−·027	3·4	+1·7	6	+2·6	1·62	1·95	−0·33	4·75	5·43	−0·68	0·68	Midnapore.
2	0	2	2	4	3	17	0	0	S 19° W	S 25° W	4·6	5·1	−0·5	56	−14	80	+2	·839	−·015	3·2	−0·4	4	+0·7	4·02	1·80	+2·22	6·76	4·92	+1·84	1·30	Calcutta.
21	0	0	0	3	5	1	0	0	S 10° E	S 1° E	2·3	3·0	−0·7	27	−25	73	−8	·783	−·087	2·7	−2·0	6	+1·1	5·89	3·50	+2·39	7·71	7·57	+0·14	0·35	Jessore.
9	0	1	1	2	5	6	4	2	S 37° W	S 27° W	1·8	3·5	−1·7	37	−23	74	+2	·749	−·023	4·6	+1·0	5	+1·5	3·21	2·11	+1·10	6·73	5·47	+1·26	1·30	Burdwan.
8	0	0	3	3	6	0	3	1	S 13° W	S 2° E	2·7	3·5	−0·8	40	−17	67	−7	·687	−·074	5·0	+1·1	3	+0·3	1·36	1·45	−0·09	3·33	3·96	−0·63	1·00	Berhampore.
																															IV.—Bihar and Orissa.
7	2	0	0	1	9	9	0	2	S 29° W	S 29° W	3·1	6·3	−3·2	49	−6	76	+1	·836	+·001	3·5	+0·9	5	+1·3	3·19	2·07	+1·12	7·90	6·38	+1·52	1·60	Balasore.
1	2	0	0	2	10	12	1	2	S 30° W		1·3			59	−18					4·2	−1·2	2	+0·4	3·08	0·81	+2·27	7·29	4·05	+3·24	2·16	Hukitala (False Point).
12	0	1	0	1	1	9	6	0	S 57° W	S 39° W	2·9	3·7	−0·8	43	−17	78	+4	·891	+·055	3·7	+0·1	5	+2·2	1·05	1·16	−0·11	4·92	3·50	+1·42	0·47	Cuttack.
0	2	1	0	0	10	15	2	0	S 34° W		13·7			75		86	+1	·961	+·049	3·9	+0·4	1	−0·3	3·24	0·66	+2·58	6·76	2·55	+4·21	3·23	Puri.
12	2	2	2	2	2	0	1	7	N 11° W		4·9			17		64	−3	·724	+·015	3·7	+1·4	0	−3·2	0·15	1·58	−1·43	4·28	4·94	−0·66	0·07	Angul.
0	5	9	1	0	2	7	3	3	N 23° W	S 87° E	3·3	2·8	+0·5	27	+17	52	+2	·597	+·001	3·9	+1·7	2	+0·5	0·99	0·65	+0·34	8·61	2·94	+5·67	0·71	Sambalpur.
18	0	0	0	0	0	9	3	0	S 56° W	S 62° W	2·6	1·9	+0·7	37	−22	56	−5	·593	−·052	3·2	+1·5	1	−1·6	0·35	1·37	−1·02	4·37	4·89	−0·52	0·20	Chaibasa.
8	1	0	0	5	3	3	6	4	S 56° W	S 51° W	3·5	5·4	−1·9	27	−21	44	+2	·415	−·018	3·3	+1·4	3	+0·4	2·17	0·97	+1·20	12·00	4·93	+7·07	1·59	Ranchi.
5	0	0	1	2	4	3	14	1	S 63° W		2·1			50		50	−4	·517	−·041	3·7	+1·5	2	−0·6	0·71	1·10	−0·39	4·58	4·70	−0·12	0·41	Purulia.
27	1	0	1	1	0	0	0	0	N 82° E		2·9			6		46	0	·503	+·033	1·4	−0·3	1	0	0·66	0·45	+0·21	7·46	3·40	+4·06	0·46	Daltonganj.
0	2	2	14	3	0	4	2	3	N 87° E	N 68° E	3·7	3·4	+0·3	37	−23	61	−7	·570	−·078	4·1	+1·7	1	−0·9	1·26	1·20	+0·06	2·45	2·96	−0·51	1·18	Purnea.
6	0	3	10	1	0	7	1	2	S 68° E		5·1			17		55		·528		2·8		2	+0·8	0·51	0·84	−0·33	1·12	3·14	−2·02	0·33	Monghyr.
5	2	0	14	2	1	0	6	0	S 87° E	S 67° E	3·4	4·2	−0·8	31	−22	60	−5	·556	−·075	2·2	+0·8	1	−0·5	0·89	0·71	+0·18	2·03	2·37	−0·34	0·89	Darbhanga.
5	1	3	9	2	2	4	3	1	S 72° E		3·4			23		57		·550		2·2		1	−0·7	1·36	0·93	+0·43	2·69	2·65	+0·04	1·27	Pusa.
7	0	0	12	3	0	5	3	0	S 53° E	S 81° E	3·5	3·6	−0·1	33	+13	46	−5	·482	−·062	2·3	+0·8	1	+0·4	0·49	0·32	+0·17	2·60	2·20	+0·40	0·49	Patna.
3	3	2	4	2	3	9	4	0	S 27° W		3·8			23		46	+4	·458	+·011	3·2	+1·6	0	−0·4	0·03	0·17	−0·14	3·25	2·17	+1·08	0·03	Buxar.
9	1	0	1	1	6	10	2	0	S 26° W	S 34° W	2·8	3·5	−0·7	46	+13	41	−10?	·433	−·160?	2·6	+0·6	2	+1·5	0·36	0·22	+0·14	4·43	2·37	+2·06	0·22	Gaya.
27	1	0	0	2	0	0	0	0	S 72° E		2·2			5		48	−4	·536	−·041	2·5	+0·7	1	−1·0	0·25	0·94	−0·69	4·95	3·33	+1·62	0·18	Naya Dumka.
																															V.—United Provinces of Agra and Oudh.
8	0	1	9	0	1	1	9	1	S 67° W	N 57° E	3·2	2·6	+0·6	2	−9	46	−7	·465	−·083	1·2	−0·6	1	+0·2	0·40	0·42	−0·02	1·92	2·30	−0·38	0·40	Gorakhpur.
5	1	3	2	3	0	10	4	2	S 53° W	S 53° W	2·6	2·6	0	27	+5	40	−7	·468	−·033	1·8	+0·2	2	+1·6	0·45	0·18	+0·27	4·70	2·13	+2·57	0·31	Benares.
6	1	1	5	2	0	3	10	2	S 86° W	N 86° W	2·9	3·9	−1·0	21	−1	35	−1	·389	−·020	2·6	+0·7	1	+0·5	0·17	0·16	+0·01	4·33	2·04	+2·29	0·13	Allahabad.
7	3	1	1	3	3	2	7	3	S 82° W	S 79° W	2·0	3·0	−1·0	17	−2	42	+3	·433	−·001	1·4	+0·5	0	−0·5	0·09	0·22	−0·13	1·02	1·98	−0·96	0·06	Cawnpore.
20	1	1	4	0	1	0	3	0	N 66° E	N 81° W	1·4	2·9	−1·5	7	−13	40	+1	·459	+·040	3·0	+1·1	0	−0·6	0·06	0·28	−0·22	1·24	2·41	−1·17	0·06	Lucknow.
2	6	3	4	3	2	3	4	3	N	N 55° E	3·5	3·0	+0·5	13	+7	49	−2	·481	−·057	2·4	+0·9	0	−0·7	0·06	0·34	−0·28	2·01	3·23	−1·22	0·03	Bahraich.
5	4	3	1	2	1	10	1	3	S 77° W	S 87° W	3·7	2·6	+1·1	20	−10	47	+12	·499	+·063	1·1	+0·1	1	+0·4	0·30	0·16	+0·14	1·77	1·82	−0·05	0·27	Jhansi.
4	2	2	5	2	2	6	5	2	S 45° W	S 89° W	3·2	3·7	−0·5	13	−24	35	−1	·405	+·013	1·8	+0·3	2	+1·4	0·43	0·23	+0·20	1·60	1·91	−0·31	0·25	Agra.
3	4	1	5	3	1	3	5	5	N	S 74° W	2·0	1·8	+0·2	10	−4	41	0	·416	+·012	1·4	−0·8	2	+1·3	0·41	0·39	+0·02	2·16	2·49	−0·33	0·22	Mainpuri.
11	2	2	3	4	1	1	2	4	N 45° E	N 20° W	1·6	2·7	−1·1	10	+2	43	−4	·412	−·039	3·4	+1·5	1	+0·3	0·30	0·31	−0·01	2·57	3·37	−0·80	0·30	Bareilly.
19	0	2	1	5	0	0	0	3	S 59° E	S 60° E	2·4	2·4	0	7	0	46	+4	·401	+·027	1·1	−0·6	3	+1·9	0·94	0·47	+0·47	8·09	5·16	+2·93	0·43	Roorkee.

Table

(2) Abstract of observations taken at 8 hrs. at 211 stations

Number of sub-division.	Station.	Height of barometers above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	VI.—Punjab.																					
11	Delhi	718	29·167	+·042	29·796	29·262	26th	28·999	12th & 13th.	77·3	63·1	94·5	−4·1	71·5	−1·5	83·0	−2·8	23·0	99·8	21st	64·0	26th
	Hissar	725	29·103	+·049	29·798	29·232	26th	28·973	11th	78·2	63·8	96·7	−2·7	66·3	−1·5	81·5	−2·1	30·4	103·5	10th	57·8	1st
	Patiala	*818*	28·997	+·033	29·789	29·128	26th	28·839	13th	77·0	67·9	92·8	−1·4	66·8	+0·2	79·8	−0·6	26·0	97·4	12th & 21st.	59·0	1st
	Ambala	892	28·914	+·036	29·782	29·054	26th	28·795	12th	76·6	62·2	95·5	+0·1P	66·8	+1·3	81·1	+0·7P	28·7	100·6	12th	58·0	1st
	Ludhiana	812	29·003	+·046	29·795	29·152	26th	28·885	11th & 13th.	74·8	62·8	93·1	−2·9	67·2	+0·4	80·2	−1·3	25·9	99·3	10th	61·4	1st
	Lahore	702	29·102	+·030	29·785	29·219	26th	28·964	10th	74·2	64·4	92·3	−4·2	65·3	+0·8	78·8	−1·7	27·0	100·8	10th	56·7	1st
	Sialkot	830	28·982	+·037	29·798	29·105	26th	28·845	11th	72·9	63·0	88·4	−5·6	63·2	−2·7	75·8	−4·1	25·2	94·7	10th	55·5	1st
	Rawalpindi	1,674	28·169	+·035	29·831	28·265	26th	28·064	11th	71·1	60·9	85·6	−1·3	58·3	−1·1	71·9	−1·2	27·3	95·0	10th	50·3	1st
12	Khushab	612	29·217	+·039	29·809	29·330	21st	29·064	10th	75·8	63·4	92·0	−1·4	65·5	−1·5	78·8	−1·5	26·5	102·2	10th	56·2	1st
	Lyallpur	605	29·205		29·790	29·316	25th	29·034	10th	74·3	63·3	92·5		64·7		78·6		27·8	101·0	10th	54·4	1st
	Montgomery	558	29·251	+·029	29·785	29·372	26th	29·091	10th	76·7	64·0	93·7	−3·5	66·7	−0·5	80·2	−1·9	27·0	102·4	10th	57·2	1st
	Multan	426	29·398	+·022	29·785	29·523	21st	29·211	10th	78·3	65·4	95·1	−2·8	70·4	+2·0	82·8	−0·4	24·7	104·6	10th	63·7	15th
	VII.—North-West Frontier Province.																					
14	Peshawar	1,113	28·733	+·004	29·851	28·814	3rd	28·606	9th	66·8	61·0	87·2	+1·7	59·6	−0·7	73·4	+0·5	27·6	95·0	9th & 30th.	54·1	1st
	D.I. Khan	590	29·254	+·025	29·822	29·363	21st	29·060	10th	76·3	65·2	92·7	−0·6	65·3	+1·1	79·5	+0·3	26·4	102·9	10th	58·0	1st
	VIII.—Sind.																					
16	Jacobabad	186	29·618	+·015	29·764	29·790	21st	29·438	10th	82·1	66·8	100·8	+1·2	71·7	+2·0	86·2	+1·6	29·1	111·5	30th	63·6	1st
	Hyderabad	96	29·729	+·010	29·778	29·829	6th	29·620	9th	80·5	70·9	100·4	−1·6	72·5	+0·4	86·4	−0·6	27·9	108·9	29th	66·0	15th
	Karachi	13	29·868	+·032	29·832	29·961	21st	29·766	19th	77·6	73·8	83·0	−2·3	73·7	−0·3	78·4	−1·3	9·3	86·0	21st, 22nd & 26th.	69·8	15th
	IX.—Rajputana.																					
17	Bikaner	*771*	29·054	+·041	29·792	29·160	26th	28·935	10th & 11th.	79·2	67·9	98·1	−2·1	70·4	−4·5P	84·2	−3·3P	27·7	107·8	30th	61·7	1st
	Jodhpur	780	29·061	+·020	29·799	29·178	3rd	28·980	10th	81·2	62·5	98·5	−2·2	71·4	+0·8	85·0	−0·7	27·1	109·2	30th	61·6	1st
18	Jaipur	1,431	28·423	+·026	29·801P	28·545	26th	28·318	11th	87·6	62·2	97·7	−2·5	69·2	−1·4	83·5	−1·9	28·5	110·1	30th	60·2	25th
	Ajmer	1,611	28·238	+·003	29·798	28·342	26th	28·145	11th	76·7	62·1	94·6	−3·8	70·0	−1·8	82·3	−2·8	24·6	104·6	30th	60·5	1st
	Kotah	832	29·003	+·019	29·783	29·131	3rd	28·906	11th	86·1	66·1	100·7	−1·2	75·1	−1·4	87·9	−1·3	25·6	109·0	30th	66·2	25th
	X.—Bombay.																					
19	Deesa	466	29·431	+·047P	29·851P	29·514	3rd	29·344	29th	82·9	67·5	103·2	−0·6	71·3	−0·2	87·2	−0·4	31·9	110·7	30th	67·0	1st
	Bhuj	334	29·549	+·027	29·838	29·647	3rd	29·447	19th	80·2	71·2	97·7	−2·7	71·4	−0·1	84·5	−1·4	26·3	106·0	30th	66·1	15th
	Jamnagar	61	29·643	+·020	29·850	29·923	6th	29·757	19th	79·7	73·8	93·9	−1·4	70·0	−0·6	81·9	−1·0	22·9	99·9	22nd	65·2	4th
	Dwarka	37	29·884	+·024	29·867	29·959	26th	29·805	19th	78·8	74·5	84·1	−0·7	76·3	+0·3	80·2	−0·2	7·8	86·3	21st	73·8	1st & 4th
	Rajkot	429	29·456	+·010	29·836	29·535	3rd	29·368	19th	79·6	69·2	100·6	−1·6	71·0	+0·9	85·8	−0·3	29·6	106·8	28th	67·0	4th & 16th
	Veraval	*18*	29·888	+·020	29·849	29·969	3rd	29·803	29th	77·7	71·8	84·2	−2·2	72·3	0	78·2	−1·1	11·9	95·6	18th	67·3	4th
	Bhavnagar Para	55	29·840	+·019	29·841	29·954	3rd	29·742	29th	82·1	67·8	101·9	0	72·2	−2·3P	87·1	−1·1P	29·6	107·2	23rd	68·6	4th & 16th
	Surat	39	29·871	+·022	29·853	29·965	3rd	29·778	29th	83·4	72·3	100·3	+0·5	73·6	+0·5	86·9	+0·5	26·7	107·6	28th	69·3	8th
	Ahmadabad	163	29·732	+·027	29·844	29·823	3rd	29·661	29th	82·2	68·9	104·2	−0·4	74·9	0	89·5	−0·2	29·3	111·0	30th	69·8	8th
25	Bombay	37	29·887	+·022	29·865	29·974	21st	29·795	29th	80·2	74·7	89·0	+0·4	76·9	−0·6	82·9	−0·1	12·1	91·5	28th	74·5	5th
	Ratnagiri	207	29·701	+·012	29·847	29·786	21st	29·628	13th	81·8	73·2	87·9	−1·8	75·8	−1·3	81·8	−1·5	12·1	93·1	15th	69·7	13th
	Marmagao	*60*	29·861	+·016	29·855	29·941	21st	29·765	13th	82·8	76·9	88·6	−0·8						92·6	30th		
	Karwar	44	29·880	+·022	29·858	29·958	21st	29·783	13th	80·5	75·6	89·8	+0·3	76·5	−1·0	83·2	−0·3	13·3	93·1	29th	73·8	26th

N.B – Elevations in italics indicate barometrical determinations.

B—*continued.*

in India, etc., in April, 1919—*continued.*

Wind Direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 30th Apr. 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															VI.—Punjab.
6	1	3	2	7	1	2	5	3	S 14° E	N 77° W	3·1	2·8	+0·3	7	−30	42	+ 3	·391	+·011	1·1	−0·9	0	−0·9	0·07	0·42	−0·35	2·94	3·28	−0·32	0·07	Delhi.
7	2	2	1	4	2	5	4	3	S 57° W	N 28° W	3·9	3·9	0	17	+15	42	0	·399	−·007	2·2	0	1	+0·3	0·21	0·34	−0·13	2·23	2·19	+0·04	0·10	Hissar.
7	6	2	0	8	3	0	2	2	N 87° E		4·6			10		61	+14?	·563	+·118?	2·5	+0·3	0	−1·3	0	0·48	−0·48	4·57	4·89	−0·32	0	Patiala.
7	6	1	5	6	1	0	2	2	N 65° E	N 18° W	3·6	2·3	+1·3	23	+14	41	−10?	·365	−·075?	4·1	+2·2?	0	−1·7	0·09	0·50	−0·41	4·70	5·56	−0·86	0·07	Ambala.
21	1	6	0	1	1	0	0	0	N 54° E	N 27° E	1·7	1·8	−0·1	20	+13	48	+ 2	·413	−·005	2·6	+0·2	1	−0·4	0·35	0·80	−0·45	4·41	5·77	−1·36	0·11	Ludhiana.
11	2	5	5	3	1	1	0	2	N 70° E	N 31° E	2·0	2·3	−0·3	30	+10	55	+ 5	·465	+·033	2·9	+0·3	1	−0·5	0·45	0·52	−0·07	4·39	3·85	+0·54	0·18	Lahore.
4	13	3	4	2	0	0	1	3	N 18° E	N 20° E	1·8	2·0	−0·2	53	+20	56	+ 5	·447	+·011	3·0	+1·0	2	−0·1	0·35	0·92	−0·57	8·09	7·01	+1·08	0·18	Sialkot.
16	2	2	1	1	1	1	4	2	N 64° W	N 30° W	2·0	2·3	−0·3	10	−19	54	− 2	·405	−·003	4·0	+0·6	3	−0·9	1·42	1·90	−0·48	9·22	10·17	−0·95	0·98	Rawalpindi.
12	6	5	4	2	1	0	0	0	N 51° E	N 37° E	2·7	4·9	−2·2	37	0	48	+ 5	·418	+·025	2·7	+0·5	5	+2·7	1·04	1·05	−0·01	4·43	4·45	−0·02	0·46	Khushab.
2	1	6	3	9	3	1	1	4	S 77° E		2·7			30		52		·436		3·4		2	+0·4	0·41	0·64	−0·23	3·32	2·83	+0·49	0·31	Lyallpur.
3	5	3	4	4	4	1	4	2	N 70° E	S 83° E	4·4	4·6	−0·2	10	−.6	48	+11	·426	+·059	2·2	0	2	+1·1	0·76	0·31	+0·45	2·04	2·27	−0·23	0·40	Montgomery.
6	5	8	0	7	4	0	0	0	N 81° E	N 51° E	2·6	1·6	+1·0	37	+14	48	+ 1	·458	+·015	1·7	−0·1	1	+0·2	0·37	0·23	+0·14	1·61	1·70	−0·09	0·11	Multan.
																															VII.—North-West Frontier Province.
29	0	0	0	0	0	1	0	0	S 45° W	S 54° W	0·6	2·9	−2·3	3	− 7	70	+ 9	·462	+·010	1·7	−2·0	3	−1·1	0·90	1·90	−1·00	6·15	7·62	−1·47	0·45	Peshawar.
9	3	10	1	2	0	0	0	5	N 26° E	N 5° E	2·0	1·8	+0·2	46	+13	53	− 3	·474	−·016	2·7	+0·2	2	+0·3	0·36	0·77	−0·41	1·36	3·28	−1·92	0·18	D. I. Khan.
																															VIII.—Sind.
16	0	3	0	8	1	2	0	0	S 47° E	N 88° E	1·5	3·1	−1·6	27	0	42	+ 1	·456	+·011	1·2	−0·8	2	+1·5	2·29	0·15	+2·14	2·62	1·16	+1·46	1·92	Jacobabad.
5	3	0	0	0	5	14	2	1	S 48° W	S 48° W	6·5*	7·9	−1·6	53	− 1	60	+13	·623	+·119	0·7	−0·8	1	+0·9	0·13	0·04	+0·09	0·71	0·89	−0·18	0·12	Hyderabad.
1	0	0	2	0	0	7	16	4	S 85° W	N 80° W	10·2	9·6	+0·6	72	+11	83	+ 4	·783	+·015	3·2	+0·8	0	−0·2	0·03	0·18	−0·15	1·27	1·62	−0·35	0·03	Karachi.
																															IX.—Rajputana.
8	1	2	3	7	4	3	1	1	S 35° E	S 51° W	2·8	4·3	−1·5	33	+11	54	+16	·533	+·114	1·2	−0·8	2	+1·6	0·64	0·16	+0·48	1·88	1·31	+0·57	0·32	Bikaner.
8	0	3	1	2	1	14	0	1	S 33° W		2·9			27		31	+ 2	·319	+·012	2·6	+0·6	2	+1·6	1·18	0·12	+1·06	1·59	0·70	+0·89	1·05	Jodhpur.
8	4	5	4	2	0	0	3	4	N 19° E	N 34° W	3·3	3·7	−0·4	30	− 4	32	− 1	·324	−·040	2·1	−0·2	1	+0·5	0·17	0·17	0	1·70	1·56	+0·14	0·10	Jaipur.
20	1	0	0	0	1	5	3	0	S 62° W	W	3·5	4·2	−0·7	23	− 8	42	+ 3	·377	−·039	0·5	−1·4	0	−0·4	0·11	0·17	−0·06	0·83	1·34	−0·51	0·08	Ajmer.
8	3	3	2	2	0	6	2	4	N 56° W		2·9			10		31	+ 6	·373	+·063	2·4	+1·2	1	+0·4	0·56	0·33	+0·23	1·50	1·38	+0·12	0·48	Kotah.
																															X.—Bombay.
4	1	5	1	0	0	4	8	9	N 53° W	N 88° W	6·0	6·6	−0·6	46	+16	43	+ 2	·473	+·016	1·5	+0·2	0	−0·1	0·09	0·03	+0·06	0·24	0·44	−0·20	0·09	Deesa.
1	4	0	0	0	1	0	23	1	N 81° W	N 75° W	6·9	8·5	−1·6	79	+ 2	63	+ 4	·649	+·013	1·9	+0·6	1	+0·9	0·10	0·08	+0·02	0·56	0·47	+0·09	0·10	Bhuj.
0	0	1	0	1	0	4	17	7	N 85° W*		10·2			78		75	+ 7	·754	+·046	1·6	+0·5	0	−0·1	0	0·05	−0·05	0·56	0·45	+0·11	0	Jamnagar.
1	3	1	0	0	0	7	11	7	N 80° W		9·0			66		82	+ 2	·799	−·023	1·8	−0·3	0	−0·1	0	0·07	−0·07	0·97	0·82	+0·15	0	Dwarka.
1	0	1	0	1	0	7	15	5	S 86° W	N 66° W	9·5	7·6	+1·9	72	− 1	57	− 7	·576	−·081	3·1	+1·9	0	−0·1	0	0·03	−0·03	0	0·30	−0·30	0	Rajkot.
2	10	0	0	0	1	0	8	9	N 43° W	N 47° W	8·2	6·1	+2·1	69	+ 6	75	+ 1	·704	−·025	1·7	−0·6	0	0	0	0	0	0·13	0·24	−0·11	0	Veraval.
1	3	1	0	0	1	2	7	15	N 57° W	S 66° W	5·1	7·7	−2·6	73	+ 6	46	−10	·492	−·118	2·2	+0·7	0	−0·2	0·03	0·10	−0·07	0·04	0·44	−0·40	0·03	Bhavnagar Para.
16	5	4	0	1	2	1	0	1	N 22° E	S 61° W	2·6	5·4	−2·8	20	−20	57	− 7	·644	−·080	1·9	+0·4	0	−0·1	0·03	0·04	−0·01	0·04	0·23	−0·19	0·03	Surat.
1	0	2	0	0	0	4	0	23	N 50° W	N 45° W	3·9	3·4	+0·5	76	+35	49	+ 2	·534	−·005	1·1	−0·5	0	−0·1	0·03	0·04	−0·01	0·21	0·28	−0·07	0·03	Ahmadabad.
1	8	7	3	1	2	1	2	5	N 11° E	N 33° E	6·9	7·7	−0·8	43	+33	76	+ 1	·784	−·033	2·0	−1·1	0	−0·1	0	0·05	−0·05	0·11	0·27	−0·16	0	Bombay.
11	9	1	0	0	0	1	0	8	N 21° W	N 81° W	8·3	6·1	+2·2	53	+33	65	− 5	·700	−·087	1·3	−1·2	0	−0·3	0	0·09	−0·09	0·22	0·34	−0·12	0	Ratnagiri.
11	10	2	1	0	3	0	0	3	N 2° E	N 5° W	5·6	6·2	−0·6	35	+31	75	0	·845	−·021	4·4	+0·7	0	−0·9	0	0·74	−0·74	0·01	0·99	−0·98	0	Marmagao.
14	11	0	0	0	2	2	0	1	N 14° W	N 9° W	3·3	3·5	−0·2	27	−16	79	+ 1	·812	−·009	3·9	+1·1	0	−1·0	0	0·51	−0·51	0	0·82	−0·82	0	Karwar.

* Mean of 8 days.

Table

(2) Abstract of observations taken at 8 hrs. at 211 stations

Number of sub-division.	Station.	Height of barometer above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	X.—Bombay—*concld.*																					
26	Malegaon	1,430	28·458	+·018	29·808	28·528	26th	28·378	29th	86·2	67·2	103·4	+0·2	70·5	−0·8	86·9	−0·3	32·9	106·9	19th	63·6	5th
	Ahmadnagar	2,154	29·709	+·018	29·802	27·850	2nd	27·705	17th	83·2	62·2	100·6	+0·9	67·7	−2·0	84·2	−0·5	32·8	104·8	18th	58·3	9th
	Poona	1,846	28·060	+·007	29·829	28·144	21st	27·977	17th	78·4	63·4	100·0	−1·4	67·1	−2·1	83·6	−1·7	30·9	104·8	18th & 30th.	55·3	9th
	Sholapur	1,590	28·299	+·015	29·797	28·384	22nd	28·229	19th	84·6	64·7	103·7	−0·7	75·5	+0·2	89·6	−0·3	28·2	106·7	18th	67·8	9th
	Bijapur	*1,948*	27·963	+·025	29·800	28·045	21st	27·903	16th & 18th.	83·8	69·2	101·6	+0·9	75·1	+0·6	88·3	+0·7	26·5	104·1	21st	69·1	10th
	Belgaum	2,562	27·391	+·022	29·838	27·472	21st	27·317	13th	76·3	64·0	97·7	+1·8	67·3	+0·2	82·5	+1·0	30·4	101·6	15th	60·7	10th
	XI.—Central India.																					
20	Neemuch	1,526	28·250	+·020	29·799	28·366	3rd	28·156	19th	83·0	62·6	97·8	−2·0	70·7	−0·3	84·3	−1·1	27·1	105·0	30th	61·6	25th
	Indore	1,823	28·058	+·015	29·769?	28·155	3rd	27·952	19th	84·6	65·6	99·8	−0·2	70·2	+0·4	85·0	+0·1	29·6	106·6	30th	62·0	4th
21	Nowgong	754	29·072	+·019	29·783	29·201	26th	28·881	29th	80·8	63·1	100·1	−2·1	71·0	−0·2	85·6	−1·1	29·1	108·1	30th	65·6	25th
	Sutna	1,041	28·787	+·027	29·776	28·919	26th	28·680	13th	82·2	64·0	97·8	−3·1	72·1	+0·4	85·0	−1·3	25·7	105·8	30th	64·8	2nd & 3rd.
	XII.—Central Provinces.																					
22	Buldana	2,134								83·5	63·7	99·1	−0·7	75·9	−0·5	87·5	−0·6	23·2	103·6	18th	68·4	5th
	Akola	925	28·951	+·032	29·811	29·041	5th	28·852	18th	86·4	67·5	104·6	−1·1	73·6	−1·1	89·2	−1·1	31·0	109·5	19th	65·9	5th
	Amraoti	1,215	28·647	+·020	29·789	28·738	3rd	28·548	19th	86·3	63·2	100·5	−1·3	75·6	−0·6	89·5	−0·9	27·9	108·2	20th	67·7	5th
23	Khandwa	1,044	28·823	+·021	29·806	28·899	3rd	28·730	18th	85·0	64·1	103·5	−1·9	74·5	−0·6	89·0	−0·8	29·0	109·2	30th	65·5	17th
	Hoshangabad	1,006	28·857	+·028	29·802	28·953	26th	28·757	19th	84·4	65·3	102·1	−2·1	71·9	−1·6	87·0	−1·9	30·2	107·1	30th	65·8	5th
	Saugor	1,807	28·028	−·002	29·758	28·141	26th	27·947	19th	80·6	59·8	98·4	−2·1	72·8	−0·3	85·6	−1·2	25·6	105·0	30th	64·0	5th
	Jubbulpore	1,327	28·503	+·008	29·769	28·627	26th	28·410	15th	81·0	64·7	97·8	−3·5	69·9	−0·3	83·9	−1·9	27·9	103·3	30th	62·7	2nd
	Seoni	2,033	27·852	+·029	39·789	27·968	26th	27·761	19th	82·0	62·5	97·2	−3·3	69·7	−1·2	83·4	−2·3	27·5	101·8	29th	60·9	5th
	Nagpur	1,017	28·845	+·031	29·796	28·961	3rd	28·735	19th	85·6	65·8	102·4	−2·8	73·6	−2·4	88·0	−2·6	28·8	107·7	20th	64·8	5th
24	Pendra	2,040	27·841	+·036	29·796	27·980	26th	27·712	12th	80·0	63·6	94·3	−1·9	69·2	−2·1	81·7	−2·0	25·1	100·3	30th	62·4	25th
	Raipur	970	28·878	+·020	29·786	28·996	26th	28·781	13th	84·5	65·9	101·0	−2·4	74·9	−1·6	87·9	−2·0	25·1	106·1	30th	69·7	9th
	Chanda	*654*	29·221	+·012	29·793	29·335	26th	29·119	19th	86·8	69·6	104·2	−2·0	74·9	−1·3	89·6	−1·7	29·3	109·3	20th	67·0	9th
	Jagdalpur	1,813	28·083		29·800	28·172	25th	27·986	13th	82·4	72·2	98·3		71·5		84·9		25·8	101·9	14th	64·7	9th
	XIII.—Hyderabad.																					
27	Aurangabad	1,905	28·006	+·019	29·809	28·098	21st	27·931	18th	84·3	63·2	101·3	−1·0	73·4	+0·4	87·3	−0·3	27·9	105·7	18th	64·7	5th
	Nizamabad	1,248	28·628		29·797	28·725	26th	28·543	19th	86·3	67·4	104·4	+1·1	74·5	−2·0	89·4	−0·5	29·9	108·4	12th	67·7	9th
28	Gulbarga	1,503	28·385	+·019	29·799	28·486	26th	28·304	13th	84·7	67·4	105·0	+1·6	76·6	+0·3	90·8	+0·9	28·4	108·0	12th & 18th.	66·1	9th
	Raichur	*1,311*	28·570	+·027	29·798	28·659	21st	28·468	13th	85·5	69·3	104·0	+1·6	78·6	−0·4	91·3	+0·6	25·4	106·1	12th	73·2	8th
	Hyderabad (Deccan)	1,719	28·187	+·034	29·805	28·278	26th	28·099	13th	84·1	71·7	101·9	+0·6	77·1	+0·9	89·5	+0·7	24·8	105·1	8th	72·2	1st
	Hanamkonda	877	29·001	+·023	29·814	29·092	5th	28·904	13th	83·9	73·9	102·1	+0·3	78·1	+1·0	90·1	+0·7	24·0	106·0	1st & 3rd.	73·2	20th
	XIV.—Mysore.																					
29	Chitaldrug	2,405	27·524	+·011	29·794	27·612	21st	27·452	13th	81·1	70·4	98·5	+1·7	73·8	+1·3	86·1	+1·5	24·7	101·3	17th	66·8	21st
	Hassan	3,142	26·843	+·023	29·823	26·918	21st	26·774	13th	75·8	68·5	94·6	+2·6	67·7	+1·2	81·1	+1·9	26·9	97·2	17th	62·9	10th
	Bangalore	3,021	26·963	+·015	29·810	27·046	22nd	26·881	13th	78·3	69·3	95·7	+2·4	70·9	+1·6	83·3	+2·0	24·8	98·3	11th	66·4	20th
	Mysore	2,518	27·441	+·015	29·820	27·527	22nd	27·360	13th	78·5	70·0	96·4	+1·9	71·3	+1·2	83·9	+1·5	25·1	98·9	15th	68·1	18th

N.B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

in India, etc., in April, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 30th April 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															X.—Bombay—*concld.*
4	1	0	0	0	1	2	10	12	N 71° W	N 69° W	6·2	6·9	0	69	+ 6	34	− 8	·429	− ·068	1·5	−0·2	0	−0·4	0	0·12	−0·12	0·21	0·61	− 0·40	0	Malegaon.
6	10	1	0	1	1	0	0	11	N 20° W	N 1° E	5·4	7·7	−2·3	59	+11	27	−20?	·298	−·229?	0·5	−0·8	0	−1·1	0·05	0·32	−0·27	1·03	1·25	− 0·22	0·05	Ahmadnagar.
6	0	0	1	1	0	6	11	5	S 85° W	N 83° W	7·4	7·7	−0·3	56	− 1	42	+ 1	·461	−·011	1·0	−0·5	0	−1·4	0	0·62	−0·62	1·04	0·93	+ 0·11	0	Poona.
3	4	4	2	4	1	2	1	9	N 8° W	N 45° W	6·8	6·4	+0·4	27	+ 4	31	− 6	·369	−·068	1·8	−0·	0	−1·0	0·03	0·47	−0·44	0·56	1·38	− 0·82	0·03	Sholapur.
6	8	7	1	0	1	1	2	4	N 2° E	N 82° W	3·3	4·1	−0·8	47	−11	46	− 8	·532	−·066	0·5	−1·2	1	−1·1	0·28	0·78	−0·50	0·34	1·48	− 1·14	0·24	Bijapur.
17	4	3	0	1	0	1	2	2	N 12° W	S 83° W	3·7	9·6	−5·9	20	− 8	51	− 7	·447	−·080	2·4	+0·2	2	−1·4	0·95	1·62	−0·67	1·03	2·48	− 1·45	0·61	Belgaum.
																															XI.—Central India.
7	4	0	7	1	1	0	9	1	N 34° W	N 51° W	[illegible]	6·4	−0·1	13	− 9	29	− 8	·316	−·102	1·7	+0·3	1	+0·7	0·16	0·12	+0·04	0·83	0·80	+ 0·03	0·14	Neemuch.
6	3	4	1	1	0	1	6	8	N 38° W	N 45° W	3·6	3·2	+0·4	43	− 7	33	− 6	·394	−·050	1·5	−0·4	0	−0·4	0·01	0·15	−0·14	3·10	0·74	+ 2·36	0·01	Indore.
3	0	3	4	1	3	9	4	3	N 44° W	S 75° W	2·5	2·3	+0·2	27	−10	34	− 3	·342	−·056	3·4	+1·3	0	−0·3	0·13	0·19	−0·06	3·21	2·11	+ 1·10	0·07	Nowgong.
12	0	0	5	0	4	4	4	1	S 22° W	N 55° W	2·7	4·9	−2·2	23	−17	34	+ 6	·367	+·040	1·6	−0·6	0	−0·4	0·07	0·21	−0·14	5·42	2·74	+ 2·68	0·03	Sutna.
																															XII.—Central Provinces.
0	0	1	2	1	0	0	13	13	N 65° W		8·5	6·6	+1·9	70		31		·346		2·5		0	−0·6	0·01	0·23	−0·22	1·12	1·62	− 0·50	0·01	Buldana.
3	1	1	1	1	1	2	9	11	N 68° W	N 67° W	5·0	4·3	+0·7	56	+ 3	33	+ 3	·407	+·031	1·5	−0·4	1	+0·4	0·25	0·17	+0·08	2·03	1·82	+ 0·21	0·25	Akola.
4	4	3	2	2	1	5	8	1	N 82° W	S 69° W	4·8	3·9	+0·9	23	− 7	24	−11?	·292	−·136?	1·4	−0·5	1	+0·3	0·11	0·25	−0·14	3·17	1·83	+ 1·34	0·11	Amraoti.
0	2	2	1	1	0	2	13	9	N 67° W	N 68° W	6·4	4·7	+1·7	66	+ 3	27	− 2	·323	−·029	1·5	+0·3	0	−0·3	0	0·11	−0·11	1·54	0·91	+ 0·63	0	Khandwa.
18	0	4	0	2	0	5	0	1	S	S 48° W	1·5	2·2	−0·7	5	−12	32	− 5	·367	− ·067	2·0	+0·4	0	−0·3	0·05	0·14	−0·09	4·91	1·48	+ 3·43	0·05	Hoshangabad.
6	1	4	0	2	3	2	9	3	N 89° W	S 53° W	3·8	3·1	+0·4	28	+11	25	− 5	·256	−·085	1·5	0	1	+0·6	0·45	0·16	+0·29	3·75	2·00	+ 1·75	0·44	Saugor.
4	2	2	0	7	8	3	2	2	S 5° E	S 18° W	1·9	2·4	−0·5	33	0	39	+ 4	·407	+·025	1·4	−0·2	1	+0·3	0·23	0·27	−0·04	9·97	2·64	+ 7·33	0·23	Jubbulpore.
24	1	2	0	1	1	1	0	0	E	S 86° W	0·5	2·8	−2·3	5	− 4	30	− 6	·323	− ·081	1·2	−0·9	1	−0·4	0·10	0·50	−0·40	8·45	3·11	+ 5·34	0·10	Seoni.
3	2	2	5	2	1	3	8	4	N 72° W	N 83° W	3·2	4·4	−1·2	17	+ 9	31	− 4	·371	−·062	1·2	−1·1	0	−1·4	0·07	0·61	−0·54	7·33	2·59	+ 4·74	0·07	Nagpur.
11	1	1	2	3	3	4	1	4	S 29° W		4·2			13		39	+ 9	·386	+·077	0·7	−1·3	1	−1·4	0·34	1·06	−0·72	11·20	5·33	+ 5·87	0·22	Pendra.
1	3	1	4	2	3	5	9	2	S 70° W	S 56° W	3·2	4·6	−1·4	27	−10	34	− 3	·392	−·055	3·5	+1·4	1	−0·5	0·23	0·68	−0·45	7·84	2·58	+ 5·26	0·18	Raipur.
0	2	0	4	5	4	6	4	5	S 34° W	S 52° E	3·6*	2·6	+1·0	23	+ 4	39	− 2	·505	−·009	2·3	+0·2	0	−1·7	0·20	0·69	−0·49	4·55	2·87	+ 1·68	0·09	Chanda.
10	0	0	2	1	8	3	6	0	S 26° W		2·2			40		60		·663		1·8		1	−3·0	0·32	1·92	−1·60	11·84	3·75	+ 8·09	0·27	Jagdalpur.
																															XIII.—Hyderabad.
4	6	3	1	2	0	0	7	7	N 32° W		3·8			46		28	− 1	·321	−·032	2·0	+0·8	1	+0·4	0·13	0·26	−0·13	1·63	1·25	+ 0·38	0·13	Aurangabad.
2	2	3	1	3	8	2	4	5	S 43° W		2·7			20		35	−16?	·427	−·219?	2·1	−0·2	3	+1·2	1·29	0·86	+0·43	3·85	2·19	+ 1·66	0·70	Nizamabad.
3	7	5	4	0	4	2	2	3	N 16° E	N 78° W	5·8	6·6	−0·8	23	+16	39	−11	·457	−·144	1·3	−0·5	2	−0·3	0·30	0·96	−0·66	2·18	1·85	+ 0·33	0·20	Gulbarga.
2	2	3	3	5	4	6	2	3	S 3° E	S 58° W	6·0	6·2	−0·2	18	−24	42	− 9	·510	−·107	2·5	+0·2	1	−0·4	0·28	0·81	−0·53	0·56	1·56	− 1·00	0·22	Raichur.
9	1	2	2	4	4	3	3	2	S 3° W	S 72° W	4·0	3·3	+0·7	17	− 2	54	+ 2	·642	+·028	2·9	+0·7	2	+0·3	0·85	0·96	−0·11	2·66	2·27	+ 0·39	0·57	Hyderabad (Deccan).
1	0	0	0	13	13	1	1	1	S 17° E		3·3			76		61	− 1	·703	+·014	2·7	−0·3	1	−0·9	1·91	0·99	+0·92	5·02	2·17	+ 2·85	1·86	Hanamkonda.
																															XIV.—Mysore.
5	0	0	0	1	3	10	9	2	S 61° W	S 70° W	3·6	4·9	−1·3	62	− 1	58	− 3	·612	−·004	2·2	−0·3	2	−0·1	1·10	1·02	+0·08	2·17	1·83	+ 0·34	0·89	Chitaldrug.
7	3	0	0	1	0	5	7	7	N 75° W	S 82° W	4·6	2·5	+2·1	53	+24	69	− 1	·613	−·007	3·9	+0·1	1	−3·0	0·34	2·12	−1·78	0·59	3·33	− 2·74	0·34	Hassan.
1	0	1	0	1	8	8	8	3	S 51° W	S 41° W	5·1	3·5	+1·6		+ 2	63	− 8	·608	−·037	3·0	+0·1	2	−0·2	0·44	1·36	−0·92	2·75	2·78	− 0·03	0·28	Bangalore.
5	0	0	0	1	5	12	6	1	S 47° W	S 68° W	4·5	5·8	−1·3	62	+10	65	− 9	·626	−·057	3·7	−1·0	2	−2·5	0·77	2·43	−1·66	2·30	3·33	− 1·03	0·36	Mysore.

* Mean of 29 days.

Table

(2) Abstract of observations taken at 8 hrs. at 211 stations

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XV.—Madras.																					
30	Mangalore	72	29·854	+·008	29·857	29·930	22nd	29·774	13th	84·4	76·6	92·0	+0·3	78·9	+0·7	85·5	+0·5	13·1	94·0	30th	76·4	10th
	Calicut	27	29·868	+·009	29·844	29·971	22nd	29·805	14th	81·1	78·6	91·1	+0·1	79·7	+1·7	85·4	+0·9	11·4	92·8	23rd	75·5	21st
	Cochin	9	29·917	+·017	29·854	30·003	22nd	29·827	13th	85·5	78·7	92·6	+1·0	80·3	+1·9	86·4	+1·5	12·3	94·1	20th	73·1	26th
	Trivandrum	198	29·723	+·023	29·850	29·808	22nd	29·630	13th	82·8	77·8	90·3	+2·7	78·6	+0·4	84·5	+1·5	11·7	92·4	7th	77·0	4 days
31	Pamban	37	29·866	+·007	29·830	29·954	21st	29·784	12th	85·3	78·7	90·1	−1·4	81·0	+1·9	85·5	+0·3	9·1	92·4	26th & 28th.	78·8	1st
	Madura	447	29·466	+·018	29·841	29·554	21st	29·377	12th	85·6	79·0	101·0	+2·0	79·1	+2·4	90·1	+2·2	21·9	103·2	12th	73·0	1st
	Pudukkottai	318	29·608	+·028	29·855?	29·703	28th	29·518	12th	85·8	76·5	100·9	+1·6	79·7	+2·1	90·3	+1·9	21·2	104·2	9th	75·1	2nd
	Negapatam	31	29·882	+·018	29·842	29·962	21st	29·796	13th	85·[illegible]	78·9	92·0	−0·7	81·0	+1·7	86·5	+0·5	11·0	98·1	23rd	75·1	5th
	Trichinopoly	255	29·663	+·020	29·848	29·736	6th	29·573	13th	86·6	77·5	102·5	+1·4	79·2	+1·5	90·8	+1·5	23·3	106·5	24th	74·1	1st
	Coimbatore	1,341	28·583	+·025	29·842	28·652	22nd	28·514	12th	2·2	75·1	98·5	+1·3	73·8	+0·3	86·1	+0·8	24·7	102·1	15th	66·5	24th
	Salem	913	29·004	+·023	29·842	29·089	22nd	28·911	13th	83·7	76·4	102·1	+1·3	78·5	+2·3	90·3	+1·8	23·6	105·7	9th	74·2	6th
	Cuddalore	37	29·874	+·016	29·841	29·950	21st	29·780	13th	85·0	79·6	91·9	−1·1	79·2	+1·9	85·6	+0·4	12·7	99·7	23rd	72·6	5th
	Vellore	707	29·187	+·003	29·825	29·270	6th	29·087	13th	83·9	76·8	101·8	+3·2	77·8	+1·3	89·8	+2·3	24·0	105·5	9th	70·5	6th
	Madras	22	29·882	+·016	29·835	29·963	21st	29·787	13th	85·7	79·5	93·5	+0·4	78·6	+1·2	86·1	+0·8	14·9	98·2	24th	73·5	5th
32	Cuddapah	428	29·445	+·006	29·803	29·529	26th	29·345	13th	89·3	76·5	105·9	+0·4	82·6	+1·9	94·2	+1·1	23·3	109·2	9th	79·3	6th
	Bellary	1,475	28·408	+·006	29·790	28·484	21st	28·320	13th	86·1	71·7	104·2	+0·6	78·2	+1·0	91·2	+0·8	26·0	107·1	14th, 17th & 24th	73·4	10th
	Kurnool	923	28·951	+·014	29·798	29·047	21st	28·827	13th	86·6	73·1	104·7	+0·7	80·2	+1·7	92·5	+1·2	24·5	107·5	13th	72·5	9th
33	Nellore	66	29·814	+·008	29·815	29·911	26th	29·707	13th	84·6	81·3	98·5	−1·9	78·2	+0·8	88·4	−0·5	20·3	101·7	2nd & 10th.	73·8	5th
	Masulipatam	15	29·887	+·015	29·837	29·983	26th	29·782	13th	85·3	79·8	94·7	−0·1	77·7	0	86·2	−0·1	17·0	97·7	4th	72·7	26th
	Cocanada	26	29·881	+·018	29·844	29·975	26th	29·774	13th	84·6	78·9	97·8	+1·8	78·4	−0·1	88·1	+0·9	19·4	101·8	23rd	73·5	16th
	Vizagapatam	*38*	29·845	+·011	29·821	29·932	26th	29·709	13th	84·9	77·8	90·5	+1·7	80·4	−1·3	85·5	+0·2	10·1	92·9	29th	76·2	16th
	Calingapatam	19	29·859		29·815	29·964	25th	29·740	13th	84·9	78·2	95·0		78·3		86·6		16·7	100·7	6th	74·8	4 days
	Gopalpur	56	29·809	+·027	29·806	29·956	25th	29·688	12th	82·7	73·7	90·2	+2·3	78·0	+0·9	84·1	+1·6	12·2	99·5	6th	73·7	4th
	Bay Islands.																					
1	P. V. Fraser	8	29·874		29·807	29·995	26th	29·760	13th	83·2	79·3											
	Port Blair	58	29·867	+·009	29·855	29·961	21st	29·762	12th	83·9	78·5	91·9	−0·4	79·1	+0·3	85·5	−0·1	12·8	95·2	28th	76·7	2nd
	Table Island	90	29·837	+·007	29·860	29·923	21st	29·745	12th	83·9	77·3	90·1	+0·5	80·4	+1·0	85·3	+0·7	9·7	93·2	25th	77·9	3rd
	Kashmir.																					
13	Muzaffarabad		27·514			27·583	1st	27·380	18th	64·9	56·9	80·5		54·1		67·3		26·4	90·0	8th	49·9	1st
	Srinagar	5,204	24·904	+·006	24·875	24·991	26th	24·892	11th & 18th.	53·4	49·4	66·5	−0·1	45·1	+0·1	55·8	0	21·4	76·7	10th	39·0	1st
	Gulmarg	*8,569*																				
	Dras	*10,059*	20·846	+·042	20·814	21·049	3rd	20·630	11th	24·7	33·9*	36·5	−7·3	16·9	−2·9	26·7	−5·1	19·6	45·3	28th	−1·0	1st & 2nd.
	Leh	*11,503*	19·720	+·014	19·688	19·983	3rd	19·550	11th	40·6	33·2†			30·1	−0·2						24·6	1st
	Skardu	*7,505*	22·872	−·008	22·842	23·087	3rd	22·702	11th	51·7	41·6	64·8	+3·3	44·2	+2·0	54·5	+2·7	20·6	70·2	10th	36·3	1st
	Gilgit	4,990	25·156	+·022	25·129	25·340	3rd	24·978	10th	62·4	52·6	77·0	+5·5	54·7	+1·9	65·8	+3·7	22·3	84·7	28th	46·7	11th & 12th.

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

* Mean of 5 days.
† „ „ 9 „

B—*continued.*

in India, etc., in April, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 30th Apr. 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XV.—Madras.
1	10	3	9	1	1	0	1	4	N 32° E	N 60° E	5·1	2·3	+2·8	49	+19	68	− 1	·809	−·005	3·2	−1·1	0	− 2·1	0	1·32	− 1·32	0·85	2·00	− 1·15	0	Mangalore.
17	0	0	0	0	0	0	3	10	N 55° W	N 13° E	5·6	7·5	−1·9	40	+ 7	72	− 5	·897	+·025	3·6	−0·9	0	− 4·3	0·04	3·54	− 3·50	1·55	5·75	− 4·20	0·04	Calicut.
3	1	11	15	0	0	0	0	0	N 69° E	N 27° E	6·1	4·4	+1·7	79	+19	73	− 4	·888	+·003	3·3	−1·1	1	− 5·5	1·74	4·96	− 3·22	13·75	10·15	+ 3·60	1·70	Cochin.
4	13	4	1	0	0	0	0	8	N 5° W	N 4° E	4·6	4·3	+0·3	69	+17	79	0	·885	+·027	5·4	+1·0	6	− 0·8	1·65	4·58	− 2·93	8·92	9·86	− 0·94	0·70	Trivandrum.
6	9	0	4	11	7	2	0	0	S 32° E	S 38° E	3·5	5·3	−1·8	62	+16	73	− 5	·888	−·039	2·6	−0·6	0	− 3·3	0·07	1·76	− 1·69	9·82	12·46	− 2·64	0·07	Pamban.
3	0	7	9	3	1	2	3	2	N 80° E	N 41° E	3·1	2·3	+0·8	33	+ 7	73	+ 2	·900	+·060	7·0	+3·5?	4	+ 1·0	1·20	2·14	− 0·94	3·12	5·27	− 2·15	0·62	Madura.
8	1	1	0	3	9	4	3	1	S 20° W		4·2			40		64	−11?	·787	−·075?	4·7	− 0·2	0	− 2·4	0	1·69	− 1·69	3·21	6·09	− 2·88	0	Pudukkottai.
1	0	0	2	11	5	10	1	0	S 5° E	S 6° E	8·7	5·0	+3·7	66	+36	74	0	·900	−·003	4·4	+0·1	0	− 1·0	0·12	0·61	− 0·49	10·11	15·11	− 5·00	0·05	Negapatam.
2	1	6	6	5	4	2	3	1	S 71° E	S 34° W	2·8	3·9	−1·1	30	+13	65	− 4	·818	+·001	3·5	−0·3	3	+ 1·2	0·62	1·78	− 1·16	5·43	6·05	− 0·62	0·34	Trichinopoly.
18	0	5	0	4	3	0	0	0	S 70° E	S 1° W	2·8	2·2	+0·6	23	+ 8	71	−10	·776	−·042	2·3	−1·8	3	+ 0·2	1·28	1·51	− 0·23	4·32	4·11	+ 0·21	0·82	Coimbatore.
2	0	8	1	2	8	7	2	0	S 7° E	S 67° E	4·0	3·4	+0·6	30	+17	70	+ 3	·812	−·027	3·5	−0·1	5	+ 1·5	1·00	1·91	− 0·91	2·23	4·03	− 1·80	0·31	Salem.
5	0	0	0	4	13	7	1	0	S 9° W	S 39° W	7·5	2·0	+5·5	69	+17	78	0	·938	−·001	4·8	+1·1	1	0	2·33	0·62	+ 1·71	11·30	10·66	+ 0·64	2·33	Cuddalore.
22	0	0	3	5	0	0	0	0	S 62° E		3·1			25		71	− 2	·826	+·011	1·4	−1·2	0	− 1·6	0·03	1·23	− 1·20	2·48	6·37	− 3·89	0·03	Vellore.
2	0	0	0	6	10	12	0	0	S 11° W	S 10° W	5·2	5·5	−0·3	79	+ 6	75	0	·918	+·016	4·4	+0·1	0	− 0·8	0	0·60	− 0·60	9·23	8·17	+ 1·06	0	Madras.
5	3	1	4	6	6	1	3	1	S 35° E	S 41° E				30	− 7	54	− 2	·744	+·004	2·3	−0·4	0	− 0·9	0	0·50	− 0·50	2·51	2·14	+ 0·37	0	Cuddapah.
3	2	0	3	3	2	4	6	7	W	N 69° W	4·1	3·9	+0·2	29	− 1	49	− 1	·598	+·005	1·4	−1·5	1	− 0·9	0·12	0·83	− 0·71	0·30	1·35	− 1·05	0·11	Bellary.
4	2	2	0	7	5	4	4	2	S 14° W	S 10° E	4·8			27	+20	51	− 4	·641	−·032	1·7	−0·6	0	− 1·7	0·10	0·63	− 0·53	0·85	1·47	− 0·62	0·05	Kurnool.
1	0	0	0	10	17	2	0	0	S 13° E	S 29° E	5·0	6·0	−1·0	86	+19	86	+12?	1·022	+·140?	3·6	−0·6	1	+ 0·5	0·10	0·42	− 0·32	5·03	5·28	− 0·25	0·10	Nellore.
3	0	0	0	7	12	7	1	0	S 3° W	S 1° E	6·0	5·6	+0·4	72	+ 5	78	− 3	·937	−·051	4·3	−0·4	3	+ 2·2	1·50	0·60	+ 0·90	4·25	2·45	+ 1·80	1·25	Masulipatam.
14	0	1	1	1	2	5	5	1	S 54° W	S 66° W	5·6	5·5	+0·1	27	−20	77	+ 1	·914	+·016	5·6	+1·3	1	0	0·14	0·61	− 0·47	1·25	2·59	− 1·34	0·12	Cocanada.
2	0	0	0	1	4	7	12	4	S 70° W	S 75° W	9·5			66	− 7	72	0	·859	+·046	4·6	+0·3	1	− 0·9	0·36	0·95	− 0·59	2·28	3·49	− 1·21	0·36	Vizagapatam.
1	0	1	1	0	3	12	10	2	S 63° W		7·9			67		73		·876		1·7		0	− 2·7	0	1·67	− 1·67	0·90	4·06	− 3·16	0	Calingapatam.
0	3	0	1	1	10	12	10	3	S 27° W	S 35° W	10·4	13·1	−2·7	56	−11	83	+ 1	·928	+·055	1·5	+0·3	1	− 0·6	0·20	0·85	− 0·65	9·11	2·96	+ 6·15	0·11	Gopalpur.
																															Bay Islands.
2	0	0	1	0	5	20	2	0	S 38° W					80		84		·950		3·4		3	+ 1·4	3·40	0·76	+ 2·64	4·75	3·90	+ 0·85	1·77	P. V. Fraser.
14	3	5	0	1	1	0	0	6	N	N 82° W	4·1	3·5	+0·6	30	0	78	− 5	·902	−·033	4·6	+0·2	5	+ 0·9	1·40	2·73	− 1·33	9·40	12·88	− 3·48	0·51	Port Blair.
0	11	1	2	0	0	1	6	9	N 31° W		5·5			66		73	− 2	·852	−·008	3·8	−1·2	0	− 1·3	0·03	0·72	− 0·69	2·27	4·19	− 1·92	0·03	Table Island.
																															Kashmir.
14	0	0	0	1	0	15	0	0	S 42° W		1·6			50		60		·365		4·6		8	− 1·0	2·89	4·91	− 2·02	23·68	20·30	+ 3·38	0·77	Muzaffarabad.
8	0	1	1	12	2	0	0	6	S 47° E	S 25° E	3·5	3·5	0	27	+16	76	− 9	·308	−·014	4·6	−0·5	10	+ 2·3	3·05	3·80	− 0·75	16·65	14·48	+ 2·17	0·80	Srinagar.
																															Gulmarg.
27	1	1	1	0	0	0	0	0	N 45° E		1·0			10		97*		·192*		4·7	−0·4	4	− 4·6	2·52	3·86	− 1·34	21·73	14·75	+ 6·98	1·52	Dras.
14	0	0	0	3	11	2	0	0	S 3° E	S 66° W	2·9	2·3	+0·6	49	+21	40†		·106†		4·4	−1·3	0	− 0·9	0·07	0·25	− 0·18	0·53	1·42	− 0·89	0·03	Leh.
9	0	2	5	2	2	3	7	0	S 18° W		5·8			13		43	−17	·160	−·057	3·5	−2·1	2	−0·9	0·30	1·25	− 0·95	4·62	4·23	+ 0·39	0·14	Skardu.
23	0	0	0	0	0	6	0	1	S 54° W		0·9			20		51	0	·285	+·041	4·2	−1·9	1	− 1·9	0·85	1·06	− 0·21	5·02	2·06	+ 2·96	0·74	Gilgit.

* Mean of 5 days.
† " " 9 "

Tabl

(2) Abstract of observations taken at 8 hrs. at 211 statio

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Baluchistan.																					
15	Fort Sandeman	4,614	25·366		25·335	25·470	6th	25·259	12th & 23rd	60·7	51·7	79·8		54·4		67·1		25·4	92·9	30th	47·7	15th
	Quetta	5,502	24·631	—·006	24·591	24·729	6th	24·492	10th	54·1	48·2	75·4	+1.5	45·9	+0·1	60·7	+0·8	29·5	85·1	30th	39·7	1st
	Chaman	4,311	25·634	—·053	25·595	25·740	6th	25·493	13th	55·6	54·7	81·3	+4·0	57·6	+3·6	69·6	+3·8	23·5	91·7	30th	48·4	14th
	Kalat	6,630	23·745		23·707	23·842	6th & 27th.	23·606	10th	51·5	45·0	72·6	—1·6	43·9		58·3		28·7	83·0	30th	36·4	1st
	Dalbandin	2,772	27·062		27·025	27·164	26th	26·920	13th	66·6	55·9	91·3		58·2		74·7		33·1	101·6	30th	49·5	1st
	Pasni		29·873		29·833	29·983	6th	29·738	19th	73·2	71·4	89·7		65·9		77·8		23·8	95·6	1st	58·3	14th
	Panjgur	3,177	26·699		26·657	26·797	6th	26·570	13th	64·3	56·3	88·7		59·4		74·1		29·3	98·2	30th	50·2	14th
	Robat							Observatory closed.														
	Seistan (c)		28·077			28·220	22nd	27·890	8th	65·5	58·1	87·9		59·5		73·7		28·4	100·1	30th	48·7	12th
	Hill stations, excluding Kashmir and Baluchistan.																					
	Parachinar	6,000	24·455	+·037	24·431	24·559	3rd	24·300	11th	58·5	50·8	69·3	+1·7	47·1	+0·4	58·2	+1·1	22·2	77·0	8th	43·1	4 days
	Cherat *	*1,256*	25·724	+·048	25·692	25·811	26th	25·625	8th	64·4	53·7	73·3†	0 †	56·8†	+0·4†	65·1†	+0·2	16·5	82·2	9th	51·9	24th
	Drosh (c)	4,500	25·103			25·225	3rd	25·000	19th & 23rd.	56·7	49·0	70·5	+0·8	50·4	+1·6	60·4	+1·2	20·1	80·3	30th	40·0	11th
	Murree	7,533	23·802	—·025	23·770	23·903	3rd	23·674	11th	54·2	46·0	63·2	—3·8	49·3	—1·6	56·2	—2·7	13·9	72·9	9th	37·7	24th
	Simla	7,232	23·091	—·005	23·053	23·170	3rd & 5th.	23·018	12th	54·8	45·5	61·8	—3·4	48·5	—2·9	55·2	—3·1	13·3	69·4	11th	39·3	1st
	Chakrata	6,922	23·364	?	23·324	23·435	3rd & 4th.	23·277	1st	56·2	47·7	67·0	—2·3	48·0	—3·6	5[illegible]·5	—2·9	19·0	72·9	18th	36·9	1st
	Mukteswar	7,592	22·864	+·014	22·823	22·931	3rd	22·767	1st	54·7	46·0	64·7	—4·6	45·2	—5·2	55·0	—4·9	19·5	71·3	3rd	35·0	25th
	Darjiling	7,432	22·955	+·003	22·910	23·061	3rd	22·834	12th	53·9	48·6	63·7	+1·2	48·0	—0·5	55·8	+0·3	15·7	70·8	15th	42·2	6th 9th.
	Shillong	4,920	25·145	+·040	25·097	25·235	26th	25·018	12th	64·5	57·0	73·8	0	55·9	—0·7	64·9	—0·3	17·9	82·1	16th	48·7	7th
	Cherrapunji	4,309	25·688	+·013	25·639	25·771	3rd	25·568	13th	64·7	58·3	71·6	+1·1	57·3	—1·2	64·4	—0·1	14·3	77·7	5th	49·9	22nd
	Netarhat		26·161		26·113	26·225	2nd	26·139	28th	74·3	59·3	85·8		62·3		74·1		23·5	91·2	23rd & 30th.	58·8	1st
	Maymyo	3,516	26·428	+·003	26·373	26·596	6th	26·347	14th	70·3	63·6	83·8	—0·5	59·4	0	71·6	—0·3	24·4	89·4	17th	51·0	4th
	Pachmarhi	3,528	26·458	+·011	26·405	26·570	26th	26·374	19th	77·8	60·0	90·9	—1·2	68·0	—1·4	79·5	—1·3	22·9	97·5	25th	60·1	5th
	Mount Abu	3,945	26·063	+·017	26·013	26·151	6th	25·977	19th	73·0	55·3	82·1	—2·7	67·3	—1·4	74·7	—2·1	14·8	90·6	30th	59·4	13th
	Mercara*	3,781	26·234	0	26·167	26·303	21st ‖	26·153	13th	70·8	61·4	86·1	+2·1	63·2	—0·7	74·7	+0·7	22·9	90·5	4th	60·0	19th
	Ootacamund	*7,327*	23·103	+·033	23·039	23·160	22nd	23·057	13th	64·1	55·2	73·5	+2·4	52·2	+0·3	62·9	+1·3	21·3	77·4	4th	48·2	6th
	Kodaikanal	7,688	22·867	+·015	22·802	22·930	21st	22·821	13th	62·0	53·6	71·0	+1·7	53·9	+0·2	62·4	+0·9	17·1	75·7	7th	50·3	6th
	Extra India.																					
	Singapore (a)	10	29·844	—·076	29·775	29·919	3rd	29·785	11th	84·8		90·0	+1·4	75·4	+0·8	82·7	+1·1	14·6	92·0	8th & 9th.	74·0	19th 24th 26th
	Penang (a)	17	29·841	—·074	29·783	29·924	20th	29·776	26th & 28th.	84·1		92·3	+1·3	73·5	—0·9	82·9	+0·2	18·8	95·0	10th	70·0	14th
	Trincomalee	99	29·810	+·020	29·837	29·896	21st	29·710	13th	81·5	77·2	91·7	+3·2	78·8	+1·1	86·8	+2·1	15·9	98·8	5th	76·7	7th
	Colombo	24	29·898	+·008	29·848	29·986	21st	29·808	13th	78·8	76·3	89·9	+0·6	76·3	+0·1	83·1	+0·3	13·6	92·2	9th	71·5	11th
	Hambantota	64	29·857		29·847	29·947	21st	29·768	13th	77·6	75·6	89·5		76·5		83·0		13·0	91·2	10th	74·2	1st
	Minicoy	7	29·951	+·041		30·022	22nd	29·883	13th													
	Amini Divi	*13*	29·917	+·018	29·858	29·994	22nd	29·845	13th	86·5	77·7	94·4	+3·5	80·1	+0·2	87·3	+1·9	14·3	96·6	30th	77·1	20th
	Gyantse	13,110																				
	Pharijong	14,400																				
	Gangtok	5,760	24·291	—·068	24·246	24·404	3rd	24·171	12th	57·7	53·1	68·8	—1·6	53·7	+6·6	61·2	+2·5	15·1	76·9	15th	48·5	9th

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

(a) 8 hrs. observations.
(c) Aneroid.

* Mean of 21 days.
† " " 20 "

B—*continued.*

in India, etc., in April, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Dec. 1918 to 30th April 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
21	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Baluchistan.
20	0	2	0	0	2	2	4	0	S 63° W		3·9			13		54		·281		1·2		5	+2·1	0·93	1·16	−0·23	3·07	5·22	−2·15	0·23	Fort Sandeman.
23	0	0	1	2	2	0	1	1	S 15° E	S 45° W	2·0	2·6	−0·6	10	+ 3	65	+14	·269	+·003	2·1	−0·3	1	−2·0	0·78	1·06	−0·28	5·76	7·84	−2·08	0·57	Quetta.
11	0	0	6	1	4	3	0	0	S 38° E	S 2° W	4·5 (d)	5·9	−1·4	43	0	49	− 1	·303	−·002	3·0	+0·2	0	−1·8	0·08	0·69	−0·61	5·34	6·40	−1·06	0·06	Chaman.
6	0	0	9	0	0	0	0	0	Calm (b)	S 35° W	3·2			(a)		62	+13	·234	+·003	1·8		1	−0·6	0·47	0·56	−0·09	3·68	5·03	−1·35	0·47	Kalat.
15	1	5	2	4	1	0	2	0	N 83° E		5·1			20		49		·316		1·8		0	−0·8	0	0·43	−0·43	3·44	3·22	+0·22	0	Dalbandin.
5	0	0	2	0	1	3	13	6	N 87° W		5·1			56		92		·749		2·9		0	−0·6	0·05	0·52	−0·47	8·52	5·53	+2·99	0·05	Pasni.
11	0	9	8	0	0	1	0	1	N 64° E		5·5			46		60		·360		1·0		1		0·12			2·87			0·12	Panjgur.
																			Observatory	closed											Robat.
15	0	0	1	0	0	0	0	14	N 42° W		5·7			46		63		·396		1·7		0		0			1·20			0	Seistan.
																															Hill stations, ex cluding Kashmir and Baluchistan.
30	0	0	0	0	0	0	0	0	Calm		0·5			(a)		60	+ 5	·291	+·013	3·4	−0·1	7	−2·2	3·69	4·45	−0·76	17·78	14·50	+3·28	1·22	Parachinar.
9	5	0	0	0	2	0	2	3	N 39° W	N 11° W	4·3†	9·6	−5·3	33	−19	49	− 1	·290	+·023	2·6	−0·5	2	−3·3	0·67	2·80	−2·13	11·97	14·35	−2·38	0·48	Cherat.
24	0	3	3	0	0	0	0	0	N 67° E		2·2			17		59	− 5	·289	−·009	3·6	+0·1	3	−5·5	2·30	4·33	−2·03	16·47	10·34	+6·13	1·19	Drosh.
7	6	1	5	4	0	1	4	2	S 28° E	N 68° E	4·7	6·8	−2·1	20	0	55	+ 7	·226	+·002	3·8	−0·1	3	+1·1	4·25	4·06	+0·19	17·28	18·40	−1·12	1·31	Murree.
																49	+ 9	·210	+·022	4·3	+1·0	7	+3·4	3·16	1·75	+1·41	15·29	11·73	+3·56	0·80	Simla.
14	0	13	2	0	0	1	0	0	N 51° E	N 17° E	4·8	5·5	−0·7	43	+ 5	54	+ 8	·241	+·034	3·1	+0·4	5	+1·0	1·89	1·69	+0·20	23·62	15·09	+8·53	0·54	Chakrata.
2	3	5	3	1	2	1	11	2	N 52° W		6·6			27		52	+12	·220	+·037	3·7	+0·9	5	+1·4	3·40	1·45	+1·95	15·35	9·37	+5·98	1·93	Mukteswar.
19	0	3	0	0	0	2	4	2	N 66° W	S 28° E	4·2	6·2	−2·1	17	+ 9	71	− 7	·287	−·049	4·7	−0·2	10	+2·7	6·40	3·80	+2·60	10·75	7·63	+3·12	3·97	Darjiling.
12	0	0	0	0	8	9	1	0	S 27° W		5·0			53		64	+ 3	·382	+·014	3·3	−0·1	13	+2·8	5·80	5·13	+0·67	7·39	9·36	−1·97	0·93	Shillong.
2	1	1	1	3	4	13	7	1	S 46° W		7·1			49		69	−16	·418	−·077	5·1	−1·7	18	−0·2	12·95	31·68	−18·73	14·69	49·86	−30·17	3·45	Cherrapunji.
1	1	0	0	0	1	2	8	17	N 62° W		4·7			77		40		·335		1·4		2		0·77			11·79			0·50	Netarhat.
14	0	1	1	0	1	7	6	0	S 60° W		1·4			33		70	+ 1	·513	−·026	2·3	0	3	−0·3	1·08	2·34	−1·26	2·60	3·83	−1·23	0·41	Maymyo.
6	1	4	1	0	0	2	8	8	N 54° W	N 88° W	3·8	4·4	−0·6	46	+19	34	+ 4	·313	+·015	0·5	−1·3	1	+0·3	1·30	0·31	+0·99	7·82	2·53	+5·29	1·30	Pachmarhi.
1	4	4	0	0	1	8	4	8	N 65° W	N 63° W	8·1	6·4	+1·7	43	0	30	0	·235	−·026	1·5	+0·2	0	−0·4	0·04	0·13	−0·09	0·43	1·05	−0·62	0·04	Mount Abu.
12	8	5	1	0	0	0	1	3	N 6° E	N 21° W	2·3	2·9	−0·6	46	+ 6	71	− 8	·527	−·056	2·8	−1·7	5	−0·1	2·30	2·64	−0·34	3·21	4·41	−1·20	0·50	Mercara.
5	1	0	7	11	5	1	0	0	S 48° E		3·1			59		58	+ 4	·344	+·037	4·5	+1·2	8	+1·7	3·74	2·60	+1·14	6·13	7·98	−1·85	1·38	Ootacamund.
1	4	8	10	5	1	0	0	1	N 73° E		7·1			62		60	+ 1	·323	+·016	3·5	+0·4	7	−0·4	4·87	4·51	+0·36	16·30	15·67	+0·63	1·18	Kodaikanal.
																															Extra India.
13	1	6	0	1	0	2	0	7	N 10° W					27						6·7	+1·9	14	+2·3	9·01	8·63	+0·38	45·60	46·92	−1·32	2·97	Singapore.
0	2	16	2	9	0	0	0	1	N 68° E					69								16	+5·7	6·30	7·03	−0·73	29·37	24·91	+4·46	1·02	Penang.
14	0	0	0	0	3	12	1	0	S 39° W	S 39° W	3·1	5·0	−1·9	46	−22	82	− 2	·872	−·050	4·5	+1·9	1	−2·0	0·13	1·92	−1·79	29·21	25·19	+4·02	0·11	Trincomalee.
24	0	0	1	0	2	2	1	0	S 23° W	S 12° E	2·8	4·6	−1·8	10	−42	93	+10	·881	−·025	7·4	+2·5	8	−2·6	6·68	9·71	−3·03	18·51	25·20	−6·69	2·37	Colombo.
0	11	1	0	0	0	1	2	15	N 31° W		4·9			79		91		·857		4·7		5		2·96			6·87	15·70	−8·83	1·60	Hambantota.
15	8	0	1	0	0	0	0	6	N 14° W	N 59° W	3·2	5·4	−2·2	40	−15					3·3	−0·8	2	−1·9	1·01	2·93	−1·92	10·80	9·82	+0·98	0·89	Minicoy.
0	13	4	0	0	0	0	0	13	N 14° W		6·8			87		66	− 7	·830	−·036	4·3	+0·4	0	−1·7	0	1·68	−1·68	5·76	3·36	+2·40	0	Amini Divi.
																									0·17			0·28			Gyantse.
																									0·93			2·41			Pharijong.
	4	5	1	0	0	1	1	0	N 23° E		1·6			27		76	+ 1	·361	+·024	3·6	+0·9	18	+2·8	10·28	11·84	−1·56	15·00	21·57	−6·57	1·60	Gangtok

(a) Indeterminate.
(b) Wind observations for 6 days.
(d) Mean of 6 days.
† " " 20 "

Table

(2) Abstract of observations taken at 8 hrs. at 211

Number of sub-division.	Station.	Height of barometer above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Extra India—*concld.*																					
	Gartok (c)	15,100																				
	Kashgar (c)	4,255	25·449	—·101		25·640	30th	25·120	11th	61·7	48·4	78·2	+7·7	52·0	+4·1	65·1	+5·9	26·2	85·3	9th	46·3	1st, 6th & 7th.
	Kabul (c)*	...	24·119	—·121		24·210	27th	24·020	11th	47·9	44·7	74·0	+4·0	45·1	+1·7	58·5	+2·9	28·9	86·6	12th	40·8	11th
	Meshed	3,104																				
	Jask	13	29·845	—·025	29·811	29·929	22nd	29·724	13th	76·3	69·3	87·3	+0·8	72·0	—1·2	79·6	—0·2	15·3	91·4	26th	68·0	14th
	Muscat	20	29·877	+·007	29·845	30·010	22nd	29·797	13th	84·0	75·2	92·2	+5·7	79·0	—0·7	85·6	+2·5	13·2	102·6	26th	71·2	1st
	Bushire	14	29·862	—·034	29·838	29·953	17th	29·740	30th	75·5	68·1	83·0	+1·8	69·0	+1·9	76·0	+1·9	14·0	97·1	29th	59·4	8th
	Busrah	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ispahan (c)	*5,817*	24·225	—·145		24·420	22nd	23·980	15th	55·0	47·2	73·8	+1·8	49·0	+3·2	61·4	+2·5	24·8	84·4	24th	41·2	17th
	Tehran (c)	*4,002*	25·686	—·224		25·840	22nd	25·520	8th	62·0	54·1	74·3	+2·9	53·2	+5·1	63·9	+4·0	21·1	84·5	29th	43·0	9th
	Baghdad	125	29·744			29·855	10th	29·602	28th	65·4	57·4	84·6		61·6		73·1		23·0	97·7	23rd	54·1	9th
	Aden	94	29·829	—·015	29·856	29·908	2nd	29·735	13th	80·8	75·7	97·4	—1·3	78·3	+1·1	83·1	—0·1	8·6	91·0	18th	72·9	2nd
	Zanzibar	72	29·940	+·004	29·937	30·007	23rd	29·862	13th	80·3	77·4	85·8	+1·4	78·7	+1·4	82·3	+1·4	7·1	89·6	10th	74·5	23rd

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level, in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.
(c) Aneroid.

* Mean of 21 days.

B—*concluded.*

stations in India, etc., in April, 1919—*concluded.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st December 1918 to 30th April 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Extra India —*concld.*
																									0			0			Gartok.
24	0	0	0	0	0	0	0	5	N 59° W	N 21° W	1·8	3·4	−1·6	20	+ 8	35	−12	·195	−·018	4·5	+0·1	0	−1·0	0	0·26	−0·26	0	1·07	−1·07	0	Kashgar.
0	4	0	0	1	1	8	4	3	S 85° W	N 89° W				52	+39	79	+13	·264	−·001	5·2	+2·7	5	−1·4	2·00	3·67	−1·67		10·64		1·20	Kabul.
																									1·90			6·47			Meshed.
5	0	1	6	0	0	1	6	11	N 45° W	N 45° W	7·5	7·2	+0·3	37	+22	69	+ 1	·628	−·045	1·9	+0·4	0	−0·3	0	0·08	−0·08	5·18	3·74	+1·44	0	Jask.
11	0	2	2	0	1	2	1	11	N 35° W	N 51° W	2·9	3·1	−0·2	33	+ 3	65	+ 6	·763	+·107	1·5	+0·4	0	−0·7	0	0·30	−0·30	4·03	3·52	+0·51	0	Muscat.
6	3	6	2	4	1	0	3	5	N 21° E	N 1° E	7·0	6·6	+0·4	27	−10	69	+ 3	·595	+·050	2·1	−1·1	2	+0·9	1·01	0·48	+0·53	8·17	9·14	−0·97	0·86	Bushire.
																									0·44			4·90			Busrah.
25	0	0	0	0	1	0	3	1	S 86° W	N 83° W	2·0	4·7	−2·7	14	−23	58	− 3	·249	−·030	2·6	−0·1	1	−1·5	0·41	0·59	−0·18	2·19	3·53	−1·34	0·33	Ispahan.
15	2	4	0	3	2	2	1	1	E	S 63° W	4·6	3·2	+1·4	7	− 8	60	+ 3	·334	+·065	4·4	+1·3	3	−0·5	1·22	1·37	−0·15	6·16	7·18	−1·02	0·61	Tehran.
1	7	3	6	2	0	2	7	2	N 2° W	N 2° W	6·0	3·1	+2·9	26	− 7	61	+ 1	·358	−·034	4·3	+2·2	4	+2·0	3·20	0·81	+2·39	9·04	5·80	+3·24	1·70	Baghdad.
8	0	13	3	0	0	0	0	1	N 48° E	N 80° E	11·1	11·2	−0·1	62	−12	78	+ 4	·823	+·020	4·5	+0·9	0	−0·3	0	0·21	−0·21	0·03	1·43	−1·40	0	Aden.
4	1	0	0	1	10	14	0	0	S 24° W	S 15° W	4·1	5·2	−1·1	73	−11	65	− 2	·691	+·023	7·7	+0·8	13	−1·8	8·85	13·73	−4·88	26·00	31·01	−5·01	3·01	Zanzibar.

Table C.—Abstract of observations taken at 8 hrs. at 61 fourth and fifth class stations in India, etc., in April, 1919.

Table

Abstract of observations taken at 8 hrs. at 61 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	II.—Assam.																								
4	Bishnath	71·6	67·0	85·6	+2·5	65·4	+2·7	75·5	+2·6	20·2	95·1	17th	59·9	1st & 2nd	...	...	...	...	...	...	...	...	...	...	...
	Borjuli	75·5	72·1	87·1	+1·1	61·0	−0·5	75·5	+0·3	23·1	94·2	4th	57·4	10th	...	...	...	...	...	...	...	...	...	...	...
	Chandkhira	75·5	74·2	96·4	+7·4	63·6	−2·7	80·0	+2·3	32·8	103·6	12th	59·1	8th	...	...	...	...	...	...	...	...	...	...	...
	Doom Booma	68·3	65·7	81·5	+5·6	62·7	+0·6	73·6	+3·1	21·8	95·3	5th	54·8	14th	...	...	...	...	...	...	...	...	...	...	...
	Dikom	69·7	65·9	83·7	+3·5	63·7	−0·3	73·7	+1·6	20·0	94·4	5th	53·6	4th & 10th	...	...	...	...	...	...	...	...	...	...	...
	Golaghat	70·1	66·8	84·7	+2·6	62·1	...	73·4	...	22·6	95·3	17th	57·4	10th	...	...	...	...	...	...	...	...	...	...	...
	Hailakandi	75·4	70·5	90·8	+3·5	67·3	−0·4	79·1	+1·5	23·5	97·8	1st	61·6	27th	...	...	...	...	...	...	...	...	...	...	...
	Jorehat	70·2	66·6	84·9	+3·1	64·0	−1·7	74·5	+0·7	20·9	95·1	17th	60·0	10th & 24th.	...	...	...	...	...	...	...	...	...	...	...
	Lumding*	74·3	68·3	90·6	...	64·5	...	77·5	...	26·1	96·9	17th	50·6	29th	...	...	...	...	...	...	...	...	...	...	...
	Messa	79·8	76·1	90·8	+1·0	64·8	+0·6	77·8	+0·8	26·0	96·8	6th	59·3	1st	...	...	...	...	...	...	...	...	...	...	...
	Panerihat	67·0	64·9	85·5	+2·0	53·9	−9·7	69·7	−3·9	31·6	93·5	5th	47·1	5th & 9th	...	...	...	...	...	...	...	...	...	...	...
	III.—Bengal.																								
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Brahmanbaria	79·7	73·3	92·9	+1·5	68·9	−1·5	80·9	0	24·0	98·4	4th	63·7	8th	...	...	...	...	...	...	...	...	...	...	...
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Goalundo	84·4	80·5	96·3	+1·3	69·9	−1·8	83·1	−0·3	26·4	104·3	15th	62·5	8th	...	...	...	...	...	...	...	...	...	...	...
	Pabna	77·6	71·8	93·0	−4·2	68·6	−2·0	80·8	−3·1	24·4	103·7	15th	52·9	2nd	...	...	...	...	...	...	...	...	...	...	...
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dam Dim	69·5	67·6	89·9	+0·6	61·6	−2·6	75·7	−1·0	28·3	98·0	18th	48·8	1st	...	...	...	...	...	...	...	...	...	...	...
	Kalchini	77·7	73·0	88·4	+1·2	63·0	−2·5	75·7	−0·7	25·4	94·6	18th	55·0	1st & 2nd	...	...	...	...	...	...	...	...	...	...	...
	Nagrakata	78·0	67·9	88·2	+0·5	64·3	−2·0	76·3	−0·7	23·9	95·6	18th	60·0	2nd, 6th & 9th.	...	...	...	...	...	...	...	...	...	...	...
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raniganj (Asansol)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IV.—Bihar and Orissa.																								
7	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzaffarpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Motihari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Mean of 28 days.

C.

and fifth class stations in India, etc., in April, 1919.

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st December 1918 to 30th April 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				II.—Assam.
...	...	...	...	...	78	−13	·632	−·020	...	...	12	−1·4	4·91	7·46	−2·55	6·93	12·75	−5·85	1·10	Bishnath.
...	...	...	...	...	84	− 2	·750	+·078	...	...	12	+0·6	4·35	6·32	−1·97	5·03	10·59	−5·56	0·75	Borjuli.
...	...	...	...	...	94	+ 8	·835	+·093	...	...	9	−3·3	6·33	10·98	−4·65	7·14	18·55	−11·41	2·30	Chandkhira.
...	...	...	...	...	87	− 5	·631	+·009	...	...	17	+2·1	7·55	10·68	−3·13	11·02	21·20	−10·18	1·07	Doom Dooma.
...	...	...	...	...	82	− 8	·589	−·032	...	...	14	−0·3	4·62	10·77	−6·15	8·22	19·76	−7·91	0·73	Dikom.
...	...	...	...	...	84	− 5	·611	−·054	...	...	12	−1·7	6·50	7·07	−0·57	8·19	12·98	−3·12	1·41	Golaghat.
...	...	...	...	...	78	−10	·682	−·009	...	...	11	−3·6	4·89	14·57	−9·68	5·59	24·03	−13·31	0·97	Hailakandi.
...	...	...	...	...	82	− 5	·603	−·041	...	...	13	−2·1	7·62	9·37	−1·75	9·76	15·94	−3·84	1·15	Jorehat.
...	...	...	...	...	74	...	·611	...	...	...	8	−0·9	4·32	4·10	+0·22		8·38		1·59	Lumding.
...	...	...	...	...	83	+ 4	·861	+·188	...	...	10	−2·2	4·85	6·11	−1·26	6·19	10·96	−4·77	1·62	Messa.
...	...	...	...	...	89	+ 3	·587	+·015	...	...	15	+2·8	8·17	7·81	+0·36	9·11	12·74	−0·98	1·66	Panerihat.
																				III.—Bengal.
...	...	...	...	...	...	...	...	...	...	...	8	+0·7	4·30	6·49	−2·19	4·30	11·14	−6·84	1·39	Comilla.
...	...	...	...	...	73	− 7	·736	−·010	...	...	5	−3·6	3·49	7·39	−3·90	5·66	13·16	−7·50	0·95	Brahmanbaria.
...	...	...	...	...	...	...	...	...	...	...	12	+6·0	4·90	4·58	+0·32	5·94	8·56	−2·62	1·37	Faridpur.
...	...	...	...	...	83	+ 6	·989	+·190	...	...	7	+0·9	5·28	4·07	+1·21	6·06	8·28	−2·22	1·70	Goalundo.
...	...	...	...	...	74	− 5	·715	−·092	...	...	6	+1·5	2·36	2·92	−0·56	3·49	5·71	−2·22	0·60	Pabna.
...	...	...	...	...	...	...	...	...	...	...	5	0	2·22	3·40	−1·18	2·99	5·99	−3·00	0·87	Sirajganj.
...	...	...	...	...	...	...	...	...	...	...	2	−0·8	0·59	1·85	−1·26	2·77	4·09	−1·32	0·23	Rampur Boalia.
...	...	...	...	...	...	...	...	...	...	...	1	−1·1	0·60	1·03	−0·43	2·51	3·36	−0·85	0·60	Malda.
...	...	...	...	...	...	...	...	...	...	...	4	−0·5	0·60	3·12	−2·52	1·09	5·45	−4·36	0·17	Rangpur.
...	...	...	...	...	91	+ 5	·654	−·051	...	...	5	−2·1	2·40	4·94	−2·54	3·56	8·85	−5·29	0·62	Dam Dim.
...	...	...	...	...	78	0	·761	+·016	...	...	11	+1·4	7·44	6·39	+1·05	7·91	10·55	−2·64	1·98	Kalchini.
...	...	...	...	...	59	−14	·546	−·063	...	...	5	−4·1	2·93	6·25	−3·32	3·97	10·90	−6·93	1·24	Nagrakata.
...	...	...	...	...	...	...	...	...	...	...	5	−2·3	4·36	5·17	−0·81	5·04	8·70	−3·66	1·82	Cooch Behar.
...	...	...	...	...	...	...	...	...	...	...	8	+4·1	6·81	2·30	+4·51	8·46	5·84	+2·62	2·45	Krishnagar.
...	...	...	...	...	...	...	...	...	...	...	2	−0·9	0·56	1·33	−0·77	6·69	4·18	+2·51	0·33	Bankura.
...	...	...	...	...	...	...	...	...	...	...	1	−1·7	0·70	1·42	−1·22	3·35	4·12	−0·77	0·12	Raniganj (Asansol).
																				IV.—Bihar and Orissa.
...	...	...	...	...	...	...	...	...	...	...	5	+3·5	1·21	0·51	+0·70	7·50	3·66	+3·84	0·57	Hazaribagh.
...	...	...	...	...	...	...	...	...	...	...	2	+0·4	0·80	0·76	+0·04	2·19	2·72	−0·53	0·40	Bhagalpur.
...	...	...	...	...	...	...	...	...	...	...	0	−1·1	0·08	0·49	−0·41	1·31	2·18	−0·87	0·08	Muzaffarpur.
...	...	...	...	...	...	...	...	...	...	...	2	+0·8	1·15	0·82	+0·33	2·32	2·63	−0·31	0·75	Motihari.
...	...	...	...	...	...	...	...	...	...	...	1	+0·3	0·16	0·34	−0·18	1·92	2·06	−0·14	0·15	Chapra.
...	...	...	...	...	...	...	...	...	...	...	1	+0·4	0·44	0·29	+0·15	3·14	2·38	+0·76	0·36	Arrah.
...	...	...	...	...	...	...	...	...	...	...	2	+1·4	0·30	0·24	+0·06	3·52	2·40	+1·12	0·14	Dehri.

Table

Abstract of observations taken at 8 hrs. at 61 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	V.—United Provinces of Agra and Oudh.																								
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehra Dun	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IX.—Rajputana.																								
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XII.—Central Provinces.																								
23	Chhindwara	80·9	65·4	97·9	...	69·9	...	83·9	...	28·0	102·5	15th	61·3	5th	14	2	1	2	0	0	3	4	4	N 63° W	...
	XIII.—Hyderabad.																								
27	Parbhani	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XV.—Madras.																								
31	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Anantapur	85·4	78·7	103·6	...	78·9	...	91·3	...	24·7	107·0	14th	72·1	18th	...	...	...	...	...	...	...	...	...	...	...
33	Guntur	84·7	80·1	100·6	...	78·7	...	89·7	...	21·9	104·4	23rd	75·0	15th, 16th & 26th.	...	...	...	...	...	...	...	...	...	...	...
	Kerapet	77·1	68·2	93·6	...	69·3	...	81·4	...	24·3	98·9	14th	64·3	28th	...	...	...	...	...	...	...	...	...	...	...
	Bay Islands.																								
	Car Nicobar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kashmir.																								
43	Jammu	74·3	63·3	88·3	...	67·6	...	78·0	...	20·7	94·9	10th	60·0	25th	0	15	11	2	1	1	0	0	0	N 28° E	...
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kargil	40·7	36·4*	58·1	...	23·9	...	41·0	...	34·2	68·5	28th	11·4	2nd	6	0	0	0	4	4	0	4	12	N 79° W	...
	Baluchistan.																								
45	Harnai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill stations, exclusive of Kashmir.																								
	Panighatta	75·0	65·2	89·8	+2·2	67·7	+0·9	78·7	+1·5	22·1	98·3	18th	60·7	26th	...	...	...	...	...	...	...	...	...	...	...
	Kurseong	68·3	66·5	74·1	+2·7	59·2	+1·4	66·7	+2·1	14·9	79·3	18th	54·2	9th	...	...	...	...	...	...	...	...	...	...	...
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ringim	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dharampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mussooree	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Poo	...	...	60·3	+1·4	38·7	−0·1	49·5	+0·7	21·6	68·1	10th & 11th.	32·2	23rd	10	0	2	10	1	2	2	2	1	S 76° E	...
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bakloh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pishin	...	...	77·5	+1·7	42·3	−1·1	59·9	+0·3	35·2	87·4	30th	34·2	1st	...	...	...	...	...	...	...	...	...	...	...

* Mean of 23 days.

C—*continued.*

and fifth class stations in India, etc., in April, 1919—*continued.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st December 1918 to 30th April, 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				V.—United Provinces of Agra and Oudh.
...	...	...	...	...	...	...	...	...	...	...	0	−0·8	0·12	0·32	−0·20	6·12	3·59	+ 2·53	0·06	Meerut.
...	...	...	...	...	...	...	...	...	...	...	3	+1·3	0·70	0·71	−0·01	10·81	7·62	+ 3·19	0·27	Debra Dun.
																				IX.—Rajputana.
...	...	...	...	...	...	...	...	...	...	...	1	+0·7	0·30	0·18	+0·12	0·45	0·69	− 0·24	0·30	Udaipur.
																				XII.—Central Provinces.
3·2	...	...	23	...	42	...	·436	...	1·5	...	0	−1·9	0·11	0·63	−0·52	7·26	3·29	+ 3·97	0·08	Chhindwara.
																				XIII.—Hyderabad.
...	...	...	...	...	...	...	...	...	...	...	2	+1·2	0·40	0·35	+0·05	2·24	1·15	+ 1·09	0·23	Parbhani.
																				XV.—Madras.
...	...	...	...	...	...	...	...	...	...	...	2	−1·9	0·23	2·53	−2·30	13·76	9·74	+ 4·02	0·13	Tinnevelly.
...	...	...	...	...	74	...	·900	...	1·8	...	1	+0·2	1·30	0·37	+0·93		0·87		1·30	Anantapur.
...	...	...	...	...	81	...	·987	...	0·8	...	1	−0·7	0·23	0·60	−0·37	0·98	2·69	− 1·71	0·22	Guntur.
...	...	...	...	...	63	...	·588	...	...	...	1	...	0·28	...	...	5·87	...	...	0·12	Koraput.
																				Bay Islands.
...	...	...	...	...	...	...	...	...	...	...	9	+3·7	3·58	3·35	+0·23	14·96	17·94	− 2·98	1·19	Car Nicobar.
																				Kashmir.
...	...	...	80	...	53	...	·457	...	3·5	...	0	−3·8	0·29	1·58	−1·29	9·75	11·94	−2·19	0·09	Jammu.
...	...	...	...	...	...	...	...	...	...	...	7	−6·1	5·88	10·14	−4·26	49·01	51·09	− 2·08	2·83	Sonamarg.
...	...	...	33	...	53*	...	·145*	...	3·6	...	2	−1·7	1·48	1·94	−0·46	7·47	7·05	+ 0·42	1·08	Kargil.
																				Baluchistan.
...	...	...	...	...	...	...	...	...	...	...	1	− 0·5	0·39	0·51	−0·12	1·78	5·40	− 3·62	0·10	Harnai.
																				Hill stations, exclusive of Kashmir.
...	...	...	...	...	58	− 3	·491	−·055	...	...	5	−1·1	3·42	3·96	−0·54	5·20	8·49	− 3·29	2·21	Panighatta.
...	...	...	...	...	91	+18	·631	+·206	...	...	7	−0·3	5·31	4·29	+1·02	6·86	9·75	− 2·89	2·69	Kurseong.
...	...	...	...	...	...	...	...	...	...	...	20	+0·7	13·79	11·65	+2·14	55·41	26·05	+29·36	2·30	Gnatong.
...	...	...	...	...	...	...	...	...	...	...	17	+3·0	6·40	7·36	−0·96	...	17·37	...	0·66	Lachung.
...	...	...	...	...	...	...	...	...	...	...	17	+0·7	7·02	9·95	−2·93	...	24·47	...	1·18	Ringim.
...	...	...	...	...	...	...	...	...	...	...	2	...	0·49	...	...	13·34	...	...	0·30	Dharampur.
...	...	...	...	...	...	...	...	...	...	...	3	+0·7	1·00	1·15	−0·15	13·29	10·52	+ 2·77	0·62	Mussooree.
...	...	...	27	...	...	...	...	...	3·9	+0·1	5	+0·6	1·52	2·18	−0·66	15·17	10·52	+ 4·65	0·70	Poo.
...	...	...	...	...	...	...	...	...	...	...	6	−0·3	4·63	3·25	+1·38	16·48	14·01	+ 2·47	2·63	Kailang.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Bakloh.
...	...	...	...	...	...	...	...	...	1·5	...	1	−1·1	0·38	0·83	−0·45	6·37	7·89	− 1·52	0·27	Pishin.

* Mean of 23 days.

Tabl

Abstract of observations taken at 8 hrs. at 61 fourt

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
															Number of winds from										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Extra India.																								
	Chumbi	42·2	40·3	60·6	...	34·3	...	47·5	...	26·3	68·2	13th	28·7	1st	...	...	...	...	...	...	...	...	...	...	...
	Pemba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Prison Island	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abadan	80·7	66·3	88·0	...	69·6	...	78·8	...	18·4	104·0	27th	60·0	8th	1	12	0	0	0	15	0	0	0	S*	...

* 2 winds variable.

C—*concluded.*

and fifth class stations in India, etc., in April, 1919—*concluded.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st December, 1918 to 30th April, 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				Extra India.
...	...	...	...	...	87	...	·235	...	2·7	...	8	−2·3	10·31	3·58	+6·73	23·79	7·69	+16·10	3·37	Chumbi.
...	...	...	...	...	...	...	...	...	...	...	19	−0·2	23·63	22·93	+0·70	46·70	40·38	+6·32	3·90	Pemba.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Prison Island.
...	...	...	10	...	49	...	·444	...	...	...	1	...	1·14	...	...	6·97	...	...	1·10	Abadan.

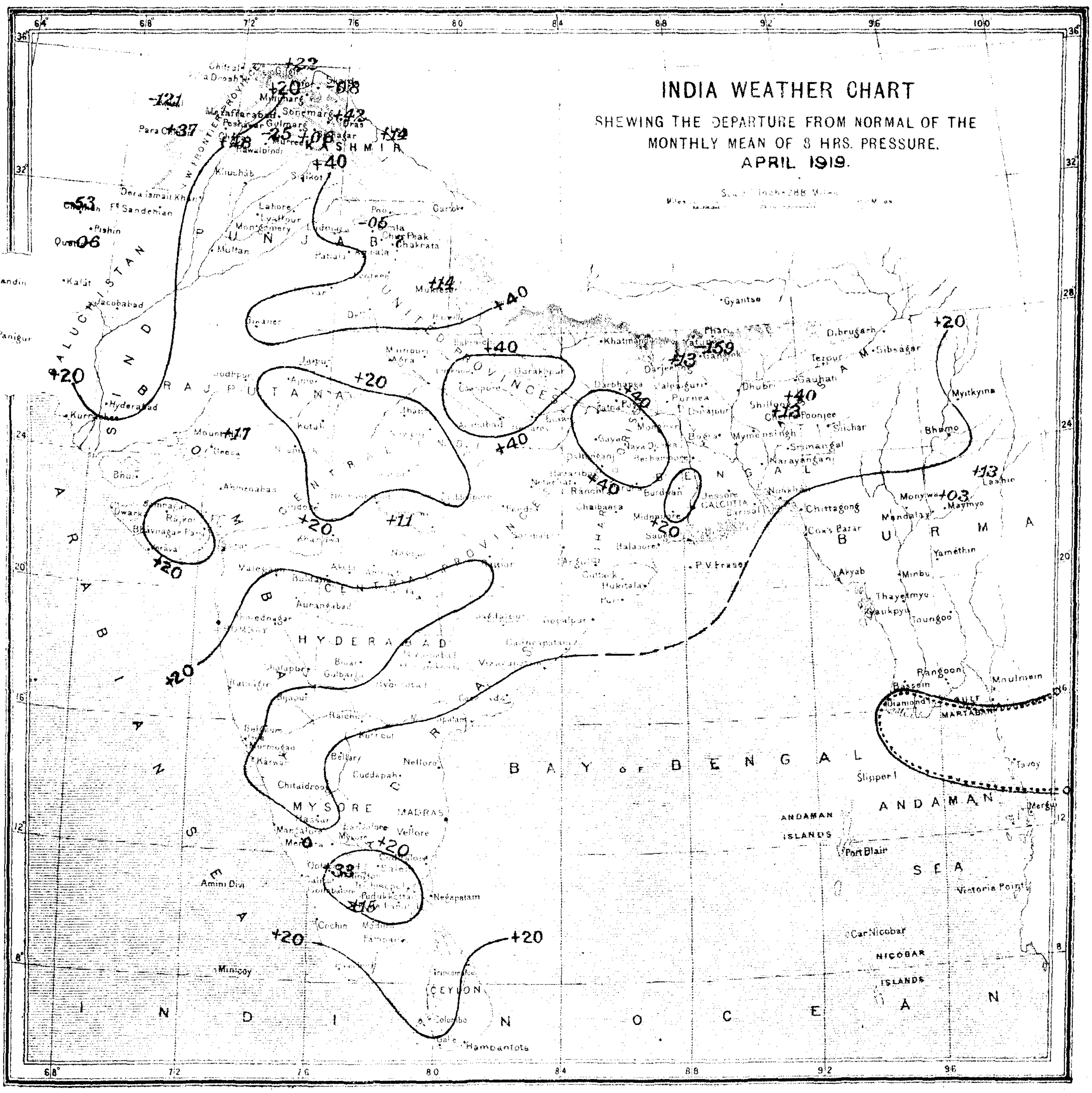
8GPI-21-464DGObs.-20-7-22-325.

The lines of the above chart represent isobars or lines of equal barometric pressure, the numbers attached indicating the barometric pressure in inches and being drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the normal distribution of pressure.

The mean 8 hrs. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table B of the 8 hrs. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	...	one	feather added to the wind arrow.
,, ,,	2 to 5 ,, ,, ,,	...	two	feathers ,, ,, ,, ,,
,, ,,	5 to 10 ,, ,, ,,	...	three	,, ,, ,, ,, ,,
,, ,,	10 to 20 ,, ,, ,,	...	four	,, ,, ,, ,, ,,
	over 20 ,, ,, ,,	...	five	,, ,, ,, ,, ,,

Wind strengths are based on factor 2·2 for the standard type of Beckley Robinson anemograph, instead of 3·0 as used for this plate up to December 1911 inclusive.



The chart shows the departure from normal of the mean during the month of 8 hrs. pressure by means of lines drawn for equal amounts of departure. The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no departure, the dotted line facing the area of deficient pressure or negative departures.

CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MAXIMUM TEMPERATURE.

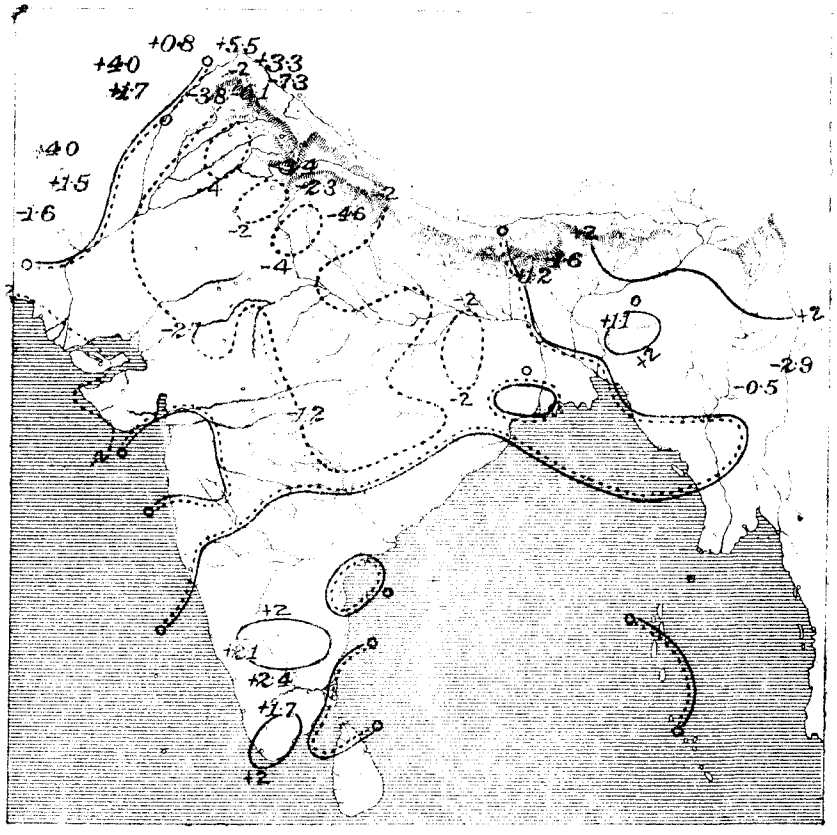


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MINIMUM TEMPERATURE.

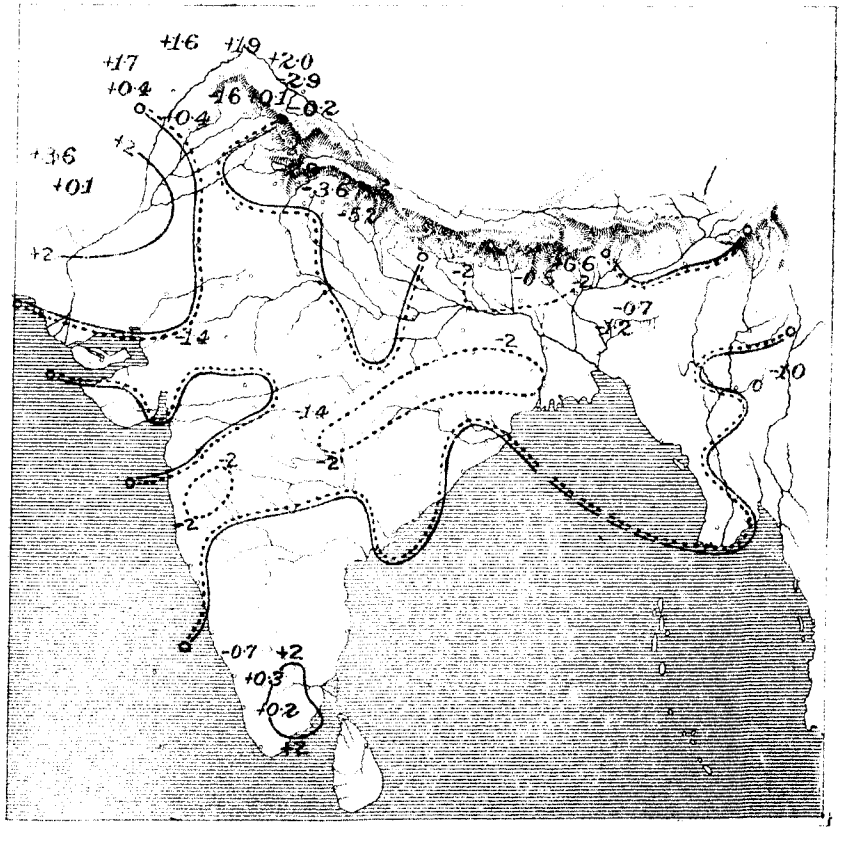


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MEAN TEMPERATURE.

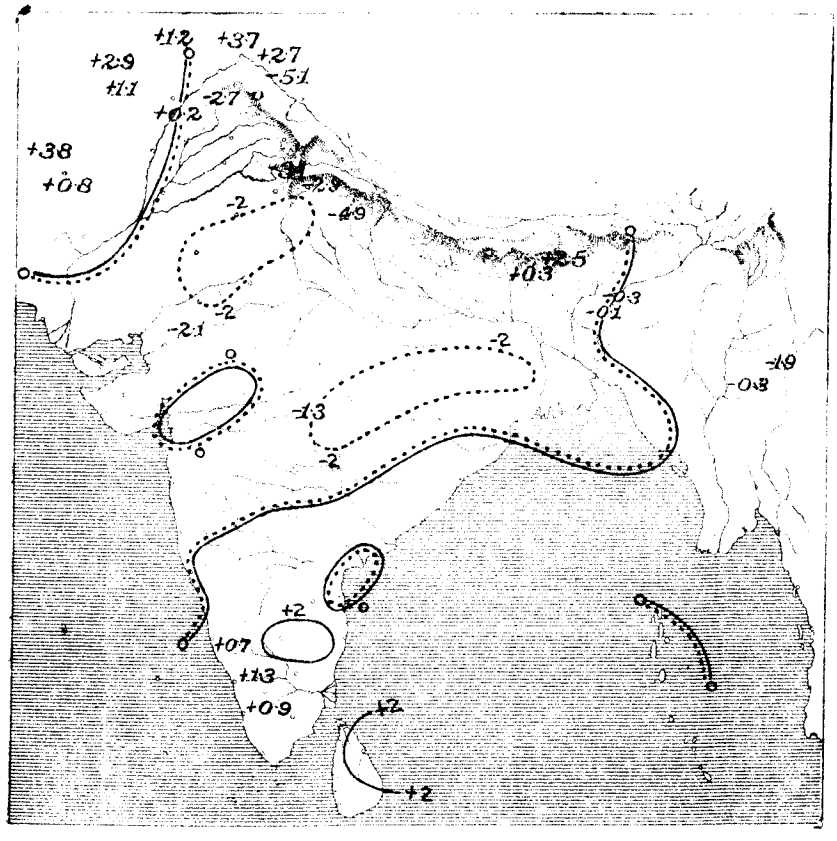


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF ABSOLUTE HUMIDITY AT 8 HRS.

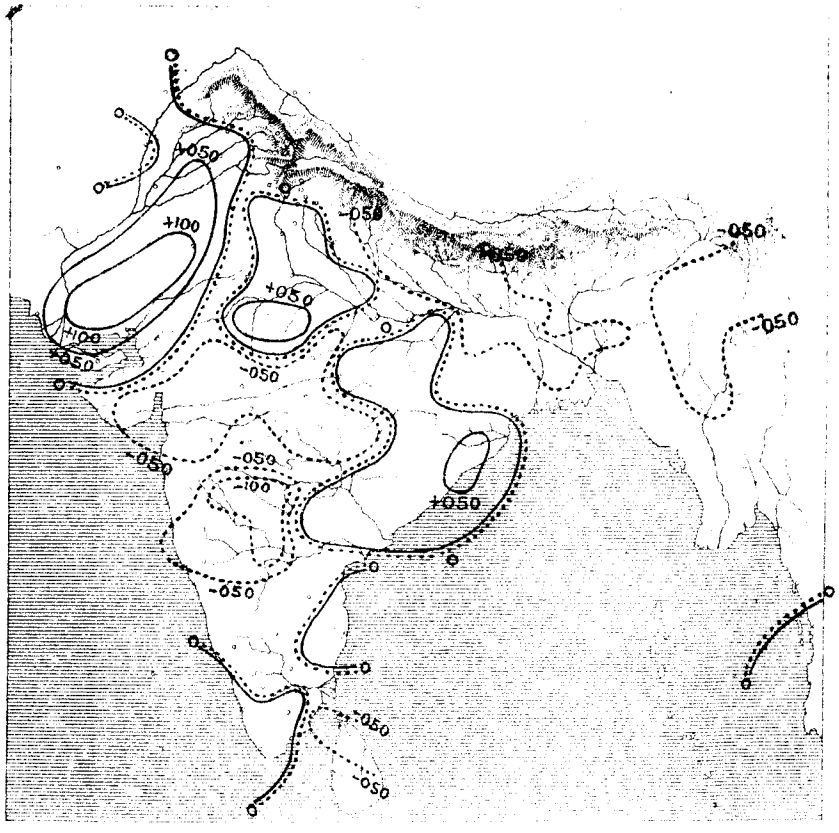


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF RELATIVE HUMIDITY AT 8 HRS.

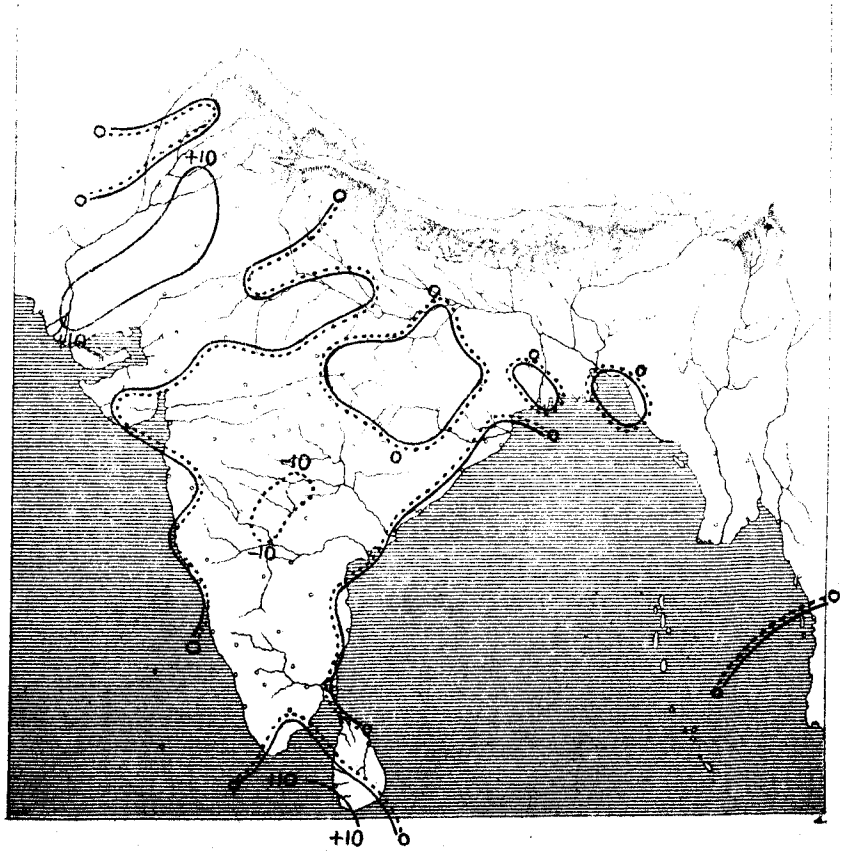


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF CLOUD AMOUNT AT 8 HRS.

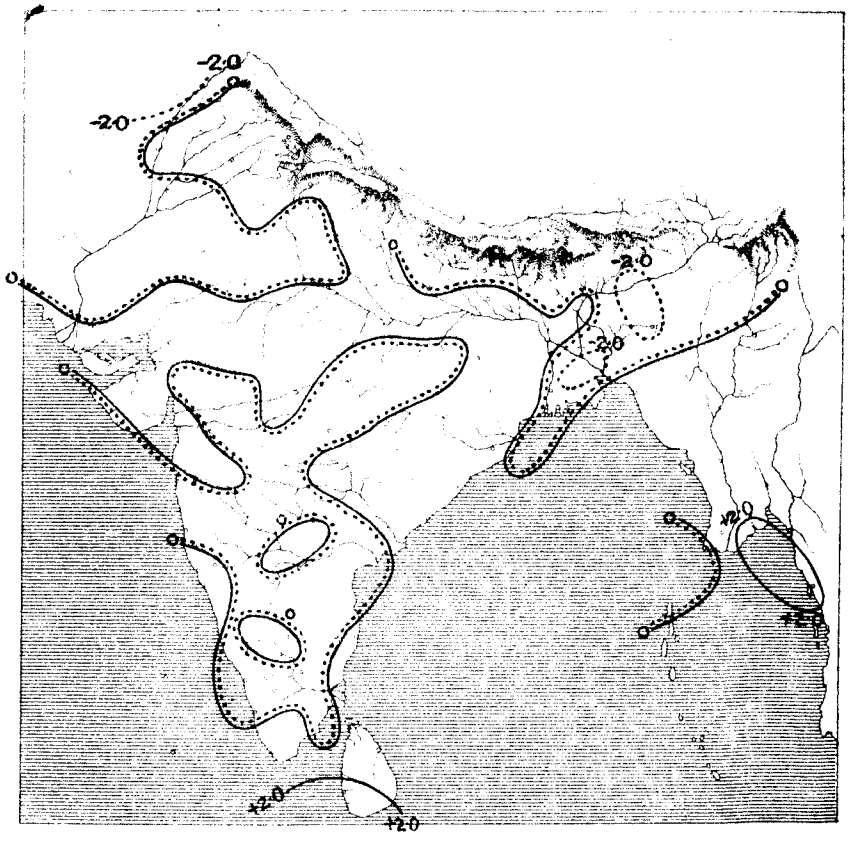
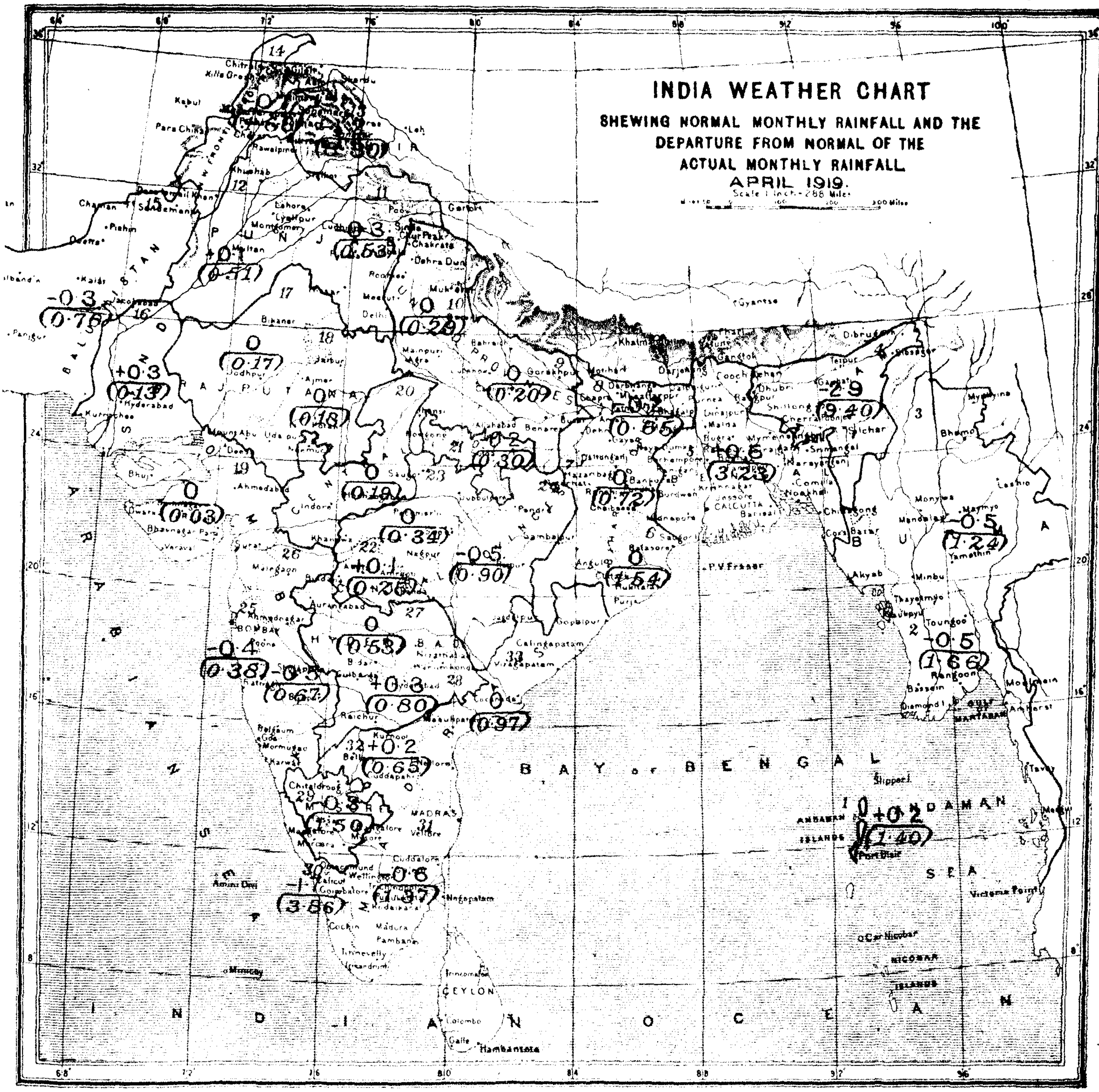


CHART SHEWING THE TOTAL NUMBER OF DAYS IN THE MONTH ON WHICH RAINFALL EQUALLED OR EXCEEDED 0·10 INCH.

(BASED ON THE RETURNS OF TABLE B.)



The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal monthly rainfall, the numbers above these give the departures from normal of the average actual rainfall over the divisions.

1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North

GOVERNMENT OF INDIA

METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA

CALCUTTA, MAY, 1919.

INTRODUCTION.

THIS review of the weather in India during the month of May, 1919, is based on observations taken daily at 8 hrs. at 212 stations, and on additional observations taken at 10 hrs. and 16 hrs. at 13 stations. In the rainfall summary have been utilized the data furnished by the meteorological observatories, and the rainfall statements of the month published by the Provincial Governments.

The brief notes on solar, magnetic and seismic disturbances are supplied by the chief observatories in the Indian area.

For a statement of the methods adopted in recording and tabulating the data, for each of the elements of observation, reference should be made to the introductory portion of the review for January.

Summary of the chief features of the weather in India during the month.

2. Two active western disturbances entered northwest India, one on the 4th and the other on the 8th; they caused fairly widespread rain in northern India. Three more disdurbances appeared from the west during the month, but they caused very little rain except in the extreme north of the country.

The thunder showers which generally occur during this season were heavy in the Peninsula, but were less heavy than usual in northeast India.

A temporary advance of the monsoon caused some rough weather in the Bay and rain in Burma in the third week. Towards the end of the month a severe storm formed in the front of the advancing monsoon current in the Arabian Sea, and moving westwards reached the neighbourhood of the Kuria Muria Islands on the 2nd June.

Cloud amount was normal or in excess except in Assam, Bengal and Kashmir. Humidity was well above the average in the North-West Frontier Province, Baluchistan and Sind and below it in Central Burma, Assam, the United Provinces, Bihar and Kashmir. Temperature was about normal.

The mean barometric pressure over the plains of India was 0·022″ in excess.

Solar, magnetic and seismic disturbances.

KODAIKANAL OBSERVATORY.

3. *Solar Observations.*—The sun was examined for spots and faculæ on all days during the month, but the prominence record was imperfect on 9 days.

Sunspots.—16 new groups were recorded. The mean daily number was 4·7. Most of the groups were of long duration and hence the average life of a spot was as much as 9·2 days. The latitude distribution was as follows :—

TABLE 1.

—	1°–10°	11°–20°	21°–30°	Mean latitude.	Extreme latitudes.
North . . .	4	3	...	10°·4	7° & 14°
South . . .	4	5	...	12°·7	7° & 20°

Prominences.—16 prominences a minute or more in height, and 11 metallic prominences were observed. A very large prominence extending over 70 degrees of the eastern limb was photographed on the 28th and 29th. It became separated from the limb and was dissipated in space between the 29th and 30th. The greatest height measured was 280″.

Magnetic disturbances.—"Great" disturbances were recorded on the 2nd, 3rd, 14th, 21st and 22nd and "Moderate" disturbances from the 5th to 6th, 12th to 13th, 15th to 18th on 20th and from 23rd to 27th.

J. EVERSHED,
Director,
Kodaikanal and Madras Observatories.

Seismic records.

$\phi = 10° 13' 50''$; $\lambda = 77° 28' 00''$; $h = 2343$ m.

Subsoil—Rock.

Apparatus.—Milne's Horizontal Pendulum Seismograph.

TABLE 2.

	V	To	ϵ	$\frac{r}{To^2}$
AN:				
AE:	9·76	17·6	1	2·8
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
May 1st	eP	4 06 24	...	...	...	...	...	
	F	4 08 00	...	...	...	...	...	Widening of line.
„ 1st	eP	5 21 00	...	...	...	...	...	
	eL	5 29 12	...	...	...	...	...	
	M	5 33 18	...	...	220	...	...	
	F	6 09 30	...	...	...	...	...	
„ 2nd	eP	3 07 48	...	...	...	...	...	
	eL	3 14 18	...	...	...	...	...	
	M	3 17 24	...	...	50	...	...	
	F	4 13 00?	...	...	...	...	...	Instrument examined at 4h. 13m.
May 6th	eP	6 31 18	...	...	...	...	...	
	F	6 33 18	...	...	...	...	...	Widening of line. In continuation of hour mark.
„ 6th	eP	19 30 12	...	...	...	...	...	
	eL	19 55 06	...	...	...	...	...	
	M	20 28 30	...	...	450	...	...	
	F	23 17 24	...	...	...	...	...	P. T. merged in hour mark.
„ 7th	eP	5 44 24	...	...	...	...	...	
	eL	6 02 48	...	...	...	...	...	
	M	6 07 12	...	...	50	...	..	
	F	6 24 24	...	...	...	...	...	
„ 11th	eP	5 35 24	...	...	...	...	...	
	F	5 38 42	...	...	...	...	...	Widening of line.
„ 22nd	eP	12 46 18	...	...	...	...	...	
	F	13 06 48	...	...	...	...	...	Widening of line.
„ 23rd	iL	6 21 18	...	...	...	...	...	
	M	6 25 36	...	...	200	...	...	
	F	6 55 48	...	...	...	...	...	No. P. T.
„ 27th	eP	18 15 36	...	...	...	...	...	
	F	18 24 54	...	...	...	...	...	Widening of line.
„ 29th	eP	11 11 54	...	...	...	...	...	
	eL	11 19 00	...	...	...	...	...	
	M	11 24 36	...	...	50	...	...	
	F	11 34 06	...	...	...	...	...	

J. EVERSHED, *Director,*
Kodaikanal and Madras Observatories.

BOMBAY OBSERVATORY.

Alibag Magnetic Record.

4. During the month of May 1919, the traces showed 5 calm days, 24 days of small, and 2 days of moderate disturbance.

The days of the month selected as "quiet" for the purposes of the Magnetic Survey of India are the 1st, 7th, 11th, 28th and 29th.

The following table represents the magnetic character of each day during the month :—

TABLE 3.

Day.	Character.	Day.	Character.	Day.	Character.	Day.	Character.
1	C	9	S	17	S	25	S
2	S	10	S	18	S	26	S
3	M	11	C	19	S	27	S
4	S	12	S	20	S	28	C
5	S	13	S	21	S	29	C
6	S	14	S	22	M	30	S
7	C	15	S	23	S	31	S
8	S	16	S	24	S		

C=calm ; S=small ; M=moderate ; G=great ; V. G.=very great.

The mean observed absolute values of the several magnetic elements reduced to the mean monthly tabulations of the magnetograms, as also the ranges and the summed ranges of the horizontal force and declination for the month are as follows :—

Easterly declination	0° 25′ 13″.
Horizontal force	0·36893 C.G.S. unit.
Vertical force	0·17060 C.G.S. „
Inclination	24° 49′·0.
Horizontal force range . . .	0·00047 C.G.S. unit.
Horizontal force summed range . .	0·00296 C.G.S. „
Declination range	4′·7.
Declination summed range . . .	19′·9.

(NOTE.—Summed range means sum without regard to sign of 24 ordinates of the diurnal inequality.)

Seismic records.

$\phi = 18° 53' 36''$; $\lambda = 72° 48' 56''$; $h = 11$m. *Subsoil*—Trap.

Apparatus.—Omori-Ewing Horizontal Pendulum (E. W.)

TABLE 4.

	V	To	ϵ	$\frac{r}{To^2}$
AN :				
AE :	20	32		
AZ :				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ An.	Ae.	Az.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
May 1st	P	5 14 20	...	...	...	...	...	
	M	5 34 15	...	...	50	...	...	
„ 3rd	P	1 2 54	...	...	...	...	...	
	M	1 34 19	...	...	160	...	...	
„ 6th	P	*19 54 8	...	...	...	...	...	* P as shown by Colaba Seismograph (E.-W.)
„ 23rd	P	†6 12 14	...	...	...	...	...	
	S	†6 16 49	...	...	...	...	...	
„ 23rd	P	†18 11 33	...	...	...	...	...	
„ 29th	P	11 10 50	...	...	...	...	...	
	M	11 15 48	...	...	45	...	...	

† These times are shown by the float record (Tilt Seismograph.)

T. K. CHINMAYANANDAM,
Director,
Bombay and Alibag Observatories.

5.—CALCUTTA (ALIPORE) OBSERVATORY.

Seismic records.

$\phi = 22° 32' N$; $\lambda = 88° 20' E$; $h = 6{\cdot}4$m. *Subsoil*—Alluvial.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs.

TABLE 5.

	V	To	ϵ	$\frac{r}{To^2}$
AN:	29	18	1	
AE:	29	28	1	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.).	REMARKS.
1919.		h. m. s.						
May 1st	P	5 22 42	...	...	...	...	...	
	F	5 58 42	...	...	...	...	...	
„ 2nd	P	2 22 00	...	...	...	...	...	
	F	2 54 00	...	...	...	...	...	
„ 3rd	P	1 1 00	5	...	...	...	...	
	S	1 8 30	7	...	...	...	...	
	L	1 21 00	15	...	...	...	...	
	M	1 26 12	...	638	...	...	...	
	F	2 33 00	...	...	...	...	...	
1919.		h. m. s.						
May 6th	P	19 52 12	5	...	...	...	...	
	S	20 1 54	11	...	...	...	...	
	L	20 11 30	13	...	...	...	...	
	M	20 17 18	...	...	?	...	...	
	F	21 13 30	...	...	...	...	...	
„ 7th	P	5 24 48	...	...	...	...	...	
	S	5 33 24	...	...	...	...	...	
	F	6 1 00	...	...	...	...	...	
„ 8th	P	6 18 06	...	...	...	...	...	
	F	6 48 06	...	...	...	...	...	
	P	18 32 48	...	...	...	...	...	
	F	18 39 48	...	...	...	...	...	
„ 23rd	P	6 15 06	4	...	...	...	...	
	S	6 18 54	6	...	...	...	...	
	L	6 20 30	9	...	...	...	...	
	F	6 59 24	...	...	...	...	...	
	P	18 16 24	...	...	...	...	...	
	S	18 17 42	...	...	...	...	...	
	F	18 33 24	...	...	...	...	...	
„ 29th	P	11 3 18	3	...	...	...	...	
	S	11 6 18	3	...	...	...	...	
	L	11 7 54	10	...	...	...	...	
	M	11 10 06	...	638	276	...	...	
	F	11 38 18	...	...	...	...	...	

6.—SIMLA OBSERVATORY.

Seismic records.

$\phi = 31° 6' N$; $\lambda = 77° 11' E$; $h = 2{\cdot}1$ *km.* *Subsoil*—Rock.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs (masses 50 kg.).

TABLE 6.

	V	To	ϵ	$\frac{r}{To^2}$
AN:	14	45	1	
AE:	14	45	1	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
May 1st	e P	4 23 00	...	...	...	...	...	
	M	4 52 12	...	43	...	...	...	
	F	5 03 42	...	...	...	...	...	Tremors.
„ 2nd	e P	2 56 24	...	...	...	...	...	
	F	3 41 48	...	...	...	...	...	
„ 6th	e P	19 53 12	...	...	...	...	...	
	S	20 03 30	...	...	...	...	...	
	L	20 15 24	35	...	...	...	...	
	M	20 30 18	...	>2186	>1543	...	...	Pendulum striking against stop on one side.
	F	23 27 18	...	...	...	...	...	
„ 8th	e P	5 35 42	...	...	...	...	...	
	M	5 49 36	...	64	71	...	...	
	F	6 15 12	...	...	...	...	...	Tremors.
1919.		h. m. s.						
May 20th	e P	17 39 48	...	...	...	...	...	
	M	17 41 18	...	...	>43	...	...	Pendulum striking against stop. Felt at Lahore.
	F	17 43 42	...	...	...	...	...	
„ 23rd	e P	6 12 00	...	...	...	...	...	
	S	6 13 00	...	...	...	...	...	
	M	6 14 48	...	1071	164	...	...	
	F	6 50 36	...	...	...	...	...	Felt at D. I. Khan.
„ 23rd	e P	18 10 54	...	...	...	...	...	
	F	18 21 12	...	...	...	...	...	Slight shock.
„ 29th	e P	11 08 48	...	...	...	...	...	
	M	11 12 54	...	143	...	...	...	
	F	11 28 06	...	...	...	...	...	

The following table contains a list of earthquakes that were reported :—

TABLE 7.

Place at which felt.	Date.	G. M. T. of earthquake.	Duration.	Intensity. Rossi-Forel scale.	No. of shocks.	Remarks.
	1919.	h. m.	sec.			
Nagrakata (Jalpaiguri District.)	May 1st	15 26	25	6	1	
Drosh . . .	„ 19th	4 35	15	6	2	
Lahore . . .	„ 20th	17 34	4	6	2	
Dera Ismail Khan .	„ 23rd	6 10	5	6	1 Continuous.	

S. SITARAMAYYA,
Scientific Assistant.

Weather in the Indian Ocean.

7. The following table gives the departures from normal of pressure and rainfall, as well as the actual and normal wind direction and velocity at the three representative stations.

TABLE 8.

—	Mauritius.	Zanzibar.	Seychelles.
Departure from normal of mean pressure in inch.	0	+·025	—·019
Actual mean wind direction . .	S 58° E	S 22° W	S 33° E
Normal mean wind direction . .	S 63° E	S 7° W	S 43° E
Actual mean wind velocity (miles per diem).	117	170	155
Normal mean wind velocity (miles per diem).	130	142	120
Rainfall departure from normal in inches	—2·59	—8·16	+7·35

Depressions and cyclonic storms.

8. Weather was disturbed in the southeast of the Arabian Sea in the last week of the month, the S. S. *Sierra Nyia* reporting a west-south-west gale on the 26th at about 200 miles to the west of Colombo. On the morning of the 29th a depression appeared off the Laccadives in front of the advancing monsoon and developed into a cyclone probably on the 30th with centre near lat. 13°N, long. 67°E. Its movement during the next 24 hours was very small but its intensity increased greatly and the S. S. *Hemelin*, on running into it on the afternoon of the 31st, experienced very high confused seas and winds of terrific force and suffered considerable damage; the barometer on the ship fell to 29·4″ at noon, 29·1″ at 15 hrs., 28·6″ at 17 hrs. and to 28·0″ at 18¼ hrs. after which it ceased to fall. The storm was then moving west-north-west and, although we have no information from ships in the storm area on the 1st June, we can estimate from its subsequent history that the centre was near lat. 14½°N, long. 63°E at 8 hours on that date. On the morning of the 2nd the centre lay about 150 miles to the east of the Kuria Muria Islands. The S. S. *Sicelia* and S. S. *Elysia* experienced the full fury of the cyclone on this date, the hurricane winds and tremendous seas causing considerable damage to the ships. The former ship was caught in the calm centre for about 15 minutes at 5½ hours on the 2nd; the north-west hurricane changed after the calm into a south-east hurricane. The greatest barometric depth was probably 1·8″. The storm extended over a wide area; S. S. the *City of Shanghai* passed through mountainous seas and heavy gales with terrific squalls on the 31st although probably 250 miles from the centre of the cyclone. Another account of this storm with extracts from ships' logs has been given in the 1919-20 Administration Report.

Five western disturbances entered north west India during the month, and began to affect the weather there on the 1st, 4th, 8th, 12th and 18th respectively.

Local storms reported in newspapers :—

TABLE 9.

Date and time.	Locality.	Damage caused.
3rd 19½ hrs. . .	Agai south block hut (Ahmedap ur-Katwa Railway.)	Mixed train capsized.
11th 20 hrs. . .	Between Lakmarwar and Gamlia sarai stations (North Western Railway.)	Goods train capsized.

Pressure.

9. The following table gives the departure from normal of the mean 8 hours pressure in the 15 chief political divisions of India :—

TABLE 10.

DIVISION.	Departure from normal of mean 8 hrs. pressure.
	"
Burma	+·001
Assam	+·024
Bengal	+·030
Bihar and Orissa	+·042
United Provinces	+·041
Punjab	+·045
North-West Frontier Province	+·027
Sind	+·016
Rajputana	+·027
Bombay	+·003
Central India	+·025
Central Provinces	+·024
Hyderabad	+·021
Mysore	+·006
Madras	+·009

The following table gives a comparison of the departure from normal of mean 8 hours pressure at 9 hill stations with the departure at an adjoining station in the plains :—

TABLE 11.

HILL STATION.	Departure from normal pressure. A.	PLAIN STATION.	Departure from normal pressure. B.	Departure of pressure difference. B—A.
	"		"	"
Quetta	+·004	Jacobabad	+·031	+·027
Leh	—·001	Lahore	+·046	+·047
Murree	—·006	Peshawar	+·024	+·030
Simla	+·008	Ludhiana	+·047	+·039
Mukteswar	+·021	Bareilly	+·046	+·025
Darjiling	+·024	Dhubri	+·036	+·012
Mount Abu	+·017	Deesa	+·028	+·011
Pachmarhi	+·008	Khandwa	+·018	+·010
Kodaikanal	—·009	Madura	+·004	+·013

Temperature.

10. Table 12 gives the actual temperature and its departure from normal in 33 sub-divisions, while table 13 give only the departure from normal in the 15 chief political divisions.

TABLE 12.

SUB-DIVISION.	ACTUAL TEMPERATURE.				DEPARTURE FROM NORMAL OF		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
1. Bay Islands	89·9	79·9	84·9	10·0	+1·0	+0·9	+0·1
2. Lower Burma	91·8	77·8	84·8	13·9	+1·5	+1·0	+0·5
3. Upper Burma	98·2	75·6	86·9	22·6	+2·7	+0·6	+2·1
4. Assam	88·9	72·1	80·5	16·8	+1·7	+0·2	+1·5
5. Bengal	93·9	76·2	85·1	17·7	+1·3	—0·1	+1·4
6. Orissa	99·0	79·2	89·0	19·9	—0·9	—0·7	—0·2
7. Chota Nagpur	100·9	75·3	88·1	25·7	—2·4	—1·7	—0·7
8. Bihar	100·1	76·8	88·5	23·3	+0·5	0	+0·5
9. United Provinces, East	104·5	78·6	91·6	25·9	+0·1	+0·5	—0·4

Sub-division.	Actual temperature.				Departure from normal of		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
10. United Provinces, West	104·3	78·1	91·2	26·3	—1·2	—1·0	—0·2
11. Punjab, East and North	101·3	74·3	87·8	27·0	—2·6	—1·2	—1·4
12. Do., Southwest	102·6	75·7	89·2	26·9	—3·2	—1·3	—1·9
13. Kashmir	76·8	52·1	64·5	24·7	+0·7	+0·7	0
14. North-West Frontier Province	100·7	71·9	86·3	28·9	—0·2	—0·3	+0·1
15. Baluchistan	93·1	63·8	78·4	29·3	+1·5	+2·3	—0·8
16. Sind	101·9	80·7	91·3	21·2	—0·7	+1·5	—2·2
17. Rajputana, West	106·5	80·6	93·5	25·9	—0·5	—0·9	+0·4
18. Do., East	104·5	80·6	92·5	24·0	—1·9	—0·8	—1·1
19. Gujarat	99·6	78·8	89·2	20·8	+0·1	+1·2	—1·1
20. Central India, West	103·9	77·3	90·6	26·5	+0·5	+0·5	0
21. Do. do., East	105·0	79·5	92·3	25·5	—1·5	—0·3	—1·2
22. Berar	106·2	80·5	93·4	25·7	+0·4	+0·8	—0·4
23. Central Provinces, West	104·8	78·1	91·4	26·7	—1·5	—1·6	+0·1
24. Do. do., East	102·1	77·0	89·6	25·1	—2·9	—2·6	—0·3
25. Konkan	90·8	80·5	85·6	10·4	+0·3	+0·4	—0·1
26. Bombay Deccan	101·1	73·3	87·2	27·8	0	+0·3	—0·3
27. Hyderabad, North	105·4	78·7	92·1	26·7	+0·2	+0·5	—0·3
28. Do., South	103·8	79·5	91·7	24·3	—0·4	—0·7	+0·3
29. Mysore	91·9	70·0	81·0	21·9	+0·4	+0·7	—0·3
30. Malabar	89·4	77·9	83·6	11·5	—0·1	—0·2	+0·1
31. Madras, Southeast	98·1	79·2	88·7	18·9	—0·2	+0·7	—0·9
32. Do., Deccan	104·0	80·4	92·2	23·6	—0·7	—0·3	—0·4
33. Do., Coast, North	96·8	80·9	88·9	15·9	—0·6	—0·3	—0·3

TABLE 13.

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+2·1	+0·8	+1·5
Assam	+1·7	+0·2	+0·9
Bengal	+1·3	—0·1	+0·6
Bihar and Orissa	—0·7	—0·6	—0·6
United Provinces	—0·5	—0·2	—0·4
Punjab	—2·8	—1·2	—2·0
North-West Frontier Province	—0·2	—0·3	—0·3

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Sind	—0·7	+1·5	+0·4
Rajputana	—1·3	—0·8	—1·1
Bombay	+0·1	+0·8	+0·4
Central India	—0·5	+0·1	—0·2
Central Provinces	—1·4	—1·3	—1·3
Hyderabad	—0·2	—0·3	—0·2
Mysore	+0·4	+0·7	+0·5
Madras	—0·3	+0·1	—0·1

Surface and upper air winds.

11. *Surface.*—Wind directions were roughly normal over the country generally, as well as over the equatorial belt of the Indian Ocean.

The following table gives the mean wind velocity and steadiness with their departures from normal.

TABLE 14.

Division.	Hourly wind velocity.		Wind steadiness.	
	Actual.	Departure from normal.	Actual.	Departure from normal.
Burma	4·2	+0·4	44	— 3
Assam	2·8	—0·4	47	+14
Bengal	3·1	—1·1	50	— 9
Bihar and Orissa	4·3	—0·4	51	— 6
United Provinces	2·8	—0·3	23	0
Punjab	3·0	0·1	23	+ 4
North-West Frontier Province	1·5	—1·1	22	+ 4
Sind	7·2	—1·6	61	+ 3
Rajputana	5·5	—1·0	41	—23
Bombay	6·4	—2·2	64	— 5
Central India	4·2	—1·3	48	—13
Central Provinces	4·6	—0·6	45	—11
Hyderabad	5·8	—1·6	40	—23
Mysore	5·5	+0·1	78	— 2
Madras	5·3	—0·3	54	— 3

Upper air.—The monthly mean velocities and directions at different heights above Agra, Simla, Lahore, Bangalore, Akyab and Calcutta during the month are given in the following table.

TABLE 15.

Height above sea, kms.	Agra. Height above sea 0·17 km.				Simla. Height above sea 2·13 kms.				Lahore. Height above sea 0·21 km.				Bengalore. Height above sea 0·92 km.				Akyab. Height above sea 0·01 km.				Calcutta. Height above sea 0·01 km.			
	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L
Ground level.	30	3·4	1·1	280	31	1·8	1·0	351	25	1·3	0·4	80	29	3·7	2·5	269	...	...	...	...	23	2·7	1·9	198
0·5	33	7·6	3·7	295	...	...	...	...	25	4·6	1·9	65	...	...	...	...	32	4·4	2·1	299	23	6·5	5·5	216
1·0	32	7·7	4·5	301	...	...	...	...	25	6·3	1·4	25	29	3·8	3·0	273	31	4·3	3·2	301	18	5·4	4·5	234
1·5	32	8·0	5·8	296	...	...	...	...	24	5·5	1·9	326	29	4·7	3·3	307	28	3·9	3·1	301	14	3·5	2·6	270
2·0	29	8·0	7·1	289	...	...	...	...	24	5·3	3·3	299	26	4·5	3·0	1	28	5·1	4·0	311	13	4·4	3·8	289
2·5	24	7·8	6·7	291	30	5·7	3·3	324	24	6·2	4·4	295	22	4·8	3·9	42	27	5·6	4·0	317	10	6·3	5·4	295

Height above sea kms.	Agra. Height above sea 0·17 km.				Simla. Height above sea 2·13 kms.				Lahore. Height above sea 0·21 km.				Bangalore. Height above sea 0·92 km.				Akyab. Height above sea 0·01 km.				Calcutta. Height above sea 0·01 km.			
	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L
3·0	22	9·1	7·5	299	31	5·8	4·2	308	23	7·2	5·8	295	20	6·0	5·2	71	25	5·9	3·5	312	10	7·4	6·6	305
3·5	21	10·1	8·7	303	31	6·6	5·0	306	23	8·5	7·2	304	19	6·7	5·9	68	23	5·7	3·3	298	9	9·5	8·8	305
4·0	18	11·9	10·3	309	30	7·6	6·1	306	22	9·7	8·8	307	18	7·2	6·2	70	23	6·3	4·6	286	8	12·1	11·6	311
4·5	15	12·1	11·1	309	27	6·9	5·7	306	21	10·5	9·8	309	15	6·0	4·5	86	17	7·2	5·9	275	5	9·0	8·9	302
5·0	14	13·4	11·7	309	23	7·2	5·8	298	20	11·9	10·1	309	11	5·2	2·7	75	15	8·2	7·1	268	5	9·4	9·0	289
5·5	13	13·6	12·3	305	21	7·7	6·1	293	18	11·6	10·1	312	9	5·1	1·6	75	7	8·3	7·4	265	4	8·9	8·6	273
6·0	13	14·5	13·3	300	19	7·7	6·1	292	17	12·1	10·6	301	8	4·1	1·0	357	4	9·4	9·1	265	2	9·7	9·7	268
6·5	12	16·3	15·1	299	19	8·6	6·9	289	16	13·7	12·1	297	7	4·6	2·1	309	2	10·5	10·2	260	2	12·5	12·5	265
7·0	11	17·4	16·2	301	18	9·3	7·1	278	15	14·6	12·7	301	7	6·0	3·3	291	1	16·0	16·0	250	2	14·3	14·1	264
7·5	8	15·6	14·7	289	17	10·7	8·3	275	14	14·7	12·3	296	7	7·6	4·1	279	...	...	...	...	2	14·5	14·1	263
8·0	7	13·3	12·9	286	14	11·1	8·8	259	13	14·6	12·0	289	6	7·3	4·6	260	...	...	...	...	2	17·0	16·2	260
8·5	6	12·6	12·1	279	14	13·0	10·5	259	11	16·8	14·1	284	5	7·9	5·1	254	...	...	...	...	1	17·0	17·0	235
9·0	5	10·1	9·8	282	12	15·5	12·4	262	10	16·4	13·4	277	3	4·2	2·2	113	...	...	...	...	...	...	...	...
9·5	4	9·9	9·4	281	12	17·9	15·1	261	10	18·3	15·3	277	3	5·8	3·8	109	...	...	...	...	...	...	...	...
10·0	4	10·4	9·3	278	10	19·4	16·6	251	9	20·9	17·6	282	3	7·0	5·9	107	...	...	...	...	...	...	...	...
10·5	4	12·9	11·3	290	8	22·1	19·5	258	8	23·3	20·6	274	1	1·5	1·5	120	...	...	...	...	...	...	...	...
11·0	3	6·3	4·9	286	7	21·1	17·8	261	7	26·7	24·1	276	1	0·5	0·5	250	...	...	...	...	...	...	...	...
11·5	3	10·5	9·9	261	4	20·7	16·7	268	3	19·3	19·2	252	...	...	...	...	...	...	...	...	...	...	...	...
12·0	2	18·5	18·5	251	4	23·4	18·9	272	3	22·2	22·0	256	...	...	...	...	...	...	...	...	...	...	...	...
12·5	1	7·0	7·0	275	3	19·5	14·4	280	1	26·0	26·0	260	...	...	...	...	...	...	...	...	...	...	...	...
13·0	...	...	...	...	2	18·0	14·5	239	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13·5	...	...	...	...	1	30·0	30·0	225	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

n—Number of flights.
V—Velocity of wind, regardless of direction, metre per second.
v—Velocity of Resultant Wind; taking account of direction, metre per second.
L—Direction of Resultant Wind; North Wind=0° or 360°, East Wind=90°.

Humidity and cloud.

12. The following table gives the mean humidity, vapour tension and cloud amount at 8 hours with their departures from normal.

TABLE 16.

Division.	Hygrometry; 8 hrs.				Cloud.	
	Mean humidity.	Departure from normal.	Mean vapour tension in inches of mercury.	Departure from normal in inches of mercury.	Mean cloud amount at 8 hrs.	Departure from normal.
	%					
Burma . .	76	— 4	·845	—·014	6·0	+0·3
Assam . . .	82	— 5	·789	—·016	4·9	—1·1
Bengal . . .	78	— 3	·877	—·019	4·2	—0·6
Bihar and Orissa .	63	— 2	·744	—·026	2·9	—0·1
United Provinces .	41	— 5	·531	—·063	2·1	+0·4
Punjab . .	42	+ 3	·498	+·011	1·6	+0·2
North-West Frontier Province.	53	+ 8	·571	+·027	1·7	+0·1
Sind . . .	64	+ 6	·809	+·082	1·3	—0·3
Rajputana . .	36	— 3	·474	—·036	2·0	+0·3
Bombay . .	65	+ 1	·754	+·014	3·0	+0·2
Central India .	39	— 2	·523	—·021	1·8	+0·1
Central Provinces .	41	+ 2	·519	—·001	2·2	+0·3
Hyderabad . .	49	0	·607	+·023	3·2	+0·5
Mysore . .	75	+ 1	·671	+·005	5·3	+0·2
Madras . .	70	0	·853	+·002	4·5	+0·1

Rainfall.

13. The month's rainfall was about normal or in excess except in the Bay Islands, Burma, Assam, Bengal, Bihar, the United Provinces, East, Kashmir, Sind, Gujarat and the Konkan, but over the country as a whole there was a deficiency of 17 per cent.

Rainfall was generally in excess over the highlands to the west of the Indus.

TABLE 17.

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
1. Bay Islands	9·3	10·3	5·31	8·97	—3·66	— 41
2. Lower Burma	9·7	13·3	8·79	13·04	—4·25	— 33
3. Upper Burma	5·4	8·0	3·20	5·83	—2·63	— 45
4. Assam	12·5	14·6	9·37	12·64	—3·27	— 26
5. Bengal	7·8	9·7	5·18	8·55	—3·37	— 39
6. Orissa	4·9	4·7	3·20	3·08	+0·12	+ 4
7. Chota Nagpur	5·0	3·4	2·50	1·94	+0·56	+ 29
8. Bihar	3·2	3·3	1·72	2·34	—0·62	— 26
9. United Provinces, East	1·2	1·3	0·48	0·68	—0·20	— 29

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
10. United Provinces, West	1·7	1·4	0·65	0·65	0	0
11. Punjab, East and North	1·6	1·4	0·62	0·61	+0·01	+ 2
12. Do., Southwest	2·0	0·8	0·81	0·36	+0·45	+125
13. Kashmir	3·7	3·3	1·59	2·08	—0·49	— 24
14. North-West Frontier Province	3·0	1·7	1·43	0·78	+0·65	+ 83
15. Baluchistan	1·3	0·4	0·81	0·15	+0·66	+440
16. Sind	0·4	0·2	0·08	0·13	—0·05	— 38
17. Rajputana, West	0·9	0·6	0·29	0·27	+0·02	+ 7
18. Do., East	1·6	1·0	0·57	0·41	+0·16	+ 39
19. Gujarat	0·3	0·3	0·08	0·17	—0·09	— 53
20. Central India, West	1·4	0·6	0·50	0·27	+0·23	+ 85
21. Do., East	1·0	0·8	0·60	0·31	+0·29	+ 94
22. Berar	1·3	0·9	0·41	0·42	—0·01	— 2
23. Central Provinces, West	1·9	1·0	0·72	0·39	+0·33	+ 85
24. Do., East	3·1	1·4	1·39	0·63	+0·76	+121
25. Konkan	1·4	1·5	0·79	1·30	—0·51	— 39
26. Bombay Deccan	3·8	2·2	2·03	1·27	+0·76	+ 60
27. Hyderabad, North	2·2	1·4	0·81	0·63	+0·18	+ 29
28. Do., South	2·9	1·9	1·09	0·89	+0·20	+ 22
29. Mysore	6·9	5·6	3·89	3·57	+0·32	+ 9
30. Malabar	11·2	8·4	9·16	6·87	+2·29	+ 33
31. Madras, Southeast	4·9	3·7	3·06	2·51	+0·55	+ 22
32. Do., Deccan	3·9	2·9	1·68	1·63	+0·05	+ 3
33. Do., Coast, North	3·9	3·0	2·61	2·00	+0·61	+ 31

TABLE 18.

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Burma	5·34	8·66	—3·32	— 38
Assam	9·37	12·64	—3·27	— 26
Bengal	5·18	8·55	—3·37	— 39
Bihar and Orissa	2·26	2·42	—0·16	— 7
United Provinces	0·57	0·66	—0·09	— 14
Punjab	0·66	0·55	+0·11	+ 20
North-West Frontier Province	1·43	0·78	+0·65	+ 83

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal
	"	"	"	
Sind	0·08	0·13	—0·05	— 38
Rajputana	0·48	0·36	+0·12	+ 33
Bombay	1·18	0·92	+0·26	+ 28
Central India	0·54	0·28	+0·26	+ 93
Central Provinces	0·91	0·50	+0·41	+ 82
Hyderabad	0·94	0·75	+0·19	+ 25
Mysore	3·89	3·57	+0·32	+ 9
Madras	4·03	3·17	+0·86	+ 27
Mean of India	2·31	2·78	—0·47	— 17

Snowfall.

I.—THE NORTH-WEST FRONTIER PROVINCE.

14. Miranshah, Kohat, Khyber Agency, Malakand Agency, Dera Ismail Khan } No snow fell.

Parachinar.—The amount of snow on adjacent hills was greater than in May of 1918.

Drosh.—Snow fell on the 12th, 15th and 18th to a depth of 1 to 3 inches on high ranges of surrounding hills. The thickness of snow on passes and high ranges at the end of the month was 1 to 4 feet.

Abbottabad (Hazara).—2 to 14 inches fell in the Kagan Valley at altitudes of 11,000 to 17,000 feet.

II.—KASHMIR.

Srinagar.—No snow fell at the station or on the surrounding mountains.

Dras.—Slight snow fell on mountains.

Skardu.—No snow fell at the station or on the lower hills surrounding the station, but light falls (about an inch on each occasion) occurred on the higher mountains on the 10th, 11th, 15th, 19th and 29th. The depth of accumulation at the end of the month was about a foot on the higher and 2 or 3 inches on the lower mountains; there was no snow lying at the station or on low hills.

Sonamarg.—Snow fell on nearest ranges on the 9th, 10th and 16th.

Kargil.—No snow fell.

Leh.—No snow fell at the station, but the hills down to about 12,000 feet were covered with fresh snow several times during the month. The snowline at the end of the month was at about 14,000 feet. Regions to the north reported very little snow and traffic with Yarkand was open nearly all winter; caravans arrived at least a month earlier than usual.

III.—THE PUNJAB.

Chamba State.—Snow fell on high peaks and it descended to 14,000 feet. The passes remained closed at the end of the month and the accumulations there were considered to be well above the average.

Kulu.—The accumulations at the end of the month were, everywhere on the Kulu hills, much greater than usual.

During the winter there was a much heavier snowfall than there had been for very many years. There were large snow drifts till the end of May in shady places down to 10,000 feet, and above 12,000 feet there was unbroken snow everywhere.

Kilba (Simla Hills).—On the 7th, 8th and 9th snowfall descended to 10,000 feet (about 2 inches in depth) and on the 30th to 12,000 feet (about 2 inches). The accumulations at the end of the month were as follows:—

Charang Pass	20 feet
Rupan "	18 "
Brua "	18 "
Shatul "	18 "
Harang "	4 "

The snowfall of the winter season as a whole was considered to be the highest known.

IV.—THE UNITED PROVINCES.

Garhwal.—Snowfall during May was above normal. The total fall of the cold weather was reported to be the heaviest in living memory, probably the heaviest for at least 80 years, and the accumulations at the beginning of May were very much above normal.

Almorah.—(Report dated the 23rd May.)

TABLE 19.

Actual falls during month :—

Locality.	Depth.	Distance below perpetual snowline.
	Feet.	
Malla Daupur	3½	3 or 4 miles.
Malla Johar	1¾	
Byans	4½	5 miles.
Chaudas	2⅔	1¼ "
Malla Durma	1¼	3 "

TABLE 20.

Name of pass or peak.	Accumulations at the end of the month.	
	Reported.	Normal.
	Feet.	Feet.
Nuwe Pass	17½	20⅓
Lampia "	15	10½
Lipulekh "	12	8⅓
Binkaru "	6	14
Pindari Peak	3½	2½
Kaphini "	3½	2½
Puwalidwar "	3½	2

V.—THE EASTERN HIMALAYAS.

Gangtok and Yatung.—No snow fell.

North-East Frontier District.—The total winter fall was below normal. Accumulations on the 24th May were as follows :—

TABLE 21.

Name of pass or peak.	Height.	Accumulation.
	Feet.	
Maya pass	8,500	No snow.
Painlon pass	9,000	Sprinkling of snow.
Phaukan pass	9,000	No snow.
Sita peak	11,000	Light snow on the summit.
Chi "	13,000	Snow over all the summit.
Dapha Bun peak	15,200	Snow on summit and down to about 12,000 feet.

Balipara Frontier Tract.—Snowfall of the season was very much below the average. The accumulation on the 15th of the month on the Sela and the Tsela was less than usual. The Mila Katungla was as usual covered by snow for about 5 months.

Summary.

15. The month's fall was light in Kashmir and the North-West Frontier Province, normal in the Punjab and heavy in the United Provinces hills. (Punjab reports indicate heavy accumulations but not necessarily very heavy falls).

S. SITARAMAYYA,
Scientific Assistant.

Table A.—Abstract of observations taken at 10 hrs. and 16 hrs. at 13 stations in India, etc., in May, 1919.

Table

Abstract of observations taken at 10 hrs. and 16 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hrs.	Pressure. Mean of 16 hrs.	Pressure. Mean daily range.	Pressure. Mean of daily mean pressures.	Pressure. Departure from normal.	Pressure. Mean reduced to sea-level and to gravity at 45° Lat.	Temperature of air. Mean maximum.	Temperature of air. Mean minimum.	Temperature of air. Mean daily range.	Temperature of air. Highest maximum.	Temperature of air. Lowest minimum.	Temperature of air. Absolute range.	Temperature of air. Mean 10 hrs.	Temperature of air. Mean 16 hrs.	Temperature of air. Mean of daily means.	Temperature of air. Departure from normal.	Temperature, wet-bulb. Mean minimum.	Temperature, wet-bulb. Mean 10 hrs.	Temperature, wet-bulb. Mean 16 hrs.	Temperature, wet-bulb. Mean of three previous columns.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal.																					
5	Calcutta . .	21	29·748	29·633	·115	29·693	+·032	29·660	95·7	77·9	17·8	104·6	68·4	36·2	89·1	91·6	86·5	+0·8	75·1	80·3	79·9	78·4
	VI.—Punjab.																					
11	Lahore . . .	702	28·999	28·903	·096	28·945	+·040	29·590	102·3	74·1	28·2	112·8	67·6	45·2	93·4	101·4	87·9	−1·0	65·3	72·0	73·9	70·4
	IX.—Rajputana.																					
13	Jaipur . . .	1,431	28·347	28·237	·110	28·287	+·043	29·606	103·9	76·9	27·0	112·5	70·0	42·5	95·0	101·1	89·6	−2·0	63·9	70·1	70·0	68·0
	X.—Bombay.																					
25	Bombay . .	37	29·824	29·718	·106	29·782	+·008	29·759	91·5	81·3	10·2	98·4	78·2	15·2	86·4	87·9	85·3	+0·7	75·5	78·8	79·5	77·9
	XIV.—Mysore.																					
26	Bangalore . .	3,021	26·924	26·804	·120	26·871	+·028	29·672	90·9	69·1	21·8	93·3	65·8	30·5	81·8	85·3	78·3	−0·2	66·0	71·3	69·8	69·0
	XV.—Madras.																					
31	Trivandrum . .	198	29·694	29·601	·093	29·652	+·007	29·779	87·3	77·8	9·5	91·0	74·2	16·8	84·2	84·6	81·4	+0·1		78·0	78·5	
	Padukkottai . .	318	29·540	29·403	·137	29·471		29·711	101·0	79·5	21·5	105·8	71·1	34·7	90·9	96·6	90·2			76·1	76·4	
	Madras . .	22	29·794	29·684	·110	29·747	+·014	29·700	99·3	81·3	18·0	108·2	76·5	31·7	94·7	91·7	89·2	+0·5	76·3	79·4	80·4	78·7
	Kashmir . .																					
14	Srinagar . .	5,204	24·861	24·792	·069	24·827	+·013	24·798	76·7	51·2	25·5	86·5	46·2	40·3	67·3	73·5	64·0	+0·1	48·6	59·9	63·3	57·1
	Hill stations, excluding Kashmir and Baluchistan.																					
	Katmandu . .	4,388	25·636	25·570	·066	25·599	+·106	25·553	85·0	59·5	25·5	96·0	50·0	46·0	76·9	80·1	72·4	+1·6	56·6	64·6	64·5	61·9
	Kodaikanal . .	7,688	22·839	22·775	·064	22·807		22·742	69·2	53·7	15·5	72·4	51·8	20·6	65·9	62·5	61·5		51·2	58·1	58·4	55·9
	Extra India.																					
	Seychelles . .	15	29·962	29·879	·083	29·922	−·019*	29·859	85·3	80·2	5·1	87·1	76·8	10·3	83·2	84·5	81·4	+1·9*	72·9	78·0	78·5	76·5
	Mauritius . .	181				29·894	0	29·962	79·2	65·3	13·9	82·4	56·1	26·3			71·8	−0·3				

Note.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.
* Departure from old normal.

A.

at 13 stations in India, etc., in May, 1919.

Vapour tension in inches of mercury.					Humidity.					Cloud.				Wind direction.											Wind steadiness.		Wind velocity.		Rainfall.		Station.	Number of sub-division.
														Total number of 10 hrs. and 16 hrs. winds from																		
From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns.	Departure from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																															III.—Bengal.	
·842	·916	·865	·883	0	88	67	59	74	− 1	3·5	3·8	3·7	−0·6	1	0	2	3	10	13	28	3	2	S 19° W	S 9° W	63	67	111	123	4·18	2·79	Calcutta . .	5
																															VI.—Punjab.	
·505	·495	·465	·500	+·046	61	33	25	41	+ 5	1·7	2·2	1·9	−0·3	11	1	3	3	13	2	0	6	23	N 44° W	N 12° E	18	18	46	56	0·68	0·33	Lahore . .	11
																															IX.—Rajputana.	
·435	·425	·346	·409	−·039	47	23	19	33	− 2	1·8	4·2	3·0	+0·7	4	4	5	4	4	3	5	15	18	N 62° W	N 72° W	37	48	97	110	1·32	0·60	Jaipur . .	18
																															X.—Bombay.	
·802	·879	·891	·870	−·019	75	70	68	74	− 2	3·2	2·1	2·7	+0·1	0	0	0	0	0	4	10	34	14	S 88° W	N 83° W	82	71	134	177	0	0	Bombay . .	25
																															XIV.—Mysore.	
·600	·647	·545	611	+·006	85	60	48	66	+ 3	5·3	7·0	6·1		3	5	1	6	4	0	9	28	6	N 88° W	S 51° W	47	66	133	110	8·31	1·66	Bangalore . .	29
																															XV.—Madras.	
	·873	·892				75	76			8·5	9·0	8·8	+2·7	3	8	2	1	0	0	1	33	34	N 47° W	N 63° W	77	78	109	124	8·65	2·07	Trivandrum .	31
	·701	·636				49	38			3·7	6·3	5·0		8	2	0	2	6	12	8	12	12	S 60° W		37		110		2·14	1·22	Pudukkottai .	
·825	·797	·882	·852	−·044	79	50	59	65	− 5	3·2	4·0	3·6	−0·1	0	0	1	5	23	10	19	10	1	S 12° E	S 9° E	55	66	1 14	159	0·03	0·02	Madras.	
																															Kashmir.	
·315	·430	·468	·405	−·037	83	65	58	69	− 9	2·0	6·0	4·0	0	14	7	7	1	10	5	2	5	11	N 10° W	N 30° E	12	6	59	75	1·59	0·46	Srinagar . .	14
																															Hill stations, excluding Kashmir and Baluchistan.	
·425	·469	·439	·435	−·055	63	52	44	60	− 8	4·6	5·3	4·9	−0·3	0	3	0	30	0	0	0	29	0	N 15° E	S 89° W	5	39	23	31	1·43	0·35	Katmandu.	
349	·491	·445	·365		85	64	79	76		5·0	8·1	6·5		2	22	10	6	3	1	1	5	12	N 2° E		56		158		7·02	1·92	Kodaikanal.	
																															Extra India.	
·713	·890	·897	·846	0	69	79	76	77	− 3	5·8	5·6	5·7	+0·6*	1	3	1	0	36	11	2	1	7	S 33° E	S 43° E	56	59	155	120	13·42	4·44	Seychelles.	
			·597	−·024				75	− 3			5·3	+0·7										S 58° E	S 63° E			117	130	0·96	0·70	Mauritius.	

* Departure from old normal.

Table B.—Abstract of observations taken at 8 hrs. at 212 stations in India, etc., in May, 1919.

(1) Provincial means.

(2) Data of stations.

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(1) Provincial means based on the material in Table B (2) except that the statement of rainfall depends on the complete data of about 2,300 stations.

Division.	Pressure departure from normal.	Temperature of air.							Wind.		Hygrometry.				Cloud.		Rainfall.		
		Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Departure of velocity from normal.	Departure of steadiness from normal.	Mean humidity.	Departure from normal.	Mean vapour tension.	Departure from normal.	Mean cloud amount.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.
	"	°	°	°	°	°	°	°					"	"			"	"	"
Burma	+·001	94·4	+2·1	76·9	+0·8	85·6	+1·5	17·5	+0·4	−3	76	−4	·845	−·014	6·0	+0·3	5·34	8·66	−3·32
Assam	+·024	88·9	+1·7	72·1	+0·2	80·5	+0·9	16·8	−0·4	+14	82	−5	·789	−·016	4·9	−1·1	9·37	12·64	−3·27
Bengal	+·030	93·9	+1·3	76·2	−0·1	85·1	+0·6	17·7	−1·1	−9	78	−3	·877	−·019	4·2	−0·6	5·18	8·55	−3·37
Bihar and Orissa	+·042	100·0	−0·7	77·2	−0·6	88·6	−0·6	22·8	−0·4	−6	63	−2	·744	−·026	2·9	−0·1	2·26	2·42	−0·16
United Provinces of Agra and Oudh	+·041	104·4	−0·5	78·4	−0·2	91·4	−0·4	26·1	−0·3	0	41	−5	·531	−·063	2·1	+0·4	0·57	0·66	−0·09
Punjab	+·045	101·8	−2·8	74·8	−1·2	88·3	−2·0	27·0	−0·1	+4	42	+3	·498	+·011	1·6	+0·2	0·66	0·55	+0·11
North-West Frontier Province	+·027	100·7	−0·2	71·9	−0·3	86·3	−0·3	28·9	−1·1	+4	53	+8	·571	+·027	1·7	+0·1	1·43	0·78	+0·65
Sind	+·016	101·9	−0·7	80·7	+1·5	91·3	+0·4	21·2	−1·6	+3	64	+0	·809	+·032	1·3	−0·3	0·08	0·13	−0·05
Rajputana	+·027	105·3	−1·3	80·6	−0·3	92·9	−1·1	24·7	−1·0	−23	36	−3	·474	−·036	2·0	+0·3	0·48	0·36	+0·12
Bombay	+·003	98·6	+0·1	77·3	+0·3	87·9	+0·4	21·4	−2·2	−5	65	+1	·754	+·014	3·0	+0·2	1·18	0·92	+0·26
Central India	+·025	104·4	−0·5	78·4	+0·1	91·5	−0·2	26·0	−1·3	−13	39	−2	·523	−·021	1·8	+0·1	0·54	0·28	+0·26
Central Provinces	+·024	104·3	−1·4	73·3	−1·3	91·3	−1·3	26·0	−0·6	−11	41	+2	·519	−·001	2·2	+0·3	0·91	0·50	+0·41
Hyderabad	+·021	104·3	−0·2	79·2	−0·3	91·8	−0·2	25·1	−1·6	−13	49	0	·607	+·023	3·2	+0·5	0·94	0·75	+0·19
Mysore	+·006	91·9	+0·4	70·0	+0·7	81·0	+0·5	21·9	+0·1	−2	75	+1	·671	+·005	5·3	+0·2	3·89	3·57	+0·32
Madras	+·009	97·0	−0·3	79·6	+0·1	88·3	−0·1	17·5	−0·3	−3	70	0	·853	+·002	4·5	+0·1	4·03	3·17	+0·86

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	I.—Burma.																					
2	Victoria Point	147	29·726		29·804	29·790	26th	29·631	30th	80·7	77·2	85·7		76·3		81·0		9·4	89·2	1st	73·7	20th
	Mergui	66	29·813	—·006	29·808	29·888	25th	29·680	30th	80·4	77·9	89·7	+0·7	75·8	+1·5	82·8	+1·1	13·9	96·3	2nd	73·3	9th
	Tavoy	19	29·844	—·027	29·876	29·935	25th	29·717	30th	81·7	78·2	91·1	+2·6	76·8	+1·4	83·9	+2·0	14·3	97·9	3rd	74·1	5th & 9th
	Moulmein	94	29·784	+·001	29·799	29·894	25th	29·659	30th	80·6	77·2	89·3	+0·1	76·5	+0·7	82·9	+0·4	12·8	98·0	4th	71·5	4th
	Rangoon	18	29·829	+·005	29·784	29·942	25th	29·699	20th	82·4	78·3	94·0	+2·3	77·9	+0·6	86·0	+1·5	16·1	101·5	2nd	74·1	4th & 22nd.
	Bassein	27	29·814	+·003	29·777	29·933	5th	29·689	20th	84·0	78·1	96·0	+4·4?	78·1	+0·8	87·0	+2·6?	17·9	102·7	4th	73·0	5th
	Diamond Island	41	29·778	—·020	29·753	29·869	5th	29·670	20th	85·8	79·0	90·1	+1·6	81·6	+2·7	85·8	+2·1	8·5	92·8	16th	75·8	24th
	Toungoo	164	29·663	+·006	29·774	29·777	25th	29·516	19th	84·2	79·8	96·9	+1·1	77·7	+1·1	87·3	+1·1	19·2	106·1	2nd	70·1	5th
	Kyaukpyu	18	29·802		29·759	29·951	4th	29·679	10th	84·7	79·1	91·6		80·4		86·0		11·2	95·4	25th	70·6	5th
	Akyab	20	29·795	+·005	29·755	29·959	4th	29·666	20th	84·5	79·0	93·2	+2·4	77·2	—0·9	85·2	+0·7	16·0	96·6	30th	66·4	4th
3	Minbu	*165*	29·615	—·007?	29·721	29·753	4th	29·419	20th	86·5	76·5	102·4	+3·4	80·5	+1·9	91·3	+2·7	21·6	107·1	17th	70·6	4th
	Yamethin	644	29·167	+·006	29·753	29·280	4th	29·053	20th	82·6	77·1	99·8	+3·2	78·8	+2·2	89·3	+2·7	21·0	105·2	16th	69·2	5th
	Mandalay	250	29·556	+·010	29·749	29·686	6th	29·338	19th	86·9	76·6	104·6	+5·0	80·4	+1·3	92·5	+3·1	24·2	110·7	2nd	73·5	21st
	Monywa	*280*	29·529	+·009	29·754	29·666	6th	29·408	19th	85·3	75·5	103·5	+2·4	80·4	+1·6	91·9	+2·5	23·1	108·6	2nd	70·1	6th
	Lashio	*2,820*	27·051	+·003	26·997	27·178	4th	26·935	20th	73·3	69·1	87·5	—0·1	66·8	0	77·1	—0·1	20·7	94·1	2nd	58·4	1st
	Bhamo	*361*	29·431	+·017	29·745	29·569	3rd	29·300	19th	79·0	73·5	95·0	+2·3	70·4	—1·9	83·2	+0·2	25·6	100·6	8th & 18th.	65·4	4th
	Myitkyina	458	29·317	+·007	29·750	29·505	3rd	29·135	19th	76·7	71·5	95·7	+1·8	71·7	—0·8	82·7	+0·5	22·0	99·2	16th	65·6	1st
	II.—Assam.																					
4	Dibrugarh	353	29·462	+·007	29·779	29·638	2nd	29·313	19th	77·0	73·7	86·0	+1·6	71·1	+0·6	78·6	+1·1	14·9	95·6	22nd	64·5	1st
	Sibsagar	333	29·494	+·025	29·788	29·653	2nd	29·345	19th	76·5	72·6	86·5	+1·0	71·7	+0·2	79·1	+0·6	14·8	95·4	22nd	63·2	6th
	Tezpur	252	29·587	+·042?	29·805?	29·747	4th	29·434	19th	76·3	72·4	88·9	+2·3	72·1	—0·1	80·5	+1·1	16·8	96·0	18th	61·1	1st
	Gauhati	196	29·627	+·022	29·781	29·719	4th	29·492	19th	78·0	73·4	88·6	+0·8	72·0	+0·1	80·3	+0·5	16·6	95·8	21st	65·2	6th
	Dhubri	115	29·691	+·036	29·761	29·832	5th	29·539	20th	78·3	74·1	87·9	+1·6	73·3	+0·4	80·6	+1·0	14·6	93·5	19th & 21st.	69·3	4th & 5th
	Silchar	104	29·732	+·032	29·789	29·851	5th	29·610	20th	79·4	75·5	90·7	+1·9	72·4	—0·2	81·6	+0·9	18·3	96·1	27th	63·6	1st
	Srimangal	66	29·754		29·770	29·870	4th	29·622	20th	81·0	76·4	93·8	+2·5	72·3	+0·1	83·1	+1·3	21·5	99·7	23rd	65·6	2nd
	III.—Bengal.																					
5	Cox's Bazar	36	29·772		29·753	29·930	4th	29·612	30th	84·7	79·2	91·6		76·8		84·2		14·8	94·7	30th	70·5	4th
	Chittagong	37	29·721	+·018	29·753	29·836	4th	29·609	20th	84·4	78·4	93·0	+4·2	76·4	+1·0	84·7	+2·6	16·6	96·2	31st	66·2	3rd
	Noakhali	43	29·765	+·032	29·785	29·883	4th	29·626	30th	84·7	79·4	91·6	+2·7	76·2	+2·5?	84·9	+2·6?	13·4	95·0	21st	69·6	2nd
	Barisal	12	29·732	+·032	29·741	29·903	5th	29·609	30th	85·2	79·6	92·5	+0·8	77·5	+0·8	85·0	+0·8	15·0	96·4	21st	69·6	5th
	Narayanganj	26	29·767	+·028	29·742	29·914	4th	29·632	30th	83·0	78·0	92·0	+0·9	76·2	+0·4	84·1	+0·7	15·8	95·9	21st & 30th.	69·2	13th
	Mymensingh	63	29·743	+·034	29·757	29·876	5th	29·612	20th	80·7	75·4	92·5	+3·6	74·3	+0·2	83·4	+1·9	18·2	96·9	19th	68·1	5th
	Bogra	75	29·712	+·032	29·738	29·839	5th	29·559	20th	81·8	76·2	96·7	+4·3	74·6	+0·4	85·7	+2·3	22·1	104·6	29th	68·8	5th
	Dinajpur	123	29·659	+·036	29·727	29·822	5th	29·416	20th	80·7	74·7	93·8	+1·9	74·3	+0·6	84·0	+1·3	19·5	101·3	28th	69·0	5th
	Jalpaiguri	183	29·526	+·043?	29·768	29·669	5th	29·374	20th	78·4	73·6	91·9	+3·0	71·4	—1·0	81·7	+1·0	20·5	96·6	21st	67·0	2nd
	Saugor Island	19	29·756	+·032	29·711	29·888	5th	29·613	20th	85·8	80·5	90·7	—1·1	80·2	—0·7	85·4	—0·9	10·5	93·1	25th & 26th.	69·7	4th
	Midnapore	140	29·695	+·024	29·692	29·742	5th	29·438	30th	83·1	77·3	97·4	—2·5	77·0	—1·3	87·2	—1·9	20·4	106·0	30th & 31st.	68·3	5th
	Calcutta	21	29·744	+·033	29·712	29·891	5th	29·602	20th	83·3	78·8	95·8	+1·3	77·9	+0·4	86·9	+0·9	17·9	104·6	22nd	68·4	5th

N. B.—Elevations in italics indicate barometrical determinations.

B.

at 212 stations in India, etc., in May, 1919.

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May, 1919, to 31st May, 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	25	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															I.—Burma.
11	0	3	6	2	5	4	0	0	S 43° E		5·5			33		85		·886		8·0		20	+1·2	18·02	16·36	+ 1·66	18·02	16·36	+ 1·66	3·80	Victoria Point.
10	0	0	8	9	2	1	0	1	S 57° E	S 81° W	4·1	1·4	+2·7	49	+26	89	+ 1	·921	+·014	6·8	+1·5	13	—4·6	14·28	17·49	— 3·21	14·28	17·49	— 3·21	3·15	Mergui.
22	1	1	1	3	2	0	0	1	S 61° E	S 61° W	1·9	1·[illegible]	+0·7	10	+ 1	85	— 3	·912	+·020	7·6	+2·3	20	+1·5	13·62	23·78	—10·16	13·62	23·78	—10·16	3·30	Tavoy.
4	3	3	5	3	9	2	1	1	S 43° E	S 47° E	8·2	2·5	+5·7	30	— 6	86	— 1	·838	—·005	8·2	+0·9	18	+0·2	23·11	20·69	+ 2·42	23·11	20·69	+ 2·42	7·05	Moulmein
3	2	5	3	3	5	5	4	1	S 6° E	S 39° W	4·0	3·4	+0·6	14	—40	83	— 3	·913	0	8·5	+1·7	8	—5·7	4·92	12·21	— 7·29	4·92	12·21	— 7·29	1·08	Rangoon.
7	0	1	3	0	[illegible]	4	4	12	N 61° W	S 51° W	5·6	3·[illegible]	+0·1	43	+14	80	— 5	·931	0	5·8	+0·3	7	—4·4	2·28	9·97	— 7·69	2·28	9·97	— 7·69	0·68	Bassein.
0	4	4	1	5	1	2	5	9	N 37° W	S 61° W	6·9	5·7	+1·2	30	—10	73	— 6	·899	—·014	5·7	—0·5	7	—3·8	7·12	10·78	— 3·66	7·72	10·78	— 3·06	2·81	Diamond Island.
1	2	1	0	15	11	1	0	0	S 29° E	S 28° E	3·1	3·4	—0·3	72	+ 4	82	+ 1	·953	+·026	7·6	+1·1	9	—1·3	10·04	7·44	+ 2·60	10·04	7·44	+ 2·60	3·71	Toungoo.
30	0	0	1	0	0	0	0	0	E		1·3			3		77		·921		5·0		5	—7·5	2·90	15·03	—12·13	2·90	15·03	—12·13	1·18	Kyaukpyu.
5	5	11	4	2	0	1	0	3	N 39° E	N 81° E	3·3	2·6	+0·7	53	+ 3	77	— 7	·918	—·038	5·4	—0·7	3	—7·6	3·66	13·21	— 9·55	3·66	13·21	— 9·55	2·21	Akyab.
1	0	0	2	0	3	1	1	3	S 38° E	S 38° E	3·4	7·5	—4·1	66	— 5	62	—10	·782	—·039	3·0	—1·5	2	—5·0	1·87	5·36	— 3·49	1·87	5·36	— 3·49	1·10	Minbu.
										S 28° E		5·9				70	— 5	·828	+ ·004	3·2	—1·0	3	—5·7	4·73	5·93	— 1·20	4·73	5·93	— 1·20	3·75	Yamethin.
13	0	0	0	3	12	3	0	0	S	S 4° E	3·7	5·4	—1·7	52	— 9	57	—12	·759	—·072	5·2	+1·3	7	—5·9	4·41	5·85	— 1·44	4·41	5·85	— 1·44	1·95	Mandalay.
1	5	2	7	9	1	1	2	3	N 87° E		2·2			33		62	— 7	750	—·047	5·3	+0·5	2	—5·0	4·77	5·43	— 0·66	4·77	5·43	— 0·66	3·60	Monywa.
5	3	11	3	2	0	3	2	2	N 38° E		2·2			37		79	— 2	·657	0	4·5	—2·3	6	—5·9	4·41	6·69	— 2·28	4·41	6·69	— 2·28	1·60	Lashio.
29	1	1	0	0	0	0	0	0	N 25° E	N 53° W	1·5	2·[illegible]	—0·[illegible]	7	—13	76	— 4	·751	—·026	6·2	+0·6	6	—4·2	3·[illegible]0	6·29	— 3·09	3·20	6·29	— 3·09	1·38	Bhamo.
25	2	3	1	0	0	0	0	0	N 37° E		3·3			17		77	— 1	701	—·048	6·1	—0·1	9	—0·4	2·45	6·47	— 4·02	2·45	6·47	— 4·02	0·39	Myitkyina.
																															II.—Assam.
23	0	3	4	0	0	0	0	1	N 62° E		0·8			20		86	— 3	·793	+·018	4·7	—1·8	14	—1·4	14·25	10·89	+ 3·36	14·25	10·89	+ 3·36	3·73	Dibrugarh.
14	3	10	1	0	3	0	0	0	N 49° E	N 60° E	1·6	2·1	—0·5	33	0	84	— 7	755	—·036	6·8	—1·1	11	—4·8	9·37	12·11	— 2·74	9·37	12·11	— 2·74	1·77	Sibsagar.
14	0	7	6	0	0	1	1	2	N 54° E		2·1			33		83	— 4	·714	—·034	5·4	—0·8	12	—3·4	8·44	9·18	— 0·74	8·44	9·18	— 0·74	1·82	Tezpur.
22	1	2	3	1	0	0	1	1	N 51° E		1·6			10		80	— 6	·761	—·023	2·3	—4·39	11	—3·2	5·00	10·06	— 5·06	5·00	10·06	— 5·06	1·06	Gauhati.
2	0	10	15	4	0	0	0	0	N 80° E	N 67° E	6·3	5·2	+1·1	82	+28	81	— 6	·788	—·013	5·8	—0·4	14	—1·5	9·32	15·28	— 5·96	9·32	15·28	— 5·96	1·43	Dhubri.
31	0	0	0	0	0	0	0	0	Calm	N 84° E	0·4	2·3	—1·9	(a)		83	— 2	·831	+·002	5·1	—1·4	19	+2·6	10·03	16·22	— 6·19	10·03	16·22	— 6·19	1·48	Silchar.
																80	— 5	·855	—·008	3·9		11	—4·3	8·94	16·89	— 7·95	8·94	16·89	— 7·95	3·25	Srimangal.
																															III.—Bengal.
13	0	4	2	6	4	1	0	1	S 54° E		3·1			30		78		·925		3·3		4	—7·6	1·49	13·24	—11·75	1·49	13·24	—11·75	0·80	Cox's Bazar.
4	0	5	11	6	5	0	0	0	S 73° E	S 50° E	3·5	4·7	—1·2	66	+ 1	79	— 2	910	+·020	4·5	—0·9	3	—8·1	1·14	9·93	— 8·79	1·14	9·93	— 8·79	0·56	Chittagong.
7	0	2	1	9	6	5	1	0	S 15° E		2·7			52		78	— 5	·931	+·013	3·6	—0·7	5	—6·0	2·18	11·97	— 9·79	2·18	11·97	— 9·79	0·95	Noakhali.
2	0	2	2	7	10	6	1	1	S 8° E	S 9° E	3·1	3·7	—0·6	56	+ 6	77	— 5	·933	—·025	5·9	+0·5	6	—4·0	2·42	9·39	— 6·97	2·42	9·39	— 6·97	0·74	Barisal.
14	0	0	3	4	7	2	1	0	S 17° E	S 28° E	2·1	4·9	—2·8	37	—17	80	— 4	905	—·015	3·5	—2·5	10	—1·3	6·25	9·61	— 3·36	6·25	9·61	— 3·36	1·75	Narayanganj.
10	0	4	11	3	1	1	0	1	S 89° E	S 81° E	2·3	3·0	—0·7	47	—21	78	— 6	·817	—·022	4·5	—1·6	13	—0·7	8·79	13·41	— 4·62	8·79	13·41	— 4·62	2·30	Mymensingh.
13	1	3	11	1	1	1	0	0	N 87° E	S 72° E	1·7	3·2	—1·5	43	—17	77	— 4	·834	+·003	5·6	+1·2	5	—5·2	3·18	8·30	— 5·12	3·18	8·30	— 5·12	0·62	Bogra.
0	1	8	17	3	2	0	0	0	N 84° E	N 88° E	3·5	3·4	+0·1	82	+10	75	— 4	·783	—·016	2·8	—3·18	9	—0·2	4·69	7·87	— 3·18	4·69	7·87	— 3·18	1·50	Dinajpur.
22	0	3	8	0	2	0	0	1	N 80° E	N 88° E	1·3			13	—19	79	— 4	·771	—·019	3·2	—1·1	8	—4·7	5·25	11·31	— 6·06	5·25	11·31	— 6·06	1·33	Jalpaiguri.
0	1	2	1	0	13	12	1	1	S 23° W	S 5° W	10·3			66	— 9	78	— 3	·964	—·036	4·4	—1·3	6	+0·1	3·69	4·52	— 0·92	3·60	4·52	— 0·92	1·04	Saugor Island.
16	0	1	0	6	6	2	0	0	S 15° E		3·6			36		72	— 1	·851	—·034	3·6	+1·3	10	+2·6	8·76	5·29	+ 3·47	8·76	5·29	+ 3·47	1·67	Midnapore.
0	0	1	2	4	6	15	0	3	S 23° W	S 6° W	4·5	5·1	—0·6	62	— 6	81	+ 2	·930	—·007	4·1	—0·6	7	—0·3	1·18	5·79	— 1·61	1·18	5·79	— 1·61	2·79	Calcutta.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal—*concld.*																					
	Jessore	30	29·752	+·011	29·728	29·892	5th & 6th.	29·603	20th	83·9	77·9	95·1	+0·6	76·2	−0·4	85·6	+0·1	18·9	100·7	22nd	68·8	6th
	Burdwan	99	29·642	+·019	29·688	29·813	5th	29·469	30th	81·2	76·6	96·9	−0·9	76·5	−1·0	86·7	−0·9	20·4	105·6	23rd	67·6	4th
	Berhampore	67	29·697	+·035	29·712	29·858	5th	29·513	30th	82·5	77·1	97·4	+0·8	76·2	−0·2	86·8	+0·3	21·2	106·6	23rd	66·2	24th
	IV.—Bihar and Orissa.																					
6	Balasore	50	29·720	+·045	29·714	29·858	5th	29·582	30th	83·7	78·0	95·1	−2·1	76·3	−2·3	85·7	−2·2	18·8	103·7	31st	68·0	6th
	Hukitala (False Point)	29	29·759	+·049	29·729	29·881	5th	29·650	30th													
	Cuttack	80	29·699	+·049	29·720	29·815	7th	29·588	30th	85·7	80·0	102·0	+0·5	80·0	0	90·9	+0·3	22·0	107·9	31st	70·1	6th
	Puri	34	29·762	+·045	29·727	29·877	7th	29·649	21st	85·4	81·0	90·9	+1·0	81·9	+1·0	86·4	+1·0	9·0	94·1	25th	70·0	5th
	Angul	455	29·305	+·040	29·700	29·434	7th	29·176	30th	84·7	77·3*	102·8*	−1·6	78·0†	−0·5	90·2†	−1·1	24·8	109·4	21st	69·0	6th
	Sambalpur	486	29·274	+·044	29·701	29·425	7th	29·153	30th	88·1	74·3	104·3	−2·3	79·6	−1·6	91·9	−1·9	24·7	110·2	22nd	70·9	6th
7	Chaibasa	*733*	29·007	+·036	29·685	29·146	3rd	28·869	30th	83·3	74·6	102·3	−1·6	77·1	−0·8	89·7	−1·2	25·2	112·2	31st	68·0	6th
	Ranchi	2,126	27·642	+·035	29·660	27·747	5th	27·509	30th	82·0	69·3	95·9	−3·3	73·9	−1·6	84·9	−2·5	22·0	107·1	31st	63·4	5th
	Purulia	*816*	28·937	+·041	29·694	29·092	5th	28·783	30th	84·3	73·6	101·0	−1·1	73·6	−3·7P	87·3	−2·4P	27·4	112·6	31st	61·3	6th
	Daltonganj	*730*	29·008	+·041	29·675	29·142	7th	28·837	30th	89·0	72·2	104·5	−2·4	76·5	−2·7	90·5	−2·5	28·0	116·1	31st	66·6	5th
8	Purnea	124	29·642	+·029	29·721	29·823	5th	29·465	28th	81·6	75·1	96·4	+1·4	74·4	+0·2	85·4	+0·8	22·0	103·3	29th	67·0	5th
	Monghyr	155	29·579		29·686	29·755	5th	29·403	30th	83·8	75·6	100·1		76·2		88·2		23·9	108·9	25th	66·4	5th
	Darbhanga	165	29·536	+·045	29·716	29·773	5th	29·414	30th	81·8	73·9	95·9	+0·1	74·8	−1·2	85·4	−0·5	21·1	104·7	28th	66·3	4th
	Pusa	188	29·562		29·701	29·733	4th & 5th.	29·383	30th	83·8	75·3	100·9		74·8		87·8		26·1	111·0	28th	65·3	4th
	Patna	183	29·561	+·049	29·698	29·738	5th	29·321	30th	85·7	73·6	100·6	+0·4	78·1	+0·4	89·5	+0·4	22·5	109·9	30th	68·3	5th
	Buxar‡	239	29·478	+·035	29·668	29·630	4th	29·291	30th	84·2	72·7	103·7	+0·7	78·9	−0·3	91·3	+0·2	24·8	112·2	30th	67·6	4th
	Gaya	372	29·361	+·051	29·582	29·512	4th	29·186	30th	87·7	72·5	103·8	−0·9	80·2	+0·5	92·0	−0·2	23·6	112·9	30th	71·2	5th
	Naya Dumka	489	29·259	+·037	29·496	29·416	5th	29·069	30th	85·5	75·3	99·8	+1·0	77·3	+0·2	88·5	+0·6	22·5	111·6	30th	67·8	5th
	V.—United Provinces of Agra and Oudh.																					
9	Gorakhpur	257	29·479	+·042	29·692	29·664	5th	29·302	29th	84·5	72·6	102·2	+1·3	76·7	−0·2	89·5	+0·5	25·5	111·9	29th & 30th.	67·0	4th
	Benares	267	29·457	+·044	29·678	29·619	5th	29·275	30th	90·5	73·2	105·0	−0·3	79·2	+0·4	92·1	+0·1	25·8	113·8	31st	70·0	4th
	Allahabad	309	29·425	+·057	29·683	29·585	4th	29·234	30th	90·5	73·2	106·5	−0·4	80·7	+1·1	93·6	+0·3	25·8	114·8	31st	69·5	4th
	Cawnpore	416	29·307	+·053	29·673	29·471	6th	29·134	30th	87·6	70·5	105·1	−0·7	79·5	+0·4	92·3	−0·1	25·6	114·8	31st	69·5	4th
	Lucknow	368	29·355	+·046	29·672	29·516	6th	29·180	30th	91·7	71·7	106·4	+1·3	79·1	+1·5	92·8	+1·4	27·3	114·9	31st	67·4	4th
	Bahraich	407	29·311	+·034	29·673	29·500	5th	29·140	28th	85·4	73·8	102·0	−0·6	76·5	−0·5	89·3	−0·5	25·5	112·1	30th	65·4	4th
10	Jhansi	824	28·903	+·020	29·667	29·007	3rd	28·768	30th	91·3	69·3	107·2	−1·2	81·4	−3·0	94·3	−2·1	25·8	116·4	31st	72·8	7th
	Agra	556	29·158	+·034	29·659	29·298	6th	29·000	30th	90·5	70·3	105·6	−1·1	81·0	−0·5	93·3	−0·8	24·6	116·8	31st	71·2	4th
	Mainpuri	516	29·166	+·030	29·652	29·373	6th	29·023	30th	88·2	70·1	105·8	−1·4	78·0	−0·7	91·9	−1·1	27·8	115·3	31st	66·2	4th
	Bareilly	568	29·148	+·046	29·670	29·349	6th	28·980	30th	86·1	69·6	102·2	−0·9	76·4	0	89·3	−0·5	25·8	112·3	31st	65·1	4th
	Roorkee	899	28·821	+·049	29·671	28·997	6th	28·682	30th	85·6	67·3	103·9	−1·6	73·6	−0·6	87·2	−1·1	27·3	111·0	31st	62·7	4th
	VI.—Punjab.																					
11	Delhi	718	29·011	+·053	29·686	29·164	6th	28·841	30th	84·5	68·0	101·3	−3·2	79·5	−0·9	90·4	−2·1	21·8	111·2	31st	67·6	4th
	Hissar	725	28·995	+·066	29·671	29·121	9th	28·848	30th	88·3	70·2	104·6	−3·2	75·5	−1·9	90·0	−2·1	29·1	113·4	31st	63·8	9th

N. B.—Elevations in italics indicate barometrical determinations.

* Mean of 30 days.
† " " 26 "
‡ " " 27 "

B—*continued.*

at 212 stations in India, etc., in May, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st May 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															III.—Bengal—*concld*
18	0	0	1	0	6	5	1	0	S 21° W	S 16° E	2·3	3·4	−1·1	30	−24	76	− 7	·879	−·073	4·6	−0·9	6	− 3·7	4·02	8·40	− 4·38	4·02	8·40	− 4·78	0·33	Jessore.
17	0	1	0	3	3	6	1	0	S 16° W	S 11° W	2·0	3·4	−1·4	30	−24	80	+ 3	·857	−·131	4·9	−0·3	7	− 0·3	6·36	6·37	− 0·01	6·36	6·37	− 0·01	1·70	Burdwan.
5	0	2	6	6	16	2	0	0	S 35° E	S 37° E	2·8	3·7	−0·9	56	+ 6	78	− 3	·861	−·019	4·9	−0·4	10	+ 2·4	5·05	5·55	− 0·50	5·05	5·55	− 0·50	1·25	Berhampore.
																															IV.—Bihar and Orissa.
1	1	0	1	0	13	12	0	3	S 27° W	S 29° W	4·2	6·4	−2·2	66	− 9	77	+ 2	·885	−·037	3·4	+0·1	9	+ 2·7	5·63	4·85	+ 0·78	5·63	4·85	+ 0·78	1·33	Balasore.
1	1	0	1	1	13	12	1	1	S 22° W		10·5			69	− 6					4·4	−1·7	5	+ 0·7	2·05	4·42	− 2·37	2·05	4·42	− 2·37	1·02	Hukitola (False Point).
13	0	2	0	0	5	8	3	0	S 38° W	S 46° W	2·8	3·7	−0·9	37	− 3	77	+ 4	·951	+·040	3·8	−0·7	5	− 0·7	2·71	4·08	− 1·37	2·71	4·08	− 1·37	0·86	Cuttack.
3	1	1	0	0	6	15	4	1	S 47° W		12·7			65		82	− 3	1·104	−·018	3·6	−0·7	3	− 0·2	3·54	2·76	+ 0·78	3·54	2·76	+ 0·78	1·63	Puri.
13	0	3	2	8	4	1	0	0	S 48° E		5·4			39		70*	+ 3	·840*	+·015	5·1	+3·1P	5	+ 0·3	1·29	2·07	− 0·78	1·29	2·07	− 0·78	0·59	Angul.
0	5	7	2	1	3	9	1	3	N 41° W	S 7° E	3·5	3·1	+0·4	10	−32	51	+ 1	·635	−·041	3·8	+0·8	3	+ 0·5	1·22	1·32	− 0·10	1·22	1·32	− 0·10	0·84	Sambalpur.
17	0	0	1	0	0	13	0	0	S 42° W	S 58° W	2·6	2·0	+0·6	40	− 7	66	+ 2	·741	−·008	3·3	+1·0	8	+ 2·5	3·78	3·26	+ 0·52	3·78	3·26	+ 0·52	1·15	Chaibasa.
2	3	2	3	3	0	4	11	3	N 80° W	S 43° W	3·9	5·7	−1·8	30	−17	55	+ 4	·594	−·016	3·0	+0·7	6	+ 1·3	1·31	2·33	− 1·02	1·31	2·33	− 1·02	0·28	Ranchi.
6	0	1	5	1	10	0	8	0	S 11° W		2·4			32		60	− 6	·583	− ·063	2·9	+0·5	7	+ 1·7	4·74	2·96	+ 1·78	4·74	2·96	+ 1·78	1·30	Purulia.
24	0	0	2	2	0	3	0	0	S 18° E		3·4†			10		43	− 5	·536	−·048	1·4	−0·1	5	+ 3·7	1·43	0·57	+ 0·86	1·43	0·57	+ 0·86	0·35	Daltonganj.
0	0	4	25	2	0	0	0	0	N 87° E	N 82° E	3·6	3·3	+0·3	96	+21	73	− 4	·768	−·023	4·5	+0·8	5	− 0·7	3·67	4·45	− 0·78	3·67	4·45	− 0·78	1·13	Purnea.
0	0	5	1*	9	1	1	3	0	S 74° E		5·6			58		68		·778		2·0		4	+ 0·6	3·1	1·85	+ 1·46	3·3	1·85	+ 1·43	1·02	Monghyr.
3	2	1	25	0	0	0	0	0	N 84° E	S 79° E	4·6	4·5	+0·1	86	+10	68		·738	−·057	1·8	−0·5	6	+ 1·9	2·01	2·93	− 0·92	2·01	2·93	− 0·92	0·30	Darbhanga.
2	1	7	18	3	0	0	0	0	N 81° E		3·4			81		66		·764		2·1		2	− 1·1	0·8	1·92	− 1·24	0·68	1·92	− 1·24	0·55	Pusa.
1	0	0	24	2	0	2	1	1	S 85° E	N 87° E	4·7	4·2	+0·5	72	+ 4	56	− 8	·686	−·066	1·7	−0·3	1	− 2·0	0·61	1·65	− 1·04	0·61	1·65	− 1·04	0·59	Patna.
3	0	2	10	5	0	3	3	1	S 72° E		3·4‡			33		57	+ 5P	·649	+·013P	2·3	+0·5	2	+ 0·5	0·69	0·68	+ 0·01	0·69	0·68	+ 0·01	0·38	Buxar.
4	3	7	2	2	2	10	1	0	S 8° E	S 78° W	3·3	3·9	−0·6	8	−20	47	−11	·598	−·174P	1·4	−1·1	1	− 0·8	1·34	1·07	+ 0·27	1·34	1·07	+ 0·27	1·22	Gaya.
23	0	0	2	3	1	1	0	1	S 41° E		2·3			13		63	− 4	·743	−·023	2·5	−0·5	6	+ 1·0	2·31	3·48	− 1·17	2·31	3·48	− 1·17	0·85	Naya Dumka.
																															V.—United Provinces of Agra and Oudh.
8	0	1	14	0	0	0	8	0	N 84° E	N 76° E	3·5	2·6	+0·9	23	−20	55	− 8	·612	−·086	1·1	−0·9	1	− 1·8	0·15	1·50	− 1·35	0·15	1·50	− 1·35	0·15	Gorakhpur.
6	1	2	3	5	0	7	3	4	S 41° W	N 72° E	2·8	3·7	−0·9	13	+ 1	42	−10	·584	−·089	2·3	+0·7	0	− 1·1	0	0·55	− 0·55	0	0·55	− 0·55	0	Benares.
12	0	2	3	2	1	1	8	2	S 86° W	N 2° E	3·1	5·0	−1·9	14	+ 5	43	+ 1	·596	+·023	2·3	+0·6	0	− 0·9	0·10	0·31	− 0·21	0·10	0·31	− 0·21	0·08	Allahabad.
3	1	2	2	5	3	5	6	4	S 48° W	S 56° W	2·5	3·6	−1·1	27	+12	41	+ 2	·515	−·078	1·7	+0·5	1	0	0·52	0·37	+ 0·15	0·52	0·37	+ 0·15	0·30	Cawnpore.
17	0	3	7	0	0	1	3	0	N 75° E	N 72° E	1·8	2·9	−1·1	17	+ 1	36	−10	·517	−·065	2·8	+1·0	0	− 1·6	0·14	0·99	− 0·85	0·14	0·99	− 0·85	0·09	Lucknow.
1	3	1	10	11	1	0	0	4	S 82° E	S 72° E	3·7	3·6	+0·1	53	+ 7	56	− 3	·677	−·036	2·5	+1·1	1	− 1·8	0·80	1·65	− 0·85	0·80	1·65	− 0·85	0·62	Bahraich.
6	0	2	2	3	1	10	5	2	S 47° W	N 70° W	5·1	3·4	+1·7	33	− 7	30	− 8	·422	−·139	1·3	+0·2	1	− 0·2	0·25	0·35	− 0·10	0·25	0·35	− 0·10	0·14	Jhansi.
7	2	1	4	4	2	6	4	1	S 14° W	S 49° W	3·6	4·5	−0·9	20	−19	34	− 4	·467	−·059	2·6	+1·4	1	− 0·3	0·21	0·47	− 0·26	0·21	0·47	− 0·26	0·16	Agra.
4	1	1	4	3	4	2	9	3	S 56° W	N 84° W	2·3	2·0	+0·3	27	+12	39	− 2	·495	−·049	1·6	−0·4	2	+ 0·9	0·35	0·49	− 0·14	0·35	0·49	− 0·14	0·15	Mainpuri.
3	0	4	8	3	3	1	6	3	S 77° E	S 73° E	2·4	3·1	−0·7	13	0	42	− 7	·499	−·107P	4·0	+2·5P	3	+ 1·3	1·32	0·75	+ 0·57	1·32	0·75	+ 0·57	0·73	Bareilly.
21	0	1	0	9	0	0	0	0	S 51° E	S 45° E	3·1	2·7	+0·4	30	+ 1	35	− 4	·423	−·048	0·9	−0·4	1	− 0·9	0·27	0·88	− 0·61	0·27	0·88	− 0·61	0·19	Roorkee.
																															VI.—Punjab.
4	4	1	2	7	0	2	4	7	N 40° W	S 73° W	3·7	3·2	+0·5	13	−12	41	+ 2	·464	−·030	1·0	−1·0	1	− 0·8	0·23	0·62	− 0·39	0·23	0·62	− 0·39	0·14	Delhi.
1	2	0	6	4	3	5	7	3	S 37° W	S 39° W	4·5‡	4·5	0	23	− 2	38	0	·495	−·009	1·8	−0·1	2	+ 0·6	0·64	0·55	+ 0·09	0·64	0·55	+ 0·09	0·26	Hissar.

* Mean of 30 days.
† " " 27 "
‡ " " 26 "

Table

(2). Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-ostern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2.	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	VI.—Punjab—*concld.*																					
	Patiala	*818*	28·875	+·022	29·648	29·028	7th	28·693	30th	85·5	75·3	101·0	−1·9	75·3	−1·2	88·2	−1·5	25·7	110·6	31st	62·4	1st
	Ambala	892	28·803	+·034	29·646	28·948	7th	28·611	30th	87·0	67·1	104·3	+0·2?	75·7	+0·1	90·0	+0·1?	28·6	114·6	31st	66·0	1st
	Ludhiana	812	28·837	+·047	29·657	29·041	7th	28·686	30th	84·6	67·4	102·6	−1·6	75·3	−0·4	88·8	−1·0	27·3	113·5	31st	68·4	9th
	Lahore	702	28·988	+·046	29·653	29·133	7th	28·816	29th	84·7	69·5	102·0	−3·4	74·1	+0·7	88·0	−1·3	27·9	111·8	30th	67·6	9th
	Sialkot	830	28·863	+·042	29·657	29·070	9th	28·705	30th	83·5	68·0	97·9	−5·3	71·9	−3·1	84·9	−4·2	26·0	107·7	30th & 31st.	63·5	10th
	Rawalpindi	1,674	28·061	+·042	29·667	28·197	7th	27·915	31st	84·1	66·1	97·1	−0·9	67·2	−1·3	82·2	−1·1	29·9	107·1	28th, 30th 31st.	59·5	10th
12	Khushab	612	29·091	+·051	29·666	29·249	8th & 9th.	28·920	29th	87·2	68·4	101·7	−2·7	74·2	−2·7	88·0	−2·7	27·5	111·2	31st	59·4	9th
	Lyallpur	605	29·078		29·647	29·219	7th	28·875	29th	84·4	69·8	101·6		73·7		87·7		27·9	110·5	29th	67·5	8th
	Montgomery	558	29·126	+·046	29·645	29·275	9th	28·937	29th	87·4	69·3	103·3	−3·9	75·3	−2·7	89·3	−3·3	28·0	111·4	29th	65·5	10th
	Multan	426	29·257	+·038	29·641	29·423	10th	29·066	29th	88·0	72·3	103·9	−3·0	79·7	+1·6	91·8	−0·7	24·2	112·8	30th	69·0	10th
	VII.—North-West Frontier Province.																					
14	Peshawar	1,113	28·618	+·024	29·701	28·784	7th	28·447	29th	79·0	66·9	99·3	+1·2	68·6	−1·3	83·9	−0·1	30·7	113·3	31st	62·9	19th
	Dera Ismail Khan	599	29·118	+·030	29·673	29·268	10th	28·937	28th	85·2	72·8	102·2	−1·6	75·2	+0·6	88·7	−0·5	27·0	112·6	30th	68·2	19th
	VIII.—Sind.																					
16	Jacobabad	186	29·497	+·031	29·639	29·641	6th	29·348	30th	91·4	75·2	111·0	−1·0	82·8	+4·5?	96·9	+1·7?	28·2	120·5	29th	76·2	8th
	Hyderabad	96	29·608	+·007	29·655	29·707	26th	29·479	30th	86·9	77·8	106·2	−1·0	79·4	+1·2	92·8	+0·1	26·8	115·0	15th	75·5	1st
	Karachi	13	29·748	+·011	29·712	29·849	6th	29·638	15th	82·4	79·5	88·5	−0·3	80·0	+1·7	84·2	+0·7	8·5	92·0	19th	76·6	1st & 2nd.
	IX.—Rajputana.																					
17	Bikaner	*771*	28·945	+·046	29·666	29·051	9th	28·831	30th	88·1	69·8	107·0	−0·4	80·7	−2·2	93·9	−1·3	26·3	114·8	31st	67·7	9th
	Jodhpur	780	28·966	+·025	29·691	29·053	10th	28·872	30th	87·8	70·5	105·9	−0·6	80·5	+0·3	93·2	−0·1	25·4	111·6	13th	73·2	26th
18	Jaipur	1,431	28·334	+·034	29·685	28·412	10th	28·220	30th	88·0	68·2	103·8	−2·7	76·8	−1·5	90·3	−2·1	27·0	112·5	31st	70·0	3rd & 4th.
	Ajmer	1,611	28·154	+·015	29·676	28·228	19th	28·060	30th	86·3	70·0	102·1	−1·7	81·3	+1·3	91·7	−0·2	20·8	110·2	2nd	72·9	7th
	Kotah	832	28·902	+·016	29·666	28·996	3rd	28·785	30th	94·4	70·0	107·7	−1·2	83·6	−2·1	95·6	−1·7	24·1	114·6	30th	77·6	7th
	X.—Bombay.																					
19	Deesa	466	29·343	+·028	29·756	29·422	25th	29·259	30th	87·3	75·4	108·7	+1·7	79·4	+2·0	94·0	+1·9	29·3	113·8	12th	72·0	1st
	Bhuj	334	29·454	+·011	29·736	29·538	25th	29·354	30th	84·9	78·8	100·7	−0·7	77·9	+1·2	89·2	+0·3	23·0	110·0	12th	72·7	1st
	Jamnagar	61	29·736	−·005	29·742	29·811	24th	29·661	15th	85·3	77·6	97·6	−0·3	76·7	0	87·1	−0·1	20·9	107·3	14th	68·8	2nd
	Dwarka	37	29·784	+·004	29·768	29·865	25th	29·690	30th	82·7	78·2	88·4	+0·7	80·5	+0·4	84·5	+0·5	7·9	90·3	27th & 30th.	76·4	2nd
	Rajkot	429	29·374	−·006	29·749	29·458	25th	29·279	30th	84·6	74·2	105·4	0	77·7	+2·7	91·5	+1·3	27·7	111·9	15th	67·7	2nd
	Veraval	*18*	29·813	−·008	29·774	29·884	25th	29·710	30th	81·9	75·3	85·8	−0·6	79·5	+1·1	82·6	+0·3	6·3	88·3	26th	71·1	2nd
	Bhavnagar Para	55	29·762	−·008	29·763	29·842	24th	29·661	30th	86·1	75·6	104·8	−0·3	78·1	−0·1?	91·4	−0·2?	26·7	111·8	15th	72·2	2nd
	Surat	39	29·798	−·001	29·780	29·870	26th	29·696	30th	86·7	78·1	98·5	−1·2	79·9	+1·5	88·2	+0·1	16·6	103·6	2nd	74·9	1st
	Ahmadabad	163	29·654	+·008	29·765	29·730	25th	29·563	30th	86·2	75·6	108·5	+0·9	80·1	+0·7	94·3	+0·8	28·4	11[illegible]·9	13th	73·0	21st
25	Bombay	37	29·828	−·006	29·805	29·892	25th	29·734	31st	83·8	74·7	91·4	+0·6	81·3	+0·6	86·3	+0·6	10·1	93·[illegible]	27th	78·2	3rd
	Ratnagiri	207	29·657	−·006	29·802	29·717	21st	29·569	31st	84·2	76·8	90·0	−1·0	80·1	+0·4	85·0	−0·3	9·9	92·1	22nd	77·1	6th
	Marmagao	*60*	29·815	−·004	29·809	29·872	21st	29·722	30th	85·7	79·2	90·9	+1·1						93·6	14th		
	Karwar	44	29·836	+·002	29·815	29·888	21st	29·754	30th	83·6	77·7	91·1	+1·4	80·0	+0·3	85·5	+0·9	11·1	94·7	14th	75·6	27th

N.B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

at 212 stations in India, etc., in May, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st May, 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															VI.—Punjab—*concld.*
4	1	5	2	9	0	2	8	0	S 45° E		5·0			13		61	+17	·749	+·196	1·2	0	1	−0·7	0·58	0·71	−0·13	0·58	0·71	−0·13	0·58	Patiala.
8	2	0	4	9	1	0	4	3	S 54° E	S 89° E	4·2	2·3	+1·9	13	+ 5	32	−13?	·391	−·145?	1·9	+0·8	0	−1·8	0·04	0·85	−0·81	0·04	0·85	−0·81	0·04	Ambala.
22	1	2	0	4	1	0	0	1	S 78° E	S 41° E	1·3	1·9	−0·6	10	− 4	38	− 1	·438	−·049	1·7	+0·2	2	+0·4	0·43	0·66	−0·23	0·43	0·66	−0·23	0·19	Ludhiana.
12	4	3	3	4	0	2	1	2	N 51° E	N 22° E	1·9	2·3	−0·4	17	− 5	45	+ 4	·519	+·015	1·8	+0·2	3	+1·6	0·68	0·72	−0·04	0·68	0·72	−0·04	0·33	Lahore.
2	9	9	7	2	0	0	1	1	N 42° E	N 41° E	2·1	2·3	−0·2	66	+27	43	+ 2	·476	−·036	1·3	0	2	−0·2	0·86	1·08	−0·22	0·86	1·08	−0·22	0·48	Sialkot.
11	4	3	2	3	2	1	2	3	N 23° E	N 14° E	1·8	2·2	−0·4	10	− 8	38	− 4	·413	−·039	1·9	−0·2	4	+1·3	0·91	1·30	−0·39	0·91	1·30	−0·39	0·39	Rawalpindi.
8	2	7	7	1	2	2	2	0	N 73° E	N 14° E	2·9	5·1	−2·2	30	+12	36	+ 2	·443	+·001	1·6	+0·5	2	+0·5	1·57	0·71	+0·86	1·57	0·71	+0·86	1·05	Khushab.
9	1	7	2	6	1	3	0	2	E		2·5			25		47		·530		1·5		2	+0·9	0·87	0·35	+0·52	0·87	0·35	+0·52	0·48	Lyallpur
3	1	4	4	6	5	4	3	1	S 31° E	S 48° E	5·0	5·5	−0·5	30	+16	38	+ 7	·474	+·036	1·5	+0·5	2	+1·0	0·41	0·32	+0·09	0·41	0·32	+0·09	0·21	Montgomery.
10	5	1	0	6	5	3	0	1	S 24° E	S 12° E	2·4	1·9	+0·5	0	+13	45	+ 3	·580	+·030	1·8	+1·2	1	+0·3	0·18	0·29	−0·11	0·18	0·29	−0·11	0·12	Multan.
																															VII.—North-West Frontier Province.
27	3	0	0	0	0	1	0	0	N 17° W	N 50° W	0·9	3·4	−2·5	7	− 4	53	+10	·500	+·013	1·0	−1·2	1	−1·1	0·45	0·88	−0·43	0·45	0·88	−0·43	0·20	Peshawar.
12	0	13	0	2	0	2	0	2	N 45° E	N 16° E	2·1	1·8	+0·3	37	+12	54	+ 6	·642	+·042	2·5	+1·5	1	+0·1	0·22	0·39	−0·17	0·22	0·39	−0·17	0·11	Dera Ismail Khan.
																															VIII.—Sind.
13	0	3	4	7	1	2	0	1	S 63° E	S 53° E	2·4	3·4	−1·0	33	+ 4	45	+ 3	·659	+·027	0·2	−0·6	1	+0·7	0·20	0·13	+0·07	0·20	0·13	+0·07	0·20	Jacobabad.
0	2	1	1	0	6	19	2	0	S 39° W	S 45° W	7·9	10·6	−2·7	69	−21	65	+11	·818	+·148	0	−0·8	0	−0·3	0	0·15	−0·15	0	0·15	−0·15	0	Hyderabad.
0	0	1	1	0	0	14	14	1	S 70° W	S 56° W	11·2	12·3	−1·1	79	+25	83	+ 3	·951	+·072	3·8	+0·6	0	−0·1	0·08	0·05	+0·03	0·08	0·05	+0·03	0·08	Karachi.
																															IX.—Rajputana.
5	1	2	1	3	4	10	4	1	S 36° W	S 36° W	4·4	5·8	−1·4	40	−25	38	− 6	·483	−·142?	1·5	+0·4	3	+1·9	0·65	0·58	+0·07	0·65	0·58	+0·07	0·24	Bikaner.
4	0	3	0	1	2	29	1	0	S 40° W		4·3			62		40	− 2	·517	−·012	2·2	+1·1	3	+2·3	0·47	0·23	+0·24	0·47	0·23	+0·24	0·14	Jodhpur.
3	2	6	4	1	0	0	5	10	N 14° W	S 88° W	4·2	4·6	−0·4	43	− 7	34	− 3	·436	−·061	2·0	+0·6	3	+1·6	1·32	0·52	+0·80	1·32	0·52	+0·80	0·60	Jaipur.
11	0	2	0	2	0	9	5	2	S 63° W	S 79° W	5·3	6·4	−1·1	37	−38	43	− 1	·528	−·039	0·4	−0·7	1	−0·4	0·71	0·53	+0·18	0·71	0·53	+0·18	0·71	Ajmer.
4	3	2	0	4	1	5	2	9	N 68° W		3·6			30		36	− 2	·404	−·033	3·7	+3·1?	2	+0·8	0·57	0·49	+0·08	0·57	0·49	+0·08	0·28	Kotah.
																															X.—Bombay.
0	0	0	0	0	2	15	10	4	S 68° W	S 83° W	7·3	9·8	−2·5	82	+17	56	− 1	·720	+·036	1·2	−0·8	0	−0·4	0·03	0·18	−0·15	0·03	0·18	−0·15	0·03	Deesa.
0	0	0	0	0	0	1	29	1	W	S 77° W	9·2	12·7	−3·5	98	+15	76	+10	·903	+·102	0·8	−0·4	0	−0·2	0	0·06	−0·06	0	0·06	−0·06	0	Bhuj.
0	0	0	0	0	1	13	17	0	S 69° W		12·8			91		69	+ 3	·840	+·033	1·1	−0·1	0	−0·1	0	0·02	−0·02	0	0·02	−0·02	0	Jamnagar.
0	0	0	0	0	3	10	18	0	S 68° W		8·1			89		80	− 1	·886	−·039	2·6	+0·3	0	0	0	0·01	−0·01	0	0·01	−0·01	0	Dwarka.
0	0	0	0	0	2	13	14	2	S 68° W	N 89° W	11·1	10·5	+0·6	89	+ 7	60	− 8?	·699	−·101?	5·3	+3·8?	1	+0·7	0·19	0·16	+0·03	0·19	0·16	+0·03	0·16	Rajkot.
0	0	0	0	1	3	6	19	2	S 75° W	N 89° W	8·5	6·9	+1·6	82	+ 6	86	+ 4	·933	+·029	2·4	−0·9	0	−0·1	0	0·04	−0·04	0	0·04	−0·04	0	Veraval.
2	0	0	0	0	2	14	7	6	S 70° W	S 62° W	5·2	10·3	−5·1	72	− 9	60	− 2	·744	−·035	1·8		0	−0·3	0·11	0·12	−0·01	0·11	0·12	−0·01	0·04	Bhavnagar Para.
9	1	0	0	3	9	7	2	0	S 17° W	S 54° W	5·2	8·1	−2·9	53	−15	66	− 1	·847	+·011	3·7	+0·8	0	−0·2	0	0·09	−0·09	0	0·09	−0·09	0	Surat.
2	0	0	0	0	0	11	6	12	N 87° W	S 81° W	4·3	5·1	−0·8	72	+ 9	60	+ 2	·746	+·013	1·5	−0·5	1	+0·8	0·50	0·11	+0·39	0·50	0·11	+0·39	0·48	Ahmadabad.
1	3	0	1	2	1	4	8	11	N 71° W	N 81° W	5·6	7·4	−1·8	53	+ 6	76	+ 2	·874	−·005	4·1	+0·1	0	−0·7	0	0·64	−0·64	0	0·64	−0·64	0	Bombay.
2	4	1	0	1	1	5	4	13	N 60° W	N 48° W	7·6	7·1	+0·5	56	− 1	70	+ 1	·819	−·020	4·4	+0·9	0	−1·3	0·11	1·11	−1·00	0·11	1·11	−1·00	0·07	Ratnagiri.
4	11	1	0	0	2	0	0	13	N 24° W	N 28° W	6·4	8·0	−1·6	69	+ 7	74	− 2	·907	−·001	6·2	+1·4	2	−0·2	0·40	1·68	−1·28	0·40	1·68	−1·28	0·20	Marmagao.
11	13	1	0	0	3	2	0	1	N 8° W	N 30° W	3·4	4·2	−0·8	33	−30	76	− 1	·868	+·010	4·9	+1·0	4	+0·9	2·86	2·61	+0·25	2·86	2·61	+0·25	1·16	Karwar.

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	X.—Bombay —*concld.*																					
	Malegaon	1,430	28·396	+·005	29·739	28·4[illegible]3	25th	28·297	3 th	87·5	73·0	105·9	+1·4	75·3	+0·1	90·6	+0·7	30·6	109·4	15th	69·2	15th
	Ahmadnagar	2,154	27·714	+·009	29·739	27·770	6th & 21st.	27·622	30th	83·7	67·6	103·1	+2·0?	72·1	+0·3	87·6	+1·1?	31·0	110·3	16th	65·5	18th
	Poona	1,846	28·020	+·004	29·779	28·084	25th	27·943	31st	80·7	69·8	99·6	−0·1	71·1	−0·7	85·4	−0·4	28·5	105·5	2nd & 3rd	66·3	14th
	Sholapur	1,590	28·244	+·002	29·741	28·308	21st	28·163	30th	84·5	70·4	104·1	−0·7	77·8	+1·1	91·0	+0·2	26·3	107·9	3rd	73·5	14th
	Bijapur	*1,848*	27·913	+·009	29·7[illegible]0	27·972	21st	27·833	28th.	83·0	71·5	101·0	−0·3	74·9	+0·5	88·0	+0·1	26·1	104·2	2nd	69·9	4th
	Belgaum	2,562	27·357	+·017	29·808	27·404	21st	27·287	28th	75·0	69·7	92·6	−0·5	68·5	+0·4	80·6	−0·1	24·1	97·0	16th	65·3	8th
	XI.—Central India.																					
20	Neemuch	1,626	28·159	+·009	29·685	28·219	6th & 25th.	28·060	30th	88·3	72·0	103·8	0	78·3	+0·9	91·1	+0·5	25·5	109·9	31st.	73·6	9th & 21st
	Indore	1,823	27·988	+·011	29·701	28·052	24th	27·878	30th	87·6	71·8	103·9	+1·0	76·3	+0·1	90·1	+0·5	27·6	110·1	31st	70·2	17th
21	Nowgong	754	8[illegible]75	+·032	29·669	29·064	3rd	28·840	30th	88·8	69·1	106·2	−1·1	79·3	−0·6	92·8	−0·9	26·9	116·0	31st	70·9	7th
	Sutna	1,041	28·6[illegible]6	+·017	29·6[illegible]6	28·805	10th	28·511	30th	89·4	69·4	103·8	−1·8	79·8	+0·1	91·8	−0·9	24·0	1[illegible]2·8	31st	68·8	8th
	XII.—Central Provinces.																					
22	Buldana	2,134								85·4	70·5	102·5	+1·0	78·6	+0·9	90·6	+0·9	23·9	107·1	31st	74·5	24th
	Akola	925	28·867	+·017	29·715	28·927	3rd	28·745	30th	90·[illegible]	72·5	106·9	+0·8	82·1	+0·9	95·5	+0·9	2[illegible]·8	114·0	31st	73·9	8th
	Amraoti*	1,[illegible]15	28·5[illegible]9	+·018	29·696	28·[illegible]34	3rd	28·45[illegible]	30th	91·0	69·3	107·2	−0·5	80·8	+0·6	94·1	0	26·4	114·0	31st	71·9	9th
23	Khandwa	1,041	28·745	+·018	29·714	28·807	2[illegible]th	28·636	30th	90·0	71·2	106·8	0	80·4	−0·3	93·6	−0·4	26·4	111·6	30th	72·7	10th
	Hoshangabad	1,006	28·766	+·018	29·693	28·826	25th	28·657	3[illegible]th	91·2	72·1	107·2	−0·2	79·0	−1·4	93·1	−0·8	28·2	114·7	31st	73·4	10th
	Saugor	1,807	27·950	−·013?	29·650	28·0[illegible]4	10th	27·[illegible]38	30th	86·9	65·8	103·8	−1·2	77·7	−1·4	90·7	−1·3	26·1	112·6	31st	70·6	10th
	Jubbulpore	1,327	28·410	+·010	29·655	28·50[illegible]	7th	28·295	31st	86·7	69·1	103·4	−2·3	76·5	−2·2	90·0	−2·3	26·9	110·9	31st	68·8	8th
	Seoni	2,033	27·768	+·032	29·678	27·839	3rd	27·66[illegible]	30th	87·1	6[illegible]·6	100·[illegible]	−3·1	74·9	−1·8	87·8	−2·5	25·9	109·0	31st	67·3	3rd
	Nagpur	1,017	28·[illegible]56	+·037	29·695	28·864	3rd	28·640	30th	90·2	73·1	105·7	−2·5	79·8	−2·2	93·2	−2·3	26·9	113·0	31st	70·8	11th
24	Pendra	2,010	27·756	+·049	29·651	27·[illegible]96	7th	27·[illegible]41	30th	84·9	67·8	99·0	−3·3	7[illegible]·8	−3·[illegible]	86·9	−3·5	24·2	107·9	31st	65·3	7th
	Raipur	970	28·785	+·033	29·683	28·920	7th	28·67[illegible]	30th	87·4	70·9	103·9	−3·3	78·6	−3·2	91·2	−3·3	25·3	111·2	31st	64·3	7th
	Chanda	*634*	29·134	+·012	29·698	29·249	3rd	29·007	30th	91·2	73·0	107·6	−2·1	81·1	−1·0	94·4	−1·5	26·5	1[illegible]3·5	31st	66·4	9th
	Jagdalpur	1,813	28·00[illegible]		29·714	28·141	3rd	27·910	30th	82·[illegible]	74·0	98·1		75·5		85·8		21·[illegible]	105·7	24th	66·0	8th
	XIII.—Hyderabad.																					
27	Aurangabad	1,905	27·947	+·004	29·737	28·011	21st	27·840	30th	85·4	71·0	103·8	−0·4	76·0	+0·8	89·9	+0·2	27·8	106·6	13th	70·4	8th
	Nizamabad	1,248	28·551	?	29·707	28·625	6th	28·433	20th	90·3	71·0	107·0	+0·8	81·3	+0·1	94·2	+0·5	25·7	111·4	31st	66·6	9th
28	Gulbarga	1,503	28·332	+·011	29·744	28·381	6th	28·251	30th	8[illegible]·5	71·6	105·1	+0·4	77·7	−0·8	91·4	−0·2	27·4	106·9	3rd	70·8	4th
	Raichur	*1,311*	28·528	+·025	29·755	28·620	3rd	28·44[illegible]	29th	8[illegible]·1	72·7	103·6	+0·1	79·0	−0·4	91·3	−0·1	24·6	106·8	20th	67·7	31st
	Hyderabad (Deccan)	1,738	28·120	+·030	29·730	28·236	3rd	28·024	30th	86·1	73·5	102·9	−0·6	80·0	−0·4	91·4	−0·5	22·9	107·9	20th	72·2	9th
	Hanamkonda	877	28·926	+·033	29·729	29·047	3rd	28·805	30th	87·7	73·7	103·6	−1·4	81·4	−1·0	92·5	−1·2	22·2	110·0	21st & 31st.	71·5	8th
	XIV.—Mysore.																					
29	Chitaldrug	2,405	27·486	+·003	29·769	27·530	23rd	27·418	30th	73·0	71·6	94·9	+0·6	72·3	+0·8	83·6	+0·7	22·6	100·0	5th	69·4	6th
	Hassan	3,149	26·809	+·017	29·794	26·847	25th	26·736	31st	74·3	69·4	90·2	+1·5	68·4	+1·5	79·3	+1·5	21·8	95·4	2nd	66·2	8th
	Bangalore	3,021	26·920	+·007	29·781	26·961	23rd	26·856	30th	75·5	69·9	91·0	−0·6	69·1	−0·1	80·1	−0·3	21·9	96·3	2nd	64·8	23rd
	Mysore	2,518	27·398	−·003	29·791	27·457	23rd	27·328	30th	76·8	70·8	91·7	0	70·3	+0·6	81·0	+0·3	21·4	96·8	3rd	65·9	6th

N.B.—Elevations in italics indicate barometrical determinations.

* Mean of 30 days.

B—*continued.*

at 212 stations in India, etc., in May, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st May, 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															X.—Bombay —*concld.*
3	1	0	1	0	1	13	9	3	S 70° W	N 79° W	8·2	9·7	−1·5	65	−14	49	0	·632	+·016	1·9	+0·4	1	−0·1	0·60	0·79	−0·19	0·60	0·79	−0·19	0·49	Malegaon.
11	3	1	0	1	1	1	2	11	N 45° W	N 34° W	6·3	10·9	−4·6	43	−25	42	−11?	·474	−·135?	1·8	+0·2	3	+1·7	0·64	0·79	−0·15	0·64	0·79	−0·15	0·20	Ahmadnagar.
1	0	0	1	0	0	3	14	12	N 75° W	N 80° W	9·1	11·2	−2·1	79	−4	59	+5	·596	+·043	3·2	+0·9	6	+4·5	4·15	1·08	+3·07	4·15	1·08	+3·07	1·61	Poona.
0	1	1	1	2	0	1	3	22	N 47° W	N 55° W	9·0	8·2	+0·8	72	−4	48	+3	·566	+·033	3·5	+0·6	1	−1·1	0·18	0·92	−0·74	0·18	0·92	−0·74	0·18	Sholapur.
9	3	1	1	1	0	0	6	10	N 47° W	N 81° W	1·9*	6·1	−4·2	49	−28	56	−5	·674	−·036	2·7	0	4	+1·4	1·79	1·20	+0·59	1·79	1·20	+0·59	0·95	Bijapur.
15	1	0	0	0	1	3	8	3	W	N 67° W	3·4	12·8	−9·4	39	−15	76	+7	·656	+·036	4·3	+0·6	9	+4·4	4·44	2·39	+2·05	4·44	2·39	+2·05	0·87	Belgaum.
																															XI.—Central India.
1	0	0	5	0	3	0	21	1	S 82° W	S 84° W	7·3	8·8	−1·5	56	−13	44	−5	·590	−·030	1·0	+0·1	4	+3·0	1·24	0·44	+0·80	1·24	0·44	+0·80	0·43	Neemuch.
6	1	0	0	0	2	0	0	2	N 89° W	N 71° W	3·3	4·6	−1·3	69	−6	44	−7	·581	−·048	0·9	−0·5	5	+3·9	1·39	0·48	+0·91	1·39	0·48	+0·91	0·34	Indore.
6	2	2	1	4	3	3	5	5	S 80° W	N 82° W	3·1	2·7	+0·4	17	−37	34	−1	·448	−·044	2·8	+0·3	2	+1·2	0·86	0·34	+0·52	0·86	0·34	+0·52	0·65	Nowgong.
6	0	0	3	0	5	3	13	1	S 63° W	N 73° W	3·2	5·9	−2·7	48	+2	36	+6	·474	+·039	2·4	+0·4	2	+0·8	0·76	0·46	+0·30	0·76	0·46	+0·30	0·39	Sutna.
																															XII.—Central Provinces.
0	0	0	1	1	0	1	15	13	N 71° W		8·3	8·9	−0·6	78		46		·560		2·2		0	−1·1	0·07	0·49	−0·42	0·07	0·49	−0·42	0·07	Buldana.
4	0	2	2	0	0	4	8	14	N 64° W	N 68° W	6·7	7·0	−0·3	62	−24	39	0	·550	+·018	2·0	+0·2	0	−0·8	0·05	0·36	−0·31	0·05	0·36	−0·31	0·03	Akola.
1	3	1	1	1	2	3	8	10	N 69° W	N 77° W	5·3†	5·0	+0·3	53	−15	31	−9	·440	−·127?	1·1	−0·7	2	+0·6	0·82	0·54	+0·28	0·82	0·54	+0·28	0·44	Amraoti.
0	2	0	0	1	1	1	16	10	N 74° W	N 70° W	7·4	7·5	−0·1	79	−7	38	−4	·521	−·022	1·2	0	2	+1·2	0·56	0·36	+0·20	0·56	0·36	+0·20	0·42	Khandwa.
13	0	3	0	1	0	12	0	2	S 51° W	S 66° W	1·9	3·0	−1·1	30	−32	37	−2	·533	−·009	0·8	−0·4	1	−0·1	0·30	0·49	−0·19	0·30	0·49	−0·19	0·30	Hoshangabad.
3	3	0	3	3	1	1	9	8	N 64° W	S 83° W	5·2	3·9	+1·3	37	−13	30	−3	·323	−·134	1·6	+0·2	2	+1·1	0·77	0·46	+0·31	0·77	0·46	+0·31	0·37	Saugor.
4	0	1	1	8	8	4	4	1	S 1° W	S 78° W	2·3	3·1	−0·8	48	−6	40	+8	·495	+·049	0·9	−0·4	3	+1·9	0·92	0·46	+0·46	0·92	0·46	+0·46	0·55	Jubbulpore.
20	2	0	0	1	3	2	2	1	S 54° W	N 39° W	0·5	3·4	−2·9	10	−28	35	+2	·431	−·019	2·0	+0·1	6	+4·2	1·53	0·64	+0·89	1·53	0·64	+0·89	0·74	Seoni.
4	3	0	3	3	1	2	7	8	N 65° W	N 48° W	4·8	5·8	−1·0	33	−14	42	+10	·587	+·105?	2·5	+0·2	3	+1·2	0·75	0·75	0	0·75	0·75	0	0·40	Nagpur.
7	1	1	1	4	5	7	1	4	S 27° W		4·6			30		41	+10	·473	+·064	2·2	+0·3	4	+2·3	1·59	0·84	+0·75	1·59	0·84	+0·75	0·48	Pendra.
2	2	3	1	0	2	11	7	3	S 76° W	S 76° W	3·6	5·8	−2·2	46	+3	43	+8	·532	+·027	4·6	+1·8	5	+2·9	3·79	0·90	+2·89	3·79	0·90	+2·89	2·64	Raipur.
9	0	0	4	7	4	8	6	2	S 17° W	S 84° W	4·8	3·5	+1·3	46	+23	40	+3	·574	+·019	4·0	+1·8	5	+3·5	2·06	0·62	+1·44	2·06	0·62	+1·44	1·27	Chanda.
7	3	0	1	1	2	6	9	2	S 76° W		2·9			43		65		·730		3·8		7	+2·3	1·92	2·39	−0·47	1·92	2·39	−0·47	0·71	Jagdalpur.
																															XIII.—Hyderabad.
0	5	0	1	1	0	4	14	6	N 73° W		10·2			66		49	+8	·579	+·089	2·0	+0·7	0	−1·4	0·18	0·70	−0·52	0·18	0·70	−0·52	0·07	Aurangabad.
0	1	2	4	0	3	9	6	6	S 77° W		3·9			37		36	−13	·503	−·184?	3·9	+1·4	3	+2·0	1·22	0·31	+0·91	1·22	0·31	+0·91	0·82	Nizamabad.
3	2	0	1	3	4	1	8	9	N 82° W	N 44° W	6·0	9·1	−3·1	40	−21	52	−4	·603	−·066	1·9	−0·8	5	+2·8	1·42	0·98	+0·44	1·42	0·98	+0·44	0·80	Gulbarga.
2	1	3	0	1	3	3	8	10	N 73° W	N 83° W	6·8	8·4	−1·6	49	−20	54	+1	·643	0	3·3	+0·9	4	+2·6	2·14	0·79	+1·35	2·14	0·79	+1·35	1·54	Raichur.
2	1	3	1	2	6	1	10	5	S 81° W	S 82° W	4·7	4·7	0	33	−27	54	+6	·664	+·070	3·7	+0·4	2	+0·1	0·39	0·88	−0·49	0·39	0·88	−0·49	0·10	Hyderabad (Deccan).
2	2	0	0	9	9	2	3	4	S 4° W		3·8			40		52	+4	·646	+·020	4·0	+0·7	3	+1·3	1·56	0·64	+0·92	1·56	0·64	+0·92	0·77	Hanamkonda.
																															XIV.—Mysore.
2	0	0	0	0	3	9	11	6	S 77° W	S 81° W	5·2	6·6	−1·4	69	−14	73	+2	·691	+·023	4·4	−0·5	7	+2·6	3·43	2·98	+0·45	3·43	2·98	+0·45	1·45	Chitaldrug.
3	2	0	0	0	0	4	15	7	N 80° W	N 80° W	5·9	2·9	+3·0	74	−4	79	+4	·663	+·016	4·5	−0·9	6	−0·9	4·18	4·82	−0·64	4·18	4·82	−0·64	1·70	Hassan.
1	0	0	0	1	2	9	15	3	S 72° W	S 75° W	5·5	4·6	+0·9	79	−4	75	0	·662	−·002	5·5	+1·2	9	+2·2	8·47	4·16	+4·31	8·47	4·16	+4·31	1·66	Bangalore.
0	1	0	0	0	1	15	14	0	S 66° W	S 74° W	5·4	7·4	−2·0	89	+13	73	−3	·666	−·018	7·0	+1·1	7	−0·8	6·47	5·28	+1·19	6·47	5·28	+1·19	1·70	Mysore.

* Mean of 21 days.
† „ „ 29 „

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XV—Madras.																					
30	Mangalore	72	29·819	−·007	29·822	29·882	23rd	29·764	12th	83·7	77·4	91·8	0	78·5	−0·1	85·1	−0·1	13·3	95·0	5th	70·2	26th
	Calicut	27	29·851	−·007	29·807	29·905	23rd	29·805	31st	81·6	78·0	89·1	−1·1	78·0	−0·1	83·6	−0·6	11·1	92·8	4th	74·6	30th
	Cochin	9	29·886	+·001	29·823	29·935	23rd	29·836	12th	83·2	77·5	89·5	−0·2	77·3	−0·2	83·4	−0·2	12·2	91·8	11th	71·7	17th
	Trivandrum	198	29·687	−·002	29·814	29·728	3rd	29·630	12th	81·2	77·3	87·2	+0·8	77·7	−0·4	82·4	+0·2	9·5	91·1	5th	74·1	30th
31	Pamban	37	29·799	−·007	29·764	29·853	5th	29·725	30th	86·1	79·9	93·1	+1·7	82·4	+1·2	87·7	+1·5	10·7	95·0	24th	79·5	11th
	Madura	447	29·3.6	+·004	29·771	29·461	3rd	29·311	31st	85·1	76·9	99·1	−0·9	78·6	+1·0	88·8	+0·1	20·5	102·2	7th	69·6	10th
	Pudukkottai	318	29·531	+·006	29·777	29·592	3rd	29·437	30th	85·6	75·6	100·8	−0·5	79·5	+0·3	90·2	−0·1	21·3	105·8	31st	76·1	12th
	Negapatam	31	29·804	+·007	29·764	29·870	5th	29·704	31st	86·4	79·3	96·6	−1·0	81·3	+1·1	88·9	+0·1	15·3	104·9	31st	73·2	11th
	Trichinopoly	255	29·580	+·008	29·775	29·650	2nd & 7th.	29·503	30th	85·2	76·4	101·4	−0·3	79·4	+0·7	90·4	+0·2	22·0	105·5	16th	72·5	11th
	Coimbatore	1,341	28·532	+·015	29·791	28·590	6th	28·470	30th	81·1	74·9	94·7	−0·1	73·8	+0·3	84·2	+0·1	20·9	99·5	2nd	66·0	16th
	Salem	913	28·948	+·019	29·788	28·989	2nd	28·879	30th	82·0	75·4	98·8	−0·7	76·5	+0·3	87·7	−0·2	22·3	104·1	16th	71·1	20th
	Cuddalore	37	29·788	+·009	29·755	29·868	3rd	29·683	30th	86·3	78·6	95·5	−3·2?	80·4	+0·3	87·9	−1·5?	15·1	104·8	22nd	74·0	11th
	Vellore	707	29·117	−·003?	29·750	29·150	3rd & 7th.	29·021	30th	85·2	76·8	102·2	+2·4?	78·4	−0·1	90·3	+1·1?	23·8	106·5	21st	73·0	26th
	Madras	22	29·792	+·007	29·745	29·878	3rd	29·677	30th	88·3	78·6	99·0	+0·5	81·7	+0·5	90·4	+0·5	17·3	106·7	18th	76·6	9th
32	Cuddapah	428	29·397	+·009	29·754	29·459	6th	29·311	30th	89·6	77·1	105·7	−0·6	82·0	−0·4	94·3	−0·5	22·7	108·8	23rd	76·4	31st
	Bellary	1,475	28·367	0	29·751	28·426	9th	28·285	30th	84·9	73·0	102·2	−0·3	77·3	−0·3	89·8	−0·3	24·9	106·3	3rd	70·1	21st
	Kurnool	923	28·906	+·016	29·753	28·973	6th	28·826	29th	86·3	76·3	104·0	−1·1	80·8	−0·2	92·4	−0·7	23·2	107·4	25th	76·8	6th
33	Nellore	66	29·728	+·010	29·728	29·828	6th	29·609	30th	88·7	79·9	102·0	−3·2	81·0	−0·6	91·5	−1·9	21·0	108·8	25th	71·9	11th
	Masulipatam	15	29·792	+·023	29·742	29·903	3rd	29·681	30th	88·4	80·1	97·9	−2·0	80·4	−1·3	89·1	−1·7	17·5	111·3	23rd	69·1	9th
	Cocanada	26	29·784	+·027	29·747	29·891	3rd	29·676	30th	87·0	80·9	98·7	−1·2	86·4	−1·9	89·6	−1·5	18·3	111·4	22nd	69·9	20th
	Waltair (Vizagapatam)	*226*	29·753	+·025	29·729	29·858	3rd	29·646	31st	87·6	79·5	93·6	+1·7	82·6	+1·7	88·1	+1·7	11·0	102·5	22nd	73·5	6th
	Calingapatam	19	29·763		29·719	29·837	3rd & 5th.	29·656	30th	87·5	80·0	97·2		80·0		88·6		17·2	108·2	22nd	70·0	6th
	Gopalpur	33	29·715	+·035	29·711	29·830	7th	29·602	30th	85·5	81·3	91·5	+1·5	80·9	+0·8	86·2	+1·1	10·6	97·2	8th	70·8	6th
	Bay Islands.																					
1	P. V. Fraser	8	29·763		29·734	29·930	5th	29·627	30th	85·7	81·1											
	Port Blair	58	29·784	−·019	29·772	29·872	26th	29·666	30th	83·4	79·2	89·8	+1·1	78·7	+0·2	84·2	+0·7	11·1	95·0	3rd	75·7	20th
	Table Island		29·745	−·010	29·769	29·824	25th	29·635	30th	85·0	79·0	90·0	+0·9	81·1	+1·5	85·6	+1·2	8·9	93·5	14th	77·9	19th
	Kashmir.																					
13	Muzaffarabad		27·424			27·503	10th	27·311	31st	71·7	61·6	90·7		63·2		77·1		27·5	101·3	31st	55·1	10th
	Srinagar	5,204	24·858	+·005	24·829	24·946	26th	24·782	30th	61·7	56·3	76·0	+0·3	51·2	−0·6	63·6	−0·1	24·8	86·5	26th	46·1	1st
	Gulmarg*	*8,569*	21·851	0	21·819	21·885	27th	21·825	29th	60·4	53·0	66·8		39·3		53·0		27·5	70·0	31st	37·9	28th
	Dras	*10,059*	20·841	+·019	20·809	20·935	3rd	20·734	19th	43·3	39·7†	57·2	−3·2	34·6	+1·5	45·9	−0·9	22·6	66·1	28th	18·4	1st
	Leh	*11,503*	19·747	−·001	19·715	19·835	31st	19·657	16th	49·0	38·9‡	64·4§	−1·1§	36·2	−0·5	50·5§	−0·8	28·2	68·9	27th	29·0	1st
	Skardu	*7,505*	22·837	−·018	22·817	22·942	3rd	22·708	19th	60·5	48·6	74·1	+2·8	51·3	+2·0	62·7	+2·4	22·8	80·2	27th	44·4	17th
	Gilgit	4,890	25·124	+·022	25·097	25·240	23rd	24·989	15th	70·7	61·7	86·1	+2·8	60·1	−0·2	73·1	+1·3	26·0	94·2	27th & 28th.	53·2	17th

N.B.—Elevations in italics indicate barometrical determinations.

* Mean of 5 days.
† " " 26 "
‡ " " 30 "
§ " " 11 "

NOTE.—The barometric readings are not reduced to sea-level in the case of

B—*continued.*

at 212 stations in India, etc., in May, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st May, 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XV.—Madras.
2	5	4	7	4	0	0	3	6	N 31° E	N 18° E	5·6	2·8	+2·8	33	+ 8	75	+ 2	·854	−·025	5·8	−0·4	8	+1·6	6·52	5·77	+ 0·75	6·52	5·77	+ 0·75	1·87	Mangalore.
15	3	1	1	1	1	1	2	6	N 40° W	N 15° W	5·6	8·2	−2·6	27	−13	85	+ 6	·910	+·023	6·6	+1·1	11	+2·7	20·14	7·78	+12·36	20·14	7·78	+12·36	5·30	Calicut.
2	2	8	16	2	0	0	0	1	N 72° E	N 29° E	4·8	4·5	+0·3	76	+29	77	− 4	·869	−·027	5·0	−0·8	14	+1·8	16·02	11·58	+ 4·44	16·02	11·58	+ 4·44	4·07	Cochin.
4	11	3	0	1	0	0	0	12	N 15 W	N 16° W	4·6	5·2	−0·6	72	+ 4	83	+ 2	·879	+·010	8·2	+2·1	7	−3·0	8·65	8·54	+ 0·11	8·65	8·54	+ 0·11	2·67	Trivandrum.
0	0	0	2	14	4	11	0	0	S 11° E	S 22° W	8·2	8·5	−0·3	72	− 1	75	− 4	·934	−·031	3·1	0	3	+1·6	2·28	0·78	+ 1·50	2·28	0·78	+ 1·50	1·90	Pamban.
1	2	1	2	1	1	2	10	11	N 65° W	N 38° W	3·9	4·5	−0·6	56	− 1	68	+ 1	·815	−·002	6·7	+3·0	8	+2·4	6·26	2·74	+ 3·52	6·26	2·74	+ 3·52	1·98	Madura.
7	7	0	0	1	1	3	8	4	N 63° W		4·5			42		62	− 7	·750	−·089?	3·7	−1·6	4	+0·4	2·14	2·28	− 0·14	2·14	2·28	− 0·14	1·22	Pudukkottai.
3	0	0	0	4	1	10	12	1	S 60° W	S 46° W	6·9	5·8	+1·1	66	− 6	72	+ 4	·905	+·027	4·6	+0·5	1	−1·0	0·43	1·68	− 1·25	0·43	1·68	− 1·25	0·26	Negapatam.
2	0	1	1	1	2	13	10	1	S 59° W	S 76° W	4·5	4·5	0	65	− 8	66	0	·792	−·011	4·8	+0·7	2	−2·2	3·29	3·21	+ 0·08	3·29	3·21	+ 0·08	1·78	Trichinopoly.
16	0	1	1	0	4	9	0	0	S 26° W	S 27° W	3·5	3·3	+0·2	37	−31	74	− 7	·786	−·042	3·1	−1·2	6	+1·3	2·20	2·34	− 0·14	2·20	2·34	− 0·14	0·76	Coimbatore.
12	0	1	1	0	1	10	5	1	S 59° W	S 43° W	3·5	3·0	+0·5	43	− 7	73	0	·791	−·053	5·7	+1·7	11	+3·3	6·53	4·78	+ 1·75	6·53	4·78	+ 1·75	2·14	Salem.
2	0	0	0	0	6	15	6	2	S 50° W	S 47° W	6·6	2·1	+4·5	76	+ 8	70	− 1	·813	−·039	4·8	+1·5	1	−0·2	1·42	0·68	+ 0·74	1·42	0·68	+ 0·74	1·38	Cuddalore.
14	0	0	0	0	0	0	17	0	W		2·3			55		68	+ 3	·810	+·015	2·8	−0·2	6	+2·3	3·14	2·31	+ 0·83	3·14	2·31	+ 0·83	0·93	Vellore.
0	0	0	0	1	10	14	6	0	S 37° W	S 41° W	4·8*	6·6	−1·8	82	+10	64	− 1	840	−·031	3·6	−0·4	0	−1·1	0·03	1·01	− 0·98	0·03	1·01	− 0·98	0·02	Madras.
2	2	0	1	2	6	1	5	12	N 79° W	N 89° W				40	−21	65	+ 1	·762	+·003	3·7	−0·1	1	−1·8	0·24	1·61	− 1·37	0·24	1·61	− 1·37	0·14	Cuddapah.
5	4	1	0	1	0	4	8	8	N 66° W	N 74° W	4·8	6·2	−1·4	53	−12	56	+ 3	·660	+·038	4·0	−0·3	5	+1·7	2·27	1·95	+ 0·32	2·27	1·95	+ 0·32	0·64	Bellary.
8	1	0	0	4	2	3	8	5	S 77° W	N 84° W	5·1			37	+ 1	62	+ 6	·778	+·066	3·5	+0·1	4	+1·8	1·46	0·96	+ 0·50	1·46	0·96	+ 0·50	0·54	Kurnool.
9	1	0	0	4	9	2	6	7	S 52° W	S 69° W	4·0	6·4	−2·4	37	+ 5	67	+ 4	·897	+·035	3·7	−1·1	2	+1·1	2·35	0·58	+ 1·77	2·35	0·58	+ 1·77	1·81	Nellore.
2	0	0	1	4	9	4	5	6	S 38° W	S 38° W	5·5	6·5	−1·0	43	+ 2	69	−9?	·914	−·151?	3·9	−1·0	2	+0·1	4·23	1·18	+ 3·05	4·23	1·18	+ 3·05	3·00	Masulipatam.
12	1	1	0	1	0	9	5	2	S 71° W	S 56° W	5·3	5·9	−0·6	40	−14	76	+ 3	·873	+·015	5·4	+0·7	2	−0·3	1·02	1·23	− 0·21	1·02	1·23	− 0·21	0·88	Cocanada.
3	0	0	0	3	1	4	17	3	S 79° W	S 72° W	9·1			66	−17	69	− 2	·900	+·007	5·1	−0·7	1	−1·9	0·32	2·10	− 1·78	0·32	2·10	− 1·78	0·17	Waltair (Vizagapatam).
3	1	0	0	0	4	10	10	3	S 67° W		7·1			68		72		·921		2·3		2	−1·2	1·68	3·20	− 1·52	1·68	3·20	− 1·52	1·30	Calingapatam.
0	2	0	1	0	14	13	0	1	S 23° W	S 30° W	9·9	12·8	−2·9	72	+ 4	83	+ 1	1·015	+·047	1·5	−0·4	4	+0·9	2·38	1·90	+ 0·48	2·38	1·90	+ 0·48	1·50	Gopalpur.
																															Bay Islands.
0	0	0	1	0	4	21	5	0	S 45° W					87		81		·999		3·3		4	−0·1	2·58	2·33	+ 0·25	2·58	2·33	+ 0·25	1·10	P. V. Fraser.
12	1	2	2	2	1	0	8	3	N 68° W	S 73° W	5·3	5·4	−0·1	17	−44	82	− 4	·940	−·013	5·9	−1·2	17	+1·0	11·18	15·84	− 4·66	11·18	15·84	− 4·66	2·67	Port Blair.
1	3	2	2	2	3	4	9	5	N 86° W		7·8			37		76	− 4	·915	−·017	5·5	−1·7	7	−3·7	2·16	8·74	− 6·58	2·16	8·74	− 6·58	0·74	Table Island.
																															Kashmir.
18	0	0	0	0	1	12	0	0	S 45° W		1·6			42		56		·424		2·1		6	+2·0	3·21	2·57	+ 0·64	3·21	2·57	+ 0·64	1·22	Muzaffarabad.
10	3	3	0	4	8	1	0	2	S 29° E	S 49° E	2·8	3·1	−0·3	20	−16	72	−11	·393	−·043	2·5	−1·0	5	−0·6	1·59	2·44	− 0·85	1·59	2·44	− 0·85	0·46	Srinagar.
0	2	3	0	0	0	0	0	0	N 28° E		3·5†			100		62		·328		1·2		0		0·11			0·11			0·08	Gulmarg.
19	1	1	0	0	0	2	5	3	N 73° W		4·0			27		64‡	− 9	·194‡	−·026	3·6	−0·2	4	−1·4	0·89	2·73	− 1·84	0·89	2·73	− 1·84	0·32	Dras.
19	0	1	0	1	7	3	0	0	S 4° W	S 43° W	2·9	2·3	+0·6	30	−15	34*	− 7	·115*	−·016	3·4	−1·2	1	+0·3	0·24	0·20	+ 0·04	0·24	0·20	+ 0·04	0·10	Leh.
16	0	3	7	0	1	2	2	0	S 87° E		6·9			18		42	−13	·219	−·041	2·8	−1·7	0	−2·5	0	1·20	− 1·20	0	1·20	− 1·20	0	Skardu.
27	1	0	0	0	0	3	0	0	S 62° W		0·4			7		59	+12	·448	+·134	2·8	−1·6	1	−1·3	0·19	0·80	− 0·61	0·19	0·80	− 0·61	0·14	Gilgit.

hill or plateau stations, the elevations of which exceed 3,200 feet.

* Mean of 30 days. † " 4 " ‡ Mean of 26 days. (a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Baluchistan.																					
15	Fort Sandeman*	4,614	25·336		25·305	25·398	25th	25·253	2nd	70·5	57·2	90·6		63·6		77·1		27·0	104·9	4th	53·3	5th & 6th.
	Quetta	5,502	24·606	+·004	24·566	24·669	10th	24·533	5th	64·4	56·1	85·1	+1·7	54·4	+2·5	69·4	+2·1	30·7	94·5	31st	47·5	20th
	Chaman	4,311	25·596	+·034	25·558	25·660	10th	25·5[illegible]3	5th	76·7	62·0	92·3	+1·4	66·0	+2·0	79·2	+1·7	26·3	102·7	31st	58·7	5th
	Kalat	6,630	23·724		23·686	23·777	26th	23·629	5th	61·0	5[illegible]·1	83·3	−0·3	5[illegible]·1		66·7		33·2	92·0	31st	44·4	19th
	Dalbandin	2,772	27·005		26·968	27·078	10th	26·915	17th	79·2	63·5	101·5		67·3		84·4		34·2	109·4	31st	60·7	26th
	Pasni		29·748		29·708	29·839	6th	29·630	18th	8[illegible]·0	77·3	95·5		72·5		84·0		23·0	106·9	13th	69·0	5th
	Panjgur		26·643		26·601	26·709	25th	26·547	18th	75·4	64·0	99·2		68·0		83·6		31·2	104·2	28th	59·8	8th
	Robat				Observatory	closed.																
	Seistan		27·989			28·090	25th	27·830	4th	75·4	63·2	97·5		66·[illegible]		83·0		29·0	106·3	31st	60·3	10th
	Hill stations, excluding Kashmir and Baluchistan.																					
	Parachinar	6,010	24·417	+·042	24·393	24·495	25th	24·304	29th	67·7	56·0	78·1	−0·9	54·5	−1·2	66·3	−1·1	23·6	91·0	30th	46·3	10th
	Cherat	*4,256*	25·648	+·041	25·616	25·756	7th	25·5[illegible]3	30th	72·0	56·3	83·7	−3·4	65·5	−1·6	74·6	−2·5	18·2	95·8	31st	53·3	9th
	Drosh (c)		25·032			25·100	4 days	24·875	28th	66·3	55·9	81·8	+0·1	56·3	+0·7	70·5	+0·4	22·5	90·7	29th	50·0	19th
	Murree	6,333	23·795	−·006	23·763	23·855	26th	23·726	19th	63·6	51·1	73·6	−2·5	59·2	+0·3	66·4	−1·1	14·4	83·6	31st	48·1	10th
	Simla	7,232	23·081	+·008	23·043	23·163	26th	23·013	30th	61·9	51·0	63·7	−4·3	56·0	−2·3	62·3	−3·3	12·7	77·5	30th	44·0	3rd
	Chakrata	7,072	23·343	P	23·309	23·422	6th	23·280	30th	64·6	52·8	76·2	+2·0	55·8	−1·0	66·0	+0·5	20·4	86·1	31st	44·9	3rd
	Mukteswar	7,592	22·856	+·021	22·815	22·934	26th	22·794	30th	60·6	50·8	70·0	−5·0	51·9	−3·5	60·9	−4·3	18·1	80·3	31st	42·2	4th
	Darjiling	7,432	22·950	+·014	22·905	23·026	7th	22·866	19th	57·8	54·8	65·7	+1·7	52·3	+0·2	59·0	+0·9	13·4	72·3	30th	44·4	5th
	Shillong	4,920	25·112	+·032	25·064	25·196	3rd	25·018	19th	66·8	62·5	73·6	−0·8	58·8	0	66·2	−0·4	14·8	79·0	29th	51·7	6th
	Cherrapunji	4,309	25·654	+·014	25·605	25·723	4th	25·557	20th	67·4	63·4	72·9	+0·6	61·4	+1·4	67·2	+1·0	11·5	76·9	3rd	53·1	1st
	Neturhat		26·116		26·095	26·236	7th	26·040	30th	79·5	63·8	30·9		70·5		80·4		15·8	100·7	31st	59·1	5th
	Maymyo	3,526	26·376	−·004	26·321	26·489	9th	26·259	19th	72·2	67·3	84·6	+1·9	65·2	+1·0	74·9	+1·5	19·4	92·2	3rd	56·2	1st
	Pachmarhi	3,528	26·396	+·008	26·343	26·441	2nd	26·318	30th	82·6	64·8	95·6	0	73·7	−1·6	84·7	−0·8	21·9	103·0	31st	67·1	11th
	Mount Abu	3,945	26·007	+·017	25·957	26·065	25th	25·922	30th	79·4	60·8	88·2	0	72·1	+0·9	80·2	+0·5	16·[illegible]	95·0	14th	53·6	6th
	Mercara	3,781	26·198	−·012	26·132	26·243	25th	26·145	29th & 30th.	69·1	66·7	80·7	+0·3	63·6	−0·9	72·2	−0·3	17·1	85·2	3rd	60·8	13th
	Ootacamund	*7,327*	23·067	+·017	23·003	23·115	6th	23·014	29th	62·6	57·0	69·8	−0·1	52·6	−0·2	61·2	−0·1	17·2	73·2	2nd	49·0	2nd
	Kodaikanal	7,638	22·827	−·009	22·762	22·871	26th	22·780	28th	60·9	55·6	69·2	+0·2	53·8	−1·1	61·5	−0·5	15·4	72·4	3rd	51·8	19th
	Extra India																					
	Singapore(a)	10	29·809	−·116	29·770	29·867	25th	29·747	28th & 30th.	84·5		89·7	+1·0	76·3	+1·2	83·0	+1·1	13·4	92·0	28th	73·5	25th
	Penang (a)	17	29·828	−·082	29·770	29·906	6th	29·793	14th	83·5		92·0	+1·3	73·2	−1·5	82·6	−0·1	18·8	94·0	9 days	70·0	31st
	Trincomalee	99	29·734	+·007	29·770	29·801	5th	29·632	31st	81·8	76·8	94·8	+1·7	79·0	+0·3	86·9	+1·0	15·8	99·3	8th	74·6	15th
	Colombo	24	29·861	−·016	29·811	29·899	22nd	29·809	31st	79·4	77·0	87·5	−0·6	77·0	−1·1	82·2	−0·9	10·5	89·9	10th	72·2	26th
	Hambantota	64	29·811		29·801	29·857	6th & 27th.	29·731	31st	78·5	76·2	88·8		77·5		83·2		11·3	94·5	23rd	75·1	8th
	Minicoy	7	29·915	+·015		29·976	26th	29·850	30th													
	Amini Divi	*13*	29·874	−·012	29·815	29·933	21st	29·762	30th	87·6	79·1	94·8	+4·0	81·6	+1·1	88·2	+2·5	13·2	96·8	14th	74·1	31st
	Gyantse	13,110																				
	Pharijong	14,400																				
	Gangtok	5,567	24·282	−·046	24·237	24·370	6th	24·190	19th	61·6	57·7	72·1	−0·3	57·4	+6·9	64·8	+3·3	14·7	79·2	21st	50·9	5th

N.B.—Elevations in italics indicate barometrical determinations.

(a) 9 hrs. observations.

(c) Aneroid.

NOTE.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevation of which exceed 3,200 feet.

* Mean of 30 days.

B—*continued.*

at 212 stations in India, etc., in May, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st May 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
21	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Baluchistan.
19	0	4	0	2	1	2	2	0	S 39° E		3·5			3		46		·216		1·3		4	+3·2	3·20	0·40	+2·80	3·20	0·40	+2·80	2·60	Fort Sandeman
26	0	2	0	1	1	1	0	0	S 52° E	N 30° W	1·6	2·4	−0·8	3	−1	60	+16	·358	+·034	1·9	+0·9	2	+1·0	0·93	0·35	+0·58	0·93	0·35	+0·58	0·69	Quetta.
16	1	0	1	4	5	4	0	0	S 60° E	S 32° W	4·0	5·5	−1·5	33	−13	43	+ 8	·391	+·064	2·2	+1·4	1	+0·7	0·59	0·09	+0·50	0·59	0·09	+0·50	0·52	Chaman.
28	0	0	1	0	0	1	0	0	S 23° E	S 34° W	3·2*			2	−35	56	+12	·303	+·011	1·5		0	−0·7	0·14	0·22	−0·08	0·14	0·22	−0·08	0·06	Kalat.
16	3	3	1	0	0	5	1	2	N 43° W		5·8			13		40		·396		2·1		0	0	0	0·02	−0·02	0	0·02	−0·02	0	Dalbandin.
5	1	0	4	2	0	1	11	7	N 71° W		5·7			40		84		·885		3·6		0	0	0	0	0	0	0	0	0	Pasni.
7	0	11	9	0	0	1	1	2	N 58° E		5·5			53		53		·464		1·1		0		0·01			0·01			0·01	Panjgur.
																	Obse	rvatory	closed.						0·03						Robat.
11	0	0	0	0	0	0	0	20	N 45° W		10·9			66		50		·427		2·0		0		0			0			0	Seistan.
																															Hill stations, excluding Kashmir and Baluchistan.
31	0	0	0	0	0	0	0	0	Calm		0·5			(a)		49	+ 3	·317	+·007	2·4	0	10	+2·8	3·93	2·45	+1·48	3·93	2·45	+1·48	0·83	Parachinar.
3	14	0	0	1	6	0	1	6	N 21° W	N 6° W	7·0	8·3	−1·3	40	− 7	38	+ 1	·274	−·023	2·3	+0·4	4	+1·4	1·35	1·58	−0·23	1·35	1·58	−0·23	0·43	Cherat.
29	0	0	2	0	0	0	0	0	E		2·5			6		54	− 6	·326	−·040	2·3	0	5	+0·7	2·27	2·10	+0·17	2·27	2·10	+0·17	0·67	Drosh.
12	9	0	2	5	1	0	0	2	N 35° E	N 7° E	3·6	5·8	−2·2	23	+ 8	44	+ 3	·245	−·024	1·9	−0·6	7	+2·0	2·93	2·87	+0·06	2·93	2·87	+0·06	0·81	Murree.
																48	+ 4	·261	+·007	3·0	+0·5	8	+3·1	4·37	2·70	+1·67	4·37	2·70	+1·67	1·70	Simla.
17	0	11	1	0	0	2	0	0	N 49° E	N 21° E	7·0	5·7	+1·3	30	+20	48	0	·278	−·001	2·3	+0·3	5	+0·8	1·03	2·52	−1·49	1·03	2·52	−1·49	0·30	Chakrata.
6	1	2	3	1	0	3	14	1	N 89° W		6·2			38		53	+ 5	·269	−·003	2·6	+0·1	9	+3·6	2·89	2·16	+0·73	2·89	2·16	+0·73	0·65	Mukteswar.
24	0	0	1	1	0	2	1	2	S 72° W	S 59° W	2·6	5·0	−2·4	7	− 4	83	− 5	·400	−·017	7·1	+0·3	17	+2·8	8·50	8·90	−0·40	8·50	8·90	−0·40	1·31	Darjiling.
26	0	0	0	0	1	2	2	0	S 54° W		3·1			10		79	+ 7	·521	−·050	6·4	+1·1	19	+1·3	10·91	11·12	−0·21	10·91	11·12	−0·21	1·46	Shillong.
1	2	2	2	5	4	9	5	1	S 28° W		5·9			37		81	− 5	·541	−·009	6·2	−0·5	22	+0·5	34·54	43·49	−8·95	34·54	43·49	−8·95	7·45	Cherrapunji.
1	2	1	0	0	4	11	8	4	S 72° W		7·1			61		43		·412		1·5		3		1·69			1·69			0·88	Netarhat.
18	2	2	0	0	1	5	3	0	S 78° W		1·3			17		78	− 2	·612	−·029	4·0	−0·7	7	−5·4	6·58	10·16	−3·58	6·53	10·16	−3·58	1·41	Maymyo.
2	2	0	0	2	3	0	19	12	N 71° W	N 81° W	4·1	5·5	−1·4	59	− 4	37	+ 2	·409	+·017	0·6	−1·1	5	+3·7	1·35	0·52	+0·83	1·35	0·52	+0·83	0·65	Pachmarhi.
1	0	2	0	2	1	16	5	4	S 60° W	S 72° W	8·5	7·9	+0·6	59	− 9	34	− 3	·327	−·014	1·0	+0·3	2	+0·9	0·66	0·68	−0·02	0·66	0·68	−0·02	0·52	Mount Abu.
7	2	2	0	0	0	2	10	8	N 64° W	N 45° W	2·5	3·9	−1·4	59	− 6	88	+ 2	·625	+·014	6·0	−0·3	9	+0·4	4·02	5·58	−1·56	4·02	5·58	−1·56	0·81	Mercara.
5	1	3	6	6	3	2	2	3	S 63° E		2·3			23		72	+ 9	·408	+·043	6·9	+2·6	14	+1·6	5·34	6·96	−1·62	5·34	6·96	−1·62	1·01	Ootacamund.
0	12	5	1	2	0	0	4	7	N 9° W		6·6			62		73	+ 6	·386	+·032	4·4	+0·2	10	−1·0	7·02	6·01	+1·01	7·02	6·01	+1·01	1·92	Kodaikanal.
																															Extra India.
11	0	2	1	1	2	7	1	6	S 74° W					23						6·8	+1·9	14	+4·9	8·40	6·14	+2·26	8·40	6·14	+2·26	1·61	Singapore.
0	4	19	1	3	0	1	0	3	N 39° E					69								20	+8·3	17·24	9·54	+7·70	17·24	9·54	+7·70	5·28	Penang.
10	0	0	0	0	0	18	3	0	S 51° W	S 45° W	5·9	8·8	−2·9	66	−31	79	− 2	·853	−·062	5·8	+3·2	4	+0·7	6·04	2·33	+3·71	6·04	2·33	+3·71	2·51	Trincomalee
14	0	1	2	1	1	10	2	0	S 35° W	S 45° W	3·5	6·7	−3·2	33	−45	89	+ 6	·891	−·039	8·1	+1·6	20	+6·9	20·02	10·92	+9·10	20·02	10·92	+9·10	3·99	Colombo.
0	3	0	0	0	0	2	19	7	N 75° W		7·9			86		89		·868		6·1		5		1·87	3·21	−1·34	1·87	3·21	−1·34	0·80	Hambantota.
3	5	0	0	0	1	7	6	9	N 74° W	N 69° W	5·3	7·4	−2·1	55	−21					4·1	−1·1	8	−0·6	9·84	5·78	+4·06	9·84	5·78	+4·06	4·23	Minicoy.
0	8	1	0	0	0	2	5	15	N 42° W		6·9			74		67	− 9	·879	−·052	4·6	−1·2	3	−1·0	1·95	2·96	−1·01	1·95	2·96	−1·01	0·86	Amini Divi.
																									0·45			0·45			Gvantse.
																									2·05			2·05			Pharijong.
24	0	5	1	1	0	0	0	0	N 59° E		1·4			19		80	− 2	·441	−·003	5·5	+1·5	22	+1·9	15·69	19·11	−3·42	15·69	19·11	−3·42	1·93	Gangtok.

* Mean of 30 days.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs.

Number of Sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Extra India—*concld.*																					
	Gartok (*c*)	15,100																				
	Kashgar (*c*)	4,255	25·387	−·163		25·770	2nd	25·120	7th	71·4	57·5	86·3	+5·3	58·8	+1·1	72·5	+3·2	27·5	97·3	7th	48·3	2nd & 3rd
	Kabul (*c*)		24·099	−·141		24·180	25th	24·050	4th & 11th.	54·1	50·8	83·7	+2·1	51·6	−0·2	67·7	+0·9	32·1	90·6	3rd & 28th	47·2	19th
	Meshed	3,104																				
	Jask	13	29·740	−·013	29·707	29·888	7th	29·597	30th	82·5	78·1	93·6	+1·4	77·6	−0·8	85·6	+0·3	16·0	103·3	11th	72·0	3rd
	Muscat	20	29·772	+·019	29·740	29·894	7th	29·633	31st	91·3	79·4	98·5	+4·8	85·0	−0·7	91·8	+2·1	13·5	109·3	27th	78·2	5th
	Bushire	14	29·765	−·026	29·741	29·885	26th	29·610	31st	80·9	71·3	87·2	−1·9	75·7	+0·1	81·5	−0·9	11·5	95·4	26th	67·9	4th
	Kerman (*c*)																					
	Ispahan (*c*)	*5,817*	24·246	−·134		24·460	27th	24·060	4th	64·2	53·1	82·5	+0·1	56·3	+2·7	69·4	+1·4	26·2	96·4	31st	47·2	7th
	Tehran (*c*)	*4,002*	25·656	−·224		25·820	27th	25·460	5th	68·5	59·8	81·9	−0·9	59·3	+1·9	70·6	+0·5	22·6	98·6	31st	48·0	14th
	Baghdad	120	29·718			29·943	26th	29·522	9th	72·1	60·7	89·7		66·7		78·2		23·0	111·5	31st	60·0	16th
	Aden	94	29·766	−·013	29·792	29·831	11th	29·655	31st	84·8	79·5	91·3	−1·5	82·9	+1·6	87·1	+0·1	8·4	97·6	22nd	79·3	20th
	Zanzibar	72	30·030	+·025	30·029	30·145	27th	29·894	1st	77·9	73·5	83·4	+0·9	76·0	+0·4	79·7	+0·7	7·4	85·0	11th	73·2	29th

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level, in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

(*c*) Aneroid.

B—*concluded.*

at 212 stations in India, etc., in May, 1919—*concluded.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from Normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to May 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Extra India—*concld.*
																									0			0			Gartok.
26	1	0	0	0	0	0	2	2	N 56° W	N 50° W	2·4	3·3	−0·9	10	− 3	42	− 2	·325	+·038	4·0	+0·9	0	−1·2	0	0·70	−0·70	0	0·70	−0·70	0	Kashgar.
0	3	1	1	0	0	13	10	3	S 81° W	N 34° W				65	+54	81	+26	·335	−·013	?	?	4	+2·0	1·16	0·78	+0·38	1·16	0·78	+0·38	0·39	Kabul.
																									1·28			1·28			Meshed.
1	4	0	9	2	0	1	5	9	N 11° W	N 60° E	8·4	8·0	+0·4	27	+21	75	+ 7	·822	+·009	2·0	+1·5	1	+1·0	0·37	0	+0·37	0·37	0	+0·37	0·25	Jask.
12	0	1	4	3	0	0	1	10	N 12° W	N 36° W	2·8	3·1	−0·3	20	−22	60	+ 1	·854	+·046	0·7	0	1	+1·0	0·16	0	+0·16	0·16	0	+0·16	0·16	Muscat.
5	3	4	2	0	0	1	5	11	N 34° W	N 25° W	8·0	6·9	+1·1	53	− 2	61	− 1	·642	−·036	4·0	+1·8	1	+1·0	0·11	0·02	+0·09	0·11	0·02	+0·09	0·11	Bushire.
																															Kerman.
23	0	0	0	0	0	3	4	1	N 82° W	N 58° W	2·5	3·4	−0·9	23	−25	49	−12	·297	−·004	1·5	−0·7	0	−0·8	0·06	0·23	−0·17	0·06	0·23	−0·17	0·04	Ispahan.
18	0	1	1	0	3	6	1	1	S 34° W	S 46° W	4·5	2·6	+1·9	23	+ 7	56	+ 9	·392	+·056	2·8	+0·3	2	−0·1	0·47	0·48	−0·01	0·47	0·48	−0·01	0·19	Tehran.
0	8	6	3	4	2	1	3	4	N 21° E	N 1° E	6·8	2·9	+3·9	30	−15	52	0	·390	−·092	3·0	+1·4	3	+2·3	1·22	0·21	+1·01	1·22	0·21	+1·01	0·44	Baghdad.
9	3	16	3	1	0	0	0	0	N 48° E	S 87° E	9·7	8·2	+1·5	62	+23	83	+ 9	·938	+·023	4·8	+1·5	0	−0·3	0	0·12	−0·12	0	0·12	−0·12	0	Aden.
0	0	0	0	0	0	16	15	0	S 22° W	S 7° W	7·1	5·9	+1·2	100	+13	80	− 6	·762	−·052	5·8	−0·9	4	−7·9	2·81	10·97	−8·16	2·81	10·97	−8·16	1·18	Zanzibar.

Table C.—Abstract of observations taken at 8 hrs. at 61 fourth and fifth class stations in India, etc., in May, 1919.

Table

Abstract of observations taken at 8 hrs. at 61 fourth

Number of Sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	II.—Assam.																								
4	Bishnath	76·7	71·6	88·1	+1·3	68·8	+1·1	78·5	+1·2	19·3	95·9	16th	61·9	6th	...	...	...	...	...	...	...	...	...	...	...
	Borjuli	79·5	76·1	90·0	+2·1	69·4	−0·5	79·7	+0·8	20·6	97·0	17th	61·4	2nd	...	...	...	...	...	...	...	...	...	...	...
	Chandkhira	78·9	76·2	94·9	+5·2	70·1	+0·9	82·5	+3·1	24·8	101·6	23rd	64·1	6th	...	...	...	...	...	...	...	...	...	...	...
	Doom Dooma	76·1	72·2	90·0	+3·7	69·3	+1·2	79·7	+2·5	20·7	100·5	22nd	62·9	2nd	...	...	...	...	...	...	...	...	...	...	...
	Dikom	76·9	72·5	87·6	+1·4	69·7	−0·3	78·7	+0·5	17·9	98·4	22nd	63·4	1st & 5th.	...	...	...	...	...	...	...	...	...	...	...
	Golaghat	76·3	73·1	87·5	+1·7	67·4	...	77·5	...	20·1	94·9	16th	59·2	6th	...	...	...	...	...	...	...	...	...	...	...
	Hailakandi	79·2	74·7	90·9	+0·8	72·5	+0·6	81·7	+0·7	18·4	98·4	16th	66·2	1st & 2nd.	...	...	...	...	...	...	...	...	...	...	...
	Jorehat	76·9	72·9	87·5	+1·3	70·6	−0·5	79·1	+0·4	16·9	95·7	19th	62·7	6th	...	...	...	...	...	...	...	...	...	...	...
	Lumding*	78·0	73·5	91·0	...	69·8	...	80·5	...	21·1	96·5	23rd	49·8	1st	...	...	...	...	...	...	...	...	...	...	...
	Messa	82·8	76·0	93·0	+1·4	69·7	+1·0	81·3	+1·2	23·3	99·5	22nd	60·3	6th	...	...	...	...	...	...	...	...	...	...	...
	Panerihat	71·1	69·4	87·7	+2·7	66·2	−2·6	76·9	+0·1	21·5	94·5	19th	58·3	6th	...	...	...	...	...	...	...	...	...	...	...
	III.—Bengal.																								
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Brahmanbaria	84·8	78·7	94·1	+3·2	74·3	+0·6	84·2	+1·9	19·8	97·6	21st	68·1	21st	...	...	...	...	...	...	...	...	...	...	...
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Goalundo	86·7	80·6	94·9	+2·3	72·7	−0·7	83·8	+0·8	22·2	100·5	22nd	66·3	4th	...	...	...	...	...	...	...	...	...	...	...
	Pabna	83·1	78·1	96·1	+0·4	74·4	+1·1	85·3	+0·7	21·7	104·3	21st	66·2	4th	...	...	...	...	...	...	...	...	...	...	...
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dam Dim	76·2	73·9	93·2	+2·7	68·6	−1·3	80·9	+0·7	24·6	97·9	19th	62·6	1st	...	...	...	...	...	...	...	...	...	...	...
	Kalchini	81·9	77·6	89·8	+1·0	69·4	−0·7	79·6	+0·1	20·4	94·1	19th & 20th.	61·0	6th	...	...	...	...	...	...	...	...	...	...	...
	Nagrakata	81·9	73·2	89·8	+1·5	69·9	−0·3	79·9	+0·6	19·9	95·2	21st	63·0	2nd	...	...	...	...	...	...	...	...	...	...	...
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raniganj (Asansol)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IV.—Bihar and Orissa.																								
7	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzaffarpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Motihari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Mean of 28 days.

C.

and fifth class stations in India, etc., in May, 1919.

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st May 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				II.—Assam.
...	...	...	...	...	78	−14	·707	−·094	...	...	15	+ 0·1	13·16	9·83	+ 3·33	13·16	9·83	+ 3·33	2·00	Bishnath.
...	...	...	...	...	85	− 2	·865	+ ·067	...	...	17	+ 2·4	13·06	9·72	+ 3·34	13·06	9·72	+ 3·34	1·72	Borjuli.
...	...	...	...	...	88	+ 4	·867	+ ·068	...	...	10	− 6·8	9·04	16·85	− 7·81	9·04	16·85	− 7·81	1·83	Chandkhira.
...	...	...	...	...	83	− 9	·740	− ·042	...	...	9	− 3·6	10·22	8·78	+ 1·44	10·22	8·78	+ 1·44	3·55	Doom Dooma.
...	...	...	...	...	81	− 6	·742	− ·011	...	...	11	− 3·5	12·76	10·86	+ 1·90	12·76	10·86	+ 1·90	4·35	Dikom.
...	...	...	...	...	85	− 5	·771	− ·028	...	...	11	− 2·8	4·39	9·00	− 4·61	4·39	9·00	− 4·61	1·15	Golaghat.
...	...	...	...	...	80	− 7	·798	+ ·001	...	...	17	+ 0·8	12·00	16·69	− 4·69	12·00	16·69	− 4·69	3·57	Hailakandi.
...	...	...	...	...	83	− 3	·759	− ·022	...	...	11	− 3·7	7·90	10·94	− 3·04	7·90	10·94	− 3·04	2·06	Jorehat.
...	...	...	...	...	80	...	·762	...	...	...	7	− 2·9	2·65	5·55	− 2·90	2·65	5·55	− 2·90	0·83	Lumding.
...	...	...	...	...	72	− 9	·810	+ ·007	...	...	8	− 6·6	3·77	8·49	− 4·72	3·77	8·49	− 4·72	0·75	Messa.
...	...	...	...	...	91	0	·698	− ·013	...	...	17	+ 2·6	8·79	11·09	− 2·30	8·79	11·09	− 2·30	1·41	Panerihat.
																				III.—Bengal.
...	...	...	...	...	...	...	...	...	...	...	5	− 7·2	2·55	12·56	−10·01	2·55	12·56	−10·01	1·04	Comilla.
...	...	...	...	...	76	− 6	·899	+ ·024	...	...	5	− 8·3	2·46	14·72	−12·26	2·46	14·72	−12·26	1·07	Brahmanbaria.
...	...	...	...	...	...	...	...	...	...	...	10	− 1·2	6·85	9·13	− 2·28	6·85	9·13	− 2·28	1·80	Faridpur.
...	...	...	...	...	76	− 3	·965	+ ·079	...	...	11	+ 0·5	6·61	8·50	− 1·89	6·61	8·50	− 1·89	1·22	Goalundo.
...	...	...	...	...	79	− 3	·902	+ ·016	...	...	10	+ 0·3	2·74	7·65	− 4·91	2·74	7·65	− 4·91	0·81	Pabna.
...	...	...	...	...	...	...	...	...	...	...	6	− 4·7	4·60	8·41	− 3·81	4·60	8·41	− 3·81	1·50	Sirajganj.
...	...	...	...	...	...	...	...	...	...	...	7	− 0·7	1·97	5·73	− 3·76	1·97	5·73	− 3·76	0·47	Rampur Boalia.
...	...	...	...	...	...	...	...	...	...	...	6	+ 0·1	4·02	4·53	− 0·51	4·02	4·53	− 0·51	2·34	Malda.
...	...	...	...	...	...	...	...	...	...	...	6	− 3·3	7·52	11·47	− 3·95	7·52	11·47	− 3·95	2·13	Rangpur.
...	...	...	...	...	90	+ 1	·809	− ·003	...	...	16	+ 0·6	9·91	15·51	− 5·60	9·91	15·51	− 5·60	2·48	Dam Dim.
...	...	...	...	...	81	− 1	·897	+ ·050	...	...	14	− 1·2	8·23	14·92	− 6·69	8·23	14·92	− 6·69	3·12	Kalchini.
...	...	...	...	...	65	−18	·700	− ·069	...	...	12	− 4·4	8·33	14·60	− 6·27	8·33	14·60	− 6·27	1·97	Nagrakata.
...	...	...	...	...	...	...	...	...	...	...	15	+ 0·3	8·61	16·22	− 7·61	8·61	16·22	− 7·61	1·30	Cooch Behar.
...	...	...	...	...	...	...	...	...	...	...	10	+ 1·7	7·77	7·14	+ 0·63	7·77	7·14	+ 0·63	2·70	Krishnagar.
...	...	...	...	...	...	...	...	...	...	...	10	+ 4·0	11·47	4·46	+ 7·01	11·47	4·46	+ 7·01	3·30	Bankura.
...	...	...	...	...	...	...	...	...	...	...	5	− 0·4	3·37	4·07	− 0·70	3·37	4·07	− 0·70	1·42	Raniganj (Asansol).
																				IV.—Bihar and Orissa.
...	...	...	...	...	...	...	...	...	...	...	3	− 0·9	1·00	2·21	− 1·21	1·00	2·21	− 1·21	0·30	Hazaribagh.
...	...	...	...	...	...	...	...	...	...	...	4	− 0·2	2·86	3·24	− 0·38	2·86	3·24	− 0·38	2·33	Bhagalpur.
...	...	...	...	...	...	...	...	...	...	...	2	− 1·6	0·60	2·50	− 1·90	0·60	2·50	− 1·90	0·27	Muzaffarpur.
...	...	...	...	...	...	...	...	...	...	...	4	− 0·2	2·94	2·87	+ 0·07	2·94	2·87	+ 0·07	2·16	Motihari.
...	...	...	...	...	...	...	...	...	...	...	1	− 0·9	0·39	1·53	− 1·14	0·39	1·53	− 1·14	0·36	Chapra.
...	...	...	...	...	...	...	...	...	...	...	1	− 1·1	0·48	1·48	− 1·00	0·48	1·48	− 1·00	0·46	Arrah.
...	...	...	...	...	...	...	...	...	...	...	3	+ 1·7	2·29	0·77	+ 1·52	2·29	0·77	+ 1·52	1·31	Dehri.

Table

Abstract of observations taken at 8 hrs. at 61 fourth

Number of Sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	V.—United Provinces of Agra and Oudh.																								
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehra Dun	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IX.—Rajputana.																								
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XII.—Central Provinces.																								
23	Chhindwara	86·1	71·0	101·7	...	75·2	...	88·5	...	26·5	110·2	31st	68·7	9th	17	1	0	0	1	1	2	3	6	N 76° W	...
	XIII.—Hyderabad.																								
27	Parbhani	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XV.—Madras.																								
21	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Anantapur	84·1	80·0	102·0	...	78·2	...	90·1	...	23·8	106·0	16th	72·6	31st	...	...	...	...	...	...	...	...	...	...	...
33	Guntur	87·6	80·4	102·6	...	80·8	...	91·7	...	21·8	113·0	23rd	69·8	9th	...	...	...	...	...	...	...	...	...	...	...
	Koraput	78·1	69·0	93·5	...	70·6	...	82·1	...	22·9	99·9	22nd & 25th.	59·8	12th	...	...	...	...	...	...	...	...	...	...	...
	Bay Islands.																								
1	Car Nicobar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kashmir.																								
13	Jammu	85·7	68·3	98·1	...	76·6	...	87·4	...	21·5	107·7	30th	68·1	8th	0	13	12	2	0	1	1	1	1	N 21° E	...
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kargil	54·6	43·5	73·7	...	36·2	...	55·0	...	37·5	79·8	28th	25·1	3rd	2	0	0	0	0	0	0	0	29	N 45° W	...
	Baluchistan.																								
15	Harnai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill stations, exclusive of Kashmir.																								
	Panighatta	76·8	70·3	89·7	+1·8	70·3	+0·2	80·0	+1·0	19·4	94·7	21st	61·1	5th	...	...	...	...	...	...	...	...	...	...	...
	Kurseong	69·0	67·1	74·9	+2·2	60·8	+0·1	67·9	+1·1	14·1	78·3	21st	54·9	4th	...	...	...	...	...	...	...	...	...	...	...
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ringim	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dharampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mussooree	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Poo	...	...	69·8	+1·6	46·0	−0·7	57·9	+0·5	23·8	75·6	25th	41·0	10th	14	0	0	1	4	3	7	2	0	S 15° W	...
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pishin	...	...	87·2	−1·2	50·9	0	69·1	−0·6	36·3	95·4	31st	45·1	6th & 20th.	...	...	...	...	...	...	...	...	...	...	...

C—*continued.*

and fifth class stations in India, etc., in May, 1919—*continued.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st May 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				V.—United Provinces of Agra and Oudh.
...	...	...	...	...	...	...	...	...	...	...	2	+0·5	1·22	0·59	+0·63	1·22	0·59	+0·63	0·88	Meerut.
...	...	...	...	...	...	...	...	...	...	...	2	−1·4	1·02	1·42	−0·40	1·02	1·42	−0·40	0·55	Dehra Dun.
																				IX.—Rajputana.
...	...	...	...	...	...	...	...	...	...	...	3	+1·4	1·85	0·73	+1·12	1·85	0·73	+1·12	1·30	Udaipur.
																				XII.—Central Provinces.
2·6	...	...	26	...	47	...	·578	...	2·0	...	3	+1·7	0·82	0·46	+0·36	0·82	0·46	+0·36	0·33	Chhindwara.
																				XIII.—Hyderabad.
...	...	...	...	...	...	...	...	...	...	...	2	+0·9	0·33	0·50	−0·17	0·33	0·50	−0·17	0·11	Parbhani.
																				XV.—Madras.
...	...	...	...	...	...	...	...	...	...	...	1	+1·4	1·53	1·42	+0·11	1·53	1·42	+0·11	0·96	Tinnevelly.
...	...	...	...	...	83	...	·973	...	4·1	...	5	+0·6	3·45	2·22	+1·23	3·45	2·22	+1·23	0·98	Anantapur.
...	...	...	...	...	73	...	·938	...	1·2	...	4	+1·7	4·67	1·49	+3·18	4·67	1·49	+3·18	2·18	Guntur.
...	...	...	...	...	63	...	·605	...	...	...	5	...	1·82	...	...	1·82	...	...	0·63	Koraput.
																				Bay Islands.
...	...	...	...	...	...	...	...	...	...	...	15	+0·1	8·08	13·08	−5·00	8·08	13·08	−5·00	1·98	Car Nicobar.
																				Kashmir.
...	...	...	71	...	40	...	·481	...	1·3	...	1	−0·8	0·40	0·55	−0·15	0·40	0·55	−0·15	0·30	Jammu.
...	...	...	...	...	...	...	...	...	...	...	7	−1·8	2·36	5·06	−2·70	2·36	5·06	−2·70	0·43	Sonamarg.
...	...	...	94	...	40	...	·168	...	2·6	...	0	−2·1	0·21	1·09	−0·88	0·21	1·09	−0·88	0·08	Kargil.
																				Baluchistan.
...	...	...	...	...	...	...	...	...	...	...	1	+0·5	0·80	0·19	+0·61	0·80	0·19	+0·61	0·63	Harnai.
																				Hill stations, exclusive of Kashmir.
...	...	...	...	...	71	−2	·656	−·050	...	...	8	−5·3	7·37	11·43	−4·06	7·37	11·43	−4·06	2·30	Panighatta.
...	...	...	...	...	90	+11	·641	+·130	...	...	11	−4·2	6·60	11·53	−4·93	6·60	11·53	−4·93	1·43	Kurseong.
...	...	...	...	...	...	...	...	...	...	...	24	−0·2	19·15	18·98	+0·17	19·15	18·98	+0·17	1·61	Gnatong.
...	...	...	...	...	...	...	...	...	...	...	19	+6·0	6·29	5·84	+0·45	6·29	5·84	+0·45	1·36	Lachung.
...	...	...	...	...	...	...	...	...	...	...	18	−3·0	6·36	19·09	−12·73	6·36	19·09	−12·73	1·22	Ringim.
...	...	...	...	...	...	...	...	...	...	...	2	...	1·22	...	...	1·22	...	...	0·90	Dharampore.
...	...	...	...	...	...	...	...	...	...	...	6	+1·8	3·30	2·31	+0·99	3·30	2·31	+0·99	1·45	Mussoorie.
...	...	...	36	...	...	...	...	...	3·9	+0·9	1	−1·2	0·14	0·91	−0·77	0·14	0·91	−0·77	0·10	Poo.
...	...	...	...	...	...	...	...	...	...	...	6	+0·4	2·16	2·43	−0·27	2·16	2·43	−0·27	0·33	Kailang.
...	...	...	...	...	...	...	...	...	1·7	...	2	+1·5	1·17	0·16	+1·01	1·17	0·16	+1·01	0·66	Pishin.

Table

Abstract of observations taken at 8 hrs. at 61 fourth

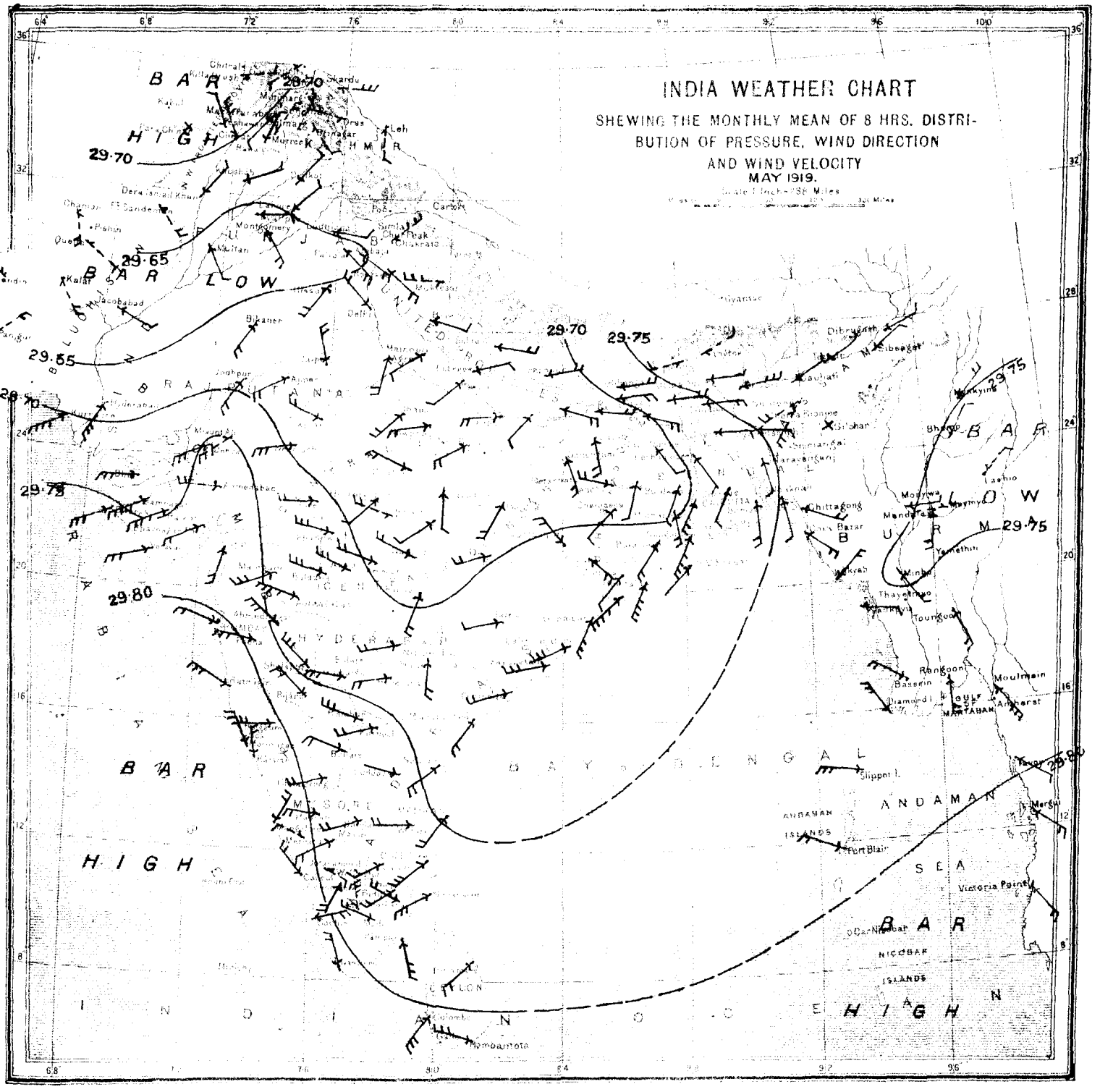
Number of Sub-division.	Station.	Temperature of air.													Wind direction.										
															Number of winds from										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Extra India.																								
	Chumbi. . . .	50·3	48·1	58·3	...	42·3	...	50·3	...	16·0	66·0	3rd	31·8	8th	...	...	...	...	...	...	...	...	..	...	...
	Pemba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abadan	89·0	68·1	98·5	...	74·7	...	86·6	...	23·8	120·0	29th & 30th.	67·0	18th	0	25	0	0	0	6	0	0	0	N	...

C—*concluded.*

and fifth class stations in India, etc., in May, 1919—*concluded.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal	Total rainfall from 1st to 31st May 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				Extra India.
...	...	...	...	...	87	...	·320	...	4·5	...	9	−1·9	4·83	4·24	+0·59	4·83	4·24	+0·59	1·06	Chumbi.
...	...	...	...	...	...	...	...	...	...	...	11	−8·1	13·30	17·26	−3·96	13·30	17·26	−3·96	2·87	Pemba.
...	...	...	61	...	36	...	·402	...	...	...	1	...	0·26	...	...	0·26	...	...	0·25	Abadan.

SGPI-21-465DGO-30-6-22—325.

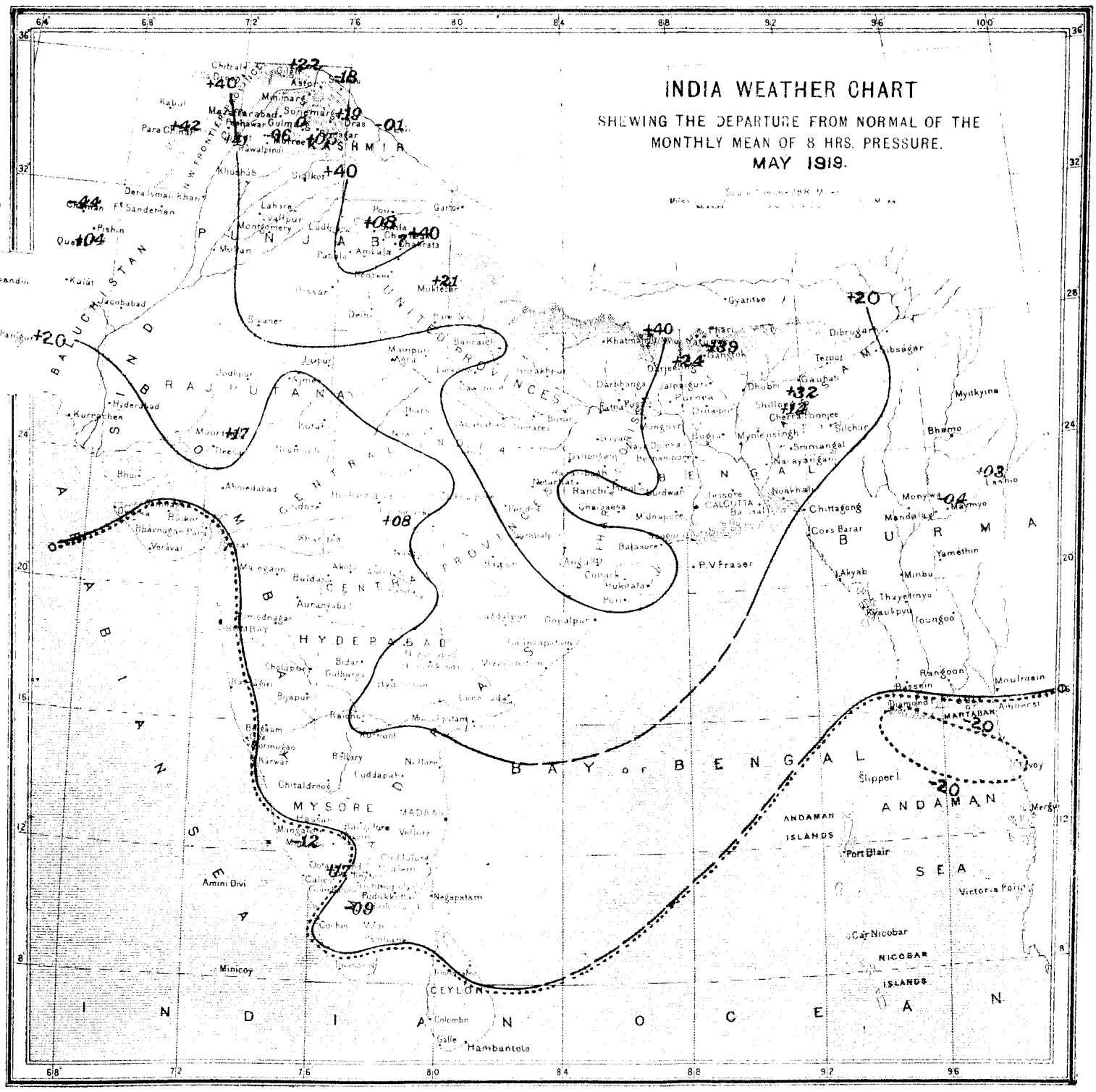


The lines of the above chart represent isobars or lines of equal barometric pressure, the numbers attached indicating the barometric pressure in inches and being drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the normal distribution of pressure.

The mean 8 hrs. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table B of the 8 hrs. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	...	one feather added to the wind arrow.
,, ,,	2 to 5 ,, ,, ,,	...	two feathers ,, ,, ,, ,,
,, ,,	5 to 10 ,, ,, ,,	...	three ,, ,, ,, ,, ,,
,, ,,	10 to 20 ,, ,, ,,	...	four ,, ,, ,, ,, ,,
	over 20 ,, ,, ,,	...	five ,, ,, ,, ,, ,,

Wind strengths are based on factor 2·2 for the standard type of Beckley Robinson anemograph, instead of 3·0 as used for this plate up to December 1911 inclusive.



The chart shows the departure from normal of the mean during the month of 8 hrs. pressure by means of lines drawn for equal amounts of departure. The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no departure, the dotted line facing the area of deficient pressure or negative departures.

CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MAXIMUM TEMPERATURE.

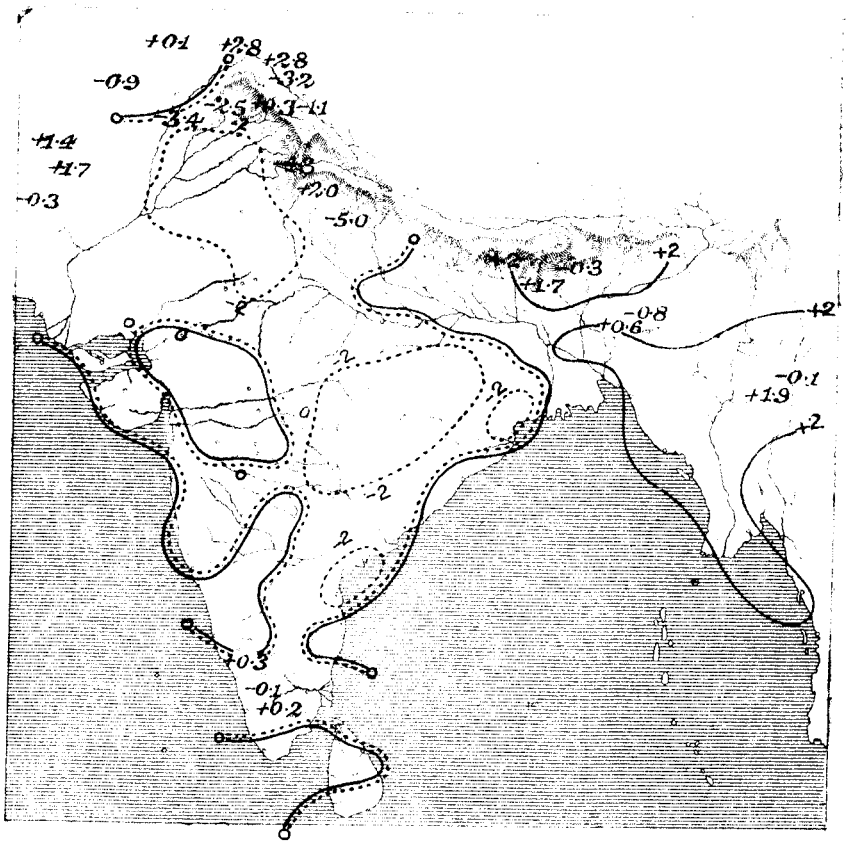


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MINIMUM TEMPERATURE.

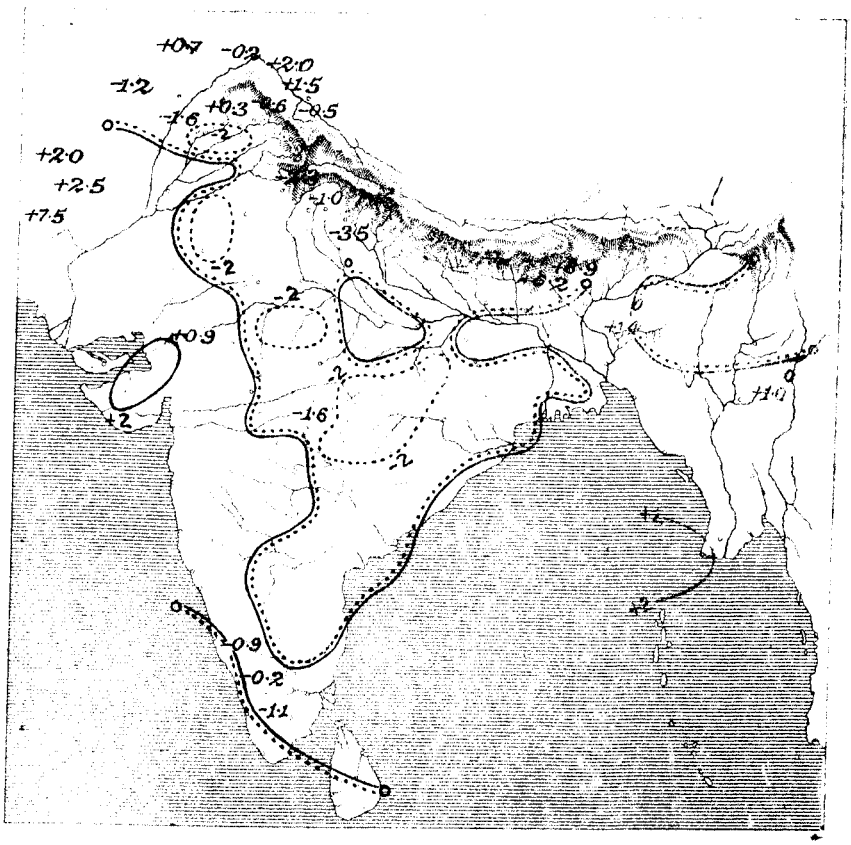


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MEAN TEMPERATURE.

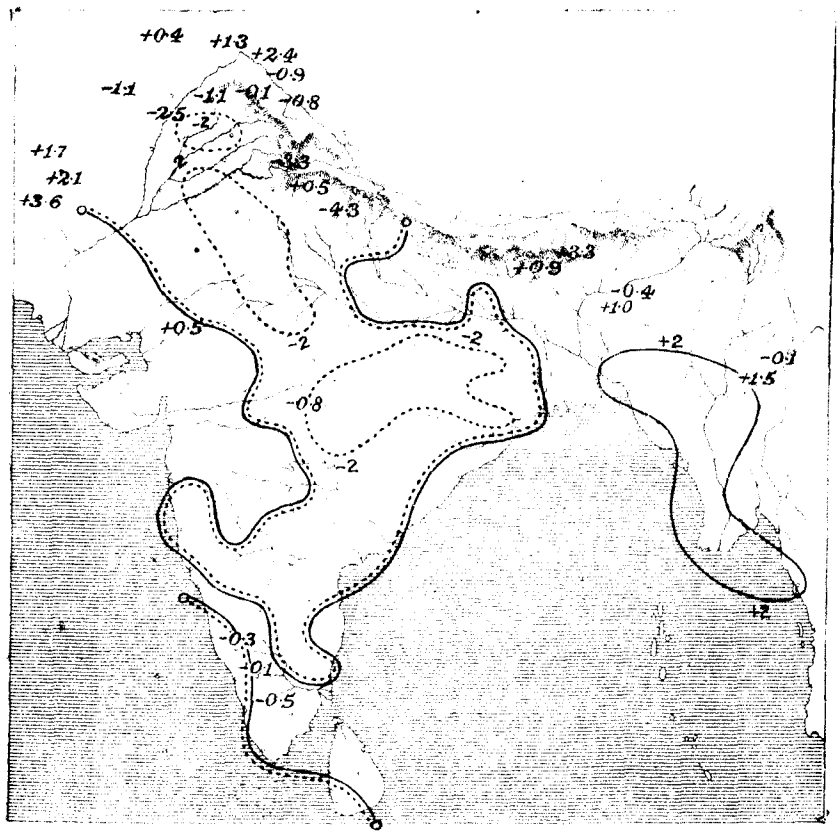


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF ABSOLUTE HUMIDITY AT 8 HRS.

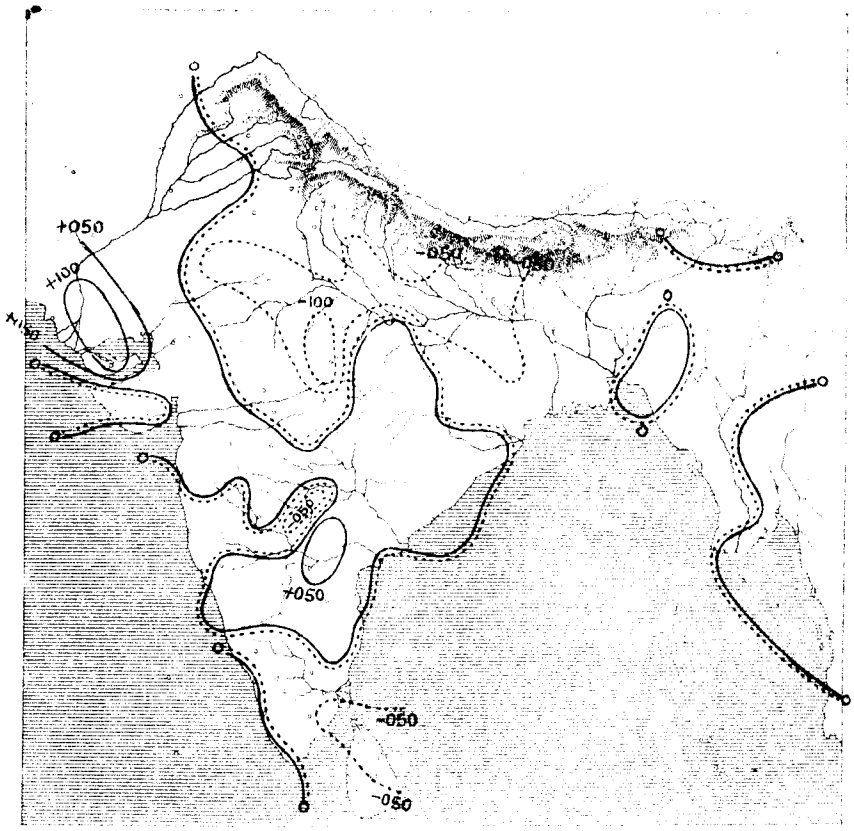


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF RELATIVE HUMIDITY AT 8 HRS

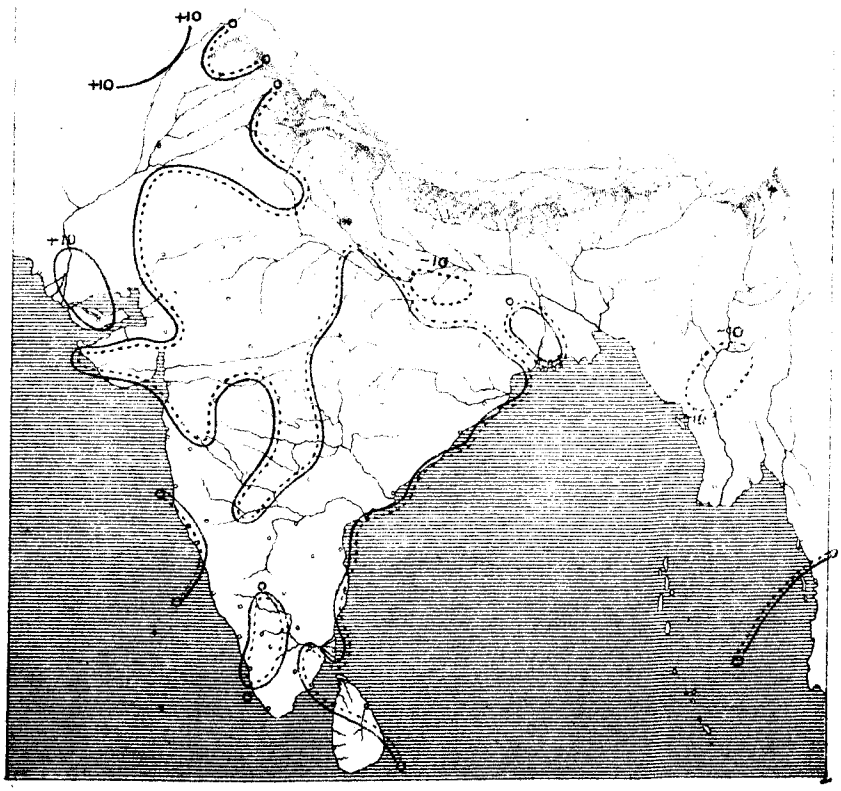


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF CLOUD AMOUNT AT 8 HRS.

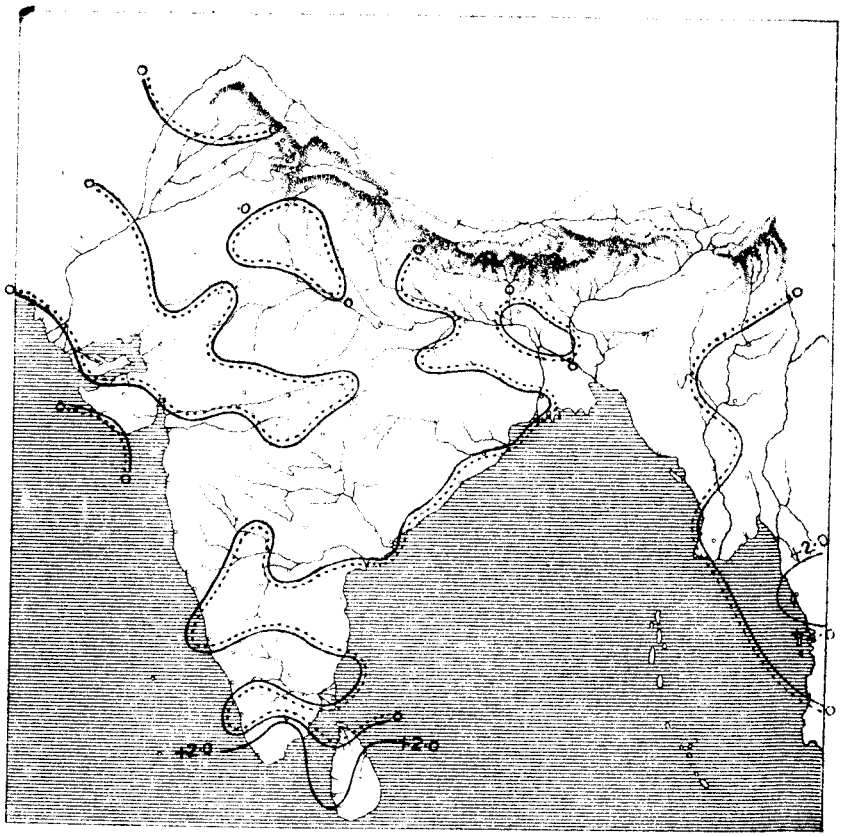
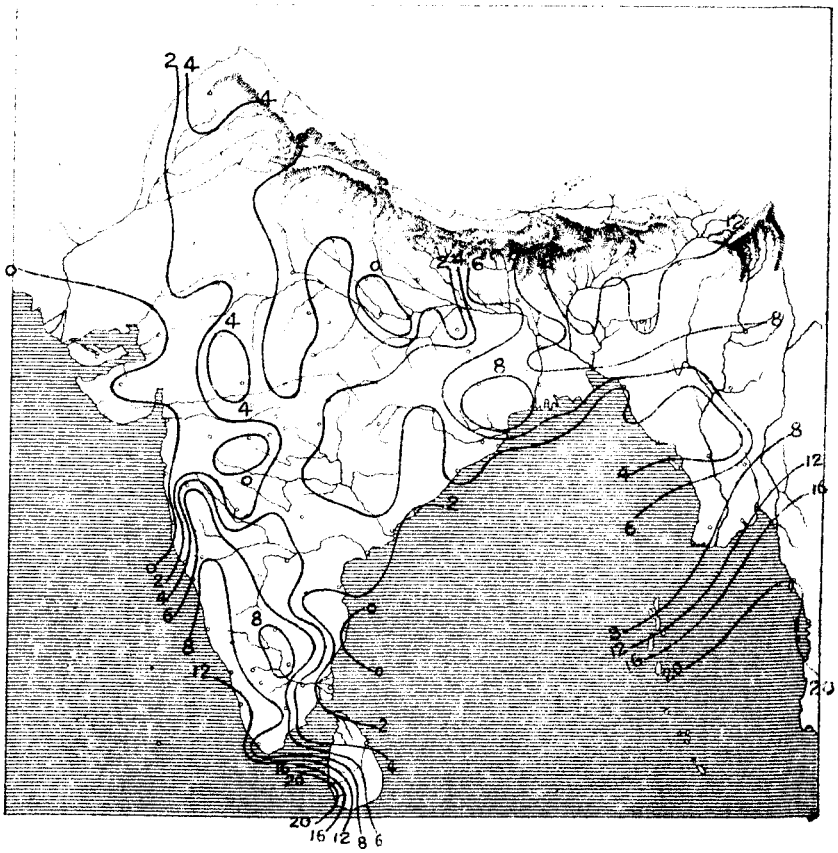
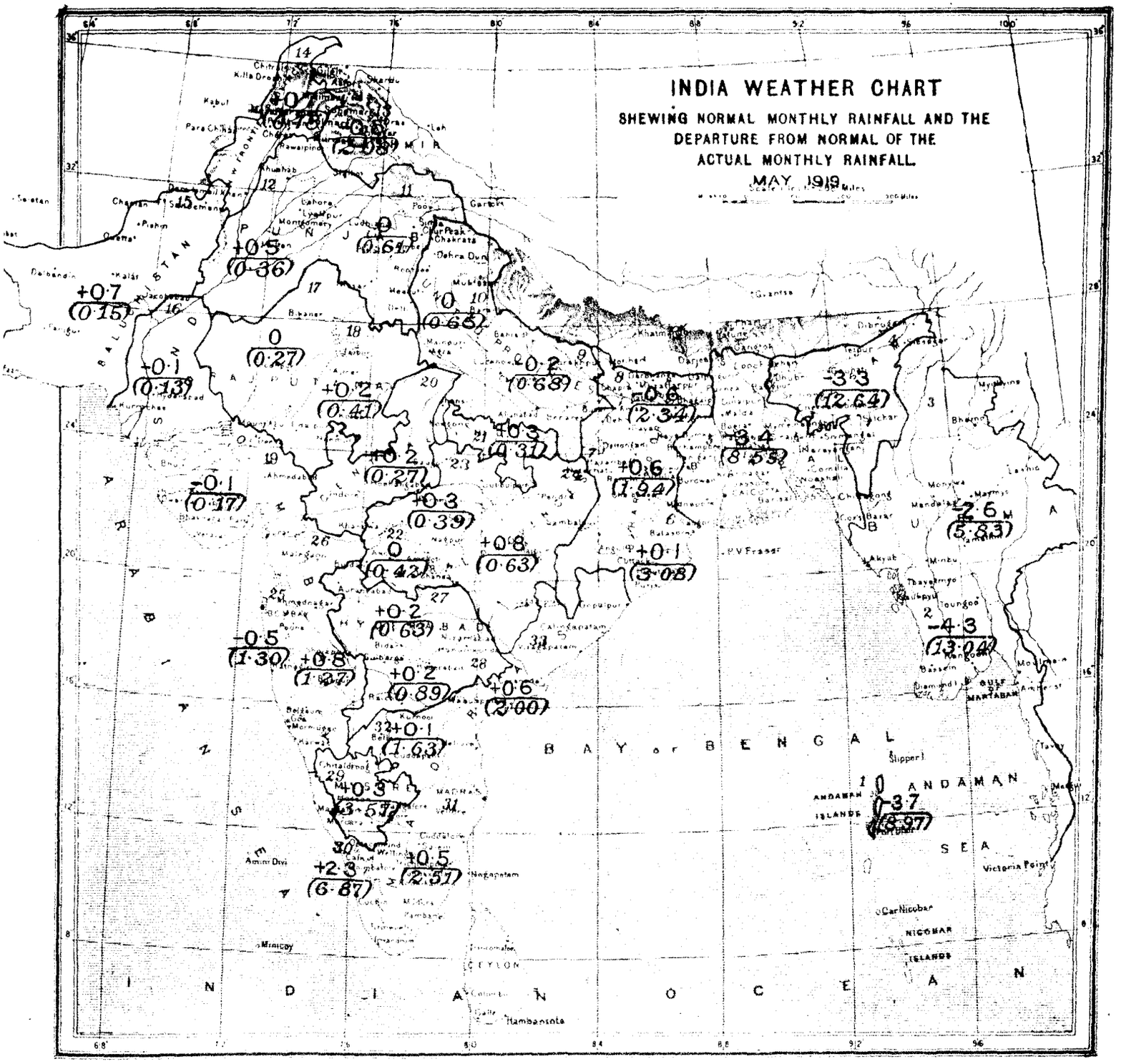


CHART SHEWING THE TOTAL NUMBER OF DAYS IN THE MONTH ON WHICH RAINFALL EQUALLED OR EXCEEDED 0·10 INCH.

(BASED ON THE RETURNS OF TABLE B.)





The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal monthly rainfall, the numbers above these give the departures from normal of the average actual rainfall over the divisions.

1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North

GOVERNMENT OF INDIA

METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, JUNE, 1919.

INTRODUCTION.

THIS review of the weather in India during the month of June, 1919, is based on observations taken daily at 8 hrs. at 211 stations, and on additional observations taken at 10 hrs. and 16 hrs. at 13 stations. In the rainfall summary have been utilized the data furnished by the meteorological observatories, and rainfall statements of the month published by the Provincial Governments.

The brief notes on solar, magnetic and seismic disturbances are supplied by the chief observatories in the Indian area.

For a statement of the methods adopted in recording and tabulating the data, for each of the elements of observation, reference should be made to the introductory portion of the review for January.

Summary of the chief features of the weather in India during the month.

2. The storm which formed in the Arabian Sea at the end of May in front of the monsoon wave disappeared near the Arabian coast on the 2nd June, and there was on the 3rd a marked increase of rainfall in the southern half of the Peninsula; by the 6th the monsoon had penetrated over practically the whole of the Peninsula. In the Bay of Bengal also monsoon conditions appeared early in the mont and produced a depression which introduced the rains into Bihar and Orissa and the United Provinces more than a week before the normal date.

The month's rainfall was in defect over the whole of northern India with the exception of Bengal, Orissa and Chota Nagpur, but over the country as a whole it was above normal.

Cloud amount was in excess over the greater part of Burma, in Bihar and Orissa, the Central Provinces, Central India West, south Rajputana, Gujarat and the greater part of the Peninsula, and was in defect generally elsewhere. Humidity was high from the Bombay Deccan to Orissa and Chota Nagpur. High temperatures prevailed in the Punjab and the surrounding areas, the maximum at Jacobabad having reached 127°, which is 1° higher than the highest previously on record.

The mean barometric pressure over the plains of India was 0·028″ in defect.

Solar, magnetic and seismic disturbances.

KODAIKANAL OBSERVATORY.

3. *Solar Observations.*—There were four days on which no observations were possible during the month. The prominence record was complete on 17 days and imperfect on 19.

Sunspots.—As many as 32 new groups were recorded, giving a daily average of 6·4. The average life of a spot was 5·3 days. The spots were distributed in latitude as follows:—

TABLE 1.

—	0°—10°	11°—20°	21°—30°	Mean latitude.	Extreme latitude.
North . . .	5	7	1	11°·8	5° & 23°
South . . .	8	10	1	12°·8	3° & 23°

Prominences.—18 prominences a minute or more in height, and five metallic prominences were observed. The tallest prominence was 160″ high photographed at +41° east on the 24th.

Magnetic disturbances.—"Moderate" disturbances were registered from the 1st to the 6th, 9th to 15th, on the 18th, from the 24th to 26th and from 28th to 29th.

J. EVERSHED,
Director,
Kodaikanal and Madras Observatories.

Seismic records.

$\phi = 10° 13' 50''$; $\lambda = 77° 28' 00''$; $h = 2343$ m. *Subsoil* Rock.

Apparatus.—Milne's Horizontal Pendulum Seismograph.

TABLE 2.

	V	To	ϵ	$\frac{r}{To^2}$
AN:				
AE:	9·76	17·6	1	2·6
AZ:				

Date	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance. Δ (Km.).	Remarks.
1919.		h. m. s.						
June 1st	e P	7 05 48	...	...	...	...	...	
	e L	7 07 18	...	...	...	...	...	
	M	7 08 18	...	...	50	...	...	
	F	7 16 30	...	...	...	...	...	
June 1st	e P	15 06 12	...	...	...	...	...	
	F	15 07 48	...	...	...	...	...	Widening of line.
„ 7th	e P	14 19 12	...	...	...	...	...	
	F	14 20 42	...	...	...	...	...	Widening of line.
„ 7th	e P	14 59 06	...	...	...	...	...	
	F	15 00 24	...	...	...	...	...	Widening of line.
„ 7th	i P	15 08 00	...	...	...	...	...	
	F	15 10 18	...	...	30	..	...	Earthquake heard and felt. Line displaced towards east.
„ 10th	e P	21 14 24	...	...	...	...	...	
	F	21 16 24	...	...	...	...	...	Widening of line.
„ 13th	e P	12 20 48	...	...	...	...	...	
	F	12 23 48	...	...	...	...	...	Widening of line.
„ 13th	e P	18 48 30	...	...	...	...	...	
	F	18 51 12	...	...	...	...	...	Widening of line.
„ 20th	e P	14 02 48	...	...	...	...	...	
	F	14 04 00	...	...	...	...	...	Widening of line.
„ 20th	e P	17 40 12	...	...	...	...	...	
	F	17 41 42	...	...	...	...	...	Widening of line.

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) An.	Ae.	Az.	Distance. Δ (Km.).	Remarks.
1919.		h. m. s.						
June 20th	e P	18 17 12	...	...	...	...	...	
	F	18 19 00	...	...	...	...	...	Widening of line.
,, 26th	e P	17 39 54	...	...	...	...	...	
	F	17 46 48	.	...	...	...	...	Widening of line.
,, 28th	e P	5 13 54	...	...	...	...	...	
	e L	5 15 54	...	...	...	...	...	
	M	5 18 00	...	...	30	...	...	
	F	5 27 42	...	...	...	...	...	
,, 28th	e P	10 44 48	...	...	...	...	...	
	F	10 46 18	...	...	...	..	...	Widening of line.
,, 30th	e P	0 43 48	...	...	..	...	...	
	e L	0 54 36	...	...	...	...	...	
	M	0 56 42	...	..	50	...	...	
	F	1 17 12	...	...	...	...	...	
,, 30th	e P	5 53 48	...	...	...	...	...	
	F	5 55 42	...	...	...	...	...	Widening of line.
,, 30th	e P	7 40 48	...	...	...	...	...	
	e L	7 47 54	...	...	...	...	...	
	M	7 52 36	...	...	450	...	...	
	F	8 20 18	...	...	...	...	...	Air tremors during high wind were frequent during the month.

J. EVERSHED,

Director,

Kodaikanal and Madras Observatories.

BOMBAY OBSERVATORY.

Alibag magnetic record.

4. During the month of June, 1919, the traces showed 8 calm days, and 22 days of small disturbance.

The days of the month selected as "quiet" for the purposes of the Magnetic Survey of India are the 8th, 14th, 16th, 19th and 20th.

The following table represents the magnetic character of each day during the month :—

TABLE 3.

Day.	Character.	Day.	Character.	Day.	Character.	Day.	Character.
1	S	9	S	17	S	25	S
2	S	10	S	18	S	26	S
3	S	11	S	19	C	27	S
4	S	12	S	20	C	28	S
5	S	13	S	21	S	29	S
6	S	14	C	22	C	30	C
7	C	15	S	23	S		
8	C	16	C	24	S		

C = calm ; S = small ; M = moderate ; G = great ; V. G. = very great.

The mean observed absolute values of the several magnetic elements reduced to the mean monthly tabulations of the magnetograms, as also the ranges and the summed ranges of the horizontal force and declination for the month, are as follows :—

Easterly declination . . .	0° 24′ 37″.
Horizontal force	0·36923 C. G. S. unit.
Vertical force	0·17068 C. G. S. unit.
Inclination	24° 48′·5.
Horizontal force range . . .	0·00055 C. G. S. unit.
Horizontal force summed range .	0·00403 C. G. S. unit.
Declination range . . .	5′·3.
Declination summed range . .	24′·5.

(NOTE.—Summed range means sum without regard to sign of twenty-four ordinates of the diurnal inequality.)

Seismic records.

$\phi = 18° 53' 36''$; $\lambda = 72° 48' 56''$; $h = 11$ m. *Subsoil* Trap.

Apparatus.—Omori-Ewing Horizontal Pendulum (E.-W.)

TABLE 4.

	V	To	ϵ	$\frac{r}{To^2}$
AN:				
AE:	20	32	•	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance. Δ (Km.).	Remarks.
1919.		h. m. s.						
June 1st	P	*12 51 2	...	...	...	...	...	*P as shown by the float record (Tilt Seismograph).
„ 15th	P	18 53 52	...	...	...	...	...	
	M	...	...	...	...	...	...	Maximum not well marked.
„ 16th	P	...	...	...	...	...	...	Beginning uncertain.
	M	...	...	...	...	...	...	Maximum not well marked.
„ 30th	P	†7 39 34	...	...	...	...	...	†P as shown by Colaba Seismograph (E.-W.)
	M	7 48 23	...	..	85	...	...	

T. K. CHINMAYANANDAN,
Director,
Bombay and Alibag Observatories.

5.—CALCUTTA (ALIPORE) OBSERVATORY.

Seismic records.

$\phi = 22° 32'$ N; $\lambda = 88° 20'$ E; $h = 6{\cdot}4$ m. *Subsoil* Alluvial.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs.

TABLE 5.

	V	To	ϵ	$\frac{r}{To^2}$
AN:	29	18	1	
AE:	29	28	1	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance. Δ (Km.).	Remarks.
1919.		h. m. s.						
June 4th	P	1 21 18	...	...	...	...	...	
	S	1 23 18	...	...	...	...	...	
	F	1 42 42	...	...	...	...	...	
„ 15th	P	18 54 24	2	...	...	...	...	
	S	18 56 06	3	...	...	...	...	
	L	18 57 54	5	..	...	...	...	
	F	19 17 24	...	...	...	...	...	
„ 28th	P	10 30 00	3	...	...	...	...	
	S	10 32 30	6	...	...	...	...	
	F	10 52 36	...	...	...	...	...	

6.—SIMLA OBSERVATORY.

Seismic records.

$\phi = 31° 6'$ N; $\lambda = 77° 11'$ E; $h = 2{\cdot}1$ km. *Subsoil* Rock.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs (Masses 50 Kg.).

TABLE 6.

	V	To	ϵ	$\frac{r}{To^2}$
AN:	14	45	1	
AE:	14	45	1	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) An.	Ab.	Az.	Distance. Δ (Km.).	Remarks.
1919.		h. m. s.						
June 1st	e P	12 48 48	...	...	...	...	...	
	F	12 58 54	...		...	...	...	Slight local shock. Felt at Cherat and Drosh
„ 4th	e P	1 15 54	...		...	.	...	
	F	1 26 54	...	...	...	...	...	Slight local shock.
„ 8th	e P	10 42 00	...	...	...	...	..	
	F	10 46 24	...	...	...	...	...	Slight local shock.
„ 9th	e P	7 35 42	...	...	.	...	...	
	F	7 51 06	...	...	...	...	...	Tremors.
„ 15th	i P	18 51 36	...	...	...	...	...	
	M	18 52 48	...	107	...	...	...	
	F	19 05 18	...	...	...	...	...	Local shock. Felt at Amritsar, Multan, Drosh, Ghora-Dhaka, Rawalpindi, Cherat, Srinagar, Gulmarg and Murree.
„ 28th	e P	10 35 54	...	...	...	...	...	
	M	10 36 30	...	36	...	...	...	
	F	10 50 18	...	...	...	...	...	Tremors.
„ 29th	e P	23 36 18	...	...	...	...	...	
	M	0 36 06	...	214	43	...	...	
	F	1 32 00	...	...	...	...	...	Felt at Rangoon.
„ 30th	e P	7 41 30	...	...	...	..	...	
	M	7 50 30	...	50	36	...	...	
	F	8 27 00	...	...	..	...	...	

The following table contains a list of earthquakes that were reported :—

TABLE 7.

Place at which felt.	Date.	G. M. T. of earthquake.	Duration.	Intensity, Rossi-Forel scale.	No. of shocks.	Remarks.
		h. m.	sec.			
Cherat . . .	June 1st	12 45	5	5	3	
Drosh . . .	„ 1st	12 45	55	7	3	
Rawalpindi . .	„ 13th	17 46	6	6	2	
Multan . .	„ 15th	18 30	2	6	2	
Drosh . . .	„ 15th	18 45	65	7	4	
Ghora-Dhaka .	„ 15th	18 50	180	7	1	
Rawalpindi . .	„ 15th	18 50	30	7	4	
Cherat . . .	„ 15th	18 52	3	6	1	
Srinagar (Kashmir)	„ 15th	18 52	7	7	2	
Gulmarg „ .	„ 15th	18 52	30	6	1	
Ghora Gali (Murree)	„ 15th	18 55	Between 20 & 30	6	1	
Ghora-Dhaka .	„ 22nd	6 45	60	5	1	

S. SITARAMAYYA,
Scientific Assistant.

Weather in the Indian Ocean.

7. The following table gives the departures from normal of pressure and rainfall, as well as the actual and normal wind direction and velocity at the three representative stations.

TABLE 8.

—	Mauritius.	Zanzibar.	Seychelles.
Departure from normal of mean pressure	+ ·006	+ ·021	+ ·006
Actual mean wind direction . .	S 61° E	S 25° W	S 41° E
Normal mean wind direction . .	S 61° E	S 13° W	S 27° E
Actual mean wind velocity (miles per diem).	137	180	174
Normal mean wind velocity (miles per diem).	137	154	188
Rainfall departure from normal .	+ 0·06	—1·58	+ 4·45

Depressions and cyclonic storms.

8. The storm, which formed in the Arabian Sea at the end of May and reached the Arabian coast at the beginning of June, has been mentioned in the Weather Review for May, 1919.

The advance of the monsoon over the Bay of Bengal resulted in the formation of a depression on the 2nd June with centre about midway between Madras and the Andaman Islands. On the 3rd, the depression began to move northeastwards, lay off Cocanada on the 5th, and curving northeastwards was to the east of Vizagapatam on the morning of the 6th, but during the course of the day it became merged in the monsoon trough.

A depression formed on the 9th in Chota Nagpur, and it lasted till the 13th instant materially changing its position; widespread rain fell in northeast India during this period, and the Bay gradients were very steep, the winds at the head of the Bay reaching at times to hurricane force and causing very high seas.

The steamers, Lama and Bahadur and the barque Salwees encountered this rough weather, and the last-mentioned vessel had to be abandoned at the mouth of the Hooghly.

A depression appeared off the False Point—Gopalpore coast on the morning of the 30th, and moving northeastwards (along the coast) had its centre nearly fifty miles off False Point on the morning of the 1st July. The depression crossed the Orissa coast on that day, lay over Bundelkhand on the 3rd and disappeared near the hill districts of the west United Provinces on the 4th. Gales were recorded at the head of the Bay between the 27th and the 29th, that is, before the formation of the depression, but the depression itself was feeble, though on passing inland it stimulated the activity of both the monsoon currents.

Pressure.

9. The following table gives the departure from normal of the mean 8 hours pressure in the 15 chief political divisions of India.

TABLE 9.

DIVISION.	Departure from normal of mean 8 hrs. pressure.
	"
Burma	−·013
Assam	−·019
Bengal	−·027
Bihar and Orissa	−·035
United Provinces	−·027
Punjab	−·062
North-West Frontier Province	−·093
Sind	−·023
Rajputana	−·031
Bombay	−·007
Central India	−·035
Central Provinces	−·037
Hyderabad	−·026
Mysore	−·009
Madras	−·020

The following table gives a comparison of the departure from normal of the mean 8 hours pressure at 9 hill stations with the departure at an adjoining station in the plains.

TABLE 10.

HILL STATION.	Departure from normal pressure. A	PLAIN STATION.	Departure from normal pressure. B	Departure of pressure difference. B—A.
	"		"	"
Quetta	−·007	Jacobabad	−·048	−·041
Leh	+·009	Lahore	−·073	−·082
Cherat	−·028	Peshawar	−·093	−·065
Simla	−·023	Ludhiana	−·056	−·033
Mukteswar	−·013	Bareilly	−·020	−·007
Darjiling	−·020	Dhubri	−·013	+·007
Mount Abu	−·003	Deesa	+·008	+·011
Pachmarhi	−·039	Khandwa	−·026	+·013
Kodaikanal	−·020	Madura	−·015	+·005

Temperature.

10. Table 11 gives the actual temperature and its departure from normal in the 33 sub-divisions, while table 12 gives only the departures from normal in the 15 chief political divisions.

TABLE 11.

SUB-DIVISION.	ACTUAL TEMPERATURE.				DEPARTURE FROM NORMAL OF		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
1. Bay Islands	84·9	78·1	81·5	6·8	—1·1	+0·3	—1·4
2. Lower Burma	86·2	76·0	81·1	10·2	+0·2	0	+0·2
3. Upper Burma	92·3	76·3	84·4	16·0	+1·8	+0·6	+1·2
4. Assam	89·9	77·2	83·5	12·8	+1·5	+1·4	+0·1
5. Bengal	89·4	78·2	83·8	11·2	—0·5	+0·2	—0·7
6. Orissa	89·8	78·4	83·8	1[illegible]·4	—3·6	—1·1	—2·5
7. Chota-Nagpur	91·9	76·8	84·4	15·2	—4·2	—0·5	—3·7
8. Bihar	93·9	79·3	86·6	14·5	—1·9	+0·1	—2·0
9. United Provinces, East	101·1	82·7	91·9	18·3	+1·2	+1·7	—0·5
10. Do., do., West	105·1	85·3	95·2	19·8	+3·4	+3·0	+0·4
11. Punjab, East and North	108·9	86·2	97·6	22·6	+4·5	+5·5	—1·0
12. Do., South-west	110·9	86·9	98·9	24·1	+2·7	+3·7	—1·0
13. Kashmir	84·6	58·1	71·3	26·5	+3·7	+3·7	0
14. North-West Frontier Province	114·5	83·4	98·9	31·1	+7·7	+4·2	+3·5
15. Baluchistan	100·5	69·0	84·8	31·6	+4·9	+1·2	+3·7
16. Sind	103·0	82·8	92·9	20·3	0	0	0
17. Rajputana, West	108·3	84·8	96·5	23·5	+2·5	+0·7	+1·8
18. Do., East	104·6	83·9	94·3	20·7	+1·0	+0·6	+0·4
19. Gujarat	96·0	80·9	88·5	15·1	—0·2	+0·3	—0·5
20. Central India, West	96·9	76·0	86·5	20·9	—0·1	—0·7	+0·6
21. Do. do., East	103·3	84·3	93·9	19·0	+2·0	+1·8	+0·2
22. Berar	94·4	75·8	85·1	18·7	—2·0	—0·5	—1·5
23. Central Provinces, West	95·9	77·4	86·6	18·5	—2·4	—1·0	—1·4
24. Do. do., East	91·7	75·9	83·8	15·9	—3·9	—1·8	—2·1
25. Konkan	86·6	78·1	82·3	8·6	0	+0·3	—0·3
26. Bombay Deccan	88·8	72·4	80·6	16·4	—2·1	+0·2	—2·3
27. Hyderabad, North	93·9	74·2	84·0	19·7	—1·9	—0·8	—1·1
28. Do., South	93·3	74·9	84·2	18·4	—2·5	—1·3	—1·2
29. Mysore	82·9	67·9	75·4	14·9	—1·3	+0·2	—1·5
30. Malabar	84·2	75·3	79·8	8·8	—0·4	+0·4	—0·8
31. Madras, South-east	95·4	78·5	86·9	17·0	—0·9	+0·5	—1·4
32. Do., Deccan	95·0	77·6	86·3	17·4	—2·4	—0·2	—2·2
33. Do., Coast, North	92·6	79·8	86·2	12·8	—2·1	—1·5	—0·6

TABLE 12.

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+1·0	+0·3	+0·6
Assam	+1·5	+1·4	+1·4
Bengal	—0·5	+0·2	—0·1
Bihar and Orissa	—3·6	—0·4	—1·7
United Provinces	+2·2	+2·3	+2·2
Punjab	+4·0	+5·0	+4·5
North-West Frontier Province	+7·7	+4·2	+5·9
Sind	0	0	0
Rajputana	+1·6	+0·7	+1·1
Bombay	—0·8	+0·3	—0·2
Central India	+0·9	+0·5	+0·7
Central Provinces	—2·7	—1·1	—1·9
Hyderabad	—2·3	—1·1	—1·7
Mysore	—1·3	+0·2	—0·6
Madras	—1·3	—0·1	—0·7

Surface and upper air winds.

11. *Surface.*—Wind directions were on the whole normal.

The following table gives the mean wind velocity and steadiness with their departures from normal.

TABLE 13.

Division.	Hourly wind velocity.		Wind steadiness.	
	Actual.	Departure from normal.	Actual.	Departure from normal.
Burma	5·6	+1·3	61	0
Assam	2·1	—0·6	10	—15
Bengal	3·7	—0·4	57	— 2
Bihar and Orissa	4·7	+0·2	49	— 7
United Provinces	3·0	—0·3	46	+16
Punjab	4·2	+0·8	61	+27
North-West Frontier Province	1·7	—0·9	19	— 5
Sind	9·6	—0·2	77	+ 3
Rajputana	8·2	+0·8	81	+23
Bombay	8·9	—0·9	70	+ 6
Central India	6·1	—0·3	59	+ 3
Central Provinces	6·6	+0·8	74	+ 5
Hyderabad	9·9	+0·8	84	+ 9
Mysore	9·2	+1·9	87	+ 3
Madras	6·9	+1·0	70	+ 6

Upper air.—The monthly mean velocities and directions at different heights above Agra, Simla, Lahore, Bangalore Akyab, Calcutta and Bombay during the month are given in the following table.

TABLE 14.

Height above sea, kms.	Agra. Height above sea 0·17 km.				Simla. Height above sea 2·13 kms.				Lahore. Height above sea 0·21 km.				Bangalore. Height above sea 0·92 km.				Akyab. Height above sea 0·01 km.				Calcutta. Height above sea 0·01 km.				Bombay. Height above sea 0·0 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
Ground level.	30	4·6	1·3	2·8	29	1·7	0·5	305	29	1·2	0·8	128	29	8·2	7·8	264	...	...	...	...	19	2·8	1·7	193	...	...	...	...
0·5	30	8·9	4·6	251	...	...	...	...	28	7·9	3·2	173	...	...	...	...	16	7·8	6·3	174	18	6·8	4·7	204	3	3·5	2·8	207
1·0	31	8·1	3·9	278	...	...	...	...	28	5·1	3·1	263	28	8·3	7·8	263	12	7·7	6·4	178	19	6·5	5·6	215	3	4·0	1·6	238
1·5	27	6·1	3·3	314	...	...	...	...	27	4·3	3·1	306	20	10·9	9·8	281	9	6·3	3·2	189	5	4·2	3·1	210	3	3·5	1·2	283
2·0	23	5·3	3·5	342	..	...	...	...	26	4·5	3·1	310	5	12·8	12·3	268	6	5·2	1·9	226	1	4·0	4·0	260	3	4·3	0·5	136
2·5	19	6·3	4·5	353	29	5·1	4·3	309	26	4·7	3·2	316	...	...	...	...	4	5·3	1·0	151	1	3·0	3·0	125	3	4·8	2·4	122
3·0	18	8·3	6·8	352	27	7·8	7·3	313	25	5·0	3·1	315	...	...	...	...	4	5·5	0·5	108	1	2·5	2·5	140	2	4·3	2·2	175
3·5	14	9·6	7·8	352	18	10·1	8·7	316	23	5·4	3·9	325	...	...	..	...	2	6·7	2·6	9	1	4·5	4·5	13[illegible]	2	2·5	1·6	160
4·0	14	8·5	6·8	360	12	8·8	7·4	321	23	6·7	5·2	334	...	...	...	...	1	3·5	3·5	245	1	2·0	2·0	140	2	2·5	1·9	157
4·5	13	8·4	6·3	10	8	8·4	7·9	317	21	6·9	5·8	337	...	...	...	...	1	3·5	3·5	240	1	7·0	7·0	95	1	3·5	3·5	105
5·0	12	9·1	5·7	16	8	7·0	6·5	316	21	7·5	6·7	336	...	...	..	...	1	3·0	3·0	250	1	8·5	8·5	85	1	2·0	2·0	160
5·5	10	7·1	3·7	66	7	6·2	5·6	307	16	7·1	6·0	335	...	...	...	...	1	4·0	4·0	230	...	...	...	...	...	...	...	...
6·0	9	7·1	3·6	75	6	5·2	4·1	294	15	9·1	7·1	329	...	...	...	...	1	6·0	6·0	210	...	...	...	...	...	...	...	...
6·5	8	8·4	3·5	77	6	6·0	4·1	300	15	9·7	7·6	325	...	...	...	...	1	3·5	3·5	170	.	...	...	...	...	...	...	...
7·0	8	8·0	3·7	58	5	7·4	6·8	300	13	10·3	7·8	315	...	...	...	...	1	5·5	5·5	170	...	...	...	...	...	...	...	...
7·5	6	9·3	4·3	106	4	7·6	7·3	295	12	11·3	8·5	319	...	...	...	...	1	5·0	5·0	180	...	...	...	...	...	...	...	...
8·0	5	7·5	1·3	69	4	7·9	4·5	307	10	11·5	7·3	324	...	...	...	...	...	...	...	...	.	...	...	...	...	...	...	...
8·5	4	4·7	4·7	116	3	10·0	8·7	306	10	11·3	7·8	324	...	...	...	...	...	...	...	...	...	...	...	...	.	...	...	...
9·0	4	4·7	4·1	87	3	10·0	8·9	303	8	10·7	8·6	311	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9·5	4	6·1	5·3	91	1	7·5	7·5	290	7	11·9	10·5	303	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...
10·0	4	8·1	7·1	91	1	10·5	10·5	305	7	12·1	11·1	301	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10·5	3	7·0	6·4	100	1	10·0	10·0	280	5	11·6	10·6	304	...	...	...	...	...	...	...	...	..	...	...	...	.	...	...	...
11·0	2	6·0	5·9	129	1	10·5	10·5	285	4	9·0	8·6	285	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11·5	2	7·0	6·7	127	...	...	...	...	3	11·2	11·1	294	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12·0	2	7·3	7·1	134	...	...	...	...	1	4·5	4·5	275	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12·5	2	9·3	8·9	132	..	...	...	...	1	6·5	6·5	265	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13·0	1	13·0	13·0	150	...	...	...	...	1	7·0	7·0	275	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13·5	1	14·5	14·5	150	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

N = Number of flights.
V = Velocity of winds regardless of direction, metres per Sec.
v = Velocity of Resultant Wind, taking account of direction, metres per Sec.
L = Direction of Resultant Wind; North Wind = 0° or 360°, East Wind = 90°.

Humidity and cloud.

12. The following table gives the mean humidity, vapour tension and cloud amount at 8 hours with their departures from normal.

TABLE 15.

Division.	Hygrometry; 8 hrs.				Cloud.	
	Mean humidity.	Departure from normal.	Mean vapour tension in inches of mercury.	Departure from normal in inches of mercury.	Mean cloud amount at 8 hrs.	Departure from normal.
	%					
Burma . . .	86	— 1	·886	—·005	8·3	+0·5
Assam . . .	89	— 2	·913	+·033	6·4	—0·7
Bengal . .	86	0	·952	—·004	7·1	0
Bihar and Orissa .	81	+ 4	·911	+·018	6·8	+1·1
United Provinces .	60	— 4	·812	+·006	3·8	—0·2
Punjab . .	46	— 4	·717	+·043	0·7	—1·4
North-West Frontier Province.	44	+ 6	·661	+·091	0·2	—1·3
Sind . . .	70	+ 4	·909	+·037	2·1	—0·2
Rajputana .	53	— 2	·701	—·026	2·0	—0·8
Bombay . .	77	+ 2	·830	—·002	7·1	+0·8
Central India .	63	— 1	·741	—·004	5·2	0
Central Provinces .	70	+ 5	·740	+·013	6·5	+1·2
Hyderabad . .	72	+ 4	·716	+·004	7·8	+1·6
Mysore . .	81	+ 1	·644	—·009	7·9	—0·1
Madras .	74	+ 1	·814	0	6·9	+0·6

Rainfall.

13. The monsoon rains may be considered to have begun in the various divisions on the dates shown below :—

Assam	4th.
Bengal	4th.
Orissa	4th.
Chota Nagpur	5th.
Bihar	7th.
Eastern part of the United Provinces .	7th, 8th.
Gujarat	6th.
Central India	7th.
Central Provinces	7th.
The Konkan and the Bombay Deccan .	3rd.
Hyderabad	4th.
Mysore	3rd.
Malabar	3rd.
The Madras Deccan	2nd.
And the Madras Coast North . . .	4th.

There were only scattered falls in Rajputana, and the monsoon did not extend to the Punjab during the month.

A break set in on the 18th over the greater part of the country and continued for a week.

The month's fall was normal or in excess in Burma, Bengal, Bihar and Orissa, the Central Provinces, and the Peninsula, and was in defect elsewhere.

TABLE 16.

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
1. Bay Islands	21·7	15·9	14·83	13·90	+0·93	+ 7
2. Lower Burma	25·6	23·1	34·24	27·34	+6·90	+ 25
3. Upper Burma	8·8	11·0	6·19	7·97	—1·78	— 22
4. Assam	16·8	17·3	15·64	17·65	—2·01	— 11
5. Bengal	15·1	14·1	14·30	14·56	—0·26	— 2
6. Orissa	14·7	10·8	12·33	9·09	+3·24	+ 36
7. Chota Nagpur	12·5	9·8	14·05	8·08	+5·97	+ 74
8. Bihar	9·2	8·5	7·70	8·08	—0·38	— 5
9. United Provinces, East	3·0	5·4	2·26	4·71	—2·45	— 52
10. Do. do., West	2·8	4·7	1·74	3·97	—2·23	— 56

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
11. Punjab, East and North	0·8	2·9	0·38	2·06	—1·68	— 82
12. Punjab, South-west	0·2	1·5	0·04	0·83	—0·79	— 95
13. Kashmir	3·0	4·1	1·46	2·34	—0·88	— 38
14. North-West Frontier Province	0·4	1·7	0·20	0·92	—0·72	— 78
15. Baluchistan	0	0·6	0	0·39	—0·39	—100
16. Sind	0·1	0·7	0·09	0·51	—0·42	— 82
17. Rajputana, West	0·2	2·1	0·06	1·30	—1·24	— 95
18. Do., East	2·0	3·8	1·17	2·52	—1·35	— 54
19. Gujarat	5·3	5·6	3·66	5·27	—1·61	— 31
20. Central India, West	7·6	5·6	4·75	4·40	+0·35	+ 8
21. Do., East	2·3	5·0	1·33	4·18	—2·85	— 68
22. Berar	10·3	7·9	8·66	5·89	+2·77	+ 47
23. Central Provinces, West	8·9	8·4	10·34	6·77	+3·57	+ 53
24. Do., East	12·6	9·3	17·84	8·00	+9·84	+123
25. Konkan	20·2	18·2	24·75	25·60	—0·85	— 3
26. Bombay Deccan	8·8	8·0	6·12	5·32	+0·80	+ 15
27. Hyderabad, North	10·2	7·3	6·59	5·55	+1·04	+ 19
28. Do., South	8·4	6·8	6·81	4·26	+2·55	+ 60
29. Mysore	8·3	7·1	5·38	4·80	+0·58	+ 12
30. Malabar	23·2	20·8	23·15	25·68	—2·53	— 10
31. Madras, South-east	3·3	2·9	1·78	1·56	+0·22	+ 14
32. Do., Deccan	5·1	4·4	3·17	2·34	+0·83	+ 35
33. Do. Coast, North	8·0	6·5	5·02	4·71	+0·31	+ 7

TABLE 17.

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Burma	17·07	15·45	+1·62	+10
Assam	15·64	17·65	—2·01	—11
Bengal	14·30	14·56	—0·26	— 2
Bihar and Orissa	10·38	8·33	+2·05	+25
United Provinces	1·98	4·31	—2·33	—54
Punjab	0·29	1·76	—1·47	—84
North-West Frontier Province	0·20	0·92	—0·72	—78

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Sind	0·09	0·51	—0·42	—82
Rajputana	0·82	2·13	—1·31	—62
Bombay	8·67	8·94	—0·27	— 3
Central India	3·48	4·32	—0·84	—19
Central Provinces	13·13	7·07	+6·06	+86
Hyderabad	6·70	4·94	+1·76	+36
Mysore	5·38	4·80	+0·58	+12
Madras	6·98	7·23	—0·25	— 3
Mean of India	7·69	7·32	+0·37	+ 5

Snowfall.

14. I.—THE NORTH-WEST FRONTIER PROVINCE.

Malakand Agency.
Khyber Agency.
Kurram.
Drosh.
} No snow fell.

Kagan Valley.—(Hazara District) 2 inches fell on the 19th between 11,000 and 17,000 feet.

II.—KASHMIR.

Very light snow (less than half an inch) fell on the 20th and 26th on the higher ranges surrounding Skardu and it was lying till the end of the month. Light falls occurred at Sonamarg on the 20th and 21st. Very light falls occurred at heights over 16,000 feet in the mountains near Leh. With these exceptions it is reported that no snow fell in Kashmir.

III.—THE PUNJAB.

Chamba.—No snow fell.

Kilba (Simla Hills).—A slight fall occurred on the 7th and descended to 10,000 feet above sea level.

IV.—THE UNITED PROVINCES.

Garhwal.—During June and July about 4 feet of snow fell on peaks above 18,000 feet in the north of the district.

Almora :—

TABLE 18.

Actual falls during the month.

Locality.	Depth.		Distance below perpetual snowline.
	Feet.	Inches.	
Malla Darma	0	6	2 miles.
Malla Danpur	1	0	3 or 4 miles.
Malla Johar	2	3	.....
Byans	6	6	3 or 4 miles.
Chaudas	1	11	½ mile.

TABLE 19.

Accumulations at the end of the month.

Name of pass or peak.	Reported.	Normal.
	Feet.	Feet.
Nuwe pass	16	17
Lampia pass	8 or 9	8½
Lipulekh pass	5 or 6	6½
Binkaru pass	4	12½
Untadhura	4¼	5½
Milamdhura	1	2½
Pindari peak	1	2
Puwalidwar	1	..

V.—EASTERN HIMALAYAS.

Gangtok and Yatung.—No snow fell.

Summary.

15. Light falls occurred in the hills of the North-West Frontier Province, Kashmir and the Punjab, and fairly normal falls in the hills of the United Provinces.

S. SITARAMAYYA,
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Table A.—Abstract of observations taken at 10 hrs. and 16 hrs. at 13 stations in India, etc., in June, 1919.

Table

Abstract of observations taken at 10 hrs. and 16 hrs.

Number of sub-division.	Station.	Height of bar-dishern above sea-level in feet.	Pressure.						Temperature of air.										Temperature, wet-bulb.			
			Mean of 10 hrs.	Mean of 16 hrs.	Mean daily range.	Mean of daily mean pressures.	Departure from normal.	Mean reduced to sea level and to gravity at 45° Lat.	Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of three previous columns.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal.																					
5	Calcutta	21	29·558	29·467	·091	29·519	—·030	29·486	89·9	79·1	10·8	100·6	75·2	25·4	85·8	86·6	84·2	−0·3	77·5	80·7	81·0	79·7
	VI.—Punjab.																					
11	Lahore	702	28·751	28·649	·102	28·692	—·081	29·318	111·4	86·6	24·8	117·5	72·6	44·9	101·8	110·9	98·6	+5·6	74·8	79·6	81·1	78·5
	IX.—Rajputana.																					
18	Jaipur	1,431	28·157	28·050	·107	28·103	—·030	29·407	106·0	83·6	22·4	112·5	74·1	38·4	95·2	104·0	93·6	+3·0	72·3	75·3	76·1	74·6
	X.—Bombay.																					
25	Bombay	37	29·702	29·630	·072	29·679	+·006	29·656	88·4	80·6	7·8	94·0	75·6	18·4	84·2	85·2	83·3	+0·9	75·8	79·3	79·8	78·2
	XIV.—Mysore.																					
29	Bangalore	3,021	26·853	26·768	·085	26·818	—·005	29·647	83·6	67·1	16·5	88·3	64·7	23·6	76·2	80·5	73·6	−0·4	65·6	69·1	69·7	68·1
	XV.—Madras.																					
31	Trivandrum	198	29·692	29·611	·081	29·656	+·004	29·784	82·3	75·1	7·2	87·7	72·4	15·3	79·6	81·1	77·5	−0·9		76·3	76·8	
	Pudukkottai	318	29·496	29·365	·131	29·431		29·671	99·0	79·4	19·6	103·2	70·2	33·0	89·5	95·7	83·2			74·7	76·3	
	Madras	22	29·711	29·601	·110	29·665	—·034	29·618	98·8	80·8	18·0	105·0	76·2	34·8	91·1	93·2	88·6	+0·2	74·0	76·7	78·5	76·4
	Kashmir.																					
13	Srinagar	5,204	24·710	24·629	·081	24·669	—·027	24·639	86·7	61·0	25·7	93·0	51·7	41·3	77·0	84·8	72·9	+4·0	57·7	66·7	70·8	65·1
	Hill stations, excluding Kashmir and Baluchistan.																					
	Katmandu	4,488	25·504	25·450	·054	25·473	+·079	25·429	84·9	67·6	17·3	92·0	58·8	33·2	77·6	79·8	75·5	+1·6	65·3	70·6	72·2	69·4
	Kodaikanal	7,688	22·779	22·726	·053	22·753		22·687	65·1	53·6	11·5	68·4	51·8	16·6	61·3	59·5	59·4		50·8	57·1	56·4	54·8
	Extra India.																					
	Seychelles	15	29·991	29·910	·081	29·953	+·006†	29·891	83·7	79·1	4·6	85·6	75·4	10·2	82·1	82·9	80·3	+2·7†	71·8	77·0	77·4	75·4
	Mauritius	181				29·977	+·006	30·047	76·8	64·8	12·0	79·2	58·5	20·7			70·2	+1·1				

N. B.—Elevations in italics indicate barometric determinations.
Note.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

† Departure from old normal.

A.

at 13 stations in India, etc., in June, 1919.

Vapour tension in inches of mercury.					Humidity.					Cloud.				Wind direction.											Wind steadiness.		Wind velocity.		Rainfall.		Station.	Number of sub-division.
														Total number of 10 hrs. and 16 hrs. winds from																		
From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns.	Departure from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																															III.—Bengal.	
·923	·977	·979	·970	−·001	93	80	78	86	+ 3	7·0	6·9	6·9	−0·6	0	0	3	9	17	10	19	2	0	S 13° E	S 3° W	57	59	99	104	12·94	2·22	Calcutta.	5
																															VI.—Punjab.	
·710	·712	·657	·711	+·084	55	36	25	40	− 4	0	0	0	−2·9	7	1	4	2	20	1	7	10	8	S 8° W	N 18° E	18	7	52	63	0	0	Lahore.	11
																															IX.—Rajputana.	
·651	·627	·549	·616	−·040	57	39	26	43	− 9	0·8	2·6	1·7	−2·7	0	1	2	2	3	1	9	26	16	N 84° E	N 70° W	63	43	140	119	1·05	0·69	Jaipur.	18
																															X.—Bombay.	
·823	·833	·945	916	−·022	79	80	78	81	− 2	7·7	7·0	7·3	+0·2	0	0	0	0	2	7	15	29	7	S 72° W	S 63° W	75	64	208	266	16·31	10·12	Bombay.	25
																															XIV.—Mysore.	
·611	·630	·601	·621	−·002	93	70	59	76	+ 2	9·1	8·7	8·9		0	0	0	0	0	0	11	42	7	S 87° W	S 72° W	92	81	244	163	3·08	1·44	Bangalore.	29
																															XV.—Madras.	
	·859	·864				85	82			9·5	9·5	9·5	+1·6	0	3	0	0	0	0	2	13	42	N 55° W	N 60° W	90	81	143	123	12·18	1·72	Trivandrum.	31
	·660	·642				48	39			3·9	6·9	5·4		7	3	1	0		0	9	24	16	N 78° W		70		134		1·22	0·69	Pudukkottai.	
·745	·724	·779	·766	−·067	72	50	52	60	− 6	5·6	9·2	7·4	+1·2	0	2	1	4	2	4	10	30	7	S 82° W	S 37° W	60	57	1 7	154	2·39	0·82	Madras.	
																															Kashmir.	
·442	·538	·591	·524	−·011	82	58	50	63	−16	1·9	3·5	2·7	−0·9	22	7	4	1	9	1	1	3	12	N 11° W	N 9° E	17	7	42	66	0·49	0·35	Srinagar.	13
																															Hill stations, excluding Kashmir and Baluchistan.	
·601	666	·704	·657	+·017	88	71	70	76	0	6·6	7·3	6·9	+0·7	0	4	0	29	0	0	0	27	0	N 23° E	N 87° W	8	20	12	23	11·82	1·82	Katmandu.	
·341	·423	·421	·395		83	79	83	82		7·5	8·7	8·1		0	2	1	0	0	0	0	29	28	N 65° W		89		293		2·53	0·45	Kodaikanal.	
																															Extra India.	
·683	·862	·866	·820	+·039	69	79	77	77	− 2	5·4	5·0	5·2	−1·9†	4	0	1	0	48	7	0	0	0	S 41° E	S 27° E	89	81	174	188	9·25	2·56	Seychelles.	
			·582	+·036				78	+ 1			6·4	+1·6										S 61° E	S 61° E			137	137	2·36	0·50	Mauritius.	

† Departure from old normal.

Table B.—Abstract of observations taken at 8 hrs. at 211 stations in India, etc., in June 1919.

(1) Provincial means.

(2) Data of stations.

(1) Provincial means based on the material in Table B (2) except that the statement of rainfall depends on the complete data of about 2,300 stations.

Division.	Pressure departure from normal.	Temperature of air.							Wind.		Hygrometry.				Cloud.		Rainfall.		
		Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Departure of velocity from normal.	Departure of steadiness from normal.	Mean humidity.	Departure from normal.	Mean vapour tension.	Departure from normal.	Mean cloud amount.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from norms.
	"	°	°	°	°	°	°	°					"	"			"	"	"
Burma	−·013	88·7	+1·0	76·2	+0·3	82·5	+0·6	12·6	+1·3	0	86	−1	·886	−·005	8·3	+0·5	17·07	15·45	+1·62
Assam	−·019	89·9	+1·5	77·2	+1·4	83·5	+1·4	12·8	−0·6	−15	89	−2	·943	+·033	6·4	−0·7	15·64	17·65	−2·01
Bengal	−·027	89·4	−0·5	73·2	+0·2	83·8	−0·1	11·2	−0·4	−2	86	0	·952	−·004	7·1	0	14·30	14·56	−0·26
Bihar and Orissa	−·035	92·2	−3·0	78·5	−0·4	85·3	−1·7	13·8	+0·2	−7	81	+4	·911	+·018	6·8	+1·1	10·38	8·33	+2·05
United Provinces of Agra and Oudh	−·027	103·1	+2·2	84·0	+2·3	93·5	+2·2	19·1	−0·3	+16	60	−4	·812	+0·6	3·8	−0·2	1·98	4·31	−2·33
Punjab	−·062	109·6	+4·0	86·4	+5·0	98·0	+4·5	23·1	+0·8	+27	46	−4	·717	+·043	0·7	−1·4	0·29	1·76	−1·47
North-West Frontier Province	−·093	114·5	+7·7	83·4	+4·2	98·9	+5·9	31·1	−0·9	−5	44	+6	·661	+·091	0·2	−1·3	0·20	0·92	−0·72
Sind	−·023	103·0	0	82·8	0	92·9	0	20·3	−0·2	+3	70	+4	·909	+·037	2·1	−0·2	0·09	0·51	−0·42
Rajputana	−·031	106·1	+1·6	84·3	+0·7	95·2	+1·1	21·8	+0·8	+23	53	−2	·701	−·026	2·0	−0·8	0·82	2·13	−1·31
Bombay	−·007	92·1	−0·8	77·6	+0·3	84·8	−0·2	14·5	−0·9	+6	77	+2	·830	−·002	7·1	+0·8	8·67	8·94	−0·27
Central India	−·035	100·1	+0·9	80·2	+0·5	90·2	+0·7	19·9	−0·3	+3	63	−1	·741	−·004	5·2	0	3·48	4·32	−0·84
Central Provinces	−·037	94·3	−2·7	76·8	−1·1	85·4	−1·9	17·7	+0·8	+5	70	+5	·740	+·013	6·5	+1·2	13·13	7·07	+6·06
Hyderabad	−·026	93·8	−2·3	74·7	−1·1	84·1	−1·7	18·8	+0·6	+9	72	+4	·716	+·004	7·8	+1·6	6·70	4·94	+1·76
Mysore	−·009	82·9	−1·3	67·9	+0·2	75·4	−0·6	14·9	+1·9	+3	81	+1	·644	−·009	7·9	−0·1	5·38	4·80	+0·58
Madras	−·020	92·7	−1·3	78·2	−0·1	85·4	−0·7	14·5	+1·0	+6	74	+1	·814	0	6·9	+0·6	6·98	7·23	−0·25

Table

(2) Abstract of observations taken at 8 hrs. at 211

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	I.—Burma.																					
2	Victoria Point	147	29·735		29·812	29·789	24th	29·645	2nd	80·5	76·8	85·1		76·4		80·8		8·7	88·7	7th	71·5	28th
	Mergui	66	29·810	+·009	29·805	29·873	8th	29·725	2nd	77·9	76·4	84·7	−1·1	74·7	+1·0	79·7	−0·1	10·0	89·9	8th	72·2	29th
	Tavoy	19	29·833	−·012	29·784	29·896	22nd	29·760	29th	78·0	76·8	85·6	+1·0	75·5	+0·5	80·5	+0·7	10·1	93·2	4th	73·2	22nd
	Moulmein	94	29·739	−·003	29·753	29·820	22nd	29·607	29th	78·5	76·5	84·0	−0·7	75·4	+0·5	79·7	−0·1	8·6	89·9	1st & 3rd.	73·5	10th
	Rangoon	18	29·777	+·001	29·732	29·842	22nd	29·673	29th	79·3	77·3	85·9	−0·4	75·6	−1·0	80·8	−0·7	10·3	90·9	28th	74·2	23rd
	Bassein	27	29·743	−·011	29·700	29·808	27th	29·631	30th	79·8	78·4	87·9	+1·6	76·9	+0·4	82·4	+1·0	11·0	93·2	2nd	73·9	11th
	Diamond Island	41	29·710	−·028	29·686	29·795	27th	29·629	30th	82·1	78·3	85·9	+0·4	77·4	+0·6	81·6	+0·5	8·5	90·2	1st	71·2	17th
	Toungoo	164	29·613	+·002	29·719	29·668	8th	29·489	29th	80·0	78·4	88·7	−0·3	75·5	+0·1	82·1	−0·1	13·2	94·5	1st	73·9	14th
	Kyaukpyu	18	29·689		29·647	29·764	27th	29·581	30th	80·1	77·8	87·0		76·9		82·0		10·1	95·4	2nd	74·7	15th
	Akyab	20	29·661	−·034	29·622	29·740	28th	29·561	30th	81·2	79·1	87·2	+1·3	76·1	−1·8	81·7	−0·3	11·1	97·6	1st	73·4	9th
3	Minbu	*165*	29·545	−·017	29·652	29·621	7th	29·448	29th	82·0	77·2	94·0	+1·7	77·7	0	85·9	+0·9	16·3	103·1	1st	73·8	4th
	Yamethin	644	29·095	−·005	29·685	29·170	6th	28·991	29th	80·3	76·1	93·0	+1·9	76·0	+0·7	84·6	+1·3	17·0	102·0	1st	70·8	7th
	Mandalay	250	29·467	−·008	29·661	29·505	27th	29·361	16th	85·8	77·5	97·4	+2·7	79·7	+1·0	88·6	+1·9	17·7	104·5	1st	72·3	7th
	Monywa	*280*	29·429	−·016	29·656	29·537	27th	29·325	19th	82·8	77·0	95·4	+2·1	79·5	+1·0	87·5	+1·5	15·9	102·0	2nd	75·9	6th
	Lashio	*2,820*	26·962	−·019	26·908	27·045	7th	26·867	16th	75·0	71·2	84·7	+0·2	71·4	+1·8	78·1	+1·0	13·3	92·5	1st	68·0	5th & 29th.
	Bhamo	*361*	29·311	−·018	29·622	29·415	7th	29·213	11th	80·5	78·1	92·0	+2·0	73·7	−1·1	82·8	+0·5	18·3	100·2	1st	71·0	29th
	Myitkyina	458	29·201	−·029	29·620	29·318	5th	29·116	14th	79·1	76·6	89·9	+2·2	76·2	+0·9	83·0	+1·5	13·7	98·8	1st	72·6	2nd
	II.—Assam.																					
4	Dibrugarh	353	29·288	−·037	29·601	29·441	5th	29·147	19th	79·2	78·2	87·7	+0·6	74·7	+0·8	81·2	+0·7	13·0	95·1	5th	70·3	1st
	Sibsagar	333	29·324	−·022	29·614	29·477	5th	29·177	19th	81·2	77·9	88·7	−0·1	77·7	+1·4	83·2	+0·7	11·0	94·0	7th	73·8	1st
	Tezpur	252	29·400	−·010	29·608	29·531	1st	29·268	19th	80·9	78·3	90·7	+2·2	77·9	+1·3	84·3	+1·7	12·8	96·0	7th	74·9	1st
	Gauhati	196	29·453	−·017	29·606	29·559	6th	29·326	19th	82·9	79·1	90·9	+1·7	78·3	+2·1	84·6	+1·9	12·6	95·7	3rd	75·2	1st & 13th.
	Dhubri	115	29·515	−·013	29·584	29·635	5th	29·367	19th	80·9	78·6	86·1	+0·2	77·8	+1·7	82·0	+0·9	8·3	92·7	3rd	73·1	1st
	Silchar	104	29·571	−·012	29·627	29·708	1st	29·385	11th	82·0	79·2	92·6	+2·4	77·6	+1·5	85·1	+2·5	15·0	97·2	2nd	73·4	1st
	Srimangal	66	29·591		29·606	29·696	5th	29·433	19th	82·8	79·2	92·7	+2·6	76·1	+0·7	84·4	+1·7	16·6	97·7	3rd	72·1	1st
	III.—Bengal.																					
5	Cox's Bazar	36	29·620		29·601	29·717	28th	29·502	19th	81·2	78·2	87·5		76·3		81·9		11·2	96·5	2nd	73·2	11th
	Chittagong	87	29·565	−·024	29·597	29·685	1st	29·431	19th	81·1	78·3	89·1	+2·3	77·4	+0·5	83·2	+1·4	11·7	98·0	1st	72·9	1st
	Noakhali	43	29·597	−·021	29·587	29·716	1st	29·448	11th	82·3	79·3	87·8	+0·6	78·1	+0·9	83·0	+0·7	9·7	94·8	3rd	73·6	1st
	Barisal	12	29·607	−·019	29·566	29·742	1st	29·444	11th	83·3	80·0	89·0	+0·2	78·8	+0·6	83·9	+0·4	10·2	96·3	3rd	75·0	1st
	Narayanganj	26	29·596	−·020	29·571	29·714	1st	29·428	11th	82·8	79·6	89·1	0	78·4	+0·2	83·8	+0·1	10·7	95·7	3rd	71·8	1st

N.B.—Elevations in italics indicate barometrical determinations.

B.

stations in India, etc., in June, 1919.

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 9 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th June 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
21	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															I.—Burma.
3	0	2	3	1	2	12	6	1	S 48° W		7·8			46		84		·869		9·2		15	−7·0	21·91	31·61	− 9·70	[illegible]	47·97	− 8·04	5·10	Victoria Point.
8	0	1	5	8	1	3	3	1	S 37° E	S 79° W	5·4	1·3	+4·1	30	−27	93	+ 1	·895	−·003	8·1	+1·9	23	−1·3	34·30	29·47	+ 4·83	48·58	46·96	+ 1·62	3·20	Mergui.
19	0	1	1	4	4	2	0	0	S 23° E	S 55° W	2·7	1·5	+1·2	7	+12	95	+ 3	·903	+·016	9·3	+2·0	28	+3·6	75·28	42·02	+33·26	88·90	65·80	+23·10	7·26	Tavoy.
3	0	1	1	5	8	9	1	1	S 10° W	S 14° E	10·5	2·7	+7·8	56	+ 4	91	− 1	·883	0	9·8	+1·6	29	+3·3	57·49	35·80	+21·69	80·60	56·49	+24·11	13·06	Moulmein.
1	0	2	2	6	11	6	2	0	S 4° E	S 37° W	4·5	3·7	+0·8	59	− 8	91	− 1	·908	−·020	9·3	+0·6	27	+4·1	23·84	17·95	+ 5·89	28·76	30·16	− 1·40	2·83	Rangoon.
6	0	0	0	7	9	8	0	0	S 2° W	S 13 W	2·8	3·4	−0·6	62	+ 3	92	0	·950	+·007	8·5	+1·2	23	−0·4	20·35	22·96	− 2·61	22·63	32·93	−10·30	3·31	Bassein.
1	0	0	1	3	7	15	3	0	S 26° W	S 39° W	11·1	7·0	+4·1	72	+ 2	84	0	·921	0	8·1	0	25	+4·0	29·23	24·20	+ 5·03	36·95	34·98	+ 1·97	3·70	Diamond Island.
3	0	0	1	16	8	1	0	1	S 29° E	S 32 E	3·6	3·7	−0·1	72	−13	93	+ 4	·949	+·013	9·5	+0·6	24	+3·6	15·30	14·20	+ 1·10	25·34	21·64	+ 3·70	1·43	Toungoo.
16	0	0	8	2	3	1	0	0	S 80° [illegible]		1·8			33		90		·919		8·7		23	+4·6	50·01	38·97	+11·04	52·91	54·00	− 1·09	6·12	Kyaukpyu.
3	0	2	2	6	10	6	1	0	S 8° E	S 48° E	4·4	2·8	+1·6	56	+ 4	91	− 2	·964	−·007	8·5	0·2	29	+5·1	41·02	45·87	+15·15	61·63	59·08	+ 5·60	7·66	Akyab.
0	0	0	0	23	7	0	[illegible]	0	S 35° E	S 48° E	4·7	8·5	−3·8	52	+21	79	− 4	·865	−·022	5·5	−1·1	12	+2·1	7·52	5·73	+ 1·79	9·39	11·09	− 1·70	1·36	Minbu.
										S 29° E		7·2				82	− 1	845	−·006	6·7	−0·1	7	−2·0	2·16	5·35	− 3·19	6·89	11·28	− 4·39	0·45	Yamethin.
4	0	0	0	10	14	2	0	0	S 11° E	S 1° W	7·0	6·4	+0·6	76	+ 4	67	− 9	828	−·041	7·1	+1·5	5	−2·6	3·24	5·76	− 2·52	7·65	11·61	− 3·96	1·24	Mandalay.
5	0	0	2	17	6	0	0	0	S 25° E		3·7			72		76	− 5	·850	−·039	8·7	+0·5	7	−0·1	8·14	5·71	+ 2·43	12·91	11·14	+ 1·77	2·77	Monywa.
2	1	1	1	0	9	14	2	0	S 30° W		3·8			66		83	− 4	·713	−·017	7·1	−1·2	10	−5·8	6·94	10·37	− 3·43	11·35	17·06	− 5·71	1·75	Lashio.
29	1	0	0	0	0	0	0	0	N	N 81° W	0·8	1·8	−1·0	3	− 7	90	0	·927	+·035	8·5	+0·7	13	−5·9	6·95	14·18	− 7·23	10·15	20·47	−10·32	1·60	Bhamo.
7	1	1	0	0	0	1	0	0	N		1·9			3		89	− 1	877	+·011	8·4	−0·6	16	−3·6	16·31	14·77	+ 1·54	18·76	21·24	− 2·48	4·10	Myitkyina.
																															II.—Assam.
27	0	0	1	1	0	1	0	0	S 38° E		0·3			3		96	+ 4	·957	+·083	7·7	−0·1	23	+4·4	20·78	17·95	+ 2·83	35·03	28·84	+ 6·19	3·25	Dibrugarh.
12	3	5	0	1	5	3	1	0	S 41° E	N 70° E	1·7	2·0	−0·3	3	−22	90	− 2	·924	−·007	8·1	−0·6	20	+3·2	20·70	13·86	+ 6·84	30·07	25·97	+ 4·10	3·80	Sibsagar.
8	0	8	7	2	0	1	4	0	N 69° E		0·9			30		88	− 3	·927	+·023	7·3	−0·2	11	−4·4	8·26	11·29	− 3·03	16·70	20·47	− 3·77	2·69	Tezpur.
23	0	1	3	0	1	1	1	0	S 63° E		0·5			7		84	− 5	·940	+·030			12	−3·9	12·46	14·51	− 2·05	17·46	24·57	− 7·11	3·20	Gauhati.
5	0	5	11	1	2	5	1	0	S 76° E	N 77° E	4·5	4·2	+0·3	37	− 7	90	− 1	·947	+·041	6·1	−1·8	15	−2·7	24·55	23·93	+ 0·62	33·37	38·71	− 5·34	7·73	Dhubri.
30	0	0	0	0	0	0	0	0	Calm.	N 85° E	0·1	2·0	−1·9	(a)		88	− 1	·956	+·033	4·7	−3·2?	17	−3·8	18·00	22·06	− 4·06	28·03	38·28	−10·25	5·49	Silchar.
																85	− 3	·952	+·031	4·7		16	−4·5	8·92	18·89	− 9·97	17·86	35·78	−17·92	2·66	Srimangal.
																															III.—Bengal.
3	0	1	2	19	5	0	0	0	S 42° E		4·7			76		87		·927		7·8		23	+3·6	37·07	26·02	+11·05	38·56	39·26	− 0·70	5·33	Cox's Bazar.
3	0	1	11	12	2	1	0	0	S 62° E	S 44° E	4·9	5·1	−0·2	69	− 5	88	+ 2	·933	+·018	7·7	+0·4	19	+2·6	18·40	20·79	− 2·39	19·54	30·72	−11·18	3·33	Chittagong.
0	0	0	3	18	8	1	0	0	S 36° E		5·0			83		88	0	·963	+·008	6·1	+0·4	23	+4·7	25·93	21·50	+ 4·43	24·11	33·47	− 9·36	4·02	Noakhali.
2	0	0	2	11	12	2	1	0	S 19° E	S 17° E	4·2	3·2	+1·0	72	+31	84	− 3	·972	−·019	6·0	−1·4	19	+2·3	14·55	16·32	− 1·77	16·97	25·71	− 8·74	2·21	Barisal.
4	0	0	7	13	5	1	0	0	S 46° E	S 32° E	2·5	5·5	−3·0	69	− 1	86	− 3	·966	−·016	7·2	−1·2	17	+2·6	8·13	13·10	− 4·97	14·38	22·71	− 8·33	1·91	Narayanganj.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs. at 21

Number of Sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature	Highest temperature observed during month	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal—*concld.*																					
	Mymensingh	63	29·567	—·023	29·5[illegible]2	29·699	5th	29·402	11th	82·0	78·8	89·2	+1·8	78·6	+1·7	83·9	+1·7	10·6	94·1	5th	72·2	1st
	Bogra	75	29·527	—·031	29·553	29·679	4th	29·344	19th	82·3	79·6	90·3	+0·8	78·1	+0·9	84·2	+0·9	12·2	94·6	3rd	70·3	1st
	Dinajpur	123	29·483	—·016	29·560	29·662	4th	29·306	19th	81·5	78·5	88·9	—0·6	76·0	+0·9	83·5	+0·1	1[illegible]·9	94·0	4th	71·0	4th
	Jalpaiguri	283	29·261	—·002	29·600	29·496	1st	29·215	19th	80·4	78·1	90·1	+1·8	75·8	+0·1	83·0	+0·9	14·3	94·9	6th	70·0	1st
	Saugor Island	10	29·555	—·038	29·5[illegible]0	29·712	1st	29·342	11th	83·3	79·9	87·2	—3·3	78·3	—2·3	83·3	—2·8	7·9	93·0	4th	75·6	1st
	Midnapore	149	29·308	—·051	29·494	29·555	1st	29·152	11th	83·5	79·5	90·4	—3·7	78·8	—0·2	84·6	—1·9	11·6	102·6	1st	74·9	2nd
	Calcutta	21	29·552	—·033	29·5[illegible]0	29·709	1st	29·352	11th	82·5	79·6	90·1	—1·4	79·1	+0·3	84·0	—0·5	11·0	100·6	3rd	75·2	1st
	Jessore	30	29·564	—·022	29·542	29·709	1st	29·375	11th	83·7	79·5	90·5	—0·8	78·3	—0·4	84·4	—0·6	12·2	98·3	3rd	75·7	1st
	Burdwan	99	29·451	—·049	29·498	29·605	1st	29·2[illegible]5	11th	81·8	78·7	90·5	—3·2	78·4	—0·8	84·5	—2·0	12·1	100·4	1st	73·0	1st
	Berhampore	67	29·511	—·028	29·527	29·678	1st	29·318	11th	82·5	79·4	91·5	—0·9	79·1	+0·7	85·3	—0·1	12·4	98·6	1st	70·5	1st
	IV.—Bihar and Orissa.																					
6	Balasore	50	29·515	—·034	29·510	29·690	1st	29·325	11th	81·6	78·4	89·1	—4·0	77·5	—1·5	83·3	—2·7	11·6	98·3	1st	72·5	2nd
	Hukitala (False Point)	29	29·553	—·037	29·5[illegible]3	29·730	1st	29·366	11th													
	Cuttack	80	29·497	—·034	29·518	29·643	1st	29·312	11th	82·6	79·2	91·5	—4·3	78·9	—1·2	85·2	—2·7	12·6	107·6	1st	74·6	10th
	Puri	24	29·564	—·036	29·527	29·704	2nd	29·374	11th	83·8	80·3	87·3	—1·9	80·5	—0·4	83·9	—1·1	6·8	94·0	5th	75·0	2nd
	Angul	455	29·[illegible]52	—·048	29·499	29·250	1st	28·902	11th	82·0	77·8	91·0	—4·2	77·2†	—1·3†	82·7†	—2·7†	13·8	110·8	1st	72·4	14th
	Sambalpur	486	29·078	—·046	29·510	29·197	28th	28·883	16th	80·9	77·0	90·2	—7·7?	78·0	—3·0	84·1	—5·3?	12·2	110·2	2nd	71·2	14th
7	Chaibasa	*733*	28·803	—·051	29·479	28·961	4th	28·568	11th	81·8	77·3	91·5	—2·7	77·9	+0·4	84·8	—1·1	13·7	113·0	1st	72·7	21st
	Ranchi	2,128	27·418	—·041	29·470	27·587	4th	27·258	11th	78·1	74·6	86·8	—5·5	74·5	—1·0	80·7	—3·3	12·3	106·9	1st	71·1	14th & 21st.
	Purulia	*816*	29·732	—·034	29·491	28·874	4th	28·535	11th	81·0	77·3	93·1	—4·3	74·4	—4·4?	83·7	—4·3?	13·7	108·4	1st	70·7	2nd
	Daltonganj	*730*	28·8[illegible]3	—·031	29·481	28·935	4th	28·687	10th	85·5	74·1	96·3	—4·5	80·3	—0·8	88·3	—2·7	16·0	115·4	1st	75·8	11th
8	Purnea	124	29·459	—·031	29·537	29·657	4th	29·284	19th	81·7	79·2	89·6	—2·3	77·9	+0·5	83·8	—0·9	11·7	94·5	3rd	68·5	1st
	Monghyr	155	29·359		29·505	29·548	5th	29·256	11th	81·4	80·0	93·6		79·2		86·4		14·4	105·2	1st	73·9	1st
	Darbhanga	165	29·402	—·032	29·[illegible]20	29·562	5th	29·266	11th	83·5	78·3	92·4	0	76·8	—0·2	85·6	—0·1	13·6	99·5	3rd	72·7	3rd
	Pusa	188	29·374		29·515	29·520	1st & 5th.	29·240	11th	84·8	79·7	96·7		78·8		87·8		17·9	104·3	3rd	73·0	3rd
	Patna	183	29·377	—·020	29·513	29·522	5th	29·250	11th	84·9	79·1	94·5	—1·8	79·9	—0·1	87·2	—0·9	14·6	104·5	1st	74·5	26th
	Buxar	239	29·293	—·034	29·488	29·426	5th	29·181	11th	84·1	78·5	96·6	—1·6	80·2	—0·5	88·4	—1·1	16·4	109·1	1st	75·9	21st
	Gaya	372	29·175	—·023	29·496	29·319	5th	29·027	11th	85·7	79·1	95·5	—4·3	81·0	+0·3	88·3	—2·0	14·5	112·1	1st	75·5	21st
	Naya Dumka	489	29·079	—·022	29·515	29·241	1st	28·880	11th	83·1	79·0	92·0	—1·7	78·7	+0·4	85·3	—0·7	13·3	101·8	1st	70·6	1st
	V.—United Provinces of Agra and Oudh.																					
9	Gorakhpur	257	29·302	—·019	29·514	29·431	2nd	29·175	19th	85·0	79·2	97·6	+0·6	80·7	+1·3	89·1	+0·9	16·9	106·9	1st	72·8	26th
	Benares	267	29·266	—·027	29·482	29·397	3rd	29·157	19th	87·3	79·8	97·9	—2·9	81·4	—0·6	89·7	—1·7	16·5	111·6	1st	74·0	22nd
	Allahabad	309	29·240	—·008	29·498	29·351	3rd	29·127	19th	90·1	78·5	107·3*	+5·9*	84·6	+1·7	97·4*	+3·8?	22·7	111·8	1st & 2nd	77·6	9th
	Cawnpore	416	29·118	—·021	29·478	29·251	5th	28·998	19th & 30th.	91·5	78·5	105·3	+3·6	85·4	+3·0	95·3	+3·3	19·9	114·4	1st	80·1	2nd

N.B. Elevations in italics indicate barometrical determinations.

*Mean of 14 days.
† „ 24 „

B—*continued.*

stations in India, etc., in June, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th June 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															III.—Bengal—*concld.*
7	0	0	12	8	3	0	0	0	S 64° E	S 61° E	2·7	2·9	−0·2	66	− 1	86	− 3	·939	+·002	7·8	−0·1	14	− 4·3	13·33	18·99	− 5·66	22·12	32·40	−10·28	4·79	Mymensingh.
11	1	1	12	1	3	1	0	0	S 78° E	S 66° E	1·2	2·9	−1·7	43	−24	88	+ 1	·974	+·036	6·7	+0·1	12	− 2·4	5·69	14·04	− 8·35	8·87	22·84	−13·97	1·23	Bogra.
1	1	2	18	5	1	1	1	0	S 83° E	S 78° E	4·1	3·2	+0·9	69	− 5	87	− 2	·938	+·015	6·7	−1·2	16	+ 2·2	14·11	14·07	+ 0·04	18·30	21·94	− 3·14	3·70	Dinajpur.
24	0	1	4	1	0	0	0	0	E	S 86° E	1·3			18	−40	90	+ 1	·937	+·037	6·1	+0·4	18	+ 0·5	27·14	23·07	+ 4·07	32·39	34·38	− 1·99	5·04	Jalpaiguri.
1	0	1	5	4	10	7	2	0	S 5° E	S 11° W	9·3	7·5	+1·8	56	− 3	86	+ 3	·975	−·052	8·3	+0·2	14	+ 1·9	18·65	11·10	+ 7·55	22·25	15·62	+ 6·63	3·89	Saugor Island.
22	0	0	1	5	2	0	0	0	S 45° E		2·9			27		82	0	·934	−·011	7·1	+2·7	13	+ 0·2	12·05	9·89	+ 2·16	20·81	15·18	+ 5·63	2·60	Midnapore.
0	0	1	6	11	3	9	0	0	S 27° E	S 4° E	4·2	4·3	−0·1	59	+11	88	+ 3	·970	−·011	7·3	+0·1	15	+ 2·0	12·94	11·81	+ 1·13	17·12	17·60	− 0·48	2·22	Calcutta.
12	0	0	3	10	5	0	0	0	S 40° E	S 27° E	2·2	3·3	−1·1	53	+ 1	83	− 5	·952	−·053	7·1	−0·5	12	− 2·3	9·52	12·77	− 3·25	13·54	21·17	− 7·63	2·74	Jessore.
10	0	0	3	7	6	3	1	0	S 20° E	S 4° E	1·9	3·6	−1·7	46	+ 2	87	+ 4	·941	−·009	7·3	−0·2	11	− 1·6	7·31	9·82	− 2·51	13·67	16·19	− 2·52	1·51	Burdwan.
4	0	0	12	7	5	2	0	0	S 54° E	S 36° E	2·9	3·4	−0·5	59	+ 7	87	0	·962	−·005	7·7	−0·2	17	+ 5·0	10·30	9·83	+ 0·47	15·35	15·38	− 0·03	1·39	Berhampore.
																															IV.—Bihar and Orissa.
4	1	3	0	0	3	10	3	1	S 35° W	S 32° W	4·0	5·3	−1·3	46	−13	86	+ 5	·926	−·024	8·1	+2·8	11	− 0·3	26·53	9·65	+16·88	32·16	14·50	+17·66	5·98	Balasore.
5	1	1	0	3	5	12	2	1	S 33° W		10·0			49						8·4	+0·6	14	+ 4·2	10·20	8·49	+ 1·71	12·25	12·91	− 0·66	2·42	Hukitala (False Point).
15	0	0	2	0	0	8	5	0	S 57° W	S 47° W	2·3	2·9	−0·6	37	−22	86	+ 8	·956	+·032	7·4	+0·5	16	+ 4·7	10·34	9·80	+ 0·54	13·05	13·88	− 0·83	2·18	Cuttack.
2	2	1	1	1	5	10	6	2	S 53° W		12·3			50		85	0	·987	−·015	7·7	+1·5	10	+ 2·3	5·85	7·20	− 1·35	9·39	9·96	− 0·57	1·46	Puri.
8	1	2	3	2	1	3	4	6	N 68° W		5·5			17		83	+ 5	·902	+·023	8·6	+2·9	18	+ 5·9	11·96	7·79	+ 4·17	13·25	9·86	+ 3·39	2·20	Angul.
1	1	3	1	2	7	14	1	0	S 23° W	S 23° W	4·2	3·8	+0·4	53	− 5	83	+14	·868	+·029	8·3	+1·9	16	+ 5·5	20·31	9·93	+10·38	21·53	11·25	+10·28	3·30	Sambalpur.
15	0	2	3	0	0	8	1	0	S 24° W	S 52° W	2·3	2·1	+0·2	10	−31	81	+ 3	·876	+·030	7·2	+1·7	12	+ 0·5	15·03	8·27	+ 6·76	18·81	11·53	+ 7·28	5·17	Chaibassa.
1	2	10	2	1	2	5	5	2	N 3° W	S 42° W	4·5	6·4	−1·9	14	−30	85	+13	·813	+·073	8·0	+2·2	13	+ 1·4	17·27	9·34	+ 7·93	18·58	11·67	+ 6·91	3·42	Ranchi.
8	0	6	4	4	4	3	1	0	S 58° E		1·8			30		84	+ 5	·884	+·005	6·5	+1·5	14	+ 3·6	16·73	7·47	+ 9·26	21·47	10·43	+11·04	4·19	Purulia.
8	3	4	3	1	1	9	1	0	N 9° W		4·4			20		69	+ 3	·836	+·032	3·7	−0·4	10	+ 1·2	10·73	6·22	+ 4·51	12·16	6·79	+ 5·37	2·43	Daltonganj.
0	1	4	19	6	0	0	0	0	S 89° E	N 84° E	3·6	2·9	+0·7	87	+21	89	+ 2	·967	+·035	6·8	+0·3	12	+ 0·2	13·71	11·09	+ 2·62	17·38	15·54	+ 1·84	2·03	Purnea.
2	1	2	8	17	0	0	0	0	S 65° E		6·6			77		82		·965		5·9		10	− 0·4	6·98	10·38	− 3·40	10·29	12·23	− 1·94	1·61	Monghyr.
3	0	3	20	3	0	0	1	0	E	S 75° E	5·7	4·4	+1·3	77	0	79	− 4	·889	−·028	5·2	−0·4	6	− 3·1	2·84	8·37	− 5·53	4·85	11·30	− 6·45	0·61	Darbhanga.
2	0	7	17	3	0	0	0	1	N 83° E		4·5			77		79		·944		6·9		5	− 4·3	2·21	9·83	− 7·62	2·89	11·75	− 8·86	0·71	Pusa.
1	0	0	26	0	0	0	2	1	N 88° E	S 87° E	6·7	4·1	+2·6	76	+13	77	0	·917	−·001	6·2	+0·8	7	− 0·9	6·11	8·03	− 1·92	6·72	9·68	− 2·96	2·28	Patna.
1	0	4	19	4	0	1	1	0	S 88° E		4·9			77		79	+ 8	·904	+·049	5·7	+0·8	6	− 1·4	2·98	5·19	− 2·21	3·67	5·87	− 2·20	1·07	Buxar.
5	4	7	6	1	2	5	0	0	N 71° E	S 66° E	3·9	3·6	+0·3	27	+ 4	75	+ 2	·908	−·006	4·9	−0·2	9	+ 1·3	12·13	7·12	+ 5·01	13·47	8·19	+ 5·28	6·80	Gaya.
20	0	1	2	7	0	0	0	0	S 61° E		2·8			30		83	+ 3	·933	+·031	6·9	+1·3	14	+ 2·3	9·31	10·13	− 0·82	11·62	13·61	− 1·99	1·70	Naya Dumka.
																															V.—United Provinces of Agra and Oudh.
2	0	1	25	0	0	0	2	0	N 88° E	N 81° E	3·3	2·3	+1·0	79	+29	77	− 1	·919	+·009	3·5	−1·3	5	− 3·2	3·32	7·56	− 4·24	3·47	9·06	− 5·59	0·98	Gorakhpur.
3	2	6	4	8	0	4	2	1	S 73° E	S 89° E	3·1	3·8	−0·7	27	+ 7	72	+ 4	·910	+·060	5·5	+0·7	7	+ 1·1	5·26	5·04	+ 0·22	5·26	5·59	− 0·33	1·74	Benares.
6	0	4	12	0	0	3	5	0	N 85° E	N 46° E	4·7	5·8	−1·1	27	+14	60	0	·815	+·022	4·7	−0·2	2	− 3·3	1·37	4·59	− 3·22	1·47	4·90	− 3·43	1·13	Allahabad.
1	0	0	10	9	3	1	4	2	S 50° E	S 59° E	2·5	4·0	−1·5	46	+24	55	− 6	·799	+·005	1·3	−2·2	1	− 3·3	0·29	3·00	− 2·71	0·81	3·37	− 2·56	0·17	Cawnpore.

Table

(2) Abstract of observations taken at 8 hrs. at 211

Number of sub-division.	Station.	Height of barometer above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	V.—United Provinces of Agra and Oudh—*concld.*																					
	Lucknow	368	29·170	−·019	29·486	29·308	3rd	29·043	19th	92·0	78·8	101·9	+3·4	81·6	+3·1	94·7	+3·3	20·3	112·9	1st & 2nd	76·0	18th & 19th.
	Bahraich	407	29·143	−·021	29·502	29·290	5th	29·008	19th	86·5	79·[illegible]	99·6	+1·[illegible]	81·6	+1·8	90·[illegible]	+1·5	18·0	108·1	1st	72·6	26th
10	Jhansi	824	28·716	−·030	29·468	28·843	2nd	28·603	11th & 19th	92·0	76·2	107·2	+3·4	80·3	+1·3	96·8	+2·3	26·9	116·2	1st	79·0	12th
	Agra	556	28·963	−·041	29·455	29·103	2nd	28·818	19th	95·4	76·[illegible]	107·8	+3·4	88·7	+3·8	96·2	+3·6	19·1	116·3	2nd	83·4	1st
	Mainpuri	516	28·999	−·041	29·457	29·134	5th	28·651	19th	93·6	78·4	107·8	+4·2	86·9	+4·[illegible]	97·3	+4·2	20·9	116·3	1st & 2nd	80·7	13th
	Bareilly	552	28·972	−·020	29·489	29·122	6th	28·829	19th	88·1	77·[illegible]	102·9	+2·0	82·8	+2·6	92·8	+2·6	20·1	111·3	2nd	75·8	8th
	Roorkee	899	28·639	−·025	29·482	28·808	6th	28·497	[illegible]	87·1	76·[illegible]	99·8	−0·9	81·6	+2·7	90·7	+0·9	18·2	110·2	2nd	70·6	1st
	VI.—Punjab.																					
11	Delhi	718	28·801	−·037	29·460	28·945	6th	28·670	17th	91·9	76·[illegible]	107·0	+3·[illegible]	88·3	+4·5	97·7	+3·9	18·7	113·5	2nd	82·8	9th
	Hissar	725	28·769	−·040	29·430	28·922	2nd	28·626	18th	95·5	77·8	110·8	+3·[illegible]	85·3	+4·7	99·6	+4·3	22·5	116·0	30th	78·0	1st
	Patiala	*818*	28·666	−·074	29·423	28·804	2nd, 5th & 6th.	28·516	18th	92·0	78·5	106·1	+3·6	85·7	+4·8	95·9	+4·2	20·4	112·8	2nd	76·0	1st
	Ambala	892	28·609	−·052	29·438	28·757	6th	28·462	18th	91·7	76·3	107·8	+5·3	86·3	+6·1	97·1	+5·7	21·5	115·6	2nd	73·0	1st
	Ludhiana	812	28·670	−·056	29·420	28·815	5th	28·517	18th	91·4	75·3	109·2	+6·[illegible]	87·8	+5·9	98·1	+6·1	22·2	115·9	2nd	76·0	1st
	Lahore	702	28·747	−·072	29·392	28·911	5th	28·583	18th	94·4	77·8	111·3	+3·[illegible]	86·6	+6·5	99·0	+5·2	24·7	117·5	4th	72·6	1st
	Sialkot	830	28·636	−·053	29·405	28·796	5th	28·409	18th	93·[illegible]	79·1	108·2	+2·[illegible]	85·[illegible]	+4·9	97·0	+3·6	22·4	113·1	7th	71·1	9th
	Rawalpindi	1,674	27·835	−·061	29·365	27·977	5th	27·628	18th	95·9	74·5	110·5	+7·[illegible]	81·8	+6·4	96·2	+6·7	28·7	115·0	14th	71·0	1st
12	Khushab	612	28·835	−·071	29·393	28·978	5th	28·669	18th	96·1	77·0	110·4	+2·[illegible]	86·3	+3·9	98·3	+3·[illegible]	24·1	118·2	4th	75·5	1st
	Lyallpur	605	28·823		29·376	28·977	5th	28·[illegible]54	18th	93·7	77·4	110·9		85·7		98·3		25·2	116·8	16th	74·7	9th
	Montgomery	558	28·880	−·070	29·375	29·028	2nd	28·73[illegible]	18th	94·7	77·3	111·0	+1·[illegible]	87·1	+[illegible]·2	99·1	+2·[illegible]	23·9	117·4	8th	81·5	3rd
	Multan	426	28·991	−·080	29·366	29·146	2nd	28·8[illegible]3	18th	93·1	80·3	111·5	+3·2	88·3	+4·1	98·9	+3·7	23·2	118·7	8th	82·7	24th
	VII.—North-West Frontier Province.																					
14	Peshawar	1,113	28·348	−·093	29·396	28·[illegible]13	2nd	28·[illegible]04	19th	89·8	74·3	105·3	+[illegible]	80·[illegible]	+3·3	97·9	+6·3	34·7	119·4	11th & 17th.	72·9	7th
	D. I. Khan	599	28·837	−·092	29·374	29·006	27th	28·676	19th	95·2	6·7	113·8	+5·[illegible]	86·2	+5·1	100·0	+5·5	27·6	129·2	17th	78·5	3rd
	VIII.—Sind.																					
16	Jacobabad	186	29·258	−·048	29·404	29·455	5th	29·060	19th	92·[illegible]	81·6	117·4	+3·5	85·3	+1·0	101·4	+2·3	32·1	127·1	12th	81·0	13th
	Hyderabad	96	29·422	−·030	29·46[illegible]	29·610	2nd	29·231	19th	86·8	78·3	103·1	−1·1	81·8	+0·1	92·5	−0·5	21·3	105·5	8th	78·0	1st
	Karachi	13	29·587	+·010	29·551	29·752	2nd	29·399	15th	84·0	79·7	86·6	−2·4	81·2	−1·2	84·9	−1·8	7·4	91·7	3rd	78·7	11th & 12th.
	IX.—Rajputana.																					
17	Bikaner	*771*	28·753	−·031	29·46[illegible]	8·9.9	2nd	28·610	19th	90·6	77·8	111·4	+4·3	86·5	+1·0	99·0	+2·7	24·9	118·0	8th	79·7	23rd
	Jodhpur	780	28·798	−·072	29·520	8·967	2nd	28·640	19th	87·0	74·6	105·2	+0·6	83·1	+0·4	94·1	+0·5	22·1	112·8	12th	78·6	22nd
18	Jaipur	1,431	28·151	−·032	29·438	8·3.4	3rd	28·028	10th	89·9	74·3	106·1	+2·1	83·6	+1·9	94·8	+2·0	22·5	112·5	6th	74·1	3rd
	Ajmer	1,611	27·986	−·036	29·504	28·153	3rd	27·857	19th	84·6	74·0	103·5	+0·5	83·0	+1·3	92·3	+0·9	18·5	107·0	1st	73·9	3rd
	Kotah	832	28·730	−·035	29·49[illegible]	28·922	3rd	28·595	10th	91·6	76·1	106·8	+0·3	85·1	−1·3	95·7	−0·5	21·2	115·6	2nd	71·6	3rd

N. B.— Elevations in italics indicate barometrical determinations.

B—*continued.*

stations in India, etc., in June, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th June 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															V.—United Provinces of Agra and Oudh—*concld.*
15	0	2	12	0	0	0	1	0	N 84° E	S 89° E	1·6	3·1	−1·5	40	+ 4	58	− 7	·816	+·003	4·4	−0·1	2	−3·4	3·24	4·38	−1·14	3·33	5·37	−1·99	3·11	Lucknow.
3	0	5	13	8	1	0	0	0	S 82° E	S 69° E	3·0	3·6	−0·6	72	+12	71	− 3	·887	−·010	6·1	+2·4	2	−5·0	7·63	5·91	+1·72	8·43	7·56	+0·87	5·65	Bahraich.
2	1	2	3	0	1	14	5	2	S 60° W	N 89° W	6·3	4·0	+2·3	43	+12	47	− 9	·686	−·093	1·0	−2·0	3	−2·5	1·31	4·48	−3·17	1·56	4·83	−3·27	0·62	Jhansi.
2	1	0	5	5	2	9	6	0	S 19° W	S 16° W	3·6	4·7	−1·1	40	+14	45	− 9	·745	+·004	2·7	−0·5	3	−0·8	0·74	2·41	−1·67	0·95	2·88	−1·93	0·35	Agra.
0	1	1	12	6	1	0	7	2	S 76° E	N 80° E	2·4	2·1	+0·3	30	+14	49	−10	·770	−·008	1·9	−2·6	1	−3·1	0·19	2·67	−2·48	0·54	3·16	−2·62	0·12	Mainpuri.
2	1	1	11	13	1	0	0	1	S 69° E	S 56° E	2·3	3·1	−0·8	69	+28	63	− 4	·814	+·003	6·7	+3·1	1	−4·2	0·38	5·01	−4·63	1·70	5·76	−4·06	0·38	Bareilly.
12	0	0	1	17	0	0	0	0	S 18° E	S 41° E	3·3	2·6	+0·7	59	+18	61	+ 2	·769	+·070	3·6	+0·5	5	−0·5	2·57	4·98	−2·31	2·94	5·86	−2·92	1·18	Roorkee.
																															VI.—Punjab.
3	2	0	2	13	1	0	4	5	S 38° E	S 44° E	4·7	3·6	+1·1	23	+10	47	− 6	·685	−·017	1·5	−2·5	0	−4·1	0	3·06	−3·06	0·23	3·68	−3·45	0	Delhi.
0	0	0	1	4	6	12	7	0	S 34° W	S 27° W	6·1*	5·2	+0·9	69	+43	43	− 6	·712	+·008	0·9	−1·9	1	−2·1	0·12	1·76	−1·64	0·76	2·31	−1·55	0·12	Hissar.
1	0	0	2	23	0	1	2	1	S 43° E		5·2			70		54	− 3	·800	+·056	1·7	−0·8	1	−2·3	1·05	2·21	−1·16	1·63	2·92	−1·29	1·05	Patiala.
0	0	0	15	12	1	0	1	1	S 68° E	S 61° E	6·4	1·8	+4·6	79	+27	48	−11	·702	−·031	1·6	−0·6	0	−5·0	0·01	3·85	−3·84	0·05	4·70	−4·65	0·01	Ambala.
8	0	1	0	10	9	0	1	1	S 22° E	S 37° E	2·8	2·0	+0·8	53	+16	43	− 7	·650	−·013	0·4	−1·9	1	−2·5	0·63	2·60	−1·97	1·06	3·26	−2·20	0·63	Ludhiana.
3	0	0	3	13	4	3	3	1	S 24° E	S 60° E	2·2	2·6	−0·4	53	+23	45	− 5	·735	+·050	0	−2·4	0	−3·0	0	1·76	−1·76	0·68	2·48	−1·80	0	Lahore.
0	1	6	15	8	0	0	0	0	S 89° E	N 81° E	2·6	2·3	+0·3	83	+39	48	− 2	·760	+·081	0·2	−1·3	1	−2·7	0·57	2·50	−1·93	1·43	3·58	−2·15	0·57	Sialkot.
7	1	3	6	8	3	0	1	1	S 68° E	N 83° E	2·0	2·0	0	43	+23	35	− 9	·585	+·026	1·1	−1·4	2	−1·5	0·39	2·07	−1·68	1·30	3·37	−2·07	0·38	Rawalpindi.
2	0	12	14	2	0	0	0	0	N 71° E	N 69° E	5·3	5·2	+0·1	82	+30	40	− 1	·677	+·089	0·3	−1·1	1	−1·5	0·12	1·45	−1·33	1·69	2·16	−0·47	0·12	Khushab.
2	0	2	2	7	5	12	0	0	S		2·2			56		48		·734		0		0	−2·4	0	1·55	−1·55	0·87	1·90	−1·03	0	Lyallpur.
0	0	0	2	3	8	12	4	0	S 25° W	S 3° W	5·8	6·9	−1·1	69	+32	43	+ 3	·700	+ ·091	0·3	−1·0	0	−1·5	0	0·99	−0·99	0·41	1·31	−0·90	0	Montgomery.
8	0	1	0	2	14	4	1	0	S 6° W	S 3° W	3·9	2·4	+1·5	56	+26	56	+ 6	·858	+·135	0	−0·7	0	−1·3	0	0·64	−0·64	0·18	0·93	−0·75	0	Multan.
																															VII.—North-West Frontier Province.
28	0	1	0	0	0	0	1	0	N 23° W	N 6° W	0·6	3·2	−2·6	2	−20	47	+ 6	·654	+·091	0·3	−1·5	0	−0·9	0·09	0·36	−0·27	0·54	1·24	−0·70	0·09	Peshawar.
11	0	10	0	7	0	1	0	1	N 79° E	N 51° E	2·6	1·8	+0·8	37	+11	41	−1·?	·668	−·116?	0·1	−1·2	1	−0·2	0·10	0·66	−0·56	0·32	1·05	−0·73	0·10	D. I. Khan.
																															VIII.—Sind.
10	0	0	2	7	8	3	0	0	S 17° E	S 51° E	3·1	3·9	−0·8	53	− 2	62	+ 7	·930	+·099	0·1	−0·8	0	−0·4	0	0·20	−0·20	0·20	0·33	−0·13	0	Jacobabad.
0	0	0	0	0	3	21	6	0	S 49° W	S 39° W	10·6	12·8	−2·2	89	+ 8	66	+ 4	·843	+·036	0·4	−2·6?	0	−0·8	0	0·49	−0·49	0	0·64	−0·64	0	Hyderabad.
0	0	0	0	0	0	11	18	1	S 75° W	S 75° W	15·2	12·8	+2·4	89	+ 3	82	+ 2	·954	−·023	5·8	+0·4	0	−0·7	0	0·97	−0·97	0·08	1·02	−0·94	0	Karachi.
																															IX.—Rajputana.
0	0	0	0	0	5	19	5	1	S 47° W	S 38° W	6·8	6·9	−0·1	86	+19	55	+ 1	·776	−·001	0·7	−1·2	0	−2·4	0	1·43	−1·43	0·65	2·01	−1·36	0	Bikaner.
0	0	0	0	0	0	29	1	0	S 46° W		7·4			96		54	− 3	·686	−·041	3·7	+0·6	0	−2·1	0	1·26	−1·26	0·47	1·49	−1·02	0	Jodhpur.
1	2	0	0	1	0	5	16	5	N 87° W	S 88° W	6·0	5·0	+1·0	72	+35	47	− 6	·616	−·050	0·7	−2·6	2	−1·8	1·05	2·17	−1·12	2·37	2·69	−0·32	0·69	Jaipur.
0	0	0	0	0	1	12	17	0	S 70° W	S 84° W	8·4	6·9	+1·5	86	+16	60	− 1	·705	−·050	0·8	−2·3	1	−1·3	0·24	2·24	−2·00	0·95	2·77	−1·82	0·18	Ajmer.
0	0	0	0	1	0	9	11	9	S 88° W		5·9			76		48	0	·693	+·013	3·9	+1·5	2	−2·2	1·70	2·54	−0·84	2·27	3·03	−0·76	0·93	Kotah.

* Mean of 27 days.

Table

(2) Abstract of observations taken at 8 hrs. at 211

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	X.—Bombay.																					
19	Deesa	466	29·192	+·008	29·604	29·344	3rd	29·059	19th	86·6	77·5	103·7	+1·4	80·8	+0·3	92·2	+0·9	22·9	111·3	1st	74·6	29th
	Bhuj	334	29·301	+·001	29·582	29·459	2nd	29·145	19th	85·8	78·2	95·5	−2·0	80·7	+0·9	88·1	−0·5	14·8	105·4	1st	78·9	5th & 26th.
	Jamnagar	61	29·599	−·003	29·605	29·748	2nd	29·463	19th	86·3	79·1	95·5	−0·7	80·0	−0·1	87·7	−0·4	15·5	102·3	2nd	70·6	19th
	Dwarka	37	29·634	−·001	29·617	29·760	2nd	29·464	15th	84·4	79·4	88·9	−0·1	82·4	+0·5	85·7	+0·2	6·5	91·9	2nd	81·0	5th
	Rajkot	429	29·228	−·010	29·559	29·355	2nd	29·093	19th	85·6	75·8	99·4	−0·5	81·0	+3·2?	90·2	+1·3?	18·4	107·1	1st	75·9	29th
	Veraval	*18*	29·668	−·003	29·629	29·783	2nd	29·509	15th	82·7	79·4	85·6	−0·8	81·6	+0·4	83·6	−0·2	4·0	88·1	5th	76·1	17th
	Bhavnagar Para	55	29·608	−·027?	29·609	29·740	3rd	29·435	15th	85·9	78·2	100·4	+0·6	80·2	−0·1	90·3	+0·3	20·2	106·8	7th	75·4	28th
	Surat	39	29·656	−·011	29·638	29·788	3rd	29·507	15th	85·0	79·1	93·1	−0·3	80·3	+0·7	86·7	+0·2	12·8	100·2	6th	71·1	28th
	Ahmadabad	163	29·505	−·005	29·614	29·660	3rd	29·379	14th	86·1	78·4	102·1	+0·6	81·2	−0·1	91·7	+0·3	20·9	109·8	1st	74·8	17th
25	Bombay	37	29·703	−·007	29·680	29·797	2nd	29·569	15th	82·8	78·6	88·8	+0·8	80·6	+0·9	84·7	+0·9	8·2	94·0	3rd	75·6	26th
	Ratnagiri	207	29·566	−·002	29·712	29·616	2nd	29·461	15th	81·1	77·4	85·9	−0·9	77·2	−0·2	81·5	−0·5	8·7	93·5	1st	72·5	9th
	Marmagao	*60*	29·740	−·005	29·735	29·810	2nd	29·654	15th	80·5	78·4	85·5	−1·2						94·5	1st		
	Karwar	44	29·768	−·002	29·747	29·848	23rd	29·692	15th	79·6	77·0	85·2	0	76·4	+0·2	80·8	+0·1	8·8	90·9	1st	73·2	26th
26	Malegaon	1,430	28·262	−·018	29·615	28·421	2nd	28·140	15th	82·1	74·4	95·5	−0·2	75·7	+0·6	85·6	+0·2	19·8	107·1	1st	71·2	17th
	Ahmadnagar	2,154	27·585	−·024	29·630	27·712	2nd	27·478	15th	77·9	70·9	91·0	−0·8	72·6	+0·5	81·8	−0·1	18·4	102·4	1st	68·5	1st
	Poona	1,846	27·906	−·006	29·670	28·002	3rd	27·790	15th	77·3	72·1	87·2	−2·6	72·9	+0·3	80·1	−1·1	14·3	98·5	1st	69·4	16th
	Sholapur	1,590	28·132	−·027	29·650	28·255	2nd	28·028	15th	78·2	72·0	91·4	−3·8	72·9	−0·7	82·2	−2·3	18·5	103·4	1st	66·8	2nd
	Bijapur	*1,948*	27·811	−·014	29·669	27·947	2nd	27·728	15th	76·9	71·6	88·3	−3·4	72·2	+0·4	80·3	−1·5	16·1	96·7	5th	69·5	29th
	Belgaum	2,562	27·264	+·001	29·724	27·352	2nd	27·178	15th	72·1	69·8	79·5	−1·7	68·2	+0·2	73·8	−0·7	11·3	91·1	4th	65·7	30th
	XI.—Central India.																					
20	Neemuch	1,626	28·005	−·034	29·542	28·886	15th	28·199	3rd	82·9	74·8	99·5	+0·8	77·4	−0·4	88·5	+0·2	22·1	110·9	1st	70·2	4th
	Indore	1,823	27·834	−·031	29·571	27·998	3rd	27·682	14th	79·7	73·7	94·3	−1·0	74·6	−1·0	84·5	−1·0	19·7	106·5	2nd	70·1	3rd & 17th.
21	Nowgong	754	28·787	−·038	29·474	28·928	3rd	28·683	19th	80·4	76·1	105·3	+2·7	85·4	+2·3	95·4	+2·5	19·9	115·0	1st	77·0	16th
	Sutna	1,041	28·500	−·036	29·469	28·692	3rd	28·313	20th	88·7	75·6	101·4	+1·3	83·3	+1·3	92·3	+1·3	18·1	112·8	1st & 2nd.	74·8	18th
	XII.—Central Provinces.																					
22	Buldana	2,134								77·8	71·7	91·3	−1·3	73·2	−0·3	82·3	−0·8	18·1	104·5	2nd	69·6	15th
	Akola	925	28·729	−·029	29·591	28·861	2nd	28·604	14th	81·8	74·5	96·1	−2·7	77·4	−0·6	86·7	−1·7	18·7	111·8	2nd	69·9	18th
	Amraoti	1,215	28·425	−·035	29·589	28·539	1st	28·306	14th	82·1	73·7	95·9	−1·9	76·7	−0·6	86·3	−1·3	19·2	110·8	1st	68·3	18th
23	Khandwa	1,044	28·604	−·026	29·589	28·755	2nd	28·465	14th	81·3	74·3	95·8	−2·6	76·2	−2·8	86·0	−2·7	19·6	109·4	2nd	70·5	17th
	Hoshangabad	1,006	28·617	−·025	29·556	28·717	2nd	28·474	14th	83·5	75·5	97·0	−2·5	77·2	−2·5	87·1	−2·5	19·8	113·7	1st	70·0	18th
	Saugor	1,807	27·763	−·073?	29·475	27·897	2nd	27·511	11th	82·3	72·5	93·5	−0·3	78·2	−0·2	88·3	−0·3	20·3	113·0	1st	69·4	18th
	Jubbulpore	1,327	28·234	−·056	29·479	28·336	2nd	28·072	14th	83·8	74·3	96·3	−1·8	79·6	+0·7	88·0	−0·5	16·7	111·9	1st	72·5	18th
	Seoni	2,033	27·591	−·039	29·511	28·698	1st	28·439	14th	81·7	72·4	92·3	−3·1	75·4	−0·1	83·8	−1·6	16·9	109·0	1st	66·7	18th
	Nagpur	1,017	28·599	−·032	29·549	28·711	1st	28·453	13th	82·8	75·2	95·2	−4·0	77·8	−1·2	86·5	−2·6	17·4	114·7	1st	68·3	18th
24	Pendra	2,040	27·564	−·031	29·492	27·663	2nd	27·421	14th	81·6	73·5	92·5	−2·2	75·0	−2·0	83·8	−2·1	17·5	109·3	1st	70·0	15th

N.B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

stations in India, etc., in June, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th June 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															X.—Bombay.
0	0	0	0	1	0	18	8	3	S 63° W	S 69° W	12·2	12·2	0	79	+16	64	− 3	·817	+·001	6·5	+1·0	3	−0·1	1·64	2·08	− 0·44	1·67	2·26	− 0·59	0·85	Deesa.
0	0	0	0	0	2	1	27	0	S 85° W	S 72° W	12·3	12·9	−0·6	92	+14	70	− 4	·835	−·043	5·1	−0·1	2	−0·3	0·32	1·84	− 1·52	0·32	1·90	− 1·58	0·20	Bhuj.
0	0	0	0	0	3	13	14	0	S 62° W		17·2			87		71	+ 2	·896	+·027	5·3	+1·5	1	−1·8	0·16	1·94	− 1·78	0·16	1·96	− 1·80	0·12	Jamnagar.
0	0	0	0	0	4	16	10	0	S 54° W		13·7			86		79	− 1	·940	−·031	4·6	−0·3	0	−2·7	0·04	2·48	− 2·44	0·04	2·49	− 2·45	0·02	Dwarka.
1	0	0	0	0	4	16	9	0	S 53° W	S 81° W	15·3	10·3	+5·0	82	+ 8	62	−12?	·761	−·119?	8·0	+2·6?	2	−3·1	1·76	4·37	− 2·61	1·95	4·53	− 2·58	1·40	Rajkot.
1	0	0	0	1	2	9	17	0	S 69° W	S 69° W	11·8	8·3	+3·5	79	+10	86	+ 2	·960	−·010	5·5	−0·6	2	−2·3	0·61	4·27	− 3·66	0·61	4·31	− 3·70	0·31	Veraval.
0	0	0	0	0	1	15	8	6	S 72° W	S 48° W	6·3	11·5	−5·2	80	0	70	− 1	·859	−·031	6·9	+0·7	5	+0·1	2·52	4·56	− 2·04	2·63	4·68	− 2·05	1·13	Bhavnagar Para.
5	1	0	0	3	8	8	2	3	S 31° W	S 49° W	5·9	9·6	−3·7	49	−21	76	− 1	·911	−·010	8·2	+1·7	7	−0·9	3·22	8·61	− 5·39	3·22	8·70	− 5·48	1·10	Surat.
3	1	0	0	1	0	12	3	10	S 87° W	S 61° W	6·3	5·[illegible]	+0·7	59	0	70	+ 2	·873	+·022	6·8	+0·3	7	+1·8	2·77	4·60	− 1·83	3·27	4·71	− 1·44	0·58	Ahmadabad.
0	1	1	0	3	2	7	11	5	S 77° W	S 58° W	8·5	11·1	−2·6	56	+ 8	82	0	·918	−·012	7·7	+0·1	10	−4·3	16·31	18·78	− 2·47	16·31	19·42	− 3·11	10·92	Bombay.
0	2	0	0	1	2	9	9	7	S 84° W	S 60° W	9·1	7·4	+1·7	62	+31	84	+ 1	·883	−·013	8·7	+1·3	22	+2·1	28·10	28·97	− 0·87	28·21	30·08	− 1·87	6·93	Ratnagiri.
3	1	0	0	0	3	1	14	8	N 82° W	N 76° W	7·9	8·0	−0·1	66	+17	91	+ 5	·943	+·015	9·4	+1·9	25	+5·0	28·44	30·13	− 1·69	28·84	31·81	− 2·97	2·71	Marmagao.
8	4	1	0	0	10	5	0	2	S 30° W	S 82° W	4·2	4·4	−0·2	30	−22	88	+ 4	·893	+·031	6·1	−1·2	24	+1·3	27·16	37·64	−10·48	30·02	40·25	−10·23	2·40	Karwar.
1	0	1	0	1	0	15	12	0	S 64° W	S 51° W	11·3	10·2	+1·1	76	+ 3	69	+ 1	·755	+·016	6·9	+1·9	7	−0·1	5·92	4·56	+ 1·36	6·52	5·35	+ 1·17	2·38	Malegaon.
3	1	0	0	0	0	4	12	10	N 76° W	N 88° W	8·5	11·8	−3·3	72	+17	80	+ 6	·666	−·049	5·8	+0·3	9	+1·5	6·34	5·13	+ 1·21	6·93	5·92	+ 1·06	2·97	Ahmadnagar.
3	0	0	0	0	0	1	18	8	N 78° W	S 82° W	10·3	11·9	−1·6	79	− 2	78	+ 6	·724	+·028	8·5	+1·5	6	−1·6	2·58	5·01	− 2·43	6·73	6·09	+ 0·64	1·21	Poona.
0	0	0	0	0	0	6	14	10	N 84° W	S 81° W	10·8	10·0	+0·8	82	+ 5	74	+ 7	·702	+·027	8·5	+1·9	11	+4·3	10·63	4·77	+ 5·86	10·81	5·69	+ 5·12	3·02	Sholapur.
0	2	0	0	0	0	4	20	4	N 86° W	S 78° W	7·6*	7·1	+0·5	86	+ 7	77	+ 1	·705	−·006	7·2	+0·8	8	+2·4	4·42	3·19	+ 1·23	6·21	4·39	+ 1·82	1·59	Bijapur.
2	0	0	0	0	1	12	13	2	S 71° W	S 75° W	6·2	16·7	−10·5	79	+ 9	89	+ 3	·695	+·005	9·4	+1·3	13	−0·4	8·77	8·24	+ 0·53	13·21	10·63	+ 2·58	3·11	Belgaum.
																															XI.—Central India.
0	0	0	1	0	1	10	18	0	S 72° W	S 81° W	10·7	9·9	+0·8	82	+ 8	68	− 1	·763	−·016	4·4	+0·4	6	+1·1	1·54	4·01	− 2·47	2·78	4·45	− 1·67	0·40	Neemuch.
3	0	0	0	0	0	0	19	8	N 77° W	S 87° W	4·0	5·1	−1·1	86	+12	75	+ 3	·755	−·013	8·4	+2·5	11	+3·5	10·79	5·55	+ 5·24	12·18	6·03	+ 6·15	4·23	Indore.
0	1	4	3	3	1	4	12	2	S 85° W	S 86° W	4·4	3·4	+1·0	27	−21	51	− 6	·709	−·028	4·4	−1·2	3	−3·1	1·22	6·24	− 5·02	2·08	6·58	− 4·50	0·67	Nowgong.
1	3	2	4	0	0	7	11	2	N 86° W	S 84° W	5·1	7·1	−2·0	40	+11	56	+ 1	735	+·042	3·6	−1·8	4	−2·3	3·10	5·59	− 2·49	3·86	6·05	− 2·19	2·50	Sutna.
																															XII.—Central Provinces.
0	0	0	0	0	0	3	15	12	N 77° W		8·9	8·0	+0·9	90		74		·701		6·7		12	+2·8	6·50	6·71	− 0·21	6·57	7·20	− 0·63	1·22	Buldana.
1	0	0	0	0	0	0	15	14	N 68° W	N 81° W	9·6	7·2	+2·4	89	+16	71	+ 5	·754	+·004	8·9	+2·8	10	+1·9	9·64	5·27	+ 4·37	9·69	5·63	+ 4·06	3·02	Akola.
2	0	0	0	0	0	0	16	12	N 71° W	S 87° W	9·3	6·5	+2·8	82	+ 4	69	0	·727	−·035	6·4	+0·7	12	+3·4	6·88	6·55	+ 0·33	7·70	7·09	+ 0·61	1·87	Amraoti.
0	0	0	0	0	0	1	22	7	N 82° W	N 87° W	10·1	7·5	+2·6	92	+10	71	+ 5	·755	+·019	5·7	+0·6	10	+3·1	7·90	5·18	+ 2·72	8·46	5·54	+ 2·92	2·46	Khandwa.
5	0	0	0	0	0	16	1	8	S 71° W	S 62° W	4·0	3·7	+0·3	59	−12	70	+ 4	·721	−·010	6·8	+1·4	9	+1·0	12·03	5·70	+ 6·33	12·33	6·19	+ 6·14	4·85	Hoshangabad.
0	0	1	3	0	0	0	13	8	N 72° W	S 80° W	8·3	4·7	+3·6	69	+ 2	64	+ 3	·678	−·011	6·0	+1·3	8	+0·1	2·58	6·64	− 4·06	3·35	7·10	− 3·75	0·53	Saugor.
1	1	1	0	1	3	9	9	5	S 75° W	S 70° W	2·9	3·7	−0·8	56	− 3	65	+ 4	·728	+·027	6·2	+1·5	8	−0·9	5·93	7·50	− 1·57	6·85	7·96	− 1·11	1·78	Jubbulpore.
5	3	1	0	0	0	3	10	8	N 67° W	S 88° W	2·5	4·2	−1·7	59	+ 3	66	+ 3	·677	−·009	6·3	+1·5	12	+0·7	15·73	8·86	+ 6·87	17·26	9·50	+ 7·76	3·47	Seoni.
1	0	0	1	0	0	0	14	14	N 67° W	S 87° W	4·5	6·6	−2·1	82	+23	71	+ 7	·771	+·059	5·9	−0·2	15	+4·8	15·30	8·78	+ 6·52	16·05	9·53	+ 6·52	3·32	Nagpur.
10	2	0	0	3	3	1	2	9	N 69° W		4·7			23		69	+ 9	·718	+·062	2·8	−2·6?	6	−5·5	9·10	7·50	+ 1·60	10·69	8·34	+ 2·35	2·45	Pendra.

*Mean of 25 days.

Table

(2) Abstract of observations taken at 8 hrs. at 211

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XII.—Central Provinces *—concld.*																					
	Raipur	970	28·601	—·052	29·506	28·760	23rd	28·456	13th	81·5	75·0	92·5	−5·3	77·3	−1·6	84·9	−3·5	15·2	115·0	2nd	68·9	19th
	Chanda	*634*	28·989	—·046	29·560	29·077	22nd	28·905	10th	83·4	74·8	95·2	−4·1	78·0	−1·8	86·6	−2·9	17·2	114·1	1st	68·0	18th
	Jagdalpur	1,813	27·835		29·553	27·914	2nd	27·721	13th	78·6	74·5	86·7		73·2		79·9		13·5	104·1	3rd	67·3	19th
	XIII.—Hyderabad.																					
27	Aurangabad	1,905	27·817	—·029	29·628	27·942	1st	27·718	15th	78·5	73·0	92·7	−1·8	72·8	0	82·7	—0·9	19·9	103·9	1st	64·0	1st
	Nizamabad	1,248	28·425	?	29·601	28·524	1st	28·343	14th	80·7	72·6	95·1	−2·1	75·6	−1·6	85·3	−1·9	19·5	109·8	1st	69·0	18th
28	Gulbarga	1,503	28·224	—·029	29·655	28·333	1st	28·155	15th	77·0	72·0	94·4	−1·1	72·8	−1·2	83·7	−1·1	21·6	104·2	1st	66·3	17th
	Raichur	*1,311*	28·427	—·018	29·666	28·538	1st	28·370	15th	79·0	72·5	92·7	−2·4	74·2	−0·8	83·4	−1·6	18·5	102·0	3rd & 5th.	71·7	27th
	Hyderabad (Deccan)	1,738	28·060	—·019	29·633	28·106	24th	27·939	14th	78·0	72·0	91·0	3·6	74·5	−1·7	82·8	—2·7	16·5	106·8	2nd	69·4	11th
	Hanamkonda	877	28·783	—·036	29·591	28·882	2nd	28·724	30th	83·8	74·0	95·3	−2·7	78·3	−1·5	86·8	—2·1	17·0	110·8	2nd	71·2	18th
	XIV.—Mysore.																					
29	Chitaldrug	2,405	27·496	—·012	29·708	27·438	2nd	27·352	15th	73·5	69·0	84·0	−2·3	69·7	−0·4	76·9	—1·3	14·3	93·4	1st	65·8	5th
	Hassan	3,149	26·737	—·001	29·743	26·803	22nd	26·682	6th	70·7	67·8	79·4	−1·2	66·4	+0·4	72·9	—0·4	13·0	87·2	3rd	64·3	23rd & 27th.
	Bangalore	3,021	26·849	—·012	29·730	26·921	23rd	26·794	6th	71·2	67·6	83·8	−1·1	67·1	+0·2	75·5	—0·5	16·7	88·8	1st	64·7	27th.
	Mysore	2,518	27·342	—·012	29·743	27·421	23rd	27·283	6th	74·3	69·0	84·2	−0·6	68·6	+0·5	76·4	—0·1	15·6	90·7	3rd	66·2	27th
	XV.—Madras.																					
30	Mangalore	72	29·779	—·008	29·782	29·848	23rd	29·708	6th	85·1	77·4	86·2	+0·9	75·6	+1·6	80·9	+1·3	10·6	90·4	18th	71·5	5th
	Calicut	27	29·832	—·009	29·788	29·940	23rd	29·757	4th	78·5	76·9	83·5	−1·2	75·5	+0·4	79·5	—0·4	8·0	88·9	1st	72·1	27th & 29th.
	Cochin	9	29·876	—·001	29·813	29·939	24th	29·797	4th	79·5	76·1	84·4	−0·5	75·3	+0·5	79·9	—0·2	9·1	90·3	1st	71·7	9th
	Trivandrum	198	29·688	+·005	29·817	29·755	24th	29·601	4th	77·5	75·6	82·6	−0·4	75·0	−0·8	78·8	—0·6	7·6	88·0	1st	72·3	25th
31	Pamban	37	29·760	—·025	29·724	29·840	23rd	29·651	4th	84·3	78·6	89·0	−1·2	81·2	+0·9	85·1	—0·1	7·8	93·7	1st	80·0	23rd
	Madura	447	29·348	—·015	29·722	29·420	23rd	29·237	5th	84·5	75·3	96·0	−2·0	78·4	+1·3	87·2	—0·3	17·6	102·0	1st	73·2	5th
	Pudukkottai	318	29·487	—·003	29·733	29·544	24th	29·395	5th	85·3	74·8	99·1	+0·2	78·9	+0·6	89·0	+0·4	20·2	104·9	1st	70·2	5th
	Negapatam	31	29·755	—·013	29·715	29·816	22nd	29·660	5th	84·7	77·2	96·4	−1·2	79·8	+0·4	88·1	—0·4	16·6	103·6	2nd	72·9	3rd
	Trichinopoly	256	29·541	—·010	29·727	29·609	24th	29·444	4th	83·3	74·3	98·1	−0·9	79·0	+0·4	88·5	—0·3	19·1	104·1	1st	73·2	4th
	Coimbatore	1,341	28·481	—·003	29·745	28·566	23rd	28·397	5th	78·9	72·9	88·6	−1·0	72·4	+0·6	80·5	—0·2	16·2	95·5	1st	69·8	28th
	Salem	913	28·894	—·002	29·738	28·968	23rd	28·817	4th	79·0	74·0	94·2	−1·1	74·8	+0·3	84·5	—0·4	19·4	101·2	2nd	71·8	5th
	Cuddalore	37	29·725	—·020	29·692	29·790	22nd	29·643	4th	84·7	77·4	97·4	−1·5	80·2	+0·2	88·8	—0·7	17·2	105·2	1st	72·7	4th
	Vellore	707	29·041	—·033	29·678	29·129	23rd	28·963	4th	82·9	74·5	96·5	−0·4	78·8	+0·2	87·6	—0·1	17·7	104·0	1st	71·4	4th
	Madras	22	29·716	—·026	29·670	29·792	23rd	29·626	4th	86·3	75·7	99·0	+0·1	81·0	+0·1	90·0	+0·1	18·0	105·3	1st	70·3	3rd
32	Cuddapah	428	29·312	—·030	29·672	29·386	1st	29·259	7th	84·9	75·1	97·3	−2·9	79·8	—0·7	88·5	—1·8	17·5	106·4	1st	73·5	21st

N. B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

stations in India, etc., in June, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th June 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XII.—Central Provinces—*concld.*
0	0	0	2	3	0	13	12	1	S 62° W	S 56° W	5·5	7·1	−1·6	66	−10	6[illegible]	+12	·779	+·049	8·0	+1·9	12	+2·4	23·34	8·65	+15·29	27·13	8·95	+18·18	7·78	Raipur.
1	1	0	0	0	1	11	13	[illegible]	S 74° W	S 61° W	7·1	4·5	+2·6	79	+14	68	+ 6	·778	+·010	7·2	+0·9	13	+3·5	15·1[illegible]	7·32	+7·78	17·16	7·94	+ 9·22	3·52	Chanda.
3	0	0	0	0	5	6	16	0	S 66° W		4·0			69		8[illegible]		·803		7·4		17	+7·5	13·22	9·13	+4·09	15·14	11·5	+ 3·62	2·79	Jagdalpur.
																															XIII.—Hyderabad.
0	1	1	0	0	0	1	20	7	N 77° W		13·0			86		77	+ 8	·74[illegible]	+·014	8·0	+2·0	10	+2·4	3·51	5·74	−2·23	3·69	6·44	− 2·75	0·72	Aurangabad.
0	0	1	0	0	0	1[illegible]	15	4	S 82° W		6·3			79		68	− 1	·700	−·057	7·5	+1·4	11	+3·[illegible]	5·0[illegible]	5·4[illegible]	+0·69	7·31	5·71	+ 1·60	1·63	Nizamabad.
0	0	0	0	0	0	1	2[illegible]	4	N 85° W	S 86° W	10·8	10·3	+0·5	86	+29	78	+ 5	·719	−·008	7·7	+1·1	9	+1·9	6·29	4·81	+1·48	7·71	5·79	+ 1·92	2·05	Gulbarga.
2	1	0	0	0	2	11	12	2	S 71° W	S 74° W	10·5	10·2	+0·3	72	− 3	73	+ 4	·717	+·005	7·2	+1·6	9	+3·2	4·3[illegible]	3·[illegible]6	+0·83	6·53	4·35	+ 2·18	1·16	Raichur.
1	1	0	0	0	0	0	22	6	N 79° W	N 87° W	8·2	6·6	+1·6	86	+ 2	74	+ 6	·708	+·015	8·5	+1·9	8	+1·4	6·66	4·64	+4·02	9·05	5·52	+ 3·53	1·96	Hyderabad (Deccan).
1	2	0	0	0	1	6	12	8	N 84° W		5·6			72		6[illegible]	+ 4	·711	+·025	7·8	+1·7	10	+2·7	4·06	5·[illegible]8	−1·72	5·62	6·42	− 0·80	0·87	Hanamkonda.
																															XIV.—Mysore.
0	0	0	0	0	0	12	15	3	S 76° W	S 68° W	8·6	8·1	+0·5	86	0	79	0	·649	−·005	8·4	+0·5	5	−1·2	5·09	3·04	+2·05	8·52	6·02	+ 2·50	2·41	Chitaldrug.
1	0	0	0	0	0	[illegible]	17	7	N 88° W	S 83° W	9·[illegible]	3·7	+5·8	83	+ 2	86	+ 3	·648	+·005	6·5	−1·9	12	+2·0	4·84	4·03	+ 0·81	8·[illegible]2	8·85	+ 0·17	0·71	Hassan.
0	0	0	0	0	0	10	19	1[illegible]	S 76° W	S 70° W	10·1	6·8	+3·3	92	+ 3	83	+ 3	·640	+·001	8·9	+1·5	7	+1·2	3·08	2·94	+0·14	11·55	7·10	+ 4·45	1·44	Bangalore.
0	0	0	0	0	0	0	16	14	S 66° W	S 62° W	8·9	10·7	−1·8	80	+ 8	76	− 4	·640	−·019	7·6	−0·7	5	−1·6	3·51	3·09	+0·42	9·98	8·27	+ 1·61	2·30	Mysore.
																															XV.—Madras.
0	1	2	4	2	0	1	12	8	N 62° W	S 83° W	6·5	2·4	+4·1	43	+32	86	0	·895	+·036	7·8	−0·8	25	+0·6	20·91	36·50	−15·59	27·43	42·27	−14·84	2·17	Mangalore.
14	2	0	0	0	0	1	6	7	N 62° W	N 22° E	5·0	7·1	−2·1	43	+32	93	+ 4	·901	+·040	8·6	+0·3	21	+5·1	24·32	34·05	−9·73	44·46	41·83	+ 2·63	2·25	Calicut.
7	2	2	3	4	1	3	4	4	N 79° W	N 9° W	5·8	4·5	+1·3	6	−16	85	− 2	·856	−·002	8·3	+0·5	24	0	22·65	26·43	−5·78	38·67	40·01	− 1·34	2·38	Cochin.
1	5	0	0	0	0	1	5	18	N 48° W	N 16° W	6·9	5·1	+0·9	79	+12	91	+ 4	·861	+·026	9·7	+1·5	22	+5·3	12·18	13·11	−0·93	20·83	21·65	− 0·82	1·72	Trivandrum.
0	0	0	0	1	9	19	1	0	S 30° W	S 39° W	12·3	9·8	+2·5	89	+11	76	− 2	·897	−·020	3·2	0	2	+1·6	0·65	0·12	+0·53	2·93	0·90	+ 2·03	0·45	Pamban.
0	2	0	0	0	0	3	14	11	N 73° W	N 79° W	6·8	3·0	+3·8	82	+22	64	0	·751	− ·009	7·8	+2·62	3	+0·7	1·81	1·43	+0·38	8·67	4·17	+ 3·90	0·91	Madura.
8	3	0	0	0	0	3	10	6	N 73° W		5·6			53		60	− 4	·722	−·010	4·6	−2·3	2	−0·9	1·22	1·33	−0·11	3·36	3·61	− 0·25	0·69	Pudukkottai.
0	0	1	0	0	0	11	15	3	S 78° W	S 61° W	7·2	6·1	+1·1	79	− 2	70	+ 6	·831	+·039	5·5	+0·9	3	+0·8	3·13	1·28	+1·85	3·56	2·96	+ 0·60	2·20	Negapatam.
0	0	0	0	0	2	14	11	3	S 68° W	S 80° W	7·8	6·7	+1·1	82	− 3	61	− 1	·711	−·026	5·5	−0·1	3	+0·9	1·12	1·46	−0·34	4·41	4·67	− 0·26	0·67	Trichinopoly.
9	0	0	0	3	1	18	3	0	S 40° W	S 45° W	6·7	5·1	+1·6	56	−22	74	− 7	·731	−·040	3·7	−2·0	5	+0·3	1·43	1·72	−0·29	3·63	4·06	− 0·43	0·43	Coimbatore.
1	0	0	0	0	7	17	3	2	S 43° W	S 32° W	5·5	3·7	+1·8	72	+ 3	79	+ 4	·774	−·024	6·8	+0·8	7	+1·8	4·27	3·03	+1·24	10·80	7·81	+ 2·99	1·35	Salem.
1	1	0	0	0	0	23	4	0	S 52° W	S 62° W	6·7	2·1	+4·6	86	+16	71	+ 3	·839	−·004	6·6	+1·9	3	+0·4	0·96	1·46	−0·50	2·38	2·14	+ 0·24	0·40	Cuddalore.
1	0	0	0	0	0	0	6	23	N 54° W		6·0			92		66	+ 3	·741	+·013	5·2	+0·3	4	−0·7	2·80	2·46	+0·34	5·94	4·77	+ 1·17	0·99	Vellore.
0	0	0	0	0	0	21	7	2	S 60° W	S 66° W	5·2	6·4	−1·2	86	+12	60	− 2	·746	−·051	6·0	0	5	+1·4	2·39	1·77	+0·62	2·42	2·78	− 0·36	0·82	Madras.
3	1	0	6	0	0	0	17	9	N 73° W	N 87° W				79	+ 1	62	+ 1	·743	−·016	7·8	+1·4	4	−0·5	3·57	3·00	+0·57	3·81	4·61	− 0·80	2·06	Cuddapah.

Table

(2) Abstract of observations taken at 8 hrs. at 21

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean of 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XV.—Madras—concld.																					
	Bellary	1,475	28·284	−·023	29·676	28·364	23rd	28·217	15th	81·0	71·8	93·1	−1·7	75·7	−0·1	84·4	−0·9	17·4	100·5	1st & 2nd.	71·7	5th
	Kurnool	923	28·815	−·021	29·671	28·922	1st	28·757	15th	80·7	73·4	94·5	−2·6	77·2	+0·1	85·9	−1·3	17·3	102·6	3rd	73·2	5th & 19th.
33	Nellore	66	29·639	−·032	29·639	29·723	23rd	29·575	6th	86·7	77·4	98·7	−2·9	81·9	−0·2	90·3	−1·5	16·8	106·6	1st & 3rd.	73·9	25th
	Masulipatam	15	29·660	−·039	29·610	29·732	23rd	29·590	30th	84·1	76·9	95·1	−3·1	78·7	−1·8	86·9	−2·5	16·4	110·5	2nd	7·22	5th
	Cocanada	26	29·624	−·038	29·587	29·708	2nd	29·537	30th	82·0	77·8	92·4	−4·3	78·8	−2·3	85·6	−3·3	13·6	108·2	1st	74·9	12th
	Waltair (Vizagapatam)	*226*	29·564	−·056	29·540	29·673	2nd	29·442	30th	84·0	77·6	90·4	+0·7	80·7	−2·7	85·5	−1·0	9·7	95·3	15th	74·9	3rd
	Calingapatam	19	29·571		29·528	29·693	1st	29·438	11th	82·9	78·7	90·2		78·9		84·6		11·3	99·5	2nd	75·1	19th
	Gopalpur	33	29·522	−·043	29·518	29·651	2nd	29·353	10th	83·6	80·5	88·7	−0·9	79·9	−0·5	84·3	−0·7	8·8	93·5	4th	73·7	13th
	Bay Islands.																					
1	P. V. Fraser	8	29·556		29·536	29·726	1st	29·354	11th	84·0	80·6											
	Port Blair	58	29·745	−·018	29·733	29·807	27th	29·637	3rd	81·2	77·9	85·2	−0·7	77·5	−0·3	81·3	−0·5	7·7	91·0	1st	71·9	14th
	Table Island		29·674	−·026	29·698	29·743	27th	29·606	30th	81·8	79·1	84·6	−1·4	78·7	+0·9	81·6	−0·3	5·9	90·2	1st	71·9	30th
	Kashmir.																					
13	Muzaffarabad		27·202			27·373	2nd	27·053	18th	82·3	70·1	103·1		75·4		89·2		27·7	111·0	15th	68·7	27th
	Srinagar	5,204	24·712	−·029	24·683	24·870	2nd	24·594	19th	71·1	64·1	86·7	+4·3	60·9	+3·3	73·8	+3·8	25·8	93·0	15th	51·6	1st
	Gulmarg	*8,569*	21·801	+·002	21·769	21·927	2nd & 6th.	21·671	19th	65·8	58·2	73·1	+6·3	48·3	+4·8	60·7	+5·5	24·8	82·7	17th	42·5	1st
	Dras	*10,059*	20·783	+·027	20·751	20·952	2nd	20·634	18th	57·4	47·9	72·1	−1·8	45·4	+4·3	58·8	+1·3	26·7	81·5	15th	38·0	3rd
	Leh	*11,503*	19·699	+·008	19·667	19·891	2nd	19·544	19th	58·4	44·2	74·4	+2·4	47·0	+3·1	60·7	+2·7	27·4	83·1	15th & 16th.	39·0	1st & 5th.
	Skardu	*7,505*	22·738	+·034	22·708	22·967	2nd	22·577	19th	68·7	54·4	85·4	+6·0	60·4	+5·1	72·9	+5·5	25·0	95·0	15th	53·6	1st
	Gilgit	4,890	24·989	+·032	24·963	25·182	2nd	24·773	19th	80·8	74·8	97·3	+5·0	69·0	+1·9	83·2	+3·5	28·3	102·2	16th	61·2	3rd
	Baluchistan.																					
15	Fort Sandeman	4,614																				
	Quetta	5,502	24·483	−·007	24·443	24·594	2nd & 6th.	24·342	19th	72·7	60·5	97·1	+6·5	59·4	+0·9	78·2	+3·7	37·7	101·5	11th	51·7	13th
	Chaman	4,311	25·451	−·055	25·413	25·553	6th	25·330	19th	85·6	66·6	102·9	+3·2	73·7	+1·5	88·3	+2·3	29·2	108·2	11th	65·2	18th
	Kalat	6,630	23·613		23·575	23·729	2nd	23·475	19th	69·0	56·5	94·2	+3·0	56·1		75·2		38·1	98·7	10th	48·1	19th
	Dalbandin	2,772	26·839		26·802	26·941	2nd	26·736	19th	85·4	65·4	110·8		72·9		91·9		37·9	117·2	11th	64·2	21st
	Pasni		29·595		29·555	29·741	3rd	29·401	15th	82·9	79·8	93·2		76·4		84·8		16·8	97·6	16th	72·7	2nd
	Panjgur		26·497		26·455	26·618	2nd	26·376	19th	81·5	70·9	105·0		75·3		90·2		29·7	112·3	14th	69·8	20th
	Seistan		27·817			27·930	29th & 30th.	27·690	4 days	81·2	64·7	104·1		75·6		89·8		28·5	116·2	10th	63·4	24th
	Hill stations, excluding Kashmir and Baluchistan.																					
	Parachinar	6,000	24·285	−·013	24·261	24·447	2nd	24·137	19th	82·4	61·8	94·3	+6·7	69·3	+5·8	81·8	+6·3	25·0	98·4	15th	61·3	1st
	Cherat	*4,256*	25·481	−·028	25·449	25·613	5th	25·333	19th	85·3	64·9	98·9	+5·1	79·7	+6·5	89·3	+5·8	19·2	104·6	14th.	69·9	25th
	Drosh (c)		24·858			25·025	4 days	24·700	19th	79·6	62·8	95·9	+5·1	72·7	+5·3	84·3	+5·2	23·2	101·7	15th	66·4	17th
	Murree	6,323								74·5	60·5	86·5	+4·8	70·5	+6·4	78·5	+5·6	16·0	92·2	14th	58·7	25th

N.B.—Elevations in italics indicate barometrical determinations.

(c) Aneroid.

NOTE.—The barometric readings are not reduced to sea-level in the case of

B—*continued.*

stations in India, etc., in June, 1919—*continued.*

Wind direction. Number of winds from Calm	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th June 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XV.—Madras—*concld.*
1	0	0	0	0	0	5	15	9	N 83° W	S 34° W	9·1	7·7	+1·4	82	+ 8	63	+ 1	·671	+·029	8·1	+0·9	2	−1·7	1·66	1·97	−0·31	3·93	3·92	+0·01	1·33	Bellary.
1	4	0	0	0	0	8	10	7	N 81° W	S 89° W	11·4*			69	+ 6	69	+ 1	·722	−·017	8·5	+2·1	5	−0·7	1·74	2·94	−1·20	3·20	3·90	−0·70	0·82	Kurnool.
1	1	0	0	0	0	4	18	6	N 84° W	N 73° W	4·4	7·0	−2·6	82	+19	65	+ 5	·811	+·015	7·2	0	3	+0·3	0·74	1·21	−0·47	3·09	1·79	+1·30	0·24	Nellore.
3	1	0	0	0	1	2	10	13	N 69° W	N 80° W	7·5	6·9	+0·6	72	+ 9	72	− 5	·827	−·138?	8·1	+0·9	9	+3·0	3·97	4·44	−0·47	8·20	5·62	+2·58	1·00	Masulipatam.
3	0	1	0	0	0	8	16	1	S 77° W	S 69° W	6·7		+0·3	72	− 3	83	+ 9	·897	+·001	8·9	+2·4	10	+3·7	4·10	4·65	−0·55	5·12	5·88	−0·76	0·68	Cocanada.
0	1	1	0	1	0	8	17	2	S 82° W	S 73° W	10·8	6·4		75	+ 2	74	+ 3	·866	+·003	9·3	+1·5	7	+0·5	5·74	4·91	+0·83	6·06	7·01	−0·95	1·80	Waltair (Vizagapatam).
0	2	1	1	0	1	13	9	3	S 75° W		7·2			63		83		·928		6·4		10	+4·1	6·00	4·37	+1·63	7·68	7·57	+0·11	1·76	Calingapatam.
1	3	1	1	0	6	13	1	4	S 53° W	S 39° W	8·7	11·0	−2·3	46	−28	87	+ 4	·999	+·038	6·0	+1·5	7	−0·8	6·69	5·94	+0·75	9·07	7·84	+1·23	2·85	Gopalpur.
																															Bay Islands.
0	1	1	2	3	6	13	4	0	S 27° W					60		86		·999		6·6		16	+6·1	11·54	6·94	+4·60	14·12	9·27	+4·83	2·44	P. V. Fraser.
0	0	0	0	1	5	17	6	1	S 46° W	S 57° W	8·4	7·6	+0·8	79	+ 5	85	− 3	·913	−·027	9·1	+0·9	26	+5·0	21·36	19·24	+2·12	32·54	35·08	−2·54	4·00	Port Blair.
0	0	0	0	2	7	16	5	0	S 37° W		20·0			82		89	+ 1	·961	−·002	9·0	+0·5	23	+6·3	11·59	15·53	−3·94	13·75	24·27	−10·52	1·37	Table Island.
																															Kashmir.
16	1	2	0	1	1	9	0	0	S 34° W		2·3			23		55		·588		2·9		8	+2·4	2·20	3·65	−1·45	5·41	6·22	−0·81	0·53	Muzaffarabad.
14	1	2	0	2	2	0	2	7	N 46° W	S 45° E	2·4	2·8	−0·4	20	+12	68	−14	·519	−·029	2·4	−0·5	1	−2·7	0·49	1·52	−1·03	2·08	3·96	−1·88	0·35	Srinagar.
7	5	12	2	1	0	0	1	2	N 32° E		3·6			56		65	−12	·404	+·012	3·1	+0·4	6	−3·0	1·96	3·47	−1·51	2·07	3.47	−1·40	0·95	Gulmarg.
25	0	0	0	1	0	1	2	1	S 75° W		5·3			10		54	− 6	·250	−·023	2·5	−0·5	1	−1·3	0·25	0·64	−0·39	1·14	3·37	−2·23	0·10	Dras.
29	0	0	0	0	1	0	0	0	S	S 72° W	1·6	1·9	−0·3	3	−44	34	− 7	·165	−·006	2·7	−1·2	0	−0·7	0·02	0·19	−0·17	0·26	0·39	−0·13	0·01	Leh.
12	0	1	7	0	1	6	3	0	S 6° E		5·9			17		40	− 9	·277	−·015	2·9	−0·4	0	−0·8	0·03	0·28	−0·25	0·03	1·48	−1·45	0·03	Skardu.
27	0	0	0	0	0	3	0	0	S 45° W		0·2			10		75	?	·794	?	1·8	−1·2	0	−1·3	0·01	0·37	−0·36	0·20	1·17	−0·97	0·01	Gilgit.
																															Baluchistan.
																															Fort Sandeman.
29	0	0	1	0	0	0	0	0	E	S 8° W	1·7	2·2	−0·5	3	− 3	48	+ 2	·392	−·023	0	−0·6	0	−0·4	0	0·17	−0·17	0·93	0·52	+0·41	0	Quetta.
9	0	0	0	5	13	2	0	1	S 5° E	S 53° W	3·4	6·6	−3·2	56	+ 8	36	+ 2	·447	+·016	0·1	−0·3	0	0	0	0·03	−0·03	0·59	0·12	+0·47	0	Chaman.
24	0	1	0	1	2	1	0	1	S	S 32° W	3·2			7	−35	46	+12	·325	+·011	0		0	−0·6	0	0·27	−0·27	0·14	0·49	−0·35	0	Kalat.
14	3	3	1	2	0	4	3	0	N 53° W		4·5			3		31		·392		0·3		0	−0·2	0	0·04	−0·04	0	0·06	−0·06	0	Dalbandin.
3	0	1	5	2	0	2	12	5	N 81° W		6·6			33		87		·975		5·7		0	−0·8	0	1·46	−1·46	0	1·46	−1·46	0	Pasni.
20	0	2	2	0	1	1	2	2	N 33° W		4·8			3		60		·640		0·4		0		0·04			0·05			0·04	Panjgur.
3	0	0	0	0	0	0	0	27	N 45° W		11·0			89		38		·407		0		0		0			0			0	Seistan.
																															Hill stations, excluding Kashmir and Baluchistan.
30	0	0	0	0	0	0	0	0	Calm		0·5			(a)		29	−10	·324	−·023	0·5	−2·8	0	−4·8	0	2·20	−2·20	3·93	4·65	−0·72	0	Parachinar.
2	8	0	0	3	14	0	0	3	S	S 79° E	5·9	7·2	−1·3	20	+15	32	−10	·283	−·030	1·0	−1·1	1	−1·0	0·57	1·23	−0·66	1·92	2·81	−0·89	0·57	Chorat.
26	0	1	3	0	0	0	0	0	N 79° E		2·8			13		39	−11	·334	−·041	1·6	+0·1	2	+0·2	0·39	0·62	−0·23	2·66	2·72	−0·06	0·18	Drosh.
13	4	0	0	10	2	0	0	1	S 55° E	S 63° E	4·4	5·3	−0·9	27	+16	46	− 2	·384	−·019	2·0	−0·8	2	−3·7	0·37	3·68	−3·31	3·30	6·55	−3·25	0·10	Murree.

Hill or plateau stations, the elevations of which exceed 3,300 feet.

* Mean of 19 days.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs. at 211

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Hill stations, excluding Kashmir and Baluchistan —concld.																					
	Simla	7,232	22·980	—·023	22·942	23·116	6th	22·817	19th	66·5	60·9	73·8	—0·4	62·5	+1·7	68·2	+0·7	11·3	80·7	4th	55·4	25th
	Chakrata	7,072	23·234	?	23·194	23·387	5th	23·090	19th	65·9	61·8	74·9	+0·6	62·2	+2·0	68·5	+1·3	12·7	85·3	1st	55·5	25th
	Mukteswar	7,592	22·740	—·013	22·639	22·882	5th	22·594	19th	62·5	59·4	72·8	—2·2	56·6	—1·4	64·7	—1·0	16·2	79·5	2nd	51·2	3rd
	Darjiling	7,432	22·849	—·020	22·804	22·950	4th	22·735	19th	62·0	60·9	68·4	+2·9	58·4	+2·2	63·4	+2·5	10·0	74·3	5th	54·3	1st
	Shillong	4,920	24·987	—·008	24·939	25·099	5th	24·845	19th	69·4	66·0	75·7	+1·3	64·2	+1·6	69·9	+1·1	11·5	80·9	2nd	59·9	3rd
	Cherrapunji	4,309	25·530	—·015	25·481	25·643	5th	25·393	19th	68·1	66·5	72·9	+0·7	65·1	+1·1	69·0	+0·9	7·8	79·1	4th	63·1	24th
	Netarhat		26·031		26·030	26·105	8th	26·053	29th	74·9	69·9	83·4		65·4		75·9		15·0	101·2	1st	64·5	21st
	Maymyo	3,546	26·283	—·027	26·228	26·347	6th	26·197	16th	79·8	68·4	78·1	—0·3	67·9	+2·0	73·0	+0·9	10·2	86·4	1st	66·2	7th & 8th
	Pachmarhi	3,528	26·229	—·039	26·176	26·374	2nd	26·085	14th	74·5	69·0	86·5	—1·1	71·2	—1·1	78·8	—1·1	15·1	102·0	1st	62·1	18th
	Mount Abu	3,945	25·860	—·003	25·810	26·005	2nd	25·733	19th	71·2	66·8	84·0	+0·4	67·3	—0·6	75·9	—0·4	16·1	90·6	1st	65·0	23rd
	Mercara	3,791	26·146	—·017	26·079	26·203	1st	26·088	6th	65·4	64·7	71·2	—1·5	62·1	—1·8	66·7	—1·5	9·1	79·8	1st	59·6	21st & 29th.
	Ootacamund	*7,327*	23·001	—·004	22·937	23·062	1st	22·954	6th	56·9	55·3	63·0	—1·2	53·0	+0·8	58·0	—0·2	10·0	72·6	1st	50·7	2nd
	Kodaikanal	7,688	22·764	—·020	22·699	22·817	23rd	22·711	6th	58·1	54·2	65·3	+0·2	53·6	—0·1	55·6	+0·1	11·7	65·3	1st	51·8	19th
	Extra India.																					
	Singapore (a)	10	29·837	—·078	29·708	29·897	13th	29·755	2nd	85·3		89·7	+1·5	76·1	+1·3	82·9	+1·4	13·6	93·5	19th	72·0	27th
	Penang (a)	17	29·818	—·082	29·760	29·916	6th	29·782	4th	82·3		92·3	+2·[illegible]	72·7	—1·4	82·5	+0·5	19·6	95·0	18th	70·0	6 days.
	Trincomalee	99	29·705	—·015	29·732	29·761	23rd & 24th.	29·584	5th	80·3	75·4	91·5	—0·1	78·5	0	85·0	—0·1	13·0	95·0	2nd	72·4	4th
	Colombo	24	29·816	—·007	29·816	29·930	23rd	29·751	8rd	79·7	76·9	86·0	—0·1	77·9	+0·4	82·0	+0·1	8·1	88·0	1st	73·8	28th
	Hambantota	64	29·807		29·797	29·873	24th	29·679	3rd	78·4	76·1*	87·4		77·3		82·9		10·1	95·7	2nd	73·5	17th
	Minicoy	7	29·914	+·024		29·969	22nd	29·857	6th													
	Amini Divi	*13*	29·816	+·003	29·787	29·903	22nd & 23rd.	29·797	6th & 24th.	83·7	79·1	87·5	+0·5	77·7	—0·4	82·6	+0·1	9·8	92·4	2nd	72·7	22nd
	Gyantse	13,110																				
	Pharijong	14,100																				
	Gangtok	5,667	24·147	—·107	24·101	24·270	2nd	24·029	19th	65·8	64·3*	73·5	—0·4	63·0	+8·1	68·2	+3·9	10·5	79·3	7th	58·0	1st
	Gartok (c)	15,100																				
	Kashgar (c)	4,255	25·311	—·159		25·566	1st	25·120	10th	75·8	61·5	92·6	+3·8	62·3	—1·5	77·5	+1·1	30·3	101·3	8th	51·3	3rd
	Kabul (c)	...	23·961	—·166		24·120	1st	23·790	19th	64·9	56·5	97·4	+8·6	61·9	+4·7	79·7	+6·7	35·5	101·6	16th	56·6	2nd
	Meshed	3,104																				
	Jask	13	29·557	—·011	29·527	29·686	4th	29·417	19th	85·0	81·1	94·1	—1·8	81·5	—1·8	87·8	—1·8	12·6	100·4	14th	75·4	20th
	Muscat	20	29·535	+·024	29·553	29·714	7th	29·486	15th	89·7	80·0	95·9	0	86·3	—2·2	91·1	—1·1	9·6	104·3	14th	78·7	4th
	Bushire	14	29·586	+·007	29·562	29·778	7th	29·351	19th	83·1	74·5	88·1	—3·7	79·3	—1·3	83·7	—2·5	8·8	94·4	2nd	70·9	5th
	Basrah	25																				
	Ispahan (c)	*5,817*	24·152	—·138		24·280	1st	24·040	18th & 20th.	74·1	57·5	95·8	+2·0	65·6	+3·4	80·7	+2·7	30·2	103·4	4 days	59·2	10th
	Tehran (c)	*4,002*	25·579	—·161		25·690	29th	25·460	20th	77·5	63·7	93·7	—0·6	66·8	+0·5	80·2	—0·1	26·3	100·6	22nd	58·0	13th
	Baghdad	127	29·585			29·791	2nd	29·421	27th	80·1	62·0	99·7		74·7		87·2		25·0	113·5	30th	65·3	13th
	Aden	94	29·638	—·024	29·663	29·715	26th	29·558	28th	86·7	81·3	95·2	+0·4	84·3	+0·3	89·7	+0·3	10·9	108·8	22nd	80·3	6th
	Zanzibar	72	30·092	+·021	30·091	30·147	25th	30·045	20th	75·6	72·0	81·6	—0·1	74·0	—0·1	77·8	—0·1	7·6	83·7	9th	71·7	18th

N.B.—Elevations in italics indicate barometrical determinations.

(a) 9 hrs. observations.
(b) 7 hrs. observations.
(c) Australia.

* Mean of 29 days.

NOTE.—The barometric readings are not reduced to sea-level in the ca

B—*concluded.*

stations in India, etc., in June, 1919—*concluded.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th June 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Hill stations, excluding Kashmir and Baluchistan—*concld.*
																75	+14	·482	+·104	5·8	+1·7	11	+1·5	8·64	6·72	+1·92	13·01	9·42	+ 3·59	1·98	Simla.
8	0	1	0	0	0	19	1	1	S 50° W	S 8° W	8·9	5·4	+3·5	59	+50	82	+15	·510	+·093	7·8	+3·9	11	+0·4	7·61	7·95	−0·34	8·64	10·47	− 1·83	1·56	Chakrata.
5	1	0	2	0	0	0	22	0	N 87° W		6·2			66		85	+16	·479	+·077	7·8	+3·2	13	+2·9	5·66	6·25	−0·59	8·55	8·41	+ 0·14	1·08	Mukteswar.
19	0	1	2	2	0	1	4	1	S 60° W	S 76° E	2·1	3·7	−1·6	3	−12	94	0	·524	+·028	8·9	+0·5	23	+2·6	30·11	24·00	+6·11	38·61	32·90	+ 5·71	3·85	Darjiling.
23	0	0	0	1	2	3	1	0	S 27° W		1·6			20		84	+ 1	·599	+·027	7·9	−0·1	19	−0·1	11·38	17·00	−5·62	22·29	28·12	− 5·83	1·98	Shillong.
3	1	6	3	5	9	3	0	0	S 43° E		5·4			43		92	− 2	·631	+·009	9·4	+0·1	26	+1·9	84·45	94·23	−9·78	118·99	137·72	−18·73	9·34	Cherrapunji.
2	1	4	2	2	2	4	9	4	N 87° W		6·7			76		80		·672		5·7		14		26·45			28·14			5·86	Netarhat.
7	0	1	0	0	2	16	4	0	S 49° W		2·7			62		88	+ 2	·666	+·001	7·6	+0·5	11	−2·7	9·07	9·46	−0·39	15·65	19·62	− 3·97	2·58	Maymyo.
1	0	0	0	0	0	4	19	6	N 87° W	S 81° W	6·0	6·7	−0·7	86	+19	78	+ 9	·647	+·034	6·1	+0·4	11	+0·4	14·41	9·28	+5·13	15·76	9·80	+ 5·96	4·25	Pachmarhi.
1	0	0	0	0	1	20	6	2	S 57° W	S 59° W	8·9	8·3	+0·6	82	+15	80	+ 8	·606	+ ·038	6·7	+1·4	5	−1·4	1·53	5·28	−3·75	2·19	5·96	− 3·77	0·43	Mount Abu.
0	1	0	0	0	0	11	14	4	S 81° W	N 88° W	6·1	5·7	+0·4	82	+ 8	96	+ 2	·600	−·006	9·3	+0·5	26	+2·7	29·01	25·87	+3·14	33·03	31·45	+ 1·58	5·51	Mercara.
0	0	0	0	0	1	3	18	8	N 85° W		7·9			86		91	+13	·422	+·045	9·6	+2·1	16	+2·2	6·48	7·07	−0·59	11·82	14·03	− 2·21	1·61	Ootacamund.
0	1	0	0	0	0	0	19	10	N 73° W		12·1			89		79	+ 4	·381	+·014	7·1	+0·7	7	−3·1	2·53	4·02	+1·49	9·55	10·03	− 0·48	0·45	Kodaikanal.
																															Extra India.
10	0	0	1	12	1	5	0	1	S 23° E					43						5·8	+0·4	6	−3·3	4·09	7·15	−3·06	12·49	13·29	− 0·80	1·54	Singapore.
0	0	26	1	3	0	0	0	0	N 53° E					86								6	−3·5	5·39	7·50	−2·11	22·63	17·04	+ 5·59	2·83	Penang.
0	0	1	0	0	0	19	9	1	S 61° W	S 47° W	9·1	12·2	−3·1	79	−15	76	− 1	·810	−·071	5·8	+2·6	2	+0·1	2·23	1·36	+0·87	8·27	3·69	+ 4·58	2·02	Trincomalee.
4	0	0	0	0	2	15	8	1	S 59° W	S 62° W	4·7	7·7	−3·0	72	−14	88	+ 4	·883	−·017	8·8	+1·5	12	−1·3	3·56	7·92	−4·36	23·58	18·84	+ 4·74	0·69	Colombo.
0	1	0	0	0	0	10	19	0	S 77° W		1·1*			89		89		·864*		6·3		5		2·88	2·38	+0·50	4·75	5·59	− 0·84	0·98	Hambantota.
2	0	0	0	0	0	9	15	4	S 83° W	S 81° W	8·7	11·8	−3·1	80	− 8					6·6	−0·3	17	−0·1	12·86	11·06	+2·80	23·79	16·84	+ 6·86	2·68	Minicoy.
0	0	0	0	0	0	7	17	6	S 88° W		15·3			87		81	− 2	·934	+·002	7·4	−0·5	18	+1·8	20·75	13·97	+6·78	22·70	16·93	+ 5·77	3·78	Amini Divi.
																									0·99			1·44			Gyantse.
																									4·29			6·34			Pharijong.
15	2	2	0	3	4	1	2	1	S 2° E		0·8			10		92*	+ 3	·590*	+·026	8·8	+2·7	22	−0·4	23·95	20·65	+3·30	39·64	39·76	− 0·12	3·30	Gangtok.
																															Gartok.
25	3	0	0	0	0	0	2	0	N 34° W	N 28° W	2·3	3·5	−1·2	13	− 4	44	+ 2	·389	+·028	2·7	+0·4	0	−0·8	0	0·28	−0·28	0	0·98	− 0·98	0	Kashgar.
0	3	0	1	4	6	11	3	2	S 34° W	N 23° E				50	+44	60	+16	·373	−·011	?	?	0	−0·7	0	0·21	−0·21	1·16	0·99	+ 0·17	0	Kabul.
																									0·31			1·59			Meshed.
0	1	0	21	0	0	0	4	4	N 75° E	S 48° E	11·2	9·6	+1·6	49	+29	84	+13	1·009	+·045	1·5	+0·5	0	−0·1	0	0·07	−0·07	0·37	0·07	+ 0·30	0	Jask.
7	1	1	5	7	0	0	0	9	N 54° E	N 27° E	3·5	3·4	+0·1	17	− 2	66	+ 2	·898	−·032	1·6	−0·2	0	−0·2	0	0·14	−0·14	0·16	0·14	+ 0·02	0	Muscat.
4	2	0	0	0	2	0	7	15	N 59° W	N 37° W	11·8	7·8	+3·8	66	+10	65	− 1	·742	−·080	0	−0·1	0	0	0	0	0	0·11	0·02	+ 0·09	0	Bushire.
																									0			0·33			Busrah.
22	0	0	0	0	0	1	5	1	W	N 50° W	2·1	2·8	−0·7	21	−23	36	−16	·310	−·168	0·1	−0·1	0	−0·1	0	0·03	−0·03	0·03	0·26	− 0·20	0	Ispahan.
18	0	0	0	2	6	3	1	0	S 13° W	S 7° W	3·5	2·2	+1·3	30	+12	46	+ 4	·433	+·030	0·4	−0·4	0	−0·3	0	0·09	−0·09	0·47	0·57	− ·010	0	Tehran.
1	5	0	0	0	0	0	13	11	N 58° W	N 9° W	11·9	3·6	+8·3	79	+11	31	− 7	·320	−·152	0·1	−0·2	0	0	0	0	0	1·22	0·21	+ 1·01	0	Baghdad.
17	0	4	3	3	0	4	0	0	S 62° E	S 34° E	3·8	6·8	−3·0	13	−13	79	+ 8	·997	+·048	5·2	+2·0	0	−0·1	0	0·06	−0·06	0	0·18	− 0·18	0	Aden.
0	0	0	0	1	13	15	1	0	S 25° W	S 13° W	7·5	6·4	+1·1	90	+ 3		− 1	·731	−·013	6·7	+1·4	1	−2·2	0·20	1·78	−1·58	3·01	12·75	− 9·74	0·12	Zanzibar.

of hill or plateau stations, the elevations of which exceed 3,200 feet.

* Mean of 29 days.

Table C.—Abstract of observations taken at 8 hrs. at 61 fourth and fifth class stations in India, etc., in June, 1919.

Table

Abstract of observations taken at 8 hrs. at 61 fourth

Number of sub-division.	Station.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Wind direction. Number of winds from Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	II.—Assam.																								
4	Bishnath	82·3	78·7	92·5	+3·2	77·1	+5·8	84·8	+4·5	15·4	97·7	7th	71·1	5th	...	...	...	...	...	...	...	...	...	...	...
	Borjuli	82·9	81·0	91·7	+2·3	75·2	+0·5	83·5	+1·4	16·5	97·0	3rd	73·4	1st & 19th	...	...	...	...	...	...	...	...	...	...	...
	Chandkhira	81·3	78·9	96·0	+6·8	74·7	+0·6	85·3	+3·7	21·3	99·6	5days	71·1	1st	...	...	...	...	...	...	...	...	...	...	...
	Doom Dooma	79·4	77·0	93·0	+3·5	75·6	+1·7	84·3	+2·6	17·4	99·7	7th	72·0	16th	...	...	...	...	...	...	...	...	...	...	...
	Dikom	80·4	77·5	91·1	+2·1	75·9	+0·9	83·5	+1·5	15·2	97·8	7th	71·4	1st	...	...	...	...	...	...	...	...	...	...	...
	Golaghat	80·8	79·1	90·6	+2·7	74·0	...	82·3	...	16·6	95·9	4th	68·6	1st	...	...	...	...	...	...	...	...	...	...	...
	Hailakandi	82·7	79·0	92·5	+3·0	77·4	+2·5	84·9	+2·7	15·1	96·4	3rd	73·6	1st	...	...	...	...	...	...	...	...	...	...	...
	Jorehat	80·5	77·9	90·5	+0·8	76·2	+0·6	83·3	+0·7	14·3	95·5	5th & 7th	72·1	1st	...	...	...	...	...	...	...	...	...	...	...
	Lumding*	83·4	77·7	94·3	...	76·8	...	85·6	...	17·5	98·9	3rd	71·2	10th	...	...	...	...	...	...	...	...	...	...	...
	Messa	85·8	80·1	94·2	+2·1	75·9	+1·6	85·1	+1·9	18·3	99·9	4th	72·6	1st	...	...	...	...	...	...	...	...	...	...	...
	Panerihat	77·9	76·4	90·6	+3·2	72·8	−0·9	81·7	+1·1	17·8	94·6	7th	69·1	4th	...	...	...	...	...	...	...	...	...	...	...
	III.—Bengal.																								
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Brahmanbaria	83·9	79·6	91·6	+2·6	76·3	+0·4	83·9	+1·5	15·3	97·6	3rd	73·9	1st	...	...	...	...	...	...	...	...	...	...	...
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Goalundo	86·1	81·0	90·5	+0·6	75·9	−0·7	83·2	−0·1	14·6	98·5	4th	70·3	1st	...	...	...	...	...	...	...	...	...	...	...
	Pabna	83·2	80·3	90·7	−2·6	76·1	+3·2	83·4	+0·3	14·6	98·2	3rd	73·2	1st	...	...	...	...	...	...	...	...	...	...	...
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dam Dim	79·2	78·2	91·5	+0·8	74·7	+1·2	83·1	+1·0	16·8	98·9	5th	70·3	1st	...	...	...	...	...	...	...	...	...	...	...
	Kalchini	79·2	76·4	89·9	+1·5	73·3	−0·5	81·6	+0·5	16·6	94·1	2nd & 6th	69·0	1st	...	...	...	...	...	...	...	...	...	...	...
	Nagrakata	80·0	76·9	88·9	+1·1	73·6	−0·5	81·3	+0·3	15·3	93·3	6th	67·0	2nd	...	...	...	...	...	...	...	...	...	...	...
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raniganj (Asansol)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IV.—Bihar and Orissa.																								
7	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzaffarpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Motihari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Mean of 29 days.

C.

and fifth class stations in India, etc., in June, 1919.

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th June 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				II.—Assam.
...	...	...	...	...	85	−8	·933	+·015	...	...	18	+1·8	12·31	14·39	− 2·08	25·47	24·22	+ 1·25	1·75	Bishnath.
...	...	...	...	...	92	0	1·037	+·104	...	...	16	−0·5	16·55	14·10	+ 2·45	29·61	23·82	+ 5·79	4·59	Borjuli.
...	...	...	...	...	90	+ 1	·989	+·061	...	...	16	−6·2	7·73	25·25	−17·52	16·77	42·10	−25·33	1·50	Chandkhira.
...	...	...	...	...	89	− 5	·891	−·019	...	...	23	+5·7	17·59	16·68	+ 0·91	27·31	25·46	+ 2·35	2·13	Doom Dooma.
...	...	...	...	...	87	− 3	·900	+·021	...	...	20	+1·7	20·21	16·18	+ 4·03	32·97	27·04	+ 5·93	5·20	Dikom.
...	...	...	...	...	88	− 1	·923	+·006	...	...	20	+4·9	16·88	9·65	+ 7·23	21·27	18·65	+ 2·62	4·61	Golaghat.
...	...	...	...	...	85	− 5	·941	+·063	...	...	16	−4·9	14·61	23·59	− 8·98	26·61	40·28	−13·67	4·85	Hailakandi.
...	...	...	...	...	89	+ 3	·923	+ ·023	...	...	22	+5·5	24·15	10·43	+ 13·72	32·05	21·37	+ 10·68	3·76	Jorehat.
...	...	...	...	...	76	...	·865	...	...	...	9	−3·0	3·61	8·53	− 5·92	6·46	15·08	− 8·62	0·72	Lumding.
...	...	...	...	...	77	− 5	·953	+·055	...	...	19	+2·5	10·25	12·32	− 2·07	14·12	20·91	− 6·79	1·15	Messa.
...	...	...	...	...	93	0	·889	+·051	...	...	16	+1·5	19·64	13·30	+ 6·14	28·43	24·59	+ 3·84	3·55	Panerihat.
																				III.—Bengal.
...	...	...	...	...	...	...	...	...	...	...	17	−0·6	17·40	17·81	− 0·41	19·95	30·37	−10·42	2·78	Comilla.
...	...	...	...	...	82	− 5	·946	+·005	...	...	12	−4·3	5·38	17·18	−11·80	7·64	31·90	−24·06	1·20	Brahmanbaria.
...	...	...	...	...	...	...	...	...	...	...	17	+1·9	5·88	13·43	− 7·55	12·73	22·56	− 9·83	2·03	Faridpur.
...	...	...	...	...	79	− 6	·990	+·011	...	...	15	−0·5	6·67	13·52	− 6·85	13·28	22·02	− 8·74	1·53	Goalundo.
...	...	...	...	...	87	+ 2	·996	+ ·028	...	...	13	−1·8	7·5	11·81	− 4·24	10·31	19·46	− 9·15	1·35	Pabna.
...	...	...	...	...	...	...	...	...	...	...	14	−0·6	8·07	12·56	− 4·49	12·67	20·97	− 8·30	1·40	Sirajganj.
...	...	...	...	...	...	...	...	...	...	...	16	+3·2	10·01	10·78	− 0·77	11·98	16·51	− 4·53	1·99	Rampur Boalia.
...	...	...	...	...	...	...	...	...	...	...	13	+1·7	11·29	9·83	+ 1·46	15·31	14·36	+ 0·95	2·46	Malda.
...	...	...	...	...	...	...	...	...	...	...	15	−0·5	16·86	17·07	− 0·21	24·38	28·54	− 4·16	3·17	Rangpur.
...	...	...	...	...	92	− 2	·949	+·029	...	...	20	−0·5	24·36	27·72	− 3·36	34·27	43·23	− 8·96	4·44	Dam Dim.
...	...	...	...	...	87	0	·878	−·019	...	...	23	+4·1	33·98	25·27	+ 8·71	42·21	40·19	+ 2·02	3·67	Kalchini.
...	...	...	...	...	87	− 2	·881	+·008	...	...	25	+3·5	30·68	27·98	+ 2·70	39·01	42·58	− 3·57	4·46	Nagrakata.
...	...	...	...	...	...	...	...	...	...	...	17	−0·9	31·46	31·15	+ 0·31	40·07	47·37	− 7·30	3·40	Cooch Behar.
...	...	...	...	...	...	...	...	...	...	...	15	+2·2	6·10	10·59	− 4·49	13·87	17·73	− 3·86	1·82	Krishnagar.
...	...	...	...	...	...	...	...	...	...	...	12	+0·4	18·04	10·67	+ 7·37	29·51	15·13	+14·38	4·70	Bankura.
...	...	...	...	...	...	...	...	...	...	...	13	+1·1	12·11	9·65	+ 2·46	15·48	13·72	+ 1·76	3·36	Raniganj (Asansol)
																				IV.—Bihar and Orissa.
...	...	...	...	...	...	...	...	...	...	...	12	+1·2	16·50	8·89	+ 7·61	17·50	11·10	+ 6·40	2·80	Hazaribagh.
...	...	...	...	...	...	...	...	...	...	...	12	+1·9	9·35	8·36	+ 0·99	12·21	11·60	+ 0·61	1·75	Bhagalpur.
...	...	...	...	...	...	...	...	...	...	...	7	−1·1	4·34	8·24	− 3·90	4·94	10·74	− 5·80	1·13	Muzaffarpur.
...	...	...	...	...	...	...	...	...	...	...	8	−1·6	12·16	9·09	+ 3·07	15·10	11·96	+ 3·14	9·22	Motihari.
...	...	...	...	...	...	...	...	...	...	...	8	+0·7	5·12	6·28	− 1·16	5·51	7·81	− 2·30	0·99	Chapra.
...	...	...	...	...	...	...	...	...	...	...	9	+1·5	5·36	6·50	− 1·14	5·84	7·98	− 2·14	1·10	Arrah.
...	...	...	...	...	...	...	...	...	...	...	7	−0·2	7·05	6·01	+ 1·94	10·24	6·78	+ 3·46	3·47	Tehri.

Table

Abstract of observations taken at 8 hrs. at 61 fourth

Number of sub-division.	Station.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Wind direction. Number of winds from: Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	V.—United Provinces of Agra and Oudh.																								
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehra Dun	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IX.—Rajputana.																								
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XII.—Central Provinces.																								
23	Chhindwara	80·5	73·6	92·6	...	74·7	...	83·7	...	17·9	110·0	1st	63·4	18th	3	1	0	0	0	0	2	11	13	N 68° W	...
	XIII.—Hyderabad.																								
27	Parbhani	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XV.—Madras.																								
31	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Anantapur	80·2	75·9	93·7	...	76·2	...	84·9	...	17·5	100·8	2nd	73·2	5th	...	...	...	...	...	...	...	...	...	...	...
33	Guntur	85·3	77·5	96·5	...	80·4	...	88·5	...	16·1	111·6	2nd	73·4	3rd	...	...	...	...	...	...	...	...	...	...	...
	Koraput	73·5	70·0	80·5	...	69·4	...	74·9	...	11·1	97·5	3rd	63·8	19th	...	...	...	...	...	...	...	...	...	...	...
	Bay Islands.																								
1	Car Nicobar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kashmir.																								
12	Jammu	94·6	79·1	106·9	...	88·3	...	97·6	...	18·6	111·1	4th	76·3	26th	0	5	14	7	3	1	0	0	0	N 58° E	...
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kargil	66·0	51·7	85·1	...	47·7	...	66·4	...	37·4	94·8	15th & 16th.	40·2	1st	1	0	0	0	0	0	0	0	29	N 45° W	...
	Baluchistan.																								
15	Harnai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill stations, exclusive of Kashmir.																								
	Panighatta	78·0	75·2	87·8	+0·7	74·1	+0·8	80·9	+0·7	13·7	96·3	6th	71·1	1st	...	...	...	...	...	...	...	...	...	...	...
	Kurseong	69·9	69·1	74·5	+1·1	65·0	+1·0	69·7	+1·0	9·5	80·3	4th	59·9	9th	...	...	...	...	...	...	...	...	...	...	...
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ringim	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dharampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mussooree	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Poo	...	...	81·6	+6·2	59·4	+5·7	70·2	+5·9	21·6	91·3	14th	52·0	1st	5	0	1	4	3	4	8	3	2	S 17° W	...
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bakloh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pishin	...	...	98·5	+2·2	57·6	−0·1	78·0	+1·1	40·9	103·4	11th	49·1	13th	...	...	...	...	...	...	...	...	...	...	...

C—*continued.*

and fifth class stations in India, etc., in June, 1919—*continued.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st Mar. to 30th June 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				V.—United Provinces of Agra and Oudh.
...	...	...	...	...	...	...	...	...	...	...	1	− 2·8	0·15	3·13	− 2·98	1·37	3·72	− 2·35	0·10	Meerut.
...	...	...	...	...	...	...	...	...	...	...	11	+ 1·6	8·24	8·64	− 0·40	9·26	10·06	− 0·80	2·75	Debra Dun.
																				IX.—Rajputana.
...	...	...	...	...	...	...	...	...	...	...	4	− 0·2	1·56	3·02	− 1·52	3·35	3·75	− 0·40	0·53	Udaipur.
																				XII.—Central Provinces.
5·6	...	...	80	...	73	...	·745	...	5·7	...	12	+ 2·4	9·01	6·22	+ 2·79	9·83	6·68	+ 3·15	2·30	Chhindwara.
																				XIII.—Hyderabad.
...	...	...	...	...	...	...	...	...	...	...	10	+ 1·9	7·72	6·05	+ 1·67	8·05	6·55	+ 1·50	3·25	Parbhani.
																				XV.—Madras.
...	...	...	...	...	...	...	...	...	...	...	0	− 1·4	0	0·62	− 0·62	1·53	2·04	− 0·51	0	Tinnevelly.
...	...	...	...	...	82	...	·839	...	8·3	...	5	+ 1·0	4·85	1·73	+ 3·12	8·30	3·95	+ 4·35	2·90	Anantapur.
...	...	...	...	...	70	...	·837	...	5·0	...	7	− 0·5	3·58	4·65	− 1·07	8·25	6·14	+ 2·11	1·63	Guntur.
...	...	...	...	...	85	...	·695	...	...	...	16	...	10·20	...	...	12·02	...	...	1·81	Koraput.
																				Bay Islands.
...	...	...	...	...	...	...	...	...	...	...	17	+ 2·0	7·91	12·96	− 5·05	15·99	26·04	− 10·05	1·28	Car Nicobar.
																				Kashmir.
...	...	...	73	...	50	...	·812	...	1·0	...	1	− 3·5	0·16	2·94	− 2·78	0·56	3·49	− 2·93	0·11	Jammu.
...	...	...	...	...	...	...	...	...	...	...	7	− 1·0	2·36	2·76	− 0·40	4·72	7·82	− 3·10	0·78	Sonamarg.
...	...	...	97	...	37	...	·237	...	2·5	...	0	− 1·0	0·05	0·15	− 0·10	0·26	1·24	− 0·98	0·05	Kargil.
																				Baluchistan.
...	...	...	...	...	...	...	...	...	...	...	0	− 1·7	0	1·03	− 1·03	0·80	1·22	− 0·42	0	Harnai.
																				Hill stations, exclusive of Kashmir.
...	...	...	...	...	88	+3	·836	−·001	...	...	20	− 0·5	33·62	25·82	+ 7·80	40·99	37·25	+ 3·74	8·21	Panighatta.
...	...	...	...	...	96	+6	·700	+·090	...	...	24	+ 2·1	45·88	31·73	+ 14·15	52·48	43·26	+ 9·22	7·06	Kurseong.
...	...	...	...	...	...	...	...	...	...	...	30	+ 4·8	37·99	25·34	+ 12·65	57·14	44·32	+ 12·82	2·35	Gnatong.
...	...	...	...	...	...	...	...	...	...	...	21	+ 0·2	10·27	9·03	+ 1·24	16·56	14·87	+ 1·69	1·50	Lachung.
...	...	...	...	...	...	...	...	...	...	...	24	+ 2·8	16·95	29·02	− 12·07	23·31	48·11	− 24·80	3·61	Ringim.
...	...	...	...	...	...	...	...	...	...	...	6	...	5·65	...	...	6·87	...	...	3·20	Dharampore.
...	...	...	...	...	...	...	...	...	...	...	10	− 0·3	7·45	9·38	− 1·93	10·75	11·69	− 0·94	2·77	Mussooree.
...	...	...	33	...	...	...	...	...	3·7	−0·1	0	− 0·6	0	0·23	− 0·23	0·14	1·14	− 1·00	0	Poo.
...	...	...	...	...	...	...	...	...	...	...	0	− 2·6	0	1·08	− 1·08	2·16	3·51	− 1·35	0	Kailang.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Bakloh.
...	...	...	...	...	...	...	...	...	0	...	0	− 0·1	0	0·04	− 0·04	1·17	0·20	+ 0·97	0	Pishin.

Tabl

Abstract of observations taken at 8 hrs. at 61 fourth an

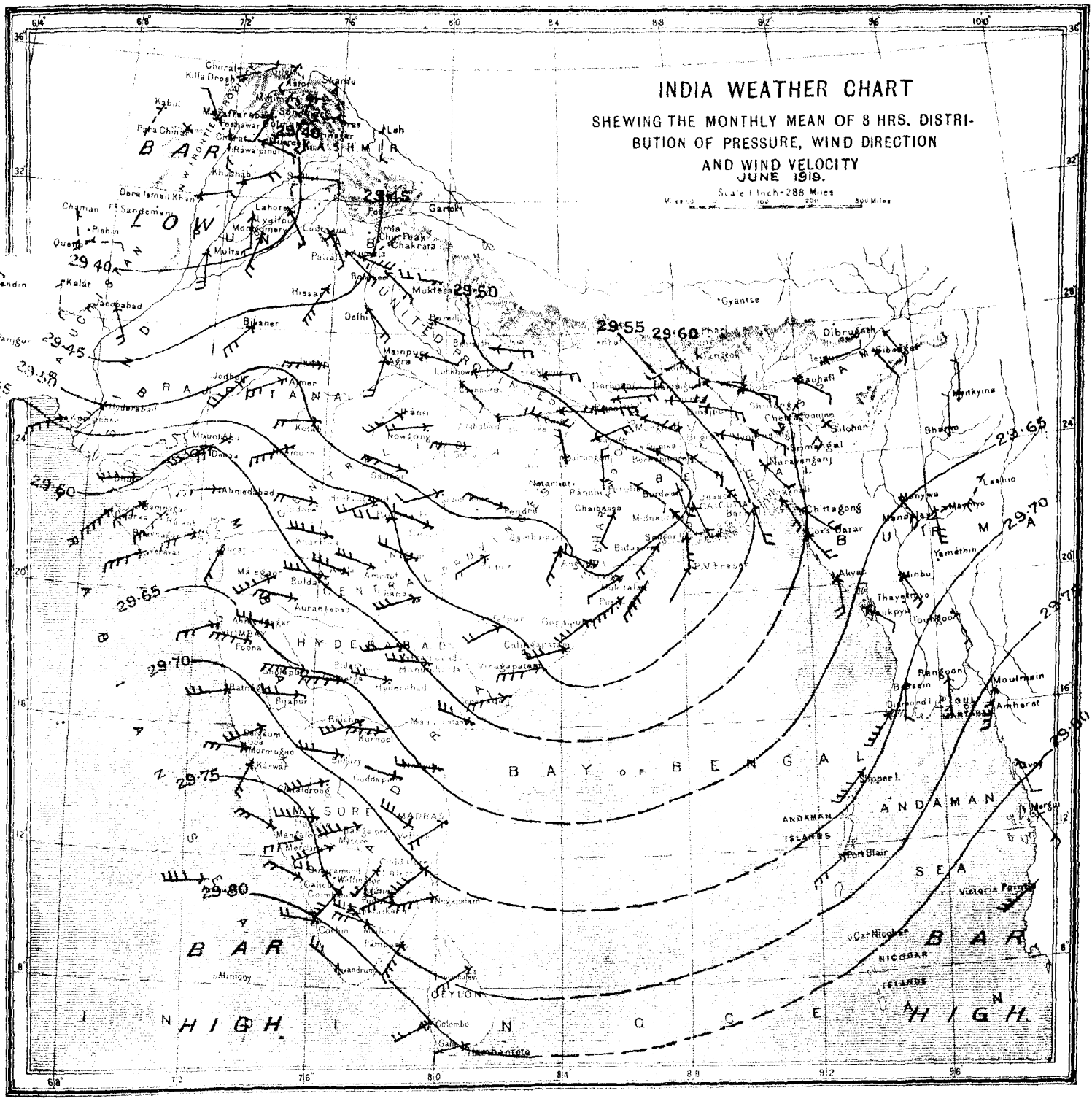
Number of sub-division.	Station.	Temperature of Air.													Wind direction.										
															Number of winds from										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Extra India.																								
	Chumbi	54·3	53·1	64·9	...	47·5	...	56·2	...	17·4	72·0	30th	38·2	4th	...	...	...	...	...	...	...	...	...	...	...
	Pemba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Prison Island . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abadan	93·0	69·3	104·0	...	78·8	...	91·4	...	25·2	115·0	29th & 30th.	74·0	3rd, 12th & 13th.	1	29	0	0	0	0	0	0	0	N	...

C—*concluded.*

fifth class stations in India, etc., in June, 1919—*concluded.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th June 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				Extra India.
...	...	...	...	...	93	...	·397	...	4·0	...	10	−4·4	7·71	6·08	+1·63	12·54	10·32	+2·22	1·78	Chumbi.
...	...	...	...	...	...	...	...	...	...	...	7	−1·0	8·37	4·88	+3·49	21·67	22·14	−0·47	3·70	Pemba.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Prison Island.
...	...	...	10	...	31	...	·392	...	...	...	0	...	0	...	...	0·26	...	...	0	Abadan.

SGPI-21-466DGO-10-8-22-325.

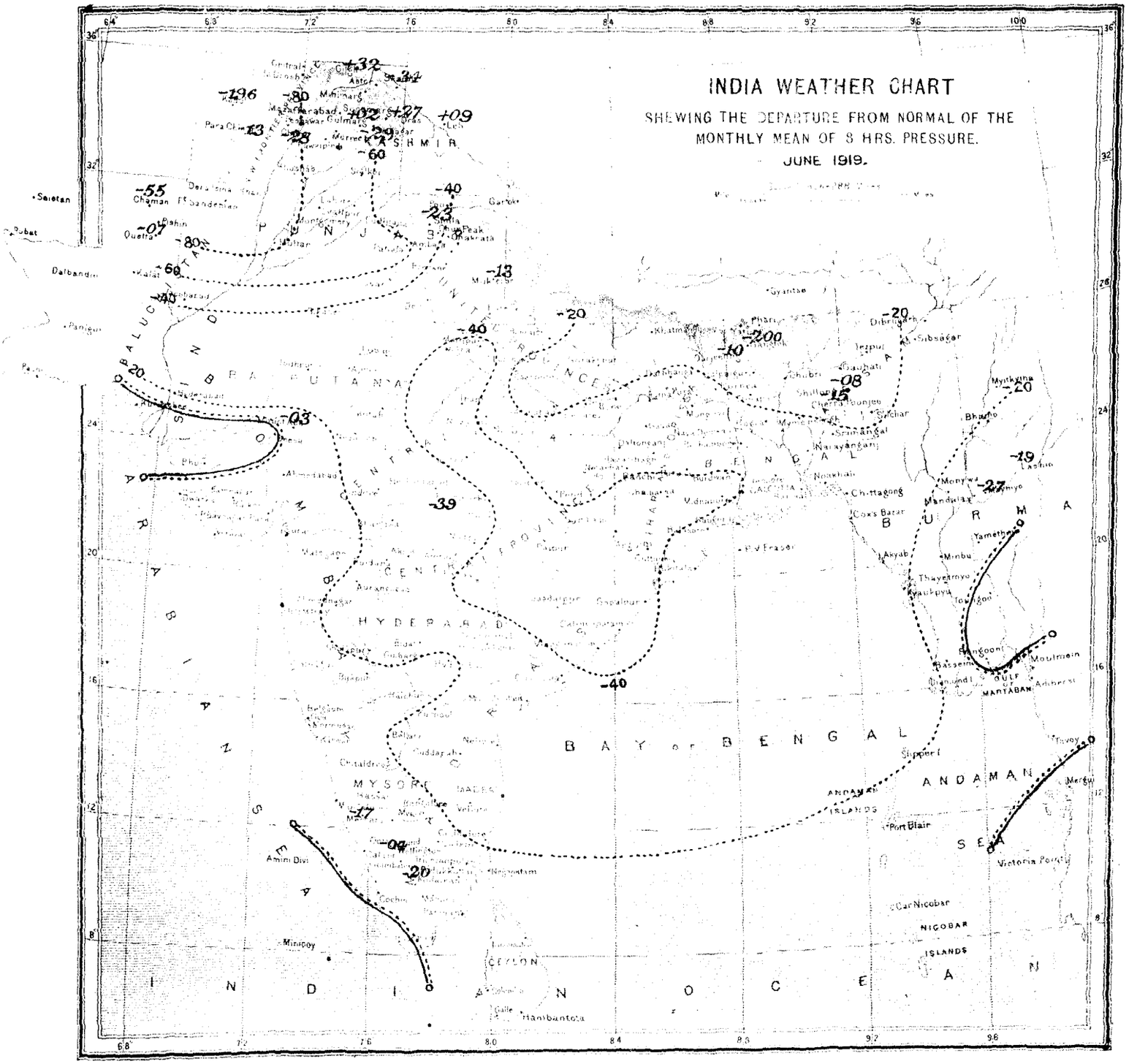


The lines of the above chart represent isobars or lines of equal barometric pressure, the numbers attached indicating the barometric pressure in inches and being drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the normal distribution of pressure.

The mean 8 hrs. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table B of the 8 hrs. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2	miles per hour	...	one	feather	added	to	the	wind arrow.
,, ,,	2 to 5	,, ,, ,,	...	two	feathers	,,	,,	,,	,,
,, ,,	5 to 10	,, ,, ,,	...	three	,,	,,	,,	,,	,,
,, ,,	10 to 20	,, ,, ,,	...	four	,,	,,	,,	,,	,,
	over 20	,, ,, ,,	...	five	,,	,,	,,	,,	,,

Wind strengths are based on factor 2·2 for the standard type of Beckley Robinson anemograph, instead of 3·0 as used for this plate up to December 1911 inclusive.



The chart shows the departure from normal of the mean during the month of 8 hrs. pressure by means of lines drawn for equal amounts of departure. The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no departure, the dotted line facing the area of deficient pressure or negative departures.

CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MAXIMUM TEMPERATURE.

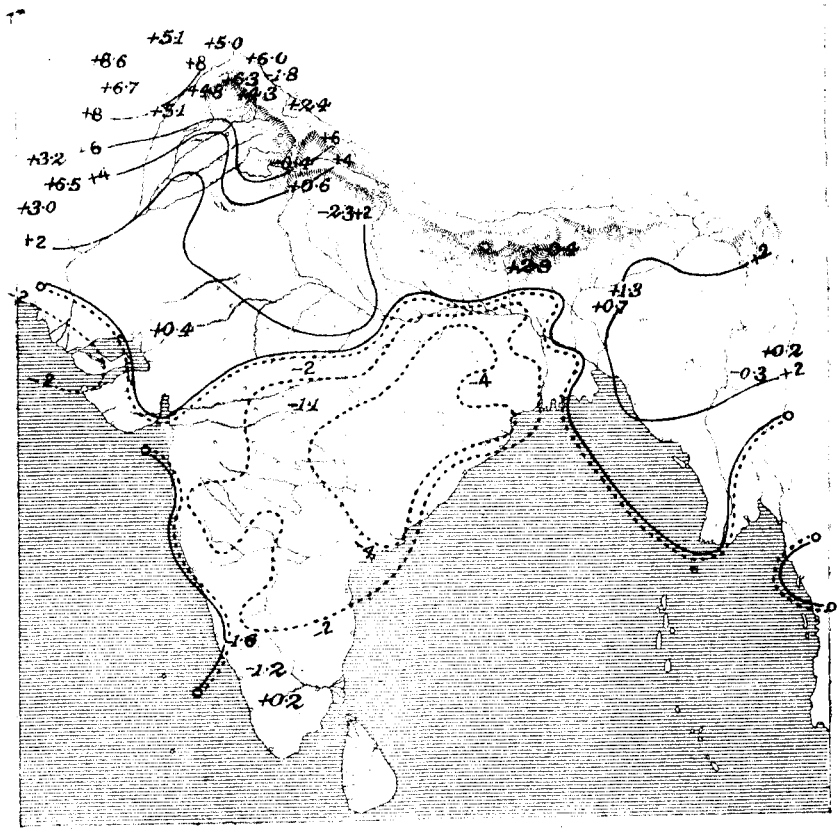


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MINIMUM TEMPERATURE.

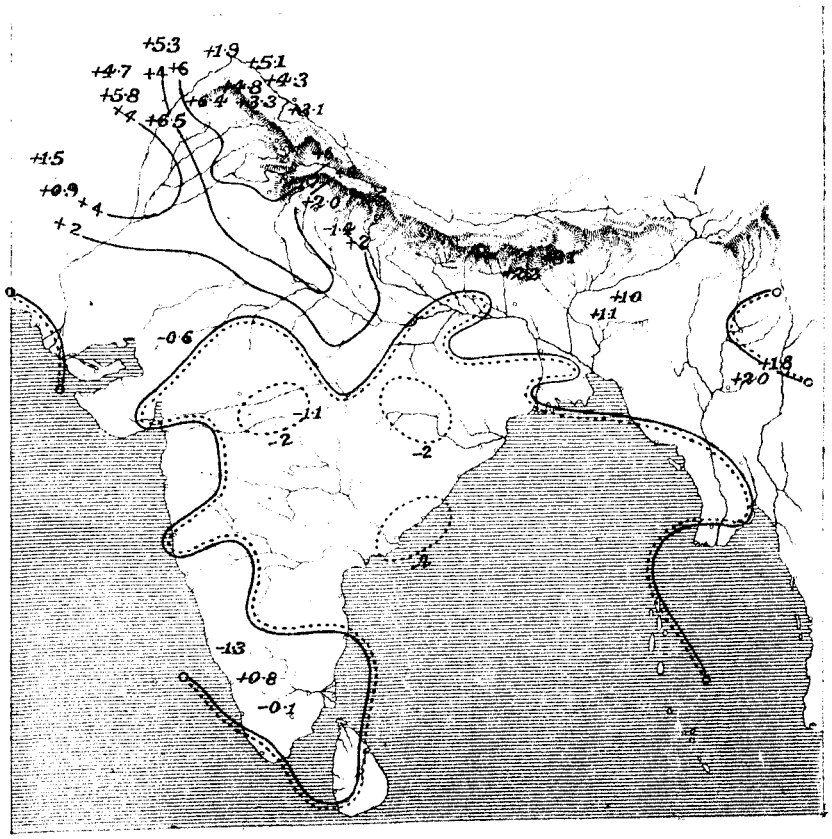


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MEAN TEMPERATURE.

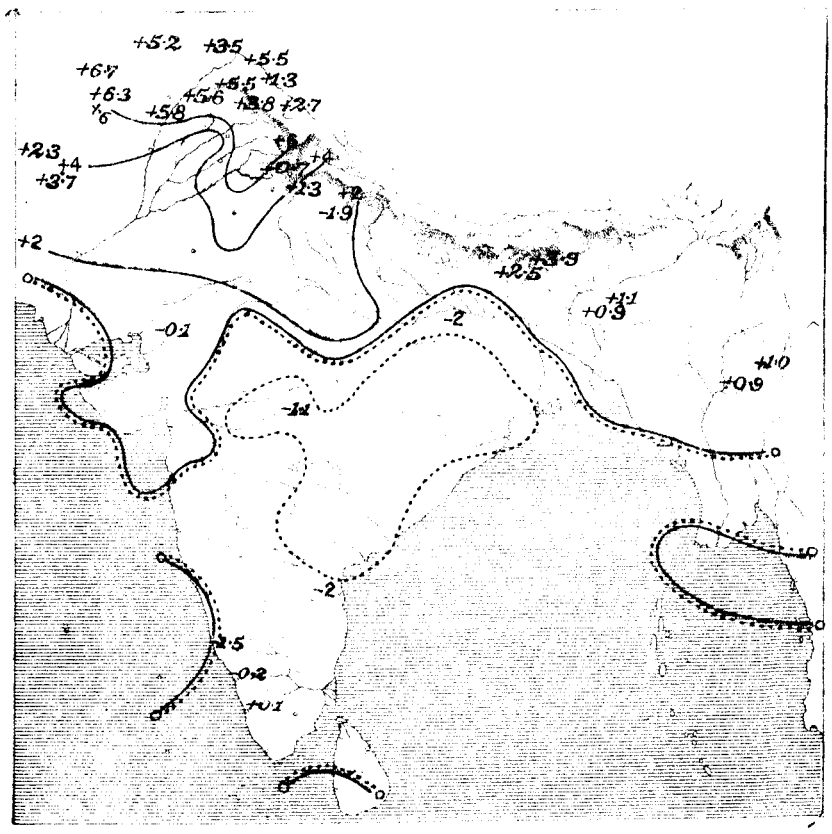


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF ABSOLUTE HUMIDITY AT 8 HRS.

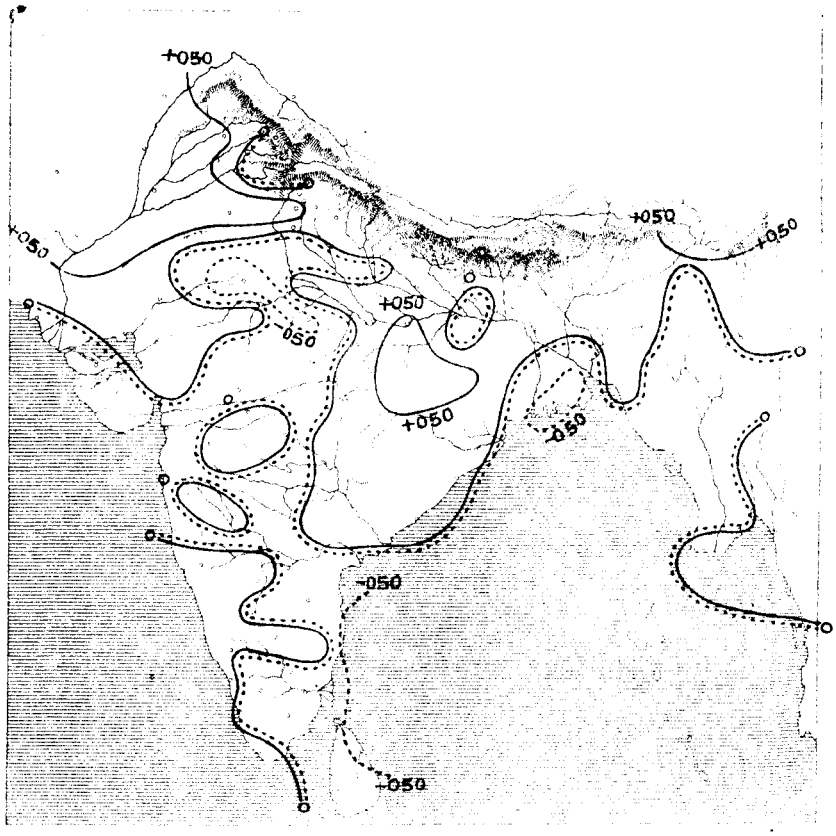


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF RELATIVE HUMIDITY AT 8 HRS.

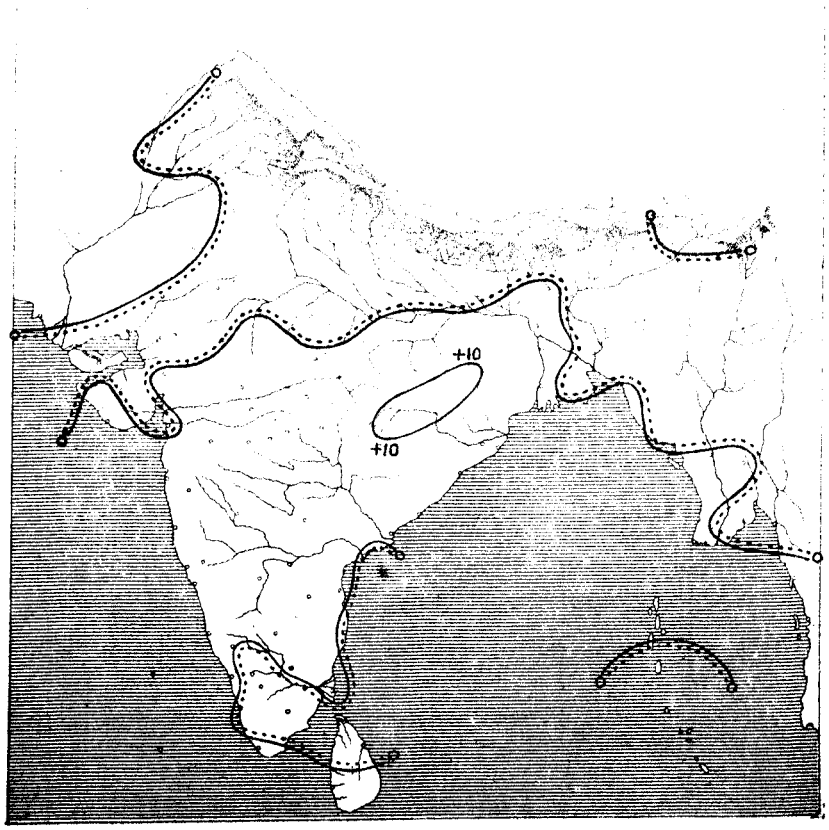


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF CLOUD AMOUNT AT 8 HRS.

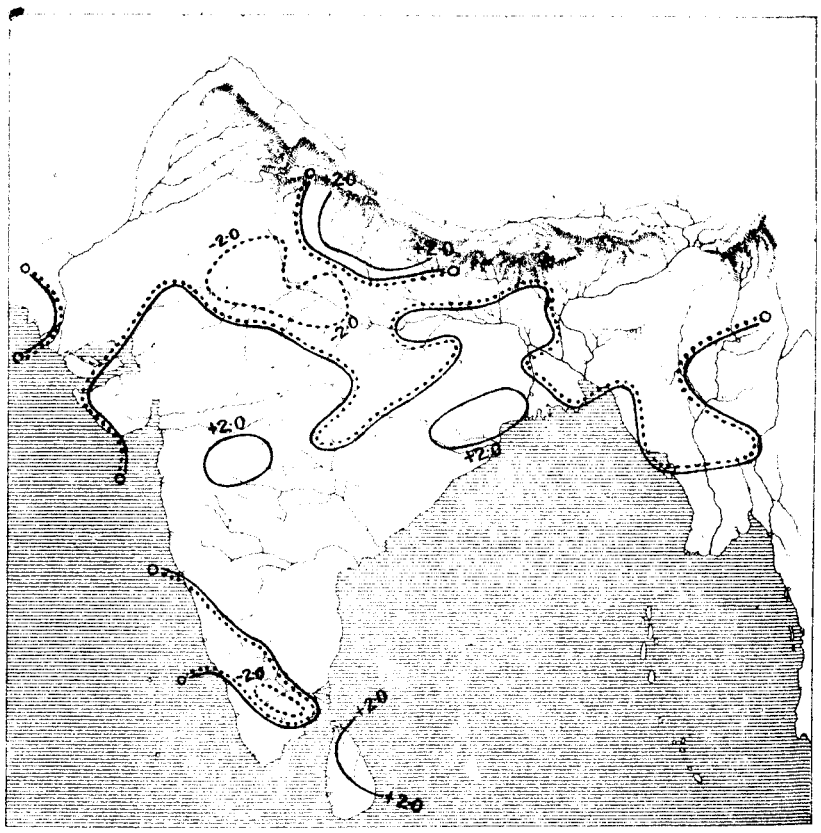
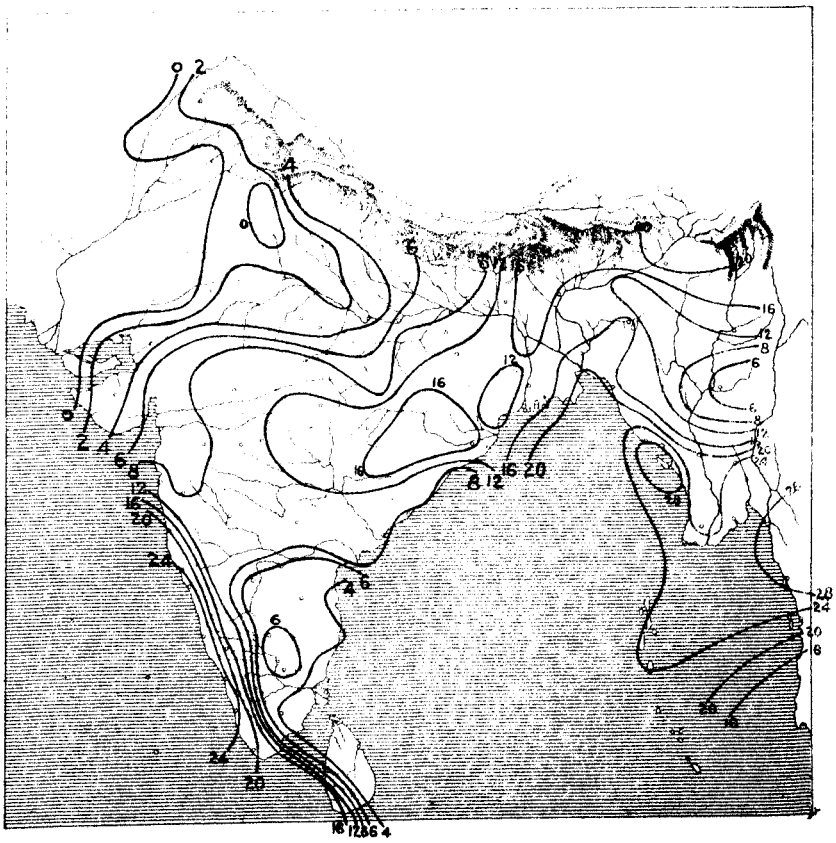
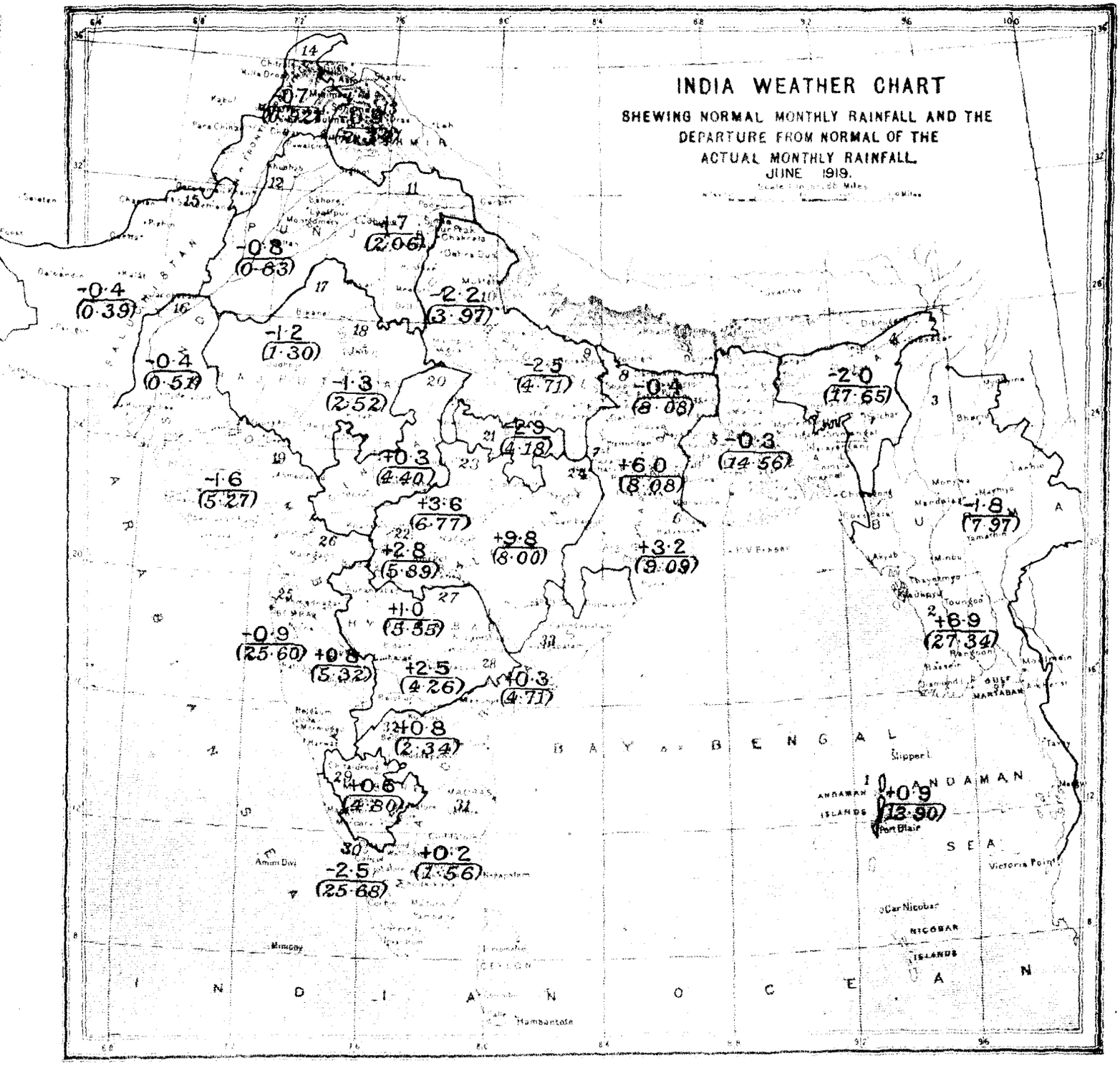


CHART SHEWING THE TOTAL NUMBER OF DAYS IN THE MONTH ON WHICH RAINFALL EQUALLED OR EXCEEDED 0·10 INCH.

(BASED ON THE RETURNS OF TABLE B.)





The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal monthly rainfall, the numbers above these give the departures from normal of the average actual rainfall over the divisions.

1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North

GOVERNMENT OF INDIA

METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA

CALCUTTA, JULY, 1919.

INTRODUCTION.

THIS review of the weather in India during the month of July, 1919, is based on observations taken daily at 8 hrs. at 212 stations, and on additional observations taken at 10 hrs. and 16 hrs. at 13 stations. In the rainfall summary the data furnished by the meteorological observatories, and the rainfall statements of the month published by the Provincial Governments have been utilized.

The brief notes on solar, magnetic and seismic disturbances are supplied by the chief observatories.

For a statement of the methods adopted in recording and tabulating the data, for each of the elements of observation, reference should be made to the introductory portion of the review for January.

Summary of the chief features of the weather in India during the month.

2. The monsoon prevailed without any appreciable break over practically the whole country; it entered the Punjab as late as the 12th July, but it continued fairly vigorous there during the rest of the month.

The month's rainfall over the country as a whole was in excess by 11 per cent.

Cloud amount was well above the average in the United Provinces, the Punjab, Baluchistan and Central India, and was well below it in Sind and Kashmir. Humidity was normal or somewhat above it except in Kashmir. Mean temperature was about 3° higher than usual in Kashmir, the North-West Frontier Province and Baluchistan. High maximum temperatures were frequently recorded also in the Punjab during the first twelve days of the month, that is, till the monsoon rains began there.

The mean barometric pressure over the plains of India was 0·013″ in excess.

Solar, magnetic and seismic disturbances.

KODAIKANAL OBSERVATORY.

3. *Solar Observations.*—No observations were possible on three days during the month. Prominences were photographed on 24 days, but on 14 of these the record was incomplete.

Sunspots.—18 new groups of spots were recorded. The mean daily number was 4·0 and the average life of a spot was 6·0 days. The distribution in latitude was as follows:—

TABLE 1.

—	0°–10°	11°–20°	Mean latitude.	Extreme latitude.
North	5	2	8°·0	2° & 13°
South	5	6	11°·0	5° & 17°

Prominences.—20 prominences, a minute or more in height, and 2 metallic prominences were recorded. The tallest prominence was 370″ high and was photographed on the 17th on the west limb at—10°.

Magnetic disturbances.—" Moderate " disturbances were recorded from the 1st to the 4th, 8th to 11th, on the 14th, 17th to 18th and 22nd to 24th.

J. EVERSHED,
Director
Kodaikanal and Madras Observatories.

Seismic records.

$\phi = 10° 13' 50''$; $\lambda = 77° 28' 00''$; $h = 2343$ m.
Subsoil—Rock.

Apparatus.—Milne's Horizontal Pendulum Seismograph.

TABLE 2.

	V	To	C	$\frac{r}{To^2}$
AN:				
AE:	9·76	18·0	1	2·7
AZ:				

Date.	Phase.	Time G. M. T.	Period. (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
July 4th	e P	13 01 24	...	...	...	...	...	
	F	13 03 36	...	...	...	...	...	Widening of line.
„ 4th	e P	13 51 36	...	...	...	...	...	
	e L	13 52 54	...	...	...	...	...	
	M	13 55 48	...	...	100	...	...	
	F	14 03 00	...	...	...	...	...	
„ 8th	e P	21 14 36	...	...	...	...	...	
	i L	21 29 00	...	...	...	...	...	
	M	21 34 06	...	...	1000	...	...	The boom touched the box at 21h. 36·7 m. and did not oscillate afterwards. Hence the end is not recorded.
1919.		h. m. s.						
July 14th	e P	14 36 12	...	...	...	...	...	
	e L	14 39 18	...	...	...	...	...	
	M	14 40 18	...	...	50	...	...	
	F	14 51 06	...	...	...	...	...	
„ 24th	e P	2 14 18	...	...	...	...	...	
	i L	2 18 24	...	...	...	...	...	
	M	2 19 24	...	...	680	...	...	Instrument examined at 2h. 48m. Air tremors due to high wind (35 miles an hour) were frequently recorded from 27th to 31st.

J. EVERSHED,
Director,
Kodaikanal and Madras Observatories.

BOMBAY OBSERVATORY.

Alibag magnetic record.

4. During the month of July, 1919, the traces showed 8 calm days and 23 days of small disturbance.

The days of the month selected as "quiet" for the purposes of the Magnetic Survey of India are the 5th, 6th, 16th, 19th and 28th.

The following table represents the magnetic character of each day during the month:—

TABLE 3.

Day.	Character.	Day.	Character.	Day.	Character.	Day.	Character.
1	S	9	S	17	S	25	C
2	S	10	S	18	S	26	S
3	S	11	S	19	C	27	S
4	C	12	S	20	S	28	C
5	C	13	S	21	S	29	S
6	C	14	S	22	S	30	S
7	S	15	C	23	S	31	S
8	S	16	C	24	S		

C = calm; M = moderate; G = great; V. G. = very great.

The mean observed absolute values of the several magnetic elements reduced to the mean monthly tabulations of the magnetograms, as also the ranges and the summed ranges of the horizontal force and declination for the month are as follows :—

Easterly declination	0° 24′ 10″.
Horizontal force	0·36918 C.G.S. unit.
Vertical force	0·17074 C.G.S. „
Inclination	24° 49′·2.
Horizontal force range	0·00057 C.G.S. unit.
Horizontal force summed range	0·00415 C.G.S. „
Declination range	4′·7.
Declination summed range	22′·9.

(NOTE :—Summed range means sum without regard to sign of 24 ordinates of the diurnal inequality.)

Seismic records.

$\phi = 18° 53' 36''$; $\lambda = 72° 48' 56''$; $h = 11$m. *Subsoil*—Trap.

Apparatus.—Omori-Ewing Horizontal Pendulum (E. W.)

TABLE 4.

	V	To	ϵ	$\frac{r}{To^2}$
AN :				
AE :	20	32		
AZ :				

Date.	Phase.	Time G. M. T.	Period. (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
July 8th	P	21 14 59	...	...	...	...	...	
	M	21 32 28	...	...	390	...	...	
„ 21st	P	19 10 30	...	...	...	...	...	
	M	...	...	...	...	...	...	Maximum not well marked.
„ 24th	P	2 8 8	...	...	...	...	...	
	M	2 14 28	...	...	510	...	...	

T. K. CHINMAYANANDAM,
Director,
Bombay and Alibag Observatories.

5.—CALCUTTA (ALIPORE) OBSERVATORY.

Seismic records.

$\phi = 22° 32'$ N ; $\lambda = 88° 20'$ E ; $h = 6·4$m. *Subsoil*—Alluvial.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs.

TABLE 5.

	V	To	ϵ	$\frac{r}{To^2}$
AN :	29			
AE :	29	30	1	
AZ :				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
July 24th	P	2 8 00	3	...	...	...	...	
	S	2 11 42	5	...	...	...	...	
	L	2 14 24	7	...	...	...	...	
	F	2 46 42	...	...	...	...	...	

6.—SIMLA OBSERVATORY.

Seismic records.

$\phi = 31° 6'$ N ; $\lambda = 77° 11'$ E ; $h = 2·1$ *km.* *Subsoil*—Rock.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs (masses 50 kg.).

TABLE 6.

	V	To	ϵ	$\frac{r}{To^2}$
AN :	14	45	1	
AE :	14	45	1	
AZ :				

Date.	Phase.	Time G. M. T.	Period. (Sec.)	Amplitude (μ) An.	Ae.	Az.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
July 5th .	P	3 23 12	...	...	...	...	...	
	F	3 26 06	...	...	...	...	...	Very slight local shock.
„ 9th	e P	21 16 06	...	...	...	...	...	Felt at Srinagar and Drosh.
	L	21 34 24	25	...	...	...	...	
	M	21 34 42	...	136	179	...	...	
	F	22 37 24	...	...	...	...	...	
„ 14th	e P	14 25 48	...	...	...	...	...	
	M	14 30 00	...	43	...	...	...	
	F	14 51 06	...	...	...	...	...	Tremors.
„ 17th	e P	10 11 18	...	...	...	...	...	
	F	10 25 54	...	...	...	...	...	Slight tremors.
„ 24th	e P	2 05 18	...	...	...	...	...	
	e L	2 07 36	...	...	...	...	...	
	M	2 07 54	...	214	700	...	...	
	F	2 57 24	...	...	...	...	...	

The following table contains a list of earthquakes that were reported :—

TABLE 7.

Place at which felt.	Date.	G. M. T. of earthquake.	Duration.	Intensity. Rossi-Forel scale.	No. of shocks.	Remarks.
	1919.	h. m.	sec.			
Srinagar (Kashmir) .	July 5th	3 23	3	6	1	
Drosh . . .	„ 5th	3 25	6	6	1	
Salonah (District Nowgong, Assam).	„ 15th	10 57	4 or 5	5	1	
Kashgar . . .	„ 24th	1 55	180	7	2	
Gauhati . . .	„ 24th	21 45	5	5	1	
Sindkheda (West Khandesh).	„ 25th	17 00	1	5	1	
Shirpur (West Khandesh).	„ 25th	18 00	1 or 2	5	1	
Drosh . . .	„ 30th	15 50	4	6	1	

S. SITARAMAYYA,

Scientific Assistant.

Weather in the Indian Ocean.

7. The following table gives the departures from normal of pressure and rainfall, as well as the actual and normal wind direction and velocity at the three representative stations.

TABLE 8.

—	Mauritius.	Zanzibar.	Seychelles.
Departure from normal of mean pressure in inches.	+·033	+·010	—·032
Actual mean wind direction . .	S 57° E	S 25° W	S 39° E
Normal mean wind direction . .	S 64° E	S 15° W	S 33° E
Actual mean wind velocity (miles per diem).	142	146	272
Normal mean wind velocity (miles per diem).	150	144	211
Rainfall departure from normal in inches	+0·11	+0·55	+2·37

Depressions and cyclonic storms.

8. An area of uniform pressure lay over the north of the Bay on the 26th and 27th, and by the morning of the 28th a storm of moderate intensity had formed with centre at about latitude 18°N, longitude 90°E; the deficiency of pressure at the centre was about 0·4″. It moved slowly in a northwesterly direction and crossed the coast between Balasore and False Point on the 1st August; the rate of movement then increased, and the storm reached Rajputana on the 4th, where it filled up in the course of the day. While the storm lay in the Bay strong gales and very high seas prevailed there, and while passing inland widespread rain occurred along its track and included some very heavy falls in Gujarat and Rajputana.

Pressure.

9. The following table gives the departure from normal of the mean 8 hours pressure in the 15 chief political divisions of India :—

TABLE 9.

DIVISION.	Departure from normal of mean 8 hrs. pressure.
	″
Burma	+·016
Assam	+·026
Bengal	+·026
Bihar and Orissa	+·028
United Provinces	+·022
Punjab	+·015
North-West Frontier Province	—·013
Sind	—·002
Rajputana	+·010
Bombay	—·002
Central India	+·015
Central Provinces	+·020
Hyderabad	+·011
Mysore	—·003
Madras	—·001

The following table gives a comparison of the departure from normal of the mean 8 hours pressure at 9 hill stations with the departure at an adjoining station in the plains :—

TABLE 10.

HILL STATION.	Departure from normal pressure. A.	PLAIN STATION.	Departure from normal pressure. B.	Departure of pressure difference. B—A.
	″		″	″
Quetta	+·010	Jacobabad	+·006	—·004
Leh	+·011	Lahore	+·009	—·002
Murree	+·015	Peshawar	—·014	—·029
Simla	+·005	Ludhiana	+·018	+·013
Mukteswar	+·016	Bareilly	+·026	+·010
Darjiling	+·005	Dhubri	+·028	+·023
Mount Abu	+·014	Deesa	+·018	+·004
Pachmarhi	+·011	Khandwa	+·014	+·003
Kodaikanal	—·003	Madura	—·009	—·006

Temperature.

10. Table 11 gives the actual temperature and its departure from normal in 33 sub-divisions, while table 12 gives only the departures from normal in the 15 chief political divisions.

TABLE 11.

Sub-division.	Actual temperature.				Departure from normal of		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
1. Bay Islands	84·9	78·3	81·5	6·7	−0·4	+1·0	−1·4
2. Lower Burma	84·9	75·2	80·1	9·7	+0·4	0	+0·4
3. Upper Burma	89·3	75·1	82·2	14·3	−0·4	−0·2	−0·2
4. Assam	88·7	77·2	82·9	11·5	0	−0·2	+0·2
5. Bengal	88·0	78·1	83·0	9·9	−0·1	−0·3	+0·2
6. Orissa	88·6	78·3	83·5	10·3	+0·2	+0·2	0
7. Chota Nagpur	87·2	75·8	81·5	11·4	−1·5	−0·4	−1·1
8. Bihar	89·3	78·5	83·9	10·9	−1·3	−0·5	−0·8
9. United Provinces, East	90·2	78·6	84·3	11·6	−2·1	−0·9	−1·2
10. Do. do. West	91·3	78·5	84·9	12·8	−1·7	−1·0	−0·7
11. Punjab, East and North	96·4	80·5	88·5	15·3	−0·5	+1·0	−1·5
12. Do., Southwest	103·1	84·7	93·9	18·4	−0·8	+1·2	−2·0
13. Kashmir	84·3	60·7	72·5	23·6	+2·4	+3·2	−0·8
14. North-West Frontier Province	106·3	83·7	95·0	22·6	+3·4	+2·9	+0·5
15. Baluchistan	100·3	72·9	86·6	27·4	+3·3	+1·9	+1·4
16. Sind	98·8	82·8	90·8	16·0	+0·2	+0·9	−0·7
17. Rajputana, West	99·8	81·3	90·5	18·5	−1·9	−0·7	−1·2
18. Do., East	91·8	78·8	85·3	13·0	−1·9	−0·2	−1·7
19. Gujarat	90·1	78·9	84·5	11·2	+0·1	+0·1	0
20. Central India, West	85·3	73·2	79·3	12·1	−1·3	−0·3	−1·0
21. Do. do., East	86·7	76·4	81·5	10·3	−2·7	−1·7	−1·0
22. Berar	87·7	73·8	80·8	13·8	+0·7	+0·9	0·2
23. Central Provinces, West	84·9	73·9	79·4	11·1	−1·7	−0·7	−1·0
24. Do. do., East	85·5	73·7	79·6	11·9	−0·5	−0·4	−0·1
25. Konkan	84·1	76·4	80·2	7·7	+0·3	+0·1	+0·2
26. Bombay Deccan	86·0	70·9	78·4	15·1	+1·4	+0·1	+1·3
27. Hyderabad, North	89·7	73·0	81·3	16·7	+2·1	+0·9	+1·2
28. Do., South	90·3	73·8	82·1	16·5	+1·5	+0·3	+1·2
29. Mysore	81·9	67·2	74·6	14·7	+1·0	+0·5	+0·5
30. Malabar	82·3	73·9	78·0	8·5	−0·6	−0·2	−0·4
31. Madras, Southeast	93·9	76·9	85·4	16·9	−0·5	+0·2	−0·7
32. Do., Deccan	93·0	76·0	84·5	17·0	+0·1	+0·1	0
33. Do. Coast, North	90·7	78·6	84·7	12·2	−0·4	−0·2	−0·2

TABLE 12.

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	″	″	″
Burma	+0·1	−0·1	0
Assam	0	−0·2	−0·1
Bengal	−0·1	−0·3	−0·2
Bihar and Orissa	−0·8	−0·2	−0·5
United Provinces	−1·9	−0·9	−1·4
Punjab	−0·6	+1·1	+0·2
North-West Frontier Province	+3·4	+2·9	+3·1
Sind	+0·2	+0·9	+0·5
Rajputana	−1·9	−0·3	−1·1
Bombay	+0·6	+0·1	+0·4
Central India	−2·0	−1·0	−1·5
Central Provinces	−0·8	−0·2	−0·5
Hyderabad	+1·7	+0·5	+1·1
Mysore	+1·0	+0·5	+0·7
Madras	−0·4	0	−0·2

Surface and upper air winds.

11. *Surface.*—Wind directions were on the whole normal. The following table gives the mean wind velocity and steadiness with their departures from normal :—

TABLE 13.

Division.	Hourly wind velocity.		Wind steadiness.	
	Actual.	Departure from normal.	Actual.	Departure from normal.
Burma	4·2	−0·1	59	− 6
Assam	2·0	−0·5	29	+12
Bengal	3·5	−0·4	43	−14
Bihar and Orissa	3·6	−0·3	37	−10
United Provinces	2·4	−0·3	36	+11
Punjab	4·2	+1·0	59	+24
North-West Frontier Province	3·7	+1·3	32	− 5
Sind	8·7	−0·9	74	− 3
Rajputana	6·4	+0·3	50	− 8
Bombay	7·7	−2·8	75	− 3
Central India	4·8	−1·1	65	0
Central Provinces	5·2	−0·4	73	− 1
Hyderabad	7·3	−2·6	86	+ 5
Mysore	7·7	+0·3	93	+ 2
Madras	5·9	+0·1	67	− 4

Upper air.—The monthly mean velocities and directions at different heights above Agra, Simla, Lahore, Bangalore, Akyab, Calcutta and Bombay during the month are given in the following table.

TABLE 14.

Height above sea, kms.	Agra. Height above sea 0·17 km.				Simla. Height above sea 2·13 kms.				Lahore. Height above sea 0·21 km.				Bangalore. Height above sea 0·92 km.				Akyab. Height above sea 0·01 km.				Calcutta. Height above sea 0·01 km.				Bombay. Height above sea 0·01 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
Ground level.	37	4·6	1·2	171	18	1·4	0·2	331	29	1·4	1·1	122	29	5·8	5·4	264	...	...	...	...	18	3·4	2·1	210	3	3·7	2·8	233
0·5	38	5·9	0·9	249	...	...	...	...	29	5·5	3·5	130	...	...	...	...	17	6·6	4·2	168	16	7·7	4·6	227	19	10·5	9·7	248
1·0	28	6·6	1·4	344	...	...	...	...	28	5·3	2·1	183	29	6·3	5·9	263	16	8·0	4·3	192	15	7·6	3·7	238	15	11·4	10·4	254
1·5	24	6·3	1·7	17	...	...	...	...	26	4·6	1·5	265	27	7·1	6·8	273	11	7·9	3·4	174	5	11·0	5·2	230	5	10·0	8·0	228
2·0	20	7·5	2·0	24	...	...	...	...	26	5·0	2·3	297	13	7·8	7·3	274	8	8·9	4·5	149	2	10·3	8·7	220	4	9·1	8·9	244
2·5	15	6·4	2·9	86	18	4·9	3·0	330	26	5·1	2·1	313	10	7·3	6·5	278	5	6·3	5·3	117	1	9·5	9·5	250	2	8·5	8·3	248
3·0	10	5·9	2·7	108	15	5·8	2·9	329	24	5·6	2·7	340	6	4·0	3·7	266	4	3·9	3·3	103	...	...	...	...	2	8·0	7·7	249
3·5	7	5·9	3·7	119	14	5·5	2·0	319	23	5·8	3·3	355	5	4·5	4·0	265	4	3·6	3·3	95	...	...	...	...	1	6·0	6·0	260
4·0	5	4·6	2·4	76	9	4·5	2·0	297	20	6·0	4·3	353	4	5·9	5·2	272	4	4·0	3·9	91	...	...	...	...	1	6·0	6·0	260
4·5	5	4·1	2·0	91	8	5·2	1·2	335	19	6·8	4·6	353	3	5·5	4·8	245	4	4·3	3·9	89	...	...	...	...	1	5·0	5·0	255
5·0	5	4·5	3·1	82	5	2·8	1·3	10	16	5·9	3·7	360	2	7·0	6·9	250	4	3·9	3·4	96	...	...	...	...	1	4·5	4·5	265
5·5	2	2·0	1·9	186	5	4·2	0·7	37	14	4·6	2·0	11	2	5·5	5·5	240	3	4·7	3·8	85	...	...	...	...	1	4·0	4·0	255
6·0	2	3·8	2·9	154	4	5·5	2·7	57	13	4·9	0·8	77	1	7·5	7·5	240	2	6·7	5·2	99	...	...	...	...	1	4·0	4·0	255
6·5	1	3·0	3·0	130	3	6·7	3·7	47	11	5·7	1·4	119	1	8·5	8·5	240	1	7·0	7·0	65	...	...	...	...	...	...	...	...
7·0	1	2·5	2·5	135	3	7·3	3·9	30	10	6·5	1·7	171	1	9·5	9·5	240	1	6·0	6·0	65	...	...	...	...	...	...	...	...
7·5	1	3·0	3·0	130	3	7·2	4·1	10	10	6·3	1·3	218	...	...	...	...	1	6·0	6·0	65	...	...	...	...	...	...	...	...
8·0	1	4·5	4·5	85	3	10·3	4·5	14	10	6·5	1·3	219	...	...	...	...	1	7·0	7·0	75	...	...	...	...	...	...	...	...
8·5	1	5·5	5·5	120	3	9·3	3·7	40	10	7·1	1·8	242	...	...	...	...	1	8·0	8·0	90	...	...	...	...	...	...	...	...
9·0	1	8·5	8·5	110	3	10·2	6·5	49	9	8·1	2·3	240	...	...	...	...	1	8·5	8·5	95	...	...	...	...	...	...	...	...
9·5	1	6·5	6·5	150	1	1·0	1·0	235	8	8·7	2·2	252	...	...	...	...	1	10·5	10·5	90	...	...	...	...	...	...	...	...
10·0	...	...	...	...	1	2·0	2·0	230	8	10·0	2·5	241	...	...	...	...	1	11·5	11·5	85	...	...	...	...	...	...	...	...
10·5	...	...	...	...	1	1·0	1·0	60	8	10·7	2·7	247	...	...	...	...	1	13·0	13·0	85	...	...	...	...	...	...	...	...
11·0	...	...	...	...	...	...	...	...	7	11·6	2·4	217	...	...	...	...	1	14·0	14·0	85	...	...	...	...	...	...	...	...
11·5	...	...	...	...	...	...	...	...	4	13·4	4·5	184	...	...	...	...	1	11·5	11·5	95	...	...	...	...	...	...	...	...
12·0	...	...	...	...	...	...	...	...	4	14·7	5·3	207	...	...	...	...	1	13·0	13·0	90	...	...	...	...	...	...	...	...
12·5	...	...	...	...	...	...	...	...	4	15·9	7·2	214	...	...	...	...	1	15·0	15·0	90	...	...	...	...	...	...	...	...
13·0	...	...	...	...	...	...	...	...	1	16·5	16·5	135	...	...	...	...	1	14·0	14·0	85	...	...	...	...	...	...	...	...
13·5	...	...	...	...	...	...	...	...	1	16·5	16·5	135	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

N—Number of flights.
V—Velocity of winds regardless of direction, metre per sec.
v—Velocity of Resultant Wind, taking account of direction, metre per sec.
L—Direction of Resultant Wind; North Wind=0° or 360°, East Wind=90°.

Humidity and cloud.

12. The following table gives the mean humidity, vapour tension and cloud amount at 8 hours with their departures from normal :—

TABLE 15.

Division.	Hygrometry; 8 hrs.				Cloud.	
	Mean humidity.	Departure from normal.	Mean vapour tension in inches of mercury.	Departure from normal in inches of mercury.	Mean cloud amount at 8 hrs.	Departure from normal.
	%					
Burma . .	88	— 1	·566	—·015	8·3	+0·2
Assam . . .	90	0	·941	—·002	7·3	—0·3
Bengal . . .	88	— 1	·949	—·014	7·7	—0·2
Bihar and Orissa .	87	+ 1	·926	—·002	7·6	+0·4
United Provinces .	86	+ 4	·937	+·010	7·3	+0·8
Punjab . .	71	+ 2	·882	+·027	4·7	+0·6
North-West Frontier Province.	65	0	·867	+·012	2·6	—0·1
Sind . . .	72	0	·902	+·003	4·2	—0·6
Rajputana . .	73	+ 1	·819	—·011	6·1	+0·3
Bombay . .	83	0	·838	0	7·8	0
Central India .	88	+ 5	·836	+·004	8·7	+0·7
Central Provinces .	85	+ 2	·799	+·002	7·6	+0·5
Hyderabad . .	77	0	·729	+·002	6·9	—0·5
Mysore . .	83	— 1	·636	—·003	7·8	—0·5
Madras . .	78	+ 3	·817	+·016	7·0	+0·1

Rainfall.

13. There was abundant rainfall over almost the whole country, the only areas with a deficiency of over 10 per cent. being the Bay Islands, Gujarat, Berar, the Bombay Deccan, Hyderabad and Mysore.

TABLE 16.

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
1. Bay Islands	12·3	16·3	6·21	12·70	−6·49	− 51
2. Lower Burma	23·1	25·2	31·82	32·08	−0·26	− 1
3. Upper Burma	11·6	9·9	8·82	6·54	+2·28	+ 35
4. Assam	18·8	18·8	17·50	18·26	−0·76	− 4
5. Bengal	17·9	16·7	18·26	15·20	+3·06	+ 20
6. Orissa	16·7	15·3	13·02	13·04	−0·02	0
7. Chota Nagpur	15·5	15·2	11·89	12·41	−0·52	− 4
8. Bihar	16·5	13·3	17·00	12·01	+4·99	+ 42
9. United Provinces, East	15·8	12·4	14·61	11·44	+3·17	+ 28

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
10. United Provinces, West	13·7	11·4	11·97	11·43	+0·54	+ 5
11. Punjab, East and North	9·0	6·7	8·81	6·24	+2·57	+ 41
12. Do., Southwest	2·7	3·1	2·33	2·51	−0·18	− 7
13 Kashmir	9·5	7·3	10·88	7·04	+3·84	+ 55
14. North-West Frontier Province	3·8	4·2	2·95	3·01	−0·06	− 2
15. Baluchistan	2·6	1·8	1·61	1·02	+0·59	+ 58
16. Sind	3·0	2·7	5·29	2·61	+2·68	+103
17. Rajputana, West	5·5	4·6	3·92	3·53	+0·39	+ 11
18. Do., East	13·2	9·4	11·39	8 18	+3·21	+ 39
19. Gujarat	13·9	12·8	11·87	13·29	−1·42	− 11
20. Central India, West	15·1	11·6	14·32	10·17	+4·15	+ 41
21. Do., East	19·4	12·5	20·49	12·02	+8·47	+ 70
22. Berar	11·5	12·3	7·79	9·34	−1·55	− 17
23. Central Provinces, West	16·6	15·0	14·14	13·85	+0·29	+ 2
24. Do., East	17·9	16·3	16·53	15·50	+1·03	+ 7
25. Konkan	27·2	26·3	41·72	40·52	+1·20	+ 3
26. Bombay Deccan	9·7	11·6	6·91	8·22	−1·31	− 16
27. Hyderabad, North	9·0	12·1	5·80	8·11	−2·31	− 28
28. Do., South	9·8	10·8	4·61	6·32	−1·71	− 27
29. Mysore	10·2	9·9	6·43	7·42	−0·99	− 13
30. Malabar	22·2	22·1	23·62	26·02	−2·40	− 9
31. Madras, Southeast	5·4	3·7	3·49	2·09	+1·40	+ 67
32. Do., Deccan	7·9	6·4	4·10	3·23	+0·87	+ 27
33. Do. Coast, North	10·9	10·0	8·15	6·48	+1·67	+ 26

TABLE 17.

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Burma	17·92	16·65	+1·27	+ 8
Assam	17·50	18·26	−0·76	− 4
Bengal	18·26	15·20	+3·06	+ 20
Bihar and Orissa	14·81	12·35	+2·46	+ 20
United Provinces	13·19	11·42	+1·77	+ 15
Punjab	7·13	5·28	+1·85	+ 35
North-West Frontier Province	2·95	3·01	−0·06	− 2

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Sind	5·29	2·61	+2·68	+103
Rajputana	9·06	6·73	+2·33	+ 35
Bombay	14·77	15·66	−0·89	− 6
Central India	16·63	10·86	+5·77	+ 53
Central Provinces	13·55	13·41	+0·14	+ 1
Hyderabad	5·24	7·26	−2·02	− 28
Mysore	6·43	7·42	−0·99	− 13
Madras	8·73	8·07	+0·66	+ 8
Mean of India	12·26	11·06	+1·20	+ 11

Snowfall.

I. THE NORTH-WEST FRONTIER PROVINCE.

14. *Malakand Agency*:—No snow fell.

Khyber Agency:—No snow fell. The depth of the snow lying on the Sufed Koh at the end of the month and the extension to the lower slopes were reported to be normal.

Kurram:—No snow fell. The amount of snow at the end of the month on the adjacent hills and passes was greater than in the previous year.

Drosh:—No snow fell. The thickness of snow at the end of the month on passes and high ranges was 1 to 3 feet.

Kagan Valely (Hazara District):—There was very little accumulation at the end of the month.

II.—KASHMIR.

Srinagar, Gulmarg and Kargil:—No snow fell at the stations or in the neighbouring mountains.

Dras:—No snow fell.

Skardu:—Very light snow fell on the higher mountains between the 27th and the 30th, and it melted away soon. This is below the normal.

Leh:—Very light falls occurred at heights over 16,000 feet. The appearance of the glaciers showed that the snow covering was exceptionally thin. Passes to the north were reported to be free from snow.

III.—THE PUNJAB.

Nagar (Kulu):—There were considerable snow accumulations above 12,000 feet, but there was little fresh snow below 18,000 feet.

Chamba:—There were fresh falls on the high ranges on the 13th, 19th, 25th and 26th. The first two falls were very light, and that of the 25th-26th was somewhat greater and extended down to about 14,000 feet. The accumulations on the high ranges at the end of the month were considerably more than usual for the time of the year, but they were not very extensive being mainly in ravines.

Kilba (Simla Hills):—The thickness of the snow covering at the end of the month was above the average. The avalanches which came down the streams did not melt away till the 15th on the bank of the Sutlej. At one place the avalanche existed at the end of the month.

A report from the Deputy Conservator of Forests says that he had been in the Chini, Kailas and Kilba ranges and over the Charang Pass, and that there was far more snow at 15,000 feet and over than at any time since he went to Bashahr in 1914; in the opinion of the villagers, the report says, the 1918-19 winter was the severest for over a decade.

IV.—THE UNITED PROVINCES.

Garhwal:—During June and July about 4 feet of snow fell on peaks above 18,000 feet in the north of the district. About 3 or 4 feet of it was reported to be lying at the end of July between 12,000 and 15,000 feet.

Almora:—(Report, dated the 23rd).

TABLE 18.

Locality.	Actual falls during month.	
	Depth.	Distance below perpetual snowline.
	Feet.	
Malla Johar	2¾	
Malla Daupur	½	3 or 4 miles.
Malla Durma	½	
Chaudas	1	¼ mile.

TABLE 19.

Name of pass or peak.	Accumulations at the end of the month.	
	Reported.	Normal.
	Feet.	Feet.
Nuwe Pass	15½	14½
Binkaru ,,	3½	6½
Pindari Peak	½	½
Kaphini ,,	½	½
Nandakot	½	...
Puwalidwar Peak	½	...
Milamdhura	1	2½
Bagadwar	½	...

V.—EASTERN HIMALAYAS.

Gangtok and Yatung.—No snow fell.

Summary.

15. No snow is reported from the North-West Frontier Province hills and there were only light falls in Kashmir; in the Punjab and the United Provinces hills the fall was normal or above it.

S. SITARAMAYYA,
Scientific Assistant.

Table A.—Abstract of observations taken at 10 hrs. and 16 hrs. at 13 stations in India, etc., in July, 1919.

Table

Abstract of observations taken at 10 hrs. and 16 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hrs.	Mean of 16 hrs.	Mean daily range.	Mean of daily mean pressures.	Departure from normal.	Mean reduced to sea-level and to gravity at 45° Lat.	Temperature of air. Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Temperature, wet-bulb. Mean minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of three previous columns.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal.																					
5	Calcutta	21	29·603	29·509	·094	29·562	+·022	29·530	88·6	79·1	9·5	91·4	75·5	18·9	84·1	85·6	83·6	+0·6	77·5	80·2	80·7	79·5
	VI.—Punjab.																					
11	Lahore	702	28·816	28·719	·097	28·764	−·004	29·410	99·5	83·5	16·0	114·2	74·7	39·5	91·7	97·2	90·6	+1·5	77·2	80·7	82·4	80·1
	IX.—Rajputana.																					
18	Jaipur	1,431	28·174	28·087	·087	28·129	+·014	29·472	92·6	78·7	13·9	105·7	72·2	33·5	95·7	89·9	84·5	−0·2	75·3	76·7	77·7	76·6
	X.—Bombay.																					
25	Bombay	37	29·680	29·618	·062	29·660	−·012	29·637	85·4	78·4	7·0	87·9	75·4	12·5	81·8	83·1	80·4	+0·9	74·5	78·3	78·8	77·2
	XIV.—Mysore.																					
29	Bangalore	3,021	26·865	26·779	·086	26·830	+·002	29·669	82·4	66·6	15·8	85·6	64·9	20·7	74·8	75·2	72·6	+0·6	65·3	68·8	69·8	68·0
	XV.—Madras.																					
30	Trivandrum	198	29·695	29·614	·081	29·662	−·003	29·790	81·8	73·5	8·4	84·0	71·3	12·7	78·5	80·6	76·2	−1·0		74·9	75·7	
31	Pudukkottai	318	29·504	29·375	·129	29·439		29·681	97·5	77·9	19·6	101·9	73·1	28·8	88·3	93·9	87·7			74·0	75·0	
	Madras	22	29·750	29·643	·107	29·708	−·010	29·661	94·3	78·2	16·1	102·2	73·5	28·7	88·0	88·3	84·8	−0·9	74·3	77·8	78·8	77·0
	Kashmir.																					
14	Srinagar	5,204	24·661	24·575	·086	24·618	−·012	24·690	88·0	66·9	21·1	93·8	59·0	34·8	79·3	86·3	77·5	+4·5	63·3	69·8	72·4	68·5
	Hill stations, excluding Kashmir and Baluchistan.																					
	Katmandu	4,388	25·521	25·410	·111	25·463	+·073	25·441	84·8	68·7	16·1	89·2	66·3	22·9	77·4	80·9	76·4	+1·3	66·4	71·2	73·1	70·2
	Kodaikanal	7,688	22·779	22·723	·056	22·751		22·686	63·7	52·5	11·2	68·2	51·2	17·0	60·3	58·3	58·1		50·5	56·6	56·0	54·4
	Extra India.																					
	Seychelles	15	29·995	29·925	·070	29·961	−·032*	29·899	81·5	77·2	4·3	85·5	75·9	9·6	79·5	80·6	78·1	+1·7*	71·3	74·7	75·2	73·7
	Mauritius	181				30·042	+·033	30·113	74·1	61·5	12·6	76·6	57·2	19·4			67·1	−0·7				

N. B.—Elevations in italics indicate barometric determinations.
Note.—The barometric readings are not reduced to sea-level in the case of hillor plateau stations, the elevations of which exceed 2,200 feet.

A.

at 13 stations in India, etc., in July, 1919.

Vapour tension in inches of mercury.					Humidity.					Cloud.				Wind direction. Total number of 10 hrs. and 16 hrs. winds from											Wind steadiness.		Wind velocity.		Rainfall.		Station.	Number of sub-division.
From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns.	Departure from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																															III.—Bengal	
·919	·979	·979	·959	—·012	92	84	80	87	0	9·1	9·1	9·1	+0·5	1	1	3	9	7	12	25	3	1	S 10° W	S 1° W	50	63	101	88	11·99	2·19	Calcutta . .	5
																															VI.—Punjab.	
·849	·893	·907	·903	+·040	75	63	55	65	0	4·1	4·2	4·1	—0·2	16	1	7	2	25	5	0	1	5	S 59° E	S 78° E	39	30	58	60	10·91	6·73	Lahore . .	11
																															IX.—Rajputana.	
·835	·866	·794	·821	—·013	85	67	59	72	— 4	7·8	7·8	7·8	+0·4	2	2	5	8	6	2	7	22	8	W	N 78° W	54	30	94	95	7·60	3·66	Jaipur . .	18
																															X.—Bombay.	
·796	·915	·928	·895	—·026	82	85	82	84	— 3	7·9	7·8	7·9	—0·8	0	0	0	0	0	4	17	41	0	S 73° W	S 75° W	90	83	210	340	31·30	9·10	Bombay . .	25
																															XIV.—Mysore.	
·607	·634	·615	·619	+·012	93	74	63	78	+ 1	9·1	8·1	8·6		1	1	0	0	0	3	13	38	6	S 83° W	S 72° W	84	88	199	168	4·35	1·41	Bangalore . .	29
																															XV.—Madras.	
	·814	·821				84	79			9·2	8·7	8·9	+0·7	0	3	0	0	0	0	0	6	53	N 47° W	N 60° W	97	78	151	158	8·50	1·35	Trivandrum .	30
	·647	·618				49	40			4·1	6·9	5·5		10	1	0	2	3	0	13	19	14	S 89° W		55		124		2·87	0·70	Pudukkottai .	31
·794	·812	·857	·836	+·024	83	62	65	71	+ 3	5·8	6·2	6·0	—1·3	1	0	1	3	10	9	15	19	4	S 42° W	S 51° W	53	66	107	139	6·26	1·78	Madras.	
																															Kashmir.	
·543	·621	·637	·601	—·039	82	63	52	66	—15	4·0	4·0	4·0	0	19	3	2	2	8	7	6	2	13	S 66° W	N 48° W	13	15	45	69	0·82	0·28	Srinagar . .	14
																															Hill stations, excluding Kashmir and Baluchistan.	
·621	·694	·725	·684	—·009	88	74	69	77	— 4	6·5	7·2	6·9	+0·1	0	3	0	32	0	0	0	27	0	N 60° E	S 62° W	10	11	12	15	12·34	2·19	Katmandu.	
346	·420	·425	·397		88	81	87	85		8·4	9·4	8·9		0	5	1	1	4	6	0	28	17	N 76° W		60		203		4·48	0·83	Kodaikanal.	
																															Extra India.	
·685	·797	·803	·777	+·026	73	79	77	77	— 1	6·0	6·1	6·1	+0·5*	0	0	0	0	54	7	1	0	0	S 39° E	S 33° E	95	86	272	211	4·78	2·69	Seychelles.	
			·495	—·021				73	— 2			6·5	+1·6										S 57° E	S 61° E			142	150	2·55	0·39	Mauritius.	

* Departure from old normal.

Table B.—Abstract of observations taken at 8 hrs. at 212 stations in India, etc., in July, 1919.

(1) Provincial means.

(2) Data of stations.

(1) Provincial means based on the material in Table B (2) except that the statement of rainfall depends on the complete data of about 2,300 stations.

Division.	Pressure departure from normal.	Temperature of air.							Wind.		Hygrometry.				Cloud.		Rainfall.		
		Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Departure of velocity from normal.	Departure of steadiness from normal.	Mean humidity.	Departure from normal.	Mean vapour tension.	Departure from normal.	Mean cloud amount.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.
	"	°	°	°	°	°	°	°					"	"			"	"	"
Burma	+·016	86·7	+0·1	75·2	−0·1	80·9	0	11·6	−0·1	− 6	88	− 1	·866	−·015	8·3	+0·2	17·92	16·65	+1·27
Assam	+·026	88·7	0	77·2	−0·2	82·9	−0·1	11·5	−0·5	+12	90	0	·941	−·002	7·3	−0·3	17·50	18·26	−0·76
Bengal	+·026	88·0	−0·1	78·1	−0·3	83·0	−0·2	9·9	−0·4	−14	88	− 1	·949	−·014	7·7	−0·2	18·26	15·20	+3·06
Bihar and Orissa	+·028	88·7	−0·8	77·9	−0·2	83·3	−0·5	10·8	−0·3	−10	87	+ 1	·926	−·002	7·6	+0·4	14·81	12·35	+2·46
United Provinces of Agra and Oudh	+·022	90·7	−1·9	78·6	−0·9	84·6	−1·4	12·1	−0·8	+11	86	+ 4	·937	+·010	7·3	+0·8	13·19	11·42	+1·77
Punjab	+·015	98·6	−0·6	81·9	+1·1	90·3	+0·2	16·7	+1·0	+24	71	+ 2	·882	+·027	4·7	+0·6	7·13	5·28	+1·85
North-West Frontier Province	−·018	106·3	+3·4	83·7	+2·9	95·0	+3·1	22·6	+1·3	− 5	66	0	·867	+·012	2·6	−0·1	2·95	3·01	−0·06
Sind	−·002	98·8	+0·2	82·8	+0·9	90·8	+0·5	16·0	−0·9	− 3	72	0	·903	+·003	4·2	−0·6	5·29	2·61	+2·68
Rajputana	+·010	95·0	−1·9	79·8	−0·3	87·4	−1·1	15·2	+6·3	− 8	73	+ 1	·819	−·011	6·1	+0·3	9·06	6·73	+2·33
Bombay	−·002	87·7	+0·6	75·8	+0·1	81·8	+0·4	11·9	−2·8	− 3	83	0	·838	0	7·8	0	14·77	15·66	−0·89
Central India	+·015	86·0	−2·0	74·8	−1·0	80·4	−1·5	11·2	−1·1	0	88	+ 5	·836	+·004	8·7	+0·7	16·63	10·86	+5·77
Central Provinces	+·020	85·8	−0·8	73·8	−0·2	79·8	−0·5	12·0	−0·4	− 1	85	+ 2	·799	+·002	7·6	+0·5	13·55	13·41	+0·14
Hyderabad	+·011	90·1	+1·7	78·5	+0·5	81·8	+1·1	16·6	−2·6	+ 5	77	0	·729	+·002	6·9	−0·5	5·24	7·26	−2·02
Mysore	−·003	81·9	+1·0	67·2	+0·5	74·6	+0·7	14·7	+0·3	+ 2	83	− 1	·636	−·003	7·8	−0·5	6·43	7·42	−0·99
Madras	−·001	90·9	−0·4	76·7	0	83·8	−0·2	14·2	+0·1	− 4	78	+ 3	·817	+·016	7·0	+0·1	8·73	8·07	+0·66

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	I.—Burma.																					
2	Victoria Point	147	29·736		29·813	29·822	10th	29·644	30th	79·3	76·0	84·6		74·7		79·7		9·9	87·5	20th	71·6	3rd & 5th
	Mergui	66	29·801	+·004	29·797	29·913	10th	29·679	30th	77·7	76·0	85·7	+1·0	74·2	+1·2	79·9	+1·1	11·5	91·1	21st	70·6	8th
	Tavoy	19	29·835	—·009	29·787	29·949	10th	29·632	29th	77·9	76·1	85·2	+2·1	74·8	+0·6	80·0	+1·3	10·4	91·3	20th	73·1	10th
	Moulmein	94	29·757	+·016	29·772	29·889	13th	29·582	29th	77·6	75·7	82·8	−0·3	74·3	+0·1	78·6	−0·1	8·5	88·2	21st	72·5	13th
	Amherst																					
	Rangoon	18	29·795	+·023	29·751	29·945	11th	29·611	28th	78·5	76·7	84·6	−0·6	75·0	−0·9	79·9	−0·7	9·6	90·1	25th	72·2	12th
	Bassein	27	29·768	+·018	29·731	29·931	11th	29·565	29th	78·4	77·0	85·4	+0·4	75·8	−0·2	80·6	+0·1	9·6	89·6	19th	73·4	13th
	Diamond Island	41	29·736	—·001	29·712	29·903	13th	29·524	29th	81·0	77·7	84·8	+0·4	76·9	+0·9	80·8	+0·7	7·9	87·2	19th & 24th.	73·8	31st
	Toungoo	164	29·630	+·024	29·737	29·784	13th	29·469	28th	79·2	77·6	86·3	−0·6	75·0	+0·1	80·6	−0·3	11·3	92·3	22nd	72·4	19th
	Kyaukpyu	18	29·721		29·679	29·875	13th	29·487	30th	78·4	76·7	84·5		76·1		80·3		8·4	90·3	29th	71·6	14th
	Akyab	20	29·697	+·014	29·658	29·855	13th	29·444	30th	79·5	77·9	85·2	+0·7	75·4	−1·9	80·3	−0·6	9·8	90·8	29th	71·6	13th
3	Minbu	*165*	29·568	+·014	29·675	29·677	13th	29·405	30th	81·1	76·6	92·2	+1·4	77·4	+0·1	84·8	+0·7	14·8	97·3	4th	74·4	17th
	Yamethin	644	29·114	+·021	29·706	29·246	13th	28·960	30th	78·9	75·3	90·1	+0·5	75·2	+0·4	82·6	+0·5	14·9	96·5	1st	71·7	13th
	Mandalay	250	29·488	+·027	29·684	29·609	10th	29·349	30th	85·1	76·3	95·8	+1·3	78·5	−0·1	87·2	+0·6	17·3	102·1	22nd	74·2	13th
	Monywa	*280*	29·454	+·029	29·681	29·566	13th	29·315	30th	81·9	76·7	93·7	−1·2	78·7	−0·4	86·2	−0·8	15·0	100·5	16th	76·1	11th & 19th.
	Lashio	*2,820*	26·979	+·010	26·925	27·074	10th	26·871	29th	72·3	70·1	80·4	−2·9	69·3	−0·5	74·8	−1·7	11·1	87·7	1st	65·0	22nd
	Bhamo	*361*	29·339	+·031	29·652	29·438	10th	29·236	29th	78·2	76·8	87·3	−0·6	71·3	−3·8?	79·3	−2·2?	16·0	96·6	1st	63·0	13th
	Myitkyina	458	29·227	+·017	29·649	29·329	13th	29·122	28th	76·7	75·4	85·7	−1·4	75·0	−0·3	80·3	−1·1	10·7	96·4	1st	72·4	11th, 12th & 13th.
	II.—Assam.																					
4	Dibrugarh	353	29·312	+·017	29·626	29·431	21st	29·193	5th	78·9	77·2	86·9	−0·3	75·8	+0·4	81·4	+0·1	11·1	95·5	30th	72·7	16th
	Sibsagar	333	29·342	+·020	29·629	29·463	21st	29·224	30th	80·0	78·0	87·4	−2·2?	78·4	+0·6	82·9	−0·8?	9·0	93·2	29th	75·0	18th
	Tezpur	252	29·415	+·030	29·628	29·555	22nd	29·283	5th	80·1	77·8	89·7	+0·3	77·9	+0·2	83·8	+0·3	11·8	96·0	30th	75·2	14th
	Gauhati	196	29·468	+·028	29·618	29·602	22nd	29·329	30th	82·3	80·2	90·4	0	78·2	+0·2	84·3	+0·1	12·2	96·6	30th	71·5	21st
	Dhubri	115	29·530	+·028	29·599	29·665	22nd	29·401	5th & 6th.	80·6	78·4	85·2	−0·9	77·8	−0·4	81·5	−0·7	7·4	92·0	30th	74·1	11th
	Silchar	104	29·598	+·034	29·654	29·728	21st	29·424	30th	81·2	78·6	90·9	+0·8	76·9	−0·3	83·9	+0·3	14·0	99·5	1st	73·1	18th
	Srimangal	66	29·616		29·631	29·764	13th	29·439	30th	81·7	78·5	90·1	+0·1	75·4	−1·1	82·8	−0·5	14·7	98·7	1st	71·3	19th
	III.—Bengal.																					
5	Cox's Bazar	36	29·657		29·638	29·805	13th	29·411	31st	79·9	77·7	84·8		75·9		80·3		8·9	89·8	31st	72·9	20th
	Chittagong	87	29·598	+·025	29·630	29·749	13th	29·387	30th	79·3	77·4	85·8	0	75·9	−0·6	80·9	−0·3	9·9	91·4	31st	72·0	20th
	Noakhali	43	29·631	+·030	29·621	29·780	13th	29·445	31st	80·3	78·2	85·8	+0·1	77·7	+0·3	81·7	+0·2	8·1	92·2	30th	75·0	16th
	Barisal	12	29·639	+·031	29·598	29·787	13th	29·429	31st	81·3	79·2	86·5	−0·9	77·7	−0·9	82·1	−0·9	8·8	91·8	30th	69·8	10th
	Narayanganj	26	29·625	+·028	29·600	29·766	21st	29·450	30th & 31st.	81·6	78·3	87·6	−0·6	78·0	−1·1	82·8	−0·9	9·6	94·1	30th	74·8	10th & 13th.
	Mymensingh	63	29·588	+·023	29·602	29·720	22nd	29·428	30th	81·5	78·9	87·6	+0·2	78·5	+0·3	83·0	+0·3	9·1	93·6	1st & 30th.	75·8	14th
	Bogra	75	29·559	+·021	29·595	29·768	22nd	29·407	6th	82·4	79·8	88·5	−0·4	78·3	−0·2	83·4	−0·3	10·2	95·9	2nd	74·6	21st
	Dinajpur	123	29·501	+·026	29·577	29·650	22nd	29·357	5th & 6th.	82·0	79·1	88·5	−0·9	78·3	−0·3	83·4	−0·6	10·2	95·8	30th	73·0	11th
	Jalpaiguri	283	29·368	+·035	29·607	29·520	22nd	29·241	5th	80·8	78·5	89·3	+0·9	76·9	−0·2	83·2	+0·3	12·4	95·0	30th	74·3	21st
	Saugor Island	10	29·598	+·0 3	29·653	29·744	13th	29·263	31st	83·4	79·9	87·3	−0·6	79·9	−0·5	83·6	−0·5	7·4	91·3	31st	75·7	14th
	Midnapore	149	29·451	+·016	29·548	29·574	22nd	29·207	31st	82·8	78·8	89·9	−0·1	78·9	+0·4	84·4	+0·1	11·0	94·0	30th	74·3	12th
	Calcutta	21	29·593	+·0·5	29·561	29·729	22nd	29·333	31st	82·2	79·5	83·0	+0·6	79·1	+0·5	84·0	+0·5	9·9	94·4	30th	75·5	12th

N. B.—Elevations in italics indicate barometrical determinations.

B.

at 212 stations in India, etc., in July, 1919.

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st July, 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															I.—Burma.
11	0	0	8	0	2	5	5	0	S 5° W		6·0			17		87		·856		8·4		17	−7·6	16·92	33·41	−16·49	56·85	81·38	−24·53	3·56	Victoria Point.
11	0	1	5	8	3	2	0	1	S 47° E	S 70° W	4·2	1·3	+2·9	43	−12	92	−1	·873	−·002	7·0	+0·6	18	−7·6	27·81	31·86	− 4·05	76·39	78·82	− 2·43	3·32	Mergui.
23	0	0	0	3	3	2	0	0	S 7° E	S 81° W	2·1	1·2	+0·9	23	+ 5	92	−1	·870	+·003	8·6	+0·8	17	−10·3	43·76	50·40	− 6·64	132·66	116·20	+16·46	7·13	Tavoy.
10	1	2	5	6	4	2	1	0	S 49° E	S 2° E	2·5	2·8	−0·3	33	−10	91	−2	·864	−·004	9·8	+1·2	23	−4·7	44·18	46·39	− 2·21	124·78	102·88	+21·90	7·22	Moulmein.
3	0	1	4	4	12	5	2	0	S 6° E		8·5			59																	Amherst.
0	0	0	1	6	12	9	3	0	S 10° W	S 45° W	3·8	3·7	+0·1	79	+ 5	92	−1	·894	−·017	9·6	+0·6	23	−2·4	27·12	21·55	+ 5·57	55·88	51·71	+ 4·17	3·50	Rangoon.
1	1	0	1	6	4	17	1	0	S 22° W	S 18° W	3·6	3·3	+0·3	69	+ 4	93	0	·910	−·017	8·5	+0·7	27	+0·9	22·99	25·16	− 2·17	45·62	58·09	−12·47	2·28	Bassein.
2	0	0	1	2	2	17	7	0	S 47° W	S 43° W	8·6	7·7	+0·9	76	− 5	86	0	·905	−·006	8·0	−0·5	23	+4·7	22·92	25·03	− 3·11	59·87	61·01	− 1·14	4·05	Diamond Island.
4	0	0	0	18	8	1	0	0	S 29° E	S 31° E	3·5	3·8	−0·3	79	− 7	93	+ 2	·917	+·010	9·2	−0·1	24	−0·5	16·13	17·73	− 1·60	41·47	39·37	+ 2·10	2·38	Toungoo.
26	0	0	3	1	1	0	0	0	S 64° E		1·3			13		92		·892		9·2		27	+0·6	56·38	48·09	+ 8·29	109·29	102·09	+ 7·20	7·65	Kyaukpyu.
7	0	3	2	12	3	3	0	1	S 42° E	S 38° E	3·6	2·8	+0·8	49	− 6	93	− 1	·935	−·025	8·5	−0·5	25	−2·5	70·16	53·49	+16·67	134·81	112·57	+22·27	10·33	Akyab.
1	0	0	1	26	2	0	1	0	S 42° E	S 39° E	4·3	9·0	−4·7	76	−16	91	− 3	·854	−·023	5·9	−1·1	11	+1·8	6·22	4·43	+ 1·79	15·61	15·52	+ 0·09	1·17	Minbu.
																84	− 1	·829	−·007	7·0	−0·4	8	−0·8	3·50	3·91	− 0·41	10·39	15·19	− 4·80	0·63	Yamethin.
11	0	0	0	5	14	1	0	0	S 8° E	S 5° E	6·2	6·6	−0·4	59	−22	72	− 3	·814	−·032	7·1	+0·6	9	+3·1	5·21	3·31	+ 1·90	12·86	14·92	− 2·06	1·32	Mandalay.
6	0	0	3	15	7	0	0	0	S 37° E		2·9			69		77	− 3	·849	−·036	9·0	+0·7	8	+3·7	7·00	2·60	+ 4·40	19·91	13·74	+ 6·17	2·07	Monywa.
1	2	3	0	2	3	17	1	2	S 45° W		2·6			49		89	0	·703	−·023	7·9	−1·0	19	+1·5	10·86	12·46	− 1·60	22·21	29·52	− 7·31	1·65	Lashio.
31	0	0	0	0	0	0	0	0	Calm	N 70° W	0·5	1·4	−0·9	(a)		94	+ 1	·900	−·005	9·4	+0·5	19	−1·1	20·43	17·26	+ 3·17	30·58	37·73	− 7·15	4·94	Bhamo.
29	0	0	0	1	1	0	0	0	S 24° E		2·5			7		94	+ 3	·860	−·035	8·7	−0·4	23	+1·6	22·19	19·03	+ 3·16	40·95	40·27	+ 0·68	3·31	Myitkyina.
																															II.—Assam.
27	0	1	1	1	1	0	0	0	S 67° E		0·3			7		93	0	·913	+·004	8·0	−0·1	22	0	28·34	21·59	+ 6·75	63·37	50·43	+12·34	4·50	Dibrugarh.
13	2	4	1	0	8	3	0	0	S 18° E	S 11° E	1·9	2·1	−0·2	20	+ 4	91	−1	·932	−·033	9·5	+0·6	22	+2·4	22·14	17·07	+ 5·07	52·21	43·04	+ 9·17	5·28	Sibsagar.
15	0	0	6	1	3	2	4	0	S 14° E		1·1			17		90	−1	·920	−·013	8·3	−0·1	17	−0·6	10·62	13·93	− 3·31	27·32	34·40	− 7·08	1·79	Tezpur.
27	0	0	3	0	0	0	1	0	E		0·9			6		91	+ 3	1·04	+·054	?	?	14	−0·5	11·96	19·81	+ 1·15	29·42	35·38	− 5·96	2·68	Gauhati.
2	0	7	11	2	4	5	0	0	S 74° E	S 83° E	4·1	3·4	+0·7	49	+20	90	−1	·942	−·009	5·7	−2·2	21	+5·1	17·51	16·65	+ 0·83	50·88	55·39	− 4·51	4·18	Dhubri.
31	0	0	0	0	0	0	0	0	Calm	N 84° E	0	2·0	−2·0	(a)		85	−2	·932	−·009	6·7	−1·5	10	−2·6	12·60	19·90	− 7·30	41·63	58·18	−17·55	1·34	Silchar.
																86	−1	·944	−·009	5·5		20	−1·9	12·47	16·37	− 4·50	30·33	52·75	−22·42	2·08	Shillongal.
																															III.—Bengal.
3	0	1	5	17	5	2	0	0	S 39° W		4·1			72		91		·916		8·0		21	−1·7	36·62	33·98	+ 2·64	75·18	73·24	+ 1·94	5·50	Cox's Bazar.
6	0	2	9	8	2	3	1	0	S 57° E	S 36° E	4·3	5·3	−1·0	49	−25	92	+ 4	·915	+·002	8·6	+0·7	24	+5·4	38·27	21·78	+16·49	57·81	52·50	+ 5·31	4·60	Chittagong.
3	0	0	3	15	8	2	0	0	S 31° E		4·4			71		91	+ 1	·933	−·014	5·6	+0·5	20	−3·0	25·85	24·67	+ 1·19	49·97	58·14	− 8·17	6·36	Noakhali.
3	0	1	3	10	9	4	1	0	S 21° E	S 14° E	3·7	3·1	+0·6	66	+23	90	+ 1	·959	−·020	6·4	−1·4	22	+1·5	27·92	15·48	+12·44	41·89	41·19	+ 3·70	5·99	Barisal.
7	0	0	5	7	7	5	0	0	S 23° E	S 27° E	2·2	5·7	−3·5	53	−18	88	− 2	·951	−·030	8·8	+0·3	18	+0·7	21·04	12·46	+ 8·58	35·42	35·17	+ 0·25	5·26	Narayanganj.
14	0	2	4	7	3	1	0	0	S 53° E	S 49° E	2·3	3·0	−0·7	40	−28	88	− 2	·952	−·010	8·6	+0·5	25	+5·2	21·33	16·35	+ 4·98	43·45	43·75	− 5·30	5·12	Mymensingh.
8	0	0	10	2	9	1	1	0	S 41° E	S 48° E	1·4	3·1	−1·7	49	−16	89	+ 1	·981	+·015	6·1	−1·2	19	+2·4	18·74	13·05	+ 5·69	27·61	35·89	− 8·28	7·09	Bogra.
2	1	3	12	4	6	2	1	0	S 64° E	S 86° E	3·2	2·9	+0·3	53	− 4	89	− 1	·966	−·001	8·1	−0·2	19	−1·1	16·55	15·27	+ 1·28	35·35	37·21	− 1·86	3·75	Dinajpur.
18	0	2	4	1	3	1	0	2	S 68° E	N 88° E	1·3			13	−44	91	0	·951	+·003	5·5	−0·4	21	−0·6	26·19	30·86	− 4·67	58·58	65·24	− 6·66	5·50	Jalpaiguri.
0	2	5	1	1	7	14	1	0	S 25° W	S 27° W	11·5	7·2	+4·3	46	− 8	85	− 2	·968	−·027	8·5	−0·2	14	−1·9	4·51	15·37	−10·86	26·76	37·99	− 4·23	0·72	Saugor Island.
26	1	2	0	1	0	1	0	0	N 45° E		2·6			3		82	− 3	·930	−·014	8·2	+2·82	13	−3·2	8·01	12·82	− 4·81	28·82	29·00	+ 0·82	1·14	Midnapore.
0	0	4	4	3	2	15	2	1	S 21° W	S 3° W	4·2	3·7	+0·5	40	−10	88	0	·967	−·005	8·7	+0·2	15	−3·2	11·99	12·74	− 0·75	29·11	30·34	− 1·23	2·19	Calcutta.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal—*concld.*																					
	Jessore	30	29·600	+·031	29·576	29·735	22nd	29·394	31st	82·7	78·8	89·2	+0·1	78·0	−1·0	83·6	−0·5	11·2	94·5	30th	75·1	12th
	Burdwan	99	29·504	+·018	29·550	29·620	22nd	29·311	31st	81·5	78·9	89·8	−0·4	78·7	−0·6	84·2	−0·5	11·1	95·2	30th	75·4	12th
	Berhampore	67	29·548	+·027	29·564	29·693	22nd	29·361	31st	82·1	79·5	89·7	+0·2	79·2	+0·4	84·5	+0·3	10·5	94·8	30th	76·8	26th
	IV.—Bihar and Orissa.																					
6	Balasore	50	29·574	+·036	29·569	29·707	13th	29·267	31st	81·7	78·6	89·5	+0·5	78·0	−0·4	83·7	+0·1	11·5	93·3	5th	70·6	26th
	Hukitola (False Point)	29	29·604	+·029	29·574	29·757	14th	29·175	31st													
	Cuttack	80	29·555	+·035	29·576	29·713	14th	29·22[illegible]	31st	82·0	78·8	90·3	+0·4	78·4	−0·2	84·4	+0·1	11·9	93·7	9th	74·2	14th
	Puri	21	29·621	+·035	29·586	29·779	14th	29·248	31st	83·0	80·0	87·5	−0·2	80·9	+1·6	84·2	+0·7	6·6	92·5	28th	77·2	15th
	Angul	455	29·165	+·010	29·564	29·311	14th	28·869	31st	81·1	77·6	88·8	+0·7	77·2	+0·1	83·0	+0·4	11·6	92·8	4th & 31st	73·4	10th & 14th.
	Sambalpur	486	29·143	+·026	29·577	29·281	14th	28·907	31st	80·2	77·4	87·1	−0·4	77·2	−0·2	82·1	−0·3	9·9	91·1	24th	74·0	15th
7	Chaibasa	*733*	28·863	+·025	29·514	28·999	14th	28·652	31st	80·1	76·7	89·4	−1·2	77·0	−0·1	83·2	−0·7	12·4	94·0	1st	72·4	18th
	Ranchi	2,128	27·501	+·036	29·539	27·614	23rd	27·347	30th	75·8	73·2	83·7	−0·7	73·1	−0·2	78·4	−0·5	10·6	87·5	1st	71·2	14th
	Purulia	*816*	28·790	+·034	29·552	28·927	22nd	28·628	6th	80·5	76·7	90·1	0	76·1*	−0·8*	82·8*	−0·4	14·0	94·1	30th	73·9	2nd
	Daltonganj	*730*	28·862	+·028	29·541	28·994	23rd	28·714	6th	80·4	76·9	88·6	−2·7	77·3	−0·8	83·0	−1·7	11·3	94·8	4th	74·9	8th
8	Purnea	124	29·480	+·015	29·558	29·[illegible]09	22nd	29·332	6th	81·5	79·4	88·7	−1·1	78·5	−0·3	83·6	−0·7	10·2	96·9	30th	74·8	22nd
	Monghyr	155	29·435		29·542	29·556	23rd	29·269	6th	82·7	79·6	89·8		78·5		84·2		11·3	98·2	1st	74·9	21st
	Darbhanga	165	29·429	+·017	29·548	29·565	23rd	29·2[illegible]5	6th	81·9	78·9	87·5	−2·0	78·3	−1·3	82·9	−1·7	9·2	95·5	31st	70·6	20th
	Pusa	188	29·400		29·542	29·524	23rd	29·239	6th	82·8	80·1	90·8		78·7		84·8		12·1	100·0	1st	75·3	22nd
	Patna	183	29·409	+·030	29·546	29·556	23rd	29·219	6th	82·9	79·3	88·8	−1·8	78·6	−1·2	83·7	−1·5	10·2	97·9	1st	74·2	25th
	Buxar	239	29·387	+·025	29·531	29·476	23rd	29·153	6th	81·1	78·9	89·2	−1·3	78·1	−0·9	83·7	−1·3	11·1	102·3	1st	72·6	19th
	Gaya	372	29·223	+·036	29·547	29·355	23rd	29·067	6th	82·5	78·7	89·9	−1·9	78·8	0	84·3	−0·9	11·1	100·7	1st	74·5	22nd
	Naya Dumka	488	29·121	+·036	29·559	29·257	23rd	28·963	6th	82·0	78·8	90·0	+0·8	78·2	+0·5	84·1	+0·7	11·8	95·4	30th	75·0	18th
	V.—United Provinces of Agra and Oudh.																					
9	Gorakhpur	257	29·325	+·024	29·539	29·466	23rd	29·164	5th	81·6	79·4	88·5	−2·5	78·8	−0·4	83·6	−1·5	9·7	98·3	30th & 31st.	73·4	1st
	Benares	267	29·304	+·023	29·524	29·424	23rd & 24th.	29·116	7th	82·1	79·1	90·6	−1·4	77·7	−2·0	84·1	−1·7	12·9	104·6	1st	68·0	5th
	Allahabad	309	29·279	+·042	29·542	29·394	17th	29·127	7th	81·6	78·3	90·2	−2·3	78·5	−1·2	84·3	−1·7	11·7	109·4	1st	75·1	15th
	Cawnpore	416	29·153	+·032	29·533	29·275	23rd	29·006	5th	82·0	78·9	90·5	−2·8	79·0	−1·0	84·8	−1·9	11·5	111·0	1st	75·9	8th
	Lucknow	368	29·196	+·022	29·518	29·300	23rd	29·054	5th	82·9	79·4	91·7	−1·0	79·0	−0·4	85·3	−0·7	12·7	109·0	1st	75·5	19th
	Bahraich	407	29·168	+·025	29·532	29·303	23rd	29·002	5th	82·8	79·1	89·5	−2·6	78·5	−0·5	84·0	−1·5	11·0	98·7	31st	74·2	6th
0	Jhansi	824	28·745	+·001	29·520	29·868	17th	28·611	1st	80·2	77·0	90·1	−1·8	77·1	−2·2	83·6	−2·0	13·0	111·9	1st	71·9	15th
	Agra	556	28·999	+·015	29·503	29·108	23rd	28·851	5th	83·9	80·4	92·4	−1·7	79·7	−1·2	86·0	−1·5	12·7	114·4	1st	75·3	14th
	Mairpuri	516	29·031	+·008	29·501	29·147	23rd & 24th.	29·902	5th	83·3	79·3	91·6	−3·2	79·0	−1·4	85·3	−2·3	12·6	111·6	1st	74·5	8th
	Bareilly	568	28·999	+·026	29·522	29·126	23rd	28·810	5th	83·1	78·6	91·2	−0·9	78·5	−0·3	84·9	−0·6	12·7	101·3	1st	72·5	8th
	Roorkee	899	28·673	+·028	29·527	28·802	23rd	28·486	5th	81·6	77·4	91·3	−0·8	78·3	+0·2	84·8	−0·3	13·0	106·2	1st	71·7	7th
	VI.—Punjab.																					
11	Delhi	718	28·853	+·036	29·526	28·971	23rd	28·697	5th	83·9	78·8	95·0	+0·6	81·2	+0·3	88·1	+0·5	13·8	112·0	1st	76·7	26th
	Hissar	725	28·822	+·035	29·496	28·937	23rd	28·628	6th	87·5	79·1	99·4	−1·1	81·9	0	90·7	−0·5	17·5	114·4	1st	75·4	27th

N.B.—Elevations in italics indicate barometrical determinations.

* Mean of 13 days.

B—*continued.*

at 212 stations in India, etc., in July, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st July 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															III.—Bengal—*concld.*
23	0	0	2	6	0	0	0	0	S 56° E	S 21° E	1·9	3·0	−1·1	27	−23	84	− 5	·935	−·065	9·0	+0·7	16	− 1·6	17·64	12·33	+ 5·31	31·18	33·50	− 2·32	4·46	Jessore.
13	0	2	1	1	2	9	3	0	S 39° W	S 3° E	1·3	3·1	−1·8	33	− 6	88	+ 1	·913	−·014	7·5	−0·8	15	− 0·9	15·04	12·87	+ 2·17	28·71	29·06	− 0·35	3·60	Burdwan.
6	0	2	3	2	10	6	0	2	S 1° E	S 25° E	2·6	3·3	−0·7	41	−11	88	− 3	·908	−·019	7·9	−1·3	19	+ 3·2	10·83	11·01	− 0·18	26·18	26·39	− 0·21	3·00	Berhampore.
																															IV.—Bihar and Orissa.
2	2	2	1	0	9	12	2	1	S 33° W	S 37° W	4·0	4·3	−0·3	53	− 1	87	+ 1	·939	−·006	7·8	+1·8	11	− 3·3	8·42	11·20	− 2·78	40·58	25·70	+14·88	2·39	Balasore.
4	3	4	0	0	3	14	3	0	S 55° W		10·1			40	−28					8·1	−0·3	12	− 2·2	11·68	12·14	− 0·46	23·93	25·05	− 1·12	4·20	Hukitala (False Point).
18	0	1	1	0	0	6	5	0	S 64° W	S 60° W	2·0	2·4	−0·4	23	−29	86	+ 4	·938	+·033	7·3	−0·1	21	+ 5·6	14·51	11·69	+ 2·82	27·56	25·57	+ 1·99	1·40	Cuttack.
1	5	2	0	0	4	11	7	1	S 70° W		11·8			84		87	+ 1	·981	+·009	6·8	−0·2	11	− 1·0	6·30	9·93	+ 3·63	15·69	19·89	− 4·20	1·23	Puri.
13	2	0	2	1	0	3	4	6	S 69° W		4·0			26		85	0	·903	+·011	8·2	+2·0	15	+ 0·8	14·59	10·81	+ 3·78	27·84	20·67	+ 7·17	2·65	Angul.
0	3	2	2	1	3	15	1	4	S 56° W	S 34° W	3·3	3·5	−0·2	40	−20	88	+ 3	·898	+·012	8·7	+0·5	20	+ 0·2	16·01	20·33	− 4·32	37·54	31·58	+ 5·96	2·81	Sambalpur.
17	1	0	1	0	1	11	0	0	S 41° W	S 66° W	2·1	2·0	+0·1	33	−11	85	+ 4	·873	+·014	8·1	+0·8	16	+ 0·5	7·79	12·04	− 4·25	26·60	23·57	+ 3·03	1·16	Chaibassa.
0	0	3	2	4	3	8	8	3	S 51° W	S 63° W	3·4	5·8	−2·4	37	+ 5	88	0	·785	−·010	8·0	−0·3	17	− 0·7	11·95	15·07	− 3·12	30·53	26·74	+ 3·79	2·67	Ranchi.
12	0	1	2	2	3	4	3	4	S 51° W		1·9*			23		85	− 3	·877	−·035	7·7	+1·0	15	− 1·0	11·41	12·44	− 1·03	32·88	22·87	+10·01	2·23	Purulia.
17	0	0	1	1	0	8	1	3	S 60° W		3·0			26		85	+ 2	·883	−·013	6·3	+0·5	20	+ 5·5	12·84	10·48	+ 2·36	25·00	17·27	+ 7·73	3·08	Daltonganj.
1	2	3	17	2	1	2	2	1	N 86° E	S 81° E	2·1	2·6	−0·5	53	+ 2	90	0	·977	−·006	7·1	0	20	+ 3·4	21·40	13·97	+ 7·43	38·78	29·51	+ 9·27	3·45	Purnea.
8	0	0	2	12	6	0	2	1	S 30° E		4·6			52		88		·868		7·0		17	+ 2·1	19·57	9·37	+ 10·20	29·86	21·60	+ 8·26	3·48	Monghyr.
15	1	2	8	2	0	0	2	1	N 78° E	S 80° E	3·6	3·5	+0·1	27	−28	87	− 1	·946	−·027	5·4	−1·8	14	0	11·99	11·65	+ 0·34	16·84	22·95	− 6·11	2·40	Darbhanga.
1	0	4	13	6	1	3	3	0	S 72° E		3·2			52		89		·989		7·5		16	+ 3·1	14·78	10·42	+ 4·36	17·67	22·17	− 4·50	3·65	Pusa.
4	1	1	13	3	1	3	5	0	S 68° W	N 81° E	4·0	3·4	+0·6	30	−12	85	− 1	·956	−·023	8·5	+0·3	19	+ 5·0	16·11	12·06	+ 4·05	22·83	21·74	+ 1·09	3·54	Patna.
9	0	1	6	3	1	5	6	0	S 9° W		5·4			19		91	+ 7	·963	+·006	7·1	−0·2	17	+ 3·9	18·93	10·73	+ 8·20	22·60	16·60	+ 6·00	4·25	Buxar.
5	0	3	4	1	5	8	5	0	S 23° W	S 2° E	2·8	2·9	−0·1	33	+23	84	+ 1	·936	0	8·0	+1·2	16	+ 1·0	20·00	12·51	+ 7·46	33·47	20·73	+12·74	6·93	Gaya.
29	0	1	0	1	0	0	0	0	E		1·2			5		86	− 1	·939	+·011	8·6	+1·6	20	+ 2·1	12·18	13·50	− 1·32	23·80	27·11	− 3·31	2·18	Naya Dumka.
																															V.—United Provinces of Agra and Oudh.
9	0	4	17	1	0	0	0	0	N 84° E	N 63° E	2·1	1·7	+0·4	69	+37	90	+ 3	·971	+·004	5·3	−1·1	18	+ 3·9	18·68	12·90	+ 5·78	22·15	21·96	+ 0·19	3·27	Gorakhpur.
6	0	1	3	8	0	7	4	1	S 7° W	S 7° E	2·7	3·4	−0·7	27	+17	87	+ 4	·949	−·002	8·0	+0·3	16	+ 2·2	12·58	11·31	+ 1·27	17·84	16·90	+ 0·94	2·35	Benares.
7	0	2	7	2	0	4	8	1	S 39° W	S 27° E	3·0	5·3	−2·3	10	+ 4	86	+ 5	·923	−·008	9·0	+1·0	15	+ 1·1	11·26	11·68	− 0·42	12·73	16·58	− 3·85	2·23	Allahabad.
2	3	2	6	8	2	4	3	1	S 51° E	S 1° E	2·6	3·4	−0·8	27	+13	87	+ 6	·947	+·013	6·0	−0·1	11	− 1·0	9·89	10·23	− 0·34	10·70	13·60	− 2·90	4·20	Cawnpore.
22	0	0	5	4	0	0	0	0	S 70° E	S 32° E	1·2	2·8	−1·6	27	+ 3	85	+ 3	·968	+·030	8·9	+1·8	18	+ 5·1	14·65	11·39	+ 3·26	18·03	16·76	+ 1·27	4·05	Lucknow.
10	2	0	8	7	2	1	1	0	S 63° E	S 68° E	2·8	2·6	+0·2	43	+ 3	84	− 1	·939	−·023	6·7	+1·0	13	+ 1·3	10·66	10·69	− 0·03	19·09	18·25	+ 0·84	2·80	Bahraich.
1	0	3	1	1	1	18	3	3	S 54° W	S 72° W	4·3	3·2	+1·1	56	+ 9	86	+ 7	·883	−·006	6·5	+1·7	23	+ 9·7	25·07	11·45	+13·62	26·63	16·28	+10·35	3·28	Jhansi.
10	1	6	5	2	4	3	0	0	S 74° E	S 24° W	3·5	4·0	−0·5	30	−12	85	+ 8	·984	+·073	8·3	+1·8	16	+ 4·8	8·21	9·10	− 0·89	9·16	11·98	− 2·82	1·66	Agra.
3	2	1	7	8	2	1	6	1	S 50° E	S 41° E	2·1	1·5	+0·6	27	+24	86	+ 8	·952	+·033	6·7	+0·3	13	+ 3·5	9·46	6·74	+ 2·72	10·00	9·90	+ 0·10	1·90	Mainpuri.
10	0	1	6	8	3	2	1	0	S 47° E	S 47° E	2·2	2·4	−0·2	46	+14	82	− 2	·917	−·017	8·3	+1·7	11	− 1·5	13·96	13·47	+ 0·49	15·66	19·23	− 3·57	3·50	Bareilly.
18	0	0	0	13	0	0	0	0	S 45° E	S 38° E	2·5	2·1	+0·4	43	+ 4	83	+ 3	·879	+·009	6·2	+0·1	14	+ 2·4	10·43	12·02	− 1·59	13·37	17·88	− 4·51	3·24	Roorkee.
																															VI.—Punjab.
9	0	1	4	13	0	1	2	1	S 51° E	S 22° E	4·5	3·1	+1·4	43	+21	79	+ 5	·913	+·012	6·9	+0·1	9	− 0·1	4·35	7·67	− 3·32	4·58	11·25	− 6·77	1·57	Delhi.
2	0	0	2	9	6	8	4	0	S 4° W	S 16° W	6·0	5·2	+0·8	59	+30	69	+ 2	·883	+·028	4·4	−0·1	7	+ 1·6	3·34	3·95	− 0·61	4·10	6·26	− 2·16	1·30	Hissar.

* Mean of 29 days.

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	VI.—Punjab—*concld.*																					
	Patiala	*818*	28·714	−·003?	29·486	28·852	23rd	28·513	5th	84·2	79·5	93·6	−1·0	79·9	+0·4	86·8	−0·3	13·7	110·2	1st	75·8	13th
	Ambala	892	28·664	+·020	29·511	28·799	23rd	28·451	5th	82·6	77·9	93·6	−1·0	78·6	−0·2	86·1	−0·6	15·0	115·5	1st	72·0	2nd
	Ludhiana	812	28·728	+·018	29·495	28·860	23rd	28·526	6th	83·8	77·5	96·1	−1·1	80·3	−0·1	88·2	−0·6	15·8	113·9	1st	74·8	19th & 20th.
	Lahore	702	28·810	+·009	29·466	28·951	23rd	28·571	6th	87·5	79·6	100·2	−0·3	83·4	+3·2	91·8	+1·5	16·8	114·2	6th	74·7	29th
	Sialkot	830	28·701	+·017	29·490	28·835	14th	28·448	6th	83·8	78·5	95·5	−2·4P	79·3	−0·6	87·4	−1·5P	16·2	113·8	1st	72·1	25th
	Rawalpindi	1,674	27·863	+·011	29·471	28·018	23rd	27·638	6th	86·4	77·2	97·7	+0·3	79·8	+3·3	88·7	+1·8	17·9	112·9	6th	71·7	14th & 19th.
12	Khushab	612	28·893	+·006	29·460	29·042	23rd	28·607	6th	90·3	79·6	102·2	−0·4	83·7	+1·4	93·0	+0·5	18·5	114·2	10th	73·2	26th
	Lyallpur	605	28·885		29·443	29·023	23rd	28·640	6th	83·7	78·7	103·3		84·5		93·9		18·8	114·2	6th	74·5	29th
	Montgomery	558	28·931	+·002	29·443	29·065	23rd	28·711	6th	90·3	79·0	103·0	−1·3	84·7	+0·8	93·9	−0·3	18·3	111·0	5th	74·7	29th
	Multan	426	29·040	−·008	29·419	29·168	23rd	28·809	6th	90·3	80·9	103·7*	−0·6	85·7†	+1·4	94·6†	+0·4	18·0	112·6	6th	77·0	30th
	VII.—North-West Frontier Province.																					
14	Peshawar	1,113	28·395	−·014	29·452	28·547	23rd	28·139	6th	86·9	78·0	107·5	+4·8	82·3	+3·1	94·9	+3·9	25·2	119·7	7th	76·4	14th
	Dera Ismail Khan	590	28·892	−·013	29·442	29·053	23rd	28·645	6th	90·4	80·2	105·1	+2·0	85·1	+2·7	95·1	+2·3	20·0	116·4	6th	76·1	26th & 27th.
	VIII.—Sind.																					
16	Jacobabad	186	29·286	+·006	29·427	29·428	24th	29·095	6th	91·0	80·2	109·1	+0·7	85·5	+0·9	97·3	+0·8	23·6	122·1	1st	78·0	30th
	Hyderabad	96	29·397	−·013	29·444	29·536	14th	29·047	31st	85·3	78·0	98·9	−0·3	81·7	+0·8	90·3	+0·3	17·2	105·6	5th	74·8	31st
	Karachi	13	29·542	+·002	29·506	29·656	14th	29·405	1st	83·8	80·0	88·4	+0·2	81·3	+0·8	84·8	+0·5	7·1	93·5	23rd	76·6	22nd
	IX.—Rajputana.																					
17	Bikaner	*771*	28·768	+·014	29·486	28·890	14th	28·620	6th	87·2	78·4	103·8	+2·8P	82·8	+0·3	93·3	+1·3P	21·0	112·2	1st	75·5	31st
	Jodhpur	780	28·790	+·010	29·518	28·917	14th	28·660	28th	83·5	75·9	95·8	−1·9	79·8	−0·7	87·8	−1·3	16·0	106·4	3rd	72·3	31st
18	Jaipur	1,431	28·165	+·013	29·527	28·272	14th	28·059	1st	82·3	75·9	93·4	−1·2	78·7	+0·2	86·1	−0·5	14·7	109·5	1st	72·2	12th
	Ajmer	1,611	27·983	+·002	29·518	28·099	14th	27·865	6th	79·6	74·5	91·1	−0·7	73·5	+0·5	84·3	−0·1	12·6	102·2	1st	72·5	31st
	Kotah	832	28·742	+·012	29·521	28·368	14th	28·619	1st	82·9	77·3	90·9	−3·6	79·3	−1·3	85·1	−2·5	11·6	103·6	1st	75·6	16th & 17th.
	X.—Bombay.																					
19	Deesa	466	29·153*	+·018	29·568*	29·272	15th	29·033	29th	82·3	77·9	93·5	+0·8	78·6	+0·6	86·1	+0·7	14·9	103·3	1st	71·2	31st
	Bhuj	334	29·258	+·001	29·540	29·387	14th	29·132	1st	83·3	78·1	92·6	+1·9	79·5	+1·5	86·0	+1·7	13·1	100·2	3rd	74·9	31st
	Jamnagar	61	29·548	−·007	29·554	29·673	15th	29·434	1st	82·8	78·6	89·8	−1·7	78·3	−0·8	84·0	−1·3	11·5	94·3	4th	73·6	4th
	Dwarka	37	29·586	+·006	29·569	29·708	15th	29·480	2nd	82·8	78·7	86·6	−0·1	80·5	−0·1	83·5	−0·1	6·1	89·1	3rd	76·2	31st
	Rajkot	*429*	29·186	−·012	29·561	29·311	17th	29·089	1st	80·8	75·9	90·9	−0·2	78·6	+2·5P	84·8	+1·1P	12·3	97·2	9th	74·1	29th
	Veraval	*18*	29·626	−·012	29·587	29·752	16th	29·516	1st	81·6	78·5	83·5	−0·3	80·2	+0·6	81·9	+0·1	3·3	85·6	1st	75·6	3rd
	Bhavnagar Para	55	29·572	−·015	29·573	29·713	14th	29·416	2nd	83·6	77·9	94·7	+1·3	78·2	−0·4	86·5	+0·5	16·5	99·4	9th	73·2	29th
	Surat	39	29·624	+·004	29·606	29·758	16th	29·437	2nd	81·9	78·4	87·3	−0·1	78·1	+0·5	82·7	+0·2	9·2	90·6	1st	74·3	29th
	Ahmadabad	163	29·477	+·008	29·558	29·609	14th	29·338	2nd	81·9	78·6	92·1	−0·6	77·9	−0·7	85·0	−0·7	14·2	99·8	1st	75·0	29th
25	Bombay	37	29·680	−·011	29·657	29·815	16th	29·488	2nd	80·4	77·4	85·4	+0·8	78·3	+0·6	81·8	+0·7	7·1	87·9	18th	75·4	2nd
	Ratnagiri	207	29·554	−·012	29·701	29·667	16th	29·418	2nd	79·9	76·7	83·7	−0·2	75·8	−0·1	79·8	−0·1	7·9	85·9	18th	68·7	2nd
	Marmagao	*60*	29·736	−·013	29·731	29·832	16th	29·645	2nd	79·4	77·7	83·4	−0·3						86·4	11th		
	Karwar	44	29·762	−·017	29·741	29·870	14th	29·674	1st	77·7	75·6	83·1	+0·2	75·0	−0·2	79·0	0	8·1	86·4	5th	72·1	16th

N.B.—Elevations in italics indicate barometrical determinations.

* Mean of 30 days.
† " " 29 "

B—*continued.*

at 212 stations in India, etc., in July, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st July 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															VI.—Punjab—*concld.*
2	0	4	5	8	1	0	1	0	S 61° E		4·6			71		81	+ 3	·913	+ ·033	6·6	+1·6	12	+3·7	10·14	5·99	+4·15	11·77	8·91	+2·86	3·07	Patiala.
0	0	1	19	15	2	1	1	1	S 57° E	S 62° E	4·2	1·1	+3·1	72	+49	81	− 1	·892	− ·021	7·7	+1·9	12	+2·4	10·84	7·41	+3·43	10·89	12·11	−1·22	2·80	Ambala.
13	0	1	2	10	5	0	0	0	S 40° E	S 34° E	2·4	1·8	+0·6	49	+13	76	+ 3	·868	+ ·007	5·4	−0·1	10	+1·8	17·89	7·92	+9·97	18·95	11·18	+7·77	5·57	Ludhiana.
2	0	4	3	20	2	0	0	0	S 56° E	S 42° E	2·5	2·5	0	79	+40	71	+ 1	·907	+ ·019	4·6	+0·8	5	−1·0	10·91	5·36	+5·55	11·59	7·84	+3·75	6·73	Lahore.
3	1	5	12	7	1	0	0	2	E	S 85° E	2·8	2·0	+0·8	61	+14	80	+ 9	·907	+ ·043	4·8	+1·2	13	+4·7	18·96	7·56	+11·40	20·39	11·14	+9·25	3·10	Sialkot.
9	0	0	7	10	4	1	0	0	S 49° E	S 82° E	2·0	1·8	+0·2	59	+31	63	− 1	·818	+ ·037	5·2	+0·8	8	−0·9	12·56	7·68	+4·88	13·86	11·05	+2·81	4·10	Rawalpindi.
4	0	10	13	2	0	1	1	0	N 76° E	N 62° E	7·9	5·5	+2·4	66	+12	63	− 1	·869	+ ·026	3·0	+0·3	2	−2·6	1·55	3·84	−2·29	3·24	6·00	−2·76	1·05	Khushab.
1	0	3	6	7	5	7	1	1	S 28° E		3·0			46		61		·830		3·1		4	+0·1	3·06	3·59	−0·53	3·93	5·49	−1·56	2·30	Lyallpur.
0	1	2	3	5	8	11	1	0	S 3° W	S 15° E	6·7	7·0	−0·3	66	+17	60	+ 2	·832	+ ·023	2·8	+0·3	2	−1·4	3·68	2·33	+1·35	4·09	3·64	+0·45	1·88	Montgomery.
3	1	7	1	3	14	2	0	0	S 30° E	S 89° W	3·2	2·3	+0·9	45	+12	66	+ 3	·926	+ ·059	2·3	+0·3	4	+1·8	4·99	2·07	+2·92	5·17	3·00	+2·17	3·10	Multan.
																															VII.—North-West Frontier Province.
21	9	0	0	0	0	0	1	0	N 6° W	N 9° W	0·6	3·0	−2·4	30	−12	67	+ 6	·845	+ ·061	2·7	−0·4	3	+0·9	0·60	1·37	−0·77	1·14	2·61	−1·47	0·21	Peshawar.
17	0	8	0	6	0	0	0	0	N 81° E	N 69° E	6·8	1·8	+5·0	33	+ 1	64	− 6	·890	− ·037	2·5	+0·3	2	−0·8	2·04	2·22	−0·18	2·36	3·27	−0·91	1·19	Dera Ismail Khan.
																															VIII.—Sind.
13	0	0	0	13	3	2	0	0	S 30° E	S 49° E	3·2	4·1	−0·9	49	−16	62	− 4	·885	− ·041	1·4	−1·1	1	−0·4	0·20	0·97	−0·77	0·40	1·30	−0·90	0·12	Jacobabad.
0	2	0	0	0	14	14	1	0	S 27° W	S 47° W	9·5	12·2	−2·7	82	+ 1	70	+ 2	·848	+ ·019	3·3	−1·6	4	+0·8	7·25	2·99	+4·26	7·25	3·63	+3·62	3·94	Hyderabad.
0	0	0	0	0	2	12	16	1	S 69° W	S 76° W	13·4	12·6	+0·8	89	+ 5	84	+ 1	·972	+ ·031	8·0	+0·8	2	−0·6	1·75	3·11	−1·36	1·83	4·13	−2·30	1·45	Karachi.
																															IX.—Rajputana.
1	1	0	2	2	10	10	4	1	S 26° W	S 29° W	7·2*	6·1	+1·1	62	− 2	66	+ 1	·850	− ·003	2·8	−1·0	4	−1·0	0·06	3·13	−2·47	1·31	5·14	−3·83	0·14	Bikaner.
5	1	0	0	1	1	21	2	0	S 46° W		4·4			73		70	0	·798	− ·017	7·8	+0·9	8	+3·1	5·73	3·78	+1·95	6·20	5·27	+0·93	2·26	Jodhpur.
4	0	2	4	2	1	2	12	4	N 87° W	S 73° W	4·1	3·9	+0·2	30	−12	75	+ 1	·804	− ·023	8·2	+1·5	11	+0·8	7·60	7·93	−0·33	9·97	10·62	−0·65	3·66	Jaipur.
6	1	0	1	1	0	7	15	0	S 75° W	S 87° W	5·3	5·8	−0·5	59	− 9	78	− 1	·785	− ·053	4·3	−1·7	12	+3·1	8·00	6·46	+1·54	8·95	9·23	−0·28	1·50	Ajmer.
5	1	0	0	1	0	15	2	6	S 71° W		3·9			59		77	+ 6	·858	+ ·043	7·5	+1·7	18	+7·8	9·80	9·32	+0·48	12·07	12·35	−0·28	1·55	Kotah.
																															X.—Bombay.
2	0	0	0	0	6	19	2	2	S 43° W	S 61° W	9·0	11·2	−2·2	79	+14	82	+ 1	·902	+ ·038	9·5	+1·3	11	+0·6	12·19	9·43	+2·76	13·86	11·69	+2·17	4·10	Deesa.
2	1	0	0	0	3	3	22	0	S 81° W	S 78° W	10·3	13·3	−3·0	79	+ 1	78	− 3	·887	− ·010	8·2	+0·9	6	−0·4	2·75	6·92	−4·67	2·57	8·82	−6·25	1·00	Bhuj.
0	0	0	0	0	4	16	10	1	S 56° W		10·9			85		82	+ 6	·921	+ ·023	5·8	+0·8	12	+4·2	12·88	8·43	+4·45	13·04	10·39	+2·65	3·42	Jamnagar.
1	1	0	1	0	4	14	9	1	S 57° W		13·4			72		83	0	·926	− ·026	6·9	−0·9	8	+1·9	4·25	7·10	−2·85	4·29	9·59	−5·30	1·33	Dwarka.
1	0	0	0	2	6	18	4	0	S 37° W	S 76° W	11·6	10·4	+1·2	82	+ 1	79	− 4	·828	− ·048	8·7	+0·9	11	0	15·35	11·22	+4·13	17·30	15·75	+1·55	7·05	Rajkot.
1	0	1	0	1	1	16	10	1	S 60° W	S 75° W	14·7	9·8	+4·9	76	− 7	87	− 1	·933	− ·009	7·8	−0·3	9	−0·5	4·79	7·16	−2·37	5·40	11·47	−6·07	0·77	Veraval.
0	0	0	0	1	3	22	4	1	S 46° W	S 48° W	5·8	10·7	−4·9	87	+10	76	− 2	·875	− ·001	8·0	+0·3	3	−6·3	3·02	7·16	−4·14	5·65	11·84	−6·19	1·61	Bhavnagar Para.
3	0	0	1	4	10	10	2	1	S 18° W	S 55° W	5·5	9·5	−4·0	66	−11	85	0	·922	+ ·003	9·2	+1·1	14	−1·7	18·51	17·09	+1·42	2[illegible]·73	25·79	−4·06	5·23	Surat.
4	0	0	0	2	2	23	0	0	S 37° W	S 55° W	3·8	4·8	−1·0	79	+ 8	86	+ 5	·934	+ ·051	7·3	−1·2	15	+2·6	8·08	11·88	−3·80	11·35	16·59	−5·24	1·34	Ahmadabad.
0	0	0	0	2	0	9	20	0	S 73° W	S 70° W	8·8	14·2	−5·4	86	+12	86	0	·897	− ·019	7·9	−1·0	22	+0·4	31·30	24·99	+6·31	47·61	44·41	+3·20	9·10	Bombay.
1	0	0	1	3	2	11	12	1	S 57° W	S 65° W	9·2	8·5	+0·7	66	− 2	86	− 1	·875	− ·011	8·5	−0·1	27	+1·4	35·01	34·19	+0·82	63·22	64·27	−1·05	4·38	Ratnagiri.
3	1	0	0	0	3	2	17	5	W	N 63° W	7·0	9·6	−2·6	71	− 9	92	+ 2	·925	+ ·012	9·1	+0·9	29	+3·1	29·32	32·14	−2·82	58·16	63·95	−5·79	3·30	Marmagao.
20	1	0	0	1	9	0	0	0	S 4° E	S 75° W	2·7	4·2	−1·5	30	−37	90	+ 4	·857	+ ·013	6·2	−1·6	28	+0·8	43·37	39·02	+4·35	73·39	79·27	−5·88	5·85	Karwar.

* Mean of 27 days.

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of barometer above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	X.—Bombay —*concld.*																					
26	Malegaon	1,430	28·250	−·001	29·611	28·376	14th	28·096	2nd	79·6	73·5	90·4	+2·6	73·7	+0·3	82·1	+1·5	16·7	97·3	23rd	69·8	24th
	Ahmadnagar	2,154	27·585	+·001	29·642	27·700	15th	27·411	2nd	75·5	70·6	86·9	+1·5	70·0	−0·7	78·5	+0·4	16·9	94·5	23rd	67·0	14th
	Poona	1,846	27·895	+·006	29·666	28·415	15th	27·760	2nd	75·6	72·2	82·6	+0·1	71·0	+0·1	76·8	+0·1	11·6	89·5	23rd	68·9	14th & 22nd.
	Sholapur	1,590	28·155	+·006	29·669	28·265	17th	28·0.9	1st	77·8	71·0	91·2	+1·9	72·3	+0·9	81·7	+1·1	18·9	96·2	12th	68·1	3rd
	Bijapur	*1,948*	27·820	+·005	29·681	27·924	14th	27·720	1st	76·2	70·8	86·0	+1·3	71·1	+0·4	79·5	+0·9	16·9	92·7	13th	68·4	3rd
	Belgaum	2,562	27·263	+·010	29·732	27·356	17th	27·169	2nd	70·8	69·3	76·7	+1·0	67·3	+0·3	72·0	+0·7	9·4	81·1	19th	63·7	1st
	XI.—Central India.																					
20	Neemuch	1,626	28·012	+·016	29·569	28·130	15th & 17th.	27·886	1st	77·5	74·4	86·1	−1·9	74·4	0	80·3	−0·9	11·7	97·3	1st	70·0	11th
	Indore	1,823	27·836	+·007	29·587	27·965	14th	27·699	1st	75·8	73·3	84·5	−0·6	72·0	−0·7	78·3	−0·7	12·5	90·3	25th	68·0	11th & 13th.
21	Nowgong	754	28·820	+·012	29·526	28·950	17th	28·700	1st	79·0	76·3	87·7	−2·8	76·5	−2·1	82·1	−2·5	11·2	111·0	1st	71·4	14th
	Sutna	1,041	28·511	+·025	29·53[illegible]	28·755	24th	28·414	7th	78·5	75·8	85·7	−2·7	76·3	−1·2	81·0	−1·9	9·4	104·3	1st	72·3	8th
	XII.—Central Provinces.																					
22	Buldana	2,134								75·8	71·6	85·6	+1·6	71·7	+0·9	78·7	+1·3	13·9	90·0	23rd	69·1	3rd
	Akola	925	28·748	+·011	29·615	28·878	17th	28·589	1st	79·8	75·0	89·6	+0·5	75·1	+0·7	82·3	+0·6	14·5	94·5	20th	71·5	24th
	Amraoti	1,215	28·455	+·014	29·607	28·570	17th	28·292	1st	78·1	73·6	87·8	+0·1	74·7	+1·0	81·3	+0·5	13·1	93·8	18th	70·7	23rd
23	Khandwa	1,044	28·615	+·014	29·605	28·736	17th	28·481	1st	78·5	74·7	87·5	0·4	74·3	−1·2	80·9	−0·8	13·2	93·5	23rd	69·7	10th
	Hoshangabad	1,006	28·640	+·023	29·5[illegible]2	28·770	14th	28·494	1st	77·9	75·7	85·2	−2·1	74·3	−1·1	79·8	−1·7	10·9	91·5	25th	67·8	10th
	Saugor	1,807	27·753	−·017?	29·530	27·924	17th	27·655	1st	75·1	72·8	82·9	−3·0	72·7	−1·4	77·8	−2·2	10·2	92·8	2nd	68·4	10th
	Jubbulpore	1,327	28·269	−·001	29·535	28·393	14th	28·098	2nd	77·4	74·5	84·1	−2·4	74·5	−0·3	79·3	−1·3	9·6	92·7	2nd	70·9	10th
	Seoni	2,033	27·632	+·026	29·584	27·761	14th	27·477	2nd	75·4	72·5	82·5	−1·8	72·2	−0·3	77·3	−1·1	10·3	87·8	2nd	69·9	10th & 20th.
	Nagpur	1,017	28·647	+·031	29·607	28·767	17th	28·487	1st	78·8	74·8	87·5	−0·5	75·1	−0·1	81·3	−0·3	12·4	92·0	18th & 25th.	71·6	21st
24	Pendra	2,040	27·611	+·044	29·570	27·717	23rd & 24th.	27·453	2nd	75·6	73·1	82·7	−1·8	71·1	−2·0	76·9	−1·9	11·6	88·7	22nd	67·7	20th
	Raipur	970	28·661	+·015	29·574	28·784	14th	28·445	31st	78·7	75·5	85·8	−1·0	75·5	+0·7	80·6	−0·1	10·3	92·2	31st	72·4	21st
	Chanda	*634*	29·028	−·004?	29·606	29·144	14th & 15th.	28·868	1st	80·0	76·0	90·0	+1·4	75·9	+0·2	82·9	+0·8	14·1	94·7	6th, 13th & 16th.	71·4	19th
	Jagdalpur	1,813	27·887		29·619	28·012	14th	27·669	1st	76·2	73·7	83·7		72·2		78·0		11·5	89·1	26th	70·0	2nd
	XIII.—Hyderabad.																					
27	Aurangabad	1,905	27·818	+·001	29·641	27·929	14th & 17th.	27·695	2nd	75·9	71·4	88·3	+1·7	71·6	+1·1	80·0	+1·4	16·7	94·0	18th	68·0	3rd
	Nizamabad	1,248	28·455	+·006	29·638	28·567	16th	28·326	1st	79·0	73·4	91·1	+2·6	74·4	+0·6	82·7	+1·6	16·7	96·1	25th	69·2	2nd
	Bidar	*2,165*																				
28	Gulbarga	1,503	28·250	+·008	29·685	28·360	14th	28·139	1st	76·6	72·0	91·5	+2·3	72·0	+0·2	81·7	+1·3	19·5	97·0	24th	64·9	2nd
	Raichur	*1,311*	28·449	+0·8	29·695	28·556	14th	28·344	1st	77·5	72·3	90·6	+0·6	73·0	+0·1	81·8	+0·3	17·8	96·3	10th	70·4	2nd
	Hyderabad (Deccan)	1,738	28·032	+·023	29·671	28·138	16th	27·916	30th	76·9	71·3	88·5	+1·0	73·8	+0·5	81·1	+0·7	14·7	92·8	23rd	68·8	2nd
	Hanamkonda	877	28·833	+·020	29·647	28·962	14th	28·667	1st	80·8	74·6	90·8	+2·0	76·5	+0·5	83·6	+1·3	14·3	96·3	9th	71·5	2nd
	XIV.—Mysore.																					
29	Chitaldrug	2,405	27·415	0	29·722	27·508	14th	27·327	1st	72·4	68·7	82·9	+0·9	69·1	+0·6	76·0	+0·7	13·8	89·3	19th	67·3	2nd
	Hassan	3,149	26·739	+·002	29·752	26·809	14th & 16th.	26·663	30th	69·6	67·0	78·6	+1·3	65·6	+0·4	72·1	+0·9	13·0	83·2	19th	61·7	3rd
	Bangalore	3,021	26·856	−·004	29·745	26·931	14th	26·765	1st	70·2	67·2	82·5	+0·4	66·6	−0·7	74·6	−0·5	15·9	85·6	23rd	64·9	8th
	Mysore	2,518	27·350	−·008	29·761	27·423	14th	27·269	1st & 30th	72·9	68·1	83·7	+1·4	67·5	+0·5	75·6	+0·9	16·2	87·4	17th	66·1	19th

N.B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

at 212 stations in India, etc., in July, 1919—*continued.*

Wind direction. Number of winds from: Calm	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st July, 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															X.—Bombay—*concld.*
0	0	1	1	2	2	23	2	0	S 28° W	S 75° W	9·1	10·6	−1·5	79	− 7	74	− 2	·749	−·002	7·5	+0·8	6	−2·1	3·75	5·07	−1·32	10·27	10·42	−0·15	1·72	Malegaon.
3	0	0	0	0	1	10	14	3	S 75° W	S 74° W	7·2	15·1	−7·9	79	+ 4	79	− 1	·688	−·014	6·5	−0·7	11	+4·3	2·64	3·83	−1·19	9·62	9·75	−0·13	0·68	Ahmadnagar.
4	0	0	0	0	0	3	22	2	S 88° W	S 76° W	6·5	12·3	−3·8	82	− 4	85	+ 3	·745	+·037	8·7	+0·1	9	−3·6	6·11	7·36	−1·25	12·84	13·45	−0·61	1·15	Poona.
0	0	0	0	0	1	15	10	5	S 72° W	S 69° W	9·5	10·5	−0·9	82	− 2	71	− 3	·669	−·024	7·8	−0·2	5	−2·9	0·88	4·42	−3·54	11·69	10·11	+1·58	0·23	Sholapur.
4	0	0	0	0	0	6	18	3	S 85° W	S 74° W	4·6	7·4	−2·8	79	− 6	76	− 4	·684	−·010	5·5	−2·2	2	−2·6	0·49	2·40	−1·91	6·70	6·79	−0·09	0·22	Bijapur.
5	0	0	0	0	1	7	18	0	S 76° W	S 77° W	5·6	19·3	−13·7	79	− 8	83	0	·697	+·012	9·4	+0·1	20	−2·2	9·53	17·08	−7·55	22·74	27·71	−4·97	1·27	Belgaum.
																															XI.—Central India.
3	0	0	0	0	0	1	26	1	W	S 71° W	8·9	8·9	0	83	+ 8	86	+ 3	·813	+·008	7·8	+0·7	14	+3·6	6·89	8·72	−1·83	9·67	13·17	−3·50	1·42	Neemuch.
9	0	0	0	0	0	1	18	3	N 86° W	S 81° W	3·4	4·9	−1·5	69	− 6	89	+ 3	·791	+·011	9·3	+0·4	13	+0·4	12·19	9·76	+2·43	24·37	15·79	+8·58	3·65	Indore.
7	0	1	0	3	4	6	8	2	S 53° W	S 84° W	3·1	3·1	0	46	−12	83	+ 7	·871	−·012	9·2	+1·2	25	+11·1	22·59	13·49	+9·10	24·67	20·07	+4·60	2·86	Nowgong.
5	0	1	0	2	4	11	6	1	S 43° W	S 74° W	5·9	6·7	−2·8	56	+11	89	+ 7	·870	+·009	8·3	+0·3	16	+0·9	13·75	13·87	−0·12	17·61	19·92	−2·31	3·25	Sutna.
																															XII.—Central Provinces.
0	0	0	1	1	0	8	18	3	S 81° W		11·0	6·8	+4·2	78		81		·714		7·4		7	−6·5	8·63	8·98	−0·35	15·20	16·18	−0·98	2·75	Buldana.
2	0	1	0	0	0	10	12	6	S 85° W	N 88° W	5·9	6·6	−0·7	76	− 6	79	0	·801	+·016	8·4	+0·1	14	+1·9	8·62	9·66	−1·04	18·31	15·29	+3·02	2·07	Akola.
0	0	1	1	0	0	3	20	6	N 83° W	S 88° W	7·1	6·6	+0·5	82	− 1	81	− 3	·773	−·017	7·2	−0·6	10	−2·2	5·25	9·18	−3·93	12·65	16·27	−3·32	1·17	Amraoti.
1	0	0	1	1	1	4	20	3	S 83° W	W	6·4	6·9	−0·5	76	−10	83	+ 3	·811	+·026	7·1	−0·4	14	+3·1	6·29	8·88	−2·59	14·75	14·42	+0·33	1·32	Khandwa.
7	0	0	0	0	0	21	1	2	S 52° W	S 54° W	2·2	3·5	−1·3	69	− 6	90	+ 3	·856	+·013	9·7	+1·4	14	−0·9	13·41	15·65	−2·24	25·74	21·84	+3·90	4·96	Hoshangabad.
0	0	1	0	0	0	6	20	4	S 88° W	S 80° W	6·5	4·7	+1·8	86	+15	90	+ 5	·777	−·019	8·3	+0·8	19	+3·6	15·43	14·01	+1·42	18·78	21·11	−2·33	3·45	Saugor.
3	0	0	1	5	6	7	7	2	S 24° W	S 74° W	2·5	3·4	−0·9	53	−12	87	+ 1	·816	− ·007	8·6	+0·5	20	+2·7	21·61	18·10	+3·51	28·46	26·06	+2·40	3·85	Jubbulpore.
6	1	0	0	0	5	8	7	4	S 66° W	S 76° W	2·5	4·5	−2·0	53	−12	87	+ 1	·759	−·021	8·6	+1·5	20	+1·9	16·79	15·66	+1·13	34·05	25·16	+8·89	2·23	Seoni.
1	0	1	0	0	0	3	19	7	N 82° W	S 76° W	4·9	6·4	−1·5	82	+14	83	0	·811	−·006	6·1	−2·1	13	−3·5	13·81	14·24	−0·43	29·86	23·77	+6·09	3·60	Nagpur.
14	1	0	0	2	5	5	1	2	S 25° W		4·8			30		89	+ 4	·783	0	3·0	−4·2	21	+4·6	13·25	13·91	−0·66	23·94	22·25	+1·69	2·77	Pendra.
2	0	0	0	0	2	16	10	1	S 60° W	S 49° W	3·5	8·1	−4·6	82	+17	86	0	·834	−·006	9·5	+1·5	16	+0·5	14·53	14·68	−0·15	41·66	23·63	+18·03	2·31	Raipur.
0	0	1	1	2	3	15	8	1	S 50° W	S 69° W	4·9	4·4	+0·5	66	−12	83	+ 4	·849	+·040	7·4	−0·4	16	−0·6	8·59	16·60	−8·01	25·75	24·54	+1·21	2·09	Chanda.
5	0	0	0	0	5	7	13	1	S 64° W		3·7			69		89		·801		7·8		19	+1·7	14·25	14·84	−0·59	29·39	26·36	+3·03	2·54	Jagdalpur.
																															XIII.—Hyderabad.
0	0	0	0	1	0	13	16	1	S 70° W		11·8			86		80	− 1	·712	−·012	8·3	+0·1	9	−2·6	5·74	6·64	−0·90	9·43	13·08	−3·65	2·62	Aurangabad.
0	1	0	0	0	1	12	12	5	S 79° W		4·2			79		76	− 3	·751	−·008	6·4	−0·5	16	+1·7	8·01	10·58	−2·57	15·32	16·29	−0·97	2·80	Nizamabad.
																															Bidar.
0	0	0	0	0	0	10	19	2	S 78° W	S 84° W	7·4	11·5	−4·1	92	+11	80	0	·724	− ·001	5·6	−2·3	8	−2·4	4·55	6·52	−1·97	12·26	12·31	−0·05	2·00	Gulbarga.
3	2	0	0	0	1	6	13	6	N 87° W	S 50° W	7·3	10·9	−3·6	69	0	78	+ 3	·775	+·015	6·5	−0·1	9	−0·5	2·54	5·26	−2·72	9·07	9·61	−0·54	0·35	Raichur.
1	0	0	0	0	0	1	27	2	N 89° W	N 85° W	7·0	7·2	−0·2	96	+ 4	76	− 2	·695	−·012	7·0	−0·8	11	+0·7	5·34	6·36	−1·02	14·39	11·88	+2·51	1·76	Hyderabad (Deccan).
0	1	0	0	2	4	7	11	6	S 75° W		5·7			62		74	+ 1	·770	+·038	7·8	+0·3	14	+1·0	6·10	9·61	−3·51	11·72	16·03	−4·31	0·94	Hanamkonda.
																															XIV.—Mysore.
0	0	0	0	0	0	14	17	0	S 70° W	S 72° W	7·1	8·5	−1·4	96	+ 3	82	− 1	·654	−·019	7·8	−1·3	7	−1·9	2·53	3·34	−0·81	11·05	9·36	+1·69	0·88	Chitaldrug.
1	0	0	0	0	0	11	18	1	S 75° W	S 37° W	8·1	3·7	+4·4	90	+ 1	82	+ 2	·634	0	6·5	−2·7	10	−2·9	3·30	5·79	−2·49	12·32	14·64	−2·32	0·61	Hassan.
0	0	0	0	0	0	10	19	2	S 78° W	S 66° W	8·3	7·0	+1·3	92	+ 2	85	0	·629	+·008	9·5	+1·0	11	+2·5	4·25	4·23	+0·12	15·90	11·33	+4·57	1·44	Bangalore.
0	0	0	0	0	4	15	12	0	S 57° W	S 67° W	7·5	10·5	−3·0	92	+ 2	78	− 4	·627	−·010	7·4	−1·3	7	0	2·47	2·69	−0·22	12·45	11·06	+1·39	0·65	Mysore.

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XV—Madras.																					
30	Mangalore	72	29·785	−·014	29·789	29·875	16th	29·708	1st	76·9	75·2	83·1	−0·6	73·6	+0·1	78·3	−0·3	9·5	88·1	9th	71·2	9th
	Calicut	27	29·838	−·020	29·792	29·898	10th	29·755	1st	76·4	75·3	81·1	−1·0	74·4	+0·5	77·6	−0·3	6·7	83·8	18th & 30th.	71·1	10th
	Cochin	9	29·885	−·009	29·822	29·939	14th	29·825	1st	77·3	74·5	83·0	−0·8	74·0	0	78·5	−0·4	9·0	86·6	9th	72·1	3rd & 31st
	Trivandrum	198	29·639	−·005	29·819	29·756	3rd	29·608	19th	76·5	74·2	82·0	+0·1	73·4	−1·5	77·7	−0·7	8·6	84·1	5th	71·2	23rd
31	Pamban	37	29·714	−·024	29·779	29·839	3rd	29·689	30th		77·7	87·7	−1·8	79·9	+0·6	83·8	−0·6	7·8	88·7	14th	78·0	27th
	Madura	447	29·361	−·009	29·740	29·433	3rd	29·268	30th	83·2	74·6	96·0	−0·9	77·7	+1·3	86·8	+0·2	18·3	100·0	12th	73·7	18th
	Pudukkottai	318	29·498	−·002	29·742	29·573	14th	29·395	30th	83·1	73·0	97·2	+1·42	77·8	+0·8	87·5	+1·12	19·4	101·9	4th	72·1	18th
	Negapatam	31	29·774	−·005	29·734	29·849	14th	29·665	30th	83·2	77·0	94·9	−1·0	78·9	+0·5	86·9	−0·3	16·0	100·0	9th	74·9	16th & 17th.
	Trichinopoly	255	29·561	−·002	29·748	29·647	14th	29·453	30th	82·8	74·0	97·2	−0·2	76·9	−1·0	87·0	−0·6	20·3	102·7	5th	71·4	12th
	Coimbatore	1,341	28·491	+·003	29·763	28·562	14th	28·393	30th	78·0	71·5	87·8	+0·1	71·1	+0·3	79·5	+0·2	16·7	90·9	20th	67·5	29th
	Salem	913	28·908	+·005	29·755	28·987	14th	28·802	30th	76·1	73·2	93·2	+0·1	74·3	+1·1	83·7	+0·6	18·9	97·8	9th	72·4	7th
	Cuddalore	37	29·752	−·006	29·749	29·839	14th	29·647	30th	83·4	77·1	95·1	−0·7	78·4	+0·4	86·7	−0·1	16·7	100·6	3rd & 9th	74·3	17th, 18th & 27th.
	Vellore	707	29·065	−·013	29·705	29·157	14th	28·933	30th	81·1	74·8	95·0	+0·9	76·3	−0·7	85·7	+0·1	18·7	101·0	9th	71·2	15th
	Madras	22	29·747	−·008	29·701	29·845	14th	29·621	30th	83·2	76·7*	94·5	−1·3	78·0	−0·8	86·2	−1·1	16·5	102·2	4th	73·5	11th
32	Cuddapah	428	29·341	−·006	29·704	29·428	14th	29·224	30th	81·9	76·7	94·6	−1·2	76·9	−1·0	85·8	−1·1	17·7	102·0	5th	71·1	13th
	Bellary	1,475	29·300	−·005	29·695?	29·412	14th	29·205	1st	80·2	71·2	92·7	+1·7	75·4	+0·4	84·1	+1·1	17·3	98·3	22nd	72·7	10th
	Kurnool	923	28·840	+·008	29·701	28·946	14th	8·721	30th	78·9	75·3	91·7	−0·1	75·7	+0·9	83·7	+0·4	16·0	97·8	5th	73·6	4 days
33	Nellore	66	29·677	−·006	29·678	29·781	14th	29·537	30th	84·3	77·5	96·0	−1·2	78·4	−1·3	87·2	−1·3	17·6	102·6	6th	74·3	11th
	Masulipatam	15	29·707	+·002	29·657	29·841	14th	29·539	30th	82·3	78·3	92·4	−0·2	77·8	−0·4	85·1	−0·3	14·6	99·6	5th	74·2	10th, 19th & 31st.
	Cocanada	26	29·681	+·019	29·644	29·821	14th	29·469	31st	81·5	78·2	90·1	−1·0	78·1	−0·8	84·1	−0·9	12·0	97·4	5th	75·2	26th
	Waltair (Vizagapatam)	226	29·627	+·014	29·603	29·778	14th	29·373	31st	82·8	78·1	89·0	+0·1	79·7	+1·2	84·3	+0·7	9·3	93·3	9th	76·8	13th
	Calingapatam	19	29·636		29·592	29·780	11th	29·370	31st	82·2	78·8	89·1		78·0		83·5		11·1	94·1	6th	71·4	5th
	Gopalpur	33	29·582	+·027	29·579	29·731	11th	29·241	31st	82·7	80·3	87·8	+0·4	79·4	+0·4	83·6	+0·1	8·4	93·5	30th	74·9	14th
	Bay Islands.																					
1	P. V. Fraser	8	29·591		29·571	29·731	13th	29·135	31st	84·7	81·5											
	Port Blair	58	29·769	+·004	29·757	29·901	14th	29·600	30th	81·4	77·7	85·9	+0·5	77·5	0	81·7	+0·3	8·4	89·6	16th	72·9	24th
	Table Island		29·700	−·005	29·724	29·839	11th & 13th.	29·478	30th	81·3	78·7	83·9	−1·3	79·0	+2·0	81·4	+0·3	4·9	86·0	19th	75·1	7th
	Kashmir.																					
13	Muzaffarabad		27·205			27·329	14th	27·059	6th	80·9	74·0	95·7		74·5		85·1		21·2	107·8	7th	70·1	29th
	Srinagar	5,204	24·663	−·010	24·634	24·751	29th	24·504	6th	74·9	69·1	88·0	+3·0	66·8	+2·8	77·4	+2·9	21·2	93·8	12th	58·9	2nd
	Gulmarg	8,569	21·774	+·010	21·742	21·847	3rd	21·695	5th	65·5	60·0	73·6	+5·0	53·0	+2·6	63·3	+3·8	20·6	81·5	10th	47·9	2nd
	Dras	10,059	20·729	+·023	20·697	20·815	3rd	20·628	6th	62·8	53·5	76·2	−2·7	51·7	+4·1	64·0	+0·7	24·5	84·9	24th	40·4	1st
	Leh	11,503	19·653	+·011	19·626	19·743	3rd	19·542	6th	60·7	50·1	75·8	−0·4	52·0	+1·9	64·4	+0·7	24·8	83·7	12th	46·8	1st
	Skardu	7,505	22·658	−·032	22·628	22·769	3rd	22·535	6th	73·4	57·3	91·3	+5·8	66·6	+5·7	78·9	+5·7	24·7	100·1	12th	55·2	2nd
	Gilgit	4,890	24·981	+·108	24·954	25·102	31st	24·788	12th	83·7	71·1	99·6	+3·7	74·0	+2·2	86·8	+2·9	25·6	106·4	23rd	67·2	31st

N. B.—Elevations in italics indicate barometrical determinations.

* Mean of 30 days.

NOTE.—The barometric readings are not reduced to sea-level in the case of

B—*continued.*

at 212 stations in India, etc., in July, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st July 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XV.—Madras.
1	7	0	6	2	3	1	6	3	N 9° E	N 76° W	4·6	2·3	+2·3	13	—27	92	+ 4	·850	—·002	9·0	+0·1	29	+1·5	40·28	38·31	+ 1·97	67·71	80·58	—12·87	3·52	Mangalore.
16	1	0	0	1	1	1	4	7	N 69° W	N 11° W	3·9	5·8	—1·9	30	+ 8	95	+ 3	·863	+·031	8·9	+0·1	24	—2·8	27·04	31·38	— 4·34	71·50	73·21	— 1·71	5·20	Calicut.
2	3	6	7	2	1	1	4	5	N 31° E	N 21° W	5·3	4·6	+0·7	30	— 2	87	— 1	·813	—·023	9·0	+0·8	26	+1·5	25·19	23·51	+ 1·68	63·86	63·52	+ 0·34	3·72	Cochin.
0	4	1	0	0	0	0	1	25	N 38 W	N 18° W	6·4	6·6	—0·2	92	+13	89	+ 2	·815	+·007	9·0	+0·5	17	+3·1	8·65	7·53	+ 1·12	29·48	29·18	+ 0·30	1·35	Trivandrum.
0	1	1	0	5	5	16	2	1	S 29° W	S 51° W	7·0	8·8	—1·8	66	— 9					3·1	—0·3	1	+0·4	0·55	0·37	+ 0·18	3·48	1·27	+ 2·21	0·50	Pamban.
1	2	1	0	0	0	1	13	13	N 63° W	N 59° W	5·1	2·8	+2·3	79	+14	66	+ 2	·742	+·010	7·6	+1·8	4	+1·9	2·61	1·85	+ 0·76	10·68	6·02	+ 4·66	1·41	Madura.
8	2	0	0	0	0	1	9	10	N 62° W		5·1			61		60	—8?	·675	—·076?	5·0	—2·9?	7	+2·3	2·87	3·03	— 0·16	6·23	6·64	— 0·41	0·70	Pudukkottai.
0	0	0	0	0	1	9	20	1	S 76° W	S 77° W	6·5	5·4	+1·1	92	+ 9	74	+ 8	·812	+·063?	5·5	+0·3	4	+0·6	1·89	1·85	+ 0·04	5·45	4·81	+ 0·64	1·30	Negapatam.
0	0	0	0	0	1	13	14	3	S 72° W	S 83° W	6·2	7·2	—1·0	86	— 1	65	+ 2 P	·719	+·012	5·2	—1·1	4	+1·8	4·61	1·26	+ 3·35	9·02	5·93	+ 3·09	1·91	Trichinopoly.
5	0	0	1	3	17	4	1		S 47° W	S 49° W	6·6	5·3	+1·3	72	— 7	72	—11	·689	—·053	4·5	—1·6	1	—3·6	0·50	1·52	— 1·02	4·13	5·58	— 1·45	0·15	Coimbatore.
3	0	0	0	0	5	20	3	0	S 42° W	S 25° W	4·4	3·4	+1·0	82	+ 9	79	0	·752	—·022	5·6	—1·0	5	—2·4	3·12	3·81	— 0·69	13·92	11·62	+ 2·30	1·33	Salem.
3	0	0	0	1	2	18	6	1	S 52° W	S 76° W	6·1	1·8	+4·3	79	+ 7	74	0	·842	—·002	6·6	+0·9	4	—1·5	2·44	3·11	— 0·67	4·82	5·25	— 0·43	1·52	Cuddalore.
11	0	0	0	0	0	6	2	18	N 49° W		4·9			63		74	+ 7	·775	+·055	5·5	—0·3	10	+2·9	9·69	4·90	+ 4·79	15·63	9·67	+ 5·96	3·00	Vellore.
0	0	0	0	0	4	22	5	0	S 46° W	S 72° W	4·5	5·8	—1·3	92	+ 8	74*	+ 5 P	·830*	+·028	7·1	0	10	+3·0	6·26	4·02	+ 2·24	8·68	6·80	+ 1·88	1·78	Madras.
8	5	0	0	0	0	0	11	7	N 58° W	S 83° W				62	—17	79	+12	·851	+·096?	7·5	—0·2	13	+6·3	10·60	3·83	+ 6·77	14·41	8·44	+ 5·97	3·82	Cuddapah.
1	0	0	0	1	2	5	14	8	S 88° W	S 87° W	7·5	8·7	—1·2	72	—18	63	— 3	·646	—·003	8·1	+0·2	2	—1·9	0·55	1·80	— 1·25	4·48	5·72	— 1·24	0·27	Bellary.
6	0	0	0	0	0	10	12	3	S 77° W	S 87° W	6·2			69	— 3	76	+ 1	·747	+·006	7·6	—0·2	11	+1·3	4·57	4·98	— 0·41	7·77	8·88	— 1·11	0·82	Kurnool.
3	0	0	0	1	2	5	12	8	S 88° W	N 78° W	4·5	7·3	—2·8	66	— 6	73	+ 7	·842	+·050	7·7	—0·4	7	+1·3	4·07	2·92	+ 1·15	7·16	4·71	+ 2·45	1·50	Nellore.
2	0	0	0	0	4	9	9	7	S 75° W	N 69° W	6·7	6·4	+0·3	66	—16	83	+ 2	·914	+·018	8·7	+0·3	9	—0·9	8·60	6·23	+ 2·37	16·80	11·85	+ 4·95	2·00	Masulipatam.
8	0	0	0	0	0	6	17	0	S 79° W	S 74° W	5·6	6·1	—0·5	69	—15	86	+ 6	·919	+·051	8·6	+1·1	11	+0·6	4·07	6·07	— 2·00	9·19	11·95	— 2·76	0·62	Cocanada.
3	0	0	0	0	1	8	15	4	S 81° W	S 75° W	9·3			76	— 4	80	+ 2	·899	+·048	8·8	+0·4	9	+0·5	4·27	4·40	— 0·13	10·33	11·41	— 1·08	1·08	Waltair (Vizagapatam).
0	1	1	0	0	4	11	9	5	S 71° W		6·9			68		85		·928		5·5		11	+2·1	9·70	5·98	+ 3·72	17·38	13·55	+ 3·83	3·37	Calingapatam.
3	4	1	0	0	9	12	0	2	S 39° W	S 49° W	8·0	9·3	—1·3	46	—19	90	+ 6	1·006	+·079	6·5	+1·4	8	—2·0	8·45	7·03	+ 1·42	17·52	14·87	+ 2·65	4·12	Gopalpur.
																															Bay Islands.
1	0	5	1	0	3	19	2	0	S 46° W					55		87		1·033		7·2		12	+1·1	4·27	8·47	— 4·20	18·39	17·74	+ 0·65	0·95	P. V. Fraser.
5	0	0	0	1	6	9	8	2	S 52° W	S 61° W	7·5	8·5	—1·0	62	—19	84	— 3	·899	—·022	8·2	0	12	—7·9	9·71	15·75	— 6·04	42·25	50·83	— 8·58	2·17	Port Blair.
0	0	0	0	1	7	17	6	0	S 41° W		17·8			86		89	— 1	·952	+·002	7·8	—1·1	13	—5·0	4·62	13·88	— 9·26	18·37	38·15	—19·78	1·02	Table Island.
																															Kashmir.
28	0	0	1	0	0	4	0	0	N 34° W		1·5			13		73		·757		5·2		15	+3·3	15·40	9·01	+ 6·39	20·81	15·23	+ 5·58	2·55	Muzaffarabad.
13	2	3	2	6	3	0	1	1	S 70° E	S 48° E	2·1	2·8	—0·7	23	+ 1	71	—13	·612	—·018	3·6	—0·9	3	—2·3	0·82	2·53	— 1·71	2·90	6·49	— 3·59	0·28	Srinagar.
7	1	14	2	4	2	0	0	1	N 65° E		2·7			49		74	— 5	·463	+·032	5·1	+0·1	7	—2·1	2·64	4·02	— 1·38	4·71†	7·49‡	— 2·78	0·60	Gulmarg.
28	0	0	0	0	0	0	1	2	N 59° W		6·5			7		57	— 5	·329	—·009	3·0	—1·0	2	+0·5	0·24	0·66	— 0·42	1·38	4·03	— 2·65	0·13	Dras.
31	0	0	0	0	0	0	0	0	Calm.	S 85° W	1·5	1·5	0	(a)		50	— 5	·267	+·005	3·9	—5·8	1	—0·2	0·21	0·47	— 0·26	0·47	0·86	— 0·39	0·13	Leh.
6	1	2	5	2	0	9	6	0	S 40° W		7·0			27		37	—13	·301	—·054	2·5	—1·6	0	—1·1	0·07	0·52	— 0·45	0·10	2·00	— 1·90	0·03	Skardu.
28	0	0	0	1	0	2	0	0	S 18° W		0			7		54	+10	·621	+·193	1·6	—2·3	0	—1·7	0·13	0·55	— 0·42	0·33	1·72	— 1·39	0·05	Gilgit.

hill or plateau stations, the elevations of which exceed 3,200 feet.

* Mean of 30 days.
† Rainfall since 27th May 1919.
‡ Normal rainfall since 1st June.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs.

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Baluchistan.																					
15	Fort Sandeman	4,614																				
—	Quetta	5,502	24·440	+·010	24·400	24·520	24th	24·357	6th	75·2	65·3	96·9	+4·1	66·8	+2·2	81·9	+3·1	30·1	102·7	12th	56·9	1st
—	Chaman	4,311	25·412	—·026	25·374	25·498	24th	25·315	6th	86·0	66·6	102·4	+2·4	76·3	+1·5	89·4	+1·9	26·1	108·2	12th	70·4	1st
—	Kalat	6,630	23·569		23·531	23·638	3rd	23·501	6th	68·8	60·3	92·8	—0·4	62·3		77·6		30·5	99·2	12th	52·0	1st
—	Dalbandin	2,772	26·794		26·757	26·882	24th	26·709	6th	85·1	65·8	109·7		74·5		92·1		35·2	115·9	11th	64·0	29th
—	Pasni		29·549		29·509	29·663	15th	29·426	2nd	82·6	79·1	92·4		76·7		84·5		15·7	96·2	23rd	73·7	28th
—	Panjgur		26·449		26·407	26·531	15th	26·364	10th	80·1	73·8	102·8		75·7		89·2		27·1	112·0	9th	68·5	24th
	Robat				Observatory	closed.																
	Seistan (c)		27·745			27·830	3rd, 17th & 18th.	27·650	15th	83·6	65·8	105·3		77·9		91·6		27·4	113·8	10th & 16th.	70·9	9th 15th & 29th.
	Hill stations, excluding Kashmir and Baluchistan.																					
	Parachinar	6,000	24·292	+·025	24·268	24·402	23rd	24·144	6th	77·2	66·5	88·4	+1·9	68·2	+2·2	78·3	+2·1	20·2	100·0	6th	62·1	29th
	Cherat	*4,256*	25·497	+·012	25·465	25·603	23rd	25·287	6th	76·9	68·7	89·0	+0·1	72·6	+1·6	80·8	+0·9	16·4	104·2	6th	64·9	14th
	Drosh (c)		24·794			24·875	3rd & 23rd.	24·675	5th & 6th	81·9	68·8	97·4	+1·7	77·2	+4·7	87·3	+3·2	20·2	105·5	12th	64·6	26th
	Murree	6,733	23·744	+·015	23·712	23·847	2nd	23·601	6th	67·2	62·8	77·1	+0·3	63·9	+2·0	70·5	+1·1	13·2	91·4	1st	56·6	13th
	Simla	7,232	22·974*	+·005*	22·936*	23·059	23rd	22·833	6th	63·1	61·7	67·5	—1·6	60·0	—0·1	63·7	—0·9	7·5	75·7	1st	54·8	7th
	Chakrata	7,072	23·230		23·190	23·328	23rd	23·090	6th	64·6	63·1	71·0	+1·2	60·7	+0·5	65·9	+0·9	10·3	79·7	4th	56·3	22nd
	Mukteswar	7,592	22·743	+·016	22·702	22·840	23rd	22·612	6th	61·7	60·5	69·2	—1·1	56·2	—2·1	62·7	—1·6	13·0	76·5	1st	54·0	23rd
	Darjiling	7,432	22·865	+·005	22·820	22·952	22nd	22·771	5th	62·5	61·0	68·5	+2·2	58·5	+0·8	63·5	+1·5	10·0	77·3	30th	56·4	22nd
	Shillong	4,920	24·996	+·016	24·948	25·089	22nd	24·894	6th	69·0	65·3	75·3	—0·4	64·1	—0·2	69·7	—0·3	11·2	80·9	30th	59·7	23rd
	Cherrapunji	4,306	25·537	+·017	25·488	25·639	21st	25·428	30th	67·5	65·9	71·9	—0·3	64·8	—0·7	68·2	—0·5	7·3	81·9	30th	61·1	21st
	Neharhat		26·026		25·974	26·056	1st	25·916	9th	70·7	69·4	78·1		65·6		71·9		12·5	84·7	1st	63·8	8th & 15th
	Maymyo	3,546	26·294	—·001	26·239	26·392	10th & 13th.	26·176	30th	69·4	67·6	76·6	—0·6	66·4	+0·8	71·5	+0·1	10·2	82·4	29th	62·6	14th
	Pachmarhi	3,528	26·239	+·011	26·186	26·350	14th	26·113	2nd	69·6	68·3	76·7	+0·2	67·7	—0·4	72·2	—0·1	9·0	85·0	1st & 2nd.	63·6	10th
	Mount Abu	3,945	25·827	+·014	25·777	25·932	14th	25·708	29th	68·6	67·3	74·5	—0·7	66·6	+0·7	70·6	0	7·9	84·2	3rd	61·8	31st
	Mercara	3,781	26·144	—·017	26·077	26·204	14th	26·076	30th	64·3	63·8	70·3	+1·3	61·1	—1·1	65·7	+0·1	9·2	78·0	30th	59·4	9th
	Ootacamund	*7,397*	22·997	+·007	22·982	23·054	14th	22·934	1st & 30th.	57·0	54·9	62·7	+1·0	51·9	—0·3	57·3	+0·3	10·8	67·5	22nd	48·7	21st
	Kodaikanal	7,698	22·764	—·003	22·699	22·818	14th	22·673	30th	57·1	54·2	64·0	+1·3	52·5	—0·1	58·3	+0·6	11·5	68·2	25th	51·2	3rd & 4th.
	Extra India.																					
	Singapore (a)	10	29·828	—·087	29·759	29·912	12th	29·771	30th	82·7		87·8	—0·1	75·2	+0·7	81·5	+0·3	12·6	91·0	7th	72·5	21st
	Penang (a)	17	29·828	—·077	29·770	29·911	17th	29·796	29th	83·7		92·5	+2·9	76·9	—0·8	82·7	+1·1	19·6	95·0	12th, 18th & 28th.	70·0	5 days.
	Trincomalee	99	29·725	—·003	29·752	29·786	14th	29·632	19th	79·3	74·1	93·2	+2·42	77·2	—0·3	85·2	+1·1	16·0	99·0	8th	73·6	25th
	Colombo	24	29·868	—·016	29·816	29·906	14th	29·793	19th	78·4	75·8	85·4	—0·2	76·8	—0·3	81·1	—0·3	8·6	88·4	19th	73·8	13th & 28th.
	Hambantota	64	29·805		29·795	29·857	3rd	29·737	19th	77·5	75·0	87·0		76·6		81·8		10·4	92·7	9th	73·2	27th
	Minicoy	7	29·912	+·014		29·966	17th	29·861	31st													
	Amini Divi	*13*	29·844	—·019	29·785	29·922	14th	29·763	22nd	81·1	77·7	84·6	—0·9	76·4	—0·9	80·5	—0·9	8·2	88·6	3rd	73·1	4th
	Gyantse	12,110																				
	Pharijong	14,400																				
	Gangtok	5,667	24·152	—·091	24·107	24·266	22nd	24·065	5th & 6th	66·4	64·9	72·7	—1·9	63·5	+7·5	68·1	+2·8	9·2	80·6	20th	60·0	22nd

N.B.—Elevations in italics indicate barometrical determinations.

(a) 9 hrs. observations.

(c) Aneroid.

NOTE.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

* Mean of 30 days.

B—*continued.*

at 212 stations in India, etc., in July, 1919—*continued.*

Wind direction. Number of winds from: Calm	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st July 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Baluchistan.
																															Fort Sandeman.
23	0	0	1	3	3	1	0	0	S 22° E	S 6° W	2·4	2·4	0	20	+13	48	+ 3	·518	—·002	1·3	+0·2	2	+0·6	0·99	0·68	+0·31	1·92	1·20	+0·72	0·77	Quetta.
8	0	0	1	6	11	5	0	0	S. 5° E	S 33° W	3·6	6·9	—3·3	62	+ 2	35	+ 5	·433	+·063	1·3	+0·7	0	—0·3	0	0·11	—0·11	0·59	0·23	+0·36	0	Chaman.
22	0	3	0	2	2	2	0	0	S 38° E	S 21° W	4·9			13	— 29	62	+22	·439	+·058	2·0		3	+1·5	0·76	0·69	+0·07	0·90	1·18	—0·28	0·37	Kalat.
12	1	2	0	1	1	7	6	1	S 69° W		5·3			30		35		·415		1·8		0	—0·4	0	0·09	—0·09	0	0·15	—0·15	0	Dalbandin.
4	1	0	4	3	3	4	9	3	S 58° W		5·5			30		85		·947		7·9		0	—0·8	0·02	0·21	—0·19	0·02	1·67	—1·65	0·02	Pasni.
22	1	0	0	0	2	5	1	0	S 45° W		5·4			27		74		·759		2·5		2		1·09			1·14			0·68	Panjgur.
																	Observatory		closed.												Robat.
3	0	0	0	0	3	0	0	28	N 45° W		17·1			92		36		·417		0·3		0		0			0			0	Seistan.
																															Hill stations, excluding Kashmir and Baluchistan.
31	0	0	0	0	0	0	0	0	Calm		0·4			(a)		60	+ 3	·539	+·036	3·6	—1·7	8	+1·4	5·62	3·49	+2·13	9·55	8·14	+1·41	1·25	Parachinar.
6	2	1	0	5	13	1	1	2	S 5° E	S 18° E	5·3	6·6	—1·3	43	+11	70	+ 2	·609	+·007	4·7	+0·6	7	+1·8	4·36	3·85	+0·51	6·28	6·66	—0·38	1·47	Cherat.
27	0	0	2	0	0	2	0	0	S 25° E		4·6			3		52	— 1	·562	+·042	2·2	+0·5	1	—0·5	0·76	0·55	+0·21	3·42	3·27	+0·15	0·76	Drosh.
16	3	1	1	5	3	1	0	1	S 53° E	S 66° E	3·6	4·5	—0·9	17	+12	81	+ 5	·528	+·015	5·3	+0·4	11	—1·7	16·47	11·89	+4·58	19·77	18·44	+1·33	4·30	Murree.
																93	+ 7	·536	+·037	8·5	+0·5	23	+3·7	27·13	16·30	+10·83	40·14	25·72	+14·42	4·25	Simla.
4	0	6	4	0	0	15	1	1	S 35° W	S 48 W	8·9	4·5	+4·4	23	+12	92	+ 3	·560	+·036	9·2	+3·3	23	+3·0	19·43	19·85	—0·42	28·07	30·32	—2·25	3·51	Chakrata.
13	0	0	3	10	0	0	5	0	S 36° E		4·3			30		94	+ 3	·515	+·014	9·4	+1·2	18	+0·2	11·68	12·50	—0·82	20·23	20·91	—0·68	1·87	Mukteswar.
21	3	1	2	2	1	0	1	0	S 63° E	S 83° E	1·6	2·6	—1·0	10	—20	93	— 3	·523	—·001	9·4	+0·4	26	+0·7	35·69	33·66	+2·03	74·30	66·56	+7·74	4·79	Darjiling.
21	0	1	3	1	3	2	0	0	S 35° E		1·6			17		83	— 4	·583	—·025	7·6	—0·3	14	—5·5	9·35	15·59	—11·24	26·64	43·71	—17·07	0·51	Shillong.
0	2	5	3	5	8	6	2	0	S 21° E		8·1			37		92	— 4	·619	—·022	9·5	+0·4	24	—3·1	80·82	101·77	—11·95	208·81	239·49	—30·68	9·60	Cherrapunji.
0	2	3	3	2	1	15	4	1	S 48° W		4·7*			39		94		·704		8·7		22		18·08			46·22			3·60	Netarhat.
9	0	0	0	1	1	19	1	0	S 42° W		2·1			69		91	+ 4	·651	—·005	8·4	+1·4	12	+0·3	7·91	6·02	+1·89	23·56	25·64	—2·08	1·56	Maymyo.
1	0	0	0	0	1	6	19	4	S 85° W	S 85° W	4·8	7·9	—3·1	86	+11	94	+ 4	·679	+·008	9·2	+0·4	26	+4·9	23·13	23·91	—0·78	38·89	33·71	+5·18	4·10	Pachmarhi.
1	1	0	0	4	3	18	4	0	S 38° W	S 55° W	7·6	8·4	—0·8	69	+ 1	94	+ 1	·653	+·009	9·8	+1·2	17	—0·2	16·62	22·10	—5·48	18·81	28·06	—9·25	3·15	Mount Abu.
1	0	0	0	0	0	12	15	3	S 76° W	N 84° W	5·6	7·2	—1·6	86	— 4	96	0	·581	—·010	9·1	—0·5	25	—4·0	33·29	42·79	—9·50	66·32	74·24	—7·92	6·36	Mercara.
7	0	1	0	1	1	4	11	6	N 89° W		6·1			51		89	+ 3	·412	+·022	9·0	+0·2	18	+0·8	9·84	9·66	+0·18	21·66	23·69	—2·03	1·81	Ootacamund.
1	1	0	0	0	3	3	5	8	N 87° W		10·4			76		84	+ 3	·392	+·004	6·7	—0·3	12	+0·4	4·48	5·00	—0·52	14·03	15·03	—1·00	0·83	Kodaikanal.
																															Extra India.
8	0	1	2	6	0	13	0	1	S 14° W					40						7·1	+1·9	7	—2·0	7·18	6·15	+1·03	19·67	19·44	+0·23	2·20	Singapore.
0	0	22	0	9	0	0	0	0	N 67° E					79								10	+0·9	5·51	6·11	—0·60	28·14	23·15	+4·99	1·50	Penang.
2	0	0	0	0	1	18	10	0	S 60° W	S 45° W	6·6	11·9	—5·3	89	—11	77	— 4	·774	—·088	5·9	+2·8	4	+1·7	2·37	1·92	+0·45	10·64	5·61	+5·03	0·90	Trincomalee.
11	0	0	0	1	2	13	4	0	S 47° W	S 65° W	3·7	6·8	—3·1	56	—27	88	+ 5	·853	—·016	8·7	+1·9	9	—0·3	4·02	5·16	—1·14	27·60	24·00	+3·60	1·31	Colombo.
0	0	0	0	0	0	10	20	1	S 77° W		10·6			96		88		·826		5·9		5		1·62	1·40	+0·22	6·37	6·99	—0·62	0·80	Hambantota.
1	0	0	0	0	0	4	20	6	N 88° W	N 87° W	7·6	12·4	—4·8	87	0					6·8	+0·4	21	+7·0	14·46	8·73	+5·73	38·16	25·57	+12·59	2·71	Minicoy.
0	0	0	0	0	0	7	19	5	S 88° W		14·6			87		85	+ 2	·903	+·008	8·3	+0·6	23	+7·2	26·06	12·08	+13·98	48·76	29·01	+19·75	6·15	Amini Divi.
																															Gyantse.
																															Pharijong.
29	0	0	1	0	0	0	1	0	Calm		0·5			(a)		93	+ 1	·600	—·001	8·6	+1·9	26	—1·8	24·85	25·56	—0·71	64·49	65·32	—0·83	3·31	Gangtok.

* Mean of 30 days.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs.

Number of Sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Extra India—*concld.*																					
	Gartok (c)	15,100																				
	Kashgar (c)	4,255	25·301	−·109		25·430	30th & 31st.	25·122	18th	78·8	6·70	95·3	+3·4	68·3	+0·5	81·8	+1·9	27·0	104·3	12th	61·8	27th
	Kabul (c)(f)		23·927	−·178		24·000	23rd	23·850	6th	74·8	65·5	100·9	+7·7	70·2	+9·6	85·6	+8·7	30·7	104·8	18th	59·2	4th
	Meshed	3,104																				
	Jask	13	29·499	−·017	29·465	29·614	24th	29·374	2nd	86·9	82·5	94·6	−1·4	83·2	−2·2	88·9	−1·9	11·4	102·0	3rd	81·0	7th
	Muscat	20	29·527	+·025	29·495	29·624	25th	29·426	30th	89·6	82·4	94·4	+1·2	86·4	−1·1	90·4	+0·1	8·0	106·0	3rd	80·5	25th
	Bushire	14	29·464	−·013	29·440	29·553	11th	29·328	29th	88·4	79·8	93·6	−1·7	83·7	−0·6	88·6	−1·1	9·9	98·4	30th	79·5	2nd
	Busrah	25																				
	Ispahan (c)	*5,817*	24·114	−·126		24·220	19th	23·910	8th	75·3	60·9	98·0	+0·2	67·3	+0·9	82·6	+0·5	30·7	102·4	5th & 14th,	58·2	30th
	Tehran (c)	*4,002*	25·562	−·158		25·646	12, 18, & 25th	25·350	9th	80·5	64·4	97·9	−1·0	71·6	+0·6	84·8	−0·2	26·3	103·6	21st	61·0	9th
	Baghdad	127	29·418			29·538	5th	29·310	30th	84·6	64·8	108·1		73·7		93·9		28·4	115·5	13th	71·9	18th
	Aden	94	29·602	−·019	29·627	29·709	17th	29·500	24th	85·8	77·6	93·7	+0·3	83·4	+0·9	88·6	+0·6	10·3	98·6	10th	77·8	24th
	Zanzibar	72	30·102	+·010	30·101	30·161	29th	30·043	17th	74·6	71·5	80·6	0	72·9	+0·1	76·7	+0·1	7·7	83·6	9th & 7th	70·2	23rd

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level, in the case of hill or plateau stations, the elevations of which exceed 3,300 feet.

(c) Aneroid
(f) Mean of 28 days.

B—*concluded.*

at 212 stations in India, etc., in July, 1919—*concluded.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from Normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st July 1910.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Extra India—*concld.*
																									0·99			1·09			Gartok.
28	0	0	1	0	0	0	0	2	N 13° W	N 52° W	1·4	3·6	−2·2	3	− 4	54	+ 8	·534	+·098	2·7	+0·1	1	+0·3	0·10	0·22	−0·12	0·10	1·20	−1·10	0·10	Kashgar.
0	0	1	1	8	4	7	6	1	S 17° W	S 68° E				50	+47	61	+17	·545	+·118	?	?	0	−0·5	0	0·13	−0·13	1·16	1·12	+0·04	0	Kabul.
																									0·06			1·65			Meshed.
3	0	0	20	5	1	1	0	1	S 79° E	S 66° E	11·2	11·1	+0·1	72	+15	82	+ 8	1·053	+·006	2·9	+0·9	0	0	0	0·01	−0·01	0·37	0·08	+0·29	0	Jask.
7	0	1	0	16	1	0	0	6	S 47° E	N 72 E	2·7	3·4	−0·7	33	−13	73	− 2	1·012	−·025	3·3	+0·1	0	−0·1	0	0·02	−0·02	0·16	0·16	0	0	Muscat.
6	3	0	0	5	1	2	7	7	N 79° W	N 37° W	6·6	6·2	+0·4	33	−11	67	0	·906	−·037	0·8	+0·1	0	0	0	0	0	0·11	0·02	+0·09	0	Bushire.
																									0			0·33			Busrah.
31	0	0	0	0	0	0	0	0	Calm	N 49° W	2·0	2·6	−0·6	(a)		44	− 8	·389	−·147	0·2	−0·5	0	−0·1	0	0·02	−0·02	0	0·28	−0·28	0	Ispahan.
13	0	1	0	0	6	6	0	0	S 18° W	S 44° W	3·2	1·7	+1·5	29	+ 8	73	+30	·417	−·055	0·9	0	0	−0·5	0	0·17	−0·17	0	0·74	−0·74	0	Tehran.
0	4	0	0	0	0	0	14	13	N 60° W	N 11° W	10·9	3·4	+7·5	89	+15	43	−16	·350	−·181	0·1	0	0	0	0	0	0	1·22	0·21	+1·01	0	Baghdad.
8	0	1	10	6	0	5	0	1	S 59° E	S 12° W	5·7	7·7	−2·0	43	− 9	68	− 3	·840	−·056	6·9	+3·5	0	0	0	0·03	−0·03	0	0·21	−0·21	0	Aden
2	0	0	0	1	11	17	0	0	S 25° W	S 15° W	6·1	6·0	+0·1	87	− 3	85	− 1	·726	0	7·0	+1·0	7	+1·9	3·00	2·45	+0·55	6·01	15·20	−9·19	0·71	Zanzibar.

(a) Indeterminate.

Table C.—Abstract of observations taken at 8 hrs. at 60 fourth and fifth class stations in India, etc., in July, 1919.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

Number of Sub-division.	Station.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	II.—Assam.																								
4	Bishnath	80·6	78·1	90·9	+1·1	76·6	+3·8	83·7	+2·5	14·3	97·7	30th	68·7	5th	...	...	...	...	...	...	...	...	...	...	...
	Borjuli	81·5	79·7	90·8	+0·5	75·9	+0·3	83·3	+0·4	14·9	98·2	30th	71·6	4th	...	...	...	...	...	...	...	...	...	...	...
	Chandkhira	79·4	76·5	94·4	+5·1	73·4	−2·1	83·9	+1·5	21·0	101·6	1st	70·3	22nd	...	...	...	...	...	...	...	...	...	...	...
	Doom Dooma	79·1	76·9	91·9	+3·0	75·7	+0·7	83·8	+1·9	16·2	101·7	31st	73·2	17th	...	...	...	...	...	...	...	...	...	...	...
	Dikom	79·6	77·4	90·1	+1·1	75·9	−0·2	83·0	+0·5	14·2	99·4	29th	72·6	16th	...	...	...	...	...	...	...	...	...	...	...
	Golaghat	80·2	77·9	89·5	+0·9	74·1	...	81·8	...	15·4	95·8	30th	71·6	21st	...	...	...	...	...	...	...	...	...	...	...
	Hailakandi	81·3	78·1	89·8	0	77·0	+0·9	83·4	+0·5	12·8	98·8	1st	73·0	9th	...	...	...	...	...	...	...	...	...	...	...
	Jorehat	80·5	78·2	89·4	−0·5	76·7	+0·1	83·1	−0·2	12·7	97·3	30th	72·7	18th	...	...	...	...	...	...	...	...	...	...	...
	Lumding *	81·6	77·3	92·7	...	75·0	...	83·8	...	17·7	98·1	1st	62·0	16th	...	...	...	...	...	...	...	...	...	...	...
	Messa	85·4	80·0	94·2	+1·4	76·1	+0·4	85·1	+0·9	18·1	99·6	31st	74·6	11th	...	...	...	...	...	...	...	...	...	...	...
	Panerihat	78·2	76·6	90·3	+1·6	73·5	−1·7	81·9	−0·1	16·8	97·3	30th	70·5	22nd	...	...	...	...	...	...	...	...	...	...	...
	III.—Bengal.																								
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Brahmanbaria	81·8	78·2	89·9	+1·6	75·4	−1·6	82·7	0	14·5	94·6	1st	72·4	20th	...	...	...	...	...	...	...	...	...	...	...
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Goalundo	83·9	79·7	88·3	0	75·6	−1·7	81·9	−0·9	12·7	94·9	30th	71·3	20th	...	...	...	...	...	...	...	...	...	...	...
	Pabna	82·2	79·4	88·9	−2·8	75·3	−0·4	82·1	−1·6	13·6	96·0	30th	71·9	20th	...	...	...	...	...	...	...	...	...	...	...
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dam Dim	81·3	78·6	94·7	+3·4	74·3	−0·6	84·5	+1·4	20·4	98·4	12th 13th & 17th.	71·0	23rd	...	...	...	...	...	...	...	...	...	...	...
	Kalchini	80·1	77·3	89·9	+0·9	73·3	−1·8	81·6	−0·5	16·6	97·6	30th	71·0	22nd & 25th.	...	...	...	...	...	...	...	...	...	...	...
	Nagrakata	81·5	77·5	87·7	−0·8	74·8	−0·2	81·3	−0·5	12·9	95·6	30th	72·0	22nd	...	...	...	...	...	...	...	...	...	...	...
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raniganj (Asansol)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IV.—Bihar and Orissa.																								
7	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzaffarpur	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Motihari	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Mean of 28 days.

C.

and fifth class stations in India, etc., in July, 1919.

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st July 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				II.—Assam.
...	...	...	...	...	89	− 6	·925	− ·013	...	...	18	− 1·8	19·97	19·87	+ 0·10	45·44	44·09	+ 1·35	3·00	Bishnath.
...	...	...	...	...	92	− 1	·997	+ ·044	...	...	17	− 3·4	18·03	20·51	− 2·48	47·64	44·33	+ 3·31	3·07	Borjuli.
...	...	...	...	...	87	− 4	·878	− ·044	...	...	15	− 8·0	10·45	18·94	− 8·49	27·22	61·04	−33·82	3·00	Chandkhira.
...	...	...	...	...	91	− 3	·900	− ·031	...	...	22	+ 0·8	26·65	19·51	+ 7·14	54·46	44·97	+ 9·49	4·55	Doom Dooma.
...	...	...	...	...	91	− 1	·913	− ·001	...	...	23	+ 1·1	28·64	20·87	+ 7·77	61·61	47·91	+13·70	2·80	Dikom.
...	...	...	...	...	90	− 1	·926	− ·021	...	...	17	− 1·7	11·68	13·57	− 1·89	32·95	32·22	+ 0·73	3·05	Golaghat.
...	...	...	...	...	86	− 4	·914	− ·001	...	...	16	− 7·0	10·57	22·28	−11·71	37·18	62·56	− 25·38	2·32	Hailakandi.
...	...	...	...	...	90	+ 1	·935	− ·005	...	...	22	+ 3·6	19·05	15·55	+ 3·50	51·10	36·92	+14·18	3·69	Jorehat.
...	...	...	...	...	82	...	875	...	...	...	14	+ 3·1	8·35	7·90	+ 0·45	14·61	22·98	− 8·37	1·70	Lumding.
...	...	...	...	...	76	− 7	·949	+ ·006	...	...	18	− 2·5	20·00	18·39	+ 1·61	34·12	39·30	− 5·18	3·60	Messa.
...	...	...	...	...	93	− 2	·895	+ ·024	...	...	20	+ 2·5	16·64	19·41	− 2·77	45·07	44·00	+ 1·07	2·45	Panerihat.
																				III.—Bengal.
...	...	...	...	...	...	...	...	...		...	19	+ 0·4	20·28	15·27	+ 5·01	40·23	45·64	− 5·41	5·67	Comilla.
...	...	...	...	...	84	− 4	·911	− ·045	...	...	18	+ 0·3	13·77	12·32	+ 1·45	21·61	44·22	−22·61	2·26	Brahmanbaria.
...	...	...	...	...	..	...	...		...	...	20	+ 2·5	15·55	12·87	+ 2·68	28·28	35·43	− 7·15	3·01	Faridpur.
...	...	...	...	...	83	− 4	·952	− ·021	...	...	19	+ 3·2	18·51	11·13	+ 7·38	31·79	33·15	− 1·36	3·72	Goalundo.
...	...	...	...	...	88	+ 1	·964	− ·009	...	...	17	0	14·18	12·95	+ 1·23	24·49	32·41	− 7·92	4·28	Pabna.
...	...	...	...	...	...	...	...	...	...	...	20	+ 4·4	18·11	11·62	+ 6·49	30·78	32·59	− 1·81	4·00	Sirajganj.
...	...	...	...	...	...	...	...	...	...	...	17	+ 1·9	12·99	10·89	+ 2·10	24·97	27·40	− 2·43	3·52	Rampur Boalia.
...	...	...	...	...	...	...	...	...	...	...	16	+ 1·5	24·84	10·53	+14·26	40·15	24·94	+15·21	6·38	Malda.
...	...	...	...	...	...	...	...	...	...	...	21	+ 6·2	16·82	14·56	+ 2·26	41.20	43·10	− 1·90	4·55	Rangpur.
...	...	...	...	...	89	− 6	·941	− ·011	...	...	21	− 3·5	37·79	40·72	− 2·93	72·06	83·95	−11·89	4·39	Dam Dim.
...	...	...	...	...	87	0	·905	− ·038	...	...	22	− 0·1	39·54	35·62	+ 3·92	81·75	75·81	+ 5·94	9·42	Kalchini.
...	...	...	...	...	84	− 6	·884	− ·026	...	...	27	+ 1·8	39·42	39·59	− 0·17	78·43	82·17	− 3·74	3·87	Nagrakata.
...	...	...	...	...	...	...	...	...	...	...	23	+ 4·1	29·54	29·16	+ 0·38	69·61	76·53	− 6·92	4·22	Cooch Behar.
...	...	...	...	...	...	...	...	...	...	...	15	− 1·3	14·61	11·27	+ 3·34	28·48	29·00	− 0·52	4·74	Krishnagar.
...	...	...	...	...	...	...	...	...	...	...	13	− 2·6	21·96	12·90	+ 9·06	5[illegible]·47	28·03	+.3·44	5·05	Bankura.
...	...	...	...	...	...	...	...	...	...	...	17	+ 0·7	14·15	12·28	+ 1·87	29·63	26·00	+ 3·63	2·69	Raniganj (Asansol).
																				IV.—Bihar and Orissa.
...	...	...	...	...	...	...	...	...	...	...	21	+ 3·4	12·75	12·78	− 0·03	30·25	23·88	+ 6·37	2·27	Hazaribagh.
...	...	...	...	...	...	...	...	...	...	...	21	+ 6·1	12·86	12·23	+ 0·63	25·07	23·83	+ 1·24	3·77	Bhagalpur.
...	...	...	...	...	...	...	...	...	...	...	16	+ 1·7	11·26	12·39	− 1·13	16·20	23·13	− 6·93	2·99	Muzaffarpur.
...	...	...	...	...	...	...	...	...	...	...	21	+ 6·9	13·44	14·74	− 1·30	28·54	26·70	+ 1·84	2·71	Motihari.
...	...	...	...	...	...	...	...	...	...	...	16	+ 2·2	22·87	11·48	+11·39	28·38	19·29	+ 9·09	5·65	Chapra.
...	...	...	...	...	...	...	...	...	...	...	20	+ 6·0	27·35	12·22	+15·13	33·19	19·90	+13·29	4·70	Arrah.
...	...	...	...	...	...	...	...	...	...	...	17	+ 3·4	18·94	10·42	+ 8·52	29·18	17·20	+11·98	3·49	Dehri.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

Number of Sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from: Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	V.—United Provinces of Agra and Oudh.																								
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehra Dun	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IX.—Rajputana.																								
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XII.—Central Provinces.																								
23	Chhindwara	74·4	70·6	82·5	...	71·2	...	76·8	...	11·3	88·7	2nd	67·8	10th	8	1	0	0	1	0	8	10	0	S 80° W	...
	XIII.—Hyderabad.																								
27	Parbhani	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XV.—Madras.																								
31	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Anantapur	79·5	75·2	92·3	...	75·2	...	83·7	...	17·1	97·0	19th	71·9	2nd	...	...	...	...	...	...	...	...	...	...	...
33	Guntur	83·3	77·7	94·9	...	78·1	...	86·5	...	16·8	102·7	19th	73·0	19th	...	...	...	...	...	...	...	...	...	...	...
	Koraput	78·1	69·9	78·9	...	68·5	...	73·7	...	10·4	84·0	23rd	62·3	14th	...	...	...	...	...	...	...	...	...	...	...
	Bay Islands.																								
1	Car Nicobar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kashmir.																								
13	Jammu	83·9	77·5	94·1	...	78·7	...	86·4	...	15·4	112·9	1st	69·5	29th	0	4	16	2	1	1	1	1	5	N 29° E	...
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kargil	72·5	57·3	90·1	...	53·2	...	71·6	...	36·9	98·8	12th	44·8	1st	3	0	0	0	0	0	0	0	28	N 45° W	...
	Baluchistan.																								
15	Harnai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill stations, exclusive of Kashmir.																								
	Panighatta	77·4	75·4	87·2	−0·4	75·2	+1·1	81·2	+0·2	12·0	96·7	30th	71·9	22nd	...	...	...	...	...	...	...	...	...	...	...
	Kurseong	71·2	70·6	75·9	+2·4	66·1	+1·1	71·0	+1·7	9·8	89·8	30th	64·1	10th	...	...	...	...	...	...	...	...	...	...	...
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dharampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mussoorie	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Poo	...	...	81·7	+4·4	61·2	+3·3	71·6	+3·9	20·5	87·3	11th	58·2	3rd	6	0	0	2	5	4	10	2	1	S 12° E	...
	Kalang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pishin	...	...	98·4	+0·2	64·0	+0·7	81·2	+0·5	34·4	103·9	11th	54·1	1st	...	...	...	...	...	...	...	...	...	...	...

C—*continued.*

and fifth class stations in India, etc., in July, 1919—*continued.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st July 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				V.—United Provinces of Agra and Oudh.
...	...	...	...	...	...	...	...	...	...	...	12	+2·1	5·72	9·16	−3·44	7·09	12·88	−5·79	0·80	Meerut.
...	...	...	...	...	...	...	...	...	...	...	21	+0·9	20·21	25·52	−5·31	29·47	35·88	−6·11	4·16	Dehra Dun.
																				IX.—Rajputana.
...	...	...	...	...	...	...	...	...	...	...	9	−0·9	4·13	7·73	−3·60	7·28	11·48	−4·00	0·87	Udaipur.
																				XII.—Central Provinces.
4·6	...	...	55	...	84	...	·713	...	8·5	...	16	+2·0	12·61	10·55	+2·06	22·44	17·23	+5·51	2·40	Chhindwara.
																				XIII.—Hyderabad.
...	...	...	...	...	...	...	...	...	...	...	7	−4·0	2·66	7·32	−4·66	10·71	13·87	−3·16	0·49	Parbhani.
																				XV.—Madras.
...	...	...	...	...	...	...	...	...	...	...	0	−0·6	0	0·41	−0·41	1·53	2·45	−0·92	0	Tinnevelly.
...	...	...	...	...	82	...	·822	...	8·3	...	9	+3·6	2·16	2·63	−0·47	10·46	6·58	+3·88	0·62	Anantapur.
...	...	...	...	...	77	...	·870	...	3·1	...	10	−0·3	7·07	5·67	+1·40	15·32	11·81	+3·51	1·44	Guntur.
...	...	...	...	...	90	...	·707	...	...	...	12	...	12·70	...	...	24·72	...	...	2·83	Koraput.
																				Bay Islands.
...	...	...	...	...	...	...	...	...	...	...	14	+1·4	12·33	9·05	+3·28	38·22	35·09	−6·77	2·69	Car Nicobar.
																				Kashmir.
...	...	...	58	...	76	...	·872	...	5·6	...	15	+4·3	22·77	12·25	+10·52	23·33	15·74	+7·59	3·05	Jammu.
...	...	...	...	...	...	...	...	...	...	...	6	−3·5	2·85	3·81	−0·96	7·57	11·63	−4·06	0·94	Sonamarg.
...	...	...	90	...	40	...	·312	...	2·4	...	1	+0·4	0·13	0·16	−0·03	0·39	1·40	−1·01	0·11	Kargil.
																				Baluchistan.
...	...	...	...	...	...	...	...	...	...	...	8	+3·7	9·23	2·36	+6·87	10·03	3·58	+6·45	2·80	Harnai.
																				Hill stations, exclusive of Kashmir.
...	...	...	...	...	91	+ 4	·851	−·020	...	...	28	+3·8	41·99	33·20	+8·79	82·98	70·45	+12·53	6·16	Panighatta.
...	...	...	...	...	97	+ 4	·740	+·102	...	...	28	+0·2	52·97	43·81	+9·16	105·45	87·07	+18·38	6·13	Kurseong.
...	...	...	...	...	...	...	...	...	...	...	25	−4·7	24·47	40·92	−16·45	81·61	85·24	−3·63	2·15	Gnatong.
...	...	...	...	...	...	...	...	...	...	...	26	+2·7	8·65	10·33	−1·68	24·21	25·20	−0·99	0·98	Lachung.
...	...	...	...	...	...	...	...	...	...	...	21	...	25·43	...	...	32·30	...	...	5·00	Dharampore.
...	...	...	...	...	...	...	...	...	...	...	24	+2·1	36·80	29·25	+7·55	47·55	40·94	+6·61	4·17	Mussoorie.
...	...	...	45	...	...	...	...	...	5·3	−0·4	0	−2·1	0·15	0·65	−0·50	0·29	1·79	−1·50	0·06	Poo.
...	...	...	...	...	...	...	...	...	...	...	4	−0·1	0·87	1·34	−0·47	3·03	4·85	−1·82	0·16	Kalleng.
...	...	...	...	...	...	...	...	...	0·5	...	0	−0·5	0	0·11	−0·11	1·17	0·31	+0·86	0	Pishin.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

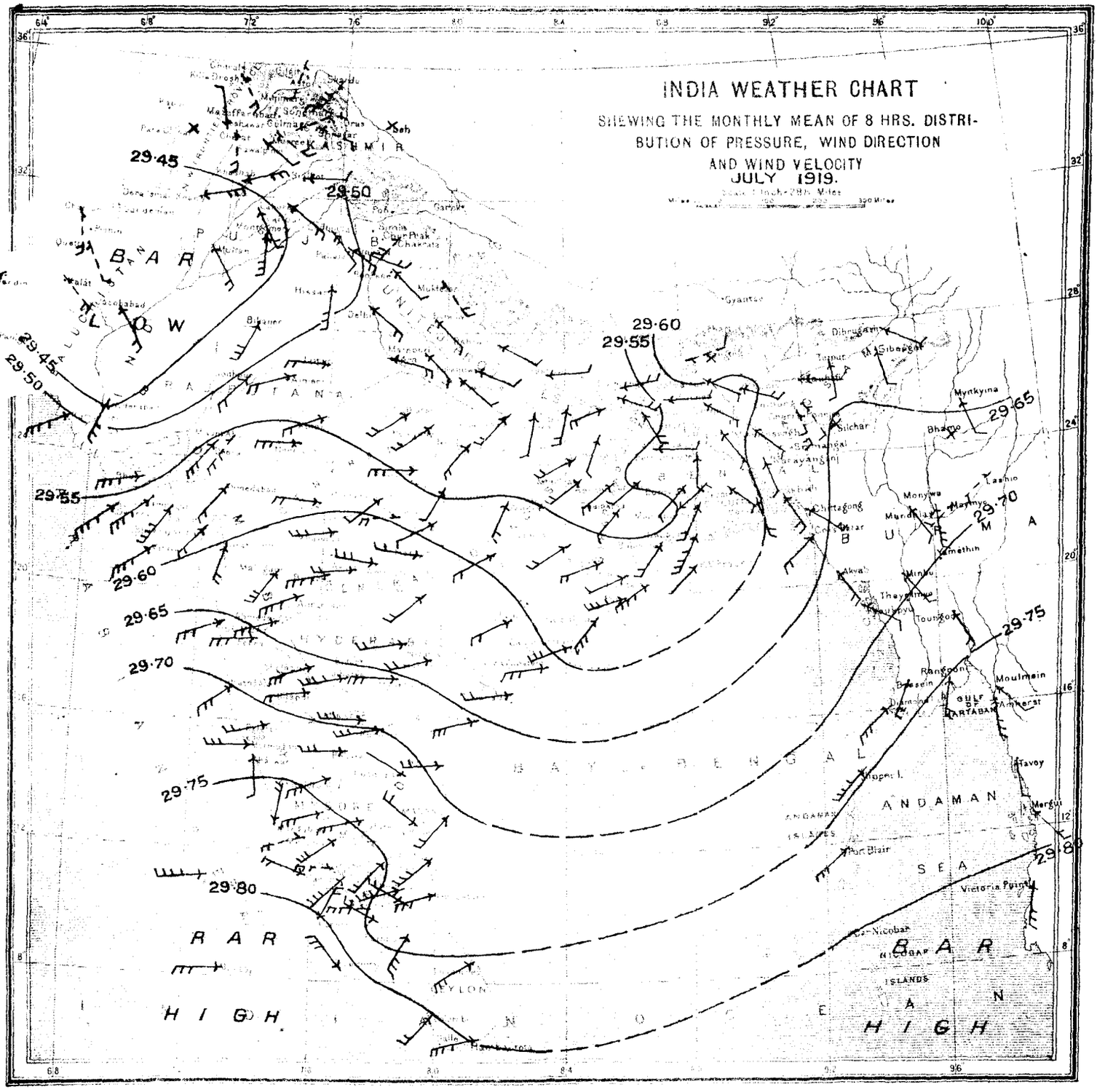
Number of Sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Extra India.																								
	Chumbi	58·9	57·7	68·6	...	51·9	...	60·2	...	16·7	76·4	13th	47·2	22nd	...	...	...	...	...	...	...	...	...	...	...
	Pembs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abadan	98·6	73·6	111·5	...	81·0	...	96·3	...	30·5	119·0	28th	77·0	8th & 9th	1	23	0	0	0	1	0	3	3	N 12° W	...

C—*concluded.*

and fifth class stations in India, etc., in July, 1919—*concluded.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal	Total rainfall from 1st May to 31st July 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				Extra India.
...	...	...	...	...	94	...	·468	...	3·5	...	12	−5 5	6·54	5·65	+0·89	19·03	15·97	+3·11	1·68	Chumbi.
...	...	...	...	...	...	...	...	...	...	...	10	+2·2	6·17	3·60	+2·57	27·84	25·74	+2·10	1·12	Pemba.
...	...	...	82	...	27	...	·500	...	...	...	0	...	0	...	...	0·26	...	...	0	Abadan.

SGPI-21-467DGC-25-8-22-325.

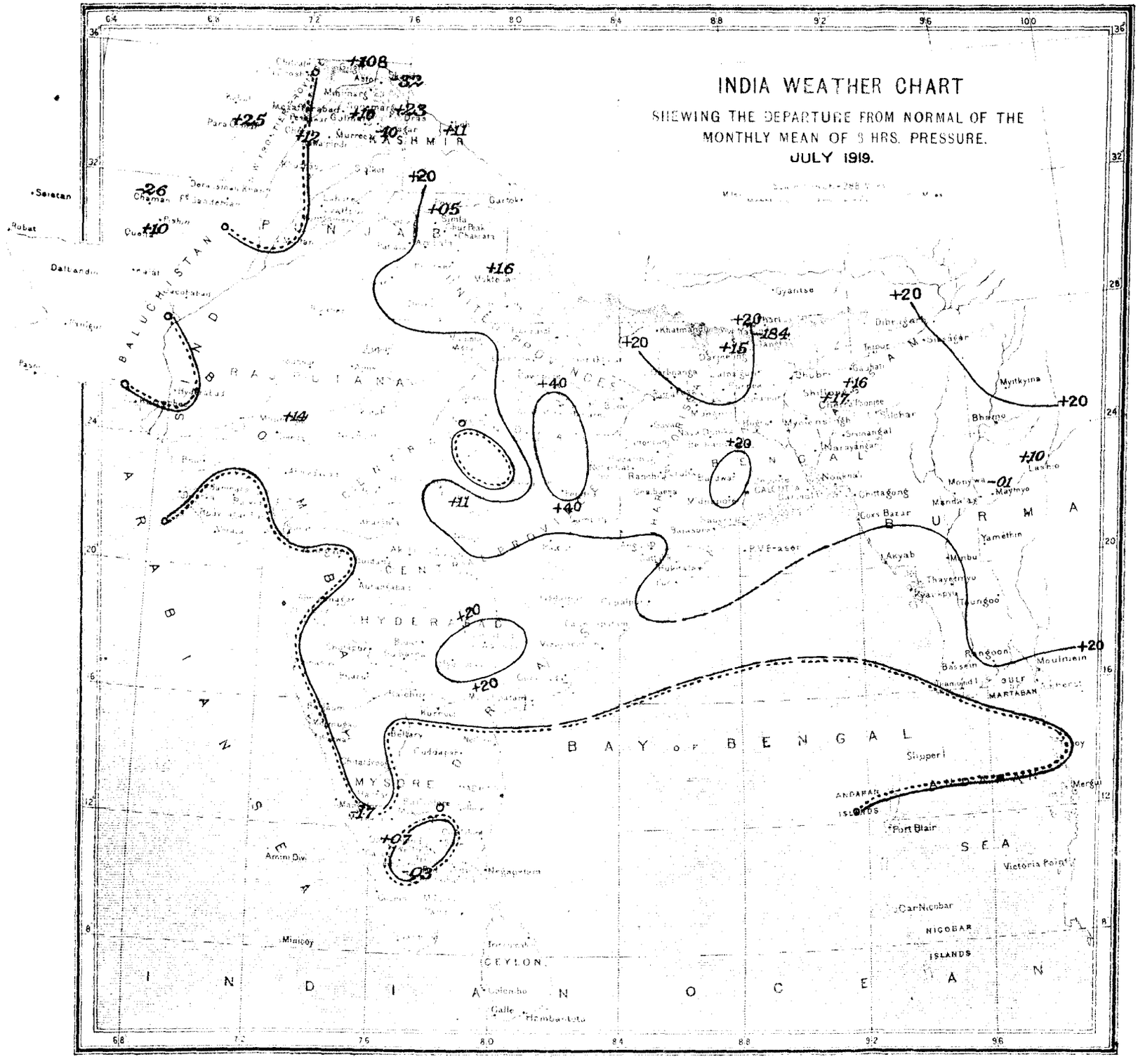


The lines of the above chart represent isobars or lines of equal barometric pressure, the numbers attached indicating the barometric pressure in inches and being drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the normal distribution of pressure.

The mean 8 hrs. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table B of the 8 hrs. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	...	one	feather added to the wind arrow.
,, ,,	2 to 5 ,, ,, ,,	...	two	feathers ,, ,, ,, ,,
,, ,,	5 to 10 ,, ,, ,,	...	three	,, ,, ,, ,, ,,
,, ,,	10 to 20 ,, ,, ,,	...	four	,, ,, ,, ,, ,,
	over 20 ,, ,, ,,	...	five	,, ,, ,, ,, ,,

Wind strengths are based on factor 2·2 for the standard type of Beckley Robinson anemograph, instead of 3·0 as used for this plate up to December 1911 inclusive.



The chart shows the departure from normal of the mean during the month of 8 hrs. pressure by means of lines drawn for equal amounts of departure. The numbers are given in thousandths of an inch, 20 representing ·020″ or two-hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no departure, the dotted line facing the area of deficient pressure or negative departures.

CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MAXIMUM TEMPERATURE.

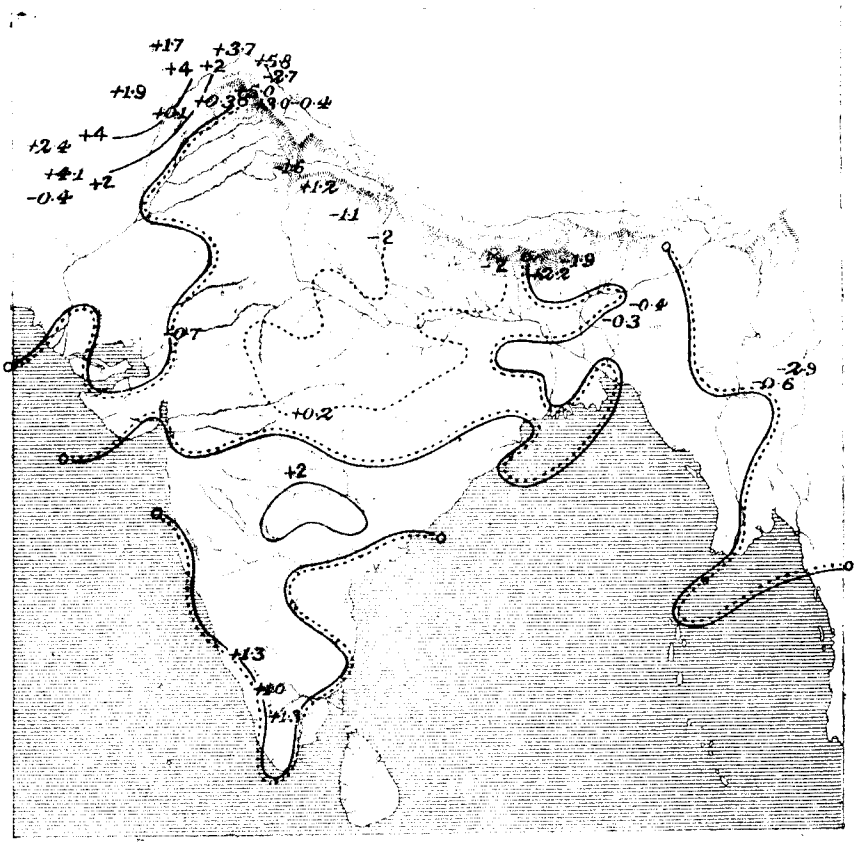


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MINIMUM TEMPERATURE.

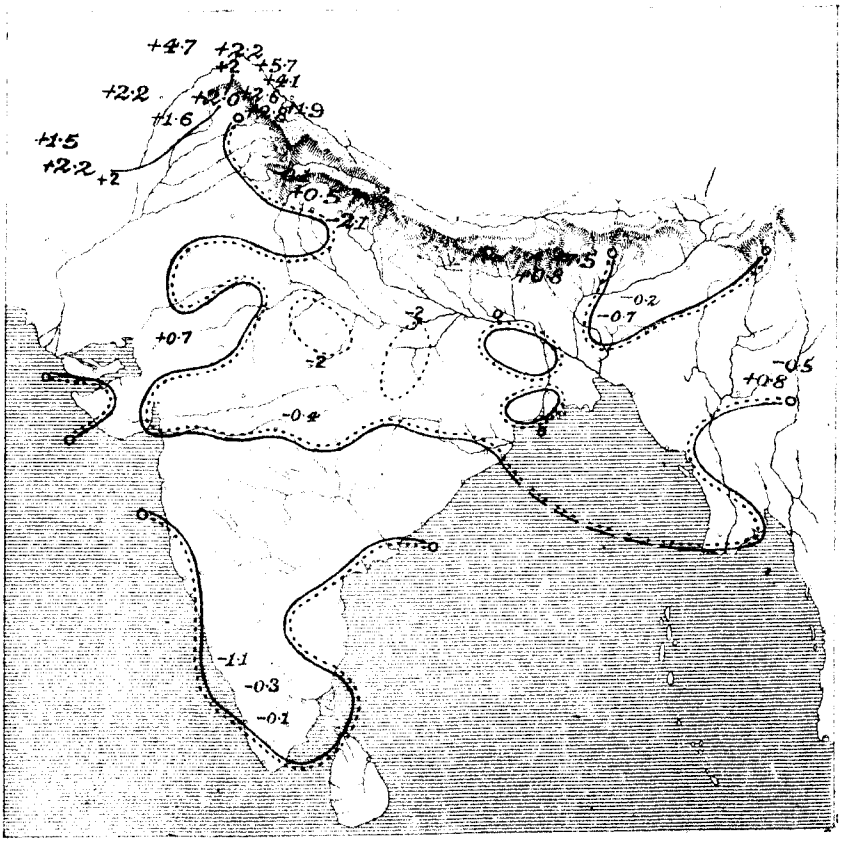


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MEAN TEMPERATURE.

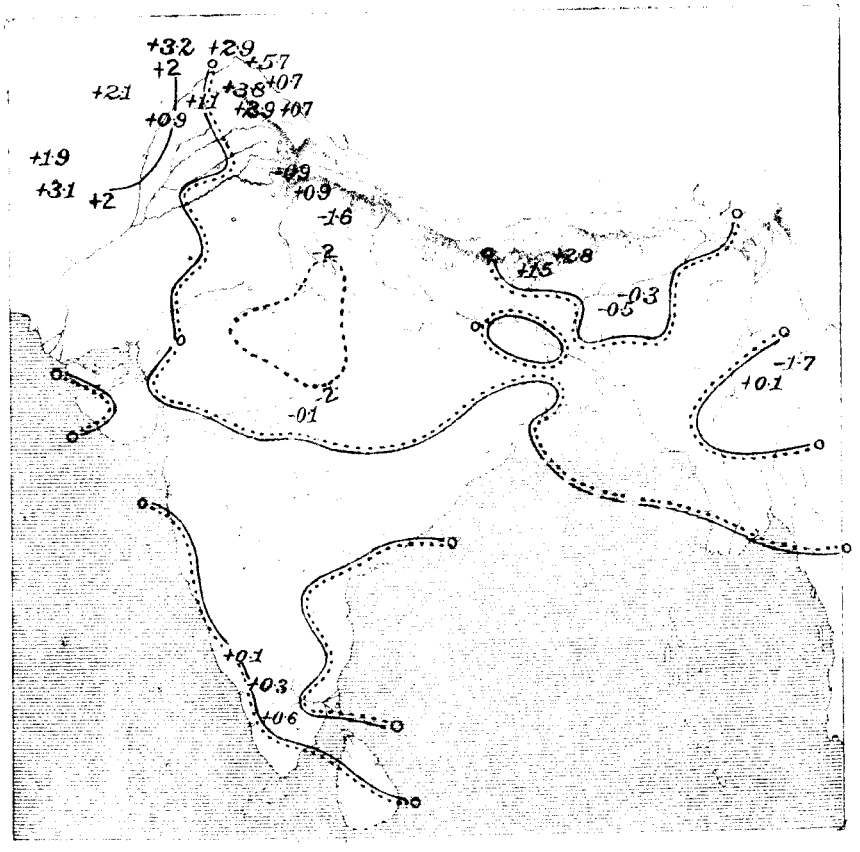


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF ABSOLUTE
HUMIDITY AT 8 HRS.

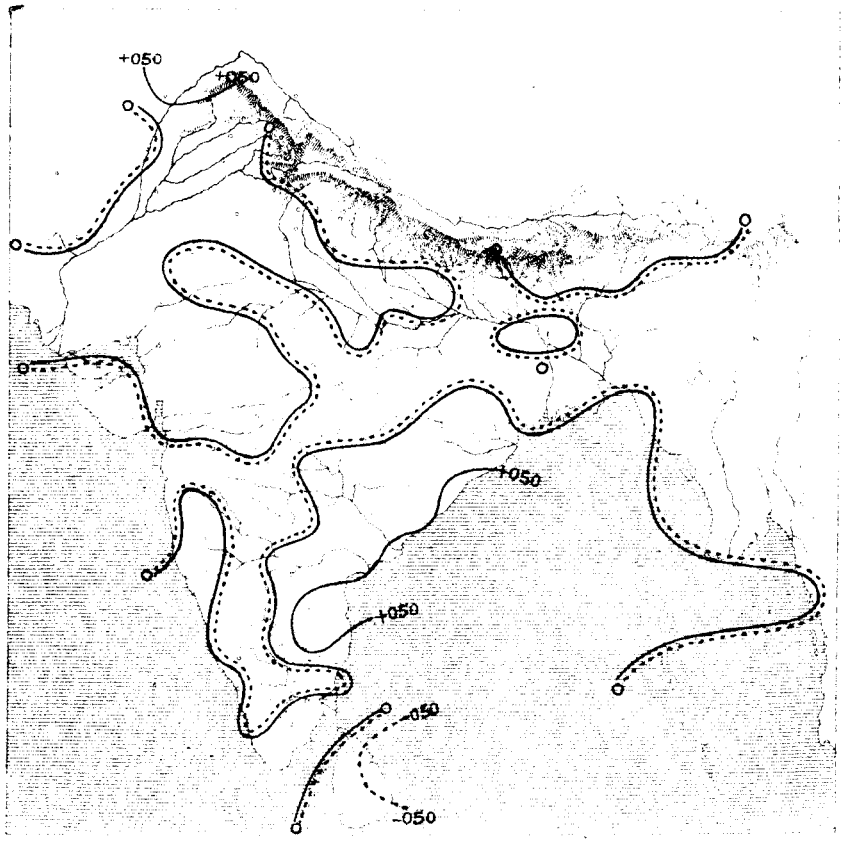


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF RELATIVE
HUMIDITY AT 8 HRS.

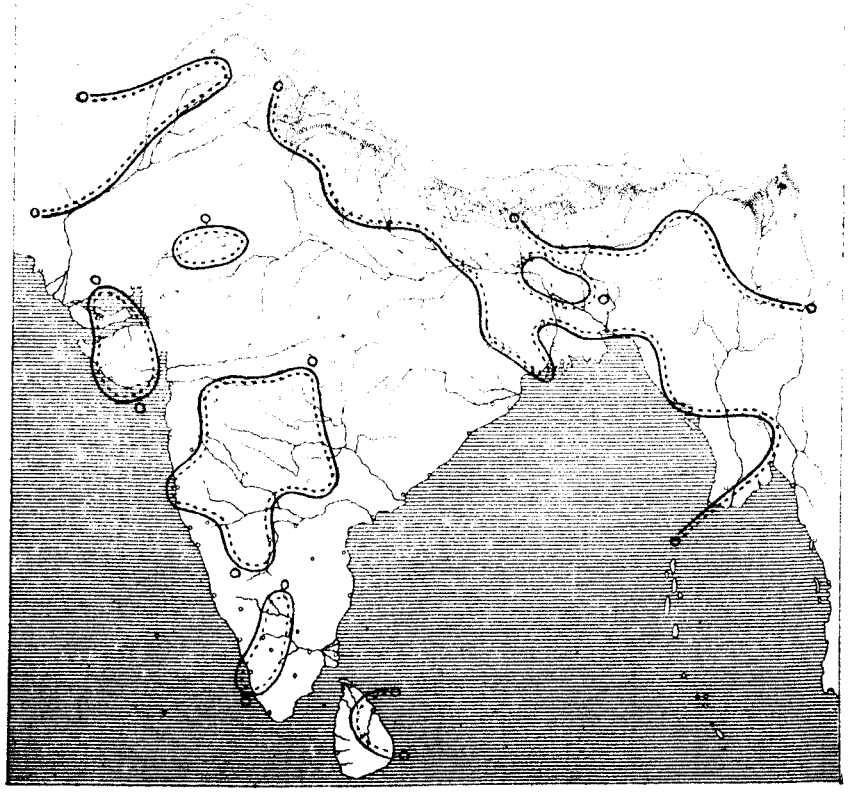


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF CLOUD AMOUNT AT 8 HRS.

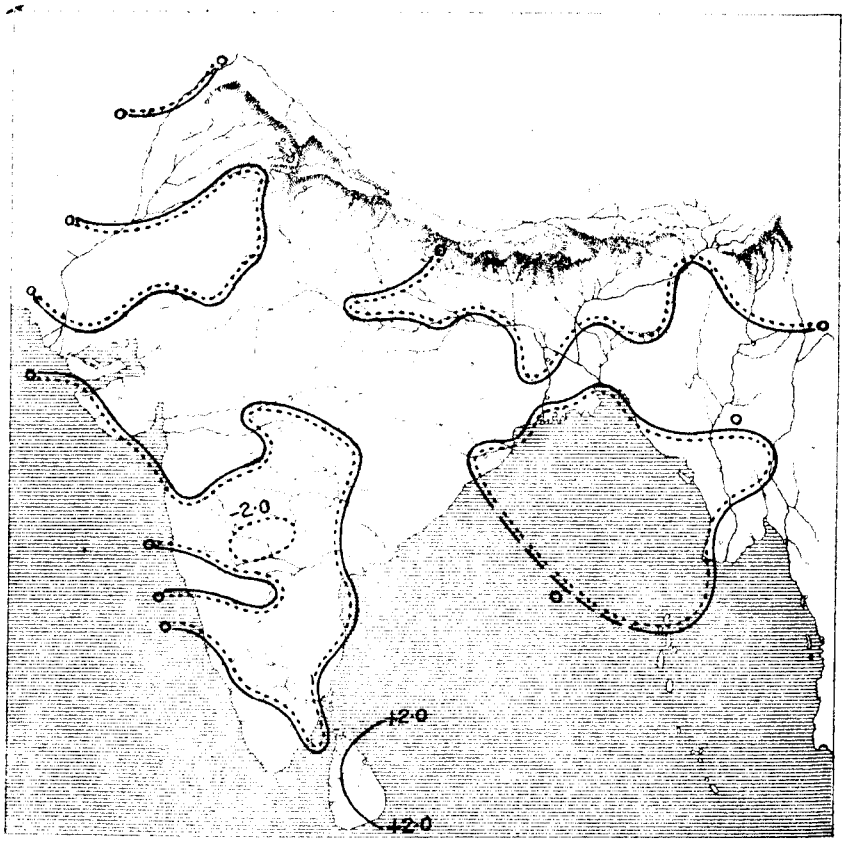
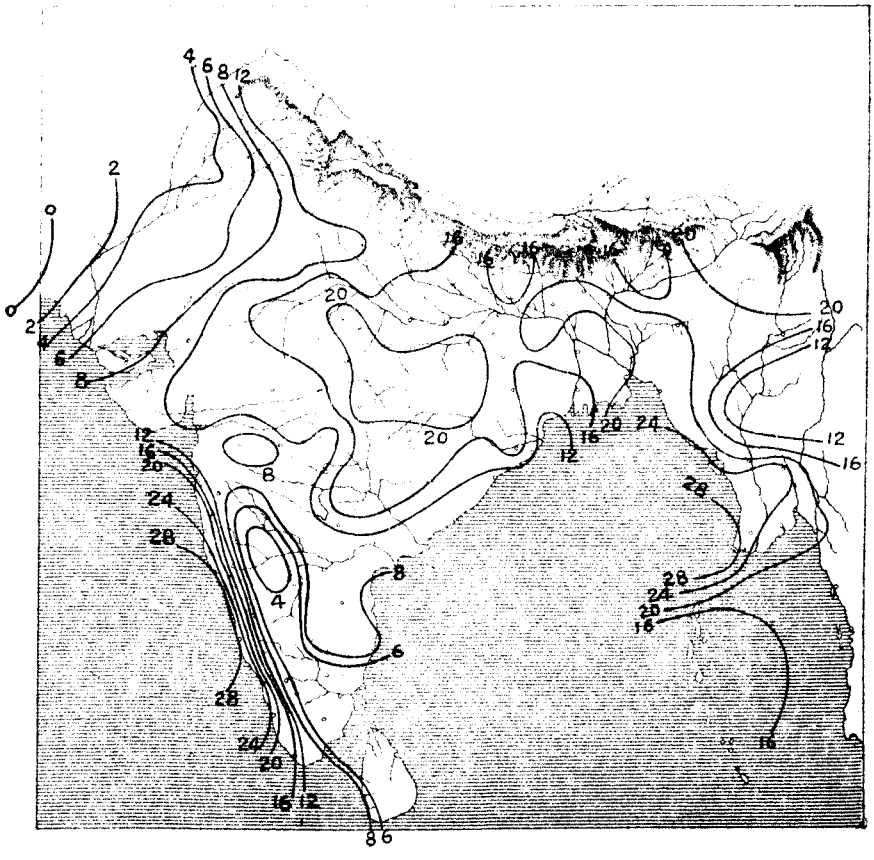
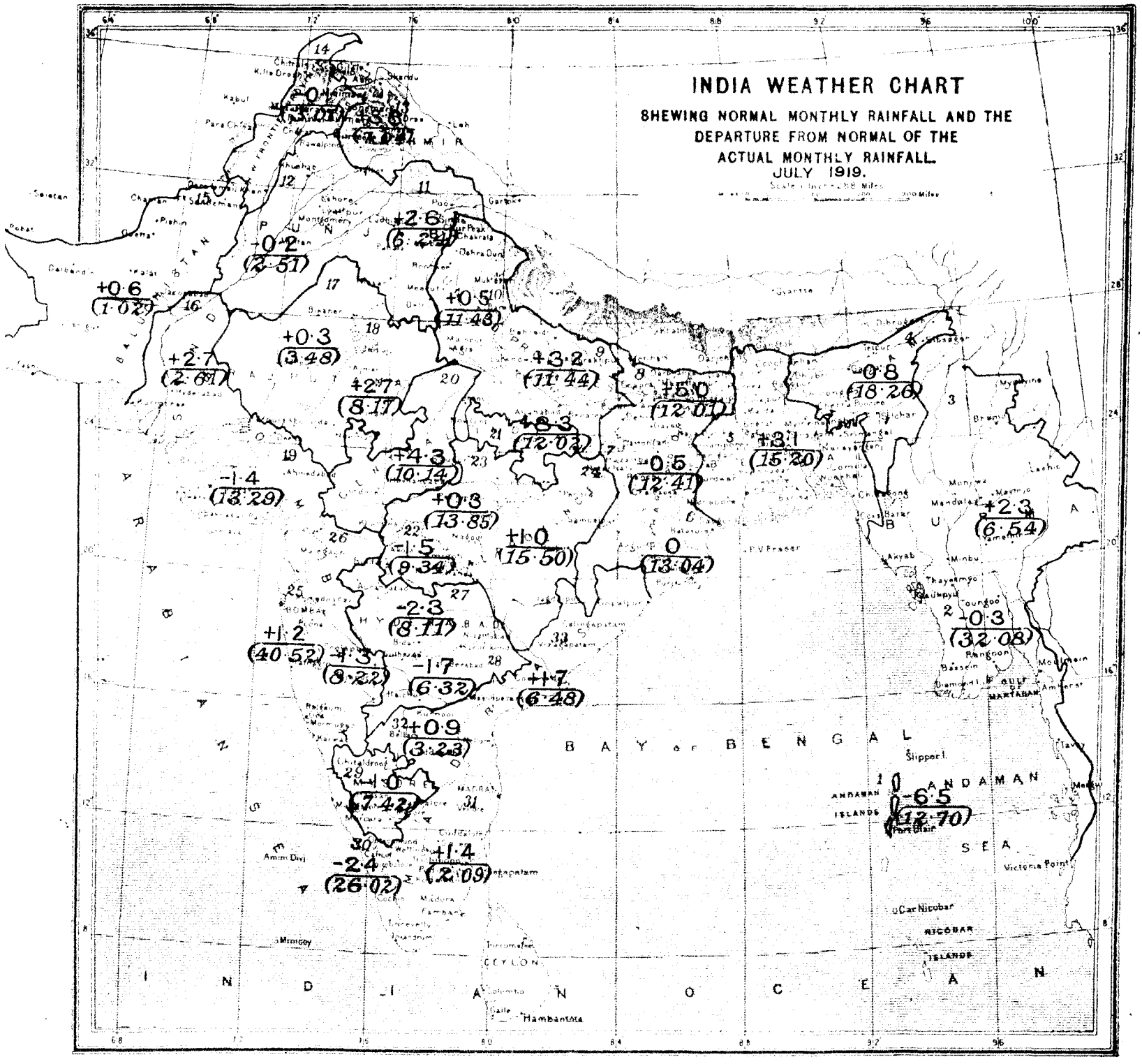


CHART SHEWING THE TOTAL NUMBER OF DAYS IN THE MONTH ON WHICH RAINFALL EQUALLED OR EXCEEDED 0·10 INCH.

(BASED ON THE RETURNS OF TABLE B.)





The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal monthly rainfall, the numbers above these give the departures from normal of the average actual rainfall over the divisions.

1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, AUGUST, 1919.

INTRODUCTION.

THIS review of the weather in India during the month of August, 1919, is based on observations taken daily at 8 hrs. at 212 stations, and on additional observations taken at 10 hrs. and 16 hrs. at 13 stations. In the rainfall summary have been utilized the data furnished by the meteorological observatories, and rainfall statements of the month published by the Provincial Governments.

The brief notes on solar, magnetic and seismic disturbances are supplied by the chief observatories in the Indian area.

For a statement of the methods adopted in recording and tabulating the data, for each of the elements of observation, reference should be made to the introductory portion of the review for January.

Summary of the chief features of the weather in India during the month.

2. Several depressions which formed near the head of the Bay and which formed inland in Central India passed westwards, and caused much heavier rain than usual along the tract of country from Orissa and Chota Nagpur on the east to Gujarat and Rajputana on the west; reports of heavy falls of 10″ and upwards in 24 hours in that area were unusually numerous.

Over the country as a whole the month's fall was in excess by 2·16″.

Cloud proportion was high in the Punjab, the North-West Frontier Province, Bombay, the Central Provinces, Kashmir and Baluchistan, and was very low in Assam and Mysore. Humidity was about normal generally. Maximum temperature was about 3½° lower than usual in the south-west Punjab and in east Rajputana.

The mean barometric pressure over the plains of India was 0·017″ in defect.

Solar, seismic and magnetic disturbances.

KODAIKANAL OBSERVATORY.

3. *Solar Observations.*—No observations were possible on three days during the month, and on twelve other days the prominence record was imperfect.

Sunspots.—19 new groups were recorded during the month. The mean daily number was 4·3 and the average life of a spot was 7·4 days. The spots were distributed in latitude as follows :—

TABLE 1.

—	0—10°	11—20°	Mean latitude.	Extreme latitude.
North	1	1	10°·5	4 & 17
South	10	7	10·6	3 & 17

Prominences.—35 prominences, a minute or more in height and 2 metallic prominences were recorded. The tallest prominence was 140″ high and was photographed on the 12th extending from +25° to 40° W.

Magnetic Disturbances.—A magnetic storm of great intensity was recorded from about noon on the 11th to midnight on the 12th-13th. Moderate disturbances were registered on the 1st, 3rd and 10th from 17th to 20th and continuously from the 24th to the 31st.

J. EVERSHED,

Director,

Kodaikanal and Madras Observatories.

Seismic records.

$\phi = 10°\ 13'\ 50''$; $\lambda = 77°\ 28'\ 00''$; $h = 2{,}343$ m. Subsoil—*Rock.*

Apparatus.—Milne's Horizontal Pendulum Seismograph.

TABLE 2.

	V	To	∈	$\frac{r}{To^2}$
AN:				
AE:	9·76	18·0	1	2·7
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.).	REMARKS.
1919.		h. m. s.						
August 3rd	e P	3 32 30	...	...	...	...	...	
	F	3 36 06	..	...	...	...	...	Widening of line.
„ 14th	e P	17 46 24	...	...	...	...	...	
	F	17 53 06	...	...	...	...	...	Widening of line.
August 25th	e P	20 17 00	...	...	...	...	...	
	F	20 21 36	...	...	...	...	...	Widening of line.
„ 27th	e P	5 58 42	...	...	...	...	...	
	F	6 14 06	...	...	...	...	...	Widening of line.
„ 28th	e P	20 02 48	...	...	...	...	...	
	F	20 07 24	...	...	...	...	...	Widening of line.
„ 29th	e P	5 55 30	...	...	...	...	...	
	e L	6 11 18	...	...	...	...	...	
	M	6 13 30	...	...	320	...	...	
	F	7 25 24	...	...	...	...	...	
	e P	8 40 42	...	...	...	...	...	
	F	8 42 48	...	...	...	...	...	Widening of line.
„ 31st	e P	17 38 12	...	...	...	...	...	
	i L	17 44 06	...	...	...	...	...	
	M 1	17 47 54	...	...	230	...	...	
	M 2	18 22 36	...	...	180	...	...	
	F	18 55 36	...	...	...	...	...	

T. ROYDS,

Assistant Director.

BOMBAY OBSERVATORY.

Alibag magnetic record.

4. During the month of August, 1919, the traces showed 6 calm days, 23 days of small, 1 day of great and 1 day of very great disturbance.

The days of the month selected as "quiet" for the purposes of the Magnetic Survey of India, are the 6th, 7th, 15th, 22nd and 31st.

The following table represents the magnetic character of each day during the month.

TABLE 3.

Day.	Character.	Day.	Character.	Day.	Character.	Day.	Character.
1	S	9	S	17	S	25	S
2	S	10	S	18	S	26	S
3	S	11	V. G.	19	S	27	S
4	S	12	G	20	S	28	S
5	S	13	C	21	S	29	S
6	C	14	S	22	C	30	S
7	C	15	C	23	S	31	C
8	S	16	S	24	S		

C=calm ; S=small ; M=moderate ; G=great; V. G.=very great.

The mean observed absolute values of the several magnetic elements reduced to the mean monthly tabulations of the magnetograms, as also the ranges and the summed ranges of the horizontal force and declination for the month are as follows :—

Easterly declination . . .	0° 23′ 55″
Horizontal force	0·36894 C. G. S. unit.
Vertical force	0·17077 C. G. S. unit.
Inclination	24° 50′·3.
Horizontal force range . . .	0·00062 C. G. S. unit.
Horizontal force summed range .	0·00367 C. G. S. unit.
Declination range	5′·2.
Declination summed range . .	23′·2.

(NOTE.—Summed range means sum without regard to sign of twenty-four ordinates of the diurnal inequality.)

Seismic records.

$\phi = 18° 53' 36''$; $\lambda = 72° 48' 56''$; $h = 11$ m. Subsoil—*Trap.*

Apparatus.—Omori-Ewing Horizontal Pendulum (E.-W.)

TABLE 4.

	V	To	ϵ	$\frac{r}{To^2}$
AN :				
AE :	20	32		
AZ :				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance. Δ (Km.).	Remarks.
1919.		h. m. s.						
Aug. 29th	P	5 53 56	...	...	...	...	...	
	M	6 17 24	...	...	50	...	...	
„ 31st	P	17 34 44	...	...	...	...	...	
	M	.....	...	...	...	...	...	Maximum not well marked.

T. K. CHINMAYANANDAM,

Director,

Bombay and Alibag Observatories.

5.—CALCUTTA (ALIPORE) OBSERVATORY.

Seismic records.

$\phi = 22° 32'$ N ; $\lambda = 88° 20'$ E ; $h = 6·4$ m. Subsoil—*Alluvial.*

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs.

TABLE 5.

	V	To	ϵ	$\frac{r}{To^2}$
AN :	29	18	1	
AE :	29	30	1	
AZ :				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) An.	Ae.	Az.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
Aug. 18th	P	17 18 48	...	...	...	...	...	
	F	17 48 48	...	...	...	...	...	
,, 25th	P	20 1 12	5	...	...	...	...	
	L	20 4 06	9	...	...	...	...	
	F	20 27 06	...	...	...	...	...	
,, 29th	P	5 52 24	4	...	...	...	...	
	L	5 59 06	9	...	...	...	...	
	F	6 29 06	...	...	...	...	...	
,, 31st	P	17 32 48	7	...	...	...	...	
	L	17 43 36	10	...	...	...	...	
	M	17 44 54	...	172	190	...	...	
	F	18 5 18	...	...	...	...	..	

6.—Simla Observatory.

Seismic records.

$\phi = 31° 6' N$; $\lambda = 77° 11' E$; $h = 2{\cdot}1$ km. Subsoil—*Rock.*

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs (Masses 50 kg.).

Table 6.

	V	To	ϵ	$\frac{r}{To^2}$
An:	14	45	1	
Ae:	14	45	1	
Az				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) An.	Ae.	Az.	Distance Δ (Km).	Remarks.
1919.		h. m. s.						
Aug. 2nd	e P	3 32 54	...	...	...	...	...	
	F	3 34 54	...	...	...	...	...	Very slight local shock.
,, 2nd	e P	18 40 24	...	...	...	...	...	
	F	18 51 00	...	...	...	...	...	Slight tremors.
,, 11th	e P	9 04 00	...	...	...	...	...	
	F	9 04 48	...	...	...	...	...	Very slight local shock.
,, 18th	e P	17 21 36	...	...	...	...	...	
	M	17 29 54	...	...	...	...	...	
	F	18 24 00	...	...	...	...	...	Felt at Rangoon ?
,, 25th	e P	20 04 06	...	...	...	...	...	
	M	20 07 42	...	57	...	...	...	
	F	20 30 48	...	...	...	...	...	
,, 29th	P	5 54 24	...	...	...	...	...	
	S	6 02 18	...	...	...	...	...	
	L	6 08 54	20	...	...	...	...	
	M	6 24 12	...	89	79	...	...	
	F	7 01 18	...	...	...	...	..	
,, 31st	e P	17 38 42	...	...	...	...	...	
	S	17 44 24	...	...	...	...	...	
	L	17 52 06	20	...	...	...	...	
	M	17 52 42	...	57	...	...	...	
	F	18 55 24	...	...	...	...	...	

The following table contains a list of earthquakes that were reported :—

TABLE 7.

Place at which felt.	Date.	G. M. T. of earthquake.	Duration.	Intensity. (Rossi-Forel scale).	No. of shocks.	REMARKS.
	1919.	h. m.	sec.			
Gulmarg (Kashmir)	Aug. 7th	21 27	3	6	1	
Rawalpindi . .	„ 8th	9 24	15	7	2	
* Birjand (Persia) .	„ 18th	about 6½ hours.	...	...	1	
Gauhati . .	Aug. 21st	7 10	1½	3	1	
„ . .	„ 21st	17 00	4	5	2	

* NOTE.—A series of earthquakes occurred in Giv and Mukhtaran valley which lies about 20 miles south of Birjand, in the latter part of the month.

S. SITARAMAYYA,

Scientific Assistant.

Weather in the Indian Ocean.

7. The following table gives the departures from normal of pressure and rainfall, as well as the actual and normal wind direction and velocity at the three representative stations.

TABLE 8.

—	Mauritius.	Zanzibar.	Seychelles.
Departure from normal of mean pressure	—·006	+·022	+·030
Actual mean wind direction . .	S 65° E	S 19° W	S 41° E
Normal mean wind direction . .	S 66° E	S 1° W	S 35° E
Actual mean wind velocity (miles per diem).	105	113	237
Normal mean wind velocity (miles per diem).	152	120	231
Rainfall departure from normal . .	+0·83	—0·06	—2·12

Depressions and cyclonic storms.

8. A depression from the north of the Bay that disappeared in Rajputana on the 4th August was described in the Weather Review for July 1919.

Five more disturbances occurred during the month. The first of these appeared at the north-east corner of the Bay on the 5th, lay over deltaic Bengal on the morning of the 7th and disappeared over the west United Provinces on the 11th. The second appeared in deltaic Bengal on the 11th, but did not develop. The third advanced from Central India into Sind between the 22nd and the 25th. The fourth appeared in the north of the Bay on the morning of the 23rd with centre nearly 200 miles east of Gopalpur. It increased slightly in intensity on the 25th, began to move on that day, crossed the Orissa coast on the 25th, and filled up in the west of the United Provinces on the 31st. The fifth formed in the north-west angle of the Bay on the 30th and lasted till the 2nd September, when it reached Bihar. These disturbances caused on many days widespread and heavy rain ; some of the specially heavy falls have been given in the section on rainfall.

Pressure.

9. The following table gives the departure from normal of the mean 8 hours pressure in the 15 chief political divisions of India.

TABLE 9.

DIVISION.	Departure from normal of mean 8 hrs. pressure.
	"
Burma	—·022
Assam	—·029
Bengal	—·048
Bihar and Orissa	—·041
United Provinces	—·025
Punjab	+·004
North-West Frontier Province	+·001
Sind	—·006
Rajputana	—·019
Bombay	—·010
Central India	—·039
Central Provinces	—·030
Hyderabad	+·003
Mysore	+·019
Madras	+·013

The following table gives a comparison of the departure from normal of the mean 8 hours pressure at 9 hill stations with the departure at an adjoining station in the plains.

TABLE 10.

HILL STATION.	Departure from normal pressure. A.	PLAIN STATION.	Departure from normal pressure. B.	Departure of pressure difference B—A.
	"		"	"
Quetta	+·006	Jacobabad	0	—·006
Leh	+·030	Lahore	+·003	—·027
Murree	+·001	Peshawar	—·009	—·010
Simla	—·013	Ludhiana	+·001	+·014
Mukteswar	+·009	Bareilly	—·012	—·021
Darjiling	—·011	Dhubri	—·023	—·012
Mount Abu	—·021	Deesa	—·022	—·001
Pachmarhi	—·037	Khandwa	—·024	+·013
Kodaikanal	+·018	Madura	+·031	+·013

Temperature.

10. Table 11 gives the actual temperature and its departure from normal in the 33 sub-divisions, while table 12 gives only the departures from normal in the 15 chief political divisions.

TABLE 11.

SUB-DIVISION.	ACTUAL TEMPERATURE.				DEPARTURE FROM NORMAL OF		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
1. Bay Islands	84·7	78·5	81·7	6·2	−0·1	+1·3	−1·4
2. Lower Burma	84·1	75·4	79·8	8·7	−0·2	+0·2	−0·4
3. Upper Burma	89·0	75·3	82·2	13·7	−0·9	+0·3	−1·2
4. Assam	91·6	78·2	84·9	13·4	+3·1	+1·0	+2·1
5. Bengal	88·0	78·3	83·2	9·6	+0·4	+0·3	+0·1
6. Orissa	86·7	77·8	82·3	8·9	−1·2	−0·2	−1·0
7. Chota Nagpur	86·0	75·8	80·9	10·2	−1·2	+0·3	−1·5
8. Bihar	89·9	79·2	84·5	10·7	+0·6	+0·7	−0·1

Sub-division.	Actual temperature.				Departure from normal of		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
9. United Provinces, East	91·0	79·3	85·2	11·7	+1·2	+0·8	+0·4
10. Do. do., West	89·8	77·9	83·8	11·9	−0·5	−0·2	−0·3
11. Punjab, East and North	92·6	78·6	85·6	14·1	−1·6	+0·1	−1·7
12. Do., South-west	97·5	81·0	89·2	16·5	−3·4	−0·7	+2·7
13. Kashmir	81·6	61·5	71·6	20·1	−1·5	+2·2	−3·7
14. North-West Frontier Province	99·5	80·5	85·9	18·9	−0·6	+0·9	−1·5
15. Baluchistan	97·6	70·5	84·1	27·1	+1·6	+2·2	−0·6
16. Sind	95·2	81·2	88·2	14·0	−0·1	+1·6	−1·7
17. Rajputana, West	94·3	78·8	86·5	15·5	−1·1	−0·7	−0·4
18. Do., East	86·3	76·4	81·4	9·9	−3·7	−0·6	−3·1
19. Gujarat	85·7	77·0	81·3	8·7	−1·9	+0·1	−2·0
20. Central India, West	82·1	72·6	77·3	9·5	−1·7	+0·6	−2·3
21. Do. do., East	85·0	76·2	80·6	8·8	−1·9	−0·4	−1·5
22. Berar	84·4	72·8	78·6	11·6	−0·7	+0·9	−1·6
23. Central Provinces, West	82·1	73·3	77·7	8·8	−2·7	−0·2	−2·5
24. Do. do., East	83·1	72·9	78·0	10·2	−1·3	−0·3	−1·0
25. Konkan	83·5	76·2	79·9	7·2	0	+0·5	−0·5
26. Bombay Deccan	84·3	70·5	77·3	13·8	+0·1	+0·9	−0·8
27. Hyderabad, North	86·3	72·1	79·1	14·3	+0·7	+1·0	−0·3
28. Do., South	90·0	73·1	81·6	16·9	+2·4	+0·3	+2·1
29. Mysore	81·1	66·7	73·9	14·4	−0·4	+0·3	−0·7
30. Malabar	82·9	74·1	78·5	8·7	−0·3	−0·2	−0·1
31. Madras, South-east	94·2	76·8	85·5	17·4	+1·0	+1·0	0
32. Do., Deccan	93·7	76·3	84·9	17·4	+1·9	+1·4	+0·5
33. Do., Coast, North	91·1	79·4	85·2	11·7	+0·9	+0·5	+0·4

TABLE 12.

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	−0·5	+0·2	−0·2
Assam	+3·1	+1·0	+2·1
Bengal	+0·4	+0·3	+0·3
Bihar and Orissa	−0·4	+0·3	−0·1
United Provinces	+0·4	+0·4	+0·4
Punjab	−2·1	−0·1	−1·1
North-West Frontier Province	−0·6	+0·9	+0·2

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Sind	−0·1	+1·6	+0·8
Rajputana	−2·7	−0·7	−1·7
Bombay	−0·9	+0·4	−0·2
Central India	−1·8	+0·1	−0·9
Central Provinces	−1·9	+0·1	−0·9
Hyderabad	+1·9	+0·5	+1·2
Mysore	−0·4	+0·3	−0·1
Madras	+0·9	+0·7	+0·8

Surface and upper air winds.

11. *Surface.*—The easterly component was slightly stronger than usual in the wind directions in the Gangetic valley.

The following table gives the mean wind velocity and steadiness with their departures from normal.

TABLE 13.

Division.	Hourly wind velocity.		Wind steadiness.	
	Actual.	Departure from normal.	Actual.	Departure from normal.
Burma	4·5	+0·6	54	− 8
Assam	2·3	0	38	+21
Bengal	3·6	+0·1	49	− 6
Bihar and Orissa	3·9	+0·6	50	+ 5
United Provinces	2·2	—0·1	38	+17
Punjab	2·9	+0·1	36	− 2
North-West Frontier Province.	1·1	—0·9	31	− 9
Sind	6·9	—2·1	70	—11
Rajputana	5·2	—0·3	40	—33
Bombay	8·0	—0·8	86	+ 7
Central India	4·3	—0·7	38	—27
Central Provinces	3·7	—1·2	77	+ 4
Hyderabad	10·6	+2·1	97	+12
Mysore	8·9	+2·3	91	+ 8
Madras	6·1	+0·9	81	+ 9

Upper air.—The monthly mean velocities and directions at different heights above Agra, Simla, Lahore, Bangalore, Akyab, Calcutta and Bombay during the month are given in the following table.

TABLE 14.

Height above sea, kms.	Agra. Height above sea 0·17 km.				Simla. Height above sea 2·13 km.				Lahore. Height above sea 0·21 km.				Bangalore. Height above sea 0·92 km.				Akyab. Height above sea 0·01 km.				Calcutta. Height above sea 0·01 km.				Bombay. Height above sea 0·01 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
Ground level.	31	3·6	0·6	52	24	1·4	0·2	42	23	0·6	0·5	126	31	7·8	7·6	253	6	1·7	0·9	158	15	3·2	1·9	115	16	3·4	3·4	206
0·5	29	7·2	2·5	82	...	...	...	...	22	4·4	1·9	141	...	...	...	...	16	8·0	5·8	179	14	6·1	3·4	123	14	10·8	10·6	254
1·0	27	7·8	4·9	88	...	...	...	...	23	3·8	1·9	189	31	8·0	7·9	262	13	7·3	4·0	189	8	6·5	3·7	114	6	9·7	9·5	267
1·5	25	6·8	5·0	97	...	...	...	...	23	3·8	1·0	235	28	10·2	9·9	270	10	7·9	3·7	180	5	4·0	3·3	185	...	...	...	...
2·0	21	7·8	6·4	95	...	...	...	...	23	4·0	0·5	267	4	9·0	8·7	292	8	8·4	4·0	163	3	4·2	2·4	183	...	...	...	...
2·5	16	8·1	6·5	98	24	3·1	0·4	165	23	4·3	0·8	310	2	7·0	6·3	304	7	7·8	5·0	146	2	5·3	3·3	139	...	...	...	...
3·0	16	8·4	6·9	99	23	3·3	0·6	128	22	3·7	1·0	325	...	...	..	...	6	6·7	3·7	139	2	5·3	4·1	136	...	...	...	...
3·5	16	8·5	7·2	98	22	3·2	1·4	135	20	3·4	1·7	318	...	...	...	...	5	6·9	3·4	131	1	3·0	3·0	135	...	...	...	...
4·0	14	7·7	6·3	99	21	3·1	1·3	105	16	3·7	2·3	315	...	...	...	...	4	6·5	5·8	157	...	...	...	...	...	...	...	...
4·5	11	8·1	7·2	97	18	3·1	0·6	48	14	3·4	1·3	318	...	...	...	...	4	8·1	7·6	149	...	...	..	...	...	...	...	...
5·0	9	7·1	6·4	90	15	2·7	0·3	1	12	3·5	1·3	247	...	...	...	...	4	8·5	8·0	149	...	...	...	...	...	...	...	...
5·5	9	6·1	5·1	94	14	3·5	0·3	180	12	4·2	2·5	245	...	...	...	...	3	5·3	4·9	141	...	...	...	...	...	...	...	...
6·0	8	5·3	4·7	91	14	4·6	1·7	173	12	4·3	3·1	250	.	...	...	...	3	5·8	5·7	149	...	...	...	...	...	...	...	...
6·5	8	5·7	5·0	91	12	5·2	3·1	209	10	5·3	4·1	253	...	...	...	...	2	6·0	6·0	121	...	...	...	...	...	...	...	...

Height above sea, kms.	Agra. Height above sea 0·17 km.				Simla. Height above sea 2·13 km.				Lahore. Height above sea 0·21 km.				Bangalore. Height above sea 0·92 km.				Akyab. Height above sea 0·01 km.				Calcutta. Height above sea 0·01 km.				Bombay. Height above sea 0·01 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
7·0	8	6·3	5·8	92	10	4·9	3·6	206	10	6·6	5·1	255	...	...	...	...	2	6·5	6·5	108	...	...	...	...	...	...	...	...
7·5	7	6·8	6·3	87	9	4·4	2·8	226	9	7·5	6·8	253	...	...	...	...	2	7·0	6·9	110	...	...	...	...	...	...	...	...
8·0	7	6·8	6·4	91	8	4·5	3·1	237	8	7·2	5·9	247	...	...	...	...	1	7·0	7·0	125	...	...	...	...	...	...	...	...
8·5	7	7·7	7·0	93	7	4·6	3·5	242	8	7·2	5·8	258	...	...	...	...	1	5·0	5·0	105	...	...	...	...	...	...	...	...
9·0	7	8·1	7·5	87	3	2·5	1·3	107	8	7·1	5·8	253	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
9·5	6	8·7	8·0	85	2	1·7	1·1	243	7	7·3	5·9	251	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10·0	6	8·3	7·8	95	2	3·5	3·1	230	6	8·3	6·2	247	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
10·5	4	7·4	6·1	101	2	4·0	3·9	243	6	8·9	6·3	245	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11·0	4	7·4	6·7	93	2	4·5	4·5	245	4	8·1	6·4	207	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
11·5	4	7·6	6·9	95	2	7·5	7·1	250	3	7·2	6·3	181	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12·0	4	7·5	6·1	85	2	7·3	6·9	253	3	6·8	5·7	176	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
12·5	3	7·8	6·2	89	1	10·0	10·0	265	2	6·7	5·7	202	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13·0	2	8·3	6·6	101	1	7·0	7·0	295	2	5·7	4·3	217	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
13·5	...	...	...	...	1	5·0	5·0	280	1	8·0	8·0	245	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14·0	...	...	...	...	1	5·5	5·5	240	1	8·0	8·0	255	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
14·5	...	...	...	...	1	6·5	6·5	220	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

N = Number of flights.
V = Velocity of wind, regardless of direction, metre per Sec.
v = Velocity of Resultant Wind, taking account of direction, metre per Sec.
L = Direction of Resultant Wind; North Wind = 0° or 360°, East Wind = 90°.

Humidity and cloud.

12. The following table gives the mean humidity, vapour tension and cloud amount at 8 hours with their departures from normal.

TABLE 15.

Division.	Hygrometry; 8 hrs. Mean humidity.	Departure from normal.	Mean vapour tension in inches of mercury.	Departure from normal in inches of mercury.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.
	%					
Burma . .	91	+ 1	·888	+ ·006	8·6	+ 0·5
Assam . . .	88	— 3	·967	+ ·028	5·9	—2·3
Bengal . .	89	— 1	·957	—·004	7·5	—0·1
Bihar and Orissa .	88	+ 1	·937	+ ·008	7·5	+ 0·5
United Provinces .	85	0	·948	+ ·020	6·3	—0·2
Punjab . .	81	+ 5	·930	+ ·050	5·0	+ 0·6
North-West Frontier Province.	78	+ 5	·916	+ ·037	3·5	+ 0·9
Sind . . .	75	— 1	·873	+ ·020	4·0	+ 0·1
Rajputana . .	81	+ 5	·838	+ ·023	6·7	+ 0·5
Bombay . .	85	+ 1	·818	+ ·006	8·4	+ 0·8
Central India .	91	+ 4	·837	+ ·010	8·5	+ 0·2
Central Provinces .	87	+ 1	·783	—·005	8·2	+ 0·8
Hyderabad . .	77	— 3	·705	—·017	6·9	—0·2
Mysore . .	83	— 1	·627	—·010	7·5	—1·1
Madras . .	76	— 2	·796	—·022	6·5	—0·1

Rainfall.

13. The monsoon remained fairly active during the month and rainfall was normal or about it in Burma and the greater part of northern and central India; in the Peninsula generally there was a deficiency. Heavy rain fell in the tracks of the several depressions that passed across the country during the month; falls of 10″ and over in a day are shown below :—

TABLE 16.

Province.	District.	Station.	Amount of rainfall received in 24 hours.	Date.
			″	Aug. 1919.
Bihar and Orissa	Puri	Jankia	11·00	31st.
" "	"	Bolgarh	10·00	31st.
United Provinces	Moradabad	Sambhal	12·64	11th
Central India	Baghelkhand	Sutna	11·80	9th.
" "	"	Nagode	10·50	9th.
" "	"	Unchehra	10·84	9th.
" "	Bundelkhand	Panna	14·38	8th.
" "	"	Dharampur	10·43	8th.
" "	"	Ajaigarh	10·59	9th.
Central India	Bundelkhand	Chandla	10·59	9th.
" "	Bhopal	Sewas	10·20	19th.
" "	"	Rhati	12·52	22nd.
" "	"	Kaliakheri	14·62	22nd.
" "	Gwalior	Amjhera	10·10	22nd.
" "	"	Joura	12·00	28th.
" "	"	Bijoypur	10·00	28th.
" "	"	Sipri	10·45	29th.
Central Provinces	Hoshangabad	Hoshangabad	10·10	22nd.
Rajputana	Banswara	Banswara	11·87	3rd.
"	Sirohi	Mount Abu	12·53	4th.
"	"	"	10·31	5th.
Gujarat	Ahmedabad	Modasa	11·92	24th.
"	Mahi Kantha	Ahmadnagar	10·15	24th.
"	" "	Bayad	10·00	24th.
"	Palanpur	Radhanpur	10·46	25th.

TABLE 17.

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			″	″	″	
1. Bay Islands	17·0	15·2	10·76	11·13	− 0·37	− 3
2. Lower Burma	27·0	24·5	38·85	29·09	+ 9·76	+ 34
3. Upper Burma	13·4	11·0	9·75	7·58	+ 2·17	+ 29
4. Assam	13·3	17·9	10·64	16·64	− 6·00	− 36
5. Bengal	17·5	16·5	13·76	14·10	− 0·34	− 2
6. Orissa	20·0	15·6	19·10	12·96	+ 6·14	+ 47
7. Chota Nagpur	19·3	16·1	18·08	13·28	+ 4·80	+ 36
8. Bihar	13·2	13·8	9·86	12·90	− 3·04	− 24
9. United Provinces, East	14·7	12·7	10·28	11·43	− 1·15	− 10
10. Do. do., West	14·3	11·5	13·73	11·31	+ 2·42	+ 21
11. Punjab, East and North	8·6	6·6	7·72	6·30	+ 1·42	+ 23
12. Do., South-west	4·0	2·8	3·14	2·30	+ 0·84	+ 37
13. Kashmir	10·2	8·3	9·17	7·86	+ 1·31	+ 17
14. North-West Frontier Province	5·7	4·2	4·12	3·19	+ 0·93	+ 29

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
15. Baluchistan	1·3	1·1	0·82	0·72	+ 0·10	+ 14
16. Sind	1·5	2·0	0·91	1·72	− 0·81	− 47
17. Rajputana, West	6·6	4·7	6·73	3·62	+ 3·11	+ 86
18. Do., East	13·3	8·8	14·05	7·18	+ 6·87	+ 96
19. Gujarat	14·8	10·5	13·64	7·86	+ 5·78	+ 74
20. Central India, West	17·4	11·2	22·61	9·64	+12·97	+135
21. Do. do., East	19·2	12·6	24·71	11·64	+13·07	+112
22. Berar	8·9	10·5	4·31	7·18	− 2·37	− 40
23. Central Provinces, West	19·5	14·2	22·57	12·25	+10·32	+ 84
24. Central Provinces, East	20·1	15·5	19·67	14·81	+ 4·86	+ 33
25. Konkan	27·3	24·3	25·10	23·69	+ 1·41	+ 6
26. Bombay Deccan	9·6	9·5	5·28	5·52	− 0·24	− 4
27. Hyderabad, North	8·0	10·9	3·96	7·48	− 3·52	− 47
28. Do., South	6·3	10·2	4·40	6·57	− 2·17	− 33
29. Mysore	7·9	8·8	3·97	5·24	− 1·27	− 24
30. Malabar	21·4	16·3	17·24	13·63	+ 3·61	+ 26
31. Madras, South-east	3·6	5·4	1·85	3·59	− 1·74	− 48
32. Do., Deccan	2·5	6·8	0·89	4·02	− 3·13	− 78
33. Do., Coast, North	9·5	10·2	6·80	7·03	− 0·23	− 3

TABLE 18.

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Burma	21·27	16·09	+5·18	+32
Assam	10·64	16·64	−6·00	−36
Bengal	13·76	14·10	−0·34	− 2
Bihar and Orissa	14·00	13·01	+0·99	+ 8
United Provinces	12·13	11·37	+0·76	+ 7
Punjab	6·59	5·32	+1·27	+24
North-West Frontier Province	4·12	3·19	+0·93	+29

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Sind	0·91	1·72	−0·81	−47
Rajputana	11·95	6·16	+5·79	+94
Bombay	11·53	9·53	+2·00	+21
Central India	23·41	10·40	+13·01	+125
Central Provinces	16·65	12·04	+4·61	+38
Hyderabad	4·17	7·05	−2·88	−41
Mysore	3·97	5·24	−1·27	−24
Madras	6·20	6·59	−0·39	− 6
Mean of India	12·05	9·89	+2	+22

Snowfall.

I.—THE NORTH-WEST FRONTIER PROVINCE.

14. *Drosh* :—Snow on the surrounding hills disappeared during the month.

II.—KASHMIR.

Srinagar. *Gulmarg.* *Kargil.* } No snow fell at the stations or in the neighbouring mountains.

Dras :—No snow fell.

Skardu :—Very light snow fell on the 8th and 21st on some of the highest mountains in the district. This is below normal. At the end of the month very light snow was visible on the higher mountains.

III.—THE UNITED PROVINCES.

Almora.—

TABLE 19.

Locality.	Actual falls during month.		
	Depth.		Distance below perpetual snowline.
	Feet	Inches	
Malla Danpur	0	9	3 or 4 miles.
Malla Darma	0	9	8 miles.
Malla Johar	3	6	...
Byans	9	0	2½ or 3 miles.
Chaudas	0	8	¼ mile.

TABLE 20.

Name of pass or peak.	Accumulation at the end of the month.	
	Reported.	Normal.
	Feet.	Feet.
Nuwe pass	15	18
Lampia "	12 or 13	6½
Lipulekh "	8 or 9	4½
Binkaru "	3	8
Millamdhura	1½	3⅔
Pindari peak	¾	1⅓
Bagadwar	2½	...
Nandakot	¾	...

IV.—THE EASTERN HIMALAYAS.

Gangtok and Yatung :—No snow fell.

Summary.

15. Very little snow is reported from Kashmir and a roughly normal amount from the United Provinces hills.

S. SITARAMAYYA,
Scientific Assistant.

Table A.—Abstract of observations taken at 10 hrs. and 16 hrs. at 13 stations in India, etc., in August, 1919.

Table

Abstract of observations taken at 10 hrs. and 16 hrs. at 13

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hrs.	Mean of 16 hrs.	Mean daily range.	Mean of daily mean pressures.	Departure from normal.	Mean reduced to sea-level and to gravity at 45° Lat.	Temperature of air. Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Temperature, Wet-bulb. Mean minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of three previous columns.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal.																					
5	Calcutta	21	29·574	29·482	·092	29·530	−·061	29·418	87·9	78·9	9·0	91·6	76·3	15·3	83·9	84·2	83·1	+0·7	77·7	80·4	80·3	79·5
	VI.—Punjab.																					
11	Lahore	702	28·888	28·794	·094	28·833	−·001	29·488	93·9	79·9	13·0	99·6	76·7	22·9	87·2	90·1	85·5	−1·6	77·0	80·9	82·2	80·0
	IX.—Rajputana.																					
18	Jaipur	1,431	28·209	28·123	·086	28·166	−·013	29·525	87·0	76·1	10·9	91·6	71·5	19·1	82·2	83·7	79·9	−2·4	74·6	76·7	77·4	76·2
	X.—Bombay.																					
25	Bombay	37	29·750	29·682	·068	29·726	−·003	29·703	84·1	77·7	6·4	85·6	75·8	9·8	80·7	81·2	79·8	+0·4	73·7	77·4	77·3	76·1
	XIV.—Mysore.																					
29	Bangalore	3,021	26·912	26·818	·094	26·874	+·030	29·719	82·3	65·9	16·4	86·1	62·9	23·2	74·3	79·8	72·2	+0·4	64·9	68·1	69·3	67·4
	XV.—Madras.																					
30	Trivandrum	198	29·754	29·666	·088	29·717	+·044	29·845	82·3	73·5	8·8	85·3	70·1	15·2	79·5	80·6	76·8	−1·0		75·3	75·4	
31	Pudukkottai	313	29·554	29·419	·135	29·487		29·729	93·3	76·6	16·7	101·7	72·4	29·3	87·1	92·5	86·5			75·1	75·2	
	Madras	22	29·797	29·675	·122	29·745	−·001	29·698	96·5	79·0	17·5	101·1	74·0	27·1	88·9	92·5	86·6	+2·1	73·8	77·0	79·1	76·6
	Kashmir.																					
13	Srinagar	5,204	24·707	24·620	·087	24·663	−·015	24·635	83·8	66·1	17·7	89·5	61·2	28·3	76·0	81·8	75·0	+4·2	63·9	70·0	71·2	68·4
	Hill stations, excluding Kashmir and Baluchistan.																					
	Katmandu	4,388	25·531	25·476	·055	25·501	+·064	25·456	85·4	69·1	16·3	90·5	67·1	23·4	78·9	80·3	76·8	+2·3	67·1	72·6	73·2	71·0
	Kodaikanal	7,688	22·818	22·761	·057	22·789		22·721	64·8	52·5	12·3	68·8	49·2	19·6	61·3	59·4	58·7		49·6	56·6	56·7	54·3
	Extra India.																					
	Seychelles	15	30·039	29·961	·078	30·003	+·030*	29·941	80·5	76·4	4·1	82·1	74·7	7·4	78·7	79·9	76·9	+0·3	70·8	73·3	74·1	72·7
	Mauritius	131				30·009	−·006	30·080	75·4	61·3	14·1	79·2	55·4	23·8			68·0					

N.B.—Elevations in italics indicate barometric determinations.

Note.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

A.

ations in India, etc., in August, 1919.

Vapour tension in inches of mercury.					Humidity.					Cloud.				Wind direction.											Wind steadiness.		Wind velocity		Rainfall.		Station.	Number of sub-division.
From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns.	Departure from normal.	Total number of 10 hrs. and 16 hrs. winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																															III.—Bengal.	
032	·989	·981	·979	+·003	95	85	84	89	+ 1	8·4	8·7	8·5	−0·2	1	0	5	11	14	9	14	3	5	S 20° E	S 2° E	37	56	92	82	23·32	7·29	Calcutta	5
																															VI.—Punjab.	
91	·972	·990	·975	+·091	88	76	71	79	+ 8	4·7	4·6	4·7	+0·7	20	1	13	0	15	4	1	1	7	S 89° E	S 78° E	21	24	31	49	5·23	2·14	Lahore	11
																															IX.—Rajputana.	
38	·853	·863	·864	+·048	93	78	75	84	+ 6	8·8	8·6	8·7	+1·1	5	3	8	10	5	1	4	14	12	N 35° W	N 69° W	19	42	91	82	11·71	2·35	Jaipur	13
																															X.—Bombay.	
77	·894	·878	·858	−·027	82	86	83	85	− 2	8·5	9·2	8·9	+0·5	0	0	0	0	0	1	21	38	2	S 75° W	S 81° W	90	79	240	270	10·65	1·45	Bombay	25
																															XIV.—Mysore.	
02	·6 5	·580	·606	−·007	95	73	59	78	− 1	9·0	8·7	8·9		0	0	0	0	0	0	16	43	3	S 81° W	S 81° W	92	88	232	145	3·73	1·56	Bangalore	9
																															XV.—Madras.	
	·817	·807				81	78			9·1	8·5	8·8	+1·9	0	4	0	0	0	0	0	3	55	N 44° W	N 60° W	97	78	112	159	4·60	0·82	Trivandrum.	30
	·365	·649				52	43			4·7	7·7	6·2		13	0	0	0	3	8	15	17	6	S 61° W		55		91		5·28	1·39	Pudukkottai	31
64	·765	·810	·791	−·045	77	56	53	63	−10	5·6	7·6	6·6	−0·3	0	0	1	3	2	3	12	31	10	S 83° W	S 36° W	67	56	108	121	3·1[illegible]	1·25	Madras.	
																															Kashmir.	
68	·636	·639	·624	+·011	83	74	60	74	− 6	6·0	6·0	6·0	+0·2	23	4	3	2	9	3	0	3	15	N 23° W	N 48° W	13	9	35	63	2·40	0·55	Srinagar.	13
																															Hill stations, excluding Kashmir and Baluchistan.	
43	·729	·734	·702	+·020	90	75	73	80	− 2	5·0	7·2	6·1	−1·0	0	2	0	30	0	4	0	26	0	S 60° E	N 66° W	6	2	8	13	8·77	2·66	Ka mandu.	
27	·411	·432	·390		83	76	86	82		7·4	9·2	8·3		1	1	2	1	0	1	2	31	23	N 71° W		79		226		6·77	1·68	Kodaikanal.	
																															Extra India.	
80	·747	·764	·738	−·009	75	76	75	76	− 2	5·3	5·1	5·2	−1·2*	2	0	0	1	52	6	1	0	0	S 41° E	S 35° E	92	89	237	231	0·44	0·27	Seychelles.	
			·522	+·015				75	+2			5·7	+0·7										S 65° E	S 66° E			105	152	30·5	1·20	Mauritius.	

* Departure from old normal.

Table B.—Abstract of observations taken at 8 hrs. at 212 stations in India, etc., in August, 1919.

(1) Provincial means.

(2) Data of stations.

(1) Provincial means based on the material in Table B (2) except that the statement of rainfall depends on the complete data of about 2,300 stations.

Division.	Pressure departure from normal.	Temperature of air.							Wind.		Hygrometry.				Cloud.		Rainfall.		
		Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Departure of velocity from normal.	Departure of steadiness from normal.	Mean humidity.	Departure from normal.	Mean vapour tension.	Departure from normal.	Mean cloud amount.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.
	"	°	°	°	°	°	°	°					"	"			"	"	"
Burma	−·022	86·1	−0·5	75·4	+0·2	80·8	−0·2	10·8	+0·6	− 8	91	+ 1	·838	+·006	8·6	+0·5	21·27	16·09	+5·18
Assam	−·029	91·6	+3·1	78·2	+1·0	84·9	+2·1	13·4	0	+21	88	− 3	·967	+·028	5·9	−2·3	10·64	16·64	−6·00
Bengal	−·048	88·0	+0·4	78·3	+0·3	83·2	+0·3	9·6	+0·1	− 6	89	− 1	·957	−·004	7·5	−0·1	13·76	14·10	−0·34
Bihar and Orissa	−·041	88·2	−0·4	78·1	+0·3	83·1	−0·1	10·1	+0·6	+ 5	88	+ 1	·937	+·008	7·5	+0·5	14·00	13·01	+0·99
United Provinces of Agra and Oudh	−·025	90·5	+0·4	78·7	+0·4	84·6	+0·4	11·8	−0·1	+17	85	0	·948	+·020	6·3	−0·2	12·13	11·37	+0·76
Punjab	+·004	94·2	−2·1	79·4	−0·1	86·8	−1·1	14·9	+0·1	− 3	81	+ 5	·930	+·050	5·0	+0·6	6·59	5·32	+1·27
North-West Frontier Province	+·001	99·5	−0·6	80·5	+0·9	89·9	+0·2	18·9	−0·9	− 9	78	+ 5	·916	+·037	3·5	+0·9	4·12	3·19	+0·93
Sind	−·006	95·2	−0·1	81·2	+1·6	88·2	+0·8	14·0	−2·1	−11	75	− 1	·873	+·020	4·0	+0·1	0·91	1·72	−0·81
Rajputana	−·019	89·5	−2·7	77·4	−0·7	83·4	−1·7	12·1	−0·3	−23	81	+ 5	·838	+·023	6·7	+0·5	11·95	6·16	+5·79
Bombay	−·010	84·8	−0·9	74·7	+0·4	79·8	−0·2	10·1	−0·8	+ 7	85	+ 1	·818	+·006	8·4	+0·8	11·53	9·53	+2·00
Central India	−·039	83·5	−1·8	74·4	+0·1	79·0	−0·9	9·1	−0·7	−27	91	+ 4	·837	+·010	8·5	+0·2	23·41	10·40	+13·01
Central Provinces	−·030	83·0	−1·9	73·1	+0·1	78·0	−0·9	9·9	+1·2	+ 4	87	+ 1	·783	−·005	8·2	+0·8	16·65	12·04	+4·61
Hyderabad	+·003	86·8	+1·9	72·8	+0·5	80·7	+1·2	16·0	+2·1	+12	77	− 3	·705	−·017	6·9	−0·2	4·17	7·05	−2·81
Mysore	+·019	81·1	−0·4	66·7	+0·2	73·9	−0·1	14·4	+2·3	+ 8	83	− 1	·627	−·019	7·5	−1·1	3·97	5·24	−1·27
Madras	+·013	91·3	+0·9	76·9	+0·7	84·1	+0·8	14·4	+0·9	+ 9	76	− 2	·796	−·022	6·5	−0·1	6·20	6·59	−0·39

Table

(2) Abstract of observations taken at 8 hrs. at 212

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	I.—Burma.																					
2	Victoria Point	147	29·756		29·833	29·818	17th	29·675	24th	79·5	76·5	83·5		76·0		79·8		7·5	85·7	1st & 20th.	72·3	3rd
	Mergui	66	29·813	−·005	29·809	29·894	18th	29·721	24th	77·1	76·1	83·7	−0·8	74·5	+1·6	79·2	+0·4	9·2	88·8	20th	72·1	30th
	Tavoy	19	29·838	−·024	29·799	29·932	17th	29·738	24th	78·1	76·7	83·1	+0·3	75·3	+1·3	79·2	+0·8	7·8	86·3	9th	72·5	30th
	Moulmein	94	29·753	−·007	29·768	29·867	17th	29·668	24th	76·7	75·4	81·5	−1·7	74·1	−0·1	77·8	−0·9	7·4	85·6	24th	71·5	31st
	Amherst																					
	Rangoon	18	29·781	−·013	29·740	29·900	18th	29·694	24th	78·6	77·0	85·2	+0·2	75·1	−0·8	80·2	−0·3	10·1	88·0	3rd & 16th.	71·2	17th
	Bassein	27	29·765	−·014	29·728	29·887	18th	29·670	24th	79·3	77·7	85·1	+0·4	76·0	+0·1	80·5	+0·3	9·1	89·2	2nd & 8th.	73·4	31st
	Diamond Island	41	29·734	−·034	29·709	29·849	18th	29·634	24th	81·6	78·6	85·3	+1·1	77·0	+1·1	81·2	+1·1	8·3	87·4	23rd	74·0	31st
	Toungoo	164	29·618	−·014	29·725	29·744	18th	29·508	10th	78·5	77·7	86·0	−1·0	74·9	+0·1	80·5	−0·5	11·1	90·5	24th	73·1	18th
	Kyaukpyu	18	29·698		29·656	29·851	18th	29·595	5th	78·4	76·8	83·8		76·2		80·0		7·6	89·2	24th	72·7	18th
	Akyab	20	29·674	−·051	29·635	29·833	19th	29·532	5th	79·2	77·9	84·1	−0·4	75·2	−2·0	79·6	−1·2	8·9	89·2	24th	73·8	6th, 18th & 29th.
2	Minbu	*165*	29·551	−·034	29·658	29·682	18th	29·435	10th	80·1	76·7	88·3	−2·0	77·0	−0·2	82·7	−1·1	11·3	93·5	14th	71·2	2nd
	Yamethin	644	29·101	−·020	29·695	29·231	18th	28·988	10th	77·6	75·4	87·7	−1·7	74·9	+0·3	81·3	−0·7	12·8	91·7	25th	72·4	28th
	Mandalay	250	29·488	−·011	29·685	29·618	17th	29·376	10th	81·6	76·9	92·3	−1·0	77·9	0	85·1	−0·5	14·4	96·9	8th	74·7	25th
	Monywa	*280*	29·451	−·019	29·679	29·572	17th	29·319	10th	80·8	77·5	89·8	−3·3	78·0	−0·3	83·9	−1·8	11·8	93·8	22nd	74·9	25th
	Lashio	*2,820*	26·969	−·023	26·915	27·084	17th	26·847	9th	73·7	71·3	83·5	+0·7	70·2	+0·8	76·9	+0·7	13·3	88·1	23rd	68·4	30th
	Bhamo	*361*	29·327	−·026	29·643	29·463	19th	29·234	10th	79·4	77·6	92·1	+4·1P	72·3	−3·0P	82·2	+0·5P	19·8	97·8	8th	70·3	3rd & 24th.
	Myitkyina	458	29·217	−·033	29·637	29·332	20th	29·111	25th	78·5	77·0	89·4	+2·1	76·6	+0·9	83·0	+1·5	12·8	93·8	10th	74·2	27th.
	II.—Assam.																					
4	Dibrugarh	353	29·312	−·038	29·622	29·461	20th	29·192	7th	82·1	80·0	91·5	+4·8	78·0	+2·3	84·7	+3·5	13·5	96·5	8th & 25th.	75·5	15th
	Sibsagar	333	29·310	−·036	29·630	29·496	20th	29·229	7th & 10th.	81·5	79·0	90·4	+1·6	79·2	+1·5	84·8	+1·5	11·2	94·3	25th	75·2	15th
	Tezpur	252	29·419	−·021	29·627	29·577	18th	29·311	10th	81·9	79·1	92·5	+3·9	78·9	+1·3	85·7	+2·6	13·6	96·8	25th	73·6	18th
	Gauhati	196	29·479	−·026	29·629	29·642	17th	29·370	10th	83·4	80·3	92·7	+2·8	78·7	+0·9	85·7	+1·9	14·0	97·8	24th	74·6	29th
	Dhubri	115	29·538	−·023	29·607	29·694	20th	29·410	7th	82·8	79·4	88·8	+2·7	79·2	+0·7	84·0	+1·7	9·6	92·7	25th	77·0	26th
	Silchar	104	29·585	−·030	29·640	29·738	20th	29·451	6th	82·7	79·5	93·4	+3·9	77·5	+0·7	85·4	+2·3	15·9	99·7	6th	75·2	30th
	Srimangal	66	29·613		29·628	29·780	20th	29·476	6th	81·9	79·0	91·9	+2·3	75·7	−0·3	83·8	+1·0	16·2	96·8	7th	72·7	24th
	III.—Bengal.																					
5	Cox's Bazar	36	29·631		29·612	29·809	20th	29·468	6th	79·4	77·5	84·5		75·3		79·9		9·2	89·7	24th	70·3	7th
	Chittagong	87	29·568	−·054	29·600	29·745	20th	29·375	6th	79·6	77·6	86·8	+1·1	76·6	+0·4	81·7	+0·7	10·2	91·4	24th	74·4	19th
	Noakhali	43	29·608	−·042	29·598	29·782	20th	29·439	7th	80·5	78·6	86·3	+0·8	78·0	+0·9	82·1	+0·9	8·3	92·2	6th	75·8	20th
	Barisal	12	29·612	−·047	29·571	29·794	20th	29·420	7th	81·3	79·1	86·2	−0·7	78·5	+0·3	82·3	−0·2	7·7	90·4	6th	75·1	18th
	Narayanganj	26	29·611	−·041	29·586	29·780	20th	29·426	7th	81·7	78·8	87·2	−0·5	78·3	−0·7	82·8	−0·6	8·9	92·3	23rd	75·8	18th
	Mymensingh	63	29·588	−·033	29·601	29·745	20th	29·417	7th	82·3	79·0	89·6	+2·5	78·8	+0·6	84·2	+1·5	10·8	94·3	23rd	75·1	24th
	Bogra	75	29·556	−·037	29·582	29·712	20th	29·360	7th	82·2	79·9	89·9	+1·4	78·6	+0·1	84·3	+0·7	11·3	94·6	23rd	76·8	19th
	Dinajpur	123	29·505	−·029	29·582	29·662	20th	29·342	7th	82·5	79·8	90·1	+1·2	79·3	+0·8	84·7	+1·0	10·8	94·3	23rd	76·5	19th & 26th.
	Jalpaiguri	283	29·380	−·011P	29·624	29·542	20th	29·253	10th	82·6	79·8	91·4	+3·0	77·6	+0·5	84·6	+1·7	13·8	96·4	1st	74·5	12th

N.B.—Elevations in italics indicate barometrical determinations.

B.

Stations in India, etc., in August, 1919.

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st August, 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															I.—Burma.
9	1	0	0	1	1	9	10	0	S 66° W		9·7			56		86		·872		9·1		23	+ 1·6	30·31	25·67	+ 4·64	87·16	107·05	−19·89	5·65	Victoria Point.
18	1	0	2	2	1	4	3	0	S 30° W	N 87° W	5·3	1·2	+4·1	17	−43	95	+ 2	·888	+·013	7·8	+1·4	28	+ 2·6	29·03	29·55	− 0·52	105·42	108·37	− 2·95	3·63	Mergui.
16	0	0	0	2	4	5	3	1	S 35° W	S 62° W	2·5	1·2	+1·3	33	+19	94	+ 1	·896	+·030	9·4	+1·5	30	+ 2·5	55·50	47·09	+ 8·41	188·16	163·29	+24·87	7·27	Tavoy.
4	0	2	5	7	4	5	3	1	S 22° E	S 4° W	3·1	2·8	+0·3	37	−18	94	+ 1	·867	−·001	10·0	+1·6	29	+ 1·9	66·02	43·34	+22·68	190·80	146·22	+44·58	8·20	Moulmein.
3	1	1	0	5	6	12	3	0	S 24° W		11·6			59																	Amherst.
4	0	1	0	2	10	9	4	1	S 28° W	S 57° W	4·2	3·2	+1·0	59	− 2	98	0	·903	−·007	9·9	+0·9	28	+ 4·0	25·15	19·74	+ 5·41	81·03	71·45	+ 9·58	2·93	Rangoon.
8	0	0	0	3	4	9	4	3	S 45° W	S 15° W	3·6	3·1	+0·5	46	−11	93	− 1	·932	+·008	8·5	+0·8	26	+ 1·3	42·81	22·48	+20·33	88·43	80·57	+ 7·86	4·65	Bassein.
0	0	0	0	0	1	22	7	1	S 56° W	S 46° W	10·1	6·5	+3·6	92	+17	87	0	·937	+·031	8·0	−0·3	24	+ 2·4	32·53	23·24	+ 9·29	92·40	84·25	+ 8·15	6·47	Diamond Island.
2	0	0	1	16	11	0	1	0	S 27° E	S 34° E	3·3	3·1	+0·2	82	+ 7	96	+ 4	·931	+·023	10·0	+0·7	25	+ 0·6	22·07	19·36	+ 2·71	63·54	58·73	+ 4·81	2·59	Toungoo.
20	0	0	4	2	3	1	1	0	S 36° E		1·2			23		93		·899		9·6		30	+ 2·4	56·64	37·79	+18·85	165·93	139·88	+26·05	5·05	Kyaukpyu.
14	0	0	1	7	6	3	0	0	S 15° E	S 39° E	3·9	2·5	+1·4	46	− 8	94	0	·961	−·023	9·3	+0·5	29	+ 2·3	62·36	44·55	+17·81	197·20	157·12	+40·08	4·84	Akyab.
1	0	0	1	25	4	0	0	0	S 11° E	S 39° E	4·0	8·9	−4·9	92	0	85	0	·871	−·010	6·3	−0·6	11	+ 0·7	5·88	5·03	+ 0·85	21·49	20·55	+ 0·94	1·20	Minbu.
																90	+ 3	·842	+·004	8·1	+0·6	16	+ 5·3	8·09	5·55	+ 2·54	18·48	20·74	− 2·26	2·38	Yamethin.
17	0	0	0	5	5	0	0	0	S 15° E	S 1° W	5·3	·	−0·5	43	−37	80	+ 1	·859	+·001	7·3	+0·7	10	+ 2·5	4·31	4·29	+ 0·02	17·17	19·21	− 2·04	1·17	Mandalay.
5	0	0	7	15	3	1	0	0	S 50° E		2·2			72		85	+ 2	·899	−·002	9·1	+0·9	11	+ 5·3	3·71	4·05	− 0·35	23·62	17·80	+ 5·82	1·11	Monywa.
9	2	4	1	0	2	12	0	1	S 47° W		1·8			27		89	− 2	·736	−·002	6·8	− 2·2	20	+ 1·0	7·25	12·81	− 5·56	29·46	42·33	−12·87	1·40	Lashio.
31	0	0	0	0	0	0	0	0	Calm	N 89° W	0·4	1·2	−0·8	(a)		92	− 1	·916	+·012	9·1	+0·8	20	+ 0·7	12·81	15·49	− 2·68	43·39	53·22	− 9·83	3·12	Bhamo.
30	0	0	1	0	0	0	0	0	E		2·1			3		93	+ 2	·907	+·011	8·2	−0·5	15	− 4·7	14·08	16·02	− 1·94	55·03	56·29	− 1·26	6·04	Myitkyina.
																															II.—Assam.
22	0	1	3	2	1	1	1	0	S 54° E		0·4			10		91	− 2	·992	+·081	5·7	−2·7	11	− 9·2	8·54	19·24	−10·70	71·91	69·67	+ 2·24	1·83	Dibrugarh.
15	1	6	0	0	4	2	0	0	N 45° E	S 1° W	1·5	2·0	−0·5	13	− 3	89	− 5	·957	−·003	7·5	−1·3	13	− 5·4	11·21	18·50	− 5·29	63·42	59·54	+ 3·88	1·57	Sibsagar.
18	0	0	11	0	1	0	1	0	S 84° E		1·0			33		88	− 5	·958	+·018	5·7	−2·5	7	−10·7	5·77	14·99	− 9·22	33·09	49·39	−16·30	3·00	Tezpur.
30	0	0	1	0	0	0	0	0	E		0·6			3		87	− 1	·989	+·048	4·9	−3·2	10	− 3·7	6·91	10·28	− 3·37	26·33	45·66	− 9·33	2·44	Gauhati.
1	0	7	16	4	2	1	0	0	S 89° E	S 69° E	5·4	3·2	+2·2	76	+44	86	− 5	·958	+·007	6·2	−1·6	12	− 2·5	7·08	13·44	− 6·36	57·96	68·83	−10·87	1·33	Dhubri.
31	0	0	0	0	0	0	0	0	Calm.	S 87° E	0·1	1·8	−1·7	(a)		86	− 5	·965	+·024	5·8	−2·5	14	− 8·3	6·32	20·00	−13·08	47·55	78·18	−30·63	1·82	Silchar.
																87	+ 1	·952	+·020	5·5		21	+ 0·4	11·60	13·22	− 1·62	41·93	65·97	−24·04	1·62	Srimangal.
																															III.—Bengal.
2	0	3	4	17	5	0	0	0	S 50° E		4·7			76		91		·915		8·1		26	+ 3·4	39·69	29·72	+ 9·97	114·87	102·96	+11·91	4·80	Cox's Bazar.
6	0	2	11	12	0	0	0	0	S 72° E	S 41° E	4·5	4·6	−0·1	72	0	91	+ 3	·919	+·008	8·9	+1·1	23	+ 6·7	30·49	18·90	+11·59	88·30	71·40	+16·90	4·75	Chittagong.
2	0	1	1	23	4	0	0	0	S 42° E		4·8			87		92	+ 2	·945	−·001	6·5	+0·4	24	+ 0·3	26·21	26·58	− 0·37	76·18	84·72	− 8·54	5·66	Noakhali.
3	0	2	6	13	5	1	1	0	S 48° E	S 17° E	4·4	2·6	+1·8	62	+26	90	+ 1	·957	−·011	7·2	−0·5	18	− 2·2	13·50	13·50	0	58·39	54·69	+ 3·70	2·11	Barisal.
7	0	0	10	9	4	1	0	0	S 55° E	S 32° E	2·3	5·2	−2·9	62	− 6	87	− 3	·944	−·032	8·6	0	17	− 0·5	13·43	12·51	+ 0·92	48·85	47·68	+ 1·17	2·38	Narayanganj.
15	0	2	8	6	0	0	0	0	S 78° E	S 56° E	2·2	·	−0·4	46	−22	86	− 4	·948	−·010	8·8	+0·7	12	− 7·4	9·20	15·56	− 6·36	52·65	64·31	−11·66	2·21	Mymensingh.
12	0	0	17	2	0	0	0	0	S 86° E	S 55° E	1·5	2·6	−1·1	59	−12	90	+ 2	·989	+·028	6·5	− 0·8	15	− 1·8	11·06	12·86	− 1·80	38·67	48·75	−10·08	1·82	Bogra.
0	2	4	23	2	0	0	0	0	N 83° E	S 68° E	3·7	2·8	+0·9	92	+24	88	− 2	·982	+·014	6·3	−1·7	14	− 1·7	6·30	12·95	− 6·65	41·65	50·16	− 8·51	1·15	Dinajpur.
25	1	1	0	3	1	0	0	0	S 63° E	N 78° E	1·0			10	−47	88	− 4	·971	+·023	4·0	−1·7	17	−2·8	11·55	25·12	−13·57	70·13	90·36	−20·23	1·65	Jalpaiguri.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs. at 212 station

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity, at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal—*concld.*																					
	Saugor Island	10	29·568	−·058	29·523	29·738	20th	29·325	1st	81·8	79·5	85·7	−1·8	78·8	−1·1	82·3	−1·5	6·9	88·2	16th	73·6	22nd
	Midnapore	149	29·416	−·071	29·513	29·585	20th	29·147	1st	82·4	79·0	88·1	−1·5	78·8	+0·5	83·5	−0·5	9·3	93·8	30th	76·9	24th
	Calcutta	21	29·563	−·059	29·531	29·751	20th	29·296	7th	81·4	79·4	87·7	+0·1	78·9	+0·5	83·3	+0·3	8·8	91·6	6th	76·3	20th
	Jessore	30	29·597	−·048	29·554	29·751	20th	29·273	7th	82·2	78·7	88·1	−0·5	78·6	−0·1	83·3	−0·3	9·5	91·8	15th	76·1	18th
	Burdwan	99	29·477	−·067	29·524	29·660	20th	29·230	7th	81·9	79·1	89·2	−0·2	79·4	+0·3	84·3	+0·1	9·8	92·8	11th	77·4	20th
	Berhampore	67	29·536	−·043	29·552	29·698	20th	29·309	7th	82·1	79·8	89·0	+0·3	79·6	+0·9	84·3	+0·6	9·4	92·6	23rd, 25th & 26th.	78·2	20th
	IV.—Bihar and Orissa.																					
6	Balasore	50	29·538	−·051	29·533	29·721	20th	29·155	1st	80·8	78·5	88·4	+0·1	78·0	−0·3	83·2	−0·1	10·4	91·8	4th	74·7	7th
	Hukitala (False Point)	29	29·569	−·052	29·539	29·753	20th	29·197	1st													
	Cuttack	80	29·520	−·045	29·542	29·701	20th	29·137	1st	81·0	78·2	87·7	−1·6	78·1	−0·2	82·9	−0·9	9·6	93·3	3rd	75·6	8th & 12th.
	Puri	24	29·591	−·042	29·556	29·783	20th	29·214	1st	82·4	79·6	86·3	−1·5	79·7	+0·3	83·0	−0·6	6·6	90·9	23rd	76·2	11th & 12th.
	Angul	455	29·110	−·060	29·539	29·322	20th	28·771	1st	80·0	77·0	86·4	−0·7	76·7	−0·1	81·6	−0·4	9·7	90·8	4th	73·4	12th
	Sambalpur	486	29·121	−·043	29·555	29·288	29th	28·833	1st	79·9	76·7	84·8	−2·3	76·4	−0·8	80·6	−1·5	8·4	91·3	18th	73·0	14th
7	Chaibasa	*733*	28·831	−·058	29·511	28·994	20th	28·532	1st	79·8	76·8	87·1	−1·6	77·2	+0·6	82·1	−0·5	9·9	92·0	5th	75·4	9th
	Ranchi	2,128	27·475	−·052	29·512	27·610	20th	27·291	8th	75·6	73·8	82·8	−0·7	73·2	+0·3	78·0	−0·2	9·6	86·2	1st	70·7	9th
	Purulia	*816*	28·768	−·044	29·531	28·940	17th	28·570	1st	79·9	77·3	89·9	+0·8	P	P	P	P	P	97·7	4th	P	P
	Daltonganj	*730*	28·846	−·040	29·523	28·995	20th	28·714	1st	80·2	77·2	88·1	−1·3	77·0	0	82·5	−0·7	11·1	95·3	3rd	74·6	9th
6	Purnea	124	29·491	−·034	29·569	29·644	20th	29·348	7th	82·8	80·1	90·1	+1·1	79·3	+0·8	84·7	+0·9	10·8	95·1	23rd	76·3	19th
	Monghyr	155	29·436*		29·542*	29·576	20th	29·304	8th	83·5	80·1	90·0		79·3		84·7		10·7	94·2	1st	74·9	4th
	Darbhanga	165	29·442	−·028	29·560	29·585	20th	29·309	8th	83·0	79·1	89·7	+1·0	79·0	−0·3	84·3	+0·3	10·7	96·2	4th	74·8	27th
	Pusa	188	29·407		29·519	29·566	20th	29·276	8th	83·2	80·3	91·3		78·7		85·0		12·6	97·2	26th	75·6	27th
	Patna	183	29·412	−·028	29·519	29·558	20th	29·259	8th	83·7	80·3	89·7	+0·5	80·2	+0·7	84·9	+0·6	9·5	94·0	2nd	76·6	4th
	Buxar	239	29·340	−·034	29·534	29·491	20th	29·174	8th	82·4	80·2	89·2	+0·3	79·3	+0·9	84·2	+0·6	9·9	93·8	1st	75·6	24th
	Gaya	372	29·214	−·027	29·528	29·364	20th	29·023	8th	82·6	79·4	90·6	+0·4	79·1	+0·7	84·8	+0·5	11·5	95·6	26th	74·4	12th
	Naya Dumka	489	29·108	−·035	29·545	29·257	20th	28·931	7th	82·5	79·5	88·9	+0·5	78·7	+1·3	83·8	+0·9	10·2	92·4	23rd & 25th.	76·4	2nd
	V.—United Provinces of Agra and Oudh.																					
9	Gorakhpur	257	29·340	−·022	29·553	29·496	20th	29·223	8th	83·0	79·7	91·3	+1·7	79·3	+0·7	85·3	+1·2	12·0	96·9	26th	76·1	27th
	Benares	267	29·306	−·037	29·525	29·456	20th	29·145	8th	83·4	80·1	90·4	+0·8	79·2	+0·6	84·8	+0·7	11·2	95·1	26th & 27th.	75·8	20th
	Allahabad	309	29·277	−·022	29·540	29·420	17th	29·132	9th	83·0	79·5	89·8	−0·1	79·4	+0·8	84·6	+0·3	10·4	96·3	27th	77·3	10th
	Cawnpore	416	29·168	−·020	29·538	29·325	17th	29·059	9th	82·2	79·5	89·6	+0·2	79·0	+0·4	84·3	+0·3	10·6	95·8	27th	77·3	3rd, 8th & 27th
	Lucknow	368	29·209	−·027	29·531	29·370	20th	29·100	9th	84·3	80·4	92·6	+2·2	79·4	+0·9	86·0	+1·5	13·2	99·4	27th	77·0	1st
	Bahraich	407	29·181	−·021	29·514	29·321	21st	29·075	11th	84·2	79·1	92·3	+2·2	79·7	+1·4	86·0	+1·8	12·6	99·0	27th	75·9	1st
10	Jhansi	824	28·758	−·047	29·536	28·902	17th	28·595	3rd	78·6	76·2	86·8	−2·2	76·0	−1·4	81·4	−1·8	10·8	94·8	27th	73·8	7th & 19th.
	Agra	556	28·024	−·027	29·534	29·181	17th	28·912	5th & 30th.	83·3	79·8	89·9	−1·5	78·8	−0·4	84·4	−0·9	11·1	97·6	27th	74·9	16th
	Mainpuri	516	28·049	−·036	29·519	29·219	17th	28·940	6th	82·5	79·3	90·3	−1·0	78·5	−0·1	84·4	−0·5	11·8	96·8	27th	74·8	16th
	Bareilly	568	28·024	−·012	29·548	29·181	17th	28·900	6th	82·3	78·8	91·6	+1·7	78·4	+0·4	85·0	+1·1	13·2	97·3	27th	71·0	19th
	Roorkee	899	28·706	−·004	29·563	28·845	20th	28·574	5th	81·6	77·9	90·4	+0·4	77·6	+0·6	84·0	+0·5	12·8	96·0	27th	73·4	15th & 16th.

N. B.—Elevations in italics indicate barometrical determinations.

* Mean of 30 days.

B—*continued.*

in India, etc., in August, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May 1919 to 31st August, 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															III.—Bengal—*concld.*
0	2	2	4	4	5	10	3	1	S 13° W	S 10° W	10·7	6·3	+4·4	37	−10	89	0	·977	−·017	8·7	0	23	+6·7	26·11	14·04	+12·07	52·87	45·03	+ 7·84	4·18	Saugor Island.
21	0	5	0	2	0	1	0	2	N 45° E		2·8			13		85	− 2	·943	−·006	8·2	+2·9	18	+1·5	20·29	12·14	+8·15	49·11	40·14	+ 8·97	5·75	Midnapore.
0	1	1	8	5	5	7	1	3	S 24° E	S 18° E	3·9	3·4	+0·5	37	−10	91	+ 2	·975	+·003	8·5	+0·1	23	+4·8	23·32	12·09	+11·23	52·43	42·43	+10·00	7·29	Calcutta.
14	0	1	7	8	0	1	0	0	S 66° E	S 25° E	2·4	2·7	−0·3	46	− 4	85	− 5	·940	−·054	8·3	+0·2	19	+2·1	10·37	10·89	−0·52	41·55	44·39	− 2·84	1·65	Jessore.
12	3	3	2	5	2	4	0	0	S 56° E	S 32° E	1·5	2·5	−1·0	20	−12	88	0	·957	−·002	7·5	−1·0	15	−0·6	13·16	11·07	+2·00	41·87	40·13	+ 1·74	3·90	Burdwan.
13	0	2	7	0	3	0	0	0	S 65° E	S 79° E	2·2	2·9	−0·7	46	+ 6	90	− 1	·987	+·001	7·0	−1·7	20	+3·6	8·42	11·56	−3·14	34·60	37·95	− 3·35	2·00	Berhampore.
																															IV.—Bihar and Orissa.
4	2	3	1	0	7	13	1	0	S 30° W	S 41° W	3·6	3·1	+0·5	46	+ 6	90	+ 3	·941	−·011	8·4	+2·5	21	+6·7	22·48	11·25	+11·23	63·06	36·95	+26·11	3·06	Balasore.
0	1	2	1	2	1	14	8	2	S 61° W		11·5			56	− 5					7·5	−0·8	17	+2·0	23·97	12·66	+11·31	47·90	37·71	+10·19	5·93	Hukitola (False Point).
13	0	1	1	0	0	10	6	0	S 61° W	S 66° W	2·7	2·0	+0·7	43	− 4	88	+ 5	·925	+·019	8·3	+1·0	18	+2·1	18·58	13·65	+4·93	46·14	39·22	+ 6·92	2·46	Cuttack.
1	3	1	1	0	4	11	8	2	S 6[illegible]° W		12·3			52		88	+ 2	·970	+·004	7·1	+0·2	18	+5·0	19·60	12·25	+7·35	35·29	32·14	+ 3·15	3·70	Puri.
5	1	2	0	0	2	4	8	9	N 76° W		6·3			52		87	+ 1	·890	+·002	8·5	+2·9	17	+2·8	14·22	10·34	+3·88	42·06	31·01	+11·05	2·22	Angul.
0	2	1	1	1	4	18	2	2	S 46° W	S 30° W	3·8	3·2	+0·6	62	+ 2	89	+ 4	·881	−·002	9·2	+1·2	26	+7·0	22·86	18·80	+4·06	60·40	50·38	+10·02	3·32	Sambalpur.
11	0	5	2	0	1	9	3	0	S 45° W	S 54° W	2·5	1·3	+1·2	20	−13	87	+ 1	·883	+·011	8·1	+1·0	18	+1·5	14·13	11·52	+2·61	40·73	35·09	+ 5·64	2·10	Chaibasa.
2	0	2	2	9	4	3	6	3	S 3° W	S 56° W	4·1	5·3	−1·2	30	+16	91	+ 2	·809	+·015	8·4	+0·1	20	+1·3	19·64	12·79	+6·85	50·17	39·53	+10·64	5·49	Ranchi.
11	1	3	3	3	2	0	8	0	S 45° W		1·6			3		89	− 1	·907	−·006	7·7	+1·3	19	+2·1	19·26	11·45	+7·81	52·14	34·32	+17·82	3·20	Purulia.
10	2	5	6	0	1	6	1	0	N 85° E		2·7			12		88	+ 2	·896	+·003	5·9	+0·3	21	+4·8	18·87	12·29	+6·58	43·87	29·56	+14·31	3·22	Daltonganj.
1	0	5	21	2	0	0	2	0	N 85° E	S 89° E	2·9	2·2	+0·7	79	+25	89	− 2	·995	+·012	6·4	−0·9	16	−0·2	10·12	13·93	−3·81	48·90	43·44	+ 5·46	2·68	Purnea.
5	0	1	8	16	0	1	0	0	S 60° E		5·6			68		86		·978		6·6		12	−3·4	8·75	14·94	−6·19	38·61	36·54	+ 2·07	1·52	Monghyr.
12	0	1	15	2	0	1	0	0	S 85° E	S 74° E	3·5	3·2	+0·3	53	−11	83	− 6	·944	−·032	6·5	−0·6	13	−1·5	4·71	14·43	−9·72	21·55	37·38	−15·83	0·80	Darbhanga.
3	0	3	17	7	0	0	1	0	S 83° E		3·5			74		88		·994		6·7		13	−1·7	5·54	16·27	−10·73	23·21	38·44	−15·23	1·37	Pusa.
5	0	0	23	2	0	0	0	1	S 88° E	S 78° E	5·5	3·2	+2·3	79	+25	86	− 1	·988	+·009	8·5	0	14	+0·2	7·72	13·57	−5·85	30·55	35·31	− 4·76	2·41	Patna.
4	0	1	15	6	1	1	3	0	S 73° E		4·4			52		90	+ 2	·996	+·043	6·6	−0·7	16	+1·9	9·16	12·08	−2·92	31·76	28·68	+ 3·08	2·43	Buxar.
3	3	8	6	4	2	2	2	1	N 73° E	S 52° E	3·3	2·7	+0·6	33	+14	86	0	·963	+·028	7·0	+0·2	20	+5·0	10·88	13·23	−2·35	44·35	33·96	+10·39	1·55	Gaya.
28	0	1	2	2	0	0	0	0	S 83° E		1·8			13		87	− 1	·967	+·032	7·7	+0·8	22	+4·3	15·95	12·98	+2·97	39·75	40·09	− 0·34	3·34	Naya Dumka.
																															V.—United Provinces of Agra and Oudh.
6	0	0	21	0	0	0	4	0	E	S 88° E	2·5	1·6	+0·9	55	+19	86	− 2	·971	+·012	3·6	−2·9?	10	−5·2	5·35	14·50	−9·15	27·50	36·46	− 8·96	1·50	Gorakhpur.
4	0	1	14	5	0	4	0	3	S 75° E	S 54° E	2·5	3·0	−0·5	13	+32	86	− 1	·978	+·020	7·6	−0·4	14	−0·7	8·59	11·51	−2·92	26·43	28·41	− 1·98	1·66	Benares.
7	1	5	11	1	0	2	4	0	N 77° E	N 79° W	3·7	4·8	−1·1	33	+29	85	− 1	·960	+·015	8·5	0	17	+3·1	13·08	11·70	+1·38	25·81	28·28	− 2·47	3·62	Allahabad.
0	2	6	10	3	4	1	2	3	N 82° E	S 2° W	2·3	2·9	−0·6	37	+30	88	− 3	·967	+·021	5·2	−1·2	18	+5·1	16·42	11·80	+4·62	27·12	25·40	+ 1·72	2·80	Cawnpore.
10	1	2	13	4	0	1	0	0	S 86° E	S 88° E	1·0	2·1	−1·1	56	+30	84	− 3	·991	+·040	7·5	+0·1	17	+3·9	8·09	11·28	−3·19	26·12	28·04	− 1·92	1·45	Lucknow.
12	1	0	16	1	1	0	0	0	S 88° E	S 70° E	2·3	2·0	+0·3	56	+ 8	79	− 8?	·923	−·035?	4·5	−1·1	7	−6·6	8·31	14·15	−5·84	27·40	32·40	− 5·00	3·85	Bahraich.
4	3	3	3	0	0	12	4	2	S 77° W	S 85° W	4·4	2·8	+1·6	30	− 6	89	+ 6	·869	−·011	6·2	+1·2	23	+9·6	23·81	10·90	+12·91	50·44	27·18	+23·26	3·85	Jhansi.
11	2	7	2	1	1	3	2	2	N 26° E	S 40° W	2·4	3·6	−1·2	20	− 9	86	+ 5	·938	+·059	7·4	+0·8	17	+7·2	17·37	7·84	+9·53	26·53	19·82	+ 6·71	4·60	Agra.
2	2	3	8	7	3	0	3	3	S 79° E	S 13° W	2·0	1·2	+0·8	33	+27	87	+ 3	·962	+·027	5·5	−1·3	13	+2·3	10·53	9·00	+1·53	20·53	18·90	+ 1·63	2·15	Mainpuri.
5	0	1	14	6	1	1	2	1	S 74° E	S 71° E	1·8	1·9	−0·1	53	+31	85	− 3	·933	−·003	7·9	+0·9	11	−1·5	9·42	12·89	−3·47	25·08	32·12	− 7·04	2·40	Bareilly.
21	0	0	0	10	0	0	0	0	S 45° E	S 36° E	1·7	1·8	−0·1	33	+ 1	84	− 1	·905	+·021	5·5	−1·0	10	−1·9	19·79	12·09	+7·70	33·16	29·97	+ 3·19	3·65	Roorkee.

Table

(2) Abstract of observations taken at 8 hrs. at 212 stations

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	VI.—Punjab.																					
11	Delhi	718	28·694	+·011	29·576	29·021	17th	28·741	5th	81·8	78·1	90·2	−1·6	79·4	−0·2	84·8	−0·9	10·8	97·3	3rd	74·9	18th
	Hissar	725	28·876	+·018	29·553	29·009	20th	28·740	5th	85·0	78·7	96·7	−1·4	79·1	−1·4	87·9	−1·4	17·6	104·4	27th	75·6	18th & 31st.
	Patiala	*818*	28·758	−·019	29·529	28·895	17th &20th.	28·644	5th	84·0	79·5	92·2	+0·2	79·4	+0·9	85·8	+0·5	12·8	98·2	27th	76·8	11th
	Ambala	892	28·702	+·001	29·554	28·846	17th	28·591	5th	82·6	78·8	92·3	+0·3	78·7	+1·0	85·5	+0·7	13·6	98·6	27th	75·7	27th
	Ludhiana	812	28·778	+·001	29·548	28·928	20th	28·672	5th	83·3	78·2	93·9	−0·4	79·7	+0·6	86·8	+0·1	14·2	100·1	15th	75·8	31st
	Lahore	702	28·872	+·003	29·535	29·032	20th	28·759	7th	83·8	79·9	93·3	−4·5	79·9	+1·0	86·6	−1·7	13·4	99·6	15th	76·7	2nd
	Sialkot	830	28·749	−·004	29·549	28·917	20th	28·622	7th	81·6	79·2	91·5	−2·9	77·7	−0·6	84·6	−1·7	13·8	96·7	16th	73·5	5th & 12th.
	Rawalpindi	1,674	27·943	+·008	29·558	28·082	16th	27·818	7th	79·7	76·6	91·0	−2·7	74·8	−0·6	82·9	−1·7	16·2	99·3	1st	70·3	28th
12	Khushab	612	28·966	+·011	29·541	29·130	20th	28·827	30th	85·0	79·3	97·2	−3·4	79·4	−2·0	88·4	−2·7	17·9	106·2	16th	73·0	8th
	Lyallpur	605	28·955		29·521	29·105	20th	28·831	7th	84·5	79·2	96·4		80·1		88·2		16·5	103·0	16th & 18th.	72·8	19th
	Montgomery	558	28·999	−·005	29·519	29·127	20th	28·885	7th	86·4	79·3	97·9	−3·9	81·3	−0·8	89·6	−2·3	16·6	103·5	18th	74·2	10th
	Multan	426	29·121	−·003	29·504	29·249	21st	28·988	5th	87·7	82·0	98·2	−3·0	83·2	+0·6	90·7	−1·2	15·0	102·8	28th	78·7	21st
	VII.—North-West Frontier Province.																					
14	Peshawar	1,113	28·468	−·009	29·541	28·611	20th	28·320	7th	81·4	77·4	98·7	−0·5	78·2	+0·2	88·4	−0·1	20·5	109·4	1st	71·7	10th
	D. I. Khan	590	28·986	+·010	29·537	29·144	20th	28·842	7th	87·2	80·4	100·2	−0·7	82·9	+1·7	91·5	+0·5	17·3	106·1	16th	77·2	28th
	VIII.—Sind.																					
16	Jacobabad	186	29·361	0	29·502	29·510	17th	29·223	4th	89·3	79·4	105·4	+0·8	84·8	+2·9	95·0	+1·9	20·6	110·6	15th	81·4	13th
	Hyderabad	96	29·473	−·013	29·521	29·624	20th	29·352	8th	83·6	77·2	95·2	−0·7	80·5	+1·5	87·9	+0·4	14·7	102·5	26th	76·5	1st
	Karachi	13	29·617	−·004	29·581	29·736	20th	29·523	4th	80·2	77·6	85·0	−0·5	78·2	+0·5	81·6	0	6·8	88·0	21st	75·0	26th & 31st.
	IX.—Rajputana.																					
17	Bikaner	*771*	28·824	+·002	29·547	28·962	20th	28·619	4th	84·2	78·0	97·5	0	79·9	−1·1	88·6	−0·5	17·6	104·0	4th	75·9	29th
	Jodhpur	780	28·836	−·016	29·571	28·961	17th	28·642	4th	80·9	75·6	91·0	−2·3	77·7	−0·3	84·4	−1·3	13·3	101·6	4th	74·1	29th
18	Jaipur	1,431	28·195	−·022	29·566	28·325	17th	27·989	4th	79·4	75·8	87·3	−4·1	76·0	−0·4	81·7	−2·3	11·3	91·6	27th	72·5	30th
	Ajmer	1,611	28·019	−·029	29·568	28·138	17th	27·814	4th	76·8	73·8	84·5	−3·5	75·9	0	80·2	−1·7	8·6	90·8	3rd	73·2	31st
	Kotah	832	28·765	−·029	29·549	28·912	17th	28·533	3rd	80·9	76·7	87·1	−3·4	77·4	−1·5	82·2	−2·5	9·7	92·8	27th	73·6	30th
	X.—Bombay.																					
19	Deesa	466	29·188	−·029	29·611	29·305	17th	29·043	3rd	78·6	76·2	86·8	−2·3	76·3	+0·5	81·5	−0·9	10·5	90·6	17th	73·8	8th
	Bhuj	334	29·320	−·015	29·605	29·426	21st	29·202	25th	79·8	76·6	85·9	−2·7	76·9	+0·6	81·4	−1·1	9·0	92·0	21st	74·7	26th
	Jamnagar	61	29·641	−·012	29·628	29·713	20th	29·518	25th	80·5	77·2	85·9	−2·2	76·5	−0·2	81·2	−1·2	9·4	89·1	13th	74·2	19th
	Dwarka	37	29·657	−·008	29·640	29·756	21st	29·531	25th	79·6	76·9	83·2	−1·3	77·8	−0·2	80·5	−0·8	5·4	86·3	20th	74·6	26th
	Rajkot	429	29·246	−·029	29·625	29·340	17th	29·137	25th	78·5	74·9	86·0	−2·8	77·1	+2·6	81·6	−0·1	8·9	90·8	18th	75·4	24th
	Veraval	*18*	29·695	−·023	29·656	29·782	21st	29·585	25th	78·7	76·9	80·9	−1·5	77·8	0	79·4	−0·7	3·1	83·3	22nd	75·1	26th
	Bhavnagar Para	55	29·635	−·034	29·636	29·732	20th	29·527	25th	80·9	76·4	89·3	−2·2	76·7	−0·1	83·0	−1·1	12·6	94·0	11th	74·4	24th
	Surat	39	29·682	−·020	29·664	29·776	20th	29·573	3rd	80·6	74·1	85·4	−1·3	77·2	+0·5	81·3	−0·4	8·2	88·8	18th	75·3	25th
	Ahmadabad	163	29·525	−·014	29·638	29·632	21st	29·383	4th	79·5	77·8	87·6	−2·1	76·5	−0·6	82·1	−1·3	11·1	93·1	13th	74·1	30th
20	Bombay	37	29·746	−·010	29·728	29·829	20th	29·642	1st	79·7	76·7	84·2	0	77·7	+0·6	80·9	+0·3	6·5	86·1	1st	75·8	30th
	Ratnagiri	207	29·624	+·006	29·772	29·695	20th	29·534	1st	79·5	75·9	83·1	−0·8	75·8	+0·4	79·5	−0·1	7·3	84·9	16th	73·7	30th
	Marmagao	*60*	29·801	+·006	29·795	29·868	20th	29·713	1st	79·0	77·4	83·6	+0·2						86·0	6th		
	Karwar	44	29·840	+·020	29·818	29·924	20th	29·751	26th	77·9	75·6	83·1	+0·7	75·2	+0·5	79·2	+0·6	7·9	84·9	17th, 23rd & 24th.	73·6	3rd

N.B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

in India, etc., in August, 1919—*continued.*

Wind Direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st August 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															VI.—Punjab.
9	0	1	5	9	0	1	2	4	S 62° E	S 27° W	2·9	2·8	+0·1	23	+ 5	84	+ 5	·913	+·038	6·8	+0·2	12	+2·9	8·29	7·36	+0·93	12·87	18·71	−5·84	1·50	Delhi.
9	7	0	4	9	6	7	3	0	S 9° E	S 42° W	4·7	4·6	+0·1	49	+ 9	75	+ 4	·892	+·034	4·6	+0·8	4	−1·2	3·03	3·44	−0·41	7·13	9·70	−2·57	1·46	Hissar.
2	0	1	1	16	3	5	3	0	S 22° E		2·8			61		82	− 1	·946	+·009	5·2	−0·5	6	−2·5	5·76	6·78	−1·02	17·53	15·69	+1·84	2·25	Patiala.
9	4	0	7	8	2	0	0	1	S 76° E	S 51 E	1·8	0·9	+0·9	49	+16	81	− 3	·952	−·001	6·8	+0·8	11	+2·0	7·18	7·77	−0·59	18·67	19·88	−1·81	2·30	Ambala.
24	1	1	0	3	2	0	0	0	S 49° E	S 29° E	1·5	1·3	+0·2	10	−29	7	− 1	·895	+·102	4·9	−0·7	6	−1·8	5·19	7·04	−1·85	24·14	18·22	+5·92	1·38	Ludhiana.
8	0	1	2	9	6	3	1	1	S 22° E	S 41° E	1·5	2·0	−0·7	56	+ 6	83	+ 8	·972	+·067	4·8	+1·0	8	+2·4	5·23	5·27	+0·0	16·82	13·06	+3·76	2·14	Lahore.
7	0	9	8	4	0	0	1	2	N 75° E	N 83 E	1·4	1·8	−0·4	53	+ 6	90	+11	·963	+·072	4·7	+0·6	10	+1·0	7·99	8·79	−0·80	28·78	19·93	+8·45	2·66	Sialkot.
14	1	4	3	1	2	2	2	2	N 56° E	S 82° E	2·0	1·2	+0·8	7	−22	87	+ 9	·875	+·044	5·5	+0·9	17	+8·0	20·82	8·64	+12·18	31·68	19·69	+14·99	4·23	Rawalpindi.
6	0	10	12	2	0	0	1	0	N 74° E	N 68 E	5·8	4·5	+1·3	66	+ 9	77	+ 8	·863	+·054	4·4	+1·9	4	+0·5	5·49	2·93	+1·47	7·64	8·93	−1·29	2·83	Khushab.
6	1	8	4	4	2	5	0	1	S 83° E		2·4			27		79		·924		5·6		7	+3·9	5·01	2·79	+2·22	8·94	8·28	+0·66	3·35	Lyallpur.
0	2	3	6	5	7	5	2	1	S 31° E	S 12° W	4·8	6·0	−1·2	33	−20	72	+10	·935	+·086	3·6	+1·1	4	+0·5	2·02	3·13	−1·11	6·11	6·77	−0·66	0·75	Montgomery.
13	2	1	0	1	11	3	0	0	S 4° W	S 14° E	1·5	2·1	−0·6	37	− 6	78	+10	1·012	+·145	2·8	+0·9	4	+1·7	2·84	1·79	+1·05	8·01	4·79	+3·22	1·20	Multan.
																															VII. North-West Frontier Province.
27	4	0	0	0	0	0	0	0	N	N 10° W	0·3	2·6	−2·3	13	−30	83	+13	·890	+·005	3·5	+0·2	5	+2·7	6·06	1·93	+4·13	7·20	4·54	+2·66	2·15	Peshawar
10	0	13	1	6	1	0	0	0	N 75 E	N 72° E	2·1	1·5	+0·6	49	+13	73	− 2	·942	+·010	3·6	+1·5	0	−2·2	0	1·94	−1·94	2·36	5·21	−2·85	0	D. I. Khan.
																															VIII.—Sind.
15	0	0	1	11	3	1	0	0	S 35° E	S 41° E	2·9	3·1	−0·2	46	−24	63	− 9	·869	−·044	1·9	−0·3	0	−1·5	0	0·92	−0·92	0·40	2·22	−1·82	0	Jacobabad.
5	1	0	0	1	2	19	3	0	S 46° W	S 43° W	6·4	11·9	−5·5	72	−14	73	+ 3	·841	+·056	2·1	−2·4	1	−1·2	0·10	2·01	−1·91	7·35	5·64	+1·71	0·10	Hyderabad.
0	0	0	0	0	0	10	19	2	S 78° W	S 76° W	11·5	12·0	−0·5	92	+ 6	88	+ 3	909	+·047	8·1	+0·6	2	+0·3	0·57	1·44	−0·87	2·40	5·57	−3·17	0·40	Karachi.
																															IX.—Rajputana.
2	3	0	3	4	3	11	7	1	S 57° W	S 36° W	5·7	5·6	+0·1	46	−34	75	+ 6	·877	+·042	3·5	−0·7	9	+4·4	7·90	3·26	+4·64	9·21	8·40	+0·81	3·18	Bikaner.
5	0	1	1	1	1	19	3	0	S 44° W		3·9			66		77	+ 1	·813	+·012	8·8	+1·5	6	+0·8	3·71	4·08	−0·87	9·41	9·35	+0·06	1·33	Jodhpur.
5	0	6	5	0	0	1	8	6	N 26° W	N 88° W	3·8	3·4	+0·6	30	−27	84	+ 5	·839	+·020	8·5	+1·5	15	+4·9	11·71	7·78	+3·93	21·68	18·40	+3·28	2·35	Jaipur.
14	0	2	0	0	0	3	12	0	S 87° W	S 85° W	3·3	5·0	−1·7	43	−39	86	+ 3	·793	− ·019	5·2	−1·3	7	−1·4	3·24	6·68	−3·44	12·19	15·91	−3·72	1·07	Ajmer.
4	2	2	0	1	0	9	6		N 85° W		3·5			49		82	+ 8	·866	+·061	7·5	+1·7	14	+4·5	12·02	7·98	+4·04	24·09	20·33	+3·76	2·75	Kotah.
																															X.—Bombay.
1	0	1	0	0	2	16	9	2	S 62° W	S 71° W	7·4	8·8	−1·4	76	+ 1	90	+ 6	·880	+·037	8·9	+1·5	16	+7·1	29·25	7·61	+21·64	43·11	19·30	+23·81	8·78	Deesa.
0	0	0	0	0	1	0	30	0	S 88° W	S 76 W	9·6	11·5	−1·9	99	+ 9	86	+ 3	·871	+·012	8·9	+1·6	7	+3·2	5·33	2·89	+2·44	7·90	11·71	−3·81	1·72	Bhuj.
0	0	0	0	0	0	16	15	0	S 67° W		12·4			93		86	+ 5	·889	+·022	5·9	+0·8	9	+2·9	9·04	5·23	+3·81	22·08	15·62	+6·46	5·49	Jamnagar.
0	0	0	0	0	2	14	13	2	S 66° W		12·8			86		88	+ 2	·887	−·015	9·4	+1·4	8	+3·6	5·58	2·87	+2·71	9·87	12·46	−2·59	1·88	Dwarka.
0	0	0	0	0	2	25	4	0	S 47° W	S 77° W	11·5	9·1	+2·5	92	+ 2	84	0	·816	−·022	9·5	+2·1	16	+8·5	11·38	5·59	+5·79	28·68	21·34	+7·34	2·88	Rajkot.
1	0	0	0	0	1	15	13	1	S 65° W	S 77 W	12·1	8·6	+3·5	86	+ 4	92	+ 3	·902	+·013	8·8	+0·7	7	+1·1	7·01	3·74	+3·27	12·41	15·21	−2·80	1·65	Veraval.
0	0	0	0	0	0	22	9		S 58° W	S 48° W	5·8	8·6	−2·8	94	+ 4	81	+ 1	·848	−·003	8·6	+1·1	8	0	6·39	5·97	+0·42	12·04	17·81	−5·77	2·22	Bhavnagar Para.
6	0	0	0	0	5	14	5	1	S 48° W	S 66° W	5·0	7·2	−2·2	66	−14	86	+ 1	894	+·006	9·4	+1·5	14	+1·6	11·14	7·35	+3·79	32·87	33·14	−0·27	2·10	Surat.
2	0	0	0	0	0	25	4	0	S 50° W	S 62° W	4·0	3·6	+0·4	89	+17	93	+10	·930	+·075	6·9	−1·5	18	+7·7	15·09	8·05	+7·04	26·44	24·64	+1·80	3·00	Ahmadabad.
0	0	0	0	0	1	13	17	0	S 69° W	S 77° W	10·0	11·2	−1·2	92	+ 9	87	0	·877	−·006	9·0	+0·1	25	+5·9	10·65	13·71	−2·86	58·46	58·12	+0·34	1·45	Bombay.
1	0	0	0	0	0	12	16	2	S 75° W	S 74° W	9·7	6·9	+2·8	89	+21	84	− 4	·842	−·030	8·7	+0·5	22	−1·7	12·88	19·57	−6·59	76·20	83·84	−7·64	1·52	Ratnagiri.
1	0	0	0	0	0	0	30	0	W	N 56° W	7·4	8·2	−0·8	97	+20	93	+ 2	·918	+·014	8·7	+1·1	26	+3·8	22·84	15·58	+7·26	81·00	79·53	+1·47	6·02	Marmagao.
12	0	1	0	2	14	2	0	0	S 3° E	N 81° W	2·6	3·1	−0·5	53	+ 6	89	+ 2	·849	+·012	6·6	−0·8	28	+4·2	22·28	21·65	+0·63	95·67	100·92	−5·25	3·76	Karwar.

Table

(2) Abstract of observations taken at 8 hrs. at 212 stations

Number of sub-division.	Station.	Height of bar-determ above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	X.—Bombay—*concld.*																					
26	Malegaon	1,430	28·287	−·023	29·654	28·388	20th	28·163	3rd	77·6	72·5	86·7	−0·2	73·1	+1·2	79·9	+0·5	13·6	90·7	22nd	71·5	9th & 31st.
	Ahmadnagar	2,154	27·622	−·016	29·685	27·708	20th	27·521	3rd	74·6	69·8	85·5	+0·7	70·2	+1·2	77·8	+0·9	15·3	90·4	18th	68·7	10th
	Poona	1,846	27·935	−·008	29·713	28·021	20th	27·835	3rd	74·1	70·9	81·1	−0·6	70·7	+1·1	75·9	+0·3	10·4	83·5	21st, 22nd & 23rd.	69·4	31st
	Sholapur	1,590	28·192	−·006	29·710	28·278	20th	28·107	3rd	77·1	70·8	90·1	+1·3	71·6	+0·8	80·9	+1·1	18·5	93·6	14th & 17th.	68·5	28th
	Bijapur	*1,948*	27·866	+·009	29·737	27·952	20th	27·782	26th	75·0	70·0	87·1	+0·6	70·4	+0·6	78·7	+0·6	16·7	90·7	28th	69·0	20th
	Belgaum	2,562	27·309	+·016	29·785	27·393	20th	27·225	26th	69·7	68·4	75·0	−1·3	66·7	+0·4	70·9	−0·5	8·3	77·3	17th	65·4	24th
	XI.—Central India.																					
20	Neemuch	1,526	28·035	−·032	29·598	28·147	20th	27·819	3rd	75·9	73·5	82·5	−2·4	73·2	+0·6	77·9	−0·9	9·3	87·7	27th	71·5	24th
	Indore	1,823	27·852	−·037	29·610	27·971	20th	27·631	3rd	74·5	72·8	81·6	−1·0	72·0	+0·6	76·8	−0·2	9·6	88·1	1st	70·1	31st
21	Nowgong	754	28·826	−·043	29·534	28·965	20th	28·714	2nd	78·1	76·4	85·9	−2·0	76·1	−0·9	81·0	−1·5	9·8	92·0	27th	73·9	9th & 12th.
	Sutna	1,041	28·530	−·044	29·520	28·661	20th	28·380	2nd	78·5	76·2	84·1	−1·9	76·3	+0·1	80·2	−0·9	7·8	89·8	27th	72·8	9th
	XII.—Central Provinces.																					
22	Buldana	2,134								74·0	70·5	81·8	−0·1	70·5	1·0	76·1	+0·5	11·3	86·8	22nd	68·9	10th
	Akola	925	28·774	−·021	29·647	28·889	20th	28·631	3rd	77·9	73·5	86·5	−0·6	74·3	+0·9	80·4	+0·1	12·2	91·2	22nd	71·8	10th
	Amraoti	1,215	28·472	−·022	29·636	28·588	20th	28·343	2nd	76·1	72·7	84·9	−1·3	73·5	+0·8	79·2	−0·3	11·4	89·2	12th	71·9	19th
23	Khandwa	1,044	28·637	−·024	29·632	28·749	20th	28·458	3rd	76·8	73·6	84·6	−1·1	73·6	−0·6	79·0	−0·9	11·0	89·2	22nd	71·9	23rd
	Hoshangabad	1,006	28·644	−·033	29·600	28·777	20th	28·441	3rd	76·3	74·8	82·0	−3·1	73·4	−0·6	77·6	−1·9	8·6	88·1	27th	70·2	15th
	Saugor	1,807	27·786	−·078?	29·525	27·904	17th	27·618	3rd	74·0	72·7	80·6	−3·0	72·6	−0·3	76·6	−1·7	8·0	87·4	28th	70·6	14th & 31st.
	Jubbulpore	1,327	28·264	−·058	29·535	28·424	20th	28·043	2nd	76·1	74·0	81·8	−2·9	73·9	0	78·0	−1·5	7·9	88·8	26th	70·9	15th
	Seoni	2,033	27·626	−·028	29·583	27·757	20th	27·413	2nd	73·8	71·4	79·3	−3·8	71·6	−0·1	75·4	−1·9	7·7	84·2	26th	69·1	15th
	Nagpur	1,017	28·654	−·013	29·618	28·778	20th	28·483	2nd	77·4	73·7	84·6	−2·3	74·8	+0·2	79·7	−1·1	9·8	89·5	6th	71·8	14th
24	Pendra	2,040	27·589	−·018	29·547	27·742	20th	27·314	2nd	74·8	72·5	81·1	−2·2	71·4	−1·2	76·3	−1·7	9·7	86·9	16th	68·9	9th
	Raipur	970	28·645	−·045	29·560	28·812	20th	28·390	2nd	77·3	74·8	83·4	−2·4	74·2*	−0·9*	79·6*	−1·7	9·2	89·3	27th	73·1	24th & 29th.
	Chanda	*634*	29·047	−·032	29·626	29·169	20th	28·897	2nd	79·0	74·6	87·0	−0·5	75·7	+0·6	81·3	+0·1	11·3	94·1	6th	72·0	27th
	Jagdalpur	1,813	27·888		29·624	28·021	20th	27·692		75·6	73·1	81·3		71·7		76·5		9·6	86·4	4th	69·5	17th
	XIII.—Hyderabad.																					
27	Aurangabad	1,905	27·851	−·020	29·684	27·948	20th	27·737	3rd	74·2	70·6	84·3	−0·7	70·5	+1·2	77·3	+0·3	13·8	89·8	22nd	69·0	6th
	Nizamabad	1,248	28·488	+·003	29·675	28·584	20th & 21st.	28·371	2nd	77·6	72·0	88·3	+2·2	73·6	−0·8	80·9	+1·5	14·7	93·0	5th	70·9	18th
	Bidar	*2,165*																				
28	Gulbarga	1,503	28·287	+·008	29·726	28·382	20th	28·201	26th	75·9	71·8	91·3	+3·1	71·4	0	81·3	+1·5	19·9	95·3	20th	65·1	15th
	Raichur	*1,311*	28·496	+·018	29·742	28·589	20th	28·401	1st	77·9	71·3	91·9	+2·9	72·6	−0·1	82·3	+1·5	19·3	95·5	7th	70·5	29th
	Hyderabad (Decean)	1,738	28·063	+·015	29·710	28·164	20th	27·946	1st	75·4	70·1	87·5	+2·0	72·5	+0·1	80·0	+1·1	15·0	93·4	23rd	70·6	25th
	Hanamkonda	877	28·858	0	29·674	28·855	20th & 21st.	28·711	1st	80·2	73·6	89·4	+1·7	76·0	+0·9	82·7	+1·3	13·4	93·7	10th	72·7	15th
	XIV.—Mysore.																					
29	Chitaldrug	2,405	27·461	+·013	29·773	27·532	20th	27·379	1st	71·9	68·0	81·9	−0·2	68·3	+0·1	75·1	−0·1	13·6	86·4	17th	67·1	23rd
	Hassan	2,149	26·790	+·023	29·809	26·839	21st	26·721	1st	69·3	66·9	77·3	−1·2	65·5	+0·8	71·4	−0·2	11·8	82·5	22nd	62·7	15th
	Bangalore	3,021	26·905	+·018	29·804	26·971	20th	26·823	1st	69·7	66·7	82·2	+0·3	65·9	+0·1	74·1	+0·2	16·3	86·1	17th	62·9	15th
	Mysore	2,518	27·404	+·022	29·821	27·458	20th	27·327	1st	72·5	67·9	82·8	−0·5	66·9	+0·3	74·9	−0·1	15·9	85·5	18th	64·5	15th

N.B.—Elevations in italics indicate barometrical determinations.

* Mean of 8 days.

B—*continued.*

n India, etc., in August, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st August 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															X.—Bombay —*concld.*
0	0	0	0	0	0	31	0	0	S 45° W	S 78° W	9·9	9·3	+0·6	100	+14	78	+ 1	·733	+ 010	8·6	+2·0	8	+2·1	3·01	3·34	−0·33	13·28	13·76	− 0·48	0·99	Malegaon.
1	0	0	0	0	0	9	20	1	S 78° W	S 86° W	8·3	13·5	−5·2	92	+17	78	− 2	·669	−·015	7·8	+0·9	1	−4·3	0·39	2·64	−2·25	10·01	12·39	− 2·38	0·10	Ahmadnagar.
1	0	0	0	0	0	2	26	2	W	S 83° W	10·5	10·8	−0·3	93	+ 3	86	+ 2	·715	+·021	9·7	+1·7	8	−0·9	3·68	3·78	−0·10	16·52	17·23	− 0·71	0·73	Poona.
0	0	0	0	0	0	19	11	1	S 63° W	S 83° W	11·0	9·3	+2·3	89	+ 5	72	− 4	·667	−·014	8·3	+0·8	3	−4·9	1·21	5·11	−3·90	12·30	15·22	− 2·32	0·57	Sholapur.
0	0	0	0	0	0	7	23	[illegible]	S 82° W	S 82° W	9·3	7·8	+1·5	96	+11	77	− 4	·669	−·020	6·5	−0·7	0	−4·7	0·18	2·51	−2·33	6·88	9·30	− 2·42	0·07	Bijapur.
3	0	0	0	0	0	14	14	0	S 67° W	S 83° W	5·5	15·7	−10·2	86	− 5	94	+ 2	·681	+·008	9·5	+1·0	2	+4·8	9·37	9·84	−0·47	32·11	37·55	− 5·44	1·08	Belgaum.
																															XI.—Central India.
6	2	1	0	0	0	10	11	1	S 79° W	S 75° W	6·9	8·0	−1·1	59	−25	89	+ 3	·794	+·010	6·3	−0·9	15	+5·3	15·44	8·67	+6·77	5·11	21·84	+ 3·27	4·82	Neemuch.
8	0	0	0	0	0	0	19	4	N 83° W	S 85° W	3·8	4·2	−0·4	72	−10	92	+ 3	·784	+·024	9·7	+0·5	18	+7·4	18·51	7·63	+10·88	42·88	23·42	+19·46	5·02	Indore.
7	0	3	3	5	1	1	8	3	S 65° W	S 89° W	2·9	2·3	+0·6	7	−44	92	+ 5	·885	0	9·5	+1·3	23	+9·6	31·15	13·09	+18·06	55·82	33·16	+22·66	5·45	Nowgong.
7	3	5	1	1	4	7	2	1	S 45° W	S 89° W	4·0	5·9	−1·9	10	−31	91	+ 4	·883	+·007	8·3	0	21	+6·5	35·81	12·38	+23·43	53·42	32·30	+21·12	11·80	Sutna.
																															XII.—Central Provinces.
0	0	0	0	0	0	6	18	7	N 88° W		7·6	6·3	+1·3	86		84		·703		7·7		12	0	6·61	7·03	−0·42	21·81	23·21	− 1·40	2·61	Buldana.
0	0	0	0	0	0	6	18	7	N 89° W	N 78° W	7·8	6·3	+1·5	89	+ 3	80	− 2	·771	+·003	9·5	+1·8	7	−2·8	2·37	6·75	−4·38	20·68	22·04	− 1·36	0·81	Akola.
0	0	0	0	0	0	2	22	7	N 83° W	N 89° W	9·5	5·7	+3·8	92	+ 6	85	− 2	·758	− 016	7·8	0	9	−1·2	3·56	6·85	−3·29	16·51	23·12	− 6·61	0·87	Amraoti.
0	0	0	0	0	1	7	17	6	S 87° W	N 86° W	7·7	6·4	+1·3	86	− 7	86	+ 2	·791	+·023	7·0	−0·4	15	+4·8	7·93	6·50	+1·43	22·68	20·92	+ 1·76	1·86	Khandwa.
8	0	1	0	0	0	18	1	3	S 57° W	S 53° W	3·3	2·8	+0·5	59	−20	93	+ 3	·841	+ 013	10·0	+1·3	22	+6·7	34·62	14·39	+20·23	60·36	36·23	+24·13	11·58	Hoshangabad.
0	1	1	0	0	1	3	16	9	N 79° W	S 87° W	6·7	3·9	+2·8	79	+14	94	+ 6	·787	+·006	9·5	+1·5	25	+9·9	35·77	13·13	+22·64	54·55	34·24	+20·31	5·08	Saugor.
3	1	1	0	1	2	11	11	1	S 66° W	S 77° W	3·5	3·1	+0·4	66	− 2	90	+ 1	·813	−·008	9·3	+1·1	22	+4·6	39·97	16·35	+23·52	68·33	42·41	+25·92	5·85	Jubbulpore.
15	0	0	0	0	1	6	7	2	S 73° W	N 76° W	2·1	3·6	−1·5	46	+ 3	89	+ 1	·740	−·030	8·9	+2·0	21	+4·4	24·77	13·00	+11·77	58·82	38·16	+20·66	4·21	Seoni.
0	1	0	0	0	0	2	19	9	N 78° W	S 89° W	5·9	5·3	+0·6	92	+31	83	− 2	·779	−·024	7·0	−1·2	16	+2·4	14·08	11·92	+2·16	43·94	35·69	+ 8·25	3·41	Nagpur.
13	1	1	0	3	2	3	4	4	S 75° W		4·6			23		89	+ 2	·770	−·013	4·2	−3·0	19	+1·5	12·68	12·59	+0·09	36·62	34·84	+ 1·78	3·22	Pendra.
3	0	1	0	0	1	12	12	1	S 69° W	S 56° W	·8	6·1	−0·3	72	0	89	0	·832	−·005	9·9	+1·9	17	+1·4	13·48	13·74	−0·26	55·14	37·37	+17·77	2·23	Raipur.
0	0	0	0	1	1	19	10	0	S 57° W	S 76° W	6·5	4·1	+2·4	92	+14	81	− 1	·802	−·007	8·0	+0·1	12	−3·2	8·18	13·35	−5·17	33·93	37·89	− 3·96	1·89	Chanda.
1	0	0	0	0	2	7	20	1	S 76° W		4·8			89		90		·789		8·0		21	+1·7	17·05	14·62	+2·43	46·44	40·98	+ 5·46	2·80	Jagdalpur.
																															XIII.—Hyderabad.
0	0	0	0	0	0	8	22	1	S 80° W		12·7			92		84	+ 1	·703	−·006	9·5	+1·3	6	−3·1	3·10	4·86	−1·76	12·53	17·94	− 5·41	0·67	Aurangabad.
0	0	0	0	0	0	14	16	1	S 71° W		5·4			92		76	− 6	·712	−·036	6·4	−0·5	12	−2·2	5·98	10·61	−4·63	21·30	26·90	− 5·60	1·79	Nizamabad.
																															Bidar
0	0	0	0	0	0	8	24	1	S 83° W	N 75° W	10·5	10·0	+0·5	96	+15	82	+ 1	·727	+ 015	7·5	+0·3	4	−4·9	2·15	6·10	−3·95	14·41	18·41	− 4·00	1·02	Gulbarga.
0	0	0	0	0	0	3	23	5	N 87° W	S 81° W	12·9	9·5	+3·4	96	+15	72	− 4	·684	−·021	6·5	+0·6	3	−6·0	1·27	5·62	−4·35	10·34	15·23	− 4·89	0·43	Raichur.
0	0	0	0	0	0	1	30	0	S 89° W	N 82° W	8·6	6·1	+2·5	100	+ 7	76	− 5	·663	−·044	6·5	−0·9	6	−4·9	3·48	6·74	−3·26	17·87	18·62	− 0·75	1·19	Hyderabad (Deccan).
0	0	0	0	0	1	2	17	11	N 79° W		6·7			86		72	− 3	·742	−·008	5·1	−1·9	9	−1·8	4·95	7·04	−2·09	16·67	23·07	− 6·40	1·90	Hanamkonda.
																															XIV.—Mysore.
0	0	0	0	0	0	11	16	4	S 89° W	S 78° W	8·4	7·8	+0·6	89	+ 1	81	− 2	·635	−·020	7·6	−1·1	5	−2·1	1·05	3·09	−2·04	12·10	12·45	− 0·35	0·21	Chitaldrug.
0	0	0	0	0	0	15	15	1	S 69° W	N 87° W	8·7	3·2	+5·5	90	+ 2	88	+ 3	·632	+·003	6·4	−2·3	7	−1·7	2·55	3·80	−1·25	14·87	18·44	− 3·57	0·58	Hassan.
0	0	0	0	0	0	10	20	1	S 77° W	S 78° W	9·8	6·1	+3·7	96	+28	85	0	·619	−·005	9·2	+0·6	7	−2·4	4·23	5·19	−0·96	20·13	16·52	+ 3·61	1·56	Bangalore.
0	0	0	0	0	0	18	12	1	S 65° W	S 72° W	8·6	9·1	−0·5	89	+ 1	78	− 4	·624	−·017	6·7	−1·8	6	−0·5	1·16	3·29	−2·13	13·61	14·35	− 0·74	0·25	Mysore.

Table

(2) Abstract of observations taken at 8 hrs. at 212 stations

Numbers of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XV.—Madras.																					
30	Mangalore	72	29·811	+·011	29·845	29·907	20th	29·763	1st	78·5	76·1	84·2	+0·8	74·3	+0·6	79·3	+0·7	9·9	88·3	26th	72·7	2nd
	Calicut	27	29·900	+·023	29·856	29·946	6th	29·824	1st	76·7	75·6	81·4	—1·3	74·5	+0·2	77·9	—0·5	6·9	84·8	10th	73·0	20th
	Cochin	9	29·947	+·037	29·884	29·989	6th & 20th.	29·871	1st	78·0	75·2	83·3	—0·8	74·3	—0·1	78·8	—0·5	9·0	85·7	16th	71·3	1st
	Trivandrum	198	29·753	+·046	29·883	29·805	6th	29·701	1st	76·4	74·3	82·5	+0·3	73·4	—1·6	78·0	—0·7	9·1	85·6	11th	70·0	1st
31	Pamban	37	29·834	+·020	29·799	29·899	20th	29·763	1st	82·7*	76·5	87·3	—2·0	78·5	+0·1	82·9	—0·9	8·8	88·6	18th	77·3	7th
	Madura	447	29·428	+·031	29·805	29·487	20th	29·342	1st	83·1	73·7	96·8	+0·5	77·4	+1·6	87·1	+1·1	19·4	100·8	18th	71·8	30th
	Pudukkottai	318	29·549	+·024	29·794	29·607	6th	29·480	1st	82·4	73·1	96·3	+1·7	76·6	+1·0	86·5	+1·3	19·7	103·8	15th	72·4	20th
	Negapatam	31	29·829	+·024	29·789	29·892	20th	29·758	1st	82·6	76·6	94·8	+0·9	78·4	+1·1	86·6	+1·0	16·4	98·9	16th	73·2	19th
	Trichinopoly	255	29·611	+·022	29·798	29·674	20th	29·531	1st	83·1	73·8	98·5	+2·0	77·7	+0·9	88·1	+1·5	20·8	101·3	5th	74·4	18th
	Coimbatore	1,341	28·547	+·031	29·817	28·604	20th	28·453	1st		71·2	87·6	—0·6	71·3	+0·5	79·4	—0·1	16·3	92·0	31st	68·8	24th
	Salem	913	28·962	+·032	29·811	29·018	20th	28·877	1st	77·6	73·1	93·8	+1·7	73·4	+0·6	83·6	+1·1	20·4	98·5	13th	71·8	7th, 22nd & 24th.
	Cuddalore	37	29·801	+·016	29·768	29·873	20th	29·727	1st	82·7	76·0	95·4	+1·6	78·0	+1·3	86·7	+1·5	17·4	99·6	16th	72·0	7th
	Vellore	707	29·114	+·003	29·754	29·180	20th	29·016	1st	81·4	73·6	94·7	+1·8	77·4	+1·1	86·1	+1·5	17·3	99·0	25th	74·0	18th
	Madras	22	29·797	+·010	29·750	29·866	20th	29·698	1st	84·0	76·1	96·6	+2·8	79·1	+1·6	87·8	+2·2	17·5	101·2	15th	74·1	22nd
32	Cuddapah	428	29·392	+·007	29·754	29·477	20th	29·291	1st	83·7	75·5	96·5	+2·2	79·2	+2·4	87·8	+2·3	17·3	101·0	21st	75·3	22nd
	Bellary	1,475	28·343	+·006	29·749	28·430	20th	28·257	1st	79·8	70·5	92·0	+1·2	74·5	+0·7	83·2	+0·9	17·5	96·3	17th	73·5	11th
	Kurnool	923	28·887	+·016	29·750	28·979	20th	28·783	1st	78·5	73·2	92·5	+2·4	75·1	+1·2	83·8	+1·8	17·4	96·2	30th	72·6	19th
33	Nellore	66	29·723	+·006	29·723	29·809	20th	29·608	1st	84·9	76·2	96·5	+0·8P	80·5	+1·7	88·4	+1·3P	16·0	99·6	21st & 22nd.	75·4	18th
	Masulipatam	15	29·740	—·002	29·690	29·844	20th	29·578	1st	82·2	76·7	93·2	+2·0	78·6	+0·9	85·9	+1·5	14·6	99·5	16th	73·2	18th
	Cocanada	26	29·691	—·009	29·657	29·817	20th	29·513	1st	81·2	77·1	89·9	+0·4	78·5	+0·1	84·2	+0·3	11·4	96·6	16th	73·8	24th
	Waltair (Vizagapatam)	226	29·618	—·037	29·594	29·800	20th	29·378	1st	83·6	76·8	90·7	+2·0	81·0	+3·0P	85·8	+2·5P	9·7	98·4	15th	75·6	27th
	Calingapatam	19	29·625		29·582	29·803	20th	29·370	1st	81·8	78·3	89·0		78·5		83·8		10·5	93·6	15th	75·2	25th
	Gopalpur	33	29·561	—·040	29·557	29·746	20th	29·274	1st	81·8	79·6	87·5	+0·2	79·2	+0·5	83·3	+0·3	8·3	94·0	5th	75·8	1st
	Bay Islands.																					
1	P. V. Fraser	8	29·547†		29·527†	29·738	20th	29·276	1st	83·9	80·9											
	Port Blair	58	29·795	+·005	29·783	29·872	18th	29·704	24th	84·3	77·9	85·8	+0·6	78·3	+1·1	82·1	+0·9	7·5	88·4	8th	74·5	22nd
	Table Island		29·707	—·028	29·731	29·811	19th	29·624	24th	80·9	78·3	83·7	—0·7	78·8	+1·6	81·2	+0·5	4·9	85·2	20th & 28th.	73·1	31st
	Kashmir.																					
13	Muzaffarabad		27·251			27·349	18th	27·129	7th	79·1	74·9	88·5		72·5		80·5		16·0	94·8	17th	70·1	11th & 12th.
	Srinagar	5,204	24·703	—·006	24·674	24·832	20th	24·576	7th	71·6	67·9	84·1	—0·6	66·2	+2·8	75·2	+1·1	17·9	89·5	16th	61·2	26th
	Gulmarg	*8,569*	21·799	+·004	21·767	21·990	20th	21·692	7th	61·5	58·7	68·1	—0·2	52·9	+2·0	60·5	+0·9	15·2	72·5	30th	39·3	2nd
	Dras	*10,052*	20·749	+·022	20·717	20·848	20th	20·637	8th	60·8	53·9	75·1	—4·6	53·0	+4·6	64·0	0	22·1	81·7	14th	44·6	10th
	Leh	*11,503*	19·698	+·030	19·666	19·810	21st	19·572	8th	57·7	50·4	72·8	—4·1	51·7	+2·0	62·2	—1·1	21·1	79·1	1st	49·0	10th
	Skardu	*7,505*	22·691	—·011	22·661	22·815	23rd	22·581	7th	70·4	58·3	87·8	+0·7	64·2	+3·1	76·0	+1·9	23·6	97·2	8th	58·0	9th
	Gilgit	4,890	25·040	+·141	25·013	25·144	17th	24·945	5th	78·2	69·8	95·0	—0·2	70·3	—1·4	82·6	—0·8	24·7	101·4	16th	62·6	26th & 27th.

N. B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

* Mean of 21 days.
† „ „ 30 „

B—*continued.*

in India, etc., in August, 1919—*continued.*

Wind direction. Number of winds from Calms.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st Aug. 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XV.—Madras.
4	0	0	1	2	3	1	14	6	S 87° W	N 72° W	4·8	1·8	+3·0	56	+31	89	0	·865	+·022	7·6	−0·9	28	+ 3·3	20·13	23·04	− 2·91	87·84	1[illegible]3·62	−15·78	2·58	Mangalore.
18	1	0	0	0	0	1	2	9	N 54° W	N 22° W	2·6	5·6	−3·0	33	− 7	95	+ 4	·869	+·028	8·5	+0·7	24	+ 5·5	17·52	15·95	+ 1·57	89·02	89·16	− 0·14	4·14	Calicut.
5	4	3	4	5	2	0	5	3	N 43° E	N 13° W	4·8	4·2	+0·6	13	−34	87	+ 1	·836	−·005	7·7	+0·4	27	+ 9·0	16·71	21·83	+ 3·88	80·57	76·35	+ 4·22	2·34	Cochin.
1	3	0	0	0	0	0	0	27	N 40° W	N 13° W	5·9	6·6	−0·7	96	+13	90	+ 5	·819	+·013	8·4	+0·7	14	+ 4·8	4·65	4·08	+ 0·57	34·13	33·26	+ 0·87	0·82	Trivandrum.
1	0	0	0	0	11	18	1	0	S 30° W	S 43° W	8·5	7·3	+1·2	92	+27	75*	− 2	·837*	−·034	2·6	−0·6	1	− 0·1	0·17	0·75	− 0·58	3·65	2·02	+ 1·63	0·17	Pamban.
1	1	0	0	0	0	0	14	15	N 64° W	N 41° W	5·8	2·3	+3·5	89	+10	62	− 5	·704	−·039	7·5	+2·3?	3	− 2·9?	0·86	4·18	− 3·32	11·54	10·20	+ 1·34	0·32	Madura.
14	1	0	0	1	0	2	5	8	N 66° W		4·2			39		63	− 8	·690	−·064	6·3	−0·8	8	+ 0·2	5·28	5·59	− 0·31	11·51	12·23	− 0·72	1·39	Pudukkottai.
0	0	0	0	0	0	9	21	1	S 79° W	S 72° W	6·7	4·5	+2·2	96	+13	75	+ 4?	·837	+·039?	5·0	−0·3	4	− 1·4	4·22	3·62	+ 0·60	9·67	8·43	+ 1·24	2·53	Negapatam.
0	0	0	0	0	1	10	17	3	S 77° W	S 85° W	6·5	5·8	+0·7	89	+ 1	62	− 6	·705	−·032	5·3	−0·7	3	− 2·1	1·67	3·88	− 2·21	10·69	9·81	+ 0·88	0·87	Trichinopoly.
4	0	0	0	0	1	19	7	0	S 55° W	S 36° W	7·2	4·7	+2·5	79	0	72	−12?	·682	−·064	2·9	−2·6	1	− 1·8	0·85	1·08	− 0·23	4·98	6·66	− 1·68	0·73	Coimbatore.
1	0	0	0	0	7	20	3	0	S 39° W	S 37° W	4·6	2·9	+1·7	86	+14	80	0	·757	−·022	4·6	−1·9	11	+ 0·3	4·61	6·91	− 2·30	18·53	18·53	0	1·49	Salem.
1	0	0	0	0	0	25	5	0	S 53° W	S 73° W	5·5	1·7	+3·8	96	+24	72	− 6	·804	−·059	6·1	+0·6	8	+ 0·1	2·77	5·13	− 2·36	7·59	10·38	− 2·79	0·86	Cuddalore.
3	0	0	0	0	0	0	7	21	N 56° W		5·4			85		68	− 3	·724	−·016	5·7	+0·3	3	− 4·6	1·46	6·40	− 4·94	17·09	16·07	+ 1·02	0·62	Vellore.
0	0	0	0	0	1	15	14	1	S 67° W	S 66° W	4·5	5·0	−0·5	89	+10	68	− 8	·788	−·048	6·8	0	5	− 3·0	3·12	4·79	− 1·67	11·80	11·59	+ 0·21	1·25	Madras.
0	2	0	0	0	0	0	21	8	N 74° W	N 82° W				92	+ 9	67	− 4	·772	+·006	7·2	−0·4	2	− 6·2	1·42	5·81	− 4·39	15·83	14·25	+ 1·58	1·30	Cuddapah.
0	1	0	0	0	0	5	17	8	N 83° W	N 85° W	9·1	8·2	+0·9	86	0	62	− 6	·626	−·022	7·4	−0·2	0	− 4·2	0·09	2·33	− 2·25	4·56	8·05	− 3·49	0·02	Bellary.
0	0	0	0	0	0	10	15	6	S 84° W	N 89° W	10·1			86	+21	77	0	·745	+·011	6·7	−0·5	4	− 5·5	0·83	5·32	− 4·49	8·60	14·20	− 5·60	0·16	Kurnool.
2	0	0	0	0	0	5	15	9	N 83° W	N 68° W	3·9	6·9	−3·0	82	+ 7	66	− 4	·780	−·022	7·2	−0·9	5	− 0·7	1·78	3·42	− 1·64	8·94	8·13	+ 0·81	0·51	Nellore.
1	0	0	0	0	0	4	14	12	N 75° W	N 72° W	7·5	5·6	+1·9	86	+ 3	78	− 5	·841	−·066	5·9	−1·9	7	− 3·7	3·15	6·91	− 3·76	19·95	18·76	+ 1·19	1·80	Masulipatam.
1	0	0	0	0	0	8	22	0	S 78° W	S 74° W	6·4	5·6	+0·8	92	+13	83	0	·878	−·001	8·2	+1·0	9	− 0·6	5·41	5·43	− 0·02	14·60	17·38	− 2·78	1·18	Cocanada.
1	0	0	0	0	0	9	17	4	S 82° W	S 84° W	11·3			86	+ 5	72	− 7	·823	−·027	9·3	+1·3	7	− 1·4	3·09	5·59	− 2·50	13·42	17·00	− 3·58	1·42	Vizagapatam.
5	2	0	0	0	0	8	12	4	S 87° W		6·2			68		85		·926		5·8		11	+ 0·7	10·75	9·77	+ 0·98	28·13	23·32	+ 4·81	5·63	Calingapatam.
1	2	0	0	0	11	15	0	2	S 34° W	S 63° W	7·0	8·0	−1·0	72	+14	91	+ 6	·989	+·064?	7·2	+2·2	13	+ 1·7	13·73	7·86	+ 5·87	31·25	22·73	+ 8·52	3·70	Gopalpur.
																															Bay Islands.
2	0	0	1	2	5	14	5	1	S 39° W					65		87		1·012		6·9		14	+ 4·1	12·19	6·93	+ 5·26	30·58	24·67	+ 5·91	3·58	P. V. Fraser.
0	0	6	0	0	1	12	15	3	S 74° W	S 62° W	11·1	7·9	+3·2	86	+ 7	84	− 4	·905	−·008	8·3	+0·1	21	+ 2·0	10·24	14·50	− 4·26	52·49	65·33	−12·84	1·58	Port Blair.
0	0	0	0	0	2	18	11	0	S 58° W		20·6			92		88	− 1	·934	−·004	8·2	−0·5	15	− 1·6	9·16	11·97	− 2·81	27·53	50·12	−22·59	2·50	Table Island.
																															Kashmir.
27	0	0	0	0	0	3	1	0	S 56° W		0·7			10		82		·816		6·2		12	− 1·8	12·34	11·03	+ 1·31	33·15	26·26	+ 6·89	2·72	Muzaffarabad.
19	1	0	1	3	4	1	1	1	S 9° E	S 48° E	1·6	2·6	−1·0	17	−15	82	− 3	·638	+·022	6·1	+1·3	5	0	2·40	2·23	+ 0·17	5·30	8·72	− 3·42	0·55	Srinagar.
10	3	10	3	1	0	1	0	3	N 36° E		2·9			46		86	+ 7	·468	+·047	7·3	+2·4	11	+ 1·5	5·53	4·82	+ 0·71	10·24	12·31	− 2·07	1·20	Gulmarg.
25	0	1	0	0	0	4	1	0	S 56° W		6·1			10	*	66	+ 4	·356	+·019	5·2	+1·1	7	+ 5·8	1·50	0·44	+ 1·06	2·88	4·47	− 1·59	0·36	Dras.
28	0	0	1	0	2	0	0	0	S 27° E	N 85° W	0·7	1·3	−0·6	7	−53	64	+ 5	·302	+·019	6·2	+1·7	4	+ 2·3	1·54	0·50	+ 1·04	2·01	1·36	+ 0·65	0·50	Leh.
1	1	2	5	2	2	7	10	1	S 58° W		5·6			30		49	− 5	·367	−·013	5·1	+1·0	0	−1·2	0·07	0·36	− 0·32	0·17	2·39	− 2·22	0·06	Skardu.
28	0	0	0	0	0	2	0	1	S 72° W		0			7		67	+20	·632	+·169	3·1	−0·8	1	− 0·8	0·45	0·48	− 0·03	0·78	2·20	− 1·42	0·23	Gilgit.

* Mean of 21 days.

Table

(2) Abstract of observations taken at 8 hrs. at 212 stations

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of most between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
15	**Baluchistan.**																					
	Quetta	5,502	24·490	+·006	24·450	24·595	17th	24·389	4th	70·3	62·9	93·3	+2·1	63·8	+2·4	78·6	+2·3	29·5	97·7	17th	52·7	30th
	Chaman	4,311	25·463	−·030	25·425	25·587	17th	25·336	4th	81·1	62·9	98·3	+1·1	73·4	+2·0	86·1	+1·5	25·4	104·3	5th	66·4	29th
	Kalat	6,630	23·609		23·571	23·708	17th	23·528	4th	63·2	56·3	90·2	−1·1	59·0		74·6		31·2	102·7	5th	51·4	30th
	Dalbandin	2,772	26·852		26·815	26·959	17th	26·711	4th	80·9	60·9	106·7		71·3		89·0		35·4	110·5	4th	65·0	14th
	Pasni		29·628		29·588	29·740	21st	29·529	4th	79·2	76·1	89·9		73·3		81·6		16·6	95·3	27th	70·0	28th
	Panjgur		26·508		26·466	26·605	17th	26·406	4th	78·9	70·3	102·9		75·4		89·1		27·5	105·2	6th	67·2	29th
	Seistan (c)		27·823			27·970	22nd	27·590	4th	81·2	62·2	101·7		77·3		89·5		24·4	109·2	4th	69·4	26th
	Hill stations, excluding Kashmir and Baluchistan.																					
	Parachinar	6,000	24·324	+·009	24·300	24·447	20th	24·208	8th	72·6	66·8	82·6	−3·0	65·5	+0·7	74·1	−1·1	17·1	86·0	16th	61·1	10th
	Cherat *	*4,256*	25·542	+·012	25·510	25·672	20th	25·428	7th	72·2	69·5	81·8	−4·8	68·4	−1·5	75·1	−3·1	13·4	91·8	1st	63·3	5th
	Drosh (c)		24·857			24·975	17th, 20th & 25th.	4·725	4th, 7th & 8th.	79·0	69·0	94·3	−1·0	74·5	+2·6	84·4	+0·8	19·8	98·7	13th	65·4	9th & 25th.
	Murree	8,333	23·871	?	23·839	23·980	20th	23·756	8th	63·9	62·3	71·2	−2·7	61·4	+0·8	66·3	−0·9	9·8	78·2	1st	56·1	25th
	Simla	7,232	22·996	−·013	22·958	23·103	20th	22·891	6th	62·8	61·0	66·1	−0·6	60·0	+0·8	63·0	+0·1	6·1	68·7	27th	58·5	12th
	Chakrata	7,072	23·261	?	23·221	23·368	20th	23·157	5th	64·7	63·0	71·2	+2·7	60·7	+1·1	65·9	+1·9	10·5	76·9	26th	58·5	2nd
	Mukteswar	7,592	22·770	+·009	22·729	22·890	17th	22·671	6th	61·9	59·9	69·4	+0·6	55·7	−2·0	62·5	−0·7	13·7	76·3	3rd	51·8	31st
	Darjiling	7,432	22·887	−·011	22·842	23·001	17th	22·807	7th	63·1	61·4	70·7	−4·8	58·9	+1·5	64·8	+3·1	11·8	76·6	25th	56·6	18th
	Shillong	4,920	25·011	−·024	24·953	25·129	20th	24·925	30th	69·2	65·9	76·2	+1·2	64·3	+0·8	70·3	+1·0	11·9	80·6	24th	61·3	30th
	Cherrapunji	4,309	25·545	−·035	25·496	25·677	20th	25·445	10th	69·0	66·8	74·5	+2·5	65·4	+0·4	70·0	+1·5	9·1	81·3	25th	63·8	19th
	Netarhat		26·037		25·986	26·052	10th	26·010	26th	70·5	69·7	77·6		65·6		71·6		12·0	81·2	24th & 30th.	60·3	1st
	Maymyo	3,516	26·287	−·043	26·232	26·409	17th	26·165	10th	69·3	67·9	75·7	−0·8	66·7	+1·2	71·2	+0·2	9·0	82·0	23rd	64·2	21st
	Pachmarhi	3,528	26·236	−·037	26·183	26·414	19th	26·056	2nd	68·7	63·5	74·3	−0·6	67·4	+0·4	70·9	−0·1	6·9	80·0	1st	65·1	16th
	Mount Abu	3,945	25·845	−·021	25·795	25·938	17th	25·722	4th	67·0	66·5	70·5	−1·5	65·4	+1·0	67·9	−0·3	5·1	77·6	3rd	62·0	11th
	Mercara	3,781	26·198	+·016	26·131	26·328	15th	26·134	1st	63·8	63·4	68·9	−0·8	61·2	−0·9	65·0	−0·9	7·7	71·2	21st	60·0	24th & 26th.
	Ootacamund	*7,327*	23·037	+·032	22·973	23·096	20th	22·970	25th	56·7	54·2	63·2	+0·5	52·3	+0·2	57·8	+0·3	10·9	67·5	20th & 29th.	48·2	24th
	Kodaikanal	7,688	22·806	+·018	22·741	22·856	20th	22·746	25th	57·5	53·7	64·5	+1·4	52·6	+0·1	58·5	+0·7	11·9	68·8	18th	49·2	25th
	Extra India.																					
	Singapore (a)	10	29·863	−·067	29·794	29·924	17th	29·771	4th	84·3		88·7	+1·3	75·9	+2·3	82·3	+1·8	12·8	91·5	30th	72·5	27th
	Penang (a)	17	29·826	−·089	29·768	29·938	21st	29·796	9th	83·5		90·9	+2·0	71·3	−2·4	81·1	−0·2	19·6	94·0	2nd & 9th	70·0	8 days.
	Trincomalee	99	29·777	+·028	29·804	29·839	20th	29·705	1st	79·9	73·9	95·4	+3·7	77·3	+0·3	86·8	+2·0	18·1	99·0	16th	72·0	3rd
	Colombo	24	29·929	+·033	29·879	29·972	20th	29·879	30th	77·9	75·5	84·3	−1·7	76·1	−1·3	80·2	−1·5	8·2	85·4	17th & 31st.	73·2	19th
	Hambantota	64	29·868		29·858	29·916	6th	29·786	1st	76·6	74·4	86·3		75·6		80·9		10·7	93·5	15th	72·5	18th
	Minicoy	7	29·971	+·051		30·012	23rd	29·908	1st													
	Amini Divi	*13*	29·913	+·019	29·854	29·998	8th	29·838	1st	81·3	77·1	85·5	+0·1	76·9	−0·4	81·2	−0·1	8·6	87·4	16th	73·5	27th
	Gyantse	13,110																				
	Pharijong	14,400																				
	Gangtok*	5,667	24·177	−·098	24·132	24·300	17th	24·103	7th	67·1	65·1	74·4	−0·2	63·8	+8·2	69·1	+4·0	10·6	81·1	25th	60·9	19th

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

(a) 9 hrs. observations.
(c) Aneroid.

* Mean of 30 days.

B—*continued.*

in India, etc., in August, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st August 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
21	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Baluchistan.
27	0	0	0	1	3	0	0	0	S 11° E	S 22° W	2·0	2·0	0	13	+ 7	66	+10	·462	−·017	2·3	+1·2	0	−0·7	0·15	0·41	−0·26	2·07	1·61	+0·46	0·06	Quetta.
11	0	0	1	7	8	3	0	1	S 12° E	S 61° W	3·8	6·1	−2·3	46	− 5	36	+ 5	·371	+·025	1·5	+1·0	0	0	0·06	0·02	+0·04	0·65	0·25	+0·40	0·06	Chaman.
27	0	0	1	0	2	1	0	0	S 7° E	S 16° W	4·0			9	−29	68	+27	·397	+·038	2·8		2	+1·5	0·89	0·18	+0·71	1·79	1·36	+0·43	0·73	Kalat.
12	1	3	2	0	0	5	8	0	S 87° W		5·8			24		27		·296		1·1		0	−0·2	0	0·08	−0·08	0	0·23	−0·23	0	Dalbandin.
6	1	1	2	0	2	0	17	3	N 87° W		5·5			56		36		·655		8·8		0	−0·2	0	0·08	−0·08	0·02	1·75	−1·73	0	Pasni.
26	0	0	1	1	1	1	0	1	S 11° E		3·3			5		67		·653		1·8		0	0	0			1·14			0	Panjgur.
2	0	0	0	0	0	0	0	29	N 45° W		16·4			92		31		·526		0·5		0		0			0			0	Seistan.
																															Hill stations excluding Kashmir and Baluchistan.
31	0	0	0	0	0	0	0	0	Calm		0			(a)		74	+13	·591	+·072	5·5	+1·2	13	+5·9	6·36	3·47	+2·89	15·91	11·61	+4·30	1·50	Parachinar.
19	0	0	0	4	7	0	0	1	S 13° E	S 31° E	2·5	5·9	−3·4	30	+ 2	88	+12	·690	+·049	6·4	+2·1	8	+2·4	4·94	4·02	+0·92	11·22	10·68	+0·54	1·38	Cherat.
29	0	0	0	0	0	2	0	0	S 45° W		3·4			3		60	+ 2	·488	+·032	2·8	+0·5	3	+0·7	1·43	0·72	+0·71	4·85	3·99	+0·86	0·62	Drosh.
12	4	2	1	8	4	0	0	0	S 62° E	N 46° W	2·9	3·9	−1·0	30	+ 8	92	+ 9	·544	+·014	6·8	+1·6	20	+5·7	33·68	14·11	+19·57	53·45	32·55	+20·90	5·78	Murree.
																91	0	·520	+·017	7·7	−0·5	18	−1·7	11·86	18·12	−6·26	52·0[illegible]	43·84	+8·16	2·30	Simla.
8	0	7	2	0	0	14	0	0	S 32° W	S 39° E	9·7	3·9	+5·8	20	+12	91	− 2	·526	+·026	8·4	+2·1	16	−4·2	13·71	19·38	−5·67	41·78	49·70	−7·92	3·57	Chakrata.
8	1	2	7	5	3	1	4	0	S 56° E		3·8			27		90	− 4	·497	−·011	7·8	−0·9	19	+1·4	9·73	12·78	−3·05	29·96	33·69	−3·73	2·02	Mukteswar.
15	5	3	3	3	0	0	0	2	N 42° E	N 88° E	1·9	2·7	−0·8	27	−13	91	− 5	·516	+·005	9·1	+0·1	18	−6·4	20·43	27·71	−7·28	99·73	94·27	+0·46	5·04	Darjiling.
19	0	2	6	2	0	2	0	0	S 79° E		1·5			23		84	− 3	·598	+·005	6·8	−0·8	16	−3·0	7·53	14·66	−7·13	34·17	58·37	−24·20	1·37	Shillong.
3	4	11	6	4	2	1	0	0	N 68° E		2·7			36		89	− 7	·631	−·008	9·0	+0·3	24	−3·2	38·26	82·91	−44·65	247·07	322·40	−75·33	5·02	Cherrapunji.
1	0	6	3	8	0	4	5	4	S 63° E		5·9			60		96		·722		8·9		18		21·06			67·28			2·61	Netarhat.
19	0	0	0	0	2	9	1	0	S 41° W		1·3			33		93	+ 3	·668	0	9·1	+1·5	19	+4·1	10·55	8·79	+1·76	34·11	34·43	−0·32	1·52	Maymyo.
0	0	0	0	0	0	1	20	10	N 77° W	S 87° W	4·8	6·8	−2·0	96	+20	98	+ 6	·683	+·028	10·0	+1·0	31	+9·8	42·95	22·83	+20·12	81·84	56·54	+25·30	4·85	Pachmarhi.
4	2	1	0	0	0	14	6	4	S 76° W	S 59° W	5·6	8·2	−2·6	59	−19	98	+ 3	·649	+·034	9·8	+0·9	21	+3·8	64·76	19·64	+45·12	83·57	47·70	+35·87	12·53	Mount Abu.
0	1	0	0	0	0	13	15	2	S 75° W	N 76° W	6·6	6·1	+0·5	86	− 4	97	+ 1	·574	−·010	9·6	+0·2	29	+2·8	31·38	25·68	+5·70	97·80	99·92	−2·12	4·54	Mercara.
1	0	0	0	0	0	4	16	10	N 81° W		6·6			86		85	− 2	·395	−·001	9·1	+1·0	9	−3·4	3·18	5·61	−2·43	24·84	29·30	−4·46	0·96	Ootacamund.
1	1	0	0	0	0	2	19	8	N 79° W		9·6			86		79	− 1	·375	−·005	6·1	−0·2	10	−2·1	6·77	6·74	+0·03	20·80	21·77	−0·97	1·68	Kodaikanal.
																															Extra India.
7	0	0	0	15	3	5	1	0	S 19° E					59						6·6	+0·8	7	−3·8	6·17	6·81	−0·64	25·84	26·25	−0·41	2·40	Singapore.
0	1	10	0	13	1	1	0	5	N 87° E					10								10	−2·7	5·28	11·17	−5·89	33·42	34·32	−0·90	1·26	Penang.
0	0	0	0	0	0	21	10	0	S 59° W	S 45° W	8·2	10·2	−2·0	93	− 1	74	− 7	·759	−·094	5·8	+3·0	1	−4·1	0·21	4·32	−4·11	10·85	9·93	+0·92	0·21	Trincomalee.
12	0	0	0	0	2	10	7	0	S 57° W	S 61° W	3·7	6·7	−3·0	53	−35	89	+ 7	·851	−·016	8·3	+1·9	15	+9·0	4·55	3·32	+1·23	32·15	27·32	+4·83	0·68	Colombo.
0	0	0	0	0	0	9	22	0	S 77° W		9·7	12·0	−2·3	96	+ 6	89		·814		4·4		3		0·55	1·22	−0·67	6·92	8·21	−1·29	0·14	Hambantota.
0	0	0	0	0	1	6	18	6	S 88° W	N 79° W	7·8	10·9	−3·1	87	− 3					5·3	−0·3	17	+6·3	6·91	7·11	−0·20	45·07	32·68	+12·39	0·78	Minicoy.
0	0	0	0	0	0	7	19	5	S 88° W		12·9			87		82	− 1	·873	−·016	6·6	−0·4	13	+1·6	14·11	7·49	+6·62	62·87	36·50	+26·37	3·80	Amini Divi.
																									3·22						Gyantse.
																									3·63						Pharijong.
0	1	9	4	6	7	1	2	0	S 67° E		5·2			43		91	− 1	·603	+·065	7·6	+1·7	29	+1·6	20·84	23·36	−2·52	85·33	88·68	−3·35	2·73	Gangtok.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs. at 212

Number of sub-division.	Station.	Height of barometer above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Extra India—*concld.*																					
	Gartok (c)	15,100																				
	Kashgar (c)	4,255	25·374	—·116		25·520	12th	25·210	4th	77·1	64·7	95·8	+6·0	68·2	+2·6	81·9	+4·3	27·6	104·8	4th	59·3	12th
	Kabul (c)	...	23·943	—·192		24·070	17th	23·830	8th	74·2	66·6	100·8	+7·3	70·3	+10·8	85·5	+9·1	30·5	105·8	2nd	63·0	29th
	Meshed	3,104																				
	Jask	13	29·574	—·019	29·540	29·704	21st	29·475	5th	85·6	82·7	94·0	—0·3	82·0	—2·1	88·0	—1·2	12·0	97·9	27th	77·2	22nd
	Muscat	20	29·599	+·017	29·567	29·722	21st	29·484	1st	86·5	82·1	91·0	+1·9	84·5	+0·5	87·7	+1·2	6·5	98·2	28th	81·0	26th
	Bushire	14	29·531	—·013	29·507	29·614	16th	29·428	5th	90·0	81·4	96·3	—0·6	84·8	+0·9	90·5	+0·1	11·5	100·2	11th	77·5	24th
	Ispahan (c)	*5,817*	24·171	—·119		24·260	18th	24·060	11th	71·4	59·2	94·4	—1·5	65·3	+2·1	79·9	+0·3	29·1	99·4	18th	59·2	29th
	Tehran (c)	*4,002*	25·632	—·118		25·750	18th	25·510	14th	79·8	66·4	95·8	—1·7	72·0	+1·0	83·9	—0·3	23·8	100·6	5th	64·0	21st
	Baghdad	127	29·485			29·597	17th	29·343	6th	82·5	64·4	108·2		79·3		93·7		28·9	118·7	10th	72·5	20th
	Aden	94	29·638	—·012	29·664	29·723	17th	29·538	28th	82·7	76·9	92·5	+0·5	79·9	—0·5	86·2	0	12·6	96·7	5th	74·5	4th & 5th
	Zanzibar	72	30·106	+·022	30·105	30·167	14th & 16th.	29·989	30th	75·1	71·6	81·9	+0·8	72·9	+0·2	77·4	+0·5	9·0	84·9	30th	70·9	1st

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level, in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.
(*c*) Aneroid.

B—*concluded.*

stations in India, etc., in August, 1919—*concluded.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st August 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Extra Ind —*concld.*
																									1·18			2·27			Gartok.
29	0	0	0	0	0	0	1	1	N 63° W	N 48° W	0	3·1	−2·6	6	− 1	52	− 1	·480	+·029	4·2	+0·9	0	−1·7	0	0·60	−0·60	0·10	1·80	−1·70	0	Kashgar.
0	2	0	1	6	4	7	8	3	S 48° W	S 88° E				45	+31	68	+21	·581	+·175	?	?	0	−0·5	0	0·14	−0·14	1·16	1·26	−0·10	0	Kabul.
																									0·03			1·68			Meshed.
1	0	0	25	2	1	0	0	2	S 88° E	S 74° E	10·0	10·5	−0·5	82	+ 6	88	+11	1·080	+·050	2·5	−0·2	0	0	0	0	0	0·37	0·08	+0·29	0	Jask.
7	1	0	1	20	0	0	0	2	S 49° E	S 76° E	2·9	3·2	−0·3	59	− 1	82	+ 1	1·039	+·031	2·5	−0·3	0	0	0	0·01	−0·01	0·16	0·17	−0·01	0	Muscat.
5	4	3	2	3	0	1	3	10	N 24° W	N 59° E	7·1	5·3	+1·8	37	+15	68	0	·959	−·028	2·3	+1·5	0	0	0	0·01	−0·01	0·11	0·03	+0·08	0	Bushire.
24	0	0	0	0	0	0	0	0	Calm*	N 34° W	1·4	2·4	−1·0	(a)		49	− 2	·382	−·091	1·5	+0·3	0	0	0	0	0	0	0·28	−0·28	0	Ispahan.
22	0	1	0	0	3	5	0	0	S 27° W	S 14° W	2·9	1·6	+1·3	23	+12	49	+ 8	·496	+·067	2·0	+1·1	0	−0·2	0	0·04	−0·04	0	0·78	−0·78	0	Tehran.
0	3	0	0	0	0	1	22	5	N 12° W	N 4° W	9·6	2·8	+6·8	92	+31	33	− 9	·370	−·194	0·3	0	0	−0·1	0	0·04	−0·04	1·22	0·25	+0·97	0	Baghdad.
8	0	5	6	6	5	1	0	0	S 64° E	S 12° W	6·2	7·8	−1·6	46	− 8	77	+ 4	·851	−·026	5·7	+2·0	0	−0·3	0	0·12	−0·12	0	0·33	−0·33	0	Aden.
4	0	0	0	1	14	11	1	0	S 19° W	S 1° W	4·7	5·0	−0·3	81	− 5	83	− 2	·723	−·008	6·2	−0·1	5	+0·8	1·63	1·69	−0·06	7·64	16·89	−9·25	0·73	Zanzibar.

(a) Indeterminate.

* Wind observations for 24 days.

Table C.—Abstract of observations taken at 8 hrs. at 60 fourth and fifth class stations in India, etc., in August, 1919.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	II.—Assam.																								
4	Bishnath	82·6	79·0	93·7	+4·3	77·7	+3·6	85.7	+3·9	16·0	98·9	9th	73·9	12th	...	...	...	...	...	...	...	...	...	...	...
	Borjuli	84·2	82·2	93·0	+2·8	76·2	+0·8	84·6	+1·8	16·8	97·4	7th	71·4	4th & 18th	...	...	...	...	...	...	...	...	...	...	...
	Chandkhira	79·7	76·5	92·9	+3·3	70·6	−4·8	81·7	−0·7	22·3	100·6	13th	70·3	4 days	...	...	...	...	...	...	...	...	...	...	...
	Doom Dooma	81·8	78·5	95·7	+6·2	77·0	+1·9	86·3	+4·1	18·7	102·8	8th	74·4	19th	...	...	...	...	...	...	...	...	...	...	...
	Dikom	82·0	79·0	94·3	+5·7	77·4	+1·5	85·9	+3·6	16·9	100·8	8th	75·0	15th & 19th.	...	...	...	...	...	...	...	...	...	...	...
	Golaghat	81·6	79·1	92·1	+4·1	75·0	...	83·5	...	17·1	95·9	8th, 24th & 25th.	71·2	18th	...	...	...	...	...	...	...	...	...	...	...
	Hailakandi	81·8	78·6	92·5	+3·4	76·9	+1·0	84·7	+2·2	15·6	98·0	6th	74·2	12th	...	...	...	...	...	...	...	...	...	...	...
	Jorehat	82·4	79·4	92·2	+3·0	77·1	+0·8	84·7	+1·9	15·1	97·1	8th	71·7	14th	...	...	...	...	...	...	...	...	...	...	...
	Lumding*	82·9	79·1	92·7	...	77·0	...	84·5	...	15·7	96·3	25th	74·4	19th	...	...	...	...	...	...	...	...	...	...	...
	Messa	86·5	81·0	96·9	+3·9	76·4	+0·9	86·7	+2·4	20·5	100·0	5th	72·8	18th	...	...	...	...	...	...	...	...	...	...	...
	Panerihat	78·9	77·5	93·2	+4·9	71·3	−3·4	82·3	+0·7	21·9	99·1	5th	61·7	11th	...	...	...	...	...	...	...	...	...	...	...
	III.—Bengal.																								
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Brahmanbaria	82·[illegible]	77·7	92·2	+4·1	75·4	−1·9	83·8	+1·1	16·8	94·3	21st	72·9	19th	...	...	...	...	...	...	...	...	...	...	...
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Goalundo	83·4	79·3	88·2	+0·5	76·4	−1·4	82·3	−0·5	11·8	92·7	6th	74·5	2nd	...	...	...	...	...	...	...	...	...	...	...
	Pabna	82·0	79·4	88·4	−3·6	75·4	−0·4	81·9	−2·0	13·0	92·3	6th & 11th.	68·1	20th	...	...	...	...	...	...	...	...	...	...	...
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dam Dim	80·6	78·4	93·1	+2·0	74·4	−0·2	83·7	+0·9	18·7	97·9	1st	71·8	12th	...	...	...	...	...	...	...	...	...	...	...
	Kalchini	83·5	79·5	92·1	+3·4	74·3	−0·4	83·2	+1·5	17·8	97·1	23rd	71·0	17th	...	...	...	...	...	...	...	...	...	...	...
	Nagrakata	84·7	78·6	90·9	+2·5	75·5	−0·9	83·2	+0·8	15·4	96·1	24th	73·0	19th & 22nd.	...	...	...	...	...	...	...	...	...	...	...
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raniganj (Asansol)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IV.—Bihar and Orissa.																								
7	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzaffarpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Motihari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Mean of 26 days.

C.

and fifth class stations in India, etc., in August, 1919.

Wind velocity.			Wind steadiness		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st August 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				II.—Assam.
...	...	...	...	...	85	−9	·945	+·006	...	...	8	−11·5	7·13	20·26	−13·13	52·57	64·35	−11·78	2·10	Bishnath.
...	...	...	...	...	91	0	1·080	+·110	...	...	8	−9·6	9·04	15·12	−6·08	56·63	59·15	−2·77	2·98	Borjuli.
...	...	...	...	...	87	−4	·877	−·059	...	...	21	−0·2	13·59	13·11	+0·48	40·81	74·15	−33·34	2·20	Chandkhira.
...	...	...	...	...	86	−8	·931	+·010	...	...	9	−9·1	8·45	17·76	−9·31	62·91	62·73	+0·18	1·68	Doom Dooma.
...	...	...	...	...	87	−6	·949	+·035	...	...	9	−11·1	9·45	19·27	−9·82	71·06	67·18	+3·88	4·00	Dikom.
...	...	...	...	...	89	−2	·959	+·020	...	...	9	−7·4	8·47	12·35	−3·88	41·42	44·57	−3·15	2·75	Golaghat.
...	...	...	...	...	86	−5	·933	+·026	...	...	16	−6·8	14·24	16·69	−2·45	51·42	79·25	−27·83	3·04	Hailakandi.
...	...	...	...	...	87	−3	·964	+·032	...	...	13	−5·5	14·09	15·58	−0·89	65·79	52·50	+13·29	2·48	Jorehat.
...	...	...	...	...	84	...	·942	...	...	...	11	+0·4	5·57	7·32	−1·75	20·18	30·30	−10·12	1·59	Lumding.
...	...	...	...	...	78	−9	·981	+·029	...	...	13	−6·1	10·89	17·58	−6·69	45·01	56·88	−11·87	2·54	Messa.
...	...	...	...	...	94	−1	·926	+·066	...	...	9	−5·3	15·31	11·25	+4·06	60·38	55·25	+5·13	4·98	Panerihat.
																				III.—Bengal.
...	...	...	...	...	...	...	...	...	...	...	20	+2·1	15·12	16·12	−1·00	55·35	61·76	−6·41	3·36	Comilla.
...	...	...	...	...	81	−6	·884	−·052	...	...	17	−0·3	12·61	12·60	+0·01	34·22	56·82	−22·60	3·12	Brahmanbaria.
...	...	...	...	...	...	...	...	...	...	...	20	+2·8	18·53	11·97	+6·56	46·81	47·40	−0·59	3·75	Faridpur.
...	...	...	...	...	83	−3	·944	−·014	...	...	22	+6·0	13·06	10·98	+2·08	44·85	44·13	+0·72	2·57	Goalundo.
...	...	...	...	...	88	+1	·971	−·002	...	...	25	+9·7	19·74	8·74	+11·00	44·23	41·15	+3·08	2·61	Pabna.
...	...	...	...	...	...	...	...	...	...	...	16	+0·9	9·50	11·11	−1·61	40·28	43·70	−3·42	1·82	Sirajganj.
...	...	...	...	...	...	...	...	...	...	...	19	+4·5	13·07	9·98	+3·09	38·04	37·38	+0·66	1·81	Rampur Boalia.
...	...	...	...	...	...	...	...	...	...	...	19	+4·4	19·19	10·91	+8·28	59·34	35·85	+23·49	3·98	Malda.
...	...	...	...	...	...	...	...	...	...	...	12	−2·2	5·27	13·66	−8·39	46·47	56·76	−10·29	1·25	Rangpur.
...	...	...	...	...	91	−4	·944	−·004	...	...	19	−3·4	15·12	32·18	−17·06	87·18	116·13	−28·95	1·8	Dam Dim.
...	...	...	...	...	82	−5	·961	+·023	...	...	12	−9·6	13·21	33·84	−20·63	94·96	109·65	−14·69	1·72	Kalchini.
...	...	...	...	...	76	−13	·894	−·009	...	...	18	−4·6	11·31	32·99	−21·68	89·74	115·16	−25·42	1·80	Nagrakata.
...	...	...	...	...	...	...	...	...	...	...	12	−6·6	9·53	25·18	−15·65	79·14	101·71	−22·57	2·95	Cooch Behar.
...	...	...	...	...	...	...	...	...	...	...	15	+0·5	9·48	9·98	−0·50	37·96	38·98	−1·02	1·57	Krishnagar.
...	...	...	...	...	...	...	...	...	...	...	18	+2·3	15·81	11·02	+4·79	67·28	39·05	+28·23	2·10	Bankura.
...	...	...	...	...	...	...	...	...	...	...	18	+2·2	13·57	11·36	+2·21	43·20	37·36	+5·84	3·52	Raniganj (Asansol).
																				IV.—Bihar and Orissa.
...	...	...	...	...	...	...	...	...	...	...	19	+1·2	14·58	12·84	+1·74	44·83	36·72	+8·11	2·05	Hazaribagh.
...	...	...	...	...	...	...	...	...	...	...	14	+1·2	7·51	11·31	−3·80	32·58	35·14	−2·56	2·45	Bhagalpur.
...	...	...	...	...	...	...	...	...	...	...	11	−2·9	3·70	14·10	−10·40	19·90	37·23	−17·33	0·56	Muzaffarpur.
...	...	...	...	...	...	...	...	...	...	...	7	−7·0	4·33	14·23	−9·90	32·87	40·93	−8·06	2·52	Motihari.
...	...	...	...	...	...	...	...	...	...	...	10	−3·4	8·56	11·56	−3·00	36·94	30·85	+6·09	2·34	Chapra.
...	...	...	...	...	...	...	...	...	...	...	17	+3·2	8·66	11·91	−3·25	41·85	32·11	+10·04	1·13	Arrah.
...	...	...	...	...	...	...	...	...	...	...	16	+1·6	11·09	13·13	−2·04	40·27	30·33	+9·94	1·71	Dehri.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

Number of sub-division.	Station.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	V.—United Provinces of Agra and Oudh.																								
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehra Dun	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IX.—Rajputana.																								
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XII.—Central Provinces.																								
23	Chhindwara	73·6	70·1	79·2	...	71·0	...	75·1	...	8·2	85·5	18th	69·8	14th & 24th.	4	0	0	0	0	1	7	12	7	S 87° W	...
	XIII.—Hyderabad.																								
27	Parbhani	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XV.—Madras.																								
31	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Anantapur	79·5	76·1	93·7	...	74·7	...	84·2	...	19·0	97·3	21st	72·1	11th	...	...	...	...	...	...	...	...	...	...	...
33	Guntur	83·8	76·4	95·8	...	79·9	...	87·8	...	15·9	101·2	15th	74·6	1st	...	...	...	...	...	...	...	...	...	...	...
	Koraput	70·8	68·8*	75·3	...	68·4	...	71·9	...	6·9	81·0	20th & 21st.	65·8	15th	...	...	...	...	...	...	...	...	...	...	...
	Bay Islands.																								
1	Car Nicobar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kashmir.																								
13	Jammu	81·5	77·4	91·2	...	76·7	...	84·0	...	14·5	97·5	16th	71·7	18th	0	11	6	3	1	3	3	3	1	N 11° E	...
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kargil	70·2	57·5	87·9	...	52·7	...	70·3	...	35·2	95·3	14th	46·4	10th	6	0	0	0	0	0	0	0	25	N 45° W	...
	Baluchistan.																								
15	Harnai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill stations, exclusive of Kashmir.																								
	Panighatta	79·7	76·1	90·1	+2·9	73·8	0	81·9	+1·5	16·3	94·7	23rd & 26th.	70·1	11th, 19th & 29th.	...	...	...	...	...	...	...	...	...	...	...
	Kurseong	71·5	70·7	76·9	+3·9	66·0	+1·3	71·5	+2·6	10·9	80·8	23rd	63·7	24th	...	...	...	...	...	...	...	...	...	...	...
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dharampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mussoorie	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Poo	...	...	80·9	+3·3	65·2	+2·3	70·6	+2·8	20·6	88·7	15th	57·6	10th	7	0	0	0	5	2	13	4	0	S 34° W	...
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pishin	...	...	94·5	−1·9	59·5	−0·2	77·0	−1·1	35·0	98·4	5th	48·1	20th	...	...	...	...	...	...	...	...	...	...	...

* Mean of 30 days.

C—*continued.*

and fifth class stations in India, etc., in August, 1919—*continued.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st August 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				V.—United Provinces of Agra and Oudh.
...	...	...	...	...	...	...	...	...	...	...	14	+ 4·3	12·96	8·69	+ 4·27	20·05	21·57	— 1·52	2·05	Meerut.
...	...	...	...	...	...	...	...	...	...	...	14	—7·6	12·89	29·69	—16·80	42·36	65·27	—22·91	3·49	Dehra Dun.
																				IX.—Rajputana.
...	...	...	...	...	...	...	...	...	...	...	12	+3·7	10·81	6·18	+4·63	18·29	17·66	+ 0·63	3·60	Udaipur.
																				XII.—Central Provinces.
6·5	...	...	71	...	84	...	·697	...	9·2	...	19	+6·4	17·14	10·17	+6·97	39·58	27·10	+12·48	3·02	Chhindwara.
																				XIII.—Hyderabad.
...	...	...	...	...	...	...	...	...	...	...	6	—4·0	3·11	6·85	—3·74	13·82	20·72	— 6·90	1·25	Parbhani.
																				XV.—Madras.
...	...	...	...	...	...	...	...	...	...	...	0	—0·9	0·15	0·51	—0·36	1·68	2·96	— 1·28	0·08	Tinnevelly.
...	...	...	...	...	85	...	·858	...	6·6	...	0	—5·0	0·08	3·18	—3·10	10·54	9·76	+0·78	0·08	Anantapur.
...	...	...	...	...	70	...	·805	...	1·9	...	7	—2·8	2·35	5·57	—3·22	17·67	17·38	+ 0·29	0·88	Guntur.
...	...	...	...	...	91*	...	·685*	...	...	...	24	...	23·95	...	...	48·67	...	...	5·20	Koraput.
																				Bay Islands.
...	...	...	...	...	...	...	...	...	...	...	11	—2·7	5·07	10·52	—5·45	33·39	45·61	—12·22	1·10	Car Nicobar.
																				Kashmir.
...	...	...	32	...	83	...	·891	...	5·6	...	14	+3·0	21·39	11·35	+10·04	44·72	27·09	+17·63	3·78	Jammu.
...	...	...	...	...	...	...	...	...	...	...	13	+4·0	5·22	3·47	+1·75	12·79	15·10	— 2·31	1·42	Sonamarg.
...	...	...	81	...	46	...	·337	...	4·8	...	3	+2·3	0·49	0·15	+0·34	0·88	1·55	— 0·67	0·14	Kargil.
																				Baluchistan.
...	...	...	...	...	...	...	...	...	...	...	4	+ 0·5	1·68	2·24	—0·56	11·71	5·82	+ 5·89	0·93	Harnai.
																				Hill stations exclusive of Kashmir.
...	...	...	...	...	85	— 3	·851	—·017	...	...	18	—5·1	14·34	31·21	—16·87	97·32	101·66	— 4·34	4·30	Panighatta.
...	...	...	...	...	97	+ 4	·743	+·114	...	...	24	—2·2	21·00	36·58	—15·58	126·45	123·65	+ 2·80	4·24	Kurseong.
...	...	...	...	...	...	...	...	...	...	...	28	+0·3	20·33	31·45	—11·12	101·94	116·69	—14·75	3·15	Gnatong.
...	...	...	...	...	...	...	...	...	...	...	21	—5·0	5·71	11·21	— 5·50	29·92	36·41	—6·49	0·62	Lachung.
...	...	...	...	...	...	...	...	...	...	...	16	...	7·42	...	...	39·72	...	...	1·48	Dharampore.
...	...	...	...	...	...	...	...	...	...	...	22	—0·3	25·11	31·29	—6·18	72·66	72·23	+ 0·43	4·04	Mussooree.
...	...	...	58	...	...	...	...	...	6·6	+0·6	2	+0·5	0·72	0·61	+0·11	1·01	2·40	— 1·39	0·41	Poo.
...	...	...	...	...	...	...	...	...	...	...	6	+2·2	1·45	1·46	—0·01	4·48	6·31	— 1·83	0·51	Kailang.
...	...	...	...	...	...	...	...	...	1·1	...	1	+0·8	0·22	0·13	+0·09	1·39	0·44	+ 0·95	0·22	Pishin.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Extra India.																								
	Chumbi	54·6	53·3	61·7	...	49·8	...	55·7	...	11·9	63·0	29th	46·0	23rd	...	...	...	...	...	...	...	...	...	...	...
	Pemba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Prison Island . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abadan	96·6	73·0	111·2	...	83·2	...	97·2	...	28·0	120·0	12th	77·0	21st	1	20	0	1	0	2	0	4	0	N 9° W*	...

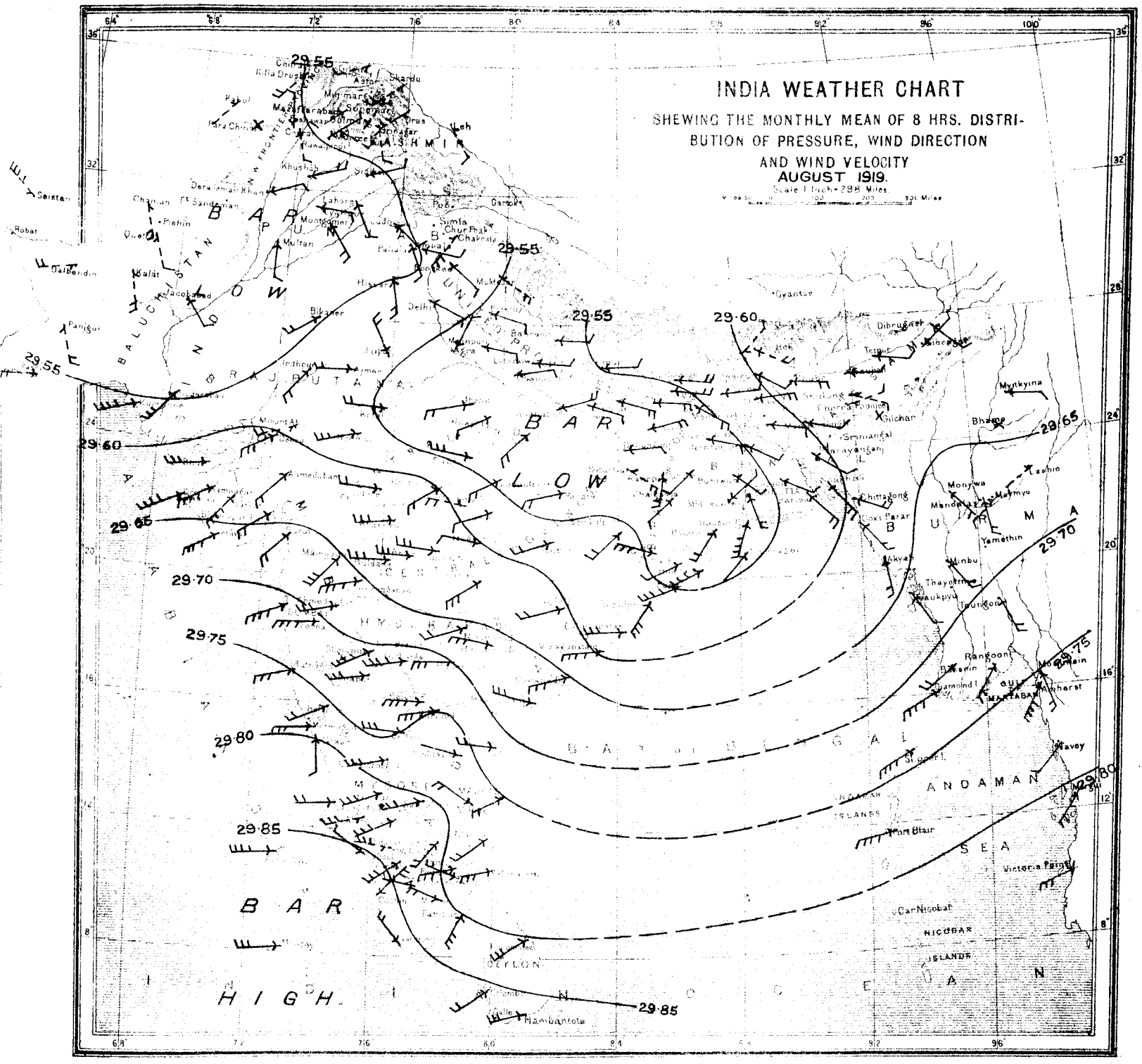
* 3 winds variable.

C—*concluded.*

and fifth class stations in India, etc., in August, 1919—*concluded.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st August, 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				Extra India.
...	...	...	...	...	93	...	·398	...	3·3	...	7	−11·3	3·35	5·89	−2·54	22·43	21·86	+0·57	1·07	Chumbi.
...	...	...	...	...	...	...	...	...	...	...	4	−0·4	2·07	1·53	+0·54	29·91	27·27	+2·64	0·92	Pemba.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Prison Island.
...	...	...	59	...	29	...	·493	...	...	...	0	...	0	...	...	0·26	...	...	0	Abadan.

SGPI-21-464DGObs.-25-8-22-325.

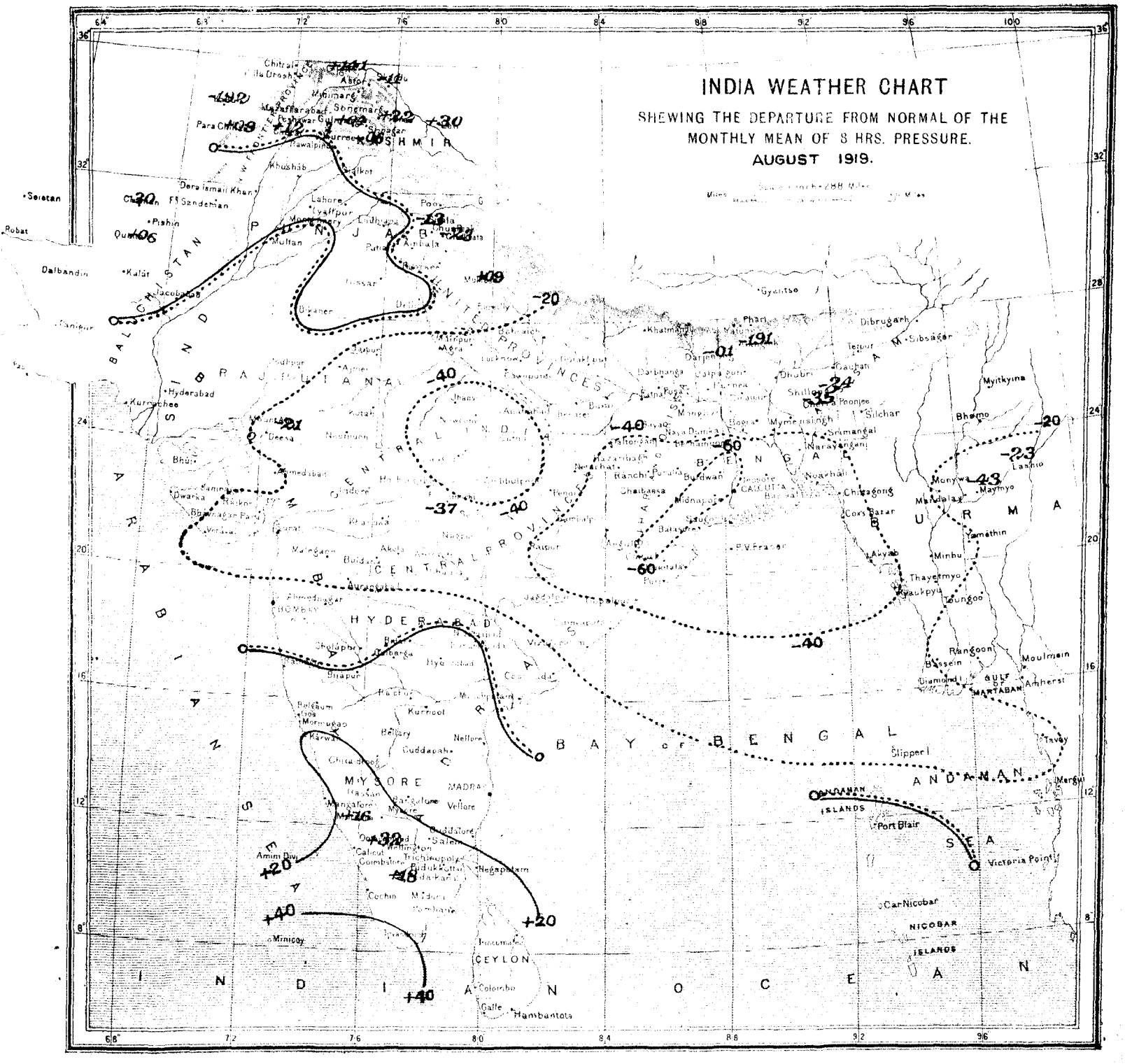


The lines of the above chart represent isobars or lines of equal barometric pressure, the numbers attached indicating the barometric pressure in inches and being drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the normal distribution of pressure.

The mean 8 hrs. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table B of the 8 hrs. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2	miles per hour	...	one	feather	added to the wind arrow.
,, ,,	2 to 5	,, ,, ,,	...	two	feathers	,, ,, ,, ,,
,, ,,	5 to 10	,, ,, ,,	...	three	,,	,, ,, ,, ,,
,, ,,	10 to 20	,, ,, ,,	...	four	,,	,, ,, ,, ,,
	over 20	,, ,, ,,	...	five	,,	,, ,, ,, ,,

Wind strengths are based on factor 2·2 for the standard type of Beckley Robinson anemograph, instead of 3·0 as used for this plate up to December 1911 inclusive.



The chart shows the departure from normal of the mean during the month of 8 hrs. pressure by means of lines drawn for equal amounts of departure. The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no departure, the dotted line facing the area of deficient pressure or negative departures.

CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MAXIMUM TEMPERATURE.

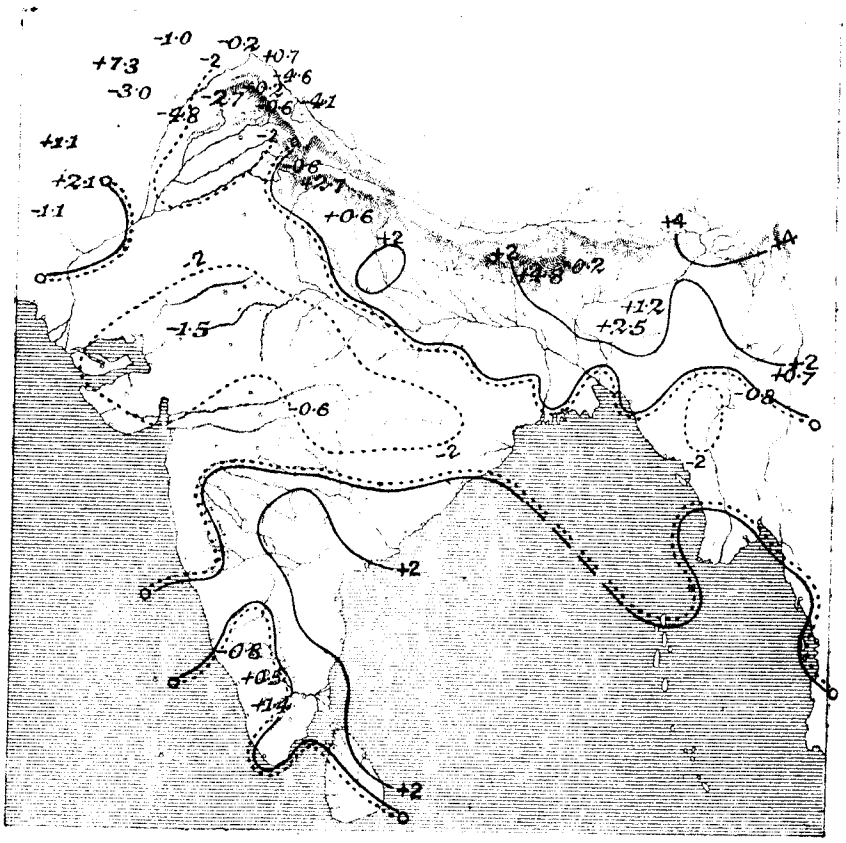


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MINIMUM TEMPERATURE.

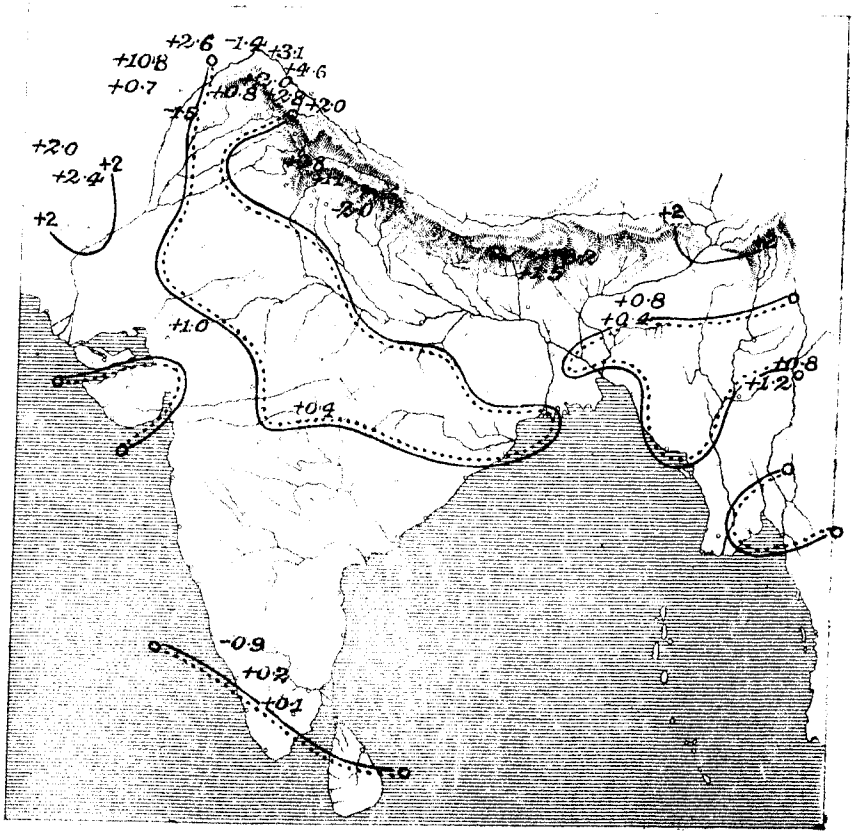


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MEAN TEMPERATURE.

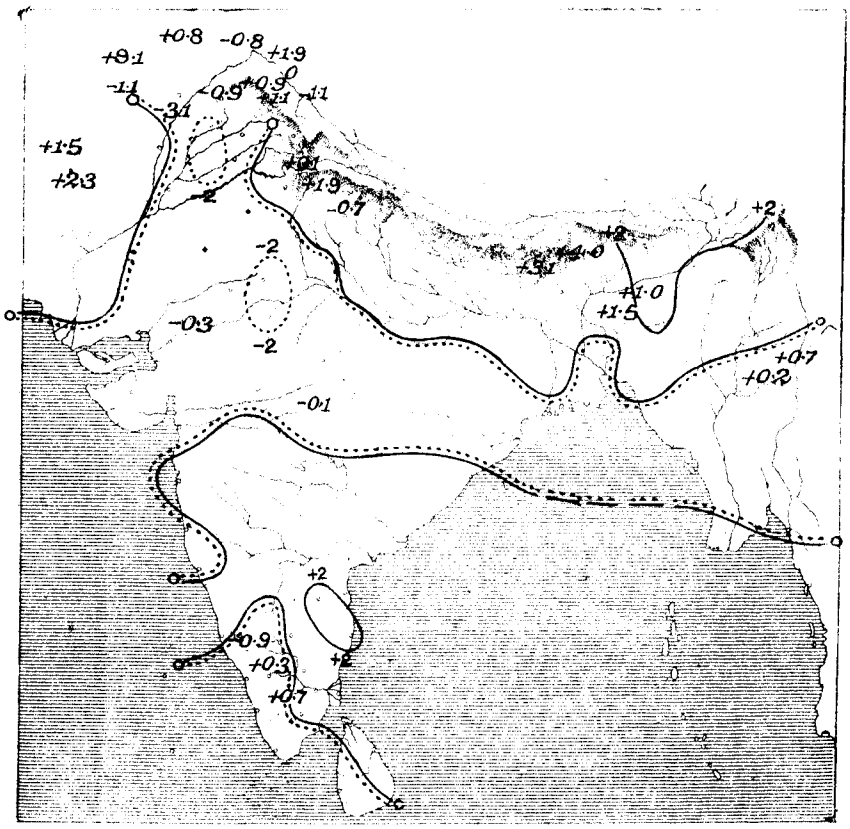


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF ABSOLUTE HUMIDITY AT 8 HRS.

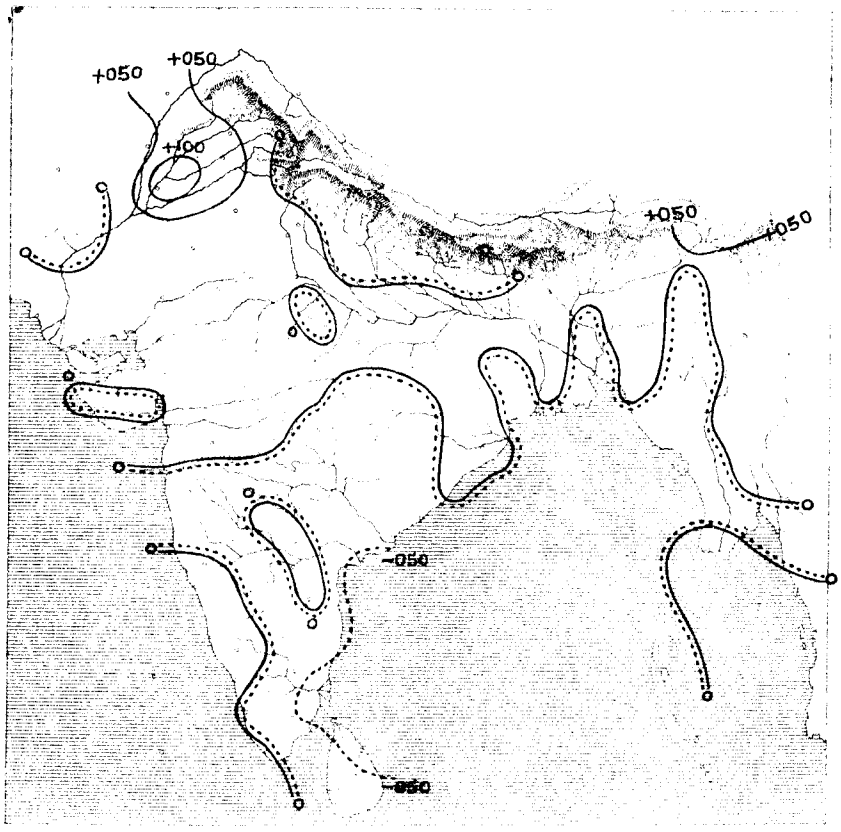


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF RELATIVE HUMIDITY AT 8 HRS.

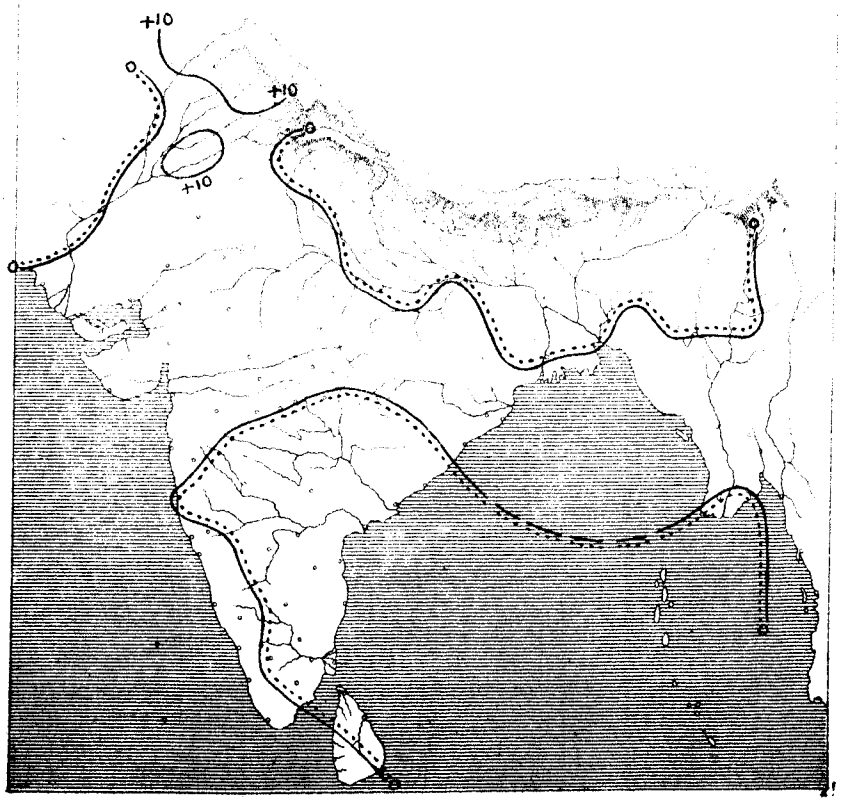


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF CLOUD AMOUNT AT 8 HRS.

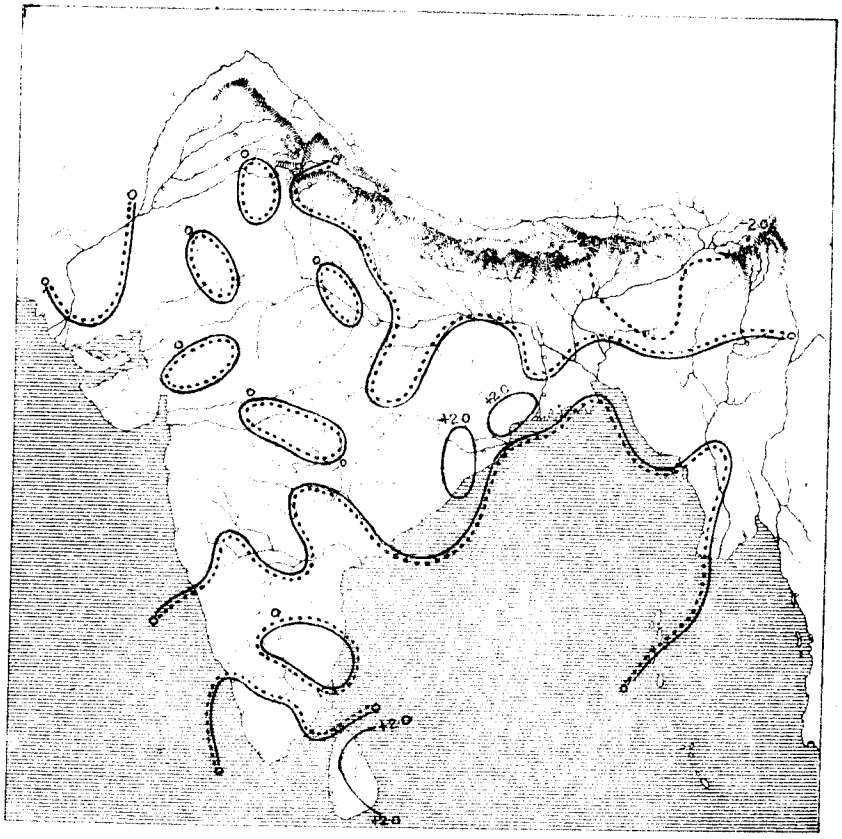
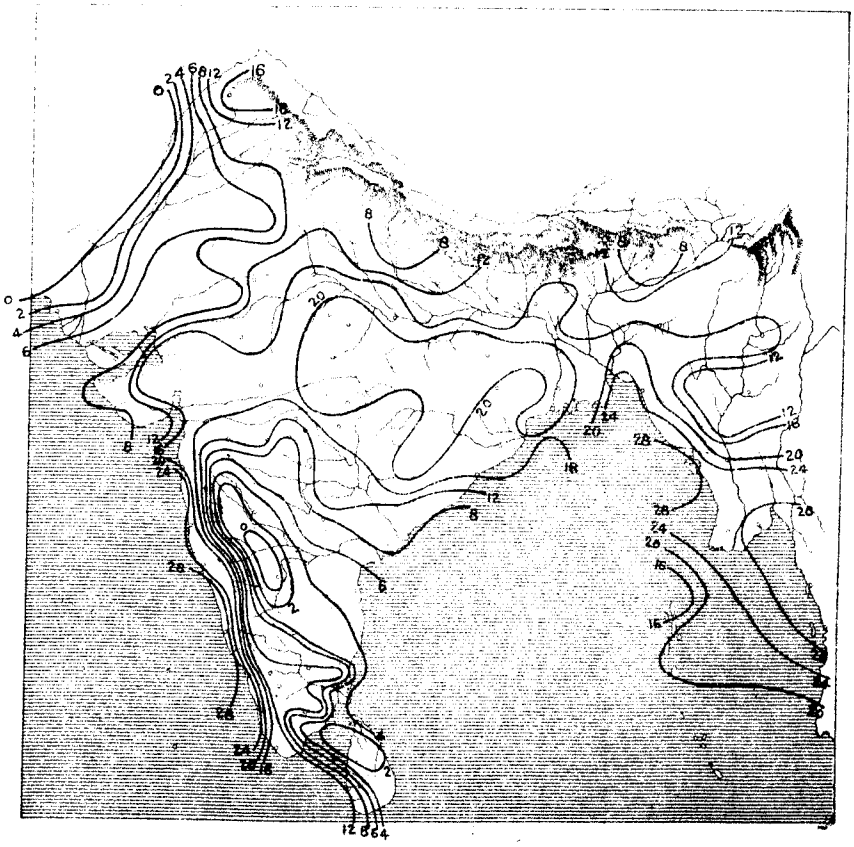
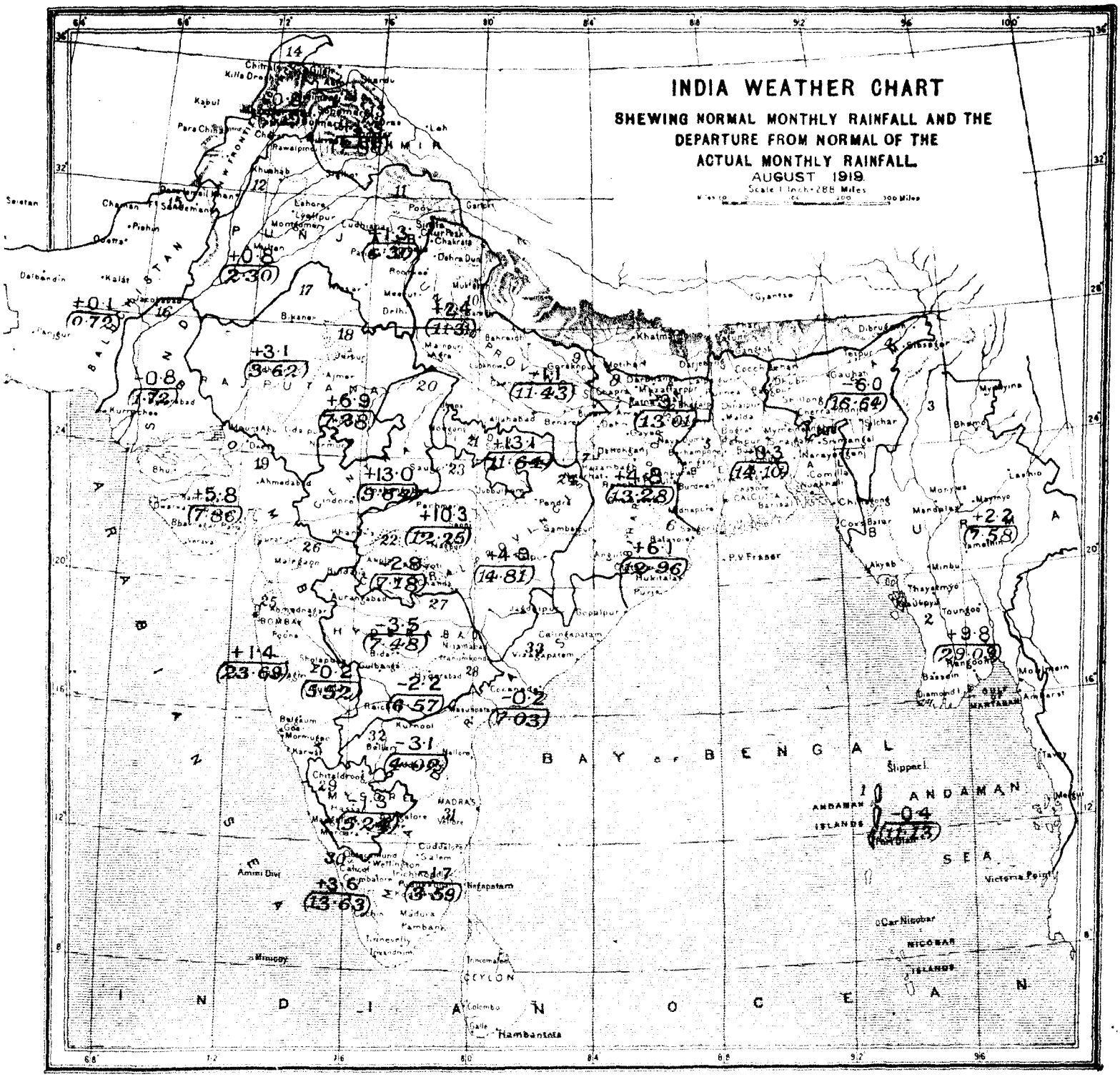


CHART SHEWING THE TOTAL NUMBER OF DAYS IN THE MONTH ON WHICH RAINFALL EQUALLED OR EXCEEDED 0·10 INCH.

(BASED ON THE RETURNS OF TABLE B.)





The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal monthly rainfall, the numbers above these give the departures from normal of the average actual rainfall over the divisions.

1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North

GOVERNMENT OF INDIA

METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, SEPTEMBER, 1919.

INTRODUCTION.

THIS review of the weather in India during the month of September, 1919, is based on observations taken daily at 8 hrs. at 212 stations, and on additional observations taken at 10 hrs. and 16 hrs. at 13 stations. In the rainfall summary the data furnished by the meteorological observatories, and the rainfall statements of the month published by the Provincial Governments have been utilized.

The brief notes on solar, magnetic and seismic disturbances are supplied by the chief observatories.

For a statement of the methods adopted in recording and tabulating the data, for each of the elements of observation, reference should be made to the introductory portion of the review for January.

Summary of the chief features of the weather in India during the month.

2. The monsoon retreated from the Punjab on the 4th about ten days before the usual time and in Rajputana little rain fell between the 4th and the end of the month. In the Peninsula the monsoon was comparatively feeble in the first fortnight, but became very active in the second, so that the month's fall was well above the average over most of that area. An exceptionally severe cyclone of small extent began to form in the Bay on the 22nd and crossed on the 24th into east Bengal where it caused immense damage to life and property.

Cloud amount was normal or in defect in most places; humidity and temperature were about normal.

The mean barometric pressure over the plains of India was 0·034″ in excess.

Solar, seismic and magnetic disturbances.

KODAIKANAL OBSERVATORY.

3. *Solar Observations.*—No observations were possible on 3 days during the month. Prominences were photographed on 19 days but on 8 of these, the record was incomplete.

Sunspots.—18 new groups were recorded. The mean daily number was 3·8 and the average life of a spot was 6·8 days. The distribution in latitude was as follows :—

TABLE 1.

—	0°–10°	11°–20°	21°–30°	Extreme latitudes.	Mean latitudes.
North . . .	1	3	1	2° & 22°	11°·8
South . . .	5	8	...	2° & 19°	12°·0

Prominences.—25 prominences, a minute or more in height, and three metallic prominences were recorded. The tallest prominence was 210″ high and was photographed on the 14th at +29°W.

Magnetic disturbances.—"Great" disturbances were recorded on the 7th and 24th and "Moderate" ones on the 3rd, 4th, 6th, from 9th to 11th, 13th to 23rd and 25th to 27th.

J. EVERSHED,
Director,
Kodaikanal and Madras Observatories.

Seismic records.

$\phi = 10° 13' 50''$; $\lambda = 77° 28' 00''$; $h = 2343$ m. *Subsoil* Rock.

Apparatus.—Milne's Horizontal Pendulum Seismograph.

TABLE 2.

	V	To	∈	$\frac{r}{To^2}$
AN:				
AE:	9·76	17·8	1	2·8
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) An.	Ae.	Az.	Distance. Δ (Km.).	Remarks.
1919.		h. m. s.						
Sept. 1st	e P	20 34 36	...	...	...	...	...	
	F	20 37 06	...	...	...	...	...	Widening of line.
„ 12th	e P	7 03 18	...	...	...	...	...	
	e L	7 11 36	...	...	...	...	...	
	M	7 14 06	...	...	40	...	...	
	F	7 19 12	...	...	...	...	...	
„ 13th	i L	12 50 42	...	...	...	...	...	
	M	12 51 00	...	...	50	...	...	No. P. T.
	F	13 6 24	...	...	...	...	...	
„ 13th	e P	13 42 18	...	...	...	...	...	
	e L	13 43 48	...	...	...	...	...	
		13 47 24	...	...	60	...	...	
	F	14 02 48	...	...	...	...	...	
1919. Sept. 26th	e P	h. m. s. 9 15 24	...	...	...	...	...	
	e L	9 30 12	...	...	...	...	...	
	M	9 32 48	...	...	50	...	...	
	F	9 49 00	...	...	...	...	...	
„ 26th	e P	19 49 42	...	...	...	...	...	
	i L	19 54 24	...	...	...	...	...	
	M	20 14 24	...	...	150	...	...	
	F	20 50 48	...	...	...	...	...	
„ 26th	e P	21 55 54	...	...	...	...	...	Widening of line.
„ 26th	e P	22 07 12	...	...	...	...	...	Widening of line.
„ 27th	e P	23 19 30	...	...	...	...	...	Widening of line.

T. ROYDS,
Assistant Director.

BOMBAY OBSERVATORY.

Alibag magnetic record.

4. During the month of September, 1919, the traces showed 6 calm days, 22 days of small and 2 days of moderate disturbance.

The days of the month selected as "quiet" for the purposes of the Magnetic Survey of India are the 1st, 5th, 12th, 28th and 29th.

The following table represents the magnetic character of each day during the month :—

TABLE 3.

Day.	Character.	Day.	Character.	Day.	Character.	Day.	Character.
1	C	9	S	17	S	24	M
2	S	10	S	18	S	25	S
3	S	11	S	19	M	26	S
4	S	12	C	20	S	27	S
5	C	13	S	21	S	28	C
6	S	14	S	22	S	29	C
7	S	15	S	23	S	30	S
8	C	16	S				

C = calm; S = small; M = moderate; G = great; V. G = very great.

The mean observed absolute values of the several magnetic elements reduced to the mean monthly tabulations of the magnetograms, as also the ranges and the summed ranges of the horizontal force and declination for the month are as follows :—

Easterly declination . . .	0° 23′ 49″.
Horizontal force	0·36891 C. G. S. unit.
Vertical force	0·17081 C. G. S. unit.
Inclination	24° 50′·7.
Horizontal force range . . .	0·00047 C. G. S. unit.
Horizontal force summed range .	0·00290 C. G. S. unit.
Declination range . . .	5′·2.
Declination summed range . .	21′·3.

(NOTE.—Summed range means sum without regard to sign of twenty-four ordinates of the diurnal inequality.)

Seismic records.

$\phi = 18° 53' 36''$; $\lambda = 72° 48' 56''$; $h = 11$ m. *Subsoil* Trap.

Apparatus.—Omori-Ewing Horizontal Pendulum (E.-W.)

TABLE 4.

	V	To	ϵ	$\frac{r}{To^2}$
AN:				
AE:	20	32		
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance. Δ (Km.).	Remarks.
1919.		h. m. s.						
Sept. 5th	P	7 57 53	...	...	...	...	...	
	M	...	...	...	...	...	...	Maximum not well marked.
„ 13th	P	12 38 18	...	...	...	...	...	
	M	12 46 16	...	...	10	...	...	
„ 26th	P	19 48 43	...	...	...	...	...	
	M	...	...	...	...	...	...	Maximum not well marked.

T. K. CHINMAYANANDAM,
Director,
Bombay and Alibag Observatories.

5.—CALCUTTA (ALIPORE) OBSERVATORY.

Seismic records.

$\phi = 22° 32'$ N; $\lambda = 88° 20'$ E; $h = 6·4$ m. *Subsoil* Alluvial.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs.

TABLE 5.

	V	To	ϵ	$\frac{r}{To^2}$
AN:	29	18	1	
AE:	29	30	1	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance. Δ (Km.).	Remarks.
1919.		h. m. s.						
Sept. 5th	P	7 56 00	...	...	...	...	...	
	L	8 1 00	5	...	...	...	...	
	F	8 25 00	...	...	...	...	...	
„ 8th	P	4 10 30	...	...	...	...	...	
	L	4 15 36	6	...	...	...	...	
	F	4 39 00	...	...	...	...	...	
„ 13th	P	12 38 48	3	...	...	...	...	
	L	12 41 12	6	...	...	...	...	
	F	13 12 36	...	...	...	...	...	
„ 26th	P	9 13 06	5	...	...	...	...	
	F	9 51 30	...	...	...	...	...	
„ 26th	P	19 47 06	4	...	...	...	...	
	F	20 23 30	...	...	...	...	...	

6.—SIMLA OBSERVATORY.

Seismic records.

$\phi = 31° 6' N$; $\lambda = 77° 11' E$; $h = 2·1$ km. *Subsoil* Rock.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs (Masses 50 Kg.).

TABLE 6.

	V	To	ϵ	$\frac{r}{To^2}$
AN:	14	45	1	
AE:	14	45	1	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance. Δ (Km.).	REMARKS.
1919.		h. m. s.						
Sept. 1st	e P	20 38 24	...	...	...	...	...	
	F	20 50 48	...	...	...	...	...	Very slight tremors.
„ 5th	i P	7 53 12	...	...	...	...	...	
	F	8 08 48	...	...	...	...	...	Slight local shock. Felt at Lahore and Srinagar.
„ 16th	e P	16 44 06	...	...	...	...	...	
	F	16 47 00	...	...	...	...	...	Very slight local shock. Felt at Sialkot, Gulmarg and Srinagar.
1919.		h. m. s.						
Sept. 26th	P	9 20 42	...	...	...	...	...	
	M	9 33 06	...	29	...	...	...	
	F	10 00 18	...	...	...	...	...	Tremors.
„ 26th	P	19 55 42	...	...	...	...	...	
	M	20 12 06	...	...	...	...	...	
	F	20 51 06	...	...	...	...	...	Tremors.

The following table contains a list of earthquakes that were reported :—

TABLE 7.

Place at which felt.	Date.	G. M. T. of earthquake.	Duration.	Intensity. Rossi-Forel scale.	No. of shocks.	REMARKS.
	1919	h. m.	s.			
Lahore . .	Sept. 5th	7 55	15	6	4	
Srinagar (Kashmir)	„ 5th	7 58	3	7	1	
Sialkot . .	16th	16 40	4	6	1	
Gulmarg (Kashmir)	„ 16th	16 44	6	6	1	
Srinagar „ .	„ 16th	16 47	5	7	2	
Muktesar . .	„ 29th	16 43	5	6	1	

NOTE:—A series of earthquakes occurred in Giv and Mukhtaran valley, which lies about 20 miles south of Birjand (Persia), between the 18th August and 20th September, 10 casualties were caused by falling houses.

S. SITARAMAYYA,
Scientific Assistant.

Weather in the Indian Ocean.

7. The following table gives the departures from normal of pressure and rainfall, as well as the actual and normal wind direction and velocity at the three representative stations.

TABLE 8.

—	Mauritius.	Zanzibar.	Seychelles.
Departure from normal of mean pressure	−·039	−·015	−·010
Actual mean wind direction . .	S 74° E	S 21° W	S 39° E
Normal mean wind direction . .	S 71° E	S 5° E	S 40° E
Actual mean wind velocity (miles per diem).	89	84	237
Normal mean wind velocity (miles per diem).	150	98	210
Rainfall departure from normal . .	+1·86	−0·73	−0·01

Depressions and cyclonic storms.

8. A depression had formed in the bay on the 22nd September and by the morning of the 23rd it had developed into a storm with its centre roughly 400 miles to the north-west of the Andamans. This moved rather rapidly in a northerly direction; and in the mean time it concentrated and grew in violence, so that by 4-30 A. M., on the morning of the 24th the Lady Fraser pilot vessel (about 60 miles south of Saugor Island) had her wireless aerials carried away by squalls of hurricane force, which persisted, with tremendous seas, until 8 o'clock. The cyclone crossed the Bengal coast about noon and passed over Khulna at about 9 P. M., Gopalganj at 10-30, Dacca at about 2-30 on the morning of the 25th, near Kishorganj at about 7-30 A. M. and broke up that day in the Assam hills. It was a typical cyclone with a deficiency of pressure at its centre of about 1¼ inches; it had a clam area at its centre of at least 15 miles in diameter, and winds of very great violence swept over a track which grew from about 25 miles wide in the Khulna district to about 45 miles in the Dacca district. Within this track the devastation was enormous. In the most affected parts of the Khulna and Faridpur districts scarcely a single *kutcha* house was left standing, while even *pucca* buildings suffered much damage. For instance at Narainganj a godown of Messrs. R. Sim and Company had walls buttressed by brick pillars 2½ feet square with a skeleton on cast iron, and sunk 4 feet in the ground; yet not only the walls but all the pillars were blown down. The Collector estimates that the loss caused to jute firms in Narayanganj amounted to 150 lakhs of rupees.

The cyclone was remarkable for its small dimensions and its great intensity. Though the Bakarganj cyclone of 1876 was far more destructive of human life, the value of property destroyed in 1919 was probably greater than in any storm in Bengal for the last 200 years. Yet, if places where the wind did not attain very great force are omitted, the diameter of the storm area was not more than 25 miles, when it crossed the coast. For details of the havoc caused reference may be made to the report of the Government of Bengal. A description was also included in the Administration report for 1919-20.

S. S. *Numidia* experienced winds of force 10 on the 22nd and 23rd near the Nicobar Islands.

Gales unconnected with cyclonic systems occurred occasionally in the Indian seas.

Pressure.

9. The following table gives the departure from normal of the mean 8 hours pressure in the 15 chief political divisions of India.

TABLE 9.

DIVISION.	Departure from normal of mean 8 hrs. pressure.
	"
Burma	+ ·046
Assam	+·040
Bengal	+·042
Bihar and Orissa	+·056
United Provinces	+·035
Punjab	+·023
North-West Frontier Province	+·015
Sind	+·022
Rajputana	+·032
Bombay	+·010
Central India	+·041
Central Provinces	+·053
Hyderabad	+·036
Mysore	+·007
Madras	+·021

The following table gives a comparison of the departure from normal of the mean 8 hours pressure at 9 hill stations with the departure at an adjoining station in the plains.

TABLE 10.

HILL STATION.	Departure from normal pressure. A	PLAIN STATION.	Departure from normal pressure. B	Departure of pressure difference. B—A.
	"		"	"
Quetta	+·014	Jacobabad	+·026	+·012
Leh	−·006	Lahore	+·013	+·019
Murree	+·006	Peshawar	+·010	+·004
Simla	+·014	Ludhiana	+·019	+·005
Mukteswar	+·018	Bareilly	+·021	+·003
Darjiling	+·001	Dhubri	+·034	+·033
Mount Abu	+·021	Deesa	+·030	+·009
Pachmarhi	+·029	Khandwa	+·037	+·008
Kodaikanal	+·007	Madura	+·014	+·007

Temperature.

10. Table 11 gives the actual temperature and its departure from normal in 33 sub-divisions, while table 12 gives only the departures from normal in the 15 chief political divisions.

TABLE 11.

Sub-division.	Actual temperature.				Departure from normal of		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
1. Bay Islands	85·5	78·1	81·8	7·4	+0·9	+1·5	−0·6
2. Lower Burma	86·6	75·5	81·0	11·0	+1·5	+0·1	+1·4
3. Upper Burma	88·9	73·4	81·1	15·4	−1·4	−0·6	−0·8
4. Assam	86·6	74·8	80·7	11·8	−1·9	−1·3	−0·6
5. Bengal	87·7	77·0	82·3	10·7	−0·5	+0·7	+0·2
6. Orissa	89·1	77·8	83·5	11·4	+0·1	0	+0·1
7. Chota-Nagpur	88·1	74·3	81·3	13·8	−0·2	−0·4	+0·2
8. Bihar	88·7	77·2	82·9	11·5	−0·7	−0·3	−0·4
9. United Provinces, East	91·2	76·7	83·9	14·5	−0·1	−0·3	+0·2
10. Do. do., West	91·9	75·2	83·6	16·7	+0·1	−0·4	+0·5
11. Punjab, East and North	94·9	73·6	84·2	21·3	+0·1	−0·6	+0·7
12. Do., South-west	98·9	75·6	87·2	23·3	−1·0	−0·7	−0·3
13. Kashmir	73·7	50·2	61·9	23·5	−3·5	−1·5	−2·0
14. North-West Frontier Province	97·6	73·7	85·6	23·9	−0·1	+0·9	−1·0
15. Baluchistan	90·5	58·9	74·7	31·6	+0·1	−0·7	+0·8
16. Sind	94·8	75·3	85·0	19·5	−0·8	−0·8	0
17. Rajputana, West	94·2	74·4	84·3	19·8	−2·3	−2·7	+0·4
18. Do., East	89·7	73·4	81·6	16·3	−2·6	−1·5	−1·1
19. Gujarat	90·1	75·5	82·8	14·7	+0·4	+0·1	+0·3
20. Central India, West	86·8	70·8	78·7	16·0	+0·3	+0·3	0
21. Do. do., East	87·5	74·3	80·9	13·2	−1·5	−0·6	−0·9
22. Berar	88·6	71·9	80·3	16·7	+1·9	+0·5	+1·4
23. Central Provinces, West	87·4	72·2	79·7	15·2	+0·2	−0·3	+0·5
24. Do. do., East	86·8	72·6	79·7	14·2	0	−0·3	+0·3
25. Konkan	85·3	76·0	80·6	9·2	+1·5	+1·0	+0·5
26. Bombay Deccan	86·3	69·1	77·7	17·2	+0·9	+0·4	+0·5
27. Hyderabad, North	88·7	71·3	79·9	17·4	+2·2	+0·7	+1·5
28. Do., South	90·1	73·1	81·5	17·0	+2·6	+0·5	+2·1
29. Mysore	83·5	66·9	75·2	16·6	+1·1	+1·1	0
30. Malabar	84·5	74·9	79·7	9·5	+0·6	+0·6	0
31. Madras, South-east	91·9	75·8	83·9	16·1	−0·5	+0·4	−0·9
32. Do., Deccan	92·5	74·8	83·6	17·7	+1·3	+0·7	+0·6
33. Do., Coast, North	90·7	78·5	84·6	12·1	+0·3	+0·6	−0·3

TABLE 12.

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·2	—0·2	0
Assam	—1·9	—1·3	—1·6
Bengal	—0·5	—0·7	—0·6
Bihar and Orissa	—0·3	—0·3	—0·3
United Provinces	0	—0·4	—0·2
Punjab	—0·2	—0·6	—0·4
North-West Frontier Province	—0·1	+0·9	+0·5
Sind	—0·8	—0·8	—0·8
Rajputana	—2·5	—2·0	—2·2
Bombay	+0·8	+0·4	+0·6
Central India	—0·6	—0·1	—0·3
Central Provinces	+0·6	—0·1	+0·2
Hyderabad	+2·5	+0·5	+1·5
Mysore	+1·1	+1·1	+1·1
Madras	+0·1	+0·5	+0·3

Surface and upper air winds.

11. *Surface.*—Wind directions differed somewhat irregularly from the normal in the Konkan, the United Provinces and the Punjab.

The following table gives the mean wind velocity and steadiness with their departures from normal.

TABLE 13.

Division.	Hourly wind velocity.		Wind steadiness.	
	Actual.	Departure from normal.	Actual.	Departure from normal.
	°	°		
Burma	3·1	+0·1	29	—19
Assam	2·1	—0·1	39	+27
Bengal	2·8	0	35	—8
Bihar and Orissa	2·6	—0·4	37	+6
United Provinces	1·3	—0·8	25	+7
Punjab	2·2	—0·1	38	+8
North-West Frontier Province	0·9	—0·8	19	—11
Sind	4·5	—3·1	65	—3
Rajputana	4·0	—0·5	52	—2
Bombay	4·4	—2·0	32	—24
Central India	2·8	—1·1	46	0
Central Provinces	3·0	—0·7	32	—14
Hyderabad	4·6	—1·8	38	—27
Mysore	4·4	—0·9	55	—24
Madras	4·0	—0·5	47	—14

Upper air.—The monthly mean velocities and directions at different heights above Agra, Simla, Lahore, Bangalore, Akyab, Calcutta and Bombay during the month are given in the following table.

TABLE 14.

Height above sea, kms.	Agra. Height above sea = 0·17 km.				Simla. Height above sea = 2·13 kms.				Lahore. Height above sea = 0·21 km.				Bangalore. Height above sea = 0·92 km.				Akyab. Height above sea = 0·01 km.				Calcutta. Height above sea = 0·01 km.				Bombay. Height above sea = 0·01 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
Ground level.	34	2·5	2·0	268	26	1·7	1·7	343	24	0·4	0·1	229	25	3·2	1·8	299	23	1·1	0·4	152	25	2·9	2·3	198	25	2·8	1·8	295
0·5	35	5·8	4·9	283	...	...	...	...	24	4·5	2·7	275	...	...	...	...	23	4·2	1·6	193	21	4·9	3·6	212	24	4·9	3·6	285
1·0	33	5·1	4·3	305	...	...	...	...	24	4·3	3·3	207	26	3·7	2·1	288	22	4·1	2·1	206	18	4·3	2·7	221	23	4·3	2·8	277
1·5	31	4·3	3·3	328	...	...	...	...	24	3·8	2·9	297	27	4·3	2·2	302	21	4·5	2·3	215	15	4·8	2·5	230	20	4·4	2·3	214
2·0	28	4·5	3·3	348	..	...	...	...	24	3·7	2·8	313	23	4·7	1·5	321	19	4·3	2·0	196	12	4·8	3·0	228	17	4·9	2·4	225
2·5	25	4·4	3·1	354	26	6·2	6·1	332	24	4·0	3·0	315	15	5·1	1·6	310	18	4·5	1·9	184	10	4·7	3·0	232	13	4·3	2·3	187
3·0	23	4·7	3·5	336	24	4·2	4·1	321	24	4·1	2·9	311	14	5·5	1·1	38	18	4·4	1·7	177	9	4·3	2·5	220	13	4·9	2·1	198
3·5	23	5·2	2·8	311	24	3·5	2·7	321	24	5·1	3·8	320	10	4·8	2·5	89	16	3·8	1·7	151	6	3·7	2·4	2 1	12	4·8	1·7	222
4·0	22	5·8	3·1	291	24	3·5	1·8	308	24	5·7	4·0	317	7	4·1	1·0	138	14	3·8	2·3	139	4	4·4	2·9	216	12	5·1	1·8	217
4·5	22	5·6	3·3	255	23	3·7	1·7	281	24	5·4	3·8	313	5	5·0	2·7	190	13	3·0	1·4	142	2	4·7	1·0	125	11	5·7	1·8	229
5·0	21	5·7	4·7	243	23	5·3	3·8	262	24	5·5	3·0	307	4	4·1	3·0	119	12	3·2	0·9	118	3	3·7	1·8	222	10	5·3	0·6	79
5·5	18	5·7	4·7	255	23	6·6	5·2	263	23	5·9	3·6	277	2	2·3	2·3	119	11	3·2	1·1	120	3	2·8	1·5	219	8	4·7	2·4	77
6·0	18	6·6	5·9	255	22	7·8	6·7	265	23	8·1	6·9	257	1	5·0	5·0	150	10	3·1	0·5	115	...	...	...	...	8	4·7	3·3	79
6·5	17	6·7	6·0	262	19	10·4	9·7	257	22	9·6	8·7	264	1	6·0	6·0	160	10	2·5	0·4	65		...	...	...	8	4·5	3·9	82
7·0	16	7·3	6·7	262	16	13·2	12·8	261	21	10·6	9·6	267	1	4·0	4·0	165	10	2·7	0·8	50	...	...	...	...	8	4·9	4·2	91
7·5	10	5·5	4·6	255	15	16·5	16·1	259	21	11·2	10·9	263	1	3·5	3·5	145	10	2·9	1·2	55	...	...	...	...	7	5·3	4·6	94
8·0	10	6·1	4·6	262	13	18·9	18·5	259	21	13·2	12·8	260	...	...	...	...	10	3·1	1·7	65	.	...	...	...	7	6·0	5·4	93
8·5	10	6·6	5·1	254	10	21·5	21·2	257	19	15·2	14·7	262	...	...	...	...	10	4·1	2·4	74	...	...	...	...	7	6·9	6·4	100
9·0	9	8·1	6·7	256	10	23·5	23·2	256	17	17·0	16·7	261	...	...	...	...	9	4·3	2·9	49	...	...	...	...	7	7·6	7·2	119
9·5	9	8·9	6·9	252	5	22·5	22·0	255	16	18·0	17·5	261	...	...	...	...	8	4·6	2·9	58	...	...	...	...	4	6·7	4·7	120
10·0	9	8·7	6·6	245	3	23·5	22·9	254	13	18·3	17·9	260	...	...	...	...	6	5·8	3·9	69	..	...	...	...	4	6·9	5·2	125
10·5	7	10·3	9·0	240	2	11·5	10·3	266	11	20·4	19·7	261	...	...	...	...	6	6·2	4·8	84	...	...	...	...	2	9·0	4·9	132
11·0	5	7·6	6·7	244	2	10·7	9·0	263	8	19·1	18·6	265	...	...	...	...	6	6·3	5·2	82	...	...	...	...	2	7·5	6·3	99
11·5	5	8·5	7·4	252	2	11·5	11·5	253	4	15·1	14·7	267	...	...	...	...	6	6·6	5·6	84	...	...	...	...	2	7·7	6·9	102
12·0	3	7·5	6·7	282	2	13·3	12·5	257	4	16·1	15·6	264	...	...	...	...	5	8·0	7·0	89	...	...	...	...	1	8·0	8·0	80
12·5	3	11·5	10·4	286	1	7·0	7·0	300	2	25·3	25·0	262	...	...	...	...	5	8·4	6·4	93	...	...	...	...	1	8·0	8·0	85
13·0	3	10·0	9·3	296	1	5·5	5·5	305	1	24·0	24·0	260	...	...	...	...	5	8·2	7·8	83	...	...	...	...	1	9·5	9·5	95
13·5	1	12·0	12·0	315	1	6·5	6·5	305	1	26·5	26·5	270	...	...	...	...	4	9·0	8·1	81	...	...	...	...	...	...	...	...
14·0	1	12·5	12·5	320	1	5·5	5·5	300	1	29·0	29·0	265	...	...	...	...	2	9·5	8·1	76	...	...	...	...	...	...	...	...
14·5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	10·0	9·1	76	...	...	...	...	...	...	...	...
15·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	11·0	8·9	74	...	...	...	...	...	...	...	...

N = Number of flights.
V = Velocity of wind regardless of direction, metre per Sec.
v = Velocity of Resultant Wind, taking account of direction, metre per Sec.
L = Direction of Resultant Wind; North Wind = 0° or 360°, East Wind = 90°.

Humidity and cloud.

12. The following table gives the mean humidity, vapour tension and cloud amount at 8 hours with their departures from normal.

TABLE 15.

Division.	Hygrometry; 8 hrs.				Cloud.	
	Mean humidity.	Departure from normal.	Mean vapour tension in inches of mercury.	Departure from normal in inches of mercury.	Mean cloud amount at 8 hrs.	Departure from normal.
	%					
Burma . . .	88	— 2	·868	—·022	7·0	—0·1
Assam . . .	90	0	·877	—·043	6·9	—0·1
Bengal . .	88	0	·927	—·027	6·4	—0·1
Bihar and Orissa .	85	0	·894	—·011	5·5	+0·1
United Provinces .	80	— 1	·848	—·011	3·5	—0·5
Punjab . .	65	— 4	·696	—·046	1·5	—0·4
North-West Frontier Province.	69	+ 2	·672	—·025	0·3	—0·7
Sind . . .	70	— 4	·724	—·057	1·5	—0·8
Rajputana . .	73	+ 1	·724	—·034	3·3	0
Bombay . .	83	0	·794	+·005	6·0	+0·3
Central India .	83	+ 1	·782	—·003	4·1	—0·8
Central Provinces .	81	— 3	·761	—·013	5·4	—0·4
Hyderabad . .	79	0	·738	+·011	5·8	—0·2
Mysore . .	84	+ 1	·647	+·015	6·9	—0·5
Madras . .	80	+ 2	·841	+·029	5·7	—0·3

Rainfall.

TABLE 16.

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
1. Bay Islands	9·3	14·8	5·59	11·70	—6·11	— 52
2. Lower Burma	14·1	18·9	12·38	18·03	—5·65	— 31
3. Upper Burma	9·3	10·4	6·80	7·62	—0·82	— 11
4. Assam	17·5	14·2	16·60	11·95	+4·65	+ 39
5. Bengal	12·8	12·1	11·99	10·87	+1·12	+ 10
6. Orissa	8·0	12·2	4·71	9·44	—4·73	— 50
7. Chota Nagpur	9·2	10·3	7·88	8·08	—0·20	— 2
8. Bihar	10·4	8·8	9·52	8·19	+1·33	+ 16
9. United Provinces, East	7·5	7·3	8·54	6·84	+1·70	+ 25
10. Do. do., West	5·7	6·0	6·18	5·93	+0·25	+ 4

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
11. Punjab, East and North	2·2	3·2	1·67	3·21	—1·54	— 48
12. Punjab, South-west	0·9	1·2	0·40	0·95	—0·55	— 58
13. Kashmir	3·0	3·9	1·53	3·78	—2·25	— 60
14. North-West Frontier Province	2·3	1·9	1·30	1·22	+0·08	+ 7
15. Baluchistan	0	0·4	0	0·19	—0·19	—100
16. Sind	0	0·6	0	0·48	—0·48	—100
17. Rajputana, West	1·2	2·2	0·80	1·80	—1·00	— 56
18. Do., East	3·4	4·7	2·21	3·98	—1·77	— 44
19. Gujarat	4·4	5·6	2·69	4·66	—1·97	— 42
20. Central India, West	4·3	4·9	2·88	5·32	—2·44	— 46
21. Do., East	5·3	7·1	3·76	6·84	—3·08	— 45
22. Berar	6·7	7·7	3·89	5·34	—1·45	— 27
23. Central Provinces, West	6·2	9·3	3·61	7·63	—4·02	— 53
24. Do., East	7·2	9·9	4·77	7·90	—3·13	— 40
25. Konkan	13·5	15·1	9·92	12·40	—2·48	— 20
26. Bombay Deccan	11·4	8·0	8·84	5·47	+3·37	+ 62
27. Hyderabad, North	9·8	9·8	7·28	8·10	—0·82	— 10
28. Do., South	11·1	9·5	6·49	6·74	—0·25	— 4
29. Mysore	12·1	7·8	8·96	4·98	+3·98	+ 80
30. Malabar	13·2	11·4	10·26	7·60	+2·66	+ 35
31. Madras, South-east	8·1	6·0	5·87	4·46	+1·41	+ 32
32. Do., Deccan	11·9	7·8	10·55	5·52	+5·03	+ 91
33. Do. Coast, North	8·4	9·3	5·82	6·99	—1·17	— 17

TABLE 17.

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Burma	9·02	11·76	—2·74	—23
Assam	16·60	11·95	+4·65	+39
Bengal	11·99	10·87	+1·12	+10
Bihar and Orissa	7·96	8·46	—0·50	— 6
United Provinces	7·28	6·35	+0·93	+15
Punjab	1·35	2·66	—1·31	—49
North-West Frontier Province	1·30	1·22	+0·08	+ 7

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Sind	0	0·48	—0·48	—100
Rajputana	1·78	3·31	—1·53	—46
Bombay	7·04	6·43	+0·61	+ 9
Central India	3·21	5·89	—2·68	—46
Central Provinces	4·18	7·15	—2·97	—42
Hyderabad	6·91	7·46	—0·55	— 7
Mysore	8·96	4·98	+3·98	+80
Madras	7·26	5·86	+1·40	+24
Mean of India	6·24	6·71	—0·47	— 7

Snowfall.

14. I.—THE NORTH-WEST FRONTIER PROVINCE.

Drosh.—2 inches fell on the 17th on the peaks of the highest range in the neighbourhood.

II.—KASHMIR.

Srinagar.—Snow fell on the 17th and 24th on the neighbouring mountains.

Gulmarg.—Light falls occurred on the surrounding higher mountains on the 16th, 17th, 22nd, 23rd and 24th.

Dras. } no snow fell.
Kargil. }

Skardu.—Snow fell on 12 days on the surrounding hills and mountains, more on the Deosai Pass and on the ranges to the west of the station than elsewhere. The depth of each fall was nearly 2 inches on the higher ranges and less than an inch on the hills; on the highest mountains it was about 4 or 5 inches. The snow lying at the end of the month was 4 or 5 inches on the higher ranges and about half an inch on the low hills.

III.—THE UNITED PROVINCES.

Almora :—

TABLE 18.

Actual falls during the month.

Locality.	Depth.		Distance below perpetual snowline.
	Feet.	Inches.	
Malla Danpur	1	0	3 or 4 miles.
Malla Johar	6	0	
Malla Darma	3	0	
Byans	11	0	7 or 8 miles.
Chaudas	1	2	¼ mile.

TABLE 19.

Accumulations at the end of the month.

Name of pass or peak.	Reported.	Normal.
	Feet.	Feet.
Nuwe pass	14	22½
Lampia pass	17 or 18	8
Lipulekh pass	11 or 12	6½
Binkaru pass	3	9
Milamdhura	2½	11½
Pindari peak	1	2¾
Kaphini peak	1	2½
Kuntela peak	1	2½
Bagdwar	1½	...

IV.—THE EASTERN HIMALAYAS.

Gangtok and Yatung.—No snow fell.

Sadiya Frontier Tract.—Snowstorms were observed on Dupha Burn (15,000 feet).

Summary.

15. Some light falls occurred in the North-West Frontier Province hills and Kashmir, and the amounts in the United Provinces hills were roughly normal.

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Table A.—Abstract of observations taken at 10 hrs. and 16 hrs. at 13 stations in India, etc., in September, 1919.

Table

Abstract of observations taken at 10 hrs. and 16 hrs

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hrs.	Mean of 16 hrs.	Mean daily range.	Mean of daily mean pressures	Departure from normal.	Mean reduced to sea-level and to gravity at 45° Lat.	Temperature of air. Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Temperature, wet-bulb. Mean minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of three previous columns
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal.																					
5	Calcutta	21	29·790	29·674	·116	29·733	+·041	29·701	88·6	78·2	10·4	93·5	75·4	18·1	85·0	85·9	83·1	+0·5	76·9	79·8	79·5	78·8
	VI.—Punjab.																					
11	Lahore	702	29·034	28·942	·092	28·980	+·008	29·633	97·2	71·6	22·6	100·3	66·3	34·0	89·1	97·0	84·9	+0·1	70·5	76·5	78·3	75·1
	IX.—Rajputana.																					
18	Jaipur	1,431	28·392	28·298	·094	28·342	+·038	29·698	91·9	72·1	19·8	99·5	68·2	31·3	85·2	89·3	80·5	−1·9	69·0	73·3	73·3	71·9
	X.—Bombay.																					
25	Bombay	37	29·829	29·731	·098	29·790	−·001	29·767	86·2	77·7	8·5	89·3	76·2	13·1	81·4	83·2	80·8	+1·4	73·5	77·8	78·0	76·4
	XIV.—Mysore.																					
29	Bangalore	3,021	26·937	26·820	·117	26·887	+·013	29·723	83·5	66·4	17·1	88·4	63·8	24·6	76·1	79·5	73·1	+1·3	65·3	70·0	70·6	68·6
	XV.—Madras.																					
30	Trivandrum	198	29·727	29·627	·100	29·683	−·007	29·811	87·7	74·7	8·0	86·5	72·6	13·9	80·4	80·8	77·6	−0·4		75·7	76·1	
31	Pudukkottai	318	29·569	29·433	·136	29·501		29·745	93·7	75·5	18·2	98·4	69·1	29·3	85·1	90·6	84·6			75·4	76·2	
	Madras	22	29·849	29·723	·126	29·795	+·018	29·748	91·8	76·9	14·9	99·0	73·3	25·7	86·5	87·2	83·3	−0·6	75·7	79·8	79·7	78·1
	Kashmir.																					
	Srinagar		24·868	24·780	·088	24·824	+·021	24·735	77·9	52·2	25·7	83·7	40·4	43·3	68·3	74·7	65·1	+1·1	50·4	60·4	62·8	57·9
	Hill stations, excluding Kashmir and Baluchistan.																					
	Katmandu	4,388	25·614	25·554	·060	25·581	+·058	25·535	81·3	65·1	16·2	85·0	60·0	25·0	74·8	77·6	72·8	−0·4	63·3	68·9	70·1	67·4
	Kodaikanal	7,688	22·831	22·761	·070	22·796		22·731	63·9	52·1	11·8	66·5	49·2	17·3	61·0	58·9	58·0		50·7	57·4	57·0	55·0
	Extra India.																					
	Seychelles	15	30·008	29·916	·092	29·970	−·010†	29·908	81·7	77·7	4·0	83·8	75·2	8·6	79·9	80·9	78·4	+0·7†	72·0	74·8	75·2	74·0
	Mauritius	181				29·965	−·039	30·035	77·7	63·0	14·7	80·8	58·8	22·0			69·8	+0·2				

N. B.—Elevations in italics indicate barometric determinations.
Note.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,300 feet.

† Departure from old normal.

A.

at 13 stations in India, etc., in September, 1919.

Vapour tension in inches of mercury.					Humidity.					Cloud.				Wind direction.											Wind steadiness.		Wind velocity.		Rainfall.		Station.	Number of sub-division.
														Total number of 10 hrs. and 16 hrs. winds from																		
From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns.	Departure from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																															III.—Bengal.	
·907	·946	·921	·931	−·021	94	79	75	84	− 2	6·7	6·8	6·7	−1·2	1	0	2	3	4	16	25	5	4	S 30° W	S 9° W	62	46	78	71	2·58	0·56	Calcutta.	5
																															VI.—Punjab.	
·698	·744	·718	·731	+ ·013	81	55	42	62	+ 1	1·0	0·6	0·8	−1·1	25	0	5	0	5	0	3	9	13	N 62° W	N 46° E	25	59	23	37	0·44	0·44	Lahore.	11
																															IX.—Rajputana.	
·672	·672	·621	·674	−·018	85	57	48	68	− 1	3·6	5·7	4·7	+0·2	3	3	2	1	2	1	6	18	24	N 67° W	N 42° W	63	43	59	74	2·44	0·72	Jaipur.	18
																															X.—Bombay.	
·765	·904	·886	·859	−·013	81	85	78	82	− 4	6·4	6·7	6·5	−0·4	0	1	3	7	6	1	4	25	13	N 80° W	N 84° W	40	52	139	189	8·03	1·88	Bombay.	25
																															XIV.—Mysore.	
·611	·664	·642	·651	+ ·028	95	74	65	81	+ 1	7·7	8·3	8·0		7	6	3	2	1	2	8	19	12	N 74° W	S 84° W	50	83	107	123	9·42	1·79	Bangalore.	29
																															XV.—Madras.	
	·822	·835				80	80			7·9	8·8	8·3	+1·8	5	0	0	0	0	1	2	10	42	N 56° W	N 63° W	82	81	93	142	12·51	3·10	Trivandrum.	30
	·745	·707				62	50			5·7	6·8	6·3		26	4	1	1	1	9	5	8	5	S 69° W		23		69		6·43	2·14	Pudukkottai.	31
·872	·880	·906	·897	+ ·049	94	70	71	80	+ 3	5·4	5·4	5·4	−0·9	4	0	2	7	16	11	10	8	2	S 7° E	S 36° W	48	53	61	105	6·43	2·83	Madras.	
																															Kashmir.	
·354	·439	·410	·411	−·037	89	63	51	68	−12	3·8	3·6	3·7	+0·4	24	7	3	1	6	4	1	3	11	N 28° W	N 33° W	15	17	36	58	0·52	0·11	Srinagar.	
																															Hill stations, excluding Kashmir and Baluchistan.	
·360	637	·647	·616	−·017	90	74	69	80	− 1	6·1	6·1	6·1	−0·2	0	3	0	30	0	1	0	26	0	N 60° W	N 87° W	7	11	18	12	6·67	1·06	Katmandu.	
·355	·434	·444	·411		91	81	90	87		8·2	9·6	8·9		1	9	4	3	10	10	3	7	13	N 73° W		10		131		11·68	2·17	Kodaikanal.	
																															Extra India.	
·710	·793	·799	·774	+·007	75	77	76	78	− 2	6·4	5·8	6·1	+0·5†	0	0	0	0	52	8	0	0	0	S 39° E	S 40° E	97	87	237	210	4·85	1·95	Seychelles.	
			·543	+·024				74	+ 2			5·9	+0·8										S 74° E	S 71° E			89	150	3·24	1·89	Mauritius.	

† Departure from old normal.

Table B.—Abstract of observations taken at 8 hrs. at 212 stations in India, etc., in September, 1919

(1) Provincial means.

(2) Data of stations.

(1) Provincial means based on the material in Table B (2) except that the statement of rainfall depends on the complete data of about 2,300 stations.

Division.	Pressure departure from normal.	Temperature of air.							Wind.		Hygrometry.				Cloud.		Rainfall.		
		Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Departure of velocity from normal.	Departure of steadiness from normal.	Mean humidity	Departure from normal.	Mean vapour tension.	Departure from normal.	Mean cloud amount.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.
	"	°	°	°	°	°	°	°					"	"			"	"	"
Burma	+·046	87·5	+0·2	74·7	−0·2	81·1	0	12·9	+0·1	−19	88	− 2	·868	−·022	7·0	−0·1	9·02	11·76	−2·74
Assam	+·040	86·6	−1·9	74·8	−0·3	80·7	−1·6	11·8	−0·1	+27	90	0	·877	−·043	6·9	−0·1	16·60	11·95	+4·65
Bengal	+·042	87·7	−0·5	77·0	−0·7	82·3	−0·6	10·7	0	− 8	88	0	·927	−·027	6·4	−0·1	11·99	10·87	+1·12
Bihar and Orissa	+·056	88·7	−0·3	76·7	−0·3	82·7	−0·3	12·0	−0·4	+ 6	85	0	·894	−·011	5·5	+0·1	7·96	8·46	−0·50
United Provinces of Agra and Oudh	+·035	91·5	0	76·0	−0·4	83·8	−0·2	15·5	−0·8	+ 7	80	− 1	·848	−·011	3·5	−0·5	7·28	6·35	+0·93
Punjab	+·023	96·2	−0·2	74·2	−0·6	85·2	−0·4	21·9	−0·1	+ 8	65	− 4	·606	−·046	1·5	−0·4	1·35	2·66	−1·31
North-West Frontier Province	+·015	97·6	−0·1	73·7	+0·9	85·6	+0·5	23·9	−0·8	−11	69	+ 2	·672	−·025	0·3	−0·7	1·30	1·22	+0·08
Sind	+·022	94·8	−0·6	75·3	−0·8	85·0	−0·8	19·5	−3·1	− 3	70	− 1	·724	−·057	1·5	−0·8	0	0·48	−0·48
Rajputana	+·032	91·5	−2·5	73·8	−2·0	82·7	−2·2	17·7	−0·5	− 2	73	+ 1	·724	−·034	3·3	0	1·78	3·31	−1·53
Bombay	+·010	88·1	+0·8	73·4	+0·4	80·8	+0·6	14·6	−1·0	−24	83	0	·794	+·005	6·0	+0·3	7·04	6·43	+0·61
Central India	+·041	87·1	−0·6	72·5	−0·1	79·8	−0·3	14·6	−1·1	0	83	+ 1	·782	−·003	4·1	−0·8	3·21	5·89	−2·68
Central Provinces	+·053	87·5	+0·6	72·2	−0·1	79·8	+0·2	15·2	−0·7	−14	81	− 3	·761	−·013	5·4	−0·4	4·18	7·15	−2·97
Hyderabad	+·036	89·6	+2·5	72·5	+0·5	81·0	+1·5	17·1	−1·3	−27	79	0	·738	+·011	5·8	−0·2	6·91	7·46	−0·55
Mysore	+·007	83·5	+1·1	66·9	+1·1	75·2	+1·1	16·6	−0·9	−24	84	+ 1	·647	+·015	6·9	−0·5	8·96	4·68	+3·88
Madras	+·021	90·4	+0·1	76·2	+0·5	83·3	+0·3	14·1	−0·5	−14	80	+ 2	·841	+·029	5·7	−0·3	7·26	5·86	+1·40

Table

(2) Abstract of observations taken at 8 hrs. at 212

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	I.—Burma.																					
2	Victoria Point	147	29·784		29·851	29·846	6th	29·722	12th	79·2	78·1	83·6		74·6		79·1		9·0	85·8	7th & 27th	71·1	15th
	Mergui	66	29·862	+·018	29·853	29·922	6th	29·796	3rd	77·2	75·8	85·9	+1·4	73·9	+1·0	79·9	+1·2	12·0	90·2	29th	70·6	6th
	Tavoy	19	29·901	+·012	29·852	29·972	9th	29·831	13th	78·1	75·9	86·9	+2·9	74·3	+0·2	80·6	+1·5	12·6	91·0	28th	71·4	6th
	Moulmein	94	29·844	+·046	29·859	29·911	9th	29·748	2nd	79·8	73·3	86·1	+1·3	75·2	+0·6	80·7	+0·9	10·9	91·5	21st	71·0	1st
	Amherst																					
	Rangoon	18	29·891	+·051	29·847	29·967	18th	29·785	4th	79·7	77·2	87·7	+2·0	75·7	−0·3	81·7	+0·9	12·0	93·8	21st	72·0	7th
	Bassein	27	29·882	+·059	29·845	29·963	9th	29·775	3rd	80·1	78·0	88·0	+2·4	76·1	0	82·0	+1·2	11·9	93·2	21st	72·9	21st
	Diamond Island	41	29·840	+·031	29·815	29·928	9th	29·738	4th	82·7	78·7	86·2	+1·6	78·2	+1·9	82·2	+1·7	8·0	88·8	20th	73·4	6th
	Toungoo	164	29·735	+·054	29·842	29·809	18th	29·615	3rd	80·1	77·6	89·4	+0·4	74·8	−0·5	82·1	−0·1	14·6	94·5	21st	71·1	13th
	Kyaukpyu	18	29·846		29·804	29·913	18th	29·705	3rd	80·0	77·7	85·7		77·0		81·3		8·7	90·9	23rd	73·9	23rd
	Akyab	20	29·840	+·045	29·801	29·933	18th	29·692	2nd	80·0	77·9	86·2	−0·2	75·5	−2·3	80·8	−1·3	10·7	90·1	22nd	72·6	9th
3	Minbu	*165*	29·637	+·033	29·805	29·778	18th	29·546	3rd	81·0	76·6	91·0	+0·7	76·6	−0·2	83·8	+0·3	14·4	98·3	30th	73·6	11th
	Yamethin	644	29·234	+·048	29·831	29·316	18th	29·100	3rd	78·4	75·9	89·6	−1·1	74·8	+0·1	82·2	−0·5	14·8	93·2	21st	69·1	9th
	Mandalay	250	29·629	+·055	29·8[illegible]	29·714	18th	29·476	2nd	82·8	76·9	94·1	+1·3	77·4	+0·1	85·6	+0·7	17·0	99·9	27th	73·8	29th
	Monywa	*980*	29·598	+·068	29·838	29·688	18th	29·433	3rd	80·1	76·9	91·2	−0·6	77·3	−0·4	84·2	−0·5	13·9	95·2	28th	74·3	16th
	Lashio	*2,890*	27·109	+·042	27·065	27·196	18th	26·947	2nd	70·8	69·1	80·4	−3·7	67·2	−0·7	73·6	−2·2	13·2	85·3	14th	62·4	10th
	Bhamo	*361*	29·497	+·061	29·[illegible]16	29·585	30th	29·325	2nd	76·5	74·8	90·8	+1·0	67·8	−6·8?	79·3	−2·9?	23·0	93·4	1st	61·2	27th
	Myitkyina	458	29·374	+·059	29·799	29·475	18th	29·208	2nd	75·2	73·9	84·9	−4·9	73·1	−2·5	79·0	−3·7	11·8	92·6	14th	69·4	29th
	II.—Assam.																					
4	Dibrugarh	353	29·472	+·037	29·789	29·570	30th	29·292	2nd	76·2	74·9	84·0	−3·0	72·4	−1·4	78·7	−2·2	10·6	92·1	1st	69·9	30th
	Sibsagar	333	29·495	+·018	29·790	29·592	27th	29·325	2nd	76·3	74·9	83·7	−4·1	74·8	−1·5	79·3	−2·8	8·9	90·2	14th	71·3	30th
	Tezpur	252	29·577	+·047	29·790	29·694	19th	29·411	1st & 2nd	77·3	75·6	87·3	−1·4	75·1	−1·7	81·2	−1·5	12·2	92·8	1st	70·8	30th
	Gauhati	196	29·635	+·050	29·787	29·726	27th	29·437	2nd	80·0	77·1	88·4	−1·5	75·8	−0·9	82·1	−1·2	12·6	94·0	1st	71·7	26th
	Dhubri	115	29·699	+·034	29·769	29·801	18th	29·539	1st	78·3	76·5	85·5	+0·1	76·0	−1·2	80·7	−0·5	9·5	90·1	1st	73·6	21st
	Silchar	104	29·758	+·054	29·815	29·886	19th	29·578	2nd	79·5	77·5	88·3	−1·5	75·2	−1·1	81·8	−1·3	13·1	94·0	5th	73·5	21st
	Srimangal	66	29·780		29·796	29·898	18th	29·600	1st	80·4	77·3	89·2	−1·8	73·3	−2·4?	81·3	−2·1?	15·9	94·5	24th	70·1	21st
	III.—Bengal.																					
5	Cox's Bazar	36	29·809		29·790	29·925	19th	29·627	1st	79·7	77·6	85·1		74·5		79·8		10·6	89·1	22nd	71·5	10th & 11th.
	Chittagong	87	29·757	+·048	29·790	29·875	29th	29·568	1st	77·9	76·5	86·0	−0·8	75·3	−1·0	80·7	−0·9	10·7	92·2	23rd	71·8	10th
	Noakhali	43	29·799	+·055	29·789	29·916	19th	29·570	1st	80·3	78·2	86·2	−0·3	77·2	−0·2	81·7	−0·3	9·0	90·8	23rd	71·8	11th
	Barisal	12	29·811	+·053	29·770	29·907	30th	29·549	1st	81·7	78·9	87·6	−0·4	77·2	−0·9	82·4	−0·7	10·4	91·8	23rd	72·8	7th
	Narayanganj	26	29·792	+·039	29·767	29·935	18th	29·550	1st	81·1	78·1	87·5	−1·0	77·2	−1·7	82·4	−1·3	10·2	91·1	16th, 23rd & 24th	72·2	25th

N. B.—Elevations in italics indicate barometrical determinations.

B.

stations in India, etc., in September, 1919.

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th September 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															I.—Burma.
19	0	3	3	2	1	1	0	1	S 87° E		4·0			17		86		·856		7·4		18	−5·6	16·85	30·91	−14·06	104·01	137·96	−33·95	4·20	Victoria Point.
18	0	0	5	5	1	0	1	0	S 59° E	N 76° W	3·6	1·2	+2·4	27	−31	93	0	·876	+·003	6·1	−0·1	17	−6·0	10·90	26·75	−15·85	116·32	135·12	−18·80	2·60	Mergui.
23	0	0	0	1	1	0	0	0	S 24° E	S 64° W	1·2	0·9	+0·3	7	−4	90	−3	·862	−·007	7·5	+0·5	16	−6·7	15·49	33·10	−17·61	203·65	196·39	+7·26	3·70	Tavoy.
7	0	6	6	3	6	1	0	1	S 70° E	S 12° E	1·9	2·3	−0·4	40	+3	89	−3	·876	−·003	7·8	+0·4	14	−8·0	11·75	27·84	−16·09	202·55	174·06	+28·49	3·10	Moulmein.
2	1	0	10	9	4	4	0	0	S 48° E		5·8			59																	Amherst.
2	4	3	5	5	4	2	3	2	S 73° E	S 50° W	2·9	2·6	+0·3	17	−31	89	−3	·899	−·014	8·9	+0·5	15	−4·5	8·73	15·25	−6·52	83·76	86·70	+3·06	1·23	Rangoon.
14	0	0	2	3	4	1	2	4	S 19° W	S 5° W	2·8	2·9	−0·1	13	−24	91	−2	·936	+·005	6·2	−0·9	12	−8·2	9·36	15·24	−5·88	97·79	95·81	+1·98	1·78	Bassein.
3	1	5	2	6	2	6	2	3	S 21° E	S 51° W	7·0	5·8	+1·2	13	−28	83	−3	·926	+·022	5·8	−1·5	9	−6·7	7·50	17·80	−10·30	99·90	102·05	−2·15	2·51	Diamond Island.
10	1	1	1	7	8	1	0	1	S 25° E	S 32° E	1·9	2·3	−0·4	40	−15	89	−1	·908	−·009	7·9	−0·3	15	−2·6	7·73	12·13	−4·40	71·27	70·86	+0·41	2·36	Toungoo.
25	0	0	1	1	2	0	0	1	S 27° E		0·5			7		90		·917		7·1		15	−4·3	13·41	18·48	−5·07	179·34	158·36	+20·98	1·59	Kyaukpyu.
6	1	8	7	2	3	3	0	0	E	N 87° E	2·6	2·2	+0·4	40	−15	90	−3	·921	−·040	7·5	0	15	−4·0	14·78	21·15	−6·37	211·98	178·27	+33·71	2·85	Akyab.
4	0	0	1	19	1	0	1	4	S 43° E	S 42° E	2·7	6·0	−3·3	49	−18	81	−5	·855	−·031	3·5	−2·8P	4	−5·7	0·90	6·20	−5·30	22·39	26·75	−4·36	0·35	Minbu.
																89	+1	·862	−·001	6·2	−0·3	11	+0·5	5·48	7·02	−1·54	23·96	27·76	−3·80	1·21	Yamethin.
12	0	0	0	0	5	0	0	0	S *	S 3° W	5·2†	3·4	+1·8	29	−26	76	−7	·843	−·047	6·9	+1·1	6	−2·8	4·57	5·92	−1·35	21·74	25·13	−3·39	3·05	Mandalay.
9	2	2	3	10	2	0	0	2	S 67° E		1·7			37		85	−2	·879	−·042	8·2	+0·9	5	−3·4	2·35	6·54	−4·19	25·97	24·34	+1·63	1·10	Monywa.
7	3	5	1	1	2	9	1	1	S 56° W		1·6			10		92	0	·689	−·043	5·5	−2·5	17	+3·7	14·38	7·40	+6·98	43·84	49·73	−5·89	2·60	Lashio.
30	0	0	0	0	0	0	0	0	Calm.	N 72° W	0·5	1·5	−1·0	(a)		92	+1	·837	−·048	9·0	+2·3P	16	+5·4	9·90	9·51	+0·39	53·29	62·73	−9·44	2·35	Bhamo.
7	0	0	0	1	2	0	0	0	S 15° E		1·8			7		94	+4	·818	−·077	8·3	+1·0	14	+1·7	13·28	9·46	+3·82	68·31	65·75	+2·56	2·54	Myitkyina.
																															II.—Assam.
26	0	2	2	0	0	0	0	0	N 67° E		0·3			10		94	+2	·850	−·032	7·2	−0·2	21	+6·1	13·65	12·78	+0·87	85·56	82·45	+3·11	3·42	Dibrugarh.
8	4	11	2	0	2	2	0	1	N 40° E	S 79° E	1·6	1·8	−0·2	40	+29	93	−1	·843	−·085	9·1	+0·8	20	+5·3	11·58	11·83	−0·25	75·00	71·37	+3·63	1·90	Sibsagar.
8	1	1	19	0	0	0	1	0	N 85° E		1·7			62		92	+1	·861	−·052	7·5	+0·6	15	+3·7	10·66	6·89	+3·77	43·75	56·28	−12·53	2·20	Tezpur.
26	0	2	1	1	0	0	0	0	N 77° E		0·8			10		87	−1	·888	−·036	5·8	−1·2	13	+3·1	10·34	6·20	+4·14	46·67	51·86	−5·19	2·78	Gauhati.
3	0	4	9	3	6	5	0	0	S 50° E	N 82° E	4·7	3·1	+1·6	46	+24	89	−2	·877	−·044	6·8	−0·1	14	+1·3	16·98	14·34	+2·64	74·94	83·17	−8·23	5·18	Dhubri.
30	0	0	0	0	0	0	0	0	Calm.	N 77° E	0	1·6	−1·6	(a)		91	+1	·915	−·014	6·9	−0·8	22	+6·8	20·12	13·39	+6·43	67·97	92·17	−24·20	3·71	Silchar.
																87	0	·902	−·039	5·3		21	+5·5	25·71	10·55	+15·16	67·64	76·52	−8·88	6·00	Srimangal.
																															III.—Bengal.
9	0	0	6	12	3	0	0	0	S 52° E		3·0			56		91		·920		6·4		15	+1·0	21·31	12·00	+9·31	136·18	114·96	+21·22	3·49	Cox's Bazar.
11	0	1	5	7	3	2	0	1	S 47° E	S 60° E	3·3	3·2	+0·1	40	−23	94	+6	·894	−·038	8·1	+1·0	20	+7·4	24·16	11·49	+12·67	112·46	82·89	+29·57	3·30	Chittagong.
7	0	0	1	14	5	3	0	0	S 27° E		3·1			70		91	+2	·937	−·015	5·1	+0·2	18	+2·3	22·39	15·48	+6·91	98·57	100·20	−1·63	3·37	Noakhali.
11	0	0	0	7	5	5	2	0	S 5° W	S 27° E	2·8	2·0	+0·8	43	+17	88	0	·941	−·031	4·6	−1·8	11	−3·5	14·08	10·77	+3·31	72·47	65·46	+7·01	6·43	Barisal.
2	0	0	1	5	6	9	1	1	S 13° W	S 18° E	1·9	3·2	−1·9	49	+1	87	−1	·920	−·050	6·8	−0·8	13	+1·4	14·78	9·11	+5·67	63·63	56·79	+6·84	7·00	Narayangarj.

* Wind observations for 17 days.
† Mean of 17 days.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs. at 212

Number of Sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal—*concld.*																					
	Mymensingh	63	29·752	+·033	29·767	29·894	18th	29·541	25th	80·3	77·3	87·2	−0·4	76·7	−1·0	82·0	−0·7	10·5	91·1	14th 15th, & 16th.	72·5	25th
	Bogra	75	29·728	+·031	29·754	29·834	18th	29·490	1st	81·0	78·9	88·7	+0·1	76·9	−0·8	82·8	−0·3	11·8	92·9	21st	72·2	30th
	Dinajpur	123	29·667	+·028	29·745	29·769	22nd	29·444	1st	80·4	77·9	87·9	−0·7	76·9	−0·6	82·4	−0·7	11·0	92·3	28th & 29th.	73·5	12th
	Jalpaiguri	283	29·538	+·047	29·780	29·635	18th	29·339	2nd	78·7	76·8	87·4	−0·3	74·7	−1·1	81·1	−0·7	12·7	91·4	15th	73·6	20th
	Saugor Island	10	29·784	+·049	29·739	29·899	18th	29·479	1st	82·6	79·0	86·4	−1·8	79·0	−0·7	82·7	−1·3	7·4	89·6	22nd	74·4	7th
	Midnapore	149	29·634	+·037	29·732	29·735	19th & 3·th.	29·289	1st	81·8	78·2	89·8	−0·1	77·8	+0·5	83·8	+0·2	12·0	97·8	2nd	74·7	12th
	Calcutta	21	29·778	+·046	29·746	29·893	18th	29·445	1st	81·8	79·0	88·6	+0·6	78·3	+0·3	83·4	+0·5	10·3	92·6	22nd	75·4	7th
	Jessore	30	29·783	+·052	29·760	29·888	19th	29·483	1st	82·1	78·7	89·0	−0·2	76·9	−1·5	83·0	−0·9	12·1	92·5	25th	74·5	7th & 26th.
	Burdwan	99	29·687	+·032	29·734	29·791	19th	29·344	1st	82·8	78·2	88·9	−0·9	77·9	−0·9	83·4	−0·9	11·0	93·6	22nd	74·4	30th
	Berhampore	67	29·730	+·043	29·748	29·831	19th	29·430	1st	81·9	78·9	88·9	−0·1	78·2	−0·4	83·6	−0·3	10·7	92·6	21st & 22nd.	74·7	8th
	IV.—Bihar and Orissa.																					
6	Balasore	50	29·762	+·067	29·757	29·882	18th	29·497	1st	81·0	78·2	89·0	+0·2	77·2	−0·7	83·1	−0·3	11·8	92·8	22nd	72·0	9th
	Hukitala (False Point)	29	29·794	+·073	29·764	29·915	19th	29·550	1st													
	Cuttack	80	29·742	+·077	29·763	29·849	19th	29·473	1st	81·5	78·0	90·4	+0·3	78·3	+0·2	84·4	+0·3	12·1	93·5	20th & 22nd.	75·0	6th
	Puri	24	29·814	+·087	29·778	29·920	18th	29·564	1st	84·1	79·6	89·2	+0·2	80·8	+1·1	85·0	+0·7	8·4	93·0	24th	76·9	12th
	Angul	455	29·354	+·074	29·755	29·459	18th	29·050	1st	80·6	76·9	88·3	+0·3	76·4	+0·4	82·6	+0·3	12·4	92·8	21st	74·4	4 days
	Sambalpur	486	29·330	+·063	29·765	29·436	19th	29·040	1st	80·7	77·5	88·2	−0·7	76·1	−1·0	82·2	−0·9	12·1	92·3	26th	73·0	15th
7	Chaibasa	*733*	29·050	+·050	29·738	29·159	30th	28·728	1st	79·9	75·9	89·2	−0·3	75·4	−0·5	82·3	−0·4	13·8	94·0	22nd	72·8	13th
	Ranchi	2,128	27·676	+·052	29·725	27·780	27th	27·357	1st	76·0	72·7	83·5	−0·6	71·3	−0·7	77·4	−0·7	12·2	87·8	29th	68·9	7th & 13th.
	Purulia	*816*	28·970	+·049	29·736	29·079	30th	28·640	1st	80·2	76·2	90·2	+0·9	75·7*	0	83·2*	+0·5	14·5	94·7	21st	73·6	8th
	Daltonganj	*730*	29·058	+·051	29·740	29·162	18th	28·724	1st	80·2	75·6	89·4	−0·9	74·8	−0·5	82·1	−0·7	14·6	94·2	21st	71·1	27th
8	Purnea	124	29·663	+·031	29·743	29·763	18th	29·425	1st	80·4	78·2	87·6	−1·3	76·8	−0·7	82·2	−1·0	10·8	91·7	21st	73·8	11th
	Monghyr	155	29·619		29·7.6	29·730	27th	29·318	1st	82·6	78·3	88·5		77·6		83·0		10·9	94·2	29th & 30th.	74·9	12th
	Darbhanga	165	29·627	+·047	29·743	29·726	27th	29·392	1st	81·9	78·3	86·0	2·7?	76·8	−1·8	81·4	−2·3?	9·2	90·5	1st	73·7	8th
	Pusa	188	29·583		29·728	29·681	12th	29·325	1st	81·6	78·7	90·2		76·5		83·4		13·7	95·7	30th	73·9	25th
	Patna	183	29·596	+·042	29·735	29·689	17th	29·318	1st	83·1	78·7	88·2	−1·6	78·3	−0·6	83·2	−1·1	9·9	93·9	22nd	74·4	17th
	Buxar	239	29·525	+·035	29·720	29·618	12th	29·247	1st	82·0	78·5	89·9	−0·2	78·3	+0·6	84·1	+0·2	11·6	95·3	28th	76·6	9th
	Gaya	372	29·411	+·050	29·738	29·512	27th	29·121	1st	81·3	77·0	89·8	−1·1	77·7	−0·1	83·8	−0·6	12·1	95·5	22nd	73·2	7th
	Naya Dumka	489	29·297	+·045	29·738	29·402	18th	28·999	1st	81·0	77·7	89·4	+0·5	75·7	−0·9	82·5	−0·2	13·7	94·4	21st	72·6	30th
	V.—United Provinces of Agra and Oudh.																					
9	Gorakhpur	257	29·508	+·032	29·723	29·601	17th	29·271	1st	81·0	77·9	89·7	−0·8	76·7	−0·9	83·2	−0·9	13·0	94·9	22nd	70·9	17th
	Benares	267	29·501	+·040	29·721	29·594	12th	29·216	1st	82·8	78·0	91·0	0	76·3	−0·9	83·7	−0·5	14·7	98·3	15th	73·7	5 days
	Allahabad	309	29·479	+·057	29·744	29·571	27th & 28th.	29·202	1st	82·5	77·0	91·6	+0·1	76·9	−0·1	84·3	0	14·7	97·4	27th	74·4	27th
	Cawnpore	416	29·357	+·042	29·729	29·445	28th	29·109	1st	81·2	76·6	91·4	+0·3	76·8	−0·5	84·1	−0·1	14·6	97·2	20th	73·1	27th

N.B.—Elevations in italics indicate barometrical determinations.

*Mean of 25 days.

B—*continued.*

stations in India, etc., in September, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th September 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															III.—Bengal—*concld.*
19	0	0	3	5	1	1	0	1	S 28° E	S 63° E	1·8	2·0	−0·2	27	−23	87	− 3	·905	−·052	7·5	+0·4	15	+ 0·1	10·31	13·39	− 3·58	62·96	73·20	−15·24	3·21	Mymensingh.
17	1	0	7	0	4	1	0	0	S 59° E	S 49° E	1·1	2·2	−1·1	27	−29	90	+ 3	·867	+·005	6·4	+0·7	14	+ 1·2	11·94	11·43	+ 0·51	50·61	60·18	− 9·57	3·51	Bogra.
5	0	5	10	4	5	1	0	0	S 73° E	S 76° E	3·0	2·6	+0·4	53	+ 1	89	0	·922	−·024	6·2	−0·5	16	+ 3·7	13·43	12·00	+ 1·43	55·08	62·16	− 7·08	2·71	Dinajpur.
24	0	3	1	1	1	0	0	0	N 84° E	N 73° E	0·9			13	−17	91	+ 1	·897	−·012	5·6	+0·4	17	+ 1·6	17·61	10·46	− 1·85	87·74	109·82	−22·08	3·50	Jalpaiguri.
1	2	2	3	2	6	12	1	1	S 20° W	S 2° W	8·3	5·2	+3·1	43	+14	85	− 3	·946	−·039	6·9	−0·8	7	− 6·4	6·46	11·17	− 4·71	59·33	56·20	+ 3·13	2·28	Saugor Island.
22	1	2	0	1	3	1	0	0	S 27° E		1·6			7		85	− 1	·915	−·014	6·3	+2·2	9	− 3·4	4·67	8·72	− 4·05	53·78	48·86	+ 4·92	1·14	Midnapore.
1	0	1	2	2	5	13	4	2	S 38° W	S 12° E	3·3	3·0	+0·3	53	+20	88	+ 1	·949	−·014	6·3	−0·6	8	− 5·2	2·58	9·93	− 7·35	55·01	52·36	+ 2·65	0·56	Calcutta.
25	1	0	1	1	0	0	1	1	N	S 32° E	1·8	2·3	−0·5	3	−34	85	− 4	·935	−·057	6·3	−0·3	12	+ 0·3	8·31	8·50	− 0·19	49·86	52·69	− 3·03	2·42	Jessore.
20	0	0	1	2	1	4	1	1	S 26° W	S 18° E	0·8	2·2	−1·4	20	− 2	86	0	·922	−·022	7·0	+0·1	9	− 2·3	5·37	8·55	− 3·18	47·24	48·68	− 1·44	1·50	Burdwan.
9	1	0	2	1	11	5	0	1	S 7° W	S 19° E	2·8*	2·7	+0·1	43	+ 5	87	− 2	·947	−·028	6·1	−1·1	12	+ 0·3	6·50	10·02	− 3·52	41·10	47·97	− 6·87	1·52	Berhampore.
																															IV.—Bihar and Orissa.
4	2	1	2	0	5	13	1	2	S 41° W	S 59° W	2·7	2·6	+0·1	46	+24	88	+ 1	·927	−·022	7·7	+2·6	6	− 7·3	3·44	12·18	− 8·74	66·50	49·13	+17·37	0·79	Balasore.
1	2	2	1	3	1	11	6	3	S 65° W		7·6			40	+ 3					6·1	−1·2	8	− 4·3	5·81	10·23	− 4·42	53·71	47·94	+ 5·77	3·83	Hukitala (False Point).
21	0	1	1	0	0	4	4	0	S 64° W	S 81° W	1·7	1·8	−0·1	23	− 7	85	+ 2	·914	+·009	5·6	−0·5	9	− 3·5	6·13	10·11	− 3·98	52·27	49·33	+ 2·94	1·55	Cuttack.
3	4	1	0	2	7	7	5	1	S 45° W		9·0			43		81	− 4	·947	−·011	5·6	0	5	− 6·8	1·89	9·23	− 7·34	37·18	41·37	− 4·19	0·54	Puri.
7	2	2	3	2	1	3	5	5	N 68° W		4·0			17		84	− 2	·875	−·024	6·6	+2·1	7	− 3·7	2·21	6·46	− 4·25	44·27	37·47	+ 6·80	0·50	Angul.
0	1	11	4	0	2	8	0	4	N 40° E	S	2·9	2·8	+0·1	17	− 5	86	+ 4	·902	+·019	5·3	−0·6	7	− 4·6	6·21	8·73	− 1·92	67·21	59·11	+ 8·10	1·41	Sambalpur.
20	0	0	1	0	1	8	0	0	S 35° W	S 53° W	1·6	1·0	+0·6	30	+ 7	85	− 1	·855	−·012	5·0	−0·6	7	− 4·7	5·06	8·58	− 3·52	45·79	43·67	+ 2·12	1·93	Chaibasa.
4	0	0	0	2	2	7	12	3	S 71° W	S 79° W	2·3	5·0	−2·7	62	+40	85	+ 1	·770	+·017	5·3	−0·8	11	− 0·9	14·27	8·95	+ 5·32	64·44	48·48	+15·96	2·84	Ranchi.
16	0	1	0	3	5	3	2	0	S 6° W		1·5			30		83	−57	·849	−·040	4·6	−0·7	9	− 2·2	5·44	10·12	− 4·68	57·58	44·44	+13·14	1·37	Purulia.
21	0	0	1	1	0	7	0	0	S 27° W		2·2†			23		81	− 3	·822	−·029	4·0	0	8	− 1·2	7·22	6·97	+ 0·25	51·09	36·53	+14·56	3·15	Daltonganj.
4	2	3	12	2	3	3	1	0	S 79° E	N 88° E	1·9	2·2	−0·3	40	+ 2	91	+ 1	·938	−·020	6·4	+0·7	17	+ 6·1	10·35	12·25	− 1·90	59·25	55·69	+ 3·56	1·43	Purnea.
9	0	0	3	10	0	6	2	0	S 20° E		3·2			40		83		·915		5·4		12	+ 1·6	13·87	8·95	+ 5·02	52·58	45·49	+ 7·09	2·75	Monghyr.
23	0	0	7	0	0	0	0	0	E	S 76° E	2·4	2·8	−0·4	23	−27	84	− 3	·819	−·028	5·9	+0·8	14	+ 5·3	10·62	8·58	+ 2·04	32·17	45·96	−13·79	5·05	Darbhanga.
6	0	3	11	4	2	0	3	1	S 85° E		2·4			40		87		·937		5·4		10	+ 1·5	5·11	6·14	− 1·03	28·32	44·58	−16·26	1·23	Pusa.
8	0	0	9	4	0	5	4	0	S 35° E	S 74° E	2·8	2·8	0	23	− 7	82	− 1	·920	−·021	6·1	+0·1	9	− 0·1	7·14	7·53	− 0·39	37·69	42·84	− 5·15	3·44	Patna.
9	0	1	3	1	2	7	7	0	S 45° W		2·8			33		85	+ 1	·928	+·018	4·3	−0·9	9	+ 0·1	7·07	7·05	+ 0·02	38·83	35·73	+ 3·10	2·78	Buxar.
3	1	1	1	1	9	13	1	0	S 24° W	S 37° W	2·3	2·8	−0·5	62	+29	82	0	·874	−·020	4·7	−0·2	10	+ 0·7	5·18	7·67	− 1·49	50·53	41·63	+ 8·90	1·21	Gaya.
29	0	0	1	0	0	0	0	0	E		1·0			3		86	+ 1	·905	0	5·5	0	12	− 0·3	7·96	9·12	− 1·16	47·71	49·21	− 1·50	1·71	Naya Dumka.
																															V.—United Provinces of Agra and Oudh.
13	1	1	13	1	0	0	1	0	N 86° E	N 63° E	2·1	1·5	+0·6	43	+17	87	+ 3	·912	−·001	2·7	−1·9	7	− 1·7	7·58	7·82	− 0·24	35·08	44·28	− 9·20	2·10	Gorakhpur.
5	0	1	4	1	0	6	2	11	N 68° W	S 31° W	1·8	2·8	−1·0	30	+19	80	− 4	·890	−·019	2·7	−1·4	11	+ 2·6	12·51	6·79	+ 5·72	38·94	35·20	+ 3·74	4·78	Benares.
6	0	2	1	0	0	5	14	3	S 87° W	N 63° W	2·6	4·3	−1·7	56	+41	77	− 4	·854	−·033	4·4	−1·1	8	+ 0·3	5·83	5·66	+ 0·17	31·64	33·94	− 2·30	1·81	Allahabad.
8	1	1	0	1	1	7	8	3	S 75° W	S 45° W	1·7	2·6	−0·9	46	+38	81	+ 1	·852	−·014	2·5	−1·1	7	− 0·1	6·89	6·88	+ 0·01	34·01	32·28	+ 1·73	2·76	Cawnpore.

* Mean of 17 days.
† „ „ 29 „

Table

(2) Abstract of observations taken at 8 hrs. at 212

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	V.—United Provinces of Agra and Oudh—*concld.*																					
	Lucknow	368	29·385	+·027	29·710	29·491	28th	29·154	5th	82·4	77·6	92·6	+0·7	76·6	+0·2	84·6	+0·5	16·0	98·9	27th & 28th.	71·5	27th
	Bahraich	407	29·349	+·030	29·715	29·447	28th & 30th.	29·136	2nd	81·2	77·1	90·7	−0·7	76·9	+0·4	83·8	−0·1	13·8	96·9	28th	73·3	8th
10	Jhansi	824	28·965	+·037	29·745	29·065	11th	28·700	1st	80·1	74·4	91·6	+0·1	75·0	−1·1	83·3	−0·5	16·6	98·8	29th	72·2	12th
	Agra	556	29·209	+·031	29·722	29·304	28th	28·952	1st	83·3	76·6	93·7	+0·5	76·8	−0·2	85·2	+0·1	16·9	100·0	28th & 29th.	73·1	12th
	Mainpuri	516	29·241	+·032	29·716	29·337	13th	28·999	1st	80·4	75·6	91·9	−0·9	75·5	−0·5	83·7	−0·7	16·4	98·4	29th	70·3	28th
	Bareilly	568	29·174	+·021	29·701	29·273	28th	28·942	5th	80·6	76·1	91·7	+1·0	75·9	+0·2	83·8	+0·6	15·8	96·3	19th, 22nd & 28th.	71·8	27th
	Roorkee	899	28·852	+·025	29·718	28·962	28th	28·645	1st	78·9	74·5	90·7	−0·2	72·8	−0·5	81·8	−0·3	17·9	96·0	14th	65·6	30th
	VI.—Punjab.																					
11	Delhi	718	29·043	+·035	29·776	29·140	27th	28·807	1st	79·9	72·3	93·5	+0·8	77·1	0	85·3	+0·4	16·4	98·0	20th & 26th.	72·4	29th
	Hissar	725	29·040	+·046	29·718	29·142	27th	28·802	1st	80·9	72·6	97·4	−0·7	73·0	−2·9	85·2	−1·8	24·4	103·7	30th	67·1	30th
	Patiala	*818*	28·908	0?	29·690	29·004	27th	28·674	1st	81·5	74·1	94·5	+1·3	74·0	−0·5	84·3	+0·4	20·5	99·2	17th	61·6	30th
	Ambala	892	28·846	+·017	29·704	28·952	29th	28·631	1st	80·5	73·0	96·2	+3·3	73·2	−0·6	84·7	+1·3	23·0	100·6	22nd	66·0	27th
	Ludhiana	812	28·925	+·019	29·703	29·023	29th	28·716	1st	80·7	72·9	96·6	+1·3	75·5	+0·3	85·6	+0·8	20·1	100·5	22nd	67·0	30th
	Lahore	702	29·018	+·013	29·688	29·133	27th	28·809	4th	81·7	74·0	96·7	−1·6	74·5	+1·1	85·6	−0·3	22·2	100·3	21st	66·3	30th
	Sialkot	830	28·895	+·012	29·696	29·008	28th	28·663	4th	79·8	73·6	92·7	−2·5	32·6	−1·5	82·7	−2·0	20·1	95·7	16th & 17th.	63·0	30th
	Rawalpindi	1,674	28·085	+·018	29·721	28·190	28th	27·877	6th	75·9	69·1	92·3	−1·2	63·7	−0·4	80·5	−0·8	22·6	95·9	16th	56·0	28th
12	Khushab	612	29·110	+·025	29·697	29·232	27th	28·902	1st	85·4	72·7	99·2	+0·3	75·3	−0·9	87·2	−0·3	23·9	103·2	21st	65·2	5th
	Lyalipur	605	29·105		29·678	29·225	26th	28·882	4th	82·2	72·7	98·5		74·5		86·5		24·0	102·5	21st	66·9	30th
	Montgomery	558	29·161	+·016	29·675	29·277	26th	28·938	4th	83·6	72·4	98·3	−2·3	74·8	−1·3	86·6	−1·8	23·5	102·9	25th	67·2	30th
	Multan	426	29·280	+·025	29·677	29·405	26th	29·065	4th	84·5	74·3	99·4	−1·1	77·7	+0·2	88·5	−0·5	21·7	103·8	21st & 24th.	73·4	25th
	VII.—North-West Frontier Province.																					
14	Peshawar	1,113	28·634	+·010	29·731	28·780	28th	28·408	1st	74·3	68·6	95·8	+0·2	70·3	−0·2	83·0	0	25·5	100·8	17th	61·9	30th
	D. I. Khan	590	29·141	+·021	29·699	29·260	27th	28·919	3rd	82·9	73·6	99·4	−0·4	77·1	+2·1	88·2	+0·9	22·3	103·0	16th	68·1	30th
	VIII.—Sind.																					
16	Jacobabad	186	29·541	+·026	29·685	29·659	28th	29·300	4th	84·0	73·8	104·0	+0·3	76·3	+0·1	90·1	+0·2	27·7	109·1	25th & 28th.	66·8	29th
	Hyderabad	96	29·646	+·010	29·695	29·763	27th	29·385	5th	79·8	72·3	96·2	−1·2	74·3	−1·9	85·2	−1·5	21·9	106·6	30th	70·1	10th
	Karachi	13	29·796	+·031	29·740	29·897	11th	29·560	5th	78·4	74·5	84·2	−1·4	75·2	−0·6	79·7	−1·0	9·0	90·0	30th	72·0	28th
	IX.—Rajputana.																					
17	Bikaner	*771*	29·000	+·038	29·734	29·103	18th	28·751	1st	81·5	76·2	95·9	−2·2	75·7	−3·1	85·8	−2·7	20·2	104·6	29th	70·9	30th
	Jodhpur	780	29·023	+·032	29·762	29·110	11th	28·803	1st	79·8	71·8	92·5	−2·4	73·1	−2·4	82·8	−2·4	19·4	102·5	29th	68·3	13th
18	Jaipur	1,131	28·379	+·036	29·760	28·473	27th	28·146	1st	79·2	71·9	91·7	−2·3	72·1	−1·4	81·9	−1·9	19·6	99·5	19th, 29th & 30th.	68·2	12th
	Ajmer	1,611	28·194	+·021	29·759	28·293	27th	27·976	1st	74·4	69·9	87·5	−2·9	72·5	−1·6	80·0	−2·3	15·0	96·2	29th	68·3	26th
	Kotah	832	28·461	+·034	29·747	29·054	11th	28·740	1st	82·0	74·7	90·0	−2·5	75·7	−1·4	82·8	−1·9	14·3	97·6	30th	73·0	13th

N. B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

stations in India, etc., in September, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th September 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	4	45	46	47	48	49	50	51	52	53	54	55
																															V.—United Provinces of Agra and Oudh—*concld.*
23	0	0	2	1	0	0	4	0	S 60° W	S 83° E	1·1	2·0	−0·9	3	−4	80	−1	·886	+·009	3·6	−0·8	10	+2·4	16·55	6·72	+9·83	42·67	34·76	+7·91	3·98	Lucknow.
24	1	0	2	1	1	0	1	0	S 66° E	S 68° E	1·4	2·3	−0·9	7	−34	82	0	·875	−·029	3·2	−0·1	6	−0·6	22·91	7·83	+15·08	50·31	40·23	+10·08	9·30	Bahraich.
15	0	0	0	0	0	3	6	0	S 63° W	N 1° E	2·1	2·4	−0·3	43	+8	76	−1	·777	−·037	1·9	−1·0	2	−5·3	0·70	6·08	−5·38	51·14	33·26	+17·88	0·30	Jhansi.
23	0	0	1	1	1	3	1	0	S 21° W	S 59° W	0·7	3·3	−2·6	13	−9	73	−1	·821	+·016	4·1	+0·6	4	−1·4	2·29	4·05	−1·76	28·82	23·87	+4·95	0·90	Agra.
11	2	1	0	1	0	2	7	6	N 67° W	S 86° W	1·0	1·1	−0·1	40	+21	80	+1	·82	−·014	5·3	+1·1	6	0	2·23	4·42	−2·19	22·76	23·32	−0·56	0·75	Mainpuri.
7	1	4	4	2	2	3	3	4	N 16° E	S 56° E	1·3	1·7	−0·4	4	−22	81	−1	·841	−·008	4·7	+1·2	4	−2·8	8·92	7·44	+1·48	34·00	39·56	−5·56	4·12	Bareilly.
20	0	1	0	6	1	0	0	2	S 48° E	S 58° E	1·3	1·4	−0·1	13	−2	80	−2	·794	+·005	2·2	−1·1	7	+1·4	7·36	6·38	+0·93	40·52	36·35	+4·17	3·04	Roorkee.
																															VI.—Punjab.
6	1	0	1	0	0	0	12	10	S 66° W	S 85° W	2·7	2·6	+0·1	66	+37	68	−3	·631	−·069	2·5	−0·6	2	−2·5	0·80	4·98	−4·18	13·67	23·69	−10·02	0·64	Delhi.
3	0	0	1	0	4	13	9	0	S 53° W	S 59° W	3·8	3·6	+0·2	69	+47	66	0	·690	−·042	2·1	+0·2	3	+0·1	1·83	1·97	−0·14	8·96	11·67	−2·71	1·30	Hissar.
7	2	0	2	6	0	3	6	4	S 79° W		2·8			17		70	−6	·743	−·061	1·8	−0·5	5	+0·8	4·18	4·54	−0·36	21·71	20·23	+1·48	1·80	Patiala.
8	0	0	4	9	0	2	1	6	S 47° E	S 39° W	2·4	1·1	+1·3	17	−12	69	−12	·713	−·089	2·5	−0·5	4	−0·5	1·95	4·65	−2·70	20·02	24·53	−4·51	1·10	Ambala.
23	2	1	0	1	0	0	1	2	N 16° W	S 20° E	0·9	1·0	−0·1	10	−2	68	−8	·707	−·061	1·5	−1·2	3	−0·8	1·61	4·11	−2·50	25·75	22·33	+3·42	0·70	Ludhiana.
13	0	0	1	3	2	3	5	3	S 56° W	S 34° E	1·1	1·5	−0·4	27	+12	68	−2	·741	−·018	0·9	−0·7	1	−1·5	0·44	2·35	−1·91	17·26	15·41	+1·85	0·44	Lahore.
5	3	9	4	6	2	1	0	0	N 80° E	N 73° E	1·3	1·3	0	46	+5	74	+2	·753	0	1·4	−0·7	2	−1·7	0·52	3·38	−2·86	28·90	23·31	+5·59	0·22	Sialkot.
17	3	3	1	0	0	3	3	0	N 34° W	N 56° E	1·3	1·1	+0·2	13	−2	70	+1	·633	−·026	1·8	−0·3	2	−2·2	2·44	3·38	−0·94	37·12	23·07	+14·05	1·61	Rawalpindi.
11	0	7	8	2	1	1	0	0	N 82° E	N 65° E	3·5	3·9	−0·4	46	−10	53	−9	·640	−·061	1·2	−0·1	1	−0·9	0·63	1·25	−0·62	8·27	10·18	−1·91	0·63	Khushab.
9	0	3	2	3	2	5	2	0	S 15° W		2·1			27		61		·672		1·4		1	−0·7	0·31	1·75	−1·44	9·25	10·03	−0·78	0·31	Lyallpur.
2	0	2	2	2	11	10	1	0	S 10° W	S 4° W	3·9	5·0	−1·1	59	+15	56	−1	·649	−·03	0·8	−0·3	1	−0·7	1·25	1·29	−0·04	7·36	8·06	−0·70	1·19	Montgomery.
18	0	1	0	0	8	3	0	0	S 9° W	S 5° W	1·2	1·9	−0·7	30	−11	60	−5	·712	−·0	0·7	0	1	+0·4	0·12	0·32	−0·20	8·13	5·11	+3·02	0·12	Multan.
																															VII.—North-West Frontier Province.
27	2	0	1	0	0	0	0	0	N 27° E	N 34° W	0·2	2·0	−1·8	7	−23	74	+10	·638	−0	0·3	−1·1	1	−0·6	0·38	0·77	−0·39	7·58	5·31	+2·27	0·33	Peshawar.
18	0	8	1	3	0	0	0	0	N 68° E	N 67° E	1·5	1·3	+0·2	30	0	63	−6	·706	−1	0·4	−0·4	1	+0·2	0·70	0·55	+0·15	3·06	5·76	−2·70	0·70	D. I. Khan.
																															VIII.—Sind.
18	0	0	1	10	1	0	0	0	S 45° E	S 48° E	1·8	2·1	−0·3	37	−11	60	−11	·697	109	0	−0·6	0	−0·2	0	0·08	−0·08	0·40	2·30	−1·90	0	Jacobabad.
2	0	0	0	0	7	17	4	0	S 40° W	S 39° W	1·9	9·9	−8·0	79	+5	68	0	·683	·043	0	−1·5	0	−0·6	0	0·52	−0·52	7·35	6·16	+1·19	0	Hyderabad.
0	1	1	0	0	0	7	18	3	S 88° W	S 77° W	9·6	10·7	−1·1	79	−2	82	0	·793	−·018	4·4	−0·4	0	−0·6	0	0·40	−0·40	2·40	5·97	−3·57	0	Karachi.
																															IX.—Rajputana.
2	0	0	1	0	5	10	11	1	S 58° W	S 46° W	5·7	5·0	+0·7	63	+6	77	+12	·8	+·090	1·4	−0·7	2	+0·1	7·84	1·18	+6·66	17·05	9·58	+7·47	4·43	Bikaner.
9	0	0	0	0	2	15	2	2	S 51° W		2·3			56		67	−2		−·053	4·7	+0·4	2	−0·5	1·02	2·26	−1·24	10·43	11·61	−1·18	0·70	Jodhpur.
5	3	1	1	0	1	0	8	11	N 53° W	N 68° W	2·5	3·1	−0·6	58	+15	70	0		−·035	4·1	+0·4	5	+0·4	2·44	3·27	−0·83	24·12	21·67	+2·45	0·72	Jaipur.
18	0	0	0	0	0	8	4	0	S 59° W	S 89° W	2·5	4·1	−1·6	40	−27	79	+3		−·067	2·0	−1·6	2	−1·7	1·28	2·52	−1·24	13·47	18·43	−4·96	1·06	Ajmer.
16	0	0	0	0	0	9	2	3	S 68° W		1·6			37		70	+2	8	+·018	4·4	+1·3	3	−2·3	1·86	4·36	−2·50	25·95	21·69	+1·26	1·30	Kotah.

Table

(2) Abstract of observations taken at 8 hrs. at 212

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	X.—Bombay.																					
19	Deesa	466	29·365	+·030	29·786	29·475	11th	29·161	4th	80·6	74·9	92·4	−0·9	73·5	−0·6	82·9	−0·7	18·9	102·0	29th	68·1	13th
	Bhuj	334	29·491	+·025	29·777	29·591	11th	29·277	5th	80·0	74·4	91·9	−0·1	74·7	+0·1	83·3	0	17·2	99·8	28th & 29th.	71·9	14th
	Jamnagar	61	29·780	+·016	29·787	29·904	11th	29·588	5th	80·9	76·0	89·7	+0·3	74·1	−0·2	81·9	+0·1	15·6	97·9	29th & 30th.	70·7	13th
	Dwarka	37	29·812	+·022	29·795	29·929	11th	29·626	5th	80·1	75·8	85·6	+0·4	77·5	+0·2	81·6	+0·3	8·1	90·3	22th	74·7	14th
	Rajkot	429	29·394	+·002	29·774	29·518	11th	29·204	5th	79·2	73·7	91·1	−0·5	75·4	+3·2?	83·3	+1·3?	15·7	98·7	28th	70·2	12th
	Veraval	*18*	29·825	+·001	29·786	29·961	11th	29·664	5th	79·5	76·1	84·1	+0·5	77·0	+0·7	80·6	+0·6	7·1	97·1	28th	75·2	14th
	Bhavnagar Para	55	29·777	+·001	29·778	29·914	11th	29·617	5th	80·7	75·4	92·9	−0·1	74·3	−0·8?	83·7	−0·5?	18·6	99·0	28th	70·4	11th
	Surat	39	29·810	+·005	29·792	29·944	11th	29·661	5th	81·4	76·6	89·9	+1·3	76·1	+0·4	83·0	+0·9	13·8	95·0	24th	73·2	13th & 30th.
	Ahmadabad	163	29·682	+·023	29·795	29·811	11th	29·505	4th	81·0	76·5	93·7	+1·4	76·5	+0·4	85·1	+0·9	17·2	103·0	23th	73·0	11th & 12th.
25	Bombay	37	29·831	−·004	29·808	29·966	11th	29·723	1st	79·6	76·9	86·3	+1·6	77·7	+1·0	82·0	+1·2	8·6	89·3	23rd	76·2	3rd
	Ratnagiri	207	29·668	−·002	29·816	29·794	11th	29·588	1st	79·4	75·8	84·9	+0·8	75·3	+0·8	80·1	+0·8	9·6	86·9	27th & 29th.	73·1	1st
	Marmagao	*60*	29·828	−·017	29·822	29·953	11th	29·760	4th	78·3	77·9	84·5	+1·3						87·2	22nd		
	Karwar	44	29·853	−·004	29·832	29·968	11th	29·772	4th	77·4	75·8	84·6	+2·0	75·1	+1·1	79·8	+1·5	9·5	87·7	23rd	73·1	14th
26	Malegaon	1,430	28·418	+·020	28·794	28·524	11th	28·267	1st	77·2	72·1	90·4	+2·2	70·0	−0·2	80·2	+1·0	20·4	96·2	15th & 16th.	64·2	13th
	Ahmadnagar	2,154	27·723	+·014	28·795	27·840	11th	27·585	1st	74·4	70·1	87·4	+1·8	68·6	+0·7	78·0	+1·3	18·8	95·1	11th	64·5	9th
	Poona	1,846	28·027	+·011	29·813	28·144	11th	27·910	4th	73·9	71·2	84·6	+0·2	69·3	+0·7	76·9	+0·5	15·3	90·5	25th	64·9	9th
	Sholapur	1,590	28·273	+·013	29·798	28·400	11th	28·160	1st	76·2	71·0	89·3	+1·0	70·9	+0·3	80·1	+0·7	18·4	95·0	8th & 10th	67·5	4th
	Bijapur	*1,948*	27·936	+·021	29·815	28·065	11th	27·839	[illegible]	74·2	70·9	86·6	−0·1	69·6	−0·1	78·1	−0·1	17·0	95·0	10th	66·2	4th
	Belgaum	2,562	27·361	+·019	29·839	27·486	11th	27·279	[illegible]	70·3	68·7	79·5	+0·5	66·4	+1·1	73·0	+0·8	13·1	83·1	14th & 17th.	62·9	13th & 14th.
	XI.—Central India.																					
20	Neemuch	1,626	28·208	+·037	29·779	28·307	11th	28·011	1st	76·7	71·9	87·5	−0·4	71·1	+0·2	79·2	−0·1	16·4	94·2	27th	65·5	13th
	Indore	1,823	28·022	+·033	29·783	28·131	11th	27·836	1st	76·5	72·7	86·1	+1·0	70·5	+0·5	78·3	+0·7	15·6	91·3	28th	67·1	12th
21	Nowgong	754	29·030	+·041	29·744	29·128	11th	28·779	1st	78·1	74·7	88·9	−1·0	74·2	−0·8	81·5	−0·9	14·7	94·4	20th	71·4	27th
	Sutna	1,041	28·744	+·054	29·740	28·328	19th	28·490	1st	78·8	75·1	86·0	−1·9	74·3	−0·4	80·2	−1·1	11·7	90·8	27th & 28th.	70·8	27th
	XII.—Central Provinces.																					
22	Buldana	2,134								[illegible]	70·8	84·9	+1·8	69·7	+0·4	77·3	+1·1	15·2	89·5	24th	65·9	7th
	Akola	925	28·914	+·037	29·789	29·034	11th	28·745	1st	[illegible]	73·4	91·7	+2·7	73·1	+0·4	82·4	+1·5	18·6	97·4	27th	69·2	9th
	Amraoti	1,215	28·619	+·043	29·782	28·727	11th	28·442	1st	[illegible]	72·8	89·3	+1·1	72·9	+0·8	81·1	+0·9	16·4	93·6	15th	69·9	12th
23	Khandwa	1,044	28·792	+·037	29·790	28·902	11th	28·618	1st	[illegible]	73·5	89·5	+1·5	72·2	−0·9	80·8	+0·3	17·3	94·5	27th	69·2	9th
	Hoshangabad	1,006	28·831	+·058	29·791	28·943	11th	28·619		[illegible]	74·6	87·0	−0·4	72·7	−0·4	79·8	−0·4	14·3	92·1	28th	68·8	12th
	Saugor	1,807	27·992	+·018?	29·738	28·102	11th	27·747	1st	[illegible]	71·1	86·5	+0·3	71·0	−0·5	78·7	−0·1	15·5	93·6	29th	66·8	11th & 12th.
	Jubbulpore	1,327	28·472	+·043	29·746	28·571	11th	28·233	1st	[illegible]	[illegible]	86·5	−0·6	73·0	+0·3	79·7	−0·1	13·5	91·9	28th	70·5	2nd
	Seoni	2,033	27·815	+·067	29·777	27·904	19th	27·592	1st	[illegible]	[illegible]	84·6	−0·7	70·3	−0·2	77·4	−0·5	14·3	90·0	24th	67·2	10th, 11th & 12th.
	Nagpur	1,017	28·822	+·069	29·785	28·921	11th	28·637	1st	[illegible]	[illegible]	90·1	+1·1	73·8	0	81·9	+0·5	16·3	95·1	24th	70·3	28th
24	Pendra	2,040	27·797	+·077	29·766	27·896	19th	27·515	1st	[illegible]	[illegible]	83·4	−1·2	69·6	−1·6	76·5	−1·4	13·8	88·1	13th	67·2	11th

N.B.—Elevations in italics indicate barometric determinations.

B—*continued.*

Stations in India, etc., in September, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th September 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															X.—Bombay.
5	3	3	0	0	0	9	6	4	N 83° W	S 79° W	9·2	6·1	−1·9	43	−16	76	0	·791	+·010	5·0	+0·1	5	+1·6	1·61	3·42	− 1·81	44·72	22·72	+22·00	0·53	Deesa.
1	3	0	0	0	1	0	24	1	N 84° W	N 87° W	5·4	8·9	−3·5	82	+ 4	76	− 2	·772	−·034	5·3	+0·9	3	+1·0	5·91	1·85	+ 4·06	13·81	13·56	+ 0·25	4·20	Bhuj.
1	1	0	0	0	1	7	10	10	N 84° W		5·8			74		79	+ 2	·829	+·008	4·1	+1·0	0	−2·7		2·32	− 2·32	22·08	17·94	+ 4·14	0	Jamnagar.
2	3	0	1	1	0	7	8	8	N 20° W		7·2			56		81	− 2	·830	−·041	5·9	+1·5	0	−1·7	0·01	1·14	− 1·13	9·88	13·60	− 3·72	0·01	Dwarka.
1	1	1	0	1	1	11	6	8	S 84° W	N 87° W	6·2	6·6	−0·4	59	−15	76	− 5	·752	−·047	6·0	+1·1	4	−0·9	1·89	3·85	− 1·96	30·57	25·19	+ 5·38	0·93	Rajkot.
6	5	1	2	0	0	4	6	6	N 56° W	N 86° W	6·2	5·8	+0·4	40	−15	85	− 1	·857	−·004	5·1	−0·2	1	−2·7	0·55	2·27	− 1·72	12·96	17·48	− 4·52	0·45	Veraval.
2	5	0	1	0	2	7	9	4	N 87° W	S 63° W	3·7	7·9	−4·2	53	−20	77	− 1	·805	−·016	5·8	+0·6	5	−0·7	2·50	3·72	− 1·22	14·54	21·53	− 6·99	1·66	Bhavnagar Para.
13	1	1	2	4	2	3	3	1	S 3° W	S 78° W	2·1	5·0	−2·9	15	−37	79	− 3	·847	−·010	6·1	+0·4	8	+0·9	4·52	6·00	− 1·48	37·39	39·14	− 1·75	1·37	Surat.
9	1	2	1	0	0	9	0	8	N 79° W	N 68° W	2·4	2·8	−0·4	30	−27	81	+ 3	·848	+·041	3·9	−1·8	2	−2·4	1·32	3·73	− 2·41	27·76	28·37	− 0·61	1·00	Ahmadabad.
2	3	4	8	3	1	3	4	2	N 70° E	S 56° W	5·9	7·9	−2·0	17	+ 2	88	+ 1	·885	+·003	4·1	−0·2	15	+2·5	8·03	10·57	− 2·54	66·49	68·69	− 2·20	1·98	Bombay.
7	5	5	1	4	1	1	4	2	N 12° E	S 73° W	5·6	5·0	+0·6	17	+10	84	− 3	·842	−·014	4·1	−0·2	13	−2·0	8·97	11·94	− 2·97	85·17	95·78	−10·61	1·95	Ratnagiri.
19	0	1	2	1	1	0	6	0	S 68° W	N 54° W	3·6	5·4	−1·8	10	−43	93	+ 2	·933	+·043	4·6	+1·2	11	−3·9	7·20	8·54	− 1·34	88·20	88·07	+ 0·13	3·01	Marmagao.
24	1	0	0	0	3	2	0	0	S 23° W	N 36° W	1·4	2·1	−0·7	10	−24	92	+ 3	·870	+·012	5·5	−0·5	12	−3·4	11·43	11·55	− 0·12	107·10	112·47	− 5·37	2·66	Karwar.
10	0	1	1	0	1	8	7	2	S 70° W	N 87° W	4·6	6·6	−2·0	43	−27	78	+ 2	·728	+·022	5·8	+1·1	12	+4·4	11·50	5·76	+ 5·74	24·78	19·52	+ 5·26	1·68	Malegaon.
14	3	1	2	0	0	4	1	5	N 46° W	N 70° W	4·9	9·1	−4·2	23	−66	80	0	·682	+·009	4·5	−0·9	12	+4·2	11·02	6·18	+ 4·84	21·03	18·57	+ 2·46	1·91	Ahmadnagar.
11	0	0	3	0	0	0	10	6	N 70° W	N 87° W	6·2	8·1	−1·9	40		88	+ 7?	·729	+·051?	5·2	+1·3	14	+6·8	10·60	4·53	+ 6·07	27·12	21·76	+ 5·36	1·96	Poona.
4	0	2	2	0	0	8	6	8	N 84° W	N 68° W	6·5	6·1	+0·4	46	−21	78	+ 1	·697	+·022	5·7	−0·3	15	+6·2	13·91	7·88	+ 6·03	26·81	23·10	+ 3·71	2·97	Sholapur.
12	2	2	1	0	0	2	6	5	N 57° W	N 87° W	3·9	5·3	−1·4	33	−42	85	+ 4	·712	+·026	5·1	−0·2	16	+7·4	10·07	5·92	+ 4·15	16·95	15·22	+ 1·73	2·13	Bijapur.
21	0	1	0	0	0	3	4	1	S 83° W	N 81° W	2·9	11·5	−8·6	20	−50	92	+ 3	·682	+·022	8·6	+1·1	18	+8·8	5·56	4·70	+ 0·86	37·67	42·25	− 4·58	0·65	Belgaum.
																															XI.—Central India.
14	1	0	0	0	0	6	6	3	S 85° W	N 89° W	4·0	6·4	−2·4	40	−15	80	0	·727	−·01[illegible]	1·6	−2·4?	3	−3·4	2·43	4·37	− 2·44	27·54	26·71	+ 0·83	1·04	Neemuch.
20	0	0	0	0	0	0	8	2	N 81° W	N 60° W	3·6	3·0	+0·6	30	−22	83	− 2	·757	+·01[illegible]	6·2	−0·4	8	−0·4	2·06	6·70	− 4·64	44·94	30·12	+14·82	0·47	Indore.
5	0	0	0	0	1	8	12	4	S 80° W	N 89° W	1·7	1·7	0	66	+27	85	+ 2	·814	−·0[illegible]	5·5	+0·4	6	−1·2	2·64	6·16	− 3·52	58·46	39·32	+19·14	0·82	Nowgong.
12	0	0	0	0	3	9	5	1	S 54° W	N 89° W	2·0	4·5	−2·5	49	+11	85	+ 3	·830	+·[illegible]	3·0	−2·4	6	−2·8	4·07	6·81	− 2·74	57·49	39·11	+18·38	1·43	Sutna.
																															XII.—Central Provinces.
0	1	0	2	1	0	4	13	9	N 78° W		5·9	5·9	0	63		82		·704		6·3		7	−1·3	8·60	7·04	+ 1·56	30·41	30·25	+ 0·16	2·83	Buldana.
2	1	1	4	0	1	4	9	9	N 75° W	N 69° W	3·6	4·7	−1·1	43	−31	77	− 3	·750	.08	7·2	+1·0	8	+0·1	4·06	5·80	− 1·74	24·74	27·84	− 3·10	1·13	Akola.
12	0	1	3	0	2	0	7	5	N 72° W	S 88° W	3·9	3·9	0	23	−36	76	− 7	·735	·030	4·5	−1·5	6	−2·2	5·41	6·22	− 0·81	21·92	29·34	− 7·42	2·50	Amraoti.
3	1	3	1	0	3	5	10	4	S 87° W	N 79° W	3·9	4·7	−0·8	43	−35	83	+ 1	·770	017	4·5	−0·8	3	−4·5	3·26	6·17	− 2·91	25·94	27·09	− 1·15	2·61	Khandwa.
21	0	1	0	0	0	5	0	3	S 82° W	S 51° W	1·1	1·9	−0·8	17	−31	87	+ 1	·816	·017	5·9	−0·2	4	−5·8	2·17	8·75	− 6·58	62·53	44·98	+17·55	1·20	Hoshangabad.
10	0	0	0	1	2	2	14	1	S 77° W	S 80° W	4·0	3·2	+0·8	49	+ 5	81	− 1	·707	·037	5·7	+0·8	6	−3·3	2·46	7·10	− 4·64	57·01	41·34	+15·67	0·78	Saugor.
3	0	0	1	8	6	5	5	2	S 14° W	S 66° W	1·8	2·2	−0·6	46	+13	80	− 5	·756	·038	3·1	−2·4	4	−5·8	4·06	7·81	− 3·75	72·39	50·22	+22·17	2·50	Jubbulpore.
23	0	0	0	0	1	2	2	2	S 78° W	N 53° W	0·6	2·8	−2·2	17	−13	77	− 6	·68[illegible]	·055	4·7	−0·2	16	+4·9	3·94	8·83	− 4·89	62·76	46·99	+15·77	1·07	Seoni.
5	1	4	7	1	0	0	7	5	N	N 72° W	2·5	3·9	−1·4	22	−11	75	− 6	·7[illegible]	·026	4·6	−1·5	8	−2·8	2·52	8·34	− 5·82	46·46	44·03	+ 2·43	0·90	Nagpur.
24	1	0	1	0	0	1	1	2	N 51° W		2·9			10		80	− 3	[illegible]	·022	3·6	−1·7	8	−2·0	8·10	6·18	+ 1·92	44·72	41·02	+ 3·70	2·40	Pendra.

Table

(2) Abstract of observations taken at 8 hrs. at 212

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XII.—Central Provinces —*concld.*																					
	Raipur	970	28·851	+·068	29·765	28·948	19th	28·615	1st	80·4	76·1	88·1	+0·1	75·0	+0·3	81·5	+0·2	13·1	92·5	24th	71·7	2nd
	Chanda	*634*	29·193	+·034	29·772	29·298	19th	29·033	1st	80·4	75·9	90·1	+1·2	74·6	+0·3	82·3	+0·7	15·5	95·1	25th	71·0	13th
	Jagdalpur	1,813	28·047		29·786	28·148	19th	27·882	1st	76·5	74·0	85·6		71·2		78·4		14·4	89·9	25th	68·2	7th
	XIII.—Hyderabad.																					
27	Aurangabad	1,905	27·967	+·023	29·802	28·077	11th	27·818	1st	75·4	70·6	87·4	+1·3	69·8	+1·1	78·6	+1·2	17·6	93·4	11th	65·0	9th
	Nizamabad	1,248	28·596	?	29·784	28·710	10th	28·451	1st	78·6	73·4	89·9	+3·1	72·7	+0·2	81·3	+1·7	17·2	95·3	25th	69·1	13th
	Bidar	*2,165*																				
28	Gulbarga	1,503	28·368	+·029	29·811	28·496	11th	28·270	1st	75·6	71·5	90·4	+2·6	71·1	−0·1	80·7	+1·3	19·3	97·8	10th	67·0	4th & 7th
	Raichur	*1,311*	28·558	+·027	29·808	28·706	11th	28·476	1st & 5th.	77·3	72·8	91·2	+3·0	73·3	+0·9	82·2	+1·9	17·9	97·4	21st	70·6	4th
	Hyderabad (Deccan)	1,738	28·155	+·046	29·800	28·261	11th	28·042	1st	77·1	71·9	88·5	+2·5	72·7	+0·6	80·6	+1·5	15·8	94·5	22nd	69·9	12th
	Hanamkonda	877	28·972	+·054	29·789	29·089	11th	28·837	1st	80·8	75·4	90·3	+2·4	75·2	+0·6	82·7	+1·5	15·1	94·8	24th	69·8	7th
	XIV.—Mysore.																					
29	Chitaldrug	2,405	27·502	+·009	29·818	27·619	11th	27·439	1st	72·6	68·8	84·5	+1·1	68·5	+1·2	76·5	+1·1	16·0	89·3	9th	66·4	15th
	Hassan	3,149	26·810	+·009	29·831	26·918	11th	26·757	4th	69·5	67·2	81·4	+0·9	65·3	+1·0	73·4	+0·9	16·1	85·6	13th	62·6	2nd
	Bangalore	3,021	26·931	+·010	29·825	27·030	11th	26·875	4th	70·7	67·9	83·4	+1·5	66·3	+0·9	74·8	+1·2	17·1	88·4	9th	63·8	9th
	Mysore	2,518	27·413	−·002	29·826	27·521	11th	27·263	4th	73·4	68·9	84·3	+0·8	67·6	+1·3	76·2	+1·1	17·2	89·3	11th	64·3	2nd
	XV.—Madras.																					
30	Mangalore	72	29·837	−·023	29·841	29·940	11th	29·778	27th	78·6	75·7	85·2	+1·3	74·7	+1·3	80·0	+1·3	10·5	88·9	24th	72·4	22nd
	Calicut	27	29·879	−·022	29·835	29·983	11th	29·833	23rd	78·2	76·4	84·2	+0·4	75·4	+1·2	79·8	+0·8	8·8	87·0	22nd	72·1	2nd
	Cochin	9	29·917	−·013	29·854	30·028	11th	29·860	24th	79·3	75·7	85·6	+0·7	74·8	+0·3	80·2	+0·5	10·6	89·8	12th	72·1	27th
	Trivandram	198	29·724	−·008	29·853	29·842	11th	29·654	24th	77·4	74·8	82·8	0	74·6	−0·5	78·7	−0·3	8·2	86·6	11th	72·5	13th
31	Pamban	37	29·845	+·001	29·810	29·948	11th	29·788	24th	82·1	77·7	87·5	−2·1	79·4	+1·1	83·4	−0·5	8·1	88·7	17th	76·8	13th
	Madura	447	29·441	+·014	29·818	29·559	11th	29·387	1st & 5th.	81·8	75·1	94·1	−1·0	76·2	+1·0	85·2	0	17·9	99·9	4th & 5th	72·3	12th
	Pudukkottai	318	29·568	+·028	29·817	29·686	11th	29·512	5th	80·9	74·5	93·8	−0·6	75·5	+0·1	84·7	−0·3	18·3	98·4	4th	69·1	12th
	Negapatam	21	29·852	+·016	29·812	29·963	11th	29·798	1st	81·5	76·7	90·9	−1·8	77·5	+0·8	84·2	−0·5	13·4	95·6	7th	74·2	13th
	Trichinopoly	255	29·634	+·016	29·822	29·743	11th	29·578	24th	82·2	75·3	95·5	+0·3	75·6	−0·2	85·6	+0·1	19·9	100·8	4th	72·8	12th
	Coimbatore	1,341	28·559	+·015	29·832	28·670	11th	28·502	24th	[illegible]	72·3	89·8	+0·7	72·0	+1·3	80·9	+1·0	17·8	94·3	9th	70·0	14th
	Salem	913	28·979	+·017	29·829	29·072	11th	28·928	28th	[illegible]	73·6	91·3	−0·2	72·3	+1·0	82·3	+0·4	18·0	95·2	4th	69·7	15th
	Cuddalore	37	29·837	+·019	29·804	29·945	11th	29·773	1st	8[illegible]	76·7	90·8	−1·4	76·9	+0·7	83·9	−0·3	13·9	95·8	13th	73·4	16th
	Vellore	707	29·156	+·011	29·799	29·260	11th	29·087	24th	80	75·6	93·3	+1·8	74·7	−0·9	84·0	+0·5	18·6	98·2	4th	70·8	11th
	Madras	22	29·848	+·026	29·802	29·961	11th	29·776	24th	82	77·9	91·9	−1·1	76·8	−0·3	84·4	+0·7	15·1	98·8	2nd & 3rd	73·1	16th
32	Cuddapah	428	29·444	+·018	29·808	29·579	11th	29·365	1st	81·[illegible]	76·7	94·7	+1·5	77·2	+1·2	86·0	+1·3	17·5	100·4	4th	71·9	26th

N. B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

stations in India, etc., in September, 1919—*continued.*

Wind direction. Number of winds from Calm. (24)	N. (25)	N.E. (26)	E. (27)	S.E. (28)	S. (29)	S.W. (30)	W. (31)	N.W. (32)	Resultant direction. (33)	Normal direction. (34)	Wind velocity. Mean velocity, miles per hour. (35)	Normal. (36)	Departure from normal. (37)	Wind steadiness. Actual percentage. (38)	Departure from normal. (39)	Hygrometry, 8 hrs. Mean humidity at 8 hrs. (40)	Departure from normal. (41)	Mean vapour tension at 8 hrs. in inches of mercury. (42)	Departure from normal. (43)	Cloud. Mean cloud amount at 8 hrs. (44)	Departure from normal. (45)	Rainfall. Number of rainy days. (46)	Departure from normal. (47)	Rainfall of month. (48)	Normal rainfall of month. (49)	Departure from normal. (50)	Total rainfall from 1st May to 30th September 1919. (51)	Normal rainfall for this period. (52)	Departure from normal of this period. (53)	Heaviest rainfall during month. (54)	Station. (55)
																															XII.—Central Provinces—*concld.*
10	1	3	1	0	1	9	3	2	S 70° W	S 63° W	3·1	4·3	−1·2	27	− 7	81	− 3	·844	+·015	8·1	+2·3	5	−5·5	2·85	7·64	−4·79	57·99	45·01	+12·98	1·80	Raipur.
1	3	4	1	3	1	6	7	4	N 81° W	N 79° W	2·9	2·9	0	27	+ 3	81	− 1	·838	+·020	5·3	−0·6	6	−4·9	3·80	9·56	−5·76	37·73	47·45	− 9·72	1·46	Chanda.
20	0	0	1	0	1	2	6	0	S 69° W		1·3			23		89		·811		6·3		11	−3·2	7·34	12·05	−4·71	53·78	53·03	+ 0·75	1·90	Jagdalpur.
																															XIII.—Hyderabad.
5	3	5	4	1	0	4	5	3	N 19° W		6·7			20		79	+ 1	·691	+·005	7·2	+1·4	13	+4·8	7·99	6·35	+1·64	20·52	24·29	− 3·77	1·76	Aurangabad.
5	2	8	0	0	0	6	3	6	N 38° W		2·3			33		77	− 4	·750	−·010	7·8	−0·5	8	−1·8	6·47	9·48	−3·01	27·77	36·38	− 8·61	2·20	Nizamabad.
																															Bidar.
7	6	6	0	0	0	2	6	3	N 26° W	N 54° W	4·6	7·9	−3·3	40	−18	82	+ 2	·720	+·009	7·8	−1·5	16	+5·6	11·14	7·50	+3·64	25·55	25·91	− 0·36	2·50	Gulbarga.
5	4	1	0	1	0	7	9	3	N 85° W	S 89° W	5·3	7·1	−1·8	45	−20	80	+ 2	·746	+·035	8·3	+0·3	12	+1·7	4·63	7·02	−2·39	14·97	22·25	− 7·28	0·93	Raichur.
15	0	0	1	4	0	1	8	1	S 63° W	N 83° W	3·9	4·1	−0·2	23	−44	77	− 4	·715	−·009	5·9	−0·4	11	+2·0	9·68	6·90	+2·78	27·55	25·52	+ 2·03	2·47	Hyderabad (Deccan).
14	3	1	0	1	2	1	5	3	N 69° W		3·3			23		78	+ 1	·806	+·035	5·0	−0·9	9	+0·2	4·77	6·81	−2·04	21·44	29·88	− 8·44	1·84	Hanamkonda.
																															XIV.—Mysore.
5	0	0	2	2	0	7	10	4	S 76° W	S 80° W	4·2	6·4	−2·2	46	−40	82	0	·654	+·009	7·4	−0·4	14	+6·8	10·45	4·06	+6·39	22·55	16·51	+ 6·04	2·55	Chitaldrug.
8	1	1	0	0	0	7	8	5	N 89° W	N 79° W	4·5	2·6	+1·9	54	−22	89	+ 6	·639	+·022	5·6	−3·3P	12	+4·0	8·22	3·86	+ 5·36	24·09	22·30	+ 1·79	2·03	Hassan.
2	4	1	0	0	0	4	16	2	N 10° W	S 82° W	4·5	5·1	−0·6	62	−19	86	0	·645	+·017	8·5	+0·5	11	+1·8	9·43	6·96	+2·47	29·56	23·48	+ 6·08	1·79	Bangalore.
3	0	1	1	2	2	12	8	1	S 53° W	S 74° W	4·6	7·3	−2·7	56	−15	79	− 3	·652	+·011	6·3	−1·5	15	+6·7	8·98	4·66	+4·32	22·59	19·01	+ 3·58	1·56	Mysore.
																															XV.—Madras.
2	4	3	14	3	2	0	1	1	N 80° E	N 52° E	3·9	1·6	+2·3	56	+45	87	0	·846	+·0[illegible]	6·1	−1·4	12	−3·4	10·81	10·45	+ 0·36	98·65	114·07	−15·42	1·78	Mangalore.
18	0	4	1	0	0	1	2	4	N 20° W	N 30° W	2·4	5·2	−2·8	20	−13	91	+ 2	·883	+·4	7·4	+0·9	10	−1·3	12·00	7·29	+4·71	101·02	96·45	+ 4·57	4·73	Calicut.
3	0	8	15	2	1	0	1	0	N 81° E	N 5° E	4·1	3·7	+0·4	69	+28	84	− 1	·839		5·3	−1·0	16	+2·3	9·37	8·65	+0·72	89·94	85·00	+ 4·94	1·43	Cochin.
8	1	0	0	0	0	0	1	20	N 45° W	N 16° W	3·9	5·9	−2·0	69	−12	88	+ 5	·825	·27	7·3	+0·4	13	+5·4	12·51	3·93	+8·58	46·64	37·19	+ 9·45	3·10	Trivandrum.
5	0	0	0	6	8	7	3	1	S 15° W	S 42° W	5·2	7·1	−1·9	56	+ 4	81	+ 4	·887	·22	3·0	−0·3	1	−1·0	0·37	1·24	−0·87	4·02	3·26	+ 0·76	0·30	Pamban.
4	5	3	2	0	0	1	6	9	N 35° W	N 29° W	3·2	2·1	+1·1	53	−25	72	+ 3	·780	·033	7·0	+2·1P	10	+3·3	7·15	5·20	+1·95	18·69	15·40	+ 3·29	2·04	Madura.
18	4	0	0	0	1	1	3	3	N 56° W		3·1			27		73	+ 5	·763	·039	6·1	−0·8	8	+1·0	6·43	5·05	+1·38	17·94	17·28	+ 0·66	2·14	Pudukkottai.
3	0	0	0	2	0	10	12	3	S 72° W	S 72° W	5·1	4·0	+1·1	69	− 5	80	+ 6	·852	·038	5·2	0	5	−1·2	2·85	3·78	−0·93	12·52	12·21	+ 0·31	1·25	Negapatam.
3	1	0	0	1	2	5	13	5	S 85° W	N 8[illegible]° W	2·7	4·7	−2·0	62	− 8	75	+ 3	·794	·037	5·0	−0·1	12	+5·9	10·51	4·56	+5·95	21·20	14·37	+ 6·83	2·59	Trichinopoly.
25	0	0	1	0	1	2	1	0	S 31° W	S 33° W	3·8	4·0	−0·2	7	−67	77	− 7	·729	−·016	3·5	−1·6	5	+1·9	1·80	1·49	+0·31	6·78	8·15	− 1·37	0·76	Coimbatore.
14	1	0	0	0	1	11	3	0	S 54° W	S 43° W	2·1	2·5	−0·4	46	−14	82	+ 2	·77[illegible]	−·009	4·8	−1·3	13	+4·3	10·79	6·50	+4·29	29·32	25·03	+ 4·29	2·49	Salem.
4	1	0	0	0	1	16	4	4	S 65° W	S 84° W	5·0	1·9	+3·1	66	− 4	79	− 1	·8[illegible]	−·015	5·8	+0·7	8	+0·9	2·59	6·58	−3·19	10·18	16·96	− 6·78	0·88	Cuddalore.
19	0	0	0	0	0	0	0	11	N 46° W		1·8			37		79	+ 6	[illegible]	+·066	4·0	−0·8	9	0	6·60	7·32	−0·72	23·69	23·39	+ 0·30	2·17	Vellore.
4	0	0	1	0	7	14	3	1	S 38° W	S 68° W	2·5	4·4	−1·9	66	− 4	82	+ 4		+·034	5·5	−0·8	7	−0·2	6·78	5·21	+1·57	18·58	16·80	+ 1·78	2·83	Madras.
10	5	0	0	2	0	1	2	10	N 40° W	N 84° W				43	−35	78	+ 4		+·074	6·0	−1·0	10	+1·5	7·81	6·21	+1·60	23·64	20·46	+ 3·18	2·35	Cuddapah.

Table

(2) Abstract of observations taken at 8 hrs. at 212

Number of sub-division.	Station.	Height of bar cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean of 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XV.—Madras— *concld.*																					
	Bellary	1,475	28·401	+·015	29·810	28·549	11th	28·363	1st	78·2	71·9	91·2	+0·6	72·4	−0·5	81·8	+0·1	18·8	97·3	8th	67·1	13th
	Kurnool	923	28·943	+·029	29·808	29·079	11th	28·861	1st	77·7	73·5	91·5	+1·9	74·7	+1·3	83·1	+1·6	16·8	98·2	10th	70·6	12th
33	Nellore	66	29·789	+·031	29·790	29·909	11th	29·703	1st	83·8	78·5	94·8	+0·2	78·2	+0·5	86·5	+0·3	16·6	100·8	4th	73·2	16th
	Masulipatam	15	29·843	+·051	29·792	29·948	10th	29·723	1st	82·9	78·1	91·6	+0·8	77·9	+0·3	84·8	+0·5	13·7	96·3	4th	74·2	1st
	Cocanada	26	29·824	+·066	29·786	29·927	10th	29·673	1st	82·3	79·0	89·4	−0·4	78·1	−0·2	83·8	−0·3	11·3	92·5	25th	73·8	30th
	Waltair (Vizagapatam)	*226*	29·797	+·069	29·773	29·893	20th	29·611	1st	83·7	76·4	88·4	−0·1	79·9	+2·0	84·1	+0·9	8·5	93·5	3rd	76·4	11th
	Calingapatam	19	29·815		29·771	29·917	19th	29·603	1st	82·7	79·2	90·4		78·1		84·3		12·3	94·0	25th	74·5	7th
	Gopalpur	33	29·770	+·078	29·766	29·869	18th	29·533	1st	83·5	78·1	89·4	+1·2	79·0	+0·6	84·2	+0·9	10·4	92·5	22nd & 26th	76·1	7th
	Bay Islands.																					
1	P. V. Fraser *	8	29·780		29·760	29·897	18th	29·506	1st	83·2	80·2											
	Port Blair	58	29·850	+·029	29·838	29·933	9th	29·773	24th	81·1	77·7	86·0	+1·1	77·7	+1·1	81·8	+1·1	8·3	89·2	21st	75·5	14th
	Table Island		29·796	+·051	29·820	29·893	9th	29·721	2nd	81·3	78·7	85·1	+0·6	78·6	+1·2	81·8	+1·2	6·5	87·2	13th, 14th & 21st	75·1	21st
	Kashmir.																					
13	Muzaffarabad		27·424			27·573	18th	27·203	1st	72·8	66·7	88·7		64·2		76·4		24·5	92·1	9th	58·9	26th & 30th.
	Srinagar	5,204	24·863	+·018	24·834	25·001	26th	24·654	4th	60·9	56·9	73·0	−1·4	52·1	−1·9	65·1	−1·7	25·9	83·7	10th	40·4	30th
	Gulmarg	*8,569*	21·884	+·008	21·852	21·989	19th	21·713	4th	58·5	49·6	61·2	−2·0	41·3	−1·7	51·3	−1·9	19·9	67·0	16th	33·7	30th
	Dras	*10,059*	20·832	+·021	20·800	20·920	28th	20·650	4th	48·6	42·3	64·8	−5·5	40·3	+0·8	52·6	−2·3	24·6	74·7	1st	30·1	30th
	Leh	*11,503*	19·734	−·006	19·702	19·825	13th	19·583	4th	48·9	39·9	66·0	−4·3	41·1	−0·5	53·5	−2·4	24·9	74·3	4th & 15th.	33·0	30th
	Skardu	*7,505*	22·817	+·003	22·817	23·043	20th	22·605	4th	58·1	49·9	74·9	−2·6	52·2	−1·6	63·6	−2·1	22·7	86·5	16th	40·7	29th
	Gilgit	4,890	25·140	+·083	25·113	25·362	28th	24·873	4th	67·5	61·7	82·2	−4·9	59·8	−4·4	71·0	−4·7	22·3	93·2	15th	49·7	28th
	Baluchistan.																					
15	Fort Sandeman	4,614																				
	Quetta	5,502	24·621	+·014	24·581	24·712	28th	24·445	1st	57·3	48·0	85·8	+0·1	48·5	−0·7	67·1	−0·3	27·3	93·5	1st	28·5	29th
	Chaman	4,311	25·621	−·021	25·583	25·731†	28th	25·430	1st	70·2	56·7	91·5†	−0·9†	60·8	+0·6	77·2†	−0·1	30·7	99·5	1st	51·5	29th
	Kalat	6,630	23·775		23·687	23·828	27th	23·547	5th	52·3	44·5	82·5	−2·9	46·4		64·5		36·1	91·7	1st	26·0	29th
	Dalbandin	2,792	27·042		27·005	27·180	28th	26·800	1st	68·0	56·1	97·9		60·2		79·1		37·7	105·8	2nd	49·8	30th
	Pasni		29·801		29·761	29·907	11th	29·575	5th	76·6	72·8	89·8		68·2		78·9		21·4	104·2	20th	63·2	8th
	Panjgur		26·666		26·624	26·799	28th	26·461	1st	69·1	55·3	95·2		64·0		79·6		31·2	101·8	3rd	55·0	8th
	Seistan		28·068			28·230	27th & 28th.	27·790	1st	70·1	56·4	91·8		65·8		78·8		26·0	100·0	13th	58·3	28th
	Hill stations, excluding Kashmir and Baluchistan.																					
	Parachinar	6,000	24·437	+·034	24·413	24·532	29th	24·247	4th	6[illegible]	57·9	77·7	−3·9	57·1	−1·8	67·4	−2·9	20·6	92·2	15th	52·1	30th
	Cherat	*4,256*	25·666	+·023	25·634	25·777	28th	25·487	4th	7[illegible]	60·3	82·6	−2·4	65·7	0	74·1	−1·2	16·9	89·4	15th	58·5	27th
	Drosh (c)		25·033			25·175	28th & 29th.	24·825	4 days	68[illegible]	59·1	83·7	−5·0	62·4	−1·9	73·0	−3·6	21·3	93·3	1st	54·4	18th
	Murree	6,323	23·963	+·006	23·931	24·054	19th	23·768	4th	61·[illegible]	54·3	71·1	−2·2	57·5	−1·0	64·3	−1·6	13·6	74·3	15th	41·4	25th

N.B.—Elevations in italics indicate barometrical determinations.

(c) Aneroid.

* Mean of 29 days.
† " " 8 "

NOTE.—The barometric readings are not reduced to sea-level in the case of

B—*continued.*

Stations in India, etc., in September, 1919—*continued.*

Wind direction. Number of winds from Calm (24)	N. (25)	N.E. (26)	E. (27)	S.E. (28)	S. (29)	S.W. (30)	W. (31)	N.W. (32)	Resultant direction (33)	Normal direction (34)	Wind velocity. Mean velocity, miles per hour (35)	Normal (36)	Departure from normal (37)	Wind steadiness. Actual percentage (38)	Departure from normal (39)	Hygrometry, 8 hrs. Mean humidity at 8 hrs. (40)	Departure from normal (41)	Mean vapour tension at 8 hrs. in inches of mercury (42)	Departure from normal (43)	Cloud. Mean cloud amount at 8 hrs. (44)	Departure from normal (45)	Rainfall. Number of rainy days (46)	Departure from normal (47)	Rainfall of month (48)	Normal rainfall of month (49)	Departure from normal (50)	Total rainfall from 1st May to 30th September 1919 (51)	Normal rainfall for this period (52)	Departure from normal of this period (53)	Heaviest rainfall during month (54)	Station (55)
																															XV.—Madras—*concld.*
8	3	1	0	1	1	2	7	7	N 64° W	N 79° W	4·3	6·7	−2·4	43	−35	73	+ 3	·698	+·044	71	0	17	+9·8	11·36	4·69	+6·67	15·92	12·74	+3·18	1·91	Bellary.
13	0	0	0	0	2	4	7	4	S 81° W	N 88° W	2·5			43	− 5	85	+ 7	·806	+·062	68	0	13	+3·5	7·30	6·15	+1·15	15·90	20·35	−4·45	1·14	Kurnool.
7	1	0	0	4	5	1	8	4	S 62° W	N 68° W	3·5	4·9	−1·4	33	−26	78	+ 4	·901	+·072	5[illegible]	−2·3?	5	−1·4	5·51	4·64	+0·87	14·45	12·77	+1·68	2·25	Nellore.
5	0	2	1	1	3	3	5	10	N 77° W	N 68° W	4·3	4·2	+0·1	37	−22	80	− 4	·887	−·035?	7[illegible]	0	7	−2·3	6·65	5·90	+0·75	26·60	24·66	+1·94	2·25	Masulipatam.
16	3	1	0	1	0	2	6	1	N 71° W	N 87° W	4·4	4·7	−0·3	23	−42	86	+ 4	·945	+·049	6[illegible]	+0·5	10	+1·8	7·15	5·71	+1·44	21·75	23·09	−1·34	1·32	Cocanada.
4	1	1	0	2	1	6	12	3	S 80° W	N 86° W	7·2			53	−14	78	− 1	·899	+·031	6[illegible]	−0·7	9	0	4·21	7·18	−2·97	17·63	24·18	−6·55	1·43	Waltair (Vizagapatam).
4	3	1	1	1	1	4	8	7	N 73° W		4·2			47		85		·951		3[illegible]		9	+0·2	3·17	8·93	−5·76	31·30	32·25	−0·95	0·63	Calingapatam.
0	7	3	1	2	6	8	1	2	S 54° W	N 61° W	5·0	6·8	−1·8	13	−28	78	− 7	·888	−·040	5[illegible]	+1·3	7	−2·8	2·22	7·86	−5·64	33·47	30·59	+2·88	0·53	Gopalpur.
																															Bay Islands.
1	1	2	2	1	1	2	0	1	S 40° W					59		87		·987		4[illegible]		4	−4·5	3·45	4·80	−1·35	34·03	29·47	+4·56	1·25	P. V. Fraser.
10	0	0	0	2	4	5	3	6	S 63° W	S 61° W	4·9	6·9	−2·0	33	−33	85	− 5	·903	−·012	62	−1·7	14	−6·2	6·72	18·36	−11·64	59·21	83·69	−24·48	1·00	Port Blair.
3	1	1	1	4	7	6	3	4	S 31° W		10·3			33		89	− 1	·950	+·011	53	−3·2	10	−5·8	6·61	11·93	−5·32	34·14	62·05	−27·91	3·20	Table Island.
																															Kashmir.
18	0	1	0	0	1	10	0	0	S 41° W		1·1			30		72		·288		2[illegible]		8	+3·8	4·75	2·64	+2·11	37·50	28·80	+9·00	0·39	Muzaffarabad.
15	1	1	3	3	4	1	0	2	S 45° E	S 43° E	1·8	2·4	−0·6	20	− 5	78	− 8	·421	−·041	3[illegible]	+0·5	1	−2·7	0·52	1·67	−1·15	5·82	10·39	−4·57	0·11	Srinagar.
13	1	6	3	3	0	1	1	2	N 58° E		2·7			27		78	− 1	·322	−·019	3[illegible]	+0·7	7	+1·9	1·80	2·85	−1·05	12·04*	15·16†	−3·12	0·35	Gulmarg.
24	0	0	0	1	0	3	2	0	S 50° W		6·4			13		63	0	·219	−·025	[illegible]	+1·3	0	−1·8	0·15	1·05	−0·90	3·03	5·52	−2·49	0·05	Dras.
28	0	0	0	0	1	1	0	0	S 24° W	N 85° W	1·4	1·4	0	7	−43	48	− 2	·170	−·023	5	+0·1	2	+1·3	0·48	0·25	+0·23	2·49	1·61	+0·88	0·30	Leh.
[illegible]	0	1	5	1	0	9	6	0	S 43° W		5·3			27		57	− 4	·278	−·038	3	+0·8	0	−1·3	0·08	0·85	−0·77	0·25	3·24	−2·99	0·04	Skardu.
27	0	0	0	0	0	1	0	2	N 72° W		0·1			7		73	+24	·493	+·112	4	−1·0	1	−0·1	0·58	0·34	+0·24	1·36	2·54	−1·18	0·23	Gilgit.
																															Baluchistan.
																															Fort Sandeman.
27	0	0	0	2	1	0	0	0	S 21° E	S 45° W	1·5	1·6	−0·1	7	+ 5	48	+ 1	·232	−·075	0	−0·3	0	−0·2	0	0·07	−0·07	2·07	1·68	+0·39	0	Quetta.
10	0	0	3	8	7	2	0	0	S 28° E	S 8° E	3·6	5·7	−2·1	53	+15	42	+12	·312	+·07[illegible]	0·1	−0·1	0	0	0	0	0	0·65	0·25	+0·40	0	Chaman.
21	0	0	1	1	6	1	0	0	S 8° E	S 14° W	4·1			23	−17	54	+14	·217	−·0[illegible]	0·1		0	0	0	0·02	−0·02	1·79	1·38	+0·41	0	Kalat.
14	2	5	3	2	2	1	0	1	N 72° E		3·3			23		47		·312		0·2		0	0	0	0	0	0	0·23	−0·23	0	Dalbandin.
6	2	2	2	1	0	2	6	9	N 51° W		5·1			43		84		·759		6·8		0	0	0	0·01	−0·01	0·02	1·76	−1·74	0	Pasni.
7	2	10	7	0	0	1	2	1	N 50° E		3·4			46		38		·282		0·3		0		0			1·14			0	Panjgur.
3	3	0	0	0	0	0	0	24	N 41° W		10·4			86		39		·287		0·5		0		0			0			0	Seistan.
																															Hill stations, excluding Kashmir and Baluchistan.
30	0	0	0	0	0	9	0	0	Calm		0·6			(*a*)		57	+ 6	·38	+·009	1·2	−2·2	9	+4·8	3·89	2·00	+1·89	19·80	13·61	+6·19	1·32	Parachinar.
11	12	0	0	1	1	0	4	1	N 20° W	S 32° W	4·8	5·8	−1·0	40	+35	53	− 7	·4[illegible]	−·065	2·1	0	3	+0·1	0·67	2·23	−1·56	11·89	12·91	−1·02	0·27	Cherat.
30	0	0	0	0	0	0	0	0	Calm		2·7			(*a*)		58	+ 6	·[illegible]	+·022	1·5	−0·1	2	+0·2	1·23	0·66	+0·57	6·08	4·65	+1·43	0·18	Drosh.
26	5	4	2	2	1	0	0	0	N 49° E	N 37° W	2·8	4·2	−1·4	27	+ 8	63	− 3		−·043	2·5	−0·2	7	+0·1	3·37	5·65	−2·28	56·82	38·20	+18·62	1·15	Murree.

Hill or plateau stations, the elevations of which exceed 3,200 feet.

Rainfall from 27th May 1919.
Normal rainfall from 1st June.

(*a*) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs. at 212

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Hill stations, excluding Kashmir and Baluchistan —concld.																					
	Simla	7,232	23·106	+·014	23·068	23·194	28th	22·933	4th	59·1	54·5	64·7	−1·4	56·0	−0·6	60·4	−1·0	8·7	67·1	6th & 28th.	51·9	25th
	Chakrata	6,922	23·346	?	23·306	23·[illegible]38	28th	23·169	5th	64·0	59·2	71·3	+2·5	57·5	+0·4	64·4	+1·5	13·8	75·7	25th	51·9	27th
	Mukteswar	7,592	22·858	+·018	22·817	22·953	29th	22·691	4th	58·9	55·1	67·9	−1·2	52·8	−2·6	60·3	−1·9	15·1	71·5	22nd & 24th.	50·8	24th
	Darjiling	7,432	22·969	+·001	22·924	23·028	27th	22·835	1st	58·7	57·7	65·1	+0·2	55·9	+0·2	60·5	+0·2	9·2	69·3	1st	52·8	28th
	Shillong	4,920	25·126	+·046	25·078	25·236	27th	24·967	2nd	66·8	63·4	72·5	−2·4	61·2	−0·8	66·9	−1·6	11·3	78·7	1st	56·5	23rd
	Cherrapunji	4,309	25·663	+·018	25·614	25·743	18th & 19th.	25·518	2nd	66·3	64·6	70·9	−2·9	62·6	−2·1	65·8	−2·5	8·3	76·3	14th	58·1	26th
	Netarhat		26·067		26·016	26·231	19th & 24th.	26·015	4th & 5th	72·6	68·4	77·9		64·0		70·9		13·9	82·7	30th	60·3	7th
	Maymyo	3,546	26·417	+·037	26·362	26·504	18th	26·276	2nd	68·2	66·9	76·6	−0·7	64·5	+0·1	70·5	−0·3	12·1	80·8	22nd & 27th.	62·0	24th
	Pachmarhi	3,528	26·397	+·029	26·344	26·487	19th	26·181	1st	70·9	67·6	78·4	+1·2	65·8	−0·5	72·1	+0·3	12·6	83·5	28th	62·9	9th
	Mount Abu	3,945	26·004	+·021	25·954	26·097	28th	25·789	4th	69·1	64·2	73·9	−1·2	64·3	−0·3	69·1	−0·7	9·6	8[illegible]·8	29th	59·4	12th
	Mercara	3,721	26·198	−·012	26·151	26·309	11th	26·154	4th	65·5	64·3	74·5	+2·7	61·4	−0·4	68·0	+1·1	13·1	79·0	11th	59·4	16th
	Ootacamund	*7,327*	23·053	+·023	22·989	23·138	11th	23·004	1st	58·7	56·0	66·1	+2·5	51·7	+0·6	58·9	+1·5	14·4	69·5	9th	46·4	2nd
	Kodaikanal	7,688	22·820	+·007	22·755	22·859	11th	22·785	1st	57·3	54·9	63·8	+0·7	52·1	−0·1	58·0	+0·3	11·7	66·5	28th	45·2	2nd
	Extra India.																					
	Singapore (*a*)	10	29·870	−·075	29·801	29·926	6th	29·809	1st	84·0		88·1	+0·2	75·1	+1·1	81·6	+0·7	13·0	90·5	10th	73·0	15th
	Penang (*a*)	17	29·837	−·073	29·779	29·895	18th	29·800	3rd & 14th.	82·0		89·2	+0·8	71·5	−2·6	80·3	−0·9	17·7	94·0	11th	69·0	16th
	Trincomalee	99	29·799	+·025	29·827	29·900	11th	29·729	1st	78·5	74·2	92·6	+2·1?	76·0	−0·6	84·3	+0·7?	16·6	97·9	3rd	71·8	6th
	Colombo	24	29·908	−·010	29·858	29·999	11th	29·858	21st	76·8	74·7	85·0	−1·3	74·8	−2·8	79·9	−1·8	10·2	86·9	26th	72·2	13th
	Hambantota	64	29·862		29·852	29·943	11th	29·816	22nd	76·6	74·3	85·8		75·5		80·7		10·3	90·5	22nd	71·7	25th
	Minicoy	7	29·940	−·007		30·025	11th	29·891	24th													
	Amini Divi	*13*	29·892	−·037	29·833	29·963	12th	29·821	24th	82·1	77·4	86·9	+1·6	77·3	+0·2	82·1	+0·9	9·6	90·2	20th	74·1	25th
	Gyantse	13,110																				
	Pharijong	14,400																				
	Gangtok	5,760	24·280*	−·072	24·235*	24·344	15th & 18th.	24·136	1st	63·1	62·0	70·8	−3·1	60·8	+7·2	65·8	+2·1	10·0	76·3	14th	58·2	28th
	Gartok (*c*)	15,100																				
	Kashgar (*c*)	4,255	25·488	−·142		25·765	13th	25·210	2nd	63·5	54·6	82·9	−0·2	54·1	−3·2	68·5	−1·7	28·8	95·3	1st, 2nd & 3rd.	40·3	6th
	Kabul (*c*)†	...	24·076			24·210	19th	23·910	1st	5[illegible]·2	55·3	95·3	+6·7	60·8	−9·3	78·0	−1·3	34·5	100·8	2nd	53·2	6th
	Meshed	3,104																				
	Jask	13	29·764	+·017	29·730	29·864	19th & 28th.	29·500	1st	[illegible]7	79·1	93·4	+0·4	78·6	−2·5	86·0	−1·1	14·8	105·1	6th	75·2	10th
	Muscat	20	29·789	+·041	29·757	29·895	19th	29·520	1st	[illegible]	79·4	93·5	+4·4	83·2	+0·1	88·3	+2·2	10·3	101·3	7th	81·0	29th
	Bushire	14	29·737	+·010	29·713	29·876	28th	29·453	1st	8[illegible]	79·0	93·0	−1·0	79·5	+0·3	86·3	−0·3	13·5	97·0	1st	73·6	27th
	Basrah	25																				
	Ispahan (*c*)	*5,817*	24·280	−·100		24·460	28th	24·010	1st	64·7	[illegible]0·0	89·0	−0·8	59·3	+3·4	74·5	+1·3	29·7	96·4	9th	53·2	16th
	Tehran (*c*)	*4,002*	25·743	−·127		25·880	28th & 29th.	25·500	1st	72·5	[illegible]2·6	88·0	−2·7	64·2	+1·0	76·1	−0·9	23·8	94·5	1st, 12th & 13th.	59·0	16th
	Baghdad	120	29·669	+·008		29·812	29th	29·452	1st	80·0	[illegible]·7	103·5		75·7		89·6		27·8	110·5	11th	70·0	14th
	Aden	94	29·736	−·002	29·762	29·835	28th	29·577	2nd	83·5	[illegible]2	90·5	−3·0	81·6	−1·0	86·0	−2·0	8·9	94·6	2nd, 8th & 10th.	78·1	28th
	Zanzibar	72	30·054	−·015	30·093	30·103	17th	30·013	1st	77·0	[illegible]	83·1	+0·8	74·2	+0·6	78·7	+0·7	8·9	86·0	27th	72·4	14th

N.B.—Elevations in italics indicate barometrical determinations.

(*a*) 9 hrs. observations.
(*c*) aneroid.

* Mean of 29 days.
† „ „ 24 „

NOTE.—The barometric readings are not reduced to sea-level in the case

B—*concluded.*

stations in India, etc., in September, 1919—*concluded.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th September 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Hill stations, excluding Kashmir and Baluchistan—*concld.*
																77	0	·384	—·014	4·3	+1·1	8	—0·6	2·26	6·04	—3·78	54·26	49·88	+ 4·38	0·48	Simla.
6	1	3	0	0	0	12	6	2	S 74° W	N 21° E	6·4	4·4	+2·0	49	+36	76	— 8	·454	—·002	5·0	+1·3	9	+0·9	9·51	6·78	+2·73	51·29	56·48	— 5·19	5·74	Chakrata.
10	0	0	3	3	1	1	11	1	S 67° W		6·1			23		80	— 3	·396	—·036	4·5	—0·8	7	—2·2	8·90	7·49	+1·41	38·86	41·18	— 2·32	3·40	Mukteswar.
27	0	1	0	0	0	0	2	0	N 60° W	S 89° E	1·7	2·7	—1·0	3	—16	95	+ 1	·463	—·010	9·1	+1·0	20	+3·3	24·27	18·19	+6·08	119·00	112·46	+ 6·54	3·33	Darjiling.
26	0	0	1	0	1	1	1	0	S 24° W		1·3			7		83	— 2	·546	—·028	6·6	+0·2	13	—4·4	14·15	10·48	+3·67	48·32	68·85	—20·53	5·19	Shillong.
8	0	2	3	3	5	7	2	0	S 2° W		4·1			35		91	0	·591	—·029	8·1	+0·8	22	+3·2	61·90	34·94	+26·96	308·97	357·34	—48·37	13·40	Cherrapunji.
0	2	4	1	0	1	4	11	7	N 68° W		4·7			53		82		·649		4·3		12		11·89			79·17			3·10	Netarhat.
20	0	0	0	1	1	6	2	0	S 43° W		1·0			27		94	+ 4	·646	—·033	8·0	+1·4	20	+4·7	9·03	11·16	—2·13	43·14	45·59	— 2·45	1·03	Maymyo.
17	0	0	3	0	0	0	8	2	N 78° W	N 85° W	1·6	4·5	—2·9	20	—24	85	+ 1	·640	+·014	4·7	1·7	14	+0·8	6·49	14·08	—7·59	88·33	70·62	+17·71	1·33	Pachmarhi.
8	4	2	1	0	1	14	0	0	S 54° W	S 70° W	4·6	5·8	—1·2	27	—17	78	— 1	·548	+ ·002	5·9	+0·8	7	—0·4	7·36	8·55	—1·19	90·93	56·25	+34·68	2·83	Mount Abu.
8	2	4	2	0	1	4	6	3	N 63° W	N 67° W	3·0	5·3	—2·3	23	—51	94	+ 1	·588	+·011	7·2	+1·3	20	+2·2	7·23	10·56	—3·33	105·03	110·48	— 5·45	1·10	Mercara.
12	1	1	3	3	3	1	4	2	S 7° W		1·8			9		85	+ 2	·420	+·036	7·9	+0·8	18	+5·9	11·95	5·77	+6·18	36·79	35·07	+ 1·72	1·58	Ootacamund.
1	3	2	0	4	3	2	6	9	N 65° W		5·4			30		87	+ 9	·409	+·039	6·8	+1·1	17	+4·8	11·68	6·73	+4·95	32·48	28·50	+ 3·98	2·17	Kodaikanal.
																															Extra India.
3	0	1	4	11	2	5	2	2	S 26° E					40						6·1	+0·3	4	—5·7	4·84	5·70	—0·86	30·68	31·95	— 1·27	2·81	Singapore.
0	1	22	2	3	1	0	0	1	N 54° E					76								17	+2·4	12·64	14·45	—1·81	46·06	48·77	— 2·71	5·79	Penang.
2	0	0	0	0	0	23	5	0	S 53° W	S 43° W	4·8	9·3	—4·5	86	— 8	81	0	·785	—·063	5	+2·4	8	+1·9	9·09	4·65	+4·44	19·94	14·58	+ 5·36	5·06	Trincomalee.
18	0	1	0	0	0	10	1	0	S 49° W	S 57° W	3·5	6·7	—3·2	30	—51	90	+ 8	·828	—·037	0	+1·7	20	+11·8	16·93	4·57	+12·36	45·08	31·89	+17·19	4·60	Colombo.
1	0	0	0	0	0	3	22	4	N 83° W		9·1*			89		89		·814		0		7		4·76	2·31	+2·45	11·68	10·52	+ 1·16	1·18	Hambantota.
7	2	0	1	2	0	5	10	3	S 86° W	N 75° W	5·0	8·5	—3·5	43	—37					8	—1·4	12	+2·1	7·75	6·15	+1·60	52·82	38·83	+13·99	2·28	Minicoy.
1	3	2	0	0	0	3	6	15	N 53° W		7·9			70		81	0	·876	+·009	3	0	10	—0·4	10·30	5·77	+4·53	73·17	42·27	+30·90	5·64	Amini Divi.
																															Gyantse.
																															Phari-jong.
28	0	1	1	0	0	0	0	0	N 74° E		0·4			6		95	+ 4	·545	—·01	9·0	+3·5	27	+6·1	32·61	17·95	+14·66	117·94	106·63	+11·31	5·40	Gangtok.
																									0·26			2·53			Gartok.
27	1	0	1	0	0	0	1	0	N	N 29° W	0·7	2·2	—1·5	3	— 8	57	+ 3	·354	0	4·0	+1·6	1	+0·3	0·13	0·28	—0·15	0·23	2·08	— 1·85	0·13	Kashgar.
0	1	1	1	0	5	5	8	3	S 67° W	S 13° W				54	+45	55	+ 3	·333	+·1	0·4	+0·2	1	+0·9	0·63	0·03	+0·60	1·79	1·29	+ 0·50	0·61	Kabul.
																									0·01			1·69			Meshed.
2	2	5	17	1	1	0	0	2	N 75° E	S 81° E	8·4	9·8	—1·4	66	+ 3	81	+ 7	·939	+·023	2·2	+0·7	0	0	0	0	0	0·37	0·08	+ 0·29	0	Jask.
18	0	1	0	5	0	0	0	6	N	N 72° E	1·5	2·8	—1·3	5	—24	73	— 2	·915	+·005	1·0	—0·1	0	0	0	0	0	0·16	0·17	— 0·01	0	Muscat.
8	2	3	3	1	2	2	0	9	N 17° W	N 60° E	5·3	5·0	+0·3	20	—32	75	+ 6	·901	+·056	1·1	+0·5	0	0	0	0	0	0·11	0·03	+ 0·08	0	Bushire.
																									0·12			0·45			Busrah.
30	0	0	0	0	0	0	0	0	Calm	N 72° W	0·9	2·5	—1·6	(a)		47	— 5	·2[illegible]	—·087	0·5	+0·1	0	—0·1	0·02	0·04	—0·02	0·02	0·32	— 0·30	0·02	Ispahan.
23	0	2	0	0	3	2	0	0	S	N 62° E	3·0	2·0	+1·0	10	— 2	57	+14	·4[illegible]	+·109	1·5	+0·9	0	—0·2	0·08	0·06	+0·02	0·08	0·84	— ·076	0·08	Tehran.
4	10	1	1	2	0	0	7	5	N 30° W	N 11° W	7·5	1·8	+5·7	49	— 3	36	— 8	0	—·093	1·3	+0·8	0	0	0	0	0	1·22	0·25	+ 0·97	0	Baghdad.
11	0	13	1	1	1	2	0	1	N 52° E	S 56° E	7·0	7·0	0	37	+ 7	92	+17	10	—·002	5·8	+1·9	1	+0·8	0·45	0·15	+0·30	0·45	0·48	— 0·03	0·45	Aden.
10	0	0	0	2	10	7	1	0	S 21° W	S 5° E	3·5	4·1	—0·6	57	—29	82	— 1	54	+·005	6·3	+0·2	5	—0·1	1·46	2·19	—0·73	9·10	19·08	— 9·98	0·43	Zanzibar.

of hill or plateau stations, the elevations of which exceed 3,200 feet.

* Mean of 29 days.

Table C.—Abstract of observations taken at 8 hrs. at 59 fourth and fifth class stations in India, etc., in September, 1919.

Table

Abstract of observations taken at 8 hrs. at 59 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	II.—Assam.																								
4	Bishnath	77·3	75·5	88·4	−1·3	74·5	+1·2	81·5	−0·1	13·9	96·3	5th	70·7	30th	...	...	...	...	...	...	...	...	...	...	...
	Borjuli	78·2	76·4	87·6	−2·6	73·4	−1·7	80·5	−2·1	14·2	93·4	1st	70·4	30th	...	...	...	...	...	...	...	...	...	...	...
	Chandkhira	76·1	71·6	91·4	+1·1	70·4	−4·6	80·9	−1·8	21·0	100·1	28th	70·1	13th	...	...	...	...	...	...	...	...	...	...	...
	Doom Dooma	76·5	74·8	87·9	−1·7	73·3	−1·0	80·6	−1·3	14·6	96·3	1st	68·7	24th	...	...	...	...	...	...	...	...	...	...	...
	Dikom	76·6	74·6	85·7	−3·3	73·2	−2·0	79·5	−2·7	12·5	94·8	1st	70·2	30th	...	...	...	...	...	...	...	...	...	...	...
	Golaghat	77·3	75·8	86·2	−1·3	71·5	...	78·9	...	14·7	90·9	5th & 14th	67·8	30th	...	...	...	...	...	...	...	...	...	...	...
	Hailakandi	78·9	76·7	88·0	−2·1	75·6	−0·2	81·8	−1·1	12·4	93·8	5th	73·6	11th	...	...	...	...	...	...	...	...	...	...	...
	Jorehat	76·8	74·9	86·2	−2·3	73·1	−2·9	79·7	−3·1	13·1	91·9	14th	69·3	30th	...	...	...	...	...	...	...	...	...	...	...
	Lumding*	79·5	76·3	89·1	...	74·2	...	81·6	...	14·9	94·7	4th	71·0	23rd	...	...	...	...	...	...	...	...	...	...	...
	Messa	82·4	77·4	91·4	−2·0	73·6	−1·1	82·5	−1·5	17·8	97·3	16th	70·3	26th	...	...	...	...	...	...	...	...	...	...	...
	Panerihat	75·7	74·6	88·3	−0·5	70·2	−3·7	79·3	−2·1	18·1	93·1	1st	67·8	30th	...	...	...	...	...	...	...	...	...	...	...
	III.—Bengal.																								
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Brahmanbaria	81·5	77·8	94·5	+2·1	75·7	−2·0	83·6	+0·1	18·8	93·0	24th	73·9	1st & 9th	...	...	...	...	...	...	...	...	...	...	...
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Goalundo	84·5	79·7	89·2	−0·1	76·4	−1·2	82·8	−0·7	12·8	94·0	23rd	73·3	6th	...	...	...	...	...	...	...	...	...	...	...
	Pabna	82·9	79·7	89·5	−3·3	75·7	−0·6	82·6	−1·9	13·8	93·6	23rd	72·5	7th	...	...	...	...	...	...	...	...	...	...	...
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dam Dim	77·5	75·7	88·9	−2·9	72·5	−1·3	80·7	−2·1	16·4	95·1	16th	69·8	24th	...	...	...	...	...	...	...	...	...	...	...
	Kalchini	80·3	76·7	88·1	−1·4	69·9	−3·9	79·0	−2·7	18·2	92·1	14th, 16th & 18th	67·5	26th	...	...	...	...	...	...	...	...	...	...	...
	Nagrakata	80·5	75·9	87·1	−3·0	72·3	−1·5	79·7	−2·3	14·8	91·1	15th	68·0	29th	...	...	...	...	...	...	...	...	...	...	...
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raniganj (Asansol)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IV.—Bihar and Orissa.																								
7	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzaffarpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Motihari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Mean of 28 days.

C.

and fifth class stations in India, etc., in September, 1919.

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th September 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				II.—Assam.
...	...	...	...	...	92	− 3	·856	−·072	...	...	19	+3·7	16·98	10·84	+ 6·14	66·55	75·19	− 5·64	2·69	Bishnath.
...	...	...	...	...	92	+ 1	·884	−·046	...	...	22	+8·5	18·87	10·45	+ 8·42	75·55	69·90	+ 5·65	3·30	Borjuli.
...	...	...	...	...	81	− 9	·720	−·218	...	...	16	−0·3	11·86	9·67	+ 2·19	52·67	83·82	−31·15	1·81	Chandkhira.
...	...	...	...	...	92	0	·839	−·053	...	...	15	−0·2	8·28	10·77	− 2·49	71·19	73·50	− 2·31	1·45	Doom Dooma.
...	...	...	...	...	91	0	·832	−·061	...	...	18	+2·8	10·65	11·41	− 0·76	81·71	78·59	+ 3·12	1·55	Dikom.
...	...	...	...	...	93	+ 2	·871	−·054	...	...	19	+6·5	11·27	7·49	+ 3·78	52·69	52·06	+ 0·63	1·56	Golagbat.
...	...	...	...	...	90	− 1	·886	−·013	...	...	17	+1·9	16·69	11·87	+ 4·82	68·11	91·12	−23·01	2·95	Hailakandi.
...	...	...	...	...	91	+ 1	·838	−·083	...	...	19	+5·5	14·46	9·88	+ 4·58	80·25	62·38	+17·87	2·23	Jorehat.
...	...	...	...	...	86	...	·860	...	...	...	11	+1·2	10·10	6·37	+ 3·73	30·28	36·67	− 6·39	4·55	Lumding.
...	...	...	...	...	79	− 7	·868	−·079	...	...	19	+5·5	14·34	9·04	+ 5·30	59·35	65·92	− 6·57	3·50	Messa.
...	...	...	...	...	95	0	·843	+·008	...	...	17	+5·1	17·68	9·00	+ 8·68	78·06	64·25	+13·81	2·98	Panerihat.
																				III.—Bengal.
...	...	...	...	...	...	...	...	...	...	...	20	+6·9	17·02	10·49	+ 6·53	72·37	72·25	+ 0·12	2·68	Comilla.
...	...	...	...	...	84	− 2	·903	−·060	...	...	16	+3·3	12·09	9·38	+ 2·71	46·31	66·20	−19·89	3·75	Brahmanbaria.
...	...	...	...	...	...	...	...	...	...	...	14	+2·1	15·98	8·83	+ 7·15	62·79	56·23	+ 6·56	7·67	Faridpur.
...	...	...	...	...	81	− 3	·949	−·004	...	...	15	+3·7	10·67	8·08	+ 2·59	55·52	52·21	+ 3·31	3·06	Goalundo.
...	...	...	...	...	86	+ 2	·970	+·004	...	...	13	+2·2	6·10	7·81	− 1·71	50·33	48·96	+ 1·37	1·16	Pabna.
...	...	...	...	...	...	...	...	...	...	...	14	+2·7	13·76	9·45	+ 4·31	54·04	53·15	+ 0·89	3·85	Sirajganj.
...	...	...	...	...	...	...	...	...	...	...	14	+2·0	12·15	9·86	+ 2·29	50·19	47·24	+ 2·95	3·37	Rampur Boalia.
...	...	...	...	...	...	...	...	...	...	...	13	+2·1	1·88	9·55	+ 2·33	71·22	45·40	+25·82	2·38	Malda.
...	...	...	...	...	...	...	...	...	...	...	16	+4·9	8·16	13·97	− 5·81	54·63	70·73	−16·10	1·19	Rangpur.
...	...	...	...	...	92	− 2	·862	−·055	...	...	23	+5·0	30·75	22·03	+ 8·72	117·93	138·16	−20·23	4·52	Dam Dim.
...	...	...	...	...	84	− 2	·879	−·066	...	...	20	+4·5	36·83	19·52	+17·31	131·79	129·17	+ 2·62	6·53	Kalchini.
...	...	...	...	...	81	− 5	·834	−·050	...	...	18	+0·1	35·44	22·16	+13·28	125·18	137·32	−12·14	5·21	Nagrakata.
...	...	...	...	...	...	...	...	...	...	...	20	+4·7	32·01	25·84	+ 6·17	111·15	127·55	−16·40	4·96	Cooch Behar.
...	...	...	...	...	...	...	...	...	...	...	11	+0·3	8·73	8·09	+ 06·4	46·69	47·07	− 0·38	5·05	Krishnagar.
...	...	...	...	...	...	...	...	...	...	...	13	+1·4	12·39	8·71	+ 3·68	79·67	47·76	+31·91	2·83	Bankura.
...	...	...	...	...	...	...	...	...	...	...	13	+1·0	8·06	8·05	+ 0·01	51·26	45·41	+ 5·85	1·42	Raniganj (Asansol).
																				IV.—Bihar and Orissa.
...	...	...	...	...	...	...	...	...	...	...	13	+·2	7·63	9·10	− 1·47	52·46	45·82	+ 6·64	1·21	Hazaribagh.
...	...	...	...	...	...	...	...	...	...	...	11	+1·8	11·31	9·03	+ 2·28	45·89	44·17	− 0·28	4·10	Bhagalpur-
...	...	...	...	...	...	...	...	...	...	...	11	+2·3	5·27	7·22	− 1·95	25·17	44·45	−19·28	0·91	Muzaffarpur.
...	...	...	...	...	...	...	...	...	...	...	9	+0·1	5·63	9·23	− 3·60	38·50	50·16	−11·66	1·11	Motihari.
...	...	...	...	...	...	...	...	...	...	...	10	+1·5	8·85	6·85	+ 2·00	45·79	37·70	+ 8·09	1·67	Chapra.
...	...	...	...	...	...	...	...	...	...	...	13	+4·0	14·97	7·66	+ 7·31	56·82	39·77	+17·05	4·13	Arrah.
...	...	...	...	...	...	...	...	...	...	...	6	−2·8	6·47	6·74	− 0·30	46·74	37·0	+ 9·67	2·47	Dehri.

Table

Abstract of observations taken at 8 hrs. at 59 fourth

Number of sub-division.	Station.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Wind direction. Number of winds from: Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	V.—United Provinces of Agra and Oudh.																								
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehra Dun	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IX.—Rajputana.																								
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XII.—Central Provinces.																								
23	Chhindwara	75·2	70·1	84·9	...	68·8	...	76·9	...	16·1	89·1	19th	64·1	13th	20	0	1	0	0	0	0	4	5	N 60° W	...
	XIII.—Hyderabad.																								
27	Parbhani	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XV.—Madras.																								
31	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Anantapur	77·8	75·1	91·9*	...	72·8	...	82·2*	...	19·1	97·3	4th	68·4	11th	...	...	...	...	...	...	...	...	...	...	...
33	Guntur	82·8	77·4	94·4	...	77·4	...	85·9	...	17·0	100·0	5th	73·6	30th	...	...	...	...	...	...	...	...	...	...	...
	Koraput	71·8	69·7	80·1	...	67·3	...	73·7	...	12·8	84·0	25th	64·8	23rd	...	...	...	...	...	...	...	...	...	...	...
	Bay Islands.																								
1	Car Nicobar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kashmir.																								
13	Jammu	80·2	70·3	91·8	...	74·3	...	83·1	...	17·5	95·2	17th	68·7	25th	0	21	4	0	0	0	0	1	4	N 3° W	...
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kargil	58·8	47·2	76·9	...	40·5	...	58·7	...	36·3	88·7	15th	30·6	30th	6	2	0	0	0	0	1	0	21	N 45° W	...
	Baluchistan.																								
15	Harnai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill stations, exclusive of Kashmir.																								
	Panighatta	75·5	73·4	85·9	−2·0	69·5	−3·4	77·7	−2·7	16·4	90·5	1st	66·3	24th & 30th.	...	...	...	...	...	...	...	...	...	...	...
	Kurseong	68·0	67·4	74·6	+0·9	63·3	−0·9	68·9	0	11·3	76·3	5th	61·7	11th	...	...	...	...	...	...	...	...	...	...	...
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ringim	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dharampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mussooree	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Poo	...	...	75·7	+2·0	52·8	+0·9	64·3	+1·5	22·9	82·8	4th	45·0	30th	1	0	0	1	2	4	16	6	0	S 41° W	...
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bakloh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pishin	...	...	85·8	−2·9	45·6	−1·8	65·7	−2·3	40·2	93·4	1st	36·0	29th	...	...	...	...	...	...	...	...	...	...	...

* Mean of 12 days.

C—*continued.*

and fifth class stations in India, etc., in September, 1919—*continued.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th September 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				V.—United Provinces of Agra and Oudh.
...	...	...	...	...	...	...	...	...	...	...	4	− 1·0	5·54	6·14	− 0·60	25·59	27·71	− 2·12	2·30	Meerut.
...	...	...	...	...	...	...	...	...	...	...	13	+ 2·6	11·13	9·45	+ 1·68	53·49	74·72	−21·23	2·06	Dehra Dun.
																				IX.—Rajputana.
...	...	...	...	...	...	...	...	...	...	...	4	− 1·2	2·02	3·88	− 1·86	20·31	21·54	− 1·23	1·20	Udaipur.
																				XII.—Central Provinces.
2·3	...	...	27	...	77	...	·674	...	5·2	...	9	− 0·3	5·88	7·26	− 1·38	45·46	34·66	+10·80	1·75	Chhindwara.
																				XIII.—Hyderabad.
...	...	...	...	...	...	...	...	...	...	...	9	− 0·4	10·78	7·95	+ 2·83	24·60	28·67	− 4·07	2·81	Parbhani.
																				XV.—Madras.
...	...	...	...	...	...	...	...	...	...	...	4	+ 2·3	2·45	1·24	+ 1·21	4·13	4·20	− 0·07	0·87	Tinnevelly.
...	...	...	...	...	88	...	·840	...	6·4	...	16	+ 7·2	16·69	8·29	+ 8·40	27·23	18·05	+ 9·18	4·58	Anantapur.
...	...	...	...	...	78	...	·867	...	0·9	...	9	− 1·5	4·29	5·90	− 1·61	21·96	23·28	− 1·32	1·15	Guntur.
...	...	...	...	...	91	...	·709	...	...	...	13	...	11·25	...	...	59·92	...	...	3·62	Koraput.
																				Bay Islands.
...	...	...	...	...	...	...	...	...	...	...	16	+ 0·9	8·56	12·95	− 4·39	41·95	58·56	− 16·61	1·43	Car Nicobar.
																				Kashmir.
...	...	...	70	...	60	...	·626	...	1·6	...	3	− 0·2	2·70	2·43	+ 0·27	47·42	29·52	+17·90	2·18	Jammu.
...	...	...	...	...	...	...	...	...	...	...	11	+ 3·9	2·32	3·69	− 1·37	15·11	18·79	− 3·68	0·41	Sonamarg.
...	...	...	70	...	41	...	·209	...	2·8	...	0	− 0·6	0·01	0·15	− 0·14	0·69	1·70	− 0·81	0·01	Kargil.
																				Baluchistan.
...	...	...	...	...	...	...	...	...	...	...	0	− 1·0	0	0·51	− 0·51	11·71	6·33	+ 5·38	0	Harnai.
																				Hill stations, exclusive of Kashmir.
...	...	...	...	...	90	+7	·796	−·045	...	...	21	+ 2·7	31·34	21·51	+ 9·83	128·66	123·17	+ 5·49	5·85	Panighatta.
...	...	...	...	...	96	+7	·662	+·059	...	...	20	+ 0·7	27·65	20·63	+ 7·02	154·10	144·28	+ 9·82	5·92	Kurseong.
...	...	...	...	...	...	...	...	...	...	...	28	+ 5·0	16·96	14·54	+ 2·42	118·90	131·23	− 12·33	2·39	Gnatong.
...	...	...	...	...	...	...	...	...	...	...	22	+ 5·4	11·43	5·62	+ 5·81	41·35	42·03	− 1·68	1·52	Lachung.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	13·27	...	...	122·66	...	...	Ringim.
...	...	...	...	...	...	...	...	...	...	...	5	...	2·28	...	...	42·00	...	...	1·12	Dharampore.
...	...	...	...	...	...	...	...	...	...	...	12	+ 1·6	22·51	10·15	+12·36	95·17	82·38	+12·79	4·48	Mussooree.
...	...	...	73	...	...	...	...	...	2·8	−0·6	0	− 1·6	0·07	0·56	− 0·49	1·08	2·96	− 1·88	0·05	Poo.
...	...	...	...	...	...	...	...	...	...	...	0	− 2·9	0·02	2·02	− 2·00	4·50	8·33	− 3·83	0·02	Kailang.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Bakloh.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	...	...	0·44	...	...	Pishin.

Table

Abstract of observations taken at 8 hrs. at 59 fourth and

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Extra India.																								
	Chumbi	51·8	50·3	61·2	...	47·2	...	54·2	...	14·0	68·2	6th	41·0	23rd	...	...	...	...	...	...	...	...	...	...	...
	Pemba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Prison Island . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abadan † . . .	90·5	71·4	107·2	...	78·4	...	92·8	...	28·8	112·0	13th & 21st.	74·0	15th & 16th.	0	9	1	0	0	1	0	2	10	N 33° W*	...

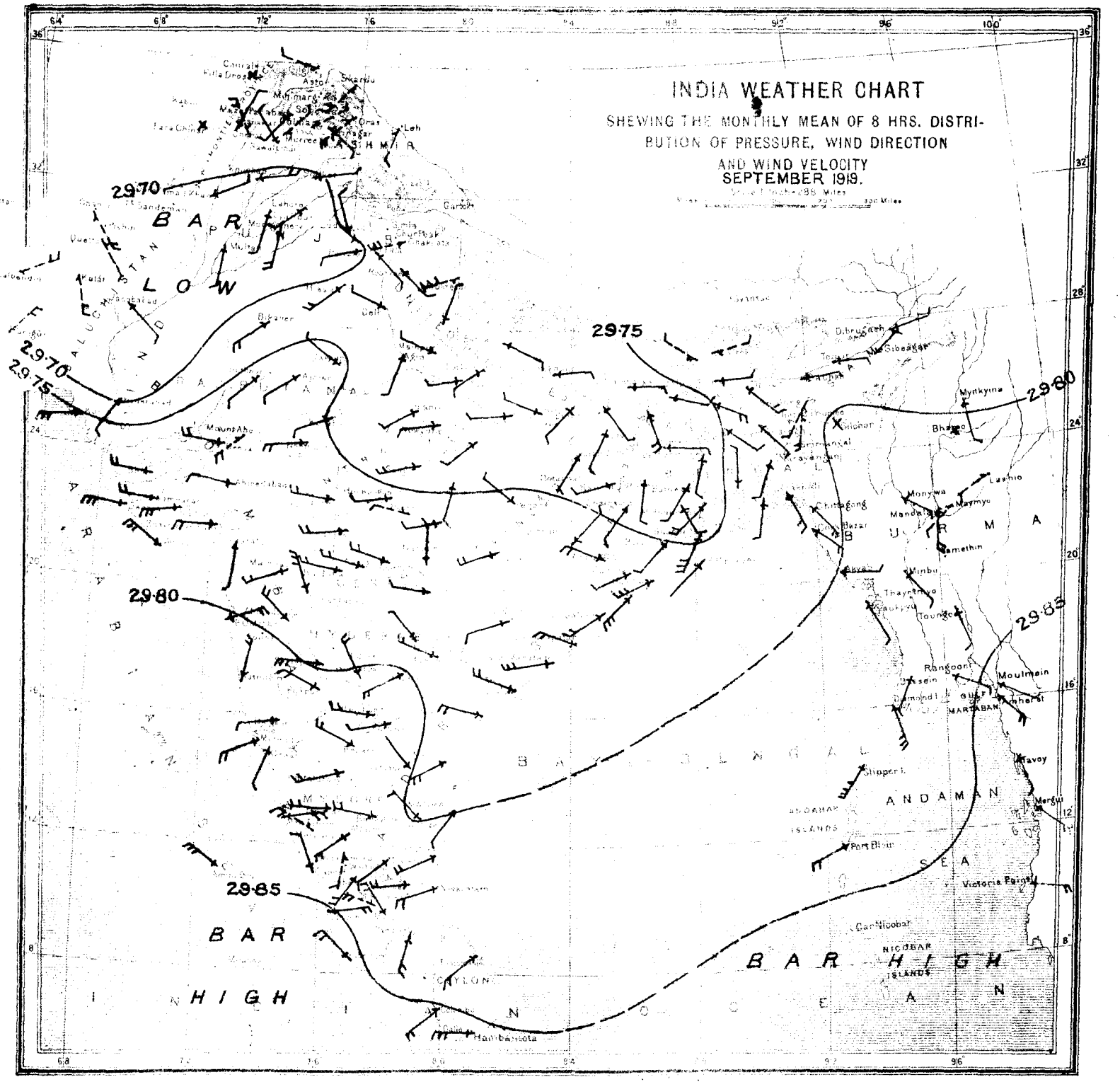
* 3 Winds variable.
† Mean of 29 days.

C—*concluded.*

fifth class stations in India, etc., in September, 1919—*concluded.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th September 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				Extra India.
...	...	...	...	...	91	...	·353	...	4·8	...	8	−2·0	3·76	2·94	+0·82	26·19	24·80	+1·39	1·02	Chumbi.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	1·27	...	...	23·54	...	...	Pemba.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Prison Island.
...	...	...	49	...	41	...	·502	...	...	...	0	...	0	...	...	0·26	...	...	0	Abadan.

SGP1-21-466DGO-19-0-22-325.

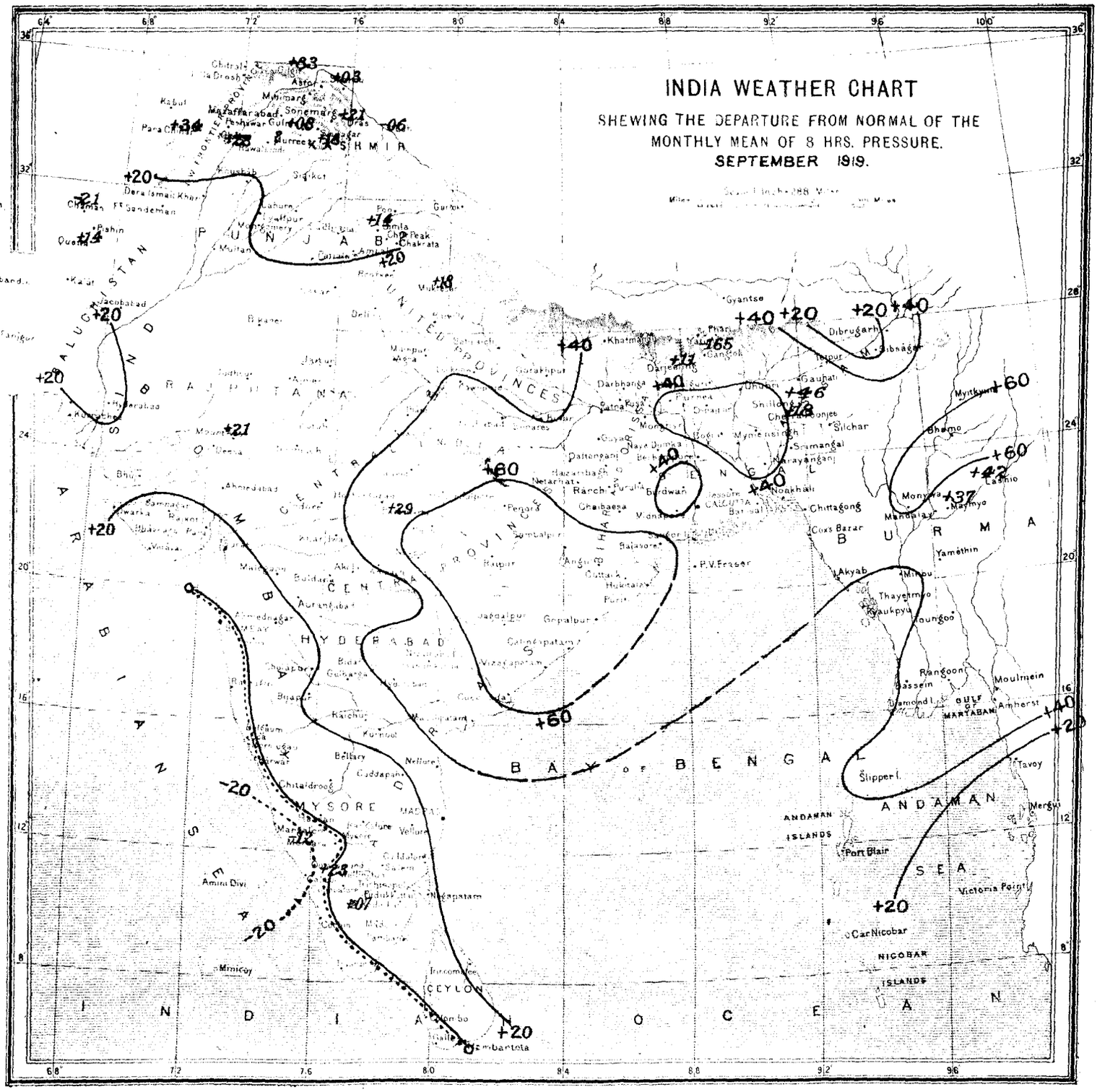


The lines of the above chart represent isobars or lines of equal barometric pressure, the numbers attached indicating the barometric pressure in inches and being drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the normal distribution of pressure.

The mean 8 hrs. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table B of the 8 hrs. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	...	one feather added to the wind arrow.
,, ,,	2 to 5 ,, ,, ,,	...	two feathers ,, ,, ,, ,,
,, ,,	5 to 10 ,, ,, ,,	...	three ,, ,, ,, ,, ,,
,, ,,	10 to 20 ,, ,, ,,	...	four ,, ,, ,, ,, ,,
	over 20 ,, ,, ,,	...	five ,, ,, ,, ,, ,,

Wind strengths are based on factor 2·2 for the standard type of Beckley Robinson anemograph, instead of 3·0 as used for this plate up to December 1911 inclusive.



The chart shows the departure from normal of the mean during the month of 8 hrs. pressure by means of lines drawn for equal amounts of departure. The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no departure, the dotted line facing the area of deficient pressure or negative departures.

CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MAXIMUM TEMPERATURE.

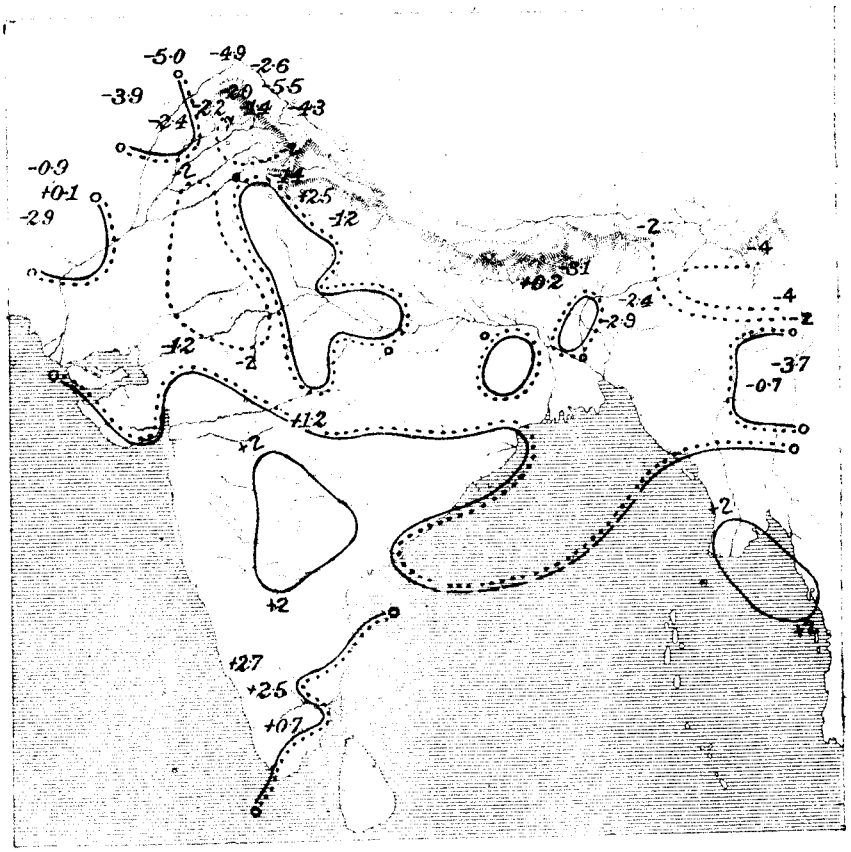


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MINIMUM TEMPERATURE.

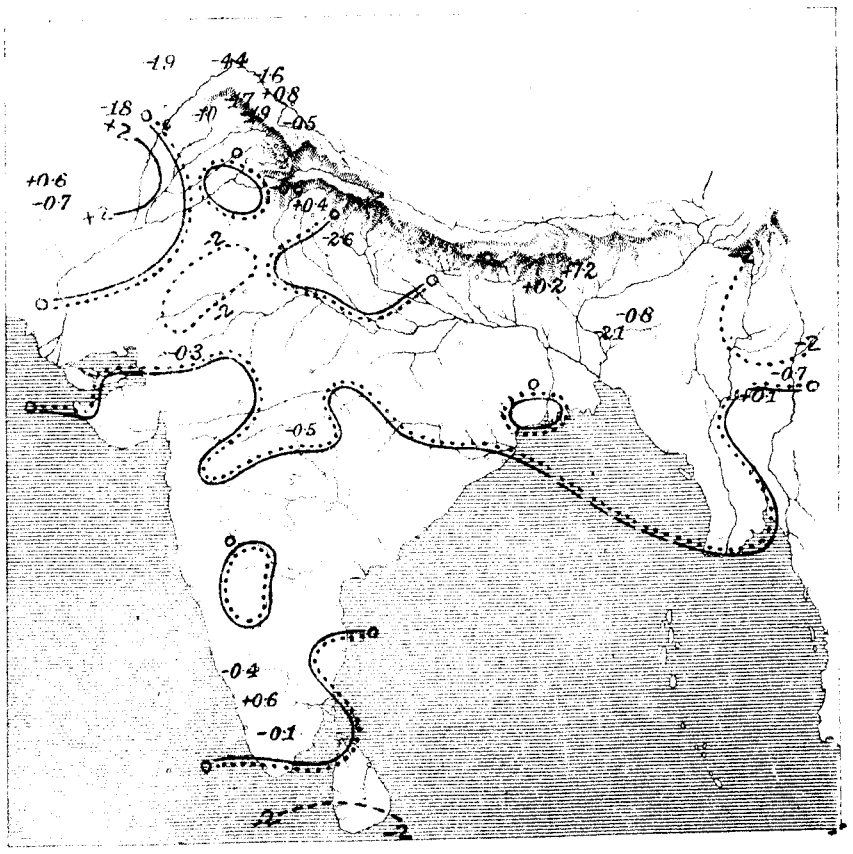


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MEAN TEMPERATURE.

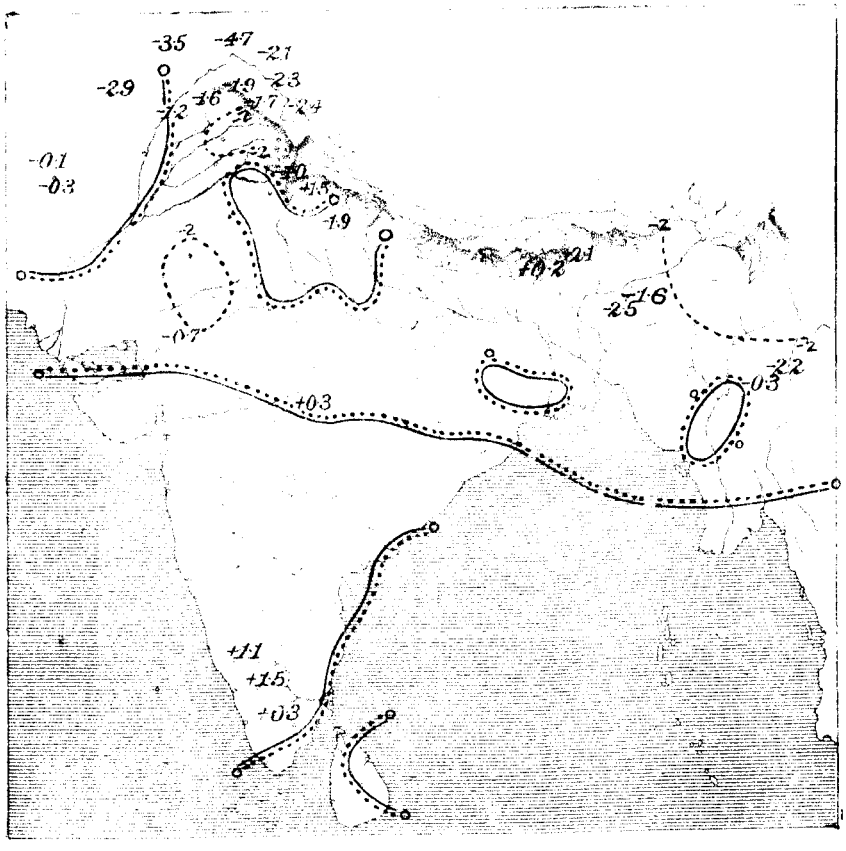


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF ABSOLUTE
HUMIDITY AT 8 HRS.

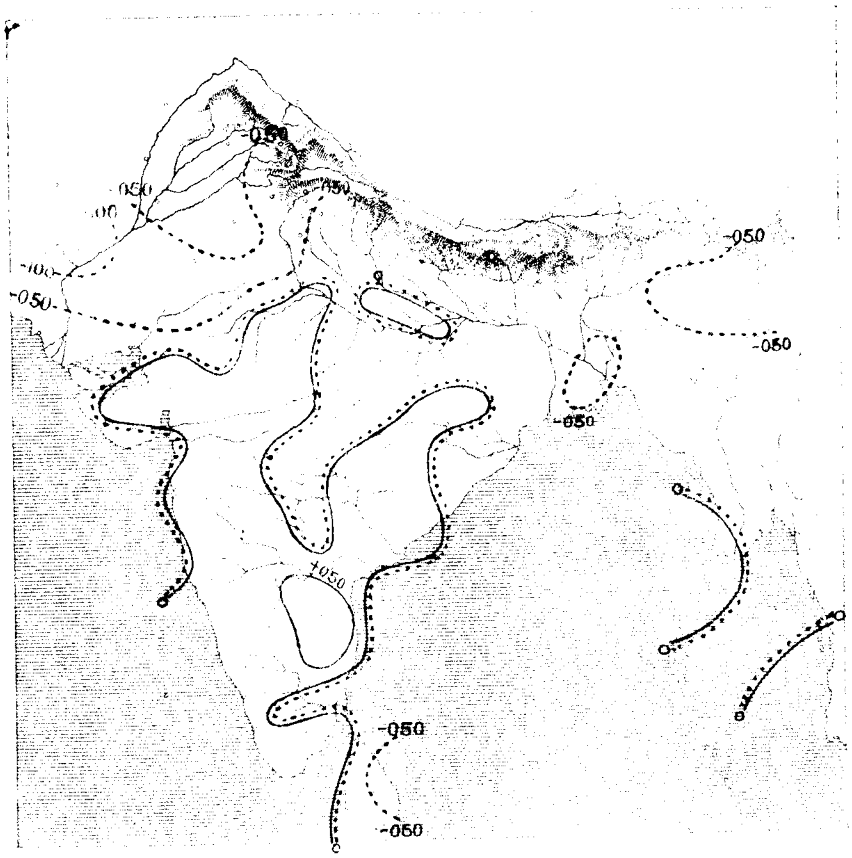


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF RELATIVE
HUMIDITY AT 8 HRS.

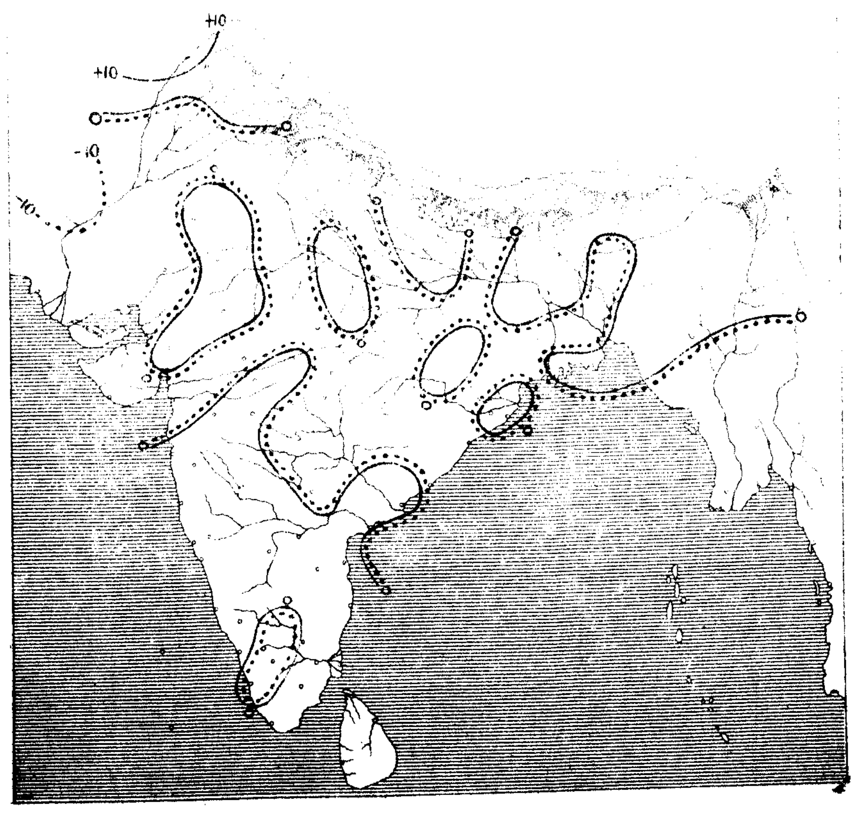


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF CLOUD AMOUNT AT 8 HRS.

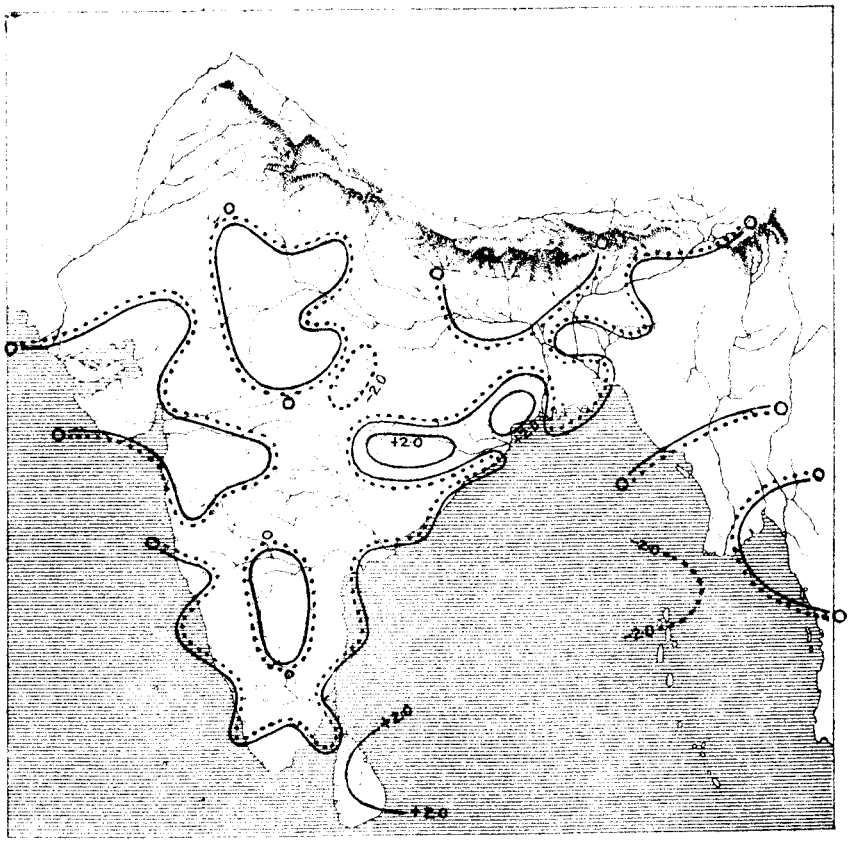
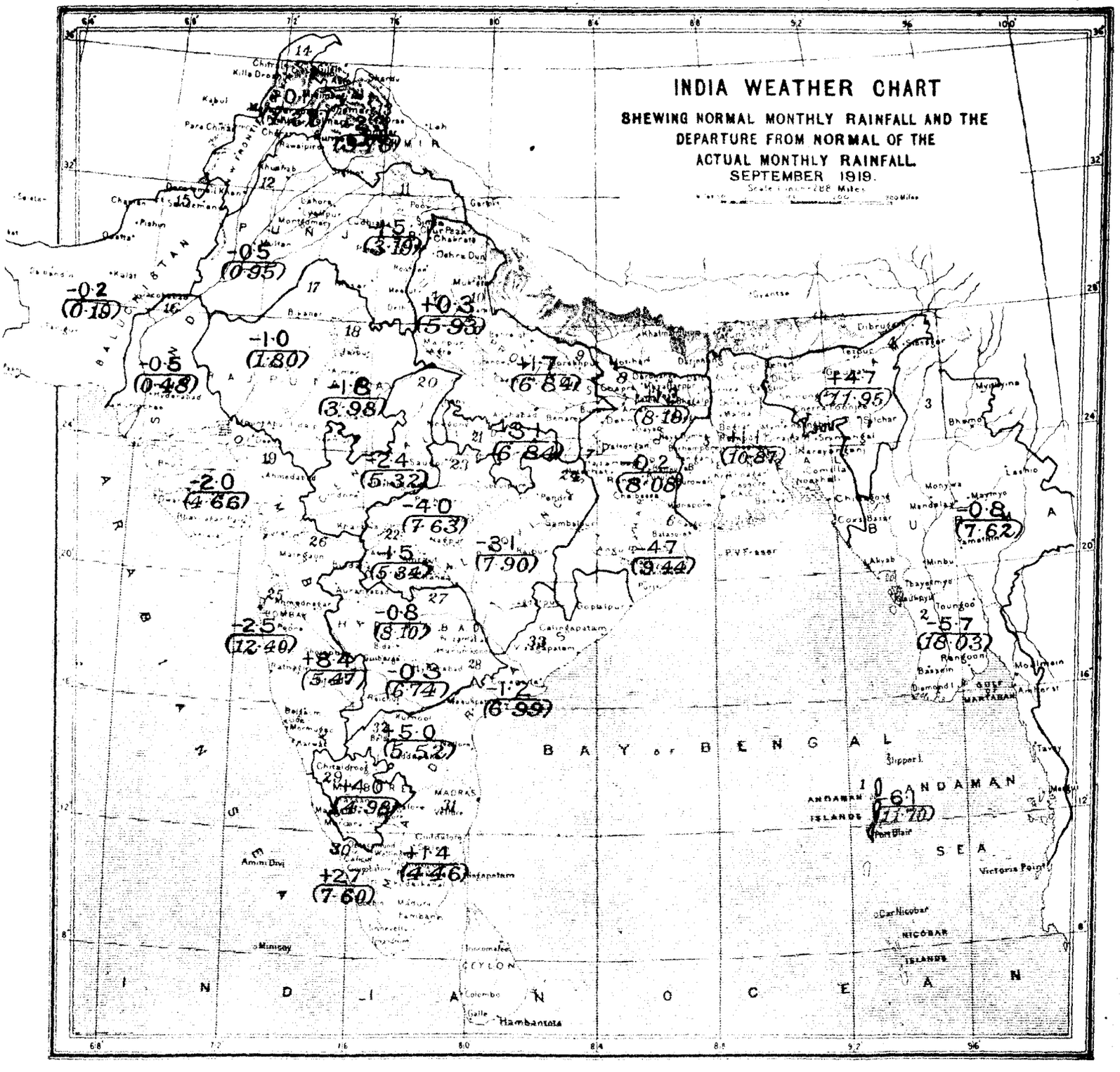


CHART SHEWING THE TOTAL NUMBER OF DAYS IN THE MONTH ON WHICH RAINFALL EQUALLED OR EXCEEDED 0·10 INCH.

(BASED ON THE RETURNS OF TABLE B.)



The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal monthly rainfall, the numbers above these give the departures from normal of the average actual rainfall over the divisions.

1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, OCTOBER, 1919.

INTRODUCTION.

THIS review of the weather in India during the month of October, 1919, is based on observations taken daily at 8 hrs. at 210 stations, and on additional observations taken at 10 hrs. and 16 hrs. at 13 stations. In the rainfall summary have been utilized the data furnished by the meteorological observatories, and the rainfall statements of the month published by the Provincial Governments.

The brief notes on solar, seismic and magnetic disturbances are supplied by the chief observatories in the Indian area.

For a statement of the methods adopted in recording and tabulating the data, for each of the elements of observation, reference should be made to the introductory portion of the review for January.

Summary of the chief features of the weather in India during the month.

2. The monsoon may be considered to have withdrawn from Bengal and Bihar and Orissa on the 24th, from the United Provinces on the 4th, from Gujarat on the 1st, from Central India on the 3rd, from Berar on the 6th, from the Central Provinces on the 23rd and from Hyderabad on the 9th. The autumn rains set in in southeast Madras between the 7th and the 11th.

A feeble winter disturbance appeared in the extreme north of the country at the beginning of the fourth week and caused a few light falls of rain there.

The month's rainfall was in excess from Bihar and Orissa to the Konkan and Gujarat, and was in defect generally elsewhere.

Cloud proportion was generally high over the area of excessive rainfall. Humidity was low in the Punjab, Kashmir and Sind, but high in Baluchistan, Central India East and parts of the Central Provinces. Temperature was about normal except in Baluchistan where minimum temperature was $4\frac{1}{2}°$ lower than usual.

The mean barometric pressure over the plains of India was 0·014 in excess.

Solar, magnetic and seismic disturbances.

KODAIKANAL OBSERVATORY.

3. *Solar Observations.*—There was one day on which no observations were possible. The prominence record was complete on 17 days and imperfect on eleven.

Sunspots.—16 new groups were recorded during the month. The mean daily number was 3·9 and the average life of a spot was 6·8 days. The spots were distributed in latitude as follows :—

TABLE 1.

—	0—10°	11—20°	21—30°	Mean latitude.	Extreme latitude.
North . . .	2	2	...	9·7	2 & 12
South . . .	5	6	1	14·1	4 & 24

Prominences.—41 prominences, a minute or more in height and 9 metallic prominences were recorded. Prominences 160″ high were photographed on 3 days and this was the greatest height reached during the month.

Magnetic disturbances.—"Great" disturbances were registered from the 2nd to 6th, 22nd to 23rd and 26th to 28th and "Moderate" ones on the 1st, 7th, 9th, from 15th to 18th, 24th and 29th.

J. EVERSHED,
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Seismic records.

$\varphi = 10° — 13' 50''$; $\lambda = 77° 28' 00''$; $h = 2343$ m.

Subsoil—Rock.

Apparatus.—Mile Horizontal Pendulum Seismograph.

TABLE 2.

	V	To	ϵ	$\frac{r}{To^2}$
AN:				
AE:	9·76	17·7	1	2·8
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance. Δ (Km.)	REMARKS.
1919.		h. m. s.						
Oct. 3rd	e P	10 37 24	...	...	...	...	...	
	i L	10 40 30	...	...	...	...	...	
	M	10 41 18	...	...	70	...	...	
	F	11 00 48	...	...	...	...	...	
„ 4th	e P	6 25 00	...	...	...	...	...	
	F	6 26 06	...	...	...	...	...	Widening of line No. P. T.'s.
„ 4th	i L	17 55 12	...	...	...	...	...	
	M	17 57 42	...	...	210	...	...	
	F	18 20 48	...	...	...	...	...	
Oct. 4th	e P	19 44 00	...	...	...	...	...	
	F	19 53 00	...	...	...	...	...	Widening of line No. P. T. S.
„ 9th	e L	7 06 06	...	...	...	...	...	
	M	7 09 42	...	...	60	...	...	
	F	7 18 24	...	...	...	...	...	
„ 10th	e P	2 10 18	...	...	...	...	...	
	F	2 22 30	...	...	...	...	...	Widening of line.
„ 12th	e P	21 54 30	...	...	...	...	...	
	e L	21 59 12	...	...	...	...	...	
	M	22 07 00	...	...	260	...	...	
	F	22 43 48	...	...	...	...	...	
„ 24th	e P	20 47 24	...	...	...	...	...	
	F	20 50 00	...	...	...	...	...	Ditto.
„ 31st	e P	16 18 42	...	...	...	...	...	
	e L	16 22 18	...	...	...	...	...	
	M	16 25 24	...	...	70	...	...	
	F	16 43 48	...	...	...	...	...	

T. ROYDS,
Assistant Director.

BOMBAY OBSERVATORY.

Alibag Magnetic Record.

4. During the month of October 1919, the traces showed 9 calm days, 18 days of small, 3 days of moderate and one day of great disturbance.

The days of the month selected as "quiet" are the 10th, 12th, 14th, 21st and 24th.

The following table represents the magnetic character of each day during the month.

TABLE 3.

Day.	Character.	Day.	Character.	Day.	Character.	Day.	Character.
1	S	9	S	17	S	25	C
2	S	10	C	18	S	26	S
3	M	11	S	19	S	27	S
4	S	12	C	20	S	28	S
5	G	13	C	21	C	29	S
6	M	14	C	22	M	30	C
7	S	15	S	23	S	31	C
8	S	16	S	24	C		

C=calm; S=small; M=moderate; G=great; V. G.=very great.

The mean observed absolute values of the several magnetic elements reduced to the mean monthly tabulations of the Magnetograms, as also the ranges and the summed ranges of the Horizontal force and declination for the month are as follows :—

Easterly declination	0° 23′ 10″
Horizontal force	0·36892 C. G. S. unit.
Vertical force	0·17091 C. G. S. „
Inclination	24° 51′·4.
Horizontal force range . . .	0·00044 C. G. S. unit.
Horizontal force summed range . .	0·00281 C. G. S. „
Declination range	2′·5.
Declination summed range . . .	9′·9.

(NOTE.—Summed range means sum without regard to sign of twenty-four ordinates of the diurnal inequality.)

Seismic records.

$\varphi = 18° 53' 36''$; $\lambda = 72° 48' 56''$; $h = 11$m.

Subsoil—Trap.

Apparatus.—Omori-Ewing Horizontal Pendulum (E.-W.)

TABLE 4.

	V	To	ε	$\frac{V}{To^2}$
AN :				
AE :	20	32		
AZ :				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.)	Remarks.
1919.		h. m. s.						
Oct. 4th	P	17 54 33	...	...	...	...	...	
	M	...	...	...	...	...	...	Maximum not well marked.
„ 12th	P	21 55 45	...	...	...	...	...	
	S	22 1 28	...	...	...	...	...	
	M	22 11 53	...	...	35	...	...	
„ 24th	P	20 25 8	...	...	...	...	...	
	M	20 42 19	...	...	10	...	...	
„ 29th	P	14 43 37	...	...	...	...	...	
	M	...	...	...	...	...	...	Maximum not well marked.

T. K. CHINMAYANANDAM,
Director,
Bombay and Alibag Observatories.

5.—CALCUTTA (ALIPORE) OBSERVATORY.

Seismic records.

$\varphi = 22° 32' N$; $\lambda = 88° 20' E$; $h = 6{\cdot}4$m. *Subsoil*—Alluvial.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs.

TABLE 5.

	V	To	ϵ	$\frac{r}{To^2}$
AN :	29	18	1	
AE :	29	30	1	
AZ :				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.)	Remarks.
1919.		h. m. s.						
Oct. 12th	P	21 54 06	3	...	...	...	...	
	L	21 59 06	5	...	...	...	...	
	F	22 32 42	...	...	...	...	...	

6.—SIMLA OBSERVATORY.

Seismic records.

$\varphi = 31° 6' N$; $\lambda = 77° 11' E$; $h = 2{\cdot}1$ km. *Subsoil*—Rock.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs (masses 50 kg.)

TABLE 6.

	V	To	ϵ	$\frac{r}{To^2}$
AN :	14	45	1	
AE :	14	45	1	
AZ :				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.)	Remarks.
1919.		h. m. s.						
Oct. 4th	e P	17 59 36	...	...	...	...	...	
	M	18 05 00	...	29	...	...	...	
	F	18 19 48	...	...	...	...	...	Tremors.
Oct. 8th	e P	5 01 42	...	...	...	...	...	
	F	5 37 24	...	...	...	...	...	Slight tremors.
„ 9th	e P	7 16 48	...	...	...	...	...	
	F	7 29 30	...	...	...	...	...	Slight tremors.
„ 10th	e P	1 53 24	...	...	...	...	...	
	M	2 02 48	...	29	...	...	...	
	F	2 25 30	...	...	...	...	...	Tremors.
„ 12th	P	21 56 30	...	...	...	...	...	
	S	22 03 54	...	...	...	...	...	
	L	22 10 54	25	...	...	...	...	
	M	22 14 06	...	179	...	...	...	
	M1	22 16 36	...	...	57	...	...	
	F	23 18 18	...	...	...	...	...	
„ 18th	P	15 03 54	...	...	...	...	...	
	F	15 08 30	...	...	...	...	...	Very slight local shock.
„ 24th	e P	20 37 42	...	...	...	...	...	
	S	20 38 24	...	...	...	...	...	
	M	20 41 06	...	107	...	...	...	
	F	21 00 24	...	...	...	...	...	
„ 29th	i P	14 38 00	...	...	...	...	...	
	M	14 38 24	...	107	...	...	...	
	F	14 41 36	...	...	...	...	...	Local shock.
„ 31st	e P	18 17 06	...	...	...	...	...	
	M	18 20 06	...	36	...	...	...	
	F	18 37 18	...	...	...	...	...	

The following table contains a list of earthquakes that were reported :—

TABLE 7.

Place at which felt.	Date.	G. M. T. of earthquake.	Duration.	Intensity. (Rossi-Forel scale.)	No. of shocks.	Remarks.
	1919.	h. m.	Sec.			
Drosh . . .	Oct. 5th	15 50	10	6	2	
„ . . .	„ 14th	17 25	12	6	2	
„ . . .	„ 14th	22 45	10	6	1	

S. SITARAMAYYA,
Scientific Assistant.

Weather in the Indian Ocean.

7. The following table gives the departures from normal of pressure and rainfall, as well as the actual and normal wind direction and velocity at the three representative stations.

TABLE 8.

—	Mauritius.	Zanzibar.	Seychelles.
Departure from normal of mean pressure in inch.	+ ·006	+ ·024	+ ·033
	°	°	°
Actual mean wind direction . . .	S 75 E	S 9 W	S 58 E
Normal mean wind direction . .	S 76 E	S 20 E	S 39 E
Actual mean wind velocity (miles per diem.)	95	70	128
Normal mean wind velocity (miles per diem.)	142	89	139
Rainfall departure from normal . .	—0·30	—0·18	+0·27

Depressions and cyclonic storms.

8. A shallow depression formed in the south-west of the Bay on the 21st, crossed the north Madras coast on the 23rd and disappeared in the Central Provinces on the 24th, it caused some rain in the neighbourhood of its track, but was very feeble throughout.

Pressure.

9. The following table gives the departure from normal of the mean 8 hours pressure in the 15 chief political divisions of India.

TABLE 9.

DIVISION.	Departure from normal of mean 8 hrs. pressure.
	"
Burma	+ ·018
Assam	+ ·007
Bengal	+ ·014
Bihar and Orissa	+ ·018
United Provinces	+ ·014
Punjab	+ ·016
North-West Frontier Province	+ ·009
Sind	+ ·019
Rajputana	+ ·017
Bombay	+ ·007
Central India	+ ·012
Central Provinces	+ ·006
Hyderabad	+ ·013
Mysore	+ ·016
Madras	+ ·015

The following table gives a comparison of the departure from normal of the mean 8 hours pressure at 9 hill stations with the departure at an adjoining station in the plains.

TABLE 10.

HILL STATION.	Departure from normal pressure. A.	PLAIN STATION.	Departure from normal pressure. B.	Departure of pressure difference B—A.
	"		"	"
Quetta . . .	+ ·011	Jacobabad . .	+ ·021	+ ·010
Leh . . .	+ ·004	Lahore . .	+ ·011	+ ·007
Murree . . .	— ·016	Peshawar . .	+ ·004	+ ·020
Simla . . .	+ ·010	Ludhiana . .	+ ·013	+ ·003
Mukteswar . .	+ ·013	Bareilly . .	+ ·005	— ·008
Darjiling . . .	— ·004	Dhubri . .	+ ·006	+ ·010
Mount Abu . .	+ ·013	Deesa . . .	+ ·017	+ ·004
Pachmarhi . .	— ·011	Khandwa . .	+ ·006	+ ·017
Kodaikanal . .	+ ·015	Madura . .	+ ·021	+ ·006

Temperature.

10. Table 11 gives the actual temperature and its departure from normal in 33 sub-divisions, while table 12 gives only the departures from normal in the 15 chief political divisions.

TABLE 11.

SUB-DIVISION.	ACTUAL TEMPERATURE.				DEPARTURE FROM NORMAL OF		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
1. Bay Islands	86·9	78·7	82·8	8·2	+ 0·8	+ 1·5	− 0·7
2. Lower Burma	88·6	75·9	82·3	12·7	+ 1·7	+ 0·7	+ 1·0
3. Upper Burma	90·2	72·6	81·4	17·6	+ 1·6	+ 0·6	+ 1·0
4. Assam	85·0	71·7	78·4	13·4	− 1·4	+ 0·6	− 2·0
5. Bengal	88·5	74·3	81·4	14·2	+ 0·9	+ 0·4	+ 0·5
6. Orissa	88.9	73·3	81·1	15·5	− 0·2	− 0·1	− 0·1
7. Chota Nagpur	87·5	67·7	77·6	19·9	0·0	− 0·3	+ 0·3
8. Bihar	88·0	70·8	79·4	17·2	− 0·5	− 0·3	− 0·2
9. United Provinces, East	89·3	66·9	78·1	22·3	− 0·8	− 0·6	− 0·2
10. Do. do. West	91·5	64·0	77·8	27·4	0·0	− 1·1	+ 1·1
11. Punjab, East and North	92·6	62·0	77·3	30·6	+ 0·6	+ 0·3	+ 0·3
12. Do. South-west	95·6	62·2	78·9	33·4	+ 0·4	− 0·9	+ 1·3
13. Kashmir	69·3	40·1	54·7	29·3	+ 0·4	− 1·2	+ 1·6
14. North-West Frontier Province	91·8	59·2	75·5	32·6	+ 0·8	− 0·3	+ 1·1
15. Baluchistan	81·5	45·5	63·5	35·9	− 1·8	− 4·5	+ 2·7
16. Sind	94·7	67·5	81·1	27·2	+ 0·2	− 1·3	+ 1·5
17. Rajputana, West	96·9	67·2	82·1	29·7	+ 0·5	− 2·3	+ 2·8
18. Do. East	93·3	66·1	79·7	27·2	− 0·5	− 0·3	− 0·2
19. Gujarat	94·0	70·8	82·4	23·2	+ 0·4	+ 0·4	0·0
20. Central India, West	89·9	63·5	76·7	26·5	+ 0·1	− 0·3	+ 0·4
21. Do. do., East	86·3	64·3	75·3	22·1	− 2·7	− 1·1	− 1·6
22. Berar	88·8	67·8	78·3	21·0	− 0·9	+ 0·7	− 1·6
23. Central Provinces, West	87·5	65·5	76·5	22·1	− 1·5	− 0·2	− 1·3
24. Do. do., East	85·7	67·1	76·4	18·5	− 1·7	− 0·3	− 1·4
25. Konkan	87·1	76·1	81·7	10·9	+ 0·3	+ 1·2	− 0·9
26. Bombay Deccan	88·2	66·8	77·5	21·4	− 0·4	+ 0·3	− 0·7
27. Hyderabad, North	88·7	67·2	77·9	21·5	− 0·8	+ 0·1	− 0·9
28. Do, South	88·5	70·7	79·6	17·7	− 1·2	+ 0·4	− 1·6
Mysore	83·7	67·0	75·3	16·7	+ 0·5	+ 1·0	− 0·5
30. Malabar	85·5	75·3	80·4	10·2	+ 0·2	+ 0·7	− 0·5
31. Madras, South-east	90·3	75·2	82·7	15·1	+ 0·9	+ 1·1	− 0·2
32. Do., Deccan	90·7	73·7	82·2	17·0	− 0·7	+ 1·1	− 1·8
33. Do., Coast, North	88·3	75·9	82·1	12·4	− 0·7	+ 0·4	− 1·1

TABLE 12.

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+1·6	+0·7	+1·1
Assam	−1·4	+0·6	−0·4
Bengal	+0·9	+0·4	+0·6
Bihar and Orissa	−0·2	−0·2	−0·3
United Provinces	−0·4	−0·8	−0·6
Punjab	+0·5	−0·1	+0·3
North-West Frontier Province	+0·8	−0·3	+0·3
Sind	+0·2	−1·3	−0·6
Rajputana	−0·1	−1·1	−0·6
Bombay	+0·1	+0·5	+0·3
Central India	−1·3	−0·7	−1·0
Central Provinces	−1·4	−0·1	−0·7
Hyderabad	−1·1	+0·3	−0·4
Mysore	+0·5	+1·0	+0·7
Madras	+0·2	+0·8	+0·6

Surface and upper air winds.

11. *Surface.*—Wind directions differed somewhat irregularly from the normal at some of the stations in northern and central India.

The following table gives the mean wind velocity and steadiness with their departures from normal :—

TABLE 13.

Division.	Hourly wind velocity in miles.		Wind steadiness.	
	Actual.	Departure from normal.	Actual.	Departure from normal.
Burma	2·0	−0·3	45	+19
Assam	1·3	−0·5	23	−1
Bengal	1·5	−0·3	17	−5
Bihar and Orissa	1·7	−0·3	30	+1
United Provinces	1·2	−0·1	29	+11
Punjab	1·9	+0·3	30	+7
North-West Frontier Province	0·7	−0·5	12	−8
Sind	2·3	−2·6	20	−3
Rajputana	2·3	−0·5	30	−6
Bombay	3·8	−0·7	29	−7
Central India	0·8	−1·7	28	−1
Central Provinces	2·1	−0·2	27	+5
Hyderabad	4·1	−0·6	17	+5
Mysore	4·5	+0·8	21	+6
Madras	3·5	+0·1	41	+3

Upper air.—The monthly mean velocities and directions at different heights above Agra, Simla, Lahore, Bangalore, Akyab, Calcutta and Bombay during the month are given in the following table :—

TABLE 14.

Height above sea. kms.	Agra.				Simla.				Lahore.				Bangalore.				Akyab.				Calcutta.				Bombay.			
	Height above sea-0·17 km.				Height above sea-2·13 km.				Height above sea-0·21 kms.				Height above sea-0·92 km.				Height above sea-0·01 km.				Height above sea-0·01 km.				Height above sea-0·01 km.			
	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L	n	V	v	L
Ground level	30	2·1	0·7	273	30	2·2	2·0	347	19	0·2	0·2	153	29	3·8	0·1	201	29	1·3	0·2	283	25	1·8	0·6	348	25	2·7	1·5	333
0·5	31	5·5	4·4	315	...	...	...	...	19	4·7	1·3	283	...	...	...	...	30	3·5	0·3	314	24	3·9	0·9	346	26	3·8	1·8	7
1·0	31	5·7	4·7	329	...	...	...	...	19	4·9	2·7	285	31	4·4	0·1	76	30	2·9	0·3	189	23	3·7	1·4	335	26	4·4	2·9	51
1·5	30	7·4	6·3	326	...	...	...	...	19	4·8	2·9	303	31	6·2	0·9	347	29	2·9	0·9	163	23	4·2	2·1	292	24	5·9	4·0	45
2·0	30	8·0	6·8	326	...	...	...	...	19	4·8	3·4	310	25	5·9	3·3	53	28	3·1	1·1	175	20	4·7	3·7	252	24	5·4	3·8	33
2·5	30	7·7	6·7	324	30	5·2	4·2	340	19	5·6	4·3	305	18	6·0	3·9	60	27	3·1	1·3	166	16	5·1	4·6	247	21	5·0	3·0	40
3·0	29	7·5	6·5	326	30	3·7	1·7	316	19	6·0	4·5	309	15	5·5	3·2	50	27	3·0	0·8	182	14	5·6	4·9	258	21	4·5	2·5	44
3·5	30	6·8	5·3	311	29	4·0	1·4	339	19	6·8	4·5	308	12	5·7	3·2	77	28	2·9	0·7	240	9	6·2	5·3	249	20	3·5	1·6	115
4·0	29	6·8	5·2	285	26	4·6	1·3	292	19	7·6	5·1	299	10	6·1	4·1	90	27	3·1	0·6	300	6	6·4	5·8	269	19	3·7	1·5	119
4·5	29	7·6	6·6	270	27	5·0	2·0	264	19	8·3	6·1	291	8	5·8	3·3	98	25	2·9	0·7	347	5	6·7	6·1	284	19	4·1	1·8	140
5·0	29	9·2	8·1	260	28	6·4	4·0	250	18	9·0	7·0	280	6	6·3	2·2	91	23	3·5	0·7	360	3	6·2	5·9	277	19	3·5	1·8	128
5·5	27	11·4	10·3	257	27	8·9	7·3	252	18	9·7	8·1	269	5	7·8	3·2	101	22	3·7	1·2	16	2	4·5	4·4	259	19	4·2	2·2	131
6·0	26	14·0	13·0	255	25	11·7	11·0	254	16	9·9	8·2	263	4	9·4	3·5	110	20	4·0	1·8	42	1	5·0	5·0	245	19	4·7	2·3	140
6·5	24	15·7	14·8	259	21	14·2	13·5	254	16	12·5	10·7	263	4	10·1	5·9	115	20	4·0	2·0	49	1	7·0	7·0	255	17	5·3	2·4	147
7·0	24	18·0	17·4	258	18	16·2	17·6	254	16	15·1	13·4	262	4	10·0	6·5	118	17	4·0	1·2	76	1	7·5	7·5	265	16	5·8	2·8	162
7·5	24	19·8	19·1	257	13	22·2	21·7	251	16	18·0	16·3	262	2	8·3	7·1	140	16	5·0	1·5	70	1	9·0	9·0	270	14	5·6	3·2	171
8·0	23	21·5	20·8	258	12	27·2	26·7	255	16	21·7	20·1	262	2	7·3	5·9	136	13	6·0	3·0	96	1	9·5	9·5	260	14	6·5	3·0	183
8·5	22	23·7	23·0	256	11	31·9	31·5	252	16	25·3	23·7	262	2	7·5	6·5	125	11	6·7	3·5	80	1	11·0	11·0	250	12	6·6	3·6	206
9·0	21	25·9	24·9	259	8	36·1	35·4	249	13	27·6	27·5	257	2	8·3	8·2	118	11	6·6	3·3	76	...	...	...	...	10	7·7	6·3	210
9·5	19	28·3	27·5	260	4	38·9	38·5	247	11	33·5	33·0	256	2	10·0	9·7	117	10	7·7	4·0	87	...	...	...	...	9	8·9	7·1	216
10·0	17	29·5	28·6	260	3	42·7	42·6	250	8	36·2	36·0	257	1	8·5	8·5	135	9	7·7	3·0	82	...	...	...	...	9	9·4	7·4	214
10·5	9	24·1	23·3	259	1	52·0	52·0	250	5	40·7	40·5	256	1	8·5	8·5	150	6	7·5	3·4	100	...	...	...	...	8	9·7	7·6	211
11·0	5	22·9	22·7	272	...	...	...	...	2	38·5	38·5	255	...	...	...	...	4	5·7	2·1	72	...	...	...	...	7	8·8	6·5	212
11·5	1	16·5	16·5	255	...	...	...	...	2	41·5	41·3	253	...	...	...	...	4	5·3	2·0	73	...	...	...	...	7	9·5	7·2	213
12·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	6·3	3·3	61	...	...	...	...	6	11·0	8·3	206
12·5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	7·6	3·7	58	...	...	...	...	3	10·7	6·5	226
13·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	7·5	2·7	67	...	...	...	...	2	10·5	4·1	177
13·5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	8·5	2·7	289	...	...	...	...	1	10·0	10·0	65
14·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	10·5	10·5	90
14·5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	11·0	11·0	85
15·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	11·0	11·0	90

n. = Number of flights.
V. = Velocity of wind regardless of direction, metre per sec.
v. = Velocity of RESULTANT WIND, taking account of direction, metre per sec.
L. = Direction of " " North wind = 0° or 360°, East wind = 90°.

Humidity and cloud.

12. The following table gives the mean humidity, vapour tension and cloud amount at 8 hours with their departures from normal :—

TABLE 15.

Division.	Hygrometry; 8 hrs.				Cloud.	
	Mean humidity.	Departure from normal.	Mean vapour tension in inches of mercury.	Departure from normal in inches of mercury.	Mean cloud amount at 8 hrs.	Departure from normal.
	%					
Burma . . .	86	—2	·865	+·008	5·2	—0·3
Assam . . .	91	+1	·806	+·013	5·2	+0·2
Bengal . .	83	—2	·847	—·001	3·2	—0·3
Bihar and Orissa .	78	0	·733	—·004	3·2	+0·5
United Provinces .	66	—4	·572	—·028	1·5	+0·3
Punjab . .	51	—5	·399	—·044	0·4	—0·2
North-West Frontier Province.	57	—2	·365	—·057	0·3	—0·4
Sind . . .	55	—7	·501	—·083	0·5	—0·3
Rajputana . .	47	—4	·421	—·049	1·1	0
Bombay . .	69	0	·664	—·008	2·9	+0·2
Central India .	67	+4	·549	+·011	1·5	—0·4
Central Provinces .	69	+4	·593	+·019	3·4	+0·6
Hyderabad . .	68	+1	·632	—·008	4·0	+0·6
Mysore . .	80	—1	·645	+·005	5·5	—0·9
Madras . .	81	+1	·827	+·015	5·2	0

Rainfall.

13. The following tables give the actual, normal and departures from normal of rainfall in the 33 sub-divisions and 15 chief political divisions of India :—

TABLE 16.

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
1. Bay Islands	10·7	10·0	3·92	7·08	—3·16	—45
2. Lower Burma	7·7	10·7	6·16	8·11	—1·95	—24
3. Upper Burma	4·5	7·5	2·90	5·61	—2·71	—48
4. Assam	9·1	6·5	6·85	5·36	+1·49	+28
5. Bengal	4·8	5·1	3·69	4·67	—0·98	—21
6. Orissa	5·5	5·1	3·09	4·28	—1·19	—28
7. Chota Nagpur	5·1	3·0	3·31	2·02	+1·29	+64
8. Bihar	3·6	2·6	2·48	2·34	+0·14	+6
9. United Provinces, East	2·9	1·7	2·18	1·94	+0·24	+12
10. Do. Do., West	0·4	0·8	0·22	0·83	—0·61	—73
11. Punjab, East and North	0	0·5	0·02	0·29	—0·27	—93
12. Do., South-west	0	0·2	0·01	0·11	—0·10	—91
13. Kashmir	0·0	1·7	0·08	0·95	—0·87	—92

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
14. North-West Frontier Province	0	0·8	0	0·39	—0·39	—100
15. Baluchistan	0	0·4	0	0·21	—0·21	—100
16. Sind	0	0	0	0·03	—0·03	—100
17. Rajputana, West	0	0·3	0	0·17	—0·17	—100
18. Do., East	0	0·5	0·01	0·44	—0·43	—98
19. Gujarat	1·3	0·9	1·20	0·65	+0·55	+85
20. Central India, West	1·1	0·9	1·04	0·58	+0·46	+79
21. Do., East	2·6	1·2	2·10	0·98	+1·12	+114
22. Berar	3·5	2·1	2·56	1·49	+1·07	+72
23. Central Provinces, West	4·0	2·0	3·36	1·42	+1·94	+137
24. Do., East	5·6	2·5	4·98	1·83	+3·15	+172
25. Konkan	7·2	5·3	5·44	3·92	+1·52	+39
26. Bombay Deccan	4·1	4·4	2·36	2·96	—0·60	—20
27. Hyderabad, North	3·8	3·2	2·41	2·31	+0·10	+4
28. Do., South	5·8	4·1	3·41	2·85	+0·56	+20
29. Mysore	5·9	7·9	2·99	5·44	—2·45	—45
30. Malabar	14·9	13·4	9·96	11·74	—1·78	—15
31. Madras, South-east	8·0	9·1	5·98	7·40	—1·42	—19
32. Do., Deccan	5·2	5·8	2·47	4·15	—1·68	—40
33. Do., Coast, North	8·8	6·8	6·75	6·58	+0·17	+3

TABLE 17.

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Burma	4·19	6·60	—2·41	—37
Assam	6·85	5·36	+1·49	+28
Bengal	3·69	4·67	—0·98	—21
Bihar and Orissa	2·83	2·73	+0·10	+4
United Provinces	1·13	1·34	—0·21	—16
Punjab	0·02	0·25	—0·23	—92
North-West Frontier Province	0	0·39	—0·39	—100

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Sind	0	0·03	—0·03	—100
Rajputana	0·01	0·35	—0·34	—97
Bombay	2·54	2·39	+0·15	+6
Central India	1·44	0·73	+0·71	+97
Central Provinces	3·83	1·61	+2·22	+138
Hyderabad	2·88	2·56	+0·32	+13
Mysore	2·99	5·44	—2·45	—45
Madras	6·67	7·79	—1·12	—14
Mean of India	2·77	2·98	—0·21	—7

Snowfall.

I.—THE NORTH-WEST FRONTIER PROVINCE.

14. *Drosh.*—Two inches fell on high peaks on the 11th and 5 inches on the 23rd.

II.—KASHMIR.

Srinagar.—A fresh fall was visible on high mountains on the 23rd.

Gulmarg (report dated the 3rd October).—Snow fell on the 1st on surrounding higher mountains.

Skardu.—The following falls occurred during the month :—

TABLE 18.

Date.	High ranges.	Low hills.
4th	2 or 3 inches.	Half an inch.
5th	5 or 6 „	2 inches.
7th	2 or 3 „	Half an inch.

4 or 5 inches of snow were lying at the end of the month on the higher mountains and about an inch on the lower.

Dras.—No snow fell.

Sonamarg.—Light falls occurred on the nearest ranges.

Kargil.—Three inches fell on the 10th on Nakhthulla peak and 6 inches on the 22nd on all high peaks in the neighbourhood.

III.—THE UNITED PROVINCES.

TABLE 19.

Locality.	Actual falls during month.	
	Depth.	Distance below perpetual snow line.
Malla Danpur	1 foot	
Malla Johar	4½ feet	½ mile
Malla Darma	4½ „	2½ miles
Chaudas	1½ „	¼ mile

TABLE 20.

Name of pass or peak.	Accumulation at the end of month.	
	Reported.	Normal.
Nuwe pass	15 feet	22¾ feet
Binkaru „	3½ „	11 „
Milamdhura	7¾ „	7 „
Pindari peak	1 foot	2¾ „
Kaphini „	1 „	3 „
Nandakot	1 „	...
Bagdwar	7¾ feet	...

IV.—THE EASTERN HIMALAYAS.

Gangtok and Yatung.—No snow fell.

Sadiya Frontier Tract.—Snow fell on Dupha Bum (15,000 feet).

Summary.

15. Only light snow fell in the hills of the North-West Frontier Province and Kashmir, and the amounts in the United Provinces hills were probably also below the average.

S. SITARAMAYYA,
Scientific Assistant.

Table A.—Abstract of observations taken at 10 hrs. and 16 hrs. at 13 stations in India, etc., in October, 1919.

Table

Abstract of observations taken at 10 hrs. and 16 hrs. at 13

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hrs.	Pressure. Mean of 16 hrs.	Pressure. Mean daily range.	Pressure. Mean of daily mean pressure.	Pressure. Departure from normal.	Pressure. Mean reduced to sea-level and to gravity at 45° Lat.	Temperature of air. Mean maximum.	Temperature of air. Mean minimum.	Temperature of air. Mean daily range.	Temperature of air. Highest maximum.	Temperature of air. Lowest minimum.	Temperature of air. Absolute range.	Temperature of air. Mean 10 hrs.	Temperature of air. Mean 16 hrs.	Temperature of air. Mean of daily means.	Temperature of air. Departure from normal.	Temperature, Wet-bulb. Mean minimum.	Temperature, Wet-bulb. Mean 10 hrs.	Temperature, Wet-bulb. Mean 16 hrs.	Temperature, Wet-bulb. Mean of three previous columns.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal.																					
5	Calcutta . .	21	29·909	29·795	·114	29·848	+·008	29·816	89·0	74·3	14·7	92·8	66·9	25·9	85·4	85·4	81·2	+ 1·2	72·8	76·6	75·8	75·1
	VI.—Punjab.																					
11	Lahore . . .	702	29·204	29·120	·084	29·151	+·002	29·815	94·0	60·2	33·8	98·2	49·7	48·5	82·3	93·1	75·7	0	56·0	66·6	69·6	64·1
	IX.—Rajputana.																					
18	Jaipur . . .	1,431	28·529	28·433	·096	28·475	+·016	29·829	94·3	64·4	29·9	97·5	54·2	43·3	86·7	92·4	78·0	+ 0·1	56·7	65·4	66·1	63·7
	X.—Bombay.																					
25	Bombay . .	37	29·889	29·788	·101	29·848	+·001	29·824	88·8	77·9	10·9	92·0	76.4	15·6	83·1	85·2	82·1	+ 1·4	72·3	77·3	77·7	75·8
	XIV.—Mysore.																					
29	Bangalore . .	3,021	26·985	26·872	·113	26.930	+·023	29·769	83·4	65·9	17·5	87·4	63·6	23·8	76·7	79·9	73·2	+ 1·4	65·0	69·3	69·3	67·9
	XV.—Madras.																					
30	Trivandrum .	198	29·764	29·665	·099	29·720	+·025	29·847	83·2	75·0	8·2	85·9	72·3	13·3	80·9	81·3	77·8	+0·1		76.1	76·4	
31	Pudukkottai . .	318	29·634	29·501	·133	29·567		29·813	91·9	74·8	17·1	97·9	70·4	27·5	84·5	87·9	83·3			75·1	75·6	
	Madras . . .	22	29·910	29·799	·111	29·860	+·015	29·813	89·2	76·3	12·9	96·2	73·1	23·1	84·4	85·7	81·4	+ 0·6	74·5	78·3	79·0	77·1
	Kashmir.																					
	Srinagar . .		24·990	24·880	·110	24·935	0	24·906	71·7	37·6	34·1	77·6	30·6	47·0	59·0	67·7	54·7	+ 1·5	36·5	50·7	55·9	47·1
	Hill stations, excluding Kashmir and Baluchistan.																					
	Katmandu . .	4,388	25·696	25·615	·081	25·652	+·015	25·606	81·0	57·4	23·6	83·4	53·2	31·2	69·7	77·1	69·2	+ 2·3	55·4	63·5	66·1	61·7
	Kodaikanal . .	7,688	22·860	22·795	·065	22·827		22·762	64·4	51·7	12·7	68·0	48·3	19·7	60·7	59·3	58·1		49·9	56·5	56·4	54·1
	Extra India.																					
	Seychelles . .	15	30·023	29·930	·093	29·988	+·033†	29·926	83·1	77·5	5·6	85·1	73·9	11·2	81·2	82·2	78·9	+ 1·2†	70·4	75·7	76·0	76·1
	Mauritius . .	181				29·953	+·006	30·023	79·9	64·0	15·9	84·4	57·0	27·4			71·4	— 0·6				

N.B.—Elevations in italics indicate barometric determinations.
Note.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

A.

stations in India, etc., in October 1919.

Vapour tension in inches of mercury.					Humidity.					Cloud.				Wind direction.											Wind steadiness.		Wind velocity.		Rainfall.		Station.	Number of sub-division.
														Total number of 10 hrs. and 16 hrs. winds from																		
From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns.	Departure from normal.	Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																															III.—Bengal.	
·792	·805	·768	·808	−·008	92	66	63	77	− 5	3·6	4·4	4·0	−0·6	8	6	5	4	5	6	13	5	15	N 85° W	N 18° W	23	11	50	49	0·46	0·14	Calcutta.	5
																															VI.—Punjab.	
·398	·448	·410	·426	−·019	75	40	26	51	− 1	0·3	0·3	0·3	−0·5	21	0	3	0	6	1	2	6	23	N 56° W	N 9° W	34	11	20	28	0	0	Lahore.	11
																															IX.—Rajputana.	
·372	·368	·316	·357	−·045	60	29	20	40	− 6	0·6	2·1	1·3	−0·4	9	11	2	1	1	3	3	13	19	N 51° W	N 27° W	53	38	48	54	0	0	Jaipur.	18
																															X.—Bombay.	
·715	·845	·849	·816	−·036	75	75	70	75	− 6	2·9	2·5	2·7	−0·4	0	2	9	11	4	3	1	12	20	N 22° W	N 9° E	29	32	147	159	1·54	0·50	Bombay.	25
																															XIV.—Mysore.	
·607	·628	·594	·624	+·016	95	69	59	77	− 1	7·1	7·5	7·3		7	7	8	14	3	3	6	11	3	N 39° E	N	11	8	119	82	3·60	2·02	Bangalore.	29
																															XV.—Madras.	
	·836	·843				80	79			7·7	8·2	7·9	+1·0†	9	4	3	0	1	0	6	7	22	N 64° W	N 69° W	61	78	72	88	7·55	1·31	Trivandrum.	30
	·742	·720				63	57			4·1	5·7	4·9		12	4	10	8	7	8	8	4	1	S 58° W		19		62		4·54	2·00	Pudukkottai.	31
·835	·885	·898	·888	+·032	93	76	73	82	− 1	6·1	6·6	6·3	+0·3	3	13	9	7	6	6	6	10	2	N 17° E	N 54° E	11	20	45	84	8·59	1·42	Madras.	
																															Kashmir.	
·204	·279	·313	·265	−·037	90	55	47	64	−15	0·6	2·1	1·3	−1·4	331	4	3	0	4	1	0	2	15	N 31° W	N 23° W	24	18	34	53	0·08	0·08	Srinagar.	
																															Hill stations, excluding Kashmir and Baluchistan.	
·419	·518	·518	·483	+·007	88	72	56	73	− 2	3·5	3·2	3·3	−0·7	0	0	0	29	0	2	0	31	0	S 45° W	S 86° W	5	34	9	12	0·64	0·30	Katmandu.	
·342	·413	·425	·393		88	79	85	84		6·5	8·3	7·4		0	15	9	61	7	6	0	9	10	N 4° E		27		159		8·44	1·81	Kodaikanal.	
																															Extra India.	
·643	·816	·813	·772	−·022	69	76	74	75	− 6	4·8	5·1	4·9	−1·3†	11	1	7		25	6	0	1	8	S 58° E	S 39° E	38	51	128	139	5·05	3·61	Seychelles.	
			·543	−·012				70	0			6·6	+1·6										S 75° E	S 76° E			95	142	1·26	0·77	Mauritius.	

† Departure from old normal.

Table B.—Abstract of observations taken at 8 hrs. at 210 stations in India, etc., in October, 1919.

(1) Provincial means.

(2) Data of stations.

(1) Provincial means based on the material in Table B (2) except that the statement of rainfall depends on the complete data of about 2,300 stations.

Division.	Pressure departure from normal.	Temperature of air.							Wind.		Hygrometry.				Cloud.		Rainfall.		
		Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Departure of velocity from normal.	Departure of steadiness from normal.	Mean humidity.	Departure from normal.	Mean vapour tension.	Departure from normal.	Mean cloud amount.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.
	"	°	°	°	°	°	°	°					"	"			"	"	"
Burma	+·018	89·3	+1·6	74·6	+0·7	81·9	+1·1	14·7	−0·3	+19	86	− 2	·865	+·008	5·2	−0·3	4·19	6·60	−2·41
Assam	+·007	85·0	−1·4	71·7	+0·6	78·4	−0·4	13·4	−0·5	− 1	91	+ 1	·906	+·013	5·2	+0·2	6·85	5·36	+1·49
Bengal	+·014	88·5	+0·9	74·3	+0·4	81·4	+0·6	14·2	−0·3	− 5	83	− 2	·847	−·001	3·2	−0·3	3·89	4·87	−0·98
Bihar and Orissa	+·018	88·1	−0·2	70·8	−0·2	79·5	−0·3	17·3	−0·3	+ 1	78	0	·733	−·004	3·2	+0·5	2·83	2·73	+0·10
United Provinces of Agra and Oudh	+·014	90·3	−0·4	65·6	−0·8	77·9	−0·6	24·6	−0·1	+11	66	− 4	·572	−·028	1·5	+0·3	1·13	1·34	−0·21
Punjab	+·016	93·6	+0·5	62·1	−0·1	77·9	+0·3	31·5	+0·3	+ 7	51	− 5	·399	−·044	0·4	−0·2	0·02	0·25	−0·23
North-West Frontier Province	+·009	91·8	+0·8	59·2	−0·3	75·5	+0·3	32·6	−0·5	− 8	57	− 2	·365	−·057	0·3	−0·4	0	0·39	−0·39
Sind	+·019	94·7	+0·2	67·5	−1·3	81·1	−0·6	27·2	−2·6	− 3	55	− 7	·501	−·083	0·5	−0·3	0	0·03	−0·03
Rajputana	+·017	94·8	−0·1	66·6	−1·1	80·7	−0·6	28·2	−0·5	− 6	47	− 4	·421	−·049	1·1	0	0·01	0·35	−0·34
Bombay	+·007	90·7	+0·1	70·7	+0·5	80·7	+0·3	20·0	−0·7	− 7	69	0	·664	−·008	2·9	+0·2	2·54	2·39	+0·15
Central India	+·012	88·1	−1·3	63·9	−0·7	76·0	−1·0	24·3	−1·7	− 1	87	+ 4	·540	+·011	1·5	−0·4	1·44	0·73	+0·71
Central Provinces	+·006	87·3	−1·4	66·5	−0·1	76·9	−0·7	20·7	−0·2	+ 5	69	+ 4	·593	+·019	3·4	+0·6	3·83	1·61	+2·22
Hyderabad	+·013	88·5	−1·1	69·5	+0·3	79·1	−0·4	19·0	−0·6	+ 5	68	+ 1	·632	−·008	4·0	+0·6	2·88	2·56	+0·32
Mysore	+·016	83·7	+0·5	67·0	+1·0	75·3	+0·7	16·7	+0·8	+ 6	80	− 1	·645	+·005	5·5	−0·9	2·99	5·44	−2·45
Madras	+·015	89·0	+0·2	75·2	+0·8	82·1	+0·6	13·8	+0·1	+ 3	81	+ 1	·827	+·015	5·2	0	6·67	7·79	−1·12

Table

(2) Abstract of observations taken at 8 hrs. at 210

Number of sub-division.	Station.	Height of barometer above sea-level in feet.	Pressure 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	I.—Burma.																					
2	Victoria Point	147	29·803	...	29·881	29·835	22nd	29·755	18th	79·2	76·0	84·4	...	74·8	...	79·6	...	9·6	89·6	29th	73·2	9th & 12th.
	Mergui	66	29·889	+·014	29·885	29·939	23rd	29·828	18th	78·7	76·4	88·3	+1·4	74·4	+1·7	81·3	+1·5	13·9	91·8	26th	72·1	2nd
	Tavoy	19	29·926	0	29·879	29·999	23rd	29·860	18th	79·5	76·5	89·2	+1·5	74·4	+0·7	81·8	+1·1	14·8	92·2	30th	72·1	31st
	Moulmein	94	29·885	+·023	29·900	29·954	23rd & 24th.	29·816	18th	80·1	77·1	88·9	+1·0	75·5	+0·6	82·2	+0·8	13·4	91·1	31st	72·0	24th
	Amherst	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangoon	18	29·935	+·024	29·891	30·024	23rd	29·859	3rd	80·2	77·9	89·4	+1·9	76·6	+0·8	83·0	+1·3	12·8	93·0	30th	71·1	1st
	Bassein	27	29·926	+·025	29·889	30·018	23rd	29·843	3rd	81·4	79·2	90·2	+2·9	76·6	+1·0	83·4	+1·9	13·6	93·2	30th	74·9	2nd & 3rd.
	Diamond Island	41	29·879	0	29·854	29·971	23rd	29·792	3rd	84·3	79·5	88·7	+2·8	79·2	+2·1	83·9	+2·3	9·5	91·6	29th	75·8	11th
	Toungoo	164	29·788	+·026	29·894	29·881	23rd	29·725	2nd	81·0	77·4	90·9	+1·0	74·8	+0·2	82·8	+0·6	16·1	92·8	5th	72·7	27th
	Kyaukpyu	18	29·899	...	29·857	29·996	23rd	29·815	3rd	81·5	78·5	87·5	...	77·7	...	82·6	...	9·8	90·3	5th	74·2	22nd
	Akyab	20	29·903	+·007	29·864	29·997	23rd	29·813	3rd	80·6	78·1	88·8	+1·3	75·5	−1·1	82·2	+0·1	13·3	90·6	14th	71·3	31st
9	Minbu	*165*	29·760	+·001	29·867	29·845	23rd	29·685	2nd	82·1	77·4	93·4	+2·9	77·4	+2·2	8[illegible]·4	+2·5	16·0	98·3	9th	74·0	31st
	Yamethin	644	29·291	+·014	29·886	29·382	23rd	29·222	2nd	80·2	76·5	92·6	+1·6	75·1	+1·1	83·8	+1·3	17·5	95·6	15th	73·4	4 days
	Mandalay	250	29·697	+·027	29·896	29·796	23rd	29·608	2nd	82·2	77·2	93·5	+1·7	70·1	+1·3	84·8	+1·5	17·4	97·9	21st	71·5	28th
	Monywa	*280*	29·666	+·026	29·896	29·763	23rd	29·581	2nd	80·8	76·7	93·5	+3·2	77·0	+1·6	85·2	+2·[illegible]	16·5	97·2	6th	73·1	2nd
	Lashio	2,820	27·175	+·010	27·121	27·270	22nd	27·086	2nd	69·6	67·9	82·4	−0·5	64·9	+1·1	73·7	+0·[illegible]	17·4	84·9	3rd & 13th.	58·6	28th
	Bhamo	361	29·586	+·039	29·905	29·666	22nd & 23rd.	29·490	2nd,	74·8	72·3	90·4	+2·6	67·9	−1·9	79·1	+0·3	22·5	96·1	8th	63·7	22nd & 31st.
	Myitkyina	458	29·467	+·032	29·895	29·587	22nd	29·358	2nd	73·9	71·6	85·7	−0·5	60·7	−0·9	77·8	−0·7	16·0	90·6	15th	64·6	23rd
	II.—Assam.																					
4	Dibrugarh	352	29·575	0	29·896	29·695	22nd	29·389	6th	73·1	71·6	81·5	−3·0	69·4	−0·1	75·5	−1·5	12·1	87·5	15th & 23rd.	66·1	22nd
	Sibsagar	383	29·602	−·013	29·898	29·712	22nd	29·424	6th	73·4	72·2	81·2	−3·2	71·5	+0·9	76·3	−1·1	9·7	86·4	17th	68·2	22nd
	Tezpur	252	29·687	+·012	29·902	29·803	22nd	29·532	6th	74·3	72·3	84·8	−1·3	71·3	+0·2	78·0	−0·5	13·5	89·4	17th	65·8	28th
	Gauhati	196	29·749	+·009	29·904	29·859	23rd	29·640	2nd	76·6	74·2	86·0	−1·3	72·4	+1·9	79·3	+0·3	13·6	91·0	5th	67·7	28th & 29th.
	Dhubri	115	29·816	+·006	29·887	29·927	23rd	29·690	3rd	76·3	74·0	83·6	−1·3	73·3	+0·6	78·5	−0·3	10·3	85·9	7th	68·5	27th
	Silchar	104	29·858	+·030	29·915	29·954	23rd	29·759	3rd	79·1	76·4	88·6	−0·1	73·6	+1·3	81·1	+0·6	15·0	93·3	15th	68·5	30th
	Srimangal	66	29·880	...	29·896	29·970	24th	29·747	2nd	77·3	74·9	89·6	+0·4	70·1	−0·5	79·9	−0·1	19·5	93·7	15th	60·3	30th
	III.—Bengal.																					
5	Cox's Bazar	36	29·883	...	29·864	29·977	23rd	29·786	3rd	81·3	77·9	89·4	...	74·5	...	81·9	...	14·9	92·2	23rd	67·5	31st
	Chittagong	87	29·839	+·013	29·871	29·923	23rd	29·747	3rd	78·5	76·1	88·8	+2·2	74·5	+1·2	81·7	+1·7	14·3	92·1	23rd	65·4	31st
	Noakhali	43	29·897	+·030	29·887	29·994	23rd	29·788	3rd	80·4	76·9	87·9	+1·7	75·8	+2·3?	81·8	+2·0?	12·1	90·8	23rd & 24th.	67·3	29th & 31st.
	Barisal	12	29·916	+·023	29·875	30·022	23rd	29·785	2nd	82·1	78·1	88·2	+0·6	75·6	+1·0	81·9	+0·8	12·6	90·8	4th	68·6	29th & 31st.
	Narayanganj	26	29·904	+·016	29·879	30·003	23rd	29·777	3rd	81·9	76·7	89·3	+1·4	75·7	+0·4	82·5	+0·9	13·6	91·3	2nd	67·8	29th

N.B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

stations in India, etc., in October, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st October 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															I.—Burma.
18	2	3	1	2	3	2	0	0	S 61° E		4·1			10		86		·850		7·3		22	+5·0	17·06	18·87	−1·81	121·07	156·83	−35·76	3·32	Victoria Point.
15	0	2	6	6	1	0	1	0	S 70° E	N 5° E	3·5	1·1	+2·4	37	+19	90	+ 1	·882	+·014	4·8	+0·2	7	−9·4	3·96	12·18	−8·22	120·28	147·30	−27·02	1·29	Mergui.
20	4	2	2	2	1	0	0	0	N 58° E	N 9° E	1·3	0·8	+0·5	30	+17	87	− 2	·868	+·001	5·1	+1·5	8	−4·7	3·10	10·54	−7·44	206·75	206·93	− 0·18	0·60	Tavoy.
4	0	10	13	3	0	0	0	1	N 75° E	S 85° E	2·0	1·5	+0·4	72	+40	87	− 1	·893	+·015	5·4	+0·4	8	−3·2	7·50	8·62	−1·12	210·05	182·68	+27·37	2·92	Moulmein.
2	1	0	13	9	2	3	0	1	S 63° E		5·7			62																	Amherst.
6	5	8	5	1	1	2	1	2	N 40° E	S 53° E	2·4	2·1	−0·3	37	+15	89	− 1	·920	+·017	8·3	+2·5?	9	−1·0	6·54	6·09	−0·45	96·30	93·69	+ 2·61	1·76	Rangoon.
22	0	2	1	2	2	0	1	1	S 58° E	N 80° E	1·6	2·4	−0·8	7	−11	90	− 3	·974	+·053	5·9	+1·1	10	−2·4	3·43	8·20	−4·77	101·22	104·01	− 2·79	0·58	Bassein.
3	1	13	7	5	0	1	0	1	N 70° E	N 53° E	4·7	5·5	−0·8	62	+30	80	− 3	·944	+·035	4·9	−0·6	7	−3·8	3·28	8·35	−5·07	103·18	110·40	− 7·22	0·72	Diamond Island.
12	2	4	2	8	3	0	0	0	S 70° E	N 84° E	1·0	1·3	−0·3	37	+19	85	− 4	·885	−·007	6·3	+0·7	8	−2·2	5·92	7·42	−1·50	77·19	78·28	− 1·09	1·72	Toungoo.
31	0	0	0	0	0	0	0	0	Calm		0·1			(a)		87		·936		4·2		15	+3·6	12·53	8·91	+3·62	191·87	167·27	+24·60	2·47	Kyaukpyu.
2	4	15	8	2	0	0	0	0	N 57° E	N 50° E	1·7	1·8	−0·1	79	+ 4	89	− 2	·924	+·010	5·8	+0·5	9	−0·2	6·58	10·61	−4·03	218·56	188·88	+29·68	2·04	Akyab.
2	1	3	5	15	1	0	0	4	S 70° E	S 10° W	1·9	4·7	−2·8	53	+42	80	− 4	·873	+·022	2·6	−2·1	1	−5·5	0·13	4·60	−4·47	22·52	31·35	− 8·83	0·13	Minbu.
										S 45° E		2·5				84	− 3	·865	+·012	3·2	−2·0	3	−5·1	1·85	5·89	−4·04	25·81	33·65	− 7·84	1·40	Yamethin.
										S		2·3				79	− 4	·866	+·011	5·5	+1·6	7	+0·6	6·26	4·74	+1·52	28·00	29·87	− 1·87	2·29	Mandalay.
6	8	1	2	6	2	0	2	4	N 22° E		1·2			20		82	− 7	·863	−·027	5·0	−0·4	3	−3·2	2·93	4·40	−1·47	28·90	28·74	+ 0·16	1·58	Monywa.
20	2	3	1	1	0	3	0	1	N 27° E		1·1			7		90	− 3	·657	0	3·4	−4·1	5	−4·8	3·32	5·69	−2·37	47·16	55·42	− 8·26	2·28	Lashio.
31	0	0	0	0	0	0	0	0	Calm	N 4° W	0·4	1·4	−1·0	(a)		88	− 1	·759	−·020	5·0	+0·3	6	−0·3	3·31	4·31	−1·09	56·60	67·04	−10·44	1·35	Bhamo.
26	2	2	1	0	0	0	0	0	N 36° E		1·5			13		89	0	·751	−·023	5·5	−0·7	9	+0·6	3·10	7·42	−4·32	71·41	73·17	− 1·76	1·32	Myitkyina.
																															II.—Assam.
26	0	2	2	0	1	0	0	0	N 83° E		0·3			11		93	+ 4	·754	+·021	5·5	+0·7	13	+4·7	15·17	5·76	+9·41	100·73	88·21	+12·52	3·82	Dibrugarh.
12	4	8	2	1	2	2	0	0	N 51° E	N 86° E	1·0	1·4	−0·4	27	+ 2	94	− 2	·777	−·019	8·4	+1·3	13	+5·4	7·02	5·12	+1·90	82·02	76·49	+ 5·53	1·32	Sibsagar.
6	0	2	17	1	1	0	3	1	N 88° W		1·7			50		91	+ 2	·769	+·006	5·5	+1·1	9	+3·0	2·88	3·99	−1·11	46·63	60·27	−13·64	0·54	Tezpur.
27	0	1	2	0	0	0	1	0	N 66° E		0·3			7		89	0	·817	+·025	4·9	−0·7	4	+0·4	0·93	2·53	−1·60	47·80	54·39	− 6·79	0·33	Gauhati.
3	0	7	9	3	3	5	1	0	S 72° E	N 67° E	2·8	2·8	0	40	− 3	89	+ 1	·807	+·010	5·9	+2·3?	9	+4·7	14·72	3·95	+10·77	89·66	87·12	+ 2·54	6·11	Dhubri.
31	0	0	0	0	0	0	0	0	Calm	N 63° E	0	1·2	−1·2	(a)		88	− 1	·873	+·044	4·2	−1·2	10	+2·4	5·07	6·57	−1·50	73·04	98·74	−25·70	1·24	Silchar.
																90	+ 4	·842	+·004	2·3		11	+2·5	10·55	6·92	+3·63	78·19	83·44	− 5·25	2·50	Srimangal.
																															III.—Bengal.
15	1	6	6	3	0	0	0	0	N 76° E		2·5			40		85		·915		3·0		2	−6·6	1·71	8·23	−6·52	137·89	123·19	+14·70	1·31	Cox's Bazar.
5	4	9	4	7	1	1	0	0	N 76° E	N 67° E	2·1	2·0	+0·1	53	+ 6	89	0	·875	+·013	3·0	−1·5	4	−3·0	1·54	6·90	−5·36	114·00	89·79	+24·21	0·65	Chittagong.
12	3	9	0	3	3	1	0	0	N 69° E		0·9			26		85	− 3	·882	+·007	2·8	0	8	+0·6	4·00	8·31	−4·31	103·57	108·51	− 5·94	0·98	Noakhali.
9	4	6	1	2	3	4	1	1	N 51° E	N 20° E	1·9	1·5	+0·4	10	− 1	82	− 2	·904	+·014	2·6	−0·7	4	−2·5	2·40	5·97	−3·57	74·87	71·43	+ 3·44	1·44	Barisal.
9	4	2	2	2	3	5	2	2	S 62° W	N 50° E	2·1	2·0	+0·1	7	− 4	78	− 7	·852	−·019	3·5	−0·8	7	+1·4	3·19	4·84	−1·65	66·82	61·63	+ 5·19	0·95	Narayanganj.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs. at 210

Number of Sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal—*concld.*																					
	Mymensingh	63	29·867	+·015	29·881	29·957	30th	29·753	3rd	79·5	76·1	87·5	+0·8	74·5	+0·9	81·0	+0·9	13·0	90·3	8th	66·2	29th
	Bogra	75	29·853	+·013	29·880	29·967	23rd	29·712	2nd	78·8	75·7	88·0	+0·7	73·2	+0·4	80·6	+0·5	14·8	92·4	7th	64·5	27th
	Dinajpur	123	29·791	+·002	29·870	29·893	22nd	29·635	3rd	77·6	74·2	87·6	+0·1	72·0	+0·3	79·7	+0·2	15·6	92·8	2nd	60·0	28th
	Jalpaiguri	283	29·652	+·017	29·897	29·765	23rd	29·535	2nd	75·2	73·3	87·4	+1·0	70·9	+0·8	79·1	+0·9	16·5	90·5	2nd	63·2	27th
	Sangor Island	10	29·904	+·012	29·859	30·002	23rd	29·774	2nd	81·9	77·4	87·5	+0·4	76·9	+0·7	82·2	+0·5	10·6	90·6	14th	69·7	28th
	Midnapore	149	29·762	+·006	29·861	29·863	30th & 31st.	29·634	2nd	79·9	74·1	89·0	−0·4	72·6	−0·6	80·8	−0·5	16·4	93·5	4th	61·9	31st
	Calcutta	21	29·901	+·012	29·869	30·007	30th	29·767	3rd	79·0	75·5	89·1	+1·9	74·3	0	81·7	+0·9	14·8	92·8	3rd	66·9	28th
	Jessore	30	29·899	+·020	29·876	30·013	23rd	29·763	2nd	81·3	76·5	89·1	+0·7	75·1	+0·8	82·1	+0·7	14·0	91·7	16th	66·3	28th
	Burdwan	99	29·819	+·004	29·866	29·923	30th	29·662	3rd	79·6	74·4	89·9	+0·9	73·8	−0·7	81·9	+0·1	16·1	93·6	4th	63·8	31st
	Berhampore	67	29·861	+·017	29·878	29·965	23rd	29·727	2nd	79·4	75·3	88·8	+1·0	74·5	+0·2	81·7	+0·6	14·3	93·2	4th	66·2	31st
	IV.—Bihar and Orissa.																					
6	Balasore	50	29·874	+·019	29·870	29·979	30th	29·741	3rd	77·2	73·4	89·0	+0·6	72·1	−1·1	80·5	−0·3	16·9	91·9	3rd	60·6	31st
	Hukitala (False Point)	29	29·898	+·020	29·868	29·996	30th	29·778	3rd													
	Cuttack	80	29·848	+·021	29·870	29·949	30th	29·710	3rd	78·1	74·6	88·7	−1·4	74·6	0	81·7	−0·7	14·1	92·9	3rd	67·2	29th
	Puri	24	29·912	+·029	29·877	30·017	30th	29·778	3rd	81·4	76·4	90·0	+1·0	78·1	+1·3	84·1	+1·1	11·9	93·1	3rd & 16th	71·0	29th
	Angul	455	29·465	+·020	29·871	29·571	30th	29·325	3rd	77·3	72·7	88·5	−0·6	71·4	+0·5	79·9	−0·1	17·1	90·6	12th	61·4	31st
	Sambalpur	486	29·443	+·012	29·885	29·547	30th	29·297	3rd	76·4	72·2	88·1	−0·7	70·5	−1·1	79·3	−0·9	17·6	91·2	10th	59·1	31st
7	Chaibasa	733	29·179	+·014	29·875	29·283	30th	29·045	3rd	74·6	70·6	89·1	+0·7	69·2	−0·7	79·1	0	19·9	93·2	4th	58·7	31st
	Ranchi	2,128	27·795	+·022	29·866	27·894	30th	27·665	3rd	72·8	66·4	82·6	−0·7	66·1	−0·2	74·4	−0·5	16·5	86·6	7th	57·9	30th & 31st.
	Purulia	*816*	29·098	+·014	29·874	29·205	28th	28·963	3rd	76·4	70·7	89·9	+0·9	69·9	−0·3	79·9	+0·3	20·0	92·9	10th	58·7	31st
	Daltonganj	*730*	29·195	+·017	29·890	29·318	30th	29·031	3rd	74·2	68·8	88·6	−0·8	65·6	0	77·1	−0·4	23·0	93·1	5th	52·4	31st
8	Purnea	124	29·796	+·005	29·876	29·912	23rd	29·639	2nd	76·2	73·4	87·8	+0·2	70·8	−0·3	79·3	−0·1	17·0	92·5	2nd	60·4	28th
	Monghyr	155	29·759		29·868	29·877	28th	29·615	2nd	78·6	72·0	88·6		72·2		80·4		16·4	93·2	1st	62·9	31st
	Darbhanga	165	29·757	+·014	29·879	29·877	28th	29·612	2nd	78·3	73·1	88·6	−3·5?	70·1	−2·6?	76·8	−3·1?	13·5	88·2	12th	58·7	27th
	Pusa	188	29·724		29·870	29·843	23rd	29·580	2nd	76·5	73·0	90·1		69·7		79·9		20·4	94·1	1st	57·1	27th
	Patna	183	29·743	+·020	29·883	29·859	28th	29·602	3rd	78·7	72·6	87·4	−1·1	72·4	−0·1	79·9	−0·6	15·0	91·6	1st	61·5	31st
	Buxar	239	29·675	+·014	29·874	29·792	23rd	29·528	2nd	75·7	70·6	89·6	−0·5	70·2	−0·4	79·9	−0·5	19·4	94·6	1st	59·4	31st
	Gaya	372	29·553	+·020	29·891	29·671	30th	29·427	3rd	76·5	70·4	88·7	−1·2	70·8	−0·2	79·7	−0·7	17·9	93·5	1st	61·1	31st
	Naya Dumka	489	29·434	+·020	29·881	29·534	30th	29·292	3rd	77·8	73·2	88·2	+0·2	70·1	−0·6	79·2	−0·2	18·1	91·4	1st	58·8	31st
	V.—United Provinces of Agra and Oudh.																					
9	Gorakhpur	257	29·652	+·011	29·872	29·771	23rd	29·516	2nd	76·0	71·3	88·0	−0·7	68·2	−1·4	78·1	−1·1	19·8	91·4	1st	56·9	30th
	Benares	267	29·650	+·014	29·875	29·767	23rd	29·487	2nd	77·4	70·3	89·9	−0·4	66·9	−0·8	78·4	−0·6	23·0	95·0	1st	53·1	31st
	Allahabad	309	29·629	+·034	29·899	29·748	28th	29·439	3rd	75·7	68·2	89·9	−0·9	67·4	+0·1	78·6	−0·4	22·5	96·4	1st	54·9	31st
	Cawnpore	416	29·507	+·025	29·889	29·620	23rd	29·344	3rd	72·8	65·8	89·6	−0·9	66·0	−0·9	77·8	−0·9	23·6	94·6	1st	56·1	31st

N.B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

stations in India, etc., in October, 1919—*continued.*

Wind direction. Number of winds from Calm	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st October 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															III.—Bengal—*concld.*
23	0	1	1	0	0	6	0	0	S 36° W	S 85° E	0·6	1·2	—0·6	13	—24	84	— 3	·855	+·002	4·2	—0·2	9	+3·6	9·71	5·24	+4·47	72·67	83·44	—10·77	3·92	Mymensingh.
23	2	1	0	0	3	2	0	0	S 24° W	N 86° E	0·4	1·2	—0·8	7	— 9	86	+ 2	·852	+·023	4·0	+1·0	5	+0·1	1·24	4·39	—3·15	51·85	64·57	—12·72	0·50	Bogra.
11	3	4	2	1	3	2	3	2	N 9° W	N 53° E	1·1	1·8	—0·7	7	—15	84	— 1	·805	—·004	2·6	—0·5	5	+1·1	5·17	3·31	+1·86	60·25	65·47	— 5·22	2·65	Dinajpur.
30	1	0	0	0	0	0	0	0	N	N 51° E	0·4			3	—40	90	+ 3	·798	+·029	2·6	—0·2	5	+0·4	4·30	4·67	—0·37	92·04	114·49	—22·45	1·50	Jalpaiguri.
1	9	6	0	2	3	5	1	4	N 12° W	N 14° W	4·8	3·9	+0·9	27	+ 5	80	— 5	·878	—·013	3·6	—1·4	2	—5·4	1·47	7·54	—6·07	60·80	63·74	— 2·94	0·91	Saugor Island.
27	0	0	0	3	1	0	0	0	S 31° E		1·3			13		75	— 4	·771	—·013	2·6	+0·2	4	—1·2	1·64	3·31	—1·67	55·42	52·17	+ 3·25	0·67	Midnapore.
3	3	4	1	1	2	6	1	10	N 52° W	N 58° W	2·1	2·0	+0·1	33	+14	84	0	·843	—·012	3·3	—0·2	1	—4·9	0·46	3·88	—3·42	55·47	56·24	— 0·77	0·14	Calcutta.
29	1	0	0	0	1	0	0	0	Calm	S 67° E	0·5	1·5	—1·0	(a)		80	— 5	·848	—·026	4·4	+0·9	3	—2·5	2·00	4·63	—2·63	51·86	57·52	— 5·66	1·10	Jessore.
28	0	0	0	0	1	1	1	0	S 24° W	N 28° W	0·2	1·4	—1·2	7	— 7	78	— 3	·793	—·016	3·1	—0·6	3	—1·1	1·74	2·97	—1·23	48·98	51·65	— 2·67	1·07	Burdwan.
19	1	0	0	2	4	4	1	0	S 18° W	S 39° W	1·2	1·5	—0·3	23	+18	81	— 4	·829	—·004	3·1	—0·5	5	+0·6	3·94	3·55	+0·39	45·04	51·52	— 6·48	1·90	Berhampore.
																															IV.—Bihar and Orissa.
17	5	0	0	0	0	5	0	4	N 55° W	N 41° W	1·0	1·9	—0·9	27	— 9	83	0	·785	—·030	3·6	+0·6	8	+2·4	4·10	5·31	—1·21	70·60	54·44	+16·16	1·45	Balasore.
4	9	1	1	3	1	1	4	7	N 28° W		5·4			43						5·2	+0·5	3	—4·1	1·50	7·83	—6·33	55·21	55·77	— 0·56	0·55	Hukitala (False Point).
29	1	1	0	0	0	0	0	0	N 24° E	N 51° W	0·8	1·3	—0·5	7	—11	84	+ 4	·817	+·021	2·8	—0·9	9	+3·2	5·26	4·97	+0·29	57·53	54·30	+ 3·23	1·82	Cuttack.
5	12	4	1	0	4	2	1	2	N		5·9			36		78	— 3	·848	—·004	3·5	+0·3	4	—2·9	2·34	6·61	—4·27	39·52	47·98	— 8·46	0·76	Puri.
7	2	3	2	1	1	0	5	10	N 38° W		3·1			36		79	0	·752	+·012	3·0	+0·1	6	+1·3	1·73	3·51	—1·78	46·00	40·98	+ 5·02	0·44	Angul.
0	12	9	5	1	0	2	0	2	N 28° E	N 33° E	2·0	2·1	+0·5	66	+ 9	81	+ 4	·741	+·003	3·2	+0·3	9	+5·7	5·40	1·77	+3·63	72·61	60·88	+11·73	1·68	Sambalpur.
25	0	0	0	0	0	5	1	0	S 52° W	S 63° W	1·2	0·7	+0·5	20	— 2	81	— 1	·710	—·006	3·6	+0·7	5	+1·2	1·21	2·78	—1·57	47·00	46·45	+ 0·55	0·35	Chaibasa.
3	0	0	1	3	2	4	10	8	S 85° W	N 80° W	2·7	3·3	—0·8	49	+28	70	0	·580	—·021	3·5	+0·4	6	+2·1	5·68	2·34	+3·34	70·12	50·82	+19·30	2·77	Ranchi.
19	0	0	0	0	0	1	5	6	N 73° W		0·9			32		74	— 4	·689	—·010	3·7	+1·5	3	—0·5	1·33	2·76	—1·43	58·91	47·20	+11·73	0·46	Purulia.
27	0	1	1	1	0	1	0	0	S 63° E		1·1			6		75	— 5	·646	+·005	2·2	+0·3	5	+2·1	3·74	1·53	+2·21	54·83	38·06	+16·77	2·22	Daltonganj.
3	0	3	8	1	0	8	5	3	S 42° W	N 79° E	1·3	1·5	—0·2	10	— 5	87	— 1	·790	—·008	3·9	+1·6	7	+3·8	2·51	2·83	—0·32	61·76	58·52	+ 3·24	0·56	Purnea.
12	2	0	1	2	1	10	2	1	S 45° W		1·			32		72		·709		3·3		3	+1·0	1·35	0·85	+0·50	53·93	46·34	+ 7·59	0·80	Monghyr.
25	0	0	3	1	0	0	1	1	E	S 68° E	0·[illegible]	·5	—0·7	6	—15	77	— 6?	·758	—·032	3·0	+1·2	1	—1·8	0·85	2·52	—1·67	33·02	48·48	—15·46	0·83	Darbhanga.
15	0	0	3	6	1	2	2	2	S 22° E		1·[illegible]			19		84		·771		2·5		3	+0·5	1·89	1·36	+0·53	30·21	45·94	—15·73	1·39	Pusa.
12	0	0	6	1	0	8	4	0	S 25° W	S 8° W	1·[illegible]	1·6	0	23	+ 1	73	— 1	·727	—·014	3·1	+0·9	3	—0·1	1·57	2·62	—1·05	39·26	45·46	— 6·20	0·72	Patna.
5	1	1	3	2	1	9	8	1	S 59° W		1·[illegible]			39		76	+ 4	·691	+·011	2·8	+0·6	6	+3·3	1·96	2·75	—0·79	40·79	38·48	+ 2·31	0·70	Buxar.
8	1	2	1	1	9	9	0	0	S 13° W	S 9° W	1·2	2·0	—0·8	46	+14	72	— 1	·680	—·008	2·7	0	6	+3·3	3·62	1·97	+1·65	54·15	43·60	+10·55	0·94	Gaya.
31	0	0	0	0	0	0	0	0	Calm		0·4			(a)		79	+ 1	·769	+·024	2·0	—0·4	8	+4·0	6·50	3·22	+3·28	54·21	52·43	+ 1·78	1·25	Naya Dumka.
																															V.—United Provinces of Agra and Oudh.
20	0	0	9	0	1	0	1	0	S 83° E	N 27° W	1·1	0·9	+0·2	27	+ 5	78	+ 1	·709	—·009	1·1	—0·6	3	+0·5	2·05	3·81	—1·76	37·13	48·09	—10·96	1·48	Gorakhpur.
9	0	1	1	2	0	12	2	4	S 58° W	S 50° W	1·6	1·8	—0·2	40	+22	68	— 6	·658	—·012	2·1	+0·2	3	+0·6	1·04	2·51	—1·47	39·98	37·71	+ 2·27	0·73	Benares.
7	0	0	0	0	0	3	19	2	S 88° W	N 86° W	1·5	2·3	—0·8	76	+51	66	— 2	·598	—·027	2·5	+0·5	2	+0·1	1·71	2·46	—0·75	33·35	36·40	— 3·05	1·24	Allahabad.
11	2	1	0	1	0	3	9	4	N 78° W	S 76° W	1·3	1·5	—0·2	43	+14	66	— 9	·545	—·023	1·5	+0·5	3	+1·6	0·88	1·25	—0·37	34·89	33·53	+ 1·36	0·40	Cawnpore.

(a) Indeterminate.

Tabl

(2) Abstract of observations taken at 8 hrs. at 21

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Mean 8 hrs. pressure reduced to 32°.	Pressure, 8 hrs., in inches. Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	V.—United Provinces of Agra and Oudh—*concld.*																					
	Lucknow	368	29·543	+·014	29·877	29·661	23rd	29·381	3rd	73·5	66·9	90·3	−0·9	65·5	−0·1	77·9	−0·5	24·8	98·4	1st	54·7	31st
	Bahraich	407	29·490	+·006	29·865	29·588	23rd	29·342	3rd	74·0	69·2	87·8	−2·8?	67·6	−0·3	77·7	−1·5?	20·2	92·1	12th	57·4	26th
10	Jhansi	824	29·100	+·002	29·895	29·208	23rd	28·912	3rd	74·7	65·3	92·5	−0·6	65·5	−4·3?	79·0	−2·5?	27·0	96·9	11th & 18th.	57·4	31st
	Agra	556	29·366	+·017	29·888	29·486	28th	29·177	3rd	78·0	65·5	93·3	−0·1	67·0	−1·0	80·2	−0·5	26·3	97·4	10th	58·2	31st
	Mainpuri	616	29·388	+·009	29·877	29·506	23rd	29·229	3rd	72·0	63·7	92·9	0	64·0	−0·9	78·5	−0·5	28·9	97·4	10th	52·9	31st
	Bareilly	508	29·325	+·005	29·868	29·454	23rd	29·178	3rd	72·2	65·9	90·1	+0·6	64·2	−0·8	77·1	−0·1	25·9	94·1	11th	53·1	31st
	Roorkee	899	29·007	+·017	29·893	29·145	23rd	28·854	3rd	70·6	63·8	88·6	−0·4	59·5	−1·5	74·0	−0·9	29·1	91·8	8th & 13th.	48·4	30th
	VI.—Punjab.																					
11	Delhi	718	29·199	+·025	29·898	29·332	23rd	29·005	3rd	72·4	60·5	91·8	0	68·7	+0·5	80·2	+0·3	23·1	95·7	10th	60·9	30th
	Hissar	725	29·190	+·026	29·897	29·320	28th	29·009	3rd	71·6	59·7	96·6	+0·6	62·0	−0·3	79·8	+0·1	33·7	100·8	9th	53·2	29th & 31st.
	Patiala	818	29·062	−·010?	29·862	29·191	23rd	28·889	3rd	73·3	63·4	92·0	+0·5	63·4	+0·9	77·7	+0·7	28·6	96·6	1st	54·0	31st
	Ambala	892	29·004	+·013	29·884	29·133	23rd	28·828	3rd	71·2	60·8	93·8	+1·6	62·1	+1·3	78·0	+1·5	31·7	97·6	10th	48·3	31st
	Ludhiana	812	29·086	+·013	29·888	29·218	23rd	28·915	3rd	70·2	61·1	93·3	+1·5	63·8	+0·3	78·6	+0·9	29·5	97·5	1st	52·6	30th
	Lahore	702	29·188	+·011	29·852	29·332	23rd	28·987	3rd	69·3	61·3	94·3	−0·6	60·2	−0·1	77·2	−0·3	34·1	98·7	1st	49·7	30th
	Sialkot	830	29·068	+·014	29·894	29·221	23rd	28·895	3rd	69·2	61·2	89·8	−2·7?	59·2	−3·3	74·5	−3·0?	30·6	93·3	4th	45·5	30th
	Rawalpindi	1,674	28·246	+·016	29·953	28·485	23rd	28·075	3rd	67·4	57·2	89·3	+0·7	56·0	−0·5	72·7	+0·1	33·3	94·1	9th	45·6	29th
12	Khusab	612	29·303	+·024?	29·897	29·497	23rd	29·104	3rd	74·9	59·9	95·5	+1·4	60·7	−2·8	78·1	−0·7	34·8	101·2	2nd	48·2	29th, 30th & 31st.
	Lyallpur	605	29·286		29·876	29·456	23rd	29·058	3rd	71·7	61·4	95·1		59·8		77·5		35·3	100·3	1st	50·0	29th
	Montgomery	558	29·337	+·010	29·875	29·494	24th	29·097	3rd	75·1	61·9	95·6	−0·7	62·3	−0·7	78·9	−0·7	33·3	101·6	5th	52·4	30th
	Multan	426	29·473	+·019	29·873	29·645	24th	29·238	3rd	74·4	62·2	96·3	+0·4	66·0	+0·9	81·3	+0·7	30·3	102·6	2nd	57·6	29th
	VII.—North-West Frontier Province.																					
14	Peshawar	1,113	28·811	+·004	29·950	29·058	23rd	28·595	3rd	59·9	54·1	89·3	+1·1	56·6	−1·3	73·0	−0·1	32·7	94·2	1st	45·1	30th
	Dera Ismail Khan	590	29·324	+·014	29·901	29·547	23rd	29·104	3rd	71·7	60·3	94·3	+0·5	61·8	+0·7	78·0	+0·6	32·5	99·0	10th	50·3	30th
	VIII.—Sind.																					
16	Jacobabad	186	29·730	+·021	29·879	29·913	24th	29·503	3rd	76·1	61·1	106·2	+1·0	62·1	−1·1	81·1	−0·1	38·1	107·9	2nd	51·2	27th
	Hyderabad	96	29·826	+·017	29·877	29·976	28th	29·588	3rd	76·4	66·5	96·8	−1·1	68·4	−1·7	82·6	−1·4	28·4	104·0	2nd	59·2	30th
	Karachi	13	29·938	+·020	29·992	30·066	28th	29·712	3rd	76·6	69·5	87·2	+0·6	72·0	−1·0	79·6	−0·2	15·2	96·0	3rd	63·7	28th
	IX.—Rajputana.																					
17	Bikaner	*771*	29·156	+·031	29·890	29·289	24th	28·941	3rd	77·7	66·5	97·5	+1·4	68·7	−2·7	83·2	−0·7	28·8	102·2	4th	57·7	31st
	Jodhpur	780	29·163	+·022	29·909	29·264	25th	28·950	3rd	76·1	61·3	96·4	−0·5	65·7	−1·8	81·1	−1·1	30·7	102·3	6th	60·3	29th
18	Jaipur	1,431	28·517	+·019	29·912	28·605	28th	28·324	3rd	76·6	63·4	94·2	−0·4	64·4	−0·4	79·3	−0·4	29·8	97·5	5th, 8th & 9th.	54·2	27th
	Ajmer	1,611	28·327	+·003	29·925	28·419	28th	28·129	3rd	68·1	58·6	92·1	+0·2	64·4	+0·2	78·3	+0·2	27·7	95·6	5th	56·9	27th
	Kotah	832	29·096	+·010	29·887	29·206	28th	28·898	3rd	80·5	66·2	93·6	−1·4	69·6	−0·7	81·6	−1·1	24·0	97·0	10th	62·8	31st

N.B.—Elevation in italics indicate barometrical determinations.

B—*continued.*

stations in India, etc., in October, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st October 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															V.—United Provinces of Agra and Oudh—*concld.*
27	2	1	0	0	0	1	0	0	N	N 58° W	1·0	1·3	−0·3	6	− 3	70	0	·580	−·033	1·8	+0·5	4	+2·4	2·65	1·15	+1·50	45·32	35·91	+9·41	1·40	Lucknow.
22	4	0	2	1	1	0	1	0	N 37° E	N 77° E	0·9	1·2	−0·3	10	0	77	+ 1	·662	−·029	1·9	+0·9	5	+3·4	3·09	1·53	+1·56	53·40	41·76	+11·64	1·54	Bahraich.
14	1	1	0	0	0	14	1	0	S 51° W	S 70° W	1·9	1·8	+0·1	43	0	58	+ 2	·503	−·032	0·9	0	2	+1·0	0·76	0·73	+0·03	51·90	33·99	+17·91	0·46	Jhansi.
19	0	1	1	0	1	7	2	0	S 45° W	N 68° W	1·3	2·3	−1·0	27	−13	48	− 9	·465	−·033	1·3	+0·5	0	−0·8	0	0·78	−0·78	28·82	24·65	+4·17	0	Agra.
11	2	0	1	1	0	2	7	7	N 68° W	N 83° W	1·1	0·7	+0·4	43	+27	61	− 4	·487	−·051	1·2	+0·1	0	−1·0	0·01	1·28	−1·27	22·77	24·60	−1·83	0·01	Mainpuri.
19	0	2	2	0	1	0	4	3	N 47° W	N 15° W	1·0	0·9	+0·1	13	+ 7	70	− 6	·565	−·044	1·5	+0·7	0	−0·8	0·04	1·22	−1·18	34·04	40·78	−6·74	0·04	Bareilly.
22	0	0	0	7	0	0	0	2	S 45° E	S 58° E	1·6	0·9	+0·7	13	+ 7	67	− 8	·512	−·015	0·3	−0·3	0	−0·7	0	0·54	−0·54	40·52	36·89	+3·63	0	Roorkee.
																															VI.—Punjab.
3	0	1	0	4	0	2	16	5	W	N 83° W	1·9	1·7	+0·2	56	+24	47	− 5	·379	−·065	0·4	−0·3	0	−0·5	0	0·30	−0·30	13·67	23·99	−10·32	0	Delhi.
7	1	0	1	2	4	9	6	1	S 47° W	S 31° W	3·5	2·5	+1·0	49	+27	46	− 6	·363	−·068	0·3	−0·2	0	−0·5	0	0·13	−0·13	8·93	11·80	−2·84	0	Hissar.
9	1	1	0	7	3	2	4	4	S 31° W		3·3			19		56	− 8	·465	−·049	0·7	+0·2	0	−0·7	0	0·28	−0·28	21·71	20·51	+1·20	0	Patiala.
8	7	1	3	7	1	0	1	3	N 54° E	N 10° W	3·3	0·8	+2·5	23	+19	51	−18?	·404	−·106?	0·5	0	0	−0·5	0	0·25	−0·25	20·02	24·78	−4·76	0	Ambala.
31	0	0	0	0	0	0	0	0	Calm	S 55° E	0·9	0·8	+0·1	(a)		56	− 5	·416	−·051	0·5	−0·3	0	−0·6	0	0·35	−0·35	25·75	22·68	+3·07	0	Ludhiana.
21	0	1	0	2	4	1	0	2	S	S 83° E	1·0	1·2	−0·2	13	+ 1	61	0	·444	−·024	0·4	−0·1	0	−0·5	0	0·24	−0·24	17·26	15·65	+1·61	0	Lahore.
16	4	7	2	1	0	0	0	1	N 38° E	N 54° E	0·7	1·0	−0·3	37	+ 5	62	+ 2	·441	−·008	0·2	−0·6	0	−0·7	0	0·25	−0·25	28·90	23·56	+5·34	0	Sialkot.
19	1	1	0	1	2	4	2	1	S 63° W	N 5° W	1·2	1·0	+0·2	17	+ 3	51	− 7	·346	−·043	0·5	−0·5	0	−1·2	0	0·53	−0·53	37·12	23·60	+13·52	0	Rawalpindi.
17	1	7	6	0	0	0	0	0	N 62° E	N 48° E	2·7	2·8	−0·1	43	0	36	−10	·323	−·031	0·4	0	0	−0·4	0	0·12	−0·12	8·27	10·30	−2·03	0	Khushab.
15	1	2	3	4	2	4	0	0	S 40° E		1·1			23		53		·413		0·5		0	−0·3	0	0·18	−0·18	9·25	10·21	−0·96	0	Lyallpur.
5	2	2	6	6	5	2	2	1	S 49° E	S 41° E	2·6	3·0	−0·4	33	− 3	44	+ 1	·384	−·004	0·5	0	0	−0·3	0	0·07	−0·07	7·36	8·13	−0·77	0	Montgomery.
24	4	0	0	0	0	3	0	0	N 48° W	S 40° E	0·9	1·1	−0·2	10	−11	47	− 9	·402	−·063	0·4	+0·1	0	−0·1	0	0·03	−0·03	8·13	5·14	+2·99	0	Multan.
																															VII.—North-West Frontier Province.
30	1	0	0	0	0	0	0	0	N	S 40° W	0·1	1·7	−1·6	3	−11	66	+ 7	·350	−·055	0·3	−0·8	0	−0·5	0	0·18	−0·18	7·58	5·49	+2·09	0	Peshawar.
30	0	7	0	1	0	1	0	2	N 36° E	N 34° E	1·4	0·8	+0·6	20	− 5	48	−11	·380	−·058	0·4	0	0	−0·2	0	0·10	−0·10	3·06	5·86	−2·80	0	Dera Ismail Khan.
																															VIII.—Sind.
27	0	1	0	1	0	0	0	2	N	N 41° E	1·0	1·5	−0·5	5	− 6	38	−18	·347	−·134	0·1	−0·3	0	−0·1	0	0·05	−0·05	0·40	2·35	−1·95	0	Jacobabad.
25	2	0	1	0	1	1	1	0	N 67° W	S 56° W	0·1	6·3	−6·2	2	−27	57	+ 1	·519	−·016	0	−0·5	0	0	0	0·01	−0·01	7·35	6·17	+1·18	0	Hyderabad.
4	5	8	1	0	0	0	7	6	N 18° W	N 50° W	5·8	6·9	−1·1	53	+24	69	− 4	·636	−·100	1·4	−0·2	0	0	0	0	0	2·40	5·97	−3·57	0	Karachi.
																															IX.—Rajputana.
4	0	0	1	6	5	6	7	2	S 32° W	S 48° W	3·3	3·6	−0·3	46	− 1	53	+ 5?	·505	+·043?	0·9	+0·2	0	−0·4	0	0·15	−0·15	17·05	9·73	+7·32	0	Bikaner.
23	0	5	1	0	1	1	0	0	N 62° E		1·2			13		39	− 4	·346	−·056	1·8	+0·7	0	−0·3	0	0·20	−0·20	10·43	11·81	−1·38	0	Jodhpur.
12	6	3	0	1	0	0	2	7	N 18° W	N 42° W	2·0	2·3	−0·3	43	− 4	46	− 3	·420	−·031	1·1	−0·1	0	−0·5	0	0·25	−0·25	24·12	21·92	+2·20	0	Jaipur.
26	0	0	0	0	0	0	0	5	0	W	S 82° W	1·0	2·0	−1·0	16	−13	55	− 5	·379	−·101	0·2	−0·9	0	−0·5	0	0·26	−0·26	13·47	18·69	−5·22	0	Ajmer.
21	1	1	0	1	0	0	3	4	N 49° W		0·7			20		44	− 3	·454	−·009	1·3	+0·3	0	−0·6	0	0·36	−0·36	25·95	25·05	+0·90	0	Kotah.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs. at 21

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between minimum and maximum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	X.—Bombay.																					
19	Deesa	466	29·484	+·017	29·908	29·568	25th	29·205	3rd	78·6	66·8	98·4	+0·9	66·1	−0·9	82·3	0	32·3	103·0	7th	60·9	26th
	Bhuj	334	29·614	+·017	29·902	29·704	14th	29·413	3rd	70·5	72·0	95·8	−0·3	68·2	−2·7?	82·1	−1·5?	27·6	99·8	4th & 7th	62·9	19th
	Jamnagar	61	29·897	+·012	29·904	29·975	28th & 30th.	29·[illegible]95	3rd	80·9	74·8	94·1	+0·3	69·4	−1·4*	81·7	−0·5	24·7	96·9	28th	64·6	22nd
	Dwarka	37	29·928	+·018	29·911	30·021	14th	29·744	3rd	81·0	73·9	88·3	+1·7	76·8*	+1·4	82·6*	+1·5	11·5	96·3	24th & 30th.	71·7	14th
	Rajkot	429	29·504	−·004	29·885	29·584	13th	29·322	3rd	78·6	67·8	95·2	−0·4	69·9	+1·7	82·5	+0·7	25·3	98·8	31st	66·[illegible]	22nd & 26th.
	Veraval	18	29·917	−·001	29·878	29·999	13th	29·730	1st	79·2	71·6	89·8	+0·9	73·4	+1·0	81·6	+0·9	16·4	97·6	30th	69·3	14th
	Bhavnagar Para	55	29·882	+·002	29·883	29·973	14th	29·701	2nd	78·7	68·5	94·0	−2·5?	69·1	−0·9	81·6	−1·7?	24·9	97·6	30th	64·4	21st
	Surat	39	29·915	+·015	29·897	30·009	28th	29·704	2nd	79·6	71·7	92·5	−1·2	72·6	+1·4	82·5	+0·1	19·9	96·6	19th	69·7	20th
	Ahmadabad	163	29·794	+·010	29·907	29·881	25th	29·611	3rd	80·9	70·9	98·0	+0·8	71·9	−0·5	85·[illegible]	+0·1	26·1	101·6	7th	69·0	7th
25	Bombay	37	29·896	−·003	29·873	29·963	13th	29·683	2nd	79·9	75·6	88·6	+0·8	77·8	+1·1	83·2	+0·9	10·8	92·0	31st	76·4	21st, 25th & 31st.
	Ratnagiri	207	29·718	+·004	29·865	29·772	13th	29·605	3rd	81·5	74·4	88·7	+0·5	75·4	+1·4	82·0	+0·9	13·3	96·3	20th	72·1	20th
	Marmagao	60	29·878	+·005	29·873	29·925	8th	29·8[illegible]3	3rd	78·4	76·7	84·9	−0·8	76·3†	+0·7†	80·9†	−0·1	8·6	88·6	31st	73·1	14th
	Karwar	44	29·887	+·001	29·866	29·934	13th	29·824	3rd	77·5	75·8	86·1	+0·7	75·1	+1·5	80·6	+1·1	11·0	94·7	29th	70·2	7th
26	Malegaon	1,430	28·509	−·001	29·894	28·585	28th	28·309	3rd	75·9	67·5	9[illegible]·9	−0·4	65·2	−0·5	78·1	−0·5	25·7	94·9	28th	59·9	30th
	Ahmadnagar	2,154	27·803	−·002	29·872	27·878	30th	27·624	3rd	76·1	65·3	88·9	+0·2	65·5	+0·4	77·2	+0·3	23·4	92·3	28th	57·9	30th
	Poona	1,846	28·107	+·010	29·893	28·191	25th	27·932	2nd	74·9	68·1	89·4	+0·4	65·7	−0·7	77·6	−[illegible]	23·7	95·0	27th	57·4	31st
	Sholapur	1,590	28·345	+·006	29·871	28·406	30th	28·199	3rd	77·4	67·9	96·3	−0·1	69·2	+0·8	79·7	+0·3	21·1	96·3	13th	64·9	31st
	Bijapur	1,948	28·002	+·019	29·873	28·066	30th	27·865	3rd	76·6	69·0	87·0	−1·9	69·2	+0·8	78·1	−0·5	17·8	90·8	26th & 27th.	64·8	31st
	Belgaum	2,562	27·424	+·030?	29·897	27·473	30th	27·316	3rd	72·1	68·2	82·6	−0·6	66·1	+1·0	74·3	+0·2	16·5	86·6	14th	62·3	10th
	XI.—Central India.																					
20	Neemuch	1,626	28·332	+·016	29·908	28·426	28th	28·140	3rd	76·9	64·0	91·6	+0·5	64·0	−0·4	77·7	+0·1	27·6	94·7	6th	59·2	27th
	Indore	1,823	28·123	+·003	29·889	28·212	28th	27·917	3rd	76·8	67·4	88·5	−0·2	63·0	−0·3	75·7	−0·3	25·3	92·1	31st	57·7	26th
21	Nowgong	754	29·165	+·009	29·894	29·270	28th	28·981	3rd	70·3	65·9	87·8	−2·2	63·8	−1·3	75·8	−1·7	24·0	91·5	1st	55·0	31st
	Sutna	1,041	28·880	+·020	29·895	28·982	28th & 30th.	28·711	2nd	71·8	67·1	84·9	−3·1	64·8	−0·9	74·9	−2·0	20·1	89·3	1st	56·3	30th & 31st.
	XII.—Central Provinces.																					
22	Buldana	2,134								7[illegible]·5	66·5	85·5	−0·4	67·9	−0·1	76·7	−0·3	17·6	89·5	31st	64·5	24th & 30th.
	Akola	925	29·010	+·004	29·893	29·102	30th	28·793	3rd	76·5	68·3	92·0	+0·1	66·7	+0·7	79·3	+0·4	25·3	94·6	20th	60·6	29th
	Amraoti	1,215	28·713	0	29·882	28·804	28th & 30th	28·506	3rd	76·9	68·1	89·0	−1·8	68·8	+0·6	79·0	−0·6	20·2	94·6	22nd	62·6	24th
23	Khandwa	1,044	28·892	+·006	29·900	28·980	28th	28·660	3rd	74·7	67·8	90·1	−1·8	64·5	−1·5	77·3	−1·7	25·6	93·8	31st	57·9	26th
	Hoshangabad	1,006	28·938	+·011	29·913	29·029	28th & 30th.	28·733	3rd	72·0	67·6	87·8	−1·8	64·8	−1·4	76·3	−1·6	23·0	89·9	21st	58·2	26th
	Saugor	1,808	28·110	−·015	29·870	28·226	28th	27·918	3rd	73·0	62·6	87·6	−0·3	65·9	−0·2	76·7	−0·3	21·7	91·0	1st	62·0	27th
	Jubbulpore	1,327	28·579	−·010	29·875	28·687	30th	28·385	3rd	71·6	66·3	86·6	−0·9	64·8	+1·1	75·7	+0·1	21·8	90·8	1st	56·5	29th
	Seoni	2,033	27·914	+·015	29·892	28·025	30th	27·730	3rd	73·9	65·2	84·5	−2·2	64·8	+0·9	74·6	−0·7	19·7	86·8	5 days	57·9	29th
	Nagpur	1,017	28·924	+·022?	29·900	29·030	30th	28·726	3rd	75·9	68·7	88·6	−1·8	68·0	−0·1	78·3	−0·9	20·6	91·7	10th	61·2	30th
24	Pendra	2,040	27·905	+·038	29·898	28·003	30th	27·744	3rd	72·1	66·0	82·2	−2·4	63·6	−1·0	72·9	−1·7	18·6	85·3	4th	55·3	31st

N. B.—Elevations in italics indicate barometrical determinations.

* Mean of 29 days.
† " " 22 "

B—*continued.*

stations in India, etc., in October, 1919—*continued.*

Wind direction. Number of winds from Calm	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st Oct. 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															X.—Bombay.
15	1	6	2	3	3	0	0	1	N 84° E	S 77° E	3·2	4·8	−1·6	27	− 9	51	0	·503	−·002	0·7	−0·4	0	−0·4	0	0·30	−0·30	44·72	23·02	+21·70	0	Deesa.
12	9	0	0	0	1	0	9	0	N 48° W	N 62° W	2·9	5·0	−2·1	40	− 9	69	+ 7	·686	+·055	1·5	+0·1	0	−0·4	0	0·24	−0·24	13·81	13·80	+ 0·01	0	Bhuj.
4	0	1	1	0	0	5	13	7	N 84° W		4·4			64		74	+ 8	·778	+·079	0·4	−0·7	0	−0·1	0	0·13	−0·13	22·08	18·07	+ 4·01	0	Jamnagar.
0	6	3	4	1	1	3	5	8	N 32° W		7·7			40		70	− 8	·736	−·081	2·6	+0·6	0	−0·2	0	0·07	−0·07	9·88	13·67	− 3·79	0	Dwarka.
2	8	5	2	1	1	2	7	3	N 23° W	N 5° W	3·8	4·2	−0·4	40	+ 1	56	−10	·540	−·108	2·0	+0·5	0	−0·9	0	0·36	−0·36	30·57	25·55	+ 5·02	0	Rajkot.
5	13	6	1	0	0	0	2	3	N 3° E	N 2° E	5·6	4·5	+1·1	62	− 3	68	0	·673	−·009	1·4	−0·6	0	−0·5	0	0·33	−0·33	12·96	17·81	− 4·85	0	Veraval.
1	0	1	2	2	3	2	5	15	N 67° W	N 73° W	2·2	5·0	−2·8	45	0	58	− 3	·566	−·056	2·4	+0·5	3	+2·5	2·68	0·27	+2·41	17·22	21·80	− 4·58	1·37	Bhavnagar Para.
17	1	4	4	3	1	0	1	0	N 85° E	N 53° E	1·3	3·2	−1·9	27	+ 9	68	− 2	·678	−·032	2·8	+1·1	3	+1·1	2·49	1·39	+1·10	39·88	40·53	− 0·65	1·50	Surat.
15	0	6	3	2	0	0	0	5	N 39°* E	N 8° E	1·8	2·4	−0·6	27	− 8	59	+ 3	·623	+·057	1·4	−0·1	0	−0·6	0	0·37	−0·37	27·76	28·74	− 0·98	0	Ahmadabad.
0	2	10	11	5	1	0	2	0	N 77° E	N 81° E	0·3	0·6	−0·3	62	− 6	81	− 1	·824	−·017	3·1	−0·5	4	+1·6	1·54	1·75	−0·21	68·03	70·44	− 2·41	0·50	Bombay.
9	4	3	5	5	2	1	1	1	N 86° E	S 68° E	6·2	4·5	+1·7	27	−13	71	− 7	·753	−·047	3·0	−0·6	8	+3·3	6·22	3·4	+2·75	91·39	99·25	− 7·86	2·40	Ratnagiri.
17	0	3	4	1	2	0	3	1	N 88° E	S 67° E	4·4	4·5	−0·1	10	−19	92	+ 2	·896	+·009	6·4	+1·8	8	+2·0	3·98	3·79	−0·19	92·18	91·86	+ 0·32	1·02	Marmagao.
26	0	0	0	0	3	1	0	1	S 24° W	N 48° E	2·0	1·8	+0·2	10	−37	92	+ 3	·867	+·049	4·9	+0·8	9	+2·0	5·83	5·61	+0·22	112·93	118·08	− 5·15	1·81	Karwar.
9	0	0	0	2	0	7	10	3	S 75° W	N 61° W	3·5	4·2	−0·7	53	+14	63	+ 3	·568	+·017	3·5	+0·8	2	−0·6	1·52	1·85	−0·33	26·30	21·37	+ 4·93	1·25	Malegaon.
15	4	1	0	4	2	0	1	4	N 7° W	N 36° E	4·6	5·8	−1·2	9	−23	55	−7?	·492	−·065	1·9	−0·7	2	−1·0	0·69	1·89	−1·20	21·7	20·46	+ 1·26	0·53	Ahmednagar.
7	0	1	9	5	0	0	4	5	N 83° W	S 69° E	5·0	4·6	+0·4	20		71	0	·607	+·006	4·6	+0·9	4	−1·0	0·95	3·68	−2·73	28·07	25·44	+ 2·63	0·25	Poona.
2	2	6	5	4	2	1	2	7	N 38° E	N 68° E	6·5	6·0	+0·5	23	0	61	0	·565	0	4·4	+0·2	2	−2·3	1·19	3·17	−1·98	28·00	26·27	+ 1·73	0·99	Sholapur.
7	3	3	6	2	2	2	2	4	N 47° E	N 77° W	2·3	2·9	−0·6	13	+ 5	68	− 2	·613	−·016	2·0	−1·5	3	−1·5	2·35	2·95	−0·60	19·30	18·17	+ 1·13	1·33	Bijapur.
20	0	3	3	0	1	3	1	0	N 63° E	N 53° E	3·7	7·0	−3·3	7	−11	82	+ 4	·638	+·017	5·7	+1·2	5	−2·6	2·67	4·73	−2·06	40·34	46·98	− 6·64	0·61	Belgaum.
																															XI.—Central India.
10	0	10	0	4	1	3	1	2	N 65° E	N 2° E	1·7	4·4	−2·7	20	+ 2	48	− 3	·440	−·023	0·3	−1·0	0	−0·7	0	0·35	−0·35	27·54	27·06	+ 0·48	0	Neemuch.
10	0	4	2	0	0	0	14	1	N 70° W	N 18° E	3·2	1·6	−1·6	33	+ 8	62	0	·557	+·015	1·2	−0·5	3	+1·1	2·36	1·06	+1·30	47·30	31·18	+16·12	1·65	Indore.
13	3	0	1	0	2	10	2	0	S 53° W	S 67° W	0·6	1·1	−0·5	33	+ 8	78	+ 9	·681	+·016	2·4	+0·4	3	+1·5	1·92	1·06	+0·86	60·38	40·38	+20·00	1·11	Nowgong.
20	0	0	0	1	1	6	2	1	S 50° W	N 27° W	1·0	2·8	−1·8	27	−22	78	+10	·619	+·036	1·9	−0·4	5	+2·9	3·65	2·14	+1·51	61·14	41·25	+19·89	1·22	Satna.
																															XII.—Central Provinces.
1	2	1	6	6	1	1	6	7	N 27° W		4·0	3·8	+0·2	6		58		·523		3·7		2	−0·7	0·35	2·16	−1·81	30·76	32·41	− 1·65	0·18	Buldana.
4	1	4	8	2	3	3	3	3	S 83° E	N 53° E	3·4	2·6	+0·8	17	− 1	64	+ 2	·584	+·023	3·5	+0·8	2	−0·4	0·85	1·89	−1·04	25·59	29·73	− 4·14	0·35	Akola.
11	1	4	11	1	1	2	0	0	N 87° E	N 63° E	2·3	2·8	−0·5	43	+11	62	+ 4	·568	+·025	3·0	+0·3	5	+2·6	5·94	1·76	+4·18	27·86	31·10	− 3·24	3·15	Amraoti.
3	3	4	3	5	3	2	7	1	S 9° E	N 2° E	2·5	2·3	+0·2	5	− 6	69	+ 8	·592	+·058	2·8	+0·8	3	+1·1	4·09	1·04	+3·05	30·03	28·13	+ 1·90	2·24	Khandwa.
29	0	1	0	0	0	1	0	0	Calm	N 79° E	0·5	1·2	−0·7	(a)		78	+ 7	·623	+·041	2·3	+0·4	4	+2·1	2·88	1·24	+1·64	65·41	46·22	+19·19	1·36	Hoshangabad.
11	0	3	2	1	2	6	5	1	S 51° W	S 27° W	3·2	2·3	+0·9	23	+ 9	55	− 1	·446	−·041	2·0	+0·3	3	+1·3	3·34	0·93	+2·41	60·35	42·27	+18·08	1·69	Saugor.
9	0	1	3	10	5	1	1	1	S 36° E	S 27° E	1·2	1·4	−0·2	46	+10	74	− 1	·587	−·011	2·3	+0·4	3	+0·9	1·80	1·62	+0·18	74·19	51·84	+22·35	1·05	Jubbulpore.
24	2	2	0	0	1	1	1	0	N 11° W	N 9° E	0·6	2·0	−1·4	5	−18	62	− 1	·510	−·025	2·8	+0·6	5	+2·1	2·10	1·79	+0·31	64·86	48·78	+16·08	1·22	Seoni.
4	13	8	3	1	0	1	1	0	N 24° E	N 7° E	2·7	2·8	−0·1	62	+33	68	+ 4	·610	+·029	3·0	+0·2	6	+3·2	5·28	1·84	+3·44	51·74	45·87	+ 5·87	2·60	Nagpur.
36	1	1	0	1	1	1	0	0	S 45° E		1·3			3		72	+ 8	·571	+·043	3·3	+0·6	5	+2·0	8·39	2·43	+5·96	53·11	43·45	+ 9·66	3·35	Pendra.

* Wind observations for 30 days. (a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs. at 210

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean maximum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XII.—Central Provinces—*contd.*																					
	Raipur	970	28·954	+·011	29·882	29·055	30th	28·804	3rd	75·9	67·5	87·3	−0·9	69·1	−0·4	78·2	−0·7	18·2	91·1	8th	63·1	29th
	Chanda	634	29·289	−·004	29·877	29·388	30th	29·109	3rd	75·7	71·3	88·3	−1·7	68·6	+0·6	78·5	−0·5	19·7	90·9	8th	59·0	30th
	Jagdalpur	1,813	28·125		29·884	28·220	28th & 30th.	28·010	3rd	73·3	69·9	84·9		67·3		76·1		17·6	88·6	27th	58·5	31st
	XIII.—Hyderabad.																					
27	Aurangabad	1,905	28·051	+·002	29·882	28·128	28th	27·834	3rd	77·4	66·2	88·5	−1·6	67·3	+1·2	77·9	−0·2	21·2	92·2	31st	62·0	29th & 30th.
	Nizamabad	1,248	28·677	?	29·874	28·765	30th	28·523	3rd	76·5	69·7	88·8	0	67·1	−1·0	78·0	−0·5	21·7	92·1	26th	57·2	29th
	Bidar	*2,165*																				
28	Gulbarga	1,503	28·437	+·012	29·882	28·518	31st	28·310	3rd	75·7	68·1	89·6	−1·0	68·5	−0·5	79·0	−0·7	21·1	95·0	27th	62·0	31st
	Raichur	*1,311*	28·613	+·015	29·864	28·690	31st	28·524	3rd	78·2	71·7	90·4	+0·4	72·9	+0·7	81·7	+0·5	17·5	94·5	27th	70·4	12th
	Hyderabad (Deccan)	1,738	28·224	+·021	29·879	28·305	30th	28·101	3rd	76·0	70·0	86·0	−2·4	69·6	+0·5	77·8	−0·9	16·4	89·6	27th	63·8	31st
	Hanamkonda	877	29·052	+·017	29·880	29·140	30th	28·924	3rd	78·4	71·9	87·9	−1·9	71·9	+0·8	79·9	−0·5	16·0	91·0	4 days	65·5	30th
	XIV.—Mysore.																					
29	Chitaldrug	2,405	27·547	+·010	29·857	27·587	27th	27·484	3rd	74·1	69·0	84·3	−0·6	68·5	+0·6	76·4	0	15·8	87·7	28th	66·7	6th
	Hassan	3,149	26·855	+·021	29·866	26·891	25th	26·800	3rd	71·6	68·0	82·1	+0·4	65·7	+1·6	73·9	+1·0	16·4	86·0	29th	63·1	5th
	Bangalore	3,031	26·976	+·017	29·868	27·011	25th & 31st.	26·926	6th	71·5	68·0	83·3	+1·4	65·9	+0·8	74·6	+1·1	17·4	87·4	28th	63·6	4th
	Mysore	2,518	27·458	+·016	29·863	27·489	8th	27·409	3rd	74·4	69·3	85·1	+0·7	67·9	+1·0	76·5	+0·9	17·2	89·9	14th	64·6	5th
	XV.—Madras.																					
30	Mangalore	72	29·881	+·010	29·835	29·937	8th	29·836	3rd & 28th.	80·0	76·4	86·2	+0·5	75·1	+1·1	80·6	+0·8	11·1	90·4	30th	72·8	7th
	Calicut	27	29·916	+·009	29·872	29·991	8th	29·868	29th	79·0	76·9	85·7	−0·4	75·6	+0·9	80·6	+0·3	10·1	88·2	26th & 29th.	72·7	8th
	Cochin	9	29·951	+·019	29·888	30·033	8th	29·916	19th & 23rd.	80·4	76·0	86·9	+0·3	75·6	+0·9	81·2	+0·6	11·3	89·7	24th	72·6	8th
	Trivandrum	198	29·759	+·020	29·838	29·829	8th	29·730	19th	77·9	75·4	83·3	+0·5	74·9	−0·1	79·1	+0·2	8·4	86·0	14th	72·5	9th
31	Pamban	37	29·891	+·010	29·856	29·944	1st	29·859	17th	81·5	77·3	87·5	−0·3	78·9	+1·7	83·2	+0·7	8·6	89·0	17th	75·6	30th
	Madura	447	29·492	+·021	29·872	29·529	24th	29·451	3rd	80·6	75·3	91·5	+0·4	75·5	+1·5	83·5	+0·9	16·0	97·0	13th	73·2	7th
	Pudukkottai	318	29·620	+·025	29·870	29·659	1st	29·565	5th	80·5	74·4	92·1	+1·6	74·8	+0·4	83·4	+1·0	17·3	97·9	12th	70·4	7th
	Negapatam	31	29·900	+·016	29·860	29·945	24th	29·860	3rd	81·1	75·7	89·2	+0·5	76·7	+0·5	82·9	+0·5	12·5	93·8	7th	73·2	20th
	Trichinopoly	255	29·676	+·013	29·864	29·717	25th	29·632	3rd & 5th.	81·1	75·8	93·1	+2·0	75·1	+0·8	84·1	+1·4	18·0	100·1	12th	72·2	7th
	Coimbatore	1,341	28·606	+·024	29·880	28·638	8th	28·555	3rd	77·8	73·2	89·2	+1·1	71·6	+1·0	80·4	+1·1	17·6	94·1	14th	67·0	26th
	Salem	913	29·037	+·036	29·888	29·080	8th	28·958	3rd	78·1	73·4	90·7	+1·0	72·9	+1·5	81·8	+1·3	17·8	95·6	14th	70·2	6th
	Cuddalore	37	29·890	+·016	29·857	29·944	25th	29·831	3rd	80·9	76·7	89·2	+0·7	76·3	+1·8	82·8	+1·3	12·9	93·8	11th	74·2	3rd, 6th & 7th.
	Vellore	707	29·212	+·005	29·858	29·268	25th	29·140	6th	78·8	74·8	90·9	+1·7	73·8	+0·8	82·3	+1·3	17·1	93·4	9th & 11th.	70·0	20th & 21st.
	Madras	22	29·903	+·014	29·857	29·954	25th	29·838	3rd & 5th.	81·0	77·5	89·3	+0·1	76·2	+1·2	82·8	+0·7	13·1	96·2	9th	73·0	23rd
32	Cuddapah	428	29·497	+·011	29·863	29·562	31st	29·421	6th	80·3	75·5	91·1	−1·5	75·5	+1·3	83·3	−0·1	15·6	94·9	28th	71·8	10th

N.B.—Elevations in italics indicate barometrical determinations.

B—*continued.*

stations in India, etc., in October, 1919—*continued.*

Wind Direction. Number of winds from Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st October 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XII.—Central Provinces—*concld.*
21	1	2	2	1	1	3	0	0	S 56° E	N 27° E	1·5	2·8	−1·3	7	−11	77	+ 4	·692	+·039	6·3	+3·3?	6	+2·7	5·93	2·04	+3·89	63·92	47·05	+16·87	2·85	Raipur.
2	2	2	1	3	2	5	6	8	N 83° W	N 14° E	2·0	1·7	+0·3	37	+19	80	+ 7	·707	+·031	4·5	+1·8	4	+1·5	1·66	1·64	+0·02	39·39	49·09	−9·70	0·89	Chanda.
26	1	0	1	0	8	0	0	0	S 27° E		0·9			7		84		·693		4·3		10	+4·6	8·53	4·01	+4·52	62·31	57·04	+5·27	2·20	Jagdalpur.
																															XIII.—Hyderabad.
2	5	4	11	6	1	0	1	1	N 78° E		5·3			53		54	− 1	·504	−·034	3·9	+1·1	2	−0·4	0·85	1·61	−0·76	21·37	25·90	−4·53	0·49	Aurangabad.
13	3	8	1	0	1	2	1	2	N 20° E		2·3			27		71	− 1	·639	−·047	3·3	+0·2	3	+0·6	0·85	1·65	−0·80	28·62	38·03	−9·41	0·49	Nizamabad.
8	3	6	6	1	0	3	4	0	N 47° E	N 72° E	4·0*	6·1	−2·1	23	0	67	− 1	·595	−·039	2·9	−0·4	8	+4·6	3·43	2·89	+0·54	28·98	28·80	+0·18	0·88	Gulbarga.
6	2	2	7	4	3	1	4	2	S 72° E	S 79° E	5·4	5·3	+0·1	17	+11	73	+ 6	·697	+·043	4·4	+0·9	5	+1·1	1·67	3·08	−1·41	16·64	25·33	−8·69	0·68	Raichur.
19	0	3	3	1	0	1	1	3	N 36° E	S 68° E	2·9	2·8	+0·1	13	+ 5	74	+ 1	·657	+·009	4·8	+0·9	5	+0·8	1·86	3·01	−1·15	29·41	28·53	+0·88	0·57	Hyderabad (Deccan).
20	0	0	0	0	0	0	1	1	N 66° W		0·8			7		71	+ 2	·698	+·021	4·5	+1·0	6	+2·9	3·63	1·81	+1·82	25·07	31·69	−6·62	2·20	Hanamkonda.
																															XIV.—Mysore.
7	0	0	6	6	0	6	6	0	S	S 45° W	3·5	4·1	−0·6	27	+13	77	+ 1	·645	+·002	5·5	0	7	+0·3	2·85	4·41	−1·56	25·40	20·92	+4·48	1·03	Chitaldrug.
6	1	5	8	0	0	3	6	2	N 27° E	N 53° E	4·1	1·8	+2·3	16	− 7	83	+ 1	·644	+·013	4·6	−2·1	7	−2·8	4·01	7·13	−3·12	28·10	29·43	−1·33	1·52	Hassan.
3	1	1	10	3	1	5	6	1	S 32° E	N 1° E	5·0	3·4	+1·6	17	+14	83	+ 1	·640	+·012	6·7	+0·6	5	−4·2	3·60	6·18	−2·58	33·16	29·66	+3·50	2·02	Bangalore.
6	0	4	3	1	1	5	7	4	N 87° W	S 72° W	5·2	5·3	−0·1	22	+ 4	77	− 6	·650	−·007	5·1	−2·1	5	−4·4	2·17	6·66	−4·49	24·76	25·67	−0·91	0·65	Mysore.
																															XV.—Madras.
2	3	5	13	4	1	0	1	2	N 77° E	S 89° E	4·3	1·6	+2·7	56	+16	85	+ 2	·860	+·025	6·7	+1·1	14	+4·0	11·16	7·51	+3·65	109·81	121·58	−11·77	2·64	Mangalore.
22	1	0	0	1	1	1	2	3	N 80° W	N 76° E	2·6	5·4	−2·8	13	−34	90	+ 4	·895	+·052	5·1	−0·8	11	−0·2	3·93	10·27	−6·34	104·95	106·72	−1·77	0·69	Calicut.
1	1	7	17	4	0	0	0	1	N 81° E	N 34° E	4·0	3·2	+0·8	79	+25	81	− 3	·836	−·010	4·2	−1·4	12	−2·3	9·20	13·28	−4·08	99·14	98·28	+0·86	2·76	Cochin.
12	5	4	0	0	0	1	1	8	N 20° W	N 14° W	3·0	3·7	−0·7	46	− 2	89	+ 5	·844	+·032	6·7	0	16	+3·8	7·72	10·74	−3·02	54·36	47·93	+6·43	1·31	Trivandrum.
3	6	2	0	0	9	10	0	1	S 39° W	S 68° W	6·4	6·3	+0·1	33	+11	82	0	·875	−·004	3·5	−0·9	11	+1·2	11·22	9·94	+1·28	15·24	13·20	+2·04	2·84	Pamban.
2	6	4	2	1	1	0	7	8	N 20° W	N 14° W	2·9	1·8	+1·1	49	−12	78	+ 2	·805	+·023	6·6	+1·4	12	+1·5	7·35	8·16	−0·81	26·04	23·56	+2·48	1·65	Madura.
9	10	6	0	1	0	0	3	2	N 4° E		2·5			48		74	− 7	·769	−·036	4·9	−1·5	8	−2·0	4·54	6·39	−1·85	22·48	23·67	−1·19	2·00	Pudukkottai.
3	1	2	1	1	2	4	8	0	N 77° W	N 85° W	5·0	3·4	+1·6	46	+ 6	77	− 4	·817	−·045	5·4	−0·8	10	−0·3	10·52	10·99	−0·47	23·04	23·20	−0·16	3·03	Negapatam.
3	4	2	1	0	1	7	6	7	N 72° W	N 77° W	1·9	2·8	−0·9	46	+10	78	− 2	·820	+·010	4·5	−1·2	7	−2·7	4·19	7·15	−2·96	25·39	21·52	+3·87	2·29	Trichinopoly.
14	1	4	2	0	1	8	1	0	S 34° W	S 4° E	3·5	2·0	+1·5	13	−12	80	− 6	·760	−·009	3·6	−2·0	12	+2·2	8·93	6·51	+2·42	15·71	14·66	+1·05	1·81	Coimbatore.
15	0	4	1	0	1	9	1	0	S 39° W	S 40° W	2·1	1·8	+0·3	20	+ 9	79	− 2	·757	−·022	4·3	−1·5	6	−4·2	4·10	6·79	−2·69	33·42	31·82	+1·60	1·39	Salem.
7	2	1	0	0	1	10	4	6	S 86° W	N 69° W	4·5	1·6	+2·9	49	+ 2	82	− 4	·855	−·034	6·4	+1·2	10	−1·0	4·86	11·77	−6·91	15·04	28·73	−13·69	1·36	Cuddalore.
23	0	0	0	0	0	0	0	8	N 45° W		1·4			26		82	+ 1	·806	+·032	4·7	+0·3	7	−0·9	2·36	6·59	−4·23	26·05	29·98	−3·93	1·01	Vellore.
8	6	0	0	0	2	8	3	4	N 84° W	N 83° W	1·9	3·5	−1·6	37	+ 5	85	+ 2	·894	+·015	5·4	+0·1	10	−0·7	8·59	11·58	−2·99	27·17	28·38	−1·21	1·42	Madras.
17	2	1	0	4	1	0	2	4	N 38° W	N 72° E				7	−15	79	+ 6	·819	+·055	5·4	+0·6	7	+0·7	3·54	4·96	−1·42	27·18	25·42	+1·76	1·22	Cuddapah.

* Mean of 15 days.

Table

(2) Abstract of observations taken at 8 hrs. at 210

Number of sub-division.	Station.	Height of barometer above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XV—Madras—*concld.*																					
	Bellary	1,475	28·455	+·010	29·864	28·514	31st	28·370	3rd	78·6	71·4	90·5	+0·2	72·1	+0·9	81·3	+0·5	18·4	96·3	26th	67·9	21st
	Kurnool	923	29·051	+·015	29·869	29·063	31st	28·912	6th	77·2	73·6	90·5	−0·4	73·6	+2·6?	82·1	+1·1?	16·9	96·2	28th	69·0	22nd
33	Nellore	66	29·851	+·011	29·852	29·913	31st	29·761	6th	80·7	78·2	89·7	−1·7	76·0	+0·2	82·8	−0·7	13·7	95·5	4th	71·4	23rd
	Masulipatam	15	29·912	+·013	29·862	29·998	31st	29·810	6th	80·1	76·5	87·9	−1·2	75·7	−0·3	81·8	−0·7	13·2	92·7	16th	69·9	23rd
	Cocanada	26	29·889	+·009	29·852	29·983	30th	29·795	6th	80·4	76·9	87·2	−0·9	75·9	−0·1	81·6	−0·5	11·3	91·7	27th	71·8	21st
	Vizagapatam	*226*	29·877	+·013	29·853	29·971	30th	29·763	3rd	81·3	76·0	87·1	−1·1	77·1	+0·8	82·1	−0·1	10·0	91·9	3rd	71·3	23rd
	Calingapatam	19	29·901		29·857	29·996	30th	29·776	3rd	80·1	76·6	89·0		75·0		82·0		14·0	93·0	17th	69·6	23rd
	Gopalpur	33	29·866	+·019	29·862	29·950	31st	29·736	3rd	80·3	74·7	88·9	+1·2	75·5	+1·2	82·2	+1·2	13·4	93·1	15th	69·1	29th
	Bay Islands.																					
1	P. V. Fraser	8	29·877		29·857	29·981	30th	29·761	3rd	84·4	77·9											
	Port Blair	58	29·874	+·012	29·861	29·947	7th	29·795	3rd	81·0	78·2	87·4	+0·8	78·0	+1·1	85·7	+0·9	9·4	90·0	23rd	74·2	8th
	Table Island		29·833	+·013	29·857	29·908	23rd	29·748	3rd	82·7	78·3	86·4	+0·8	79·4	+2·0	82·9	+1·4	7·0	87·8	19th	75·3	2nd
	Kashmir.																					
13	Muzaffarabad		27·528			27·617	28th	27·419	21st	69·5	56·3	86·4		54·3		70·4		32·1	90·2	13th	46·7	31st
	Srinagar	5,204	24·991	+·008	24·962	25·198	23rd	24·844	3rd	40·4	44·9	72·1	+2·0	37·6	−3·5	54·8	−0·7	34·5	77·7	3rd	30·6	31st
	Gulmarg	*8,569*																				
	Dras	*10,059*	20·906	+·028	20·874	20·987	23rd	20·796	3rd	33·1	33·3*	55·9	−1·5	27·0	+0·2	41·4	−0·7	28·9	62·1	2nd & 7th.	19·0	31st
	Leh	*11,503*	19·794	+·004	19·762	19·859	13th	19·607	3rd	40·9	35·5†	58·6	0	30·7	+0·4	44·7	+0·2	27·9	64·1	7th	26·2	26th & 29th.
	Skardu	*7,505*	22·962	+·003	22·932	23·077	23rd	22·786	3rd	46·9	39·9‡	66·7	+0·3	41·1	−0·2	53·9	+0·1	25·6	73·0	2nd	30·5	31st
	Gilgit	4,890	25·276	+·047	25·249	25·461	14th	25·104	3rd	58·0	45·0§	76·3	+1·4	49·8	−3·0	63·1	−0·8	26·5	83·7	3rd	42·7	31st
	Baluchistan.																					
15	Fort Sandeman	4,614																				
	Quetta	5,502	24·746	+·011	24·706	24·839	24th	24·611	3rd	39·7	36·9‖	73·5	−1·8	34·4	−4·5	54·0	−3·1	39·1	81·3	1st & 6th.	26·5	27th
	Chaman	4,311	25·777	−·031	25·739	25·892	24th	25·631	3rd	56·7	49·0			48·0	−4·7						39·6	27th
	Kalat	6,630	23·816		23·78	23·893	24th	23·713	3rd	37·0	35·4¶	70·8	−3·7	32·0		51·4		38·8	79·8	6th	23·0	30th
	Dalbandin	2,772	27·234		27·197	27·360	23rd	27·074	3rd	52·0	41·7	84·7		44·6		64·7		40·1	93·4	6th	35·2	27th
	Pasni		29·959		29·919	30·072	24th & 25th.	29·775	3rd	73·8	65·5	94·2		59·5		76·9		34·7	104·5	9th	52·9	27th
	Panjgur		26·835		26·793	26·964	24th	26·692	3rd	56·6	44·8	82·9		51·0		66·9		31·9	92·4	6th	41·8	27th
	Seistan		28·289			28·470	24th	28·110	3rd	55·9	47·0	82·6		51·8		67·2		30·8	93·3	14th	39·7	30th
	Hill stations, excluding Kashmir and Baluchistan.																					
	Parachinar	6,000	24·532	+·023	24·508	24·642	24th	24·387	3rd	59·3	46·5	73·3	−1·3	46·0	−3·2	59·6	−2·3	27·3	80·2	17th	37·3	26th
	Cherat	*4,256*	25·788	+·029	25·756	25·950	23rd	25·606	3rd	65·1	50·1	77·6	−0·2	59·7	+2·0	68·6	+0·9	17·9	83·2	2nd	52·7	28th
	Loosh (*c*)		25·170			25·375	23rd & 24th.	24·975	3rd	58·4	48·2	74·8	−2·3	53·5	+0·7	64·2	−0·8	21·3	83·7	7th	44·6	24th
	Murree	6,333	24·029	−·016	23·997	24·181	23rd	23·923	3rd	57·5	44·9	67·7	−1·1	54·7	+1·6	61·2	+0·3	13·0	72·1	9th	49·1	29th

N.B.—Elevations in italics indicate barometrical determinations.
(*c*) Aneroid.

NOTE.—The barometric readings are not reduced to sea-level in the case of

* Mean of 9 days.
† ,, ,, 7 ,,
‡ ,, ,, 28 ,,
§ ,, ,, 11 ,,
‖ ,, ,, 22 ,,
¶ ,, ,, 15 ,,

B—*continued.*

stations in India, etc., in October, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st October 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XV.—Madras—*concld.*
9	1	1	4	3	2	2	5	4	S 67° W	N 62° W	3·6	3·1	+0·5	7	0	70	+ 3	·679	+·053	5·1	−0·2	4	−2·2	1·14	4·00	−2·86	17·06	16·74	+ 0·32	0·37	Bellary.
23	0	0	0	0	0	3	3	2	S 83° W	N 66° W	1·7			23	+16	84	+10	·780	+·077	5·1	+1·0	7	+2·2	2·84	3·15	−0·31	18·74	23·50	− 4·76	1·35	Kurnool.
7	4	3	0	1	1	3	4	8	N 48° W	N 68° W	1·8	3·2	−1·4	40	+22	89	+ 9	·925	+·063	6·9	+0·3	10	+2·2	4·12	8·31	−4·19	18·57	21·08	− 2·51	0·78	Nellore.
3	7	9	1	0	0	0	3	8	N 4° W	N 1° E	3·4	3·4	0	62	+22	84	+ 1	·858	−·025	4·9	0	9	+0·7	7·66	7·95	−0·29	34·26	32·61	+ 1·65	2·25	Masulipatam.
14	6	4	0	1	0	0	3	3	N 9° W	N 11° W	4·5	5·5	−1·0	33	−28	84	+ 5	·877	+·053	5·7	+1·2	9	+1·1	9·61	7·68	+1·93	31·36	30·77	+ 0·59	4·10	Cocanada.
4	2	3	0	0	0	0	12	10	N 57° W	N 74° W	5·0			66	+21	78	+ 6	·830	+·053	6·8	+1·8	12	+5·5	12·06	6·29	+5·77	29·69	30·47	− 0·78	3·02	Vizagapatam.
3	11	3	1	0	0	0	2	11	N 18° W		3·9			71		85		·869		3·1		12	+6·7	9·03	5·45	+3·58	40·33	37·70	+ 2·63	2·94	Calingapatam.
0	25	2	0	0	1	1	1	1	N 2° W	N 23° W	5·0	5·8	−0·8	82	+ 7	7[illegible]	− 6	·792	−·022	4·0	+1·8	7	+0·5	6·76	7·86	−1·10	40·23	38·45	+ 1·78	2·64	Gopalpur.
																															Bay Islands.
0	7	5	1	4	4	6	1	3	N					6		73		·869		2·4		5	+0·8	1·22	3·59	−2·37	35·25	33·06	+ 2·19	0·55	P. V. Fraser.
19	0	1	3	2	1	1	2	2	S 45° E	S 68° W	2·3	4·6	−2·3	3	−15	84	− 5	·916	−·004	4·8	−1·6	18	+2·5	7·[illegible]3	11·06	−3·73	66·54	94·75	−28·21	1·20	Port Blair
4	1	3	6	4	5	4	2	2	S 38° E		5·7			27		82	− 3	·913	+·006	3·8	−3·3	9	−1·2	3·22	6·58	−3·36	37·36	68·63	−31·27	0·77	Table Island.
																															Kashmir.
25	0	0	0	0	1	5	0	0	S 31° W		0·9			19		41		·293		1·5		0	−2·8	0·03	2·17	−2·14	37·93	31·07	+ 6·86	0·02	Muzaffarabad.
17	1	1	0	8	1	2	0	1	S 37° E	S 51° E	1·7	2·2	−0·5	23	+ 1	70	−16	·249	−·037	0·9	−1·2	0	−2·8	0·08	1·12	−1·04	5·90	11·51	− 5·61	0·08	Srinagar.
																															Gulmarg.
29	0	1	0	0	0	0	0	1	N		4·4			5		64*		·147*		1·1	−0·9	0	−1·6	0·11	0·49	−0·38	3·14	6·01	− 2·87	0·07	Dras.
28	0	0	0	1	2	0	0	0	S 15° E	S 83° W	1·6	1·5	+0·1	10	−33	36†		·103†		1·3	−1·1	0	−0·1	0	0·15	−0·15	2·49	1·76	+ 0·73	0	Leh.
13	0	2	8	4	2	1	1	0	S 69° E		4·4			4[illegible]		50‡	−15	·165‡	−·049	1·5	−1·3	0	−0·4	0·07	0·12	−0·05	0·32	3·36	− 3·04	0·07	Skardu.
29	0	0	0	0	0	2	0	0	S 45° W		0·3			3		46§		·194§		1·0	−2·4	0	−0·7	0·07	0·26	−0·19	1·43	2·80	− 1·37	0·05	Gilgit.
																															Baluchistan.
																															Fort Sandeman.
30	0	0	0	1	0	0	0	0	S 45° E	N 59° W	1·3	1·4	−0·1	3	0	56‖	+12	·153‖	−·042	0	−0·3	0	−0·3	0	0·14	−0·14	2·07	1·82	+ 0·25	0	Quetta.
13	0	0	11	5	2	0	0	0	S 19° E	S 45° E	3·3	5·8	−2·5	53	− 1	59	+26	·270	+·008	0·2	−0·3	0	−0·3	0	0·13	−0·13	0·65	0·38	+ 0·27	0	Chaman.
16	0	0	0	1	8	6	0	0	S 15° W	S 11° E	3·6			43	− 3	50¶		·134¶		0·1		0	−0·4	0	0·15	−0·15	1·79	1·53	+ 0·26	0	Kalat.
27	1	1	0	0	1	1	1	0	Calm.		2·4			(*a*)		37		·140		0·3		0	−0·2	0	0·08	−0·08	0	0·31	− 0·31	0	Dalbandin.
9	3	3	2		0	0	2	12	N 25° W		4·9			46		64		·519		0·4		0	0	0	0·01	−0·01	0·02	1·77	− 1·75	0	Pasni.
5	2	13	11	0	0	0	0	0	N 31° E		3·9			72		34		·156		0·5		0		0			1·14			0	Panjgur.
16	2	0	0	0	0	0	0	12	N 39° W		7·9			46		50		·222		0·1		0		0			0			0	Seistan.
																															Hill stations, excluding Kashmir and Baluchistan.
31	0	0	0	0	0	0	0	0	[illegible]		0·6			(*a*)		36	− 3	·184	−·027	0·6	−0·5	1	−1·4	0·37	0·98	−0·61	20·17	14·59	+ 5·58	0·30	Parachinar.
9	15	1	0	2	0	1	1	2	[illegible]	[illegible] W	5·2	7·4	−2·2	49	− 2	31	−11	·195	−·060	0·4	−0·6	0	−1·3	0	0·50	−0·50	11·89	13·41	− 1·52	0	Cherat.
31	0	0	0	0	0	0	0	0	[illegible]		1·5			(*a*)		46	− 8	·224	−·010	1·0	−1·0	1	−1·8	0·23	1·39	−1·16	6·31	6·04	+ 0·27	0·15	Drosh.
8	4	15	1	1	0	1	1	[illegible]	[illegible]	[illegible] W	3·1	4·5	−1·4	56	+37	35	− 8	·169	−·044	0·5	−0·8	1	−1·5	0·12	1·56	−1·44	56·94	39·76	+17·18	0·12	Murree.

hill or plateau stations, th[illegible] which exceed 3,200 feet.

(*a*) Indeterminate.

* Mean of 9 days.
† " " 7 "
‡ " " 28 "
§ " " 1[illegible] "
‖ " " 22 "
¶ " " 15 "

Table

(2) Abstract of observations taken at 8 hrs. at 210

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Hill stations excluding Kashmir and Baluchistan—*concld.*																					
	Simla	7,232	23·180	+·010	23·142	23·278	23rd	23·064	3rd	56·1	44·9	63·2	+0·4	51·6	+0·5	57·4	+0·5	11·6	68·7	7th	47·7	28th
	Chakrata	7,072	23·426	?	23·386	23·538	23rd	23·302	3rd	60·3	50·4	71·4	+4·4	52·3	+1·3	61·8	+2·9	19·1	74·9	8th	49·5	22nd
	Mukteswar	7,592	22·927	+·013	22·886	23·007	22nd	22·803	3rd	55·8	46·8	65·7	−0·8	48·3	−1·5	57·0	−1·1	17·4	60·5	3rd	44·0	22nd
	Darjiling	7,432	23·030	−·004	22·985	23·116	22nd & 23rd	22·948	2nd	55·5	53·5	64·5	+3·2	51·3	+1·4	57·9	+2·8	13·2	68·3	8th	47·7	18th
	Shillong	4,920	25·209	+·024	25·161	25·301	22nd	25·100	3rd	63·1	59·2	72·1	+0·4	55·7	+1·2	63·9	+0·8	16·4	76·1	1st	48·6	24th
	Cherrapunji	4,309	25·743	+·008	25·694	25·833	23rd	25·662	3rd	65·5	62·2	70·9	−1·1	60·2	−0·3	65·6	−0·7	10·7	74·8	23rd	55·8	31st
	Netarhat	...	26·212		26·161	26·279	21st	26·025	1st & 3rd	69·6	60·5	76·9		59·0		67·9		17·9	82·7	4th	52·3	28th & 30t
	Maymyo	3,546	26·476	+·016	26·421	26·563	23rd	26·392	2nd	67·6	66·4	77·3	+0·5	62·0	+1·9	69·7	+1·2	15·3	80·4	13th & 14th.	56·6	24th
	Pachmarhi	3,528	26·488	−·011	26·435	26·579	30th	26·263	3rd	70·4	63·1	79·3	+0·7	58·7	−0·5	69·0	+0·1	20·6	82·0	31st	52·6	29th
	Mount Abu	3,945	26·198	+·016	26·073	26·196	25th	25·934	3rd	72·9	58·1	78·3	−0·9	64·2	−0·3	71·2	−0·6	14·1	82·0	31st	61·2	31st
	Mercara	3,781	26·241	+·006	26·174	26·275	8th	26·186	3rd	66·5	64·8	76·2	+0·2	61·8	−0·3	69·0	−0·1	14·4	80·1	24th & 30th.	59·9	7th
	Ootacamund	7,327	23·064	+·029	23·020	23·106	25th	23·044	3rd	58·6	54·7	66·2	+2·2	51·3	+0·8	58·7	+1·5	14·9	70·4	3rd	47·2	7th
	Kodaikanal	7,688	22·851	+·015	22·786	22·878	8th	22·804	6th	57·3	54·2	64·5	+2·0	51·8	+0·4	58·1	+1·2	12·7	68·0	3rd	48·3	8th
	Extra India.																					
	Singapore (*a*)	10	29·891	−·049	29·822	29·937	4th	29·833	19th	82·8		88·0	+0·1	75·2	+1·2	81·6	+0·7	12·8	91·5	15th	72·5	5th, 9th & 11th.
	Penang (*a*)	17	29·858	−·062	29·800	29·904	6th	29·759	20th	82·2		88·3	−0·1	71·8	−1·4	80·1	−0·7	16·5	92·0	16th	70·0	12th & 13th.
	Trincomalee	99	29·840	+·029	29·868	29·913	1st	29·795	18th	78·3	75·4	90·6	+1·9	75·9	+0·4	83·2	+1·1	14·7	96·2	14th	72·7	18th
	Colombo	24	29·941	+·016	29·891	30·006	8th	29·885	19th	77·7	75·4	85·6	−0·4	76·0	+0·7	80·8	+0·1	9·6	87·8	24th	72·7	27th
	Hambantota	64	29·897		29·887	29·951	1st	29·851	18th	76·8	74·7	86·3		75·3		80·8		11·0	89·0	20th	64·3	25th
	Minicoy	7	29·977	+·039		30·039	8th	29·928	19th													
	Amini Divi	*13*	29·940	+·010	29·881	30·009	8th	29·894	19th	82·9	77·5	87·9	+2·0	77·5	+0·9	82·7	+1·5	10·4	91·6	22nd	73·3	30th
	Gyantse	13,110																				
	Pharijong	14,400																				
	Gangtok *	5,667	24·349	−·073	24·304	24·442	22nd	24·262	2nd	59·5	57·4	70·5	−0·3	57·1	+3·7	63·8	+4·2	13·4	74·6	12th	54·2	29th
	Gartok (*c*)	15,100																				
	Kashgar (*c*)	4,255	25·706	−·024		26·150	11th	25·530	1st & 6th.	40·0	41·5	71·9	+1·3	30·7	−3·2	55·8	−0·9	32·2	88·3	3rd	38·3	26th & 31st.
	Kabul (*c*)	...																				
	Meshed	3,104																				
	Jask	13	29·972	+·037	29·938	30·126	24th	29·794	3rd	78·4	70·2	92·1	+1·8	72·1	−3·8	82·1	−1·0	20·0	103·4	2nd	67·3	25th
	Muscat	20	29·991	+·051	29·959	30·151	24th	29·820	3rd	82·3	73·4	92·3	+4·1	78·8	−2·3	85·3	+0·9	14·0	99·9	3rd	72·6	30th
	Bushire	14	29·967	+·022	29·943	30·127	31st	29·752	3rd	78·5	70·7	88·4	+0·8	73·0	+1·7	80·7	+1·3	15·4	93·7	5th	67·4	30th
	Busrah	25																				
	Ispahan (*c*)	5,817	24·401	−·079		24·490	24th	24·320	5th	51·6	44·8	78·0	+0·7	48·1	+2·2	63·1	+1·5	29·9	88·4	5th	39·2	27th
	Tehran (*c*)	4,002	25·361	−·176		26·000	23rd & 24th.	25·750	1st	62·8	52·1	77·8	+1·2	55·4	+3·4	66·6	+2·3	22·4	87·5	4 days	43·0	26th
	Baghdad	127	29·886	+·020		30·079	31st	29·784	4th	69·2	56·9	95·8	+3·5	66·2	+3·2	81·0	+3·3	29·6	103·3	1st	55·3	23rd
	Aden	94	29·894	+·020	29·934	29·991	29th	29·791	1st	79·1	73·9	87·9	−1·7	77·1	−0·7	82·5	−1·2	10·8	91·8	5th	72·3	27th
	Zanzibar	72	30·042	+·024	30·040	30·096	3nd	29·983	26th	79·2	75·0	84·6	+1·2	75·8	+0·5	80·2	+0·9	8·8	87·7	27th	73·8	4th

N.B.—Elevations in italics indicate barometrical determinations.
(*a*) 9 hrs. observations.
(*c*) Aneroid.

* Mean of 30 days.

NOTE.—The barometric readings are not reduced to sea-level in the case

C.

and fifth class stations in India, etc., in October, 1919.

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st October 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				II.—Assam.
...	...	...	...	...	86	− 3	·769	+·013	...	...	11	+3·2	5·72	5·63	+0·09	75·27	80·82	−5·55	1·37	Bishnath.
...	...	...	...	...	88	+ 3	·841	+·067	...	...	8	+0·5	2·97	4·65	−1·68	78·52	74·55	+3·97	1·15	Borjuli.
...	...	...	...	...	91	+ 1	·799	−0·22	...	...	10	+1·8	9·72	6·73	+2·99	62·39	90·55	−28·16	3·00	Chandkhira.
...	...	...	...	...	90	− 3	·718	−0·29	...	...	11	+3·7	13·01	4·64	+8·37	84·20	78·14	+6·06	4·84	Doom Dooma.
...	...	...	...	...	91	+ 3	·735	+0·14	...	...	12	+3·8	12·96	5·58	+7·38	94·67	84·17	+10·50	3·50	Dikom.
...	...	...	...	...	92	+ 3	·803	+0·20	...	...	6	−0·7	2·73	3·40	−0·67	55·42	55·46	−0·04	0·63	Golaghat.
...	...	...	...	...	90	− 3	·853	+0·54	...	...	10	+1·8	4·31	8·15	−3·84	72·42	99·27	−26·85	0·88	Hailakandi.
...	...	...	...	...	92	+ 2	·772	−0·05	...	...	12	+5·3	4·75	4·60	+0·15	85·00	66·98	+18·02	1·04	Jorehat.
...	...	...	...	...	88	...	·799	...	...	...	5	−1·1	2·98	4·75	−1·77	33·26	41·42	−8·16	1·65	Lumding.
...	...	...	...	...	78	− 3	·780	−0·07	...	...	9	+1·8	3·24	5·04	−1·80	62·59	70·96	−8·37	0·70	Messa.
...	...	...	...	...	95	+ 2	·793	+1·50	...	...	9	+2·7	9·03	4·08	+4·95	87·09	68·33	+18·76	2·39	Panerihat.
																				III.—Bengal.
...	...	...	...	...	...	...	...	...	...	...	3	−3·3	0·65	6·36	−5·71	73·02	78·61	−5·59	0·25	Comilla.
...	...	...	...	...	82	− 3	·908	+0·23	...	...	3	−2·2	3·57	6·69	−3·12	49·88	72·89	−23·01	1·83	Brahmanbaria.
...	...	...	...	...	...	...	...	...	...	...	3	−2·2	2·16	4·54	−2·38	64·95	60·77	+4·18	1·13	Faridpur.
...	...	...	...	...	89	−11	·829	−0·08	...	...	7	+0·9	3·17	4·84	−1·67	58·69	57·05	+1·64	0·88	Goalundo.
...	...	...	...	...	77	− 2	·857	+0·22	...	...	5	+0·2	1·21	4·42	−3·21	51·54	53·38	−1·84	0·48	Pabna.
...	...	...	...	...	...	...	...	...	...	...	7	+2·4	4·11	4·59	−0·48	58·15	57·74	+0·41	1·73	Sirajganj.
...	...	...	...	...	...	...	...	...	...	...	7	+3·0	5·33	3·10	+2·23	55·52	50·34	+5·18	1·29	Rampur Boalia.
...	...	...	...	...	...	...	...	...	...	...	6	+2·4	3·07	3·69	−0·62	74·20	49·09	+25·20	1·00	Malda.
...	...	...	...	...	...	...	...	...	...	...	8	+4·0	12·51	4·34	+8·17	67·14	75·07	−7·93	4·60	Rangpur.
...	...	...	...	...	91	+ 1	·760	−0·05	...	...	7	+1·0	15·88	5·13	+10·75	133·81	143·29	−9·48	6·70	Dam Dim.
...	...	...	...	...	83	+ 2	·812	−0·09	...	...	11	+4·3	10·84	6·15	+4·69	142·63	135·32	+7·31	2·38	Kalchini.
...	...	...	...	...	75	− 8	·741	+0·16	...	...	9	+1·1	13·08	7·52	+5·56	138·26	144·84	−6·58	3·29	Nagrakata.
...	...	...	...	...	...	...	...	...	...	...	8	+3·1	13·51	6·97	+6·54	124·66	134·52	−9·86	5·30	Cooch Behar.
...	...	...	...	...	...	...	...	...	...	...	3	−1·6	2·42	4·03	−1·61	49·11	51·10	−1·99	1·16	Krishnagar.
...	...	...	...	...	...	...	...	...	...	...	3	−0·9	1·44	2·53	−1·09	81·11	50·29	+30·82	0·86	Bankura.
...	...	...	...	...	...	...	...	...	...	...	5	+1·6	3·40	2·25	+1·15	54·66	47·66	+7·00	1·50	Raniganj (Asansol).
																				IV.—Bihar and Orissa.
...	...	...	...	...	...	...	...	...	...	...	9	+5·1	6·35	2·69	+3·66	58·81	48·51	+10·30	2·12	Hazaribagh.
...	...	...	...	...	...	...	...	...	...	...	2	−0·4	0·90	2·04	−1·14	44·79	46·21	−1·42	0·50	Bhagalpur.
...	...	...	...	...	...	...	...	...	...	...	2	−0·5	2·11	2·65	−0·54	27·28	47·10	−19·82	1·34	Muzaffarpur.
...	...	...	...	...	...	...	...	...	...	...	5	+0·4	1·02	2·55	−1·53	39·52	52·71	−13·19	0·58	Motihari.
...	...	...	...	...	...	...	...	...	...	...	4	+1·5	3·46	2·24	+1·22	49·25	39·94	+9·31	1·36	Chapra.
...	...	...	...	...	...	...	...	...	...	...	4	+1·0	3·42	2·48	+1·14	60·44	42·25	+18·19	1·62	Arrah.
...	...	...	...	...	...	...	...	...	...	...	5	+2·4	4·87	2·01	+2·86	51·61	39·08	+12·53	1·74	Dehri.

Table C.—Abstract of observations taken at 8 hrs. at 59 fourth and fifth class stations in India, etc., in October, 1919.

Tabl

Abstract of observations taken at 8 hrs. at 59 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	II.—Assam.																								
4	Eishnath	75·1	72·6	86·0	−1·3	70·7	+5·1	78·3	+1·9	15·3	91·3	24th	63·7	28th	...	...	...	...	...	...	...	...	...	...	...
	Borjuli	77·7	75·2	86·9	−1·5	68·8	−0·3	77·9	−0·9	18·1	90·4	15th	63·4	30th	...	...	...	...	...	...	...	...	...	...	...
	Chandkhira	75·7	73·3	92·0	+4·8	65·9	−4·0	78·9	+0·4	26·1	100·6	17th	60·1	29th	...	...	...	...	...	...	...	...	...	...	...
	Doom Dooma	72·5	70·4	86·6	+3·1	68·1	+0·6	77·3	+1·9	18·5	93·5	14th	64·4	23rd	...	...	...	...	...	...	...	...	...	...	...
	Dikom	73·0	71·1	87·1	+1·1	65·9	−1·7	76·5	−0·3	21·2	95·8	14th	63·0	22nd & 23rd.	...	...	...	...	...	...	...	...	...	...	...
	Golaghat	75·0	73·4	83·7	−0·2	67·8	...	75·7	...	15·9	88·9	6th	63·2	28th	...	...	...	...	...	...	...	...	...	...	...
	Hailakandi	77·7	75·5	89·2	+1·2	74·1	+2·8	81·7	+2·0	15·1	94·4	15th & 23rd.	68·4	30th	...	...	...	...	...	...	...	...	...	...	...
	Jorehat	73·9	72·3	83·5	−3·2	69·4	−0·6	76·5	−1·9	14·1	88·9	6th	64·9	30th	...	...	...	...	...	...	...	...	...	...	...
	Lumding*	76·6	74·0	86·6	...	70·4	...	78·5	...	16·2	89·7	16th	64·2	30th	...	...	...	...	...	...	...	...	...	...	...
	Messa	79·4	74·4	89·5	−1·5	69·3	+1·9	79·4	+0·2	20·2	92·7	16th	65·1	28th & 31st.	...	...	...	...	...	...	...	...	...	...	...
	Panerihat	73·8	72·7	87·3	+0·7	65·8	−0·7	76·5	0	21·5	92·1	14th	61·1	31st	...	...	...	...	...	...	...	...	...	...	...
	III.—Bengal.																								
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Brahmanbaria	82·7	78·3	91·8	+3·9	74·1	+0·6	82·9	+2·3	17·7	93·2	12th	70·9	31st	...	...	...	...	...	...	...	...	...	...	...
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Goalundo	86·2	78·3	90·5	+1·7	75·6	+3·1	83·1	+2·4	14·9	94·2	8th	69·3	30th	...	...	...	...	...	...	...	...	...	...	...
	Pabna	82·4	76·9	91·2	−1·1	72·9	+1·5	82·1	+0·2	18·3	93·0	24th	64·1	29th	...	...	...	...	...	...	...	...	...	...	...
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dam Dim	73·7	72·0	89·0	−1·7	69·3	+3·8	79·1	+1·1	19·7	95·9	8th	60·2	28th	...	...	...	...	...	...	...	...	...	...	...
	Kalchini	78·1	74·5	88·0	−0·3	66·0	−0·3	77·0	−0·3	22·0	91·1	2nd	61·5	28th	...	...	...	...	...	...	...	...	...	...	...
	Nagrakata	80·8	73·7	87·7	−0·8	68·1	+0·7	77·9	−0·1	19·6	90·1	13th, 18th & 20th.	66·5	29th	...	...	...	...	...	...	...	...	...	...	...
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raniganj (Asansol)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IV.—Bihar and Orissa.																								
6	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzaffarpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Motihari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Mean of 28 days.

Tabl

Abstract of observations taken at 8 hrs. at 59 fourt

Number of sub-division.	Station.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Wind direction. Number of winds from Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	V.—United Provinces of Agra and Oudh.																								
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Dehra Dun	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	IX.—Rajputana.																								
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	XII.—Central Provinces.																								
23	Chhindwara	71·6	65·1	85·4	...	62·5	...	74·0	...	22·9	88·5	31st	55·4	29th	28	0	1	0	0	0	1	1	0	W	
	XIII.—Hyderabad.																								
27	Parbhani	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	XV.—Madras.																								
31	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
32	Anantapur	78·5	75·4	90·2	...	73·2	...	81·7	...	17·0	94·6	25th	70·5	5th	...	...	...	...	...	...	...	...	...	...	
33	Guntur	79·6	75·7	90·3	...	74·8	...	82·6	...	15·5	96·2	4th	71·0	23rd	...	...	...	...	...	...	...	...	...	...	
	Koraput	69·9	67·2	79·9	...	63·8	...	71·8	...	16·1	84·0	9th	55·8	20th	...	...	...	...	...	...	...	...	...	...	
	Bay Islands.																								
1	Car-Nicobor	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Kashmir.																								
13	Jammu	71·2	58·1	89·0	...	66·0	...	77·5	...	23·0	94·0	1st	58·2	29th & 3'th	0	11	16	2	0	0	0	0	2	N 27° E	
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Kargil	46·9	36·5	67·6	...	28·5	...	48·1	..	39·1	74·8	7th	20·0	30th	6	0	0	0	2	2	10	3	8	S 70° W	
	Baluchistan.																								
15	Harnai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Hill stations, exclusive of Kashmir.																								
	Panighatta	74·0	69·7	86·2	−0·2	67·9	+0·5	77·1	+0·1	18·3	88·3	13th	63·1	28th	...	...	...	...	...	...		...	...	...	
	Kurseong	65·3	64·4	70·6	−0·2	59·2	−0·3	64·9	−0·3	11·4	74·1	2nd	56·1	22nd	...	...	...	...	...	...	...	...	...	...	
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Dharampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Mussooree	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Poo	...	...	69·1	+3·5	43·1	+1·5	56·1	+2·5	26·0	73·1	27th	40·0	24th	3	0	0	10	10	3	5	0	0	S 43° E	
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Pishin	...	...	74·1	−2·9	30·8	−6·4	52·4	−4·7	43·3	81·3	5 days	21·0	27th	...	...	...	...	...	...	...	...	...	...	

C—*continued.*

and fifth class stations in India, etc., in October, 1919—*continued.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st October 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				V.—United Provinces of Agra and Oudh.
...	...	...	...	...	...	...	...	...	...	...	0	−0·5	0	0·50	−0·50	25·59	28·21	−2·62	0	Meerut.
...	...	...	...	...	...	...	...	...	...	...	1	−0·3	0·22	0·90	−0·68	53·71	75·62	−21·91	0·22	Dehra Dun.
																				IX.—Rajputana.
...	...	...	...	...	...	...	...	...	...	...	0	−0·7	0	0·51	−0·51	20·31	22·05	− 1·74	0	Udaipur.
																				XII.—Central Provinces.
7·9	...	...	3	...	70	...	·543	...	2·9	...	5	+2·6	3·04	1·44	+1·60	48·50	36·10	+12·40	0·96	Chhindwara.
																				XIII.—Hyderabad.
...	...	...	...	...	...	...	...	...	...	...	4	+0·8	1·28	2·22	−0·94	25·88	30·89	− 5·01	0·50	Parbhani.
																				XV.—Madras.
...	...	...	...	...	...	...	...	...	...	...	8	−1·4	4·31	7·43	−3·12	8·44	11·63	− 3·19	1·56	Tinnevelly.
...	...	...	...	...	87	...	·846	...	5·8	...	5	0	2·97	2·95	+0·02	30·20	21·00	+ 9·20	1·61	Anantapur.
...	...	...	...	...	83	...	·836	...	1·5	...	5	−2·0	3·79	4·95	−1·16	25·75	28·23	− 2·48	0·97	Guntur.
...	...	...	...	...	87	...	·643	...	...	...	8	...	4·42	...	...	64·34	...	...	2·69	Koraput.
																				Bay Islands.
...	...	...	...	...	...	...	...	...	...	...	12	−2·4	9·75	11·06	−1·31	51·70	69·62	−17·92	2·27	Car Nicobar.
																				Kashmir.
...	...	...	87	...	42	...	·327	...	0·3	...	0	−2·0	0	0·69	−0·69	47·42	30·21	+17·21	0	Jammu.
...	...	...	...	...	...	...	...	...	...	...	3	−1·9	0·82	2·04	−1·22	15·93	20·83	− 4·90	0·34	Sonamargh.
...	...	...	48	...	34	...	·112	...	0·6	...	0	−0·1	0	0·07	−0·07	0·89	1·77	− 0·88	0	Kargil.
																				Baluchistan.
...	...	...	...	...	...	...	...	...	...	...	0	−0·4	0	0·12	−0·12	11·71	6·45	+ 5·26	0	Harnai.
																				Hill stations, exclusive of Kashmir.
...	...	...	...	...	80	+12	·687	+·022	...	—	5	−1·8	3·33	7·20	−3·87	131·99	130·37	+1·62	1·30	Panighatta.
...	...	...	...	...	95	+16	·594	+·117	...	...	3	−3·8	1·37	6·96	−5·59	155·47	151·24	+ 4·23	1·03	Kurseong.
...	...	...	...	...	...	...	...	...	...	...	3	−8·5	0·52	5·81	−5·29	119·42	137·04	−17·62	0·25	Gnatong.
...	...	...	...	...	...	...	...	...	...	...	13	+3·4	5·02	3·97	+1·05	46·37	46·00	+ 0·37	1·58	Lachung.
...	...	...	...	...	...	...	...	...	...	...	0	...	...	...	...	42·00	...	...	...	Dharampore.
...	...	...	...	...	...	...	...	...	...	...	0	−1·4	0·06	0·90	−0·84	95·23	83·28	+11·95	0·06	Mussooree.
...	...	...	...	...	...	...	...	...	1·3	−0·2	0	−0·7	0	0·34	−0·34	1·08	3·30	− 2·22	0	Peo.
...	...	...	61	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	Kailang.
...	...	...	...	...	...	...	...	...	...	...	0	−0·5	0	0·21	−0·21	1·39*	0·65	+ 0·74	0	Pishin.

* Rainfall for September wanting.

Table

Abstract of observations taken at 8 hrs. at 59 fourth and

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
															Number of winds from										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Extra India.																								
	Chumbi	42·7	41·2	58·3	...	37·8	...	48·1	...	20·5	61·8	13th	31·7	13th	...	...	...	...	...	...	...	...	...	...	...
	Pemba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abadan	82·5	66·8	98·0	...	69·9	...	83·9	...	28·1	109·0	2nd	62·0	25th	1	9	0	0	0	9	0	4	6	*N 63° W	...

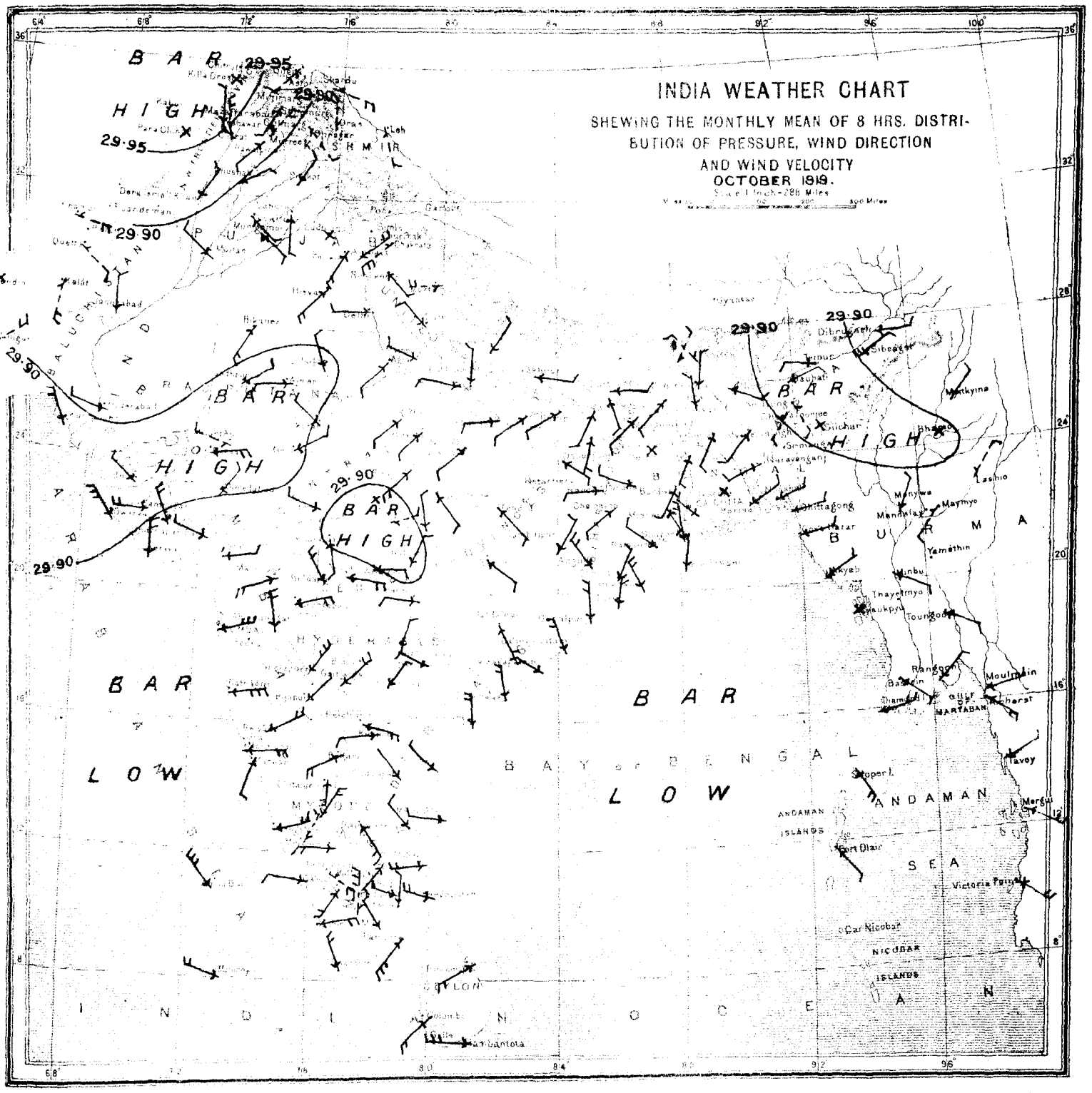
* Winds variable.

C—*concluded.*

fifth class stations in India, etc., in October, 1919—*concluded.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 31st October 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				Extra India.
...	...	...	...	...	90	...	·249	...	2·9	...	1	−2·5	0·12	1·65	−1·53	26·31	26·45	−0·14	0·12	Chumbi.
...	...	...	...	...	...	...	...	...	...	...	6	+1·7	4·19	2·26	+1·93	+34·10*	30·80	+3·30	2·90	Pemba.
...	...	...	30	...	45	...	·453	...	...	...	0	...	0	...	...	0·26	...	...	0	Abadan.

SGPI—21—470DGOb—7-10-22—325.

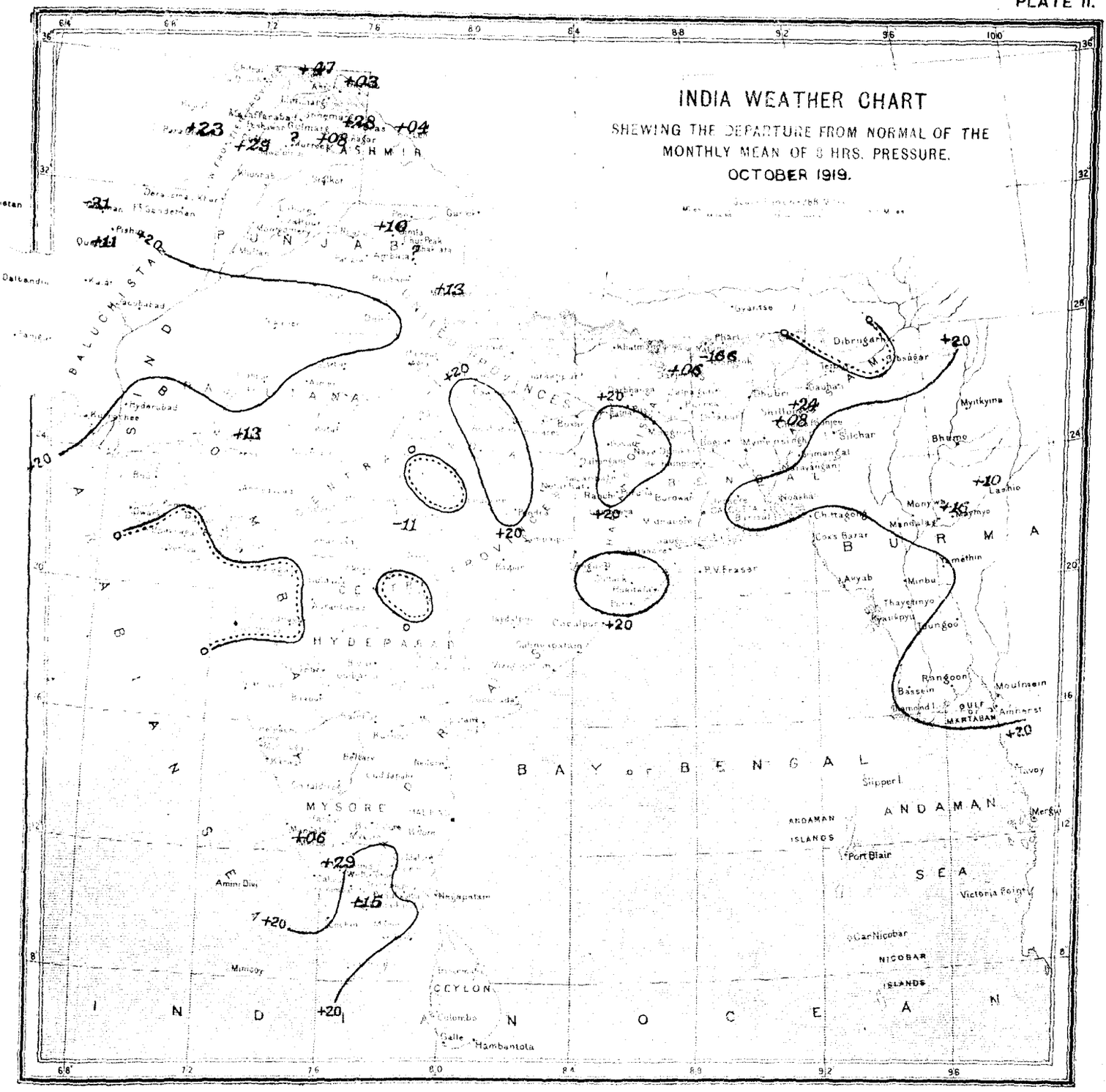


The lines of the above chart represent isobars or lines of equal barometric pressure, the numbers attached indicating the barometric pressure in inches and being drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the normal distribution of pressure.

The mean 8 hrs. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table B of the 8 hrs. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	...	one	feather added to the wind arrow.
,, ,,	2 to 5 ,, ,, ,,	...	two	feathers ,, ,, ,, ,,
,, ,,	5 to 10 ,, ,, ,,	...	three	,, ,, ,, ,, ,,
,, ,,	10 to 20 ,, ,, ,,	...	four	,, ,, ,, ,, ,,
	over 20 ,, ,, ,,	...	five	,, ,, ,, ,, ,,

Wind strengths are based on factor 2·2 for the standard type of Beckley Robinson anemograph, instead of 3·0 as used for this plate up to December 1911 inclusive.



The chart shows the departure from normal of the mean during the month of 8 hrs. pressure by means of lines drawn for equal amounts of departure. The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no departure, the dotted line facing the area of deficient pressure or negative departures.

CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MAXIMUM TEMPERATURE.

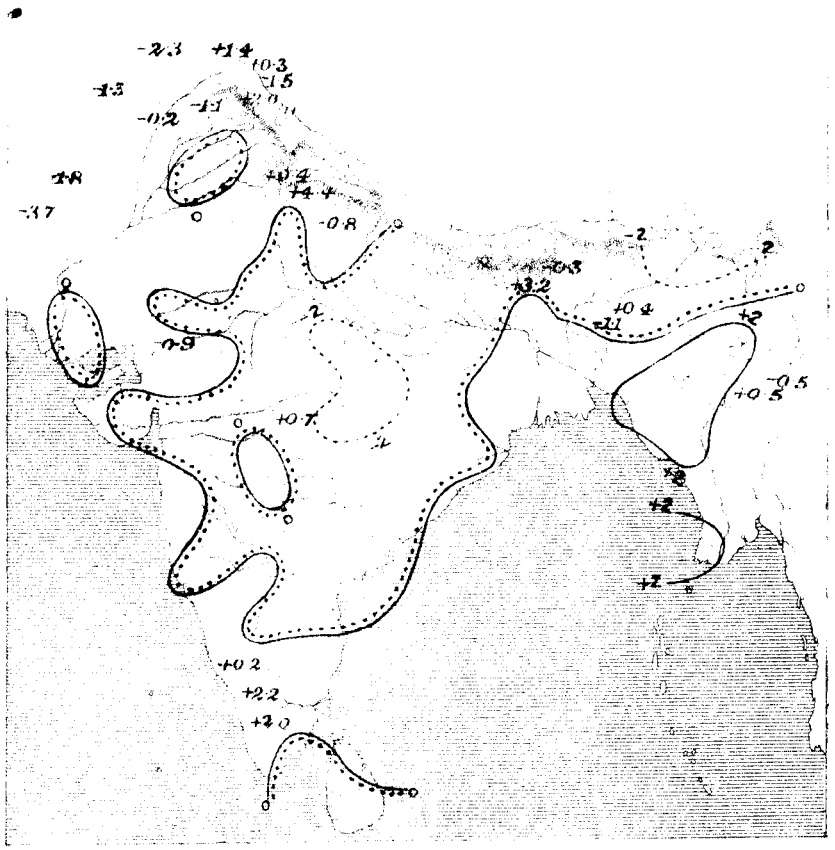


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MINIMUM TEMPERATURE.

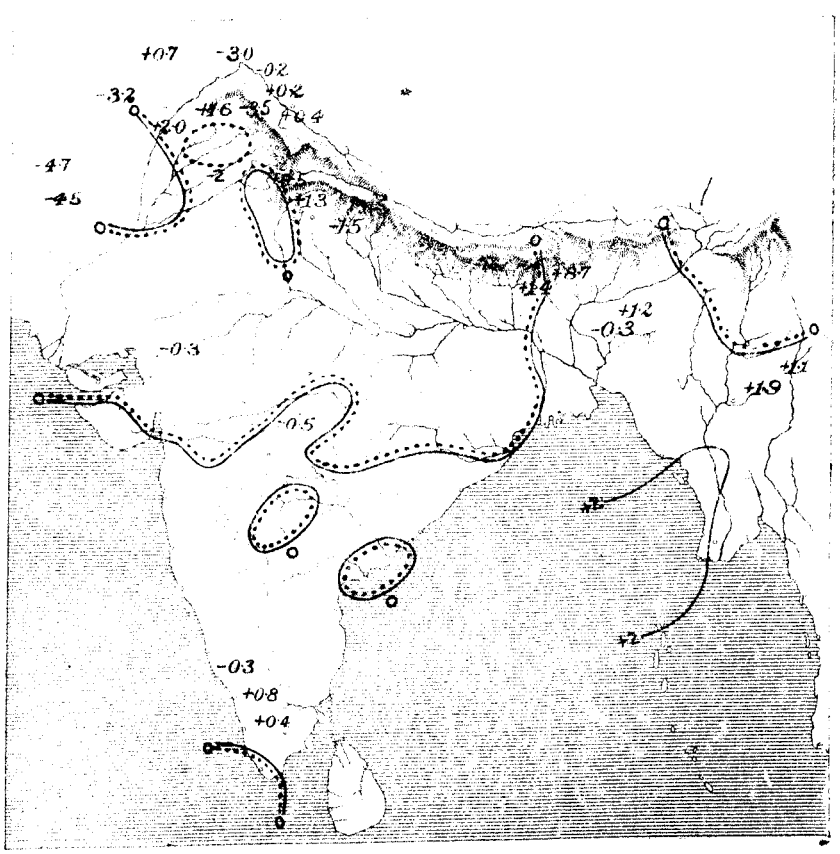


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MEAN TEMPERATURE.

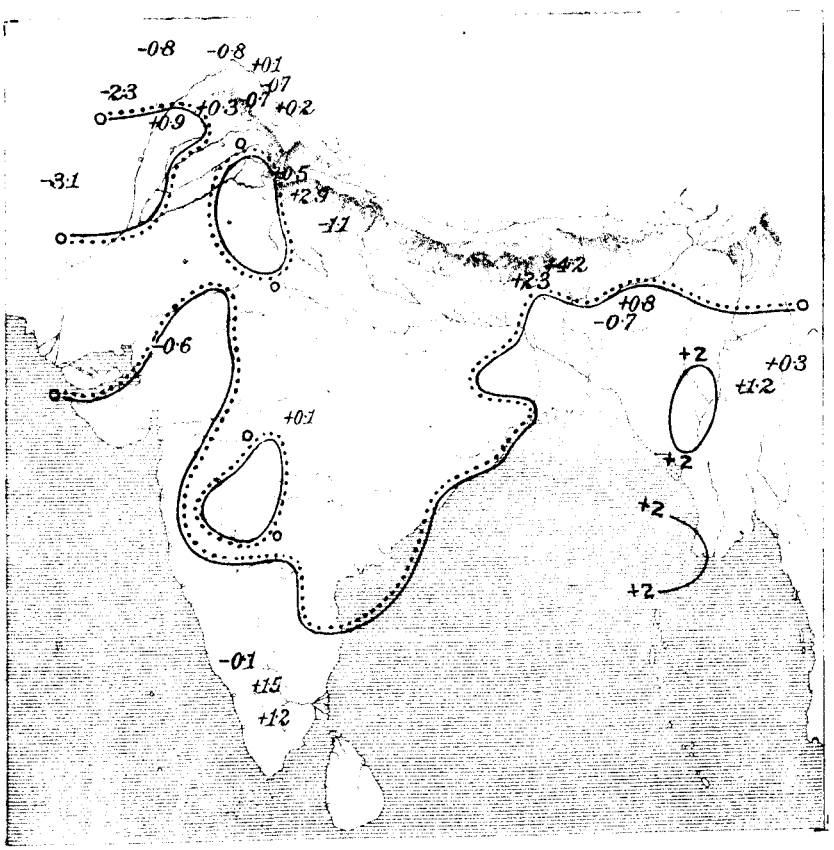


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF ABSOLUTE
HUMIDITY AT 8 HRS.

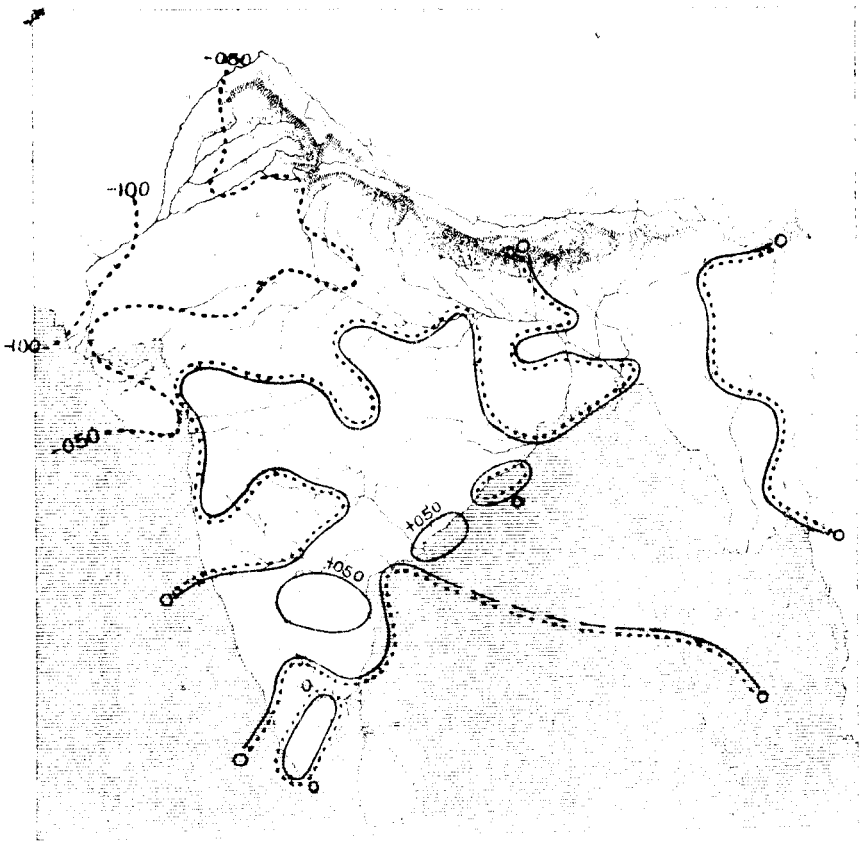


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF RELATIVE
HUMIDITY AT 8 HRS.

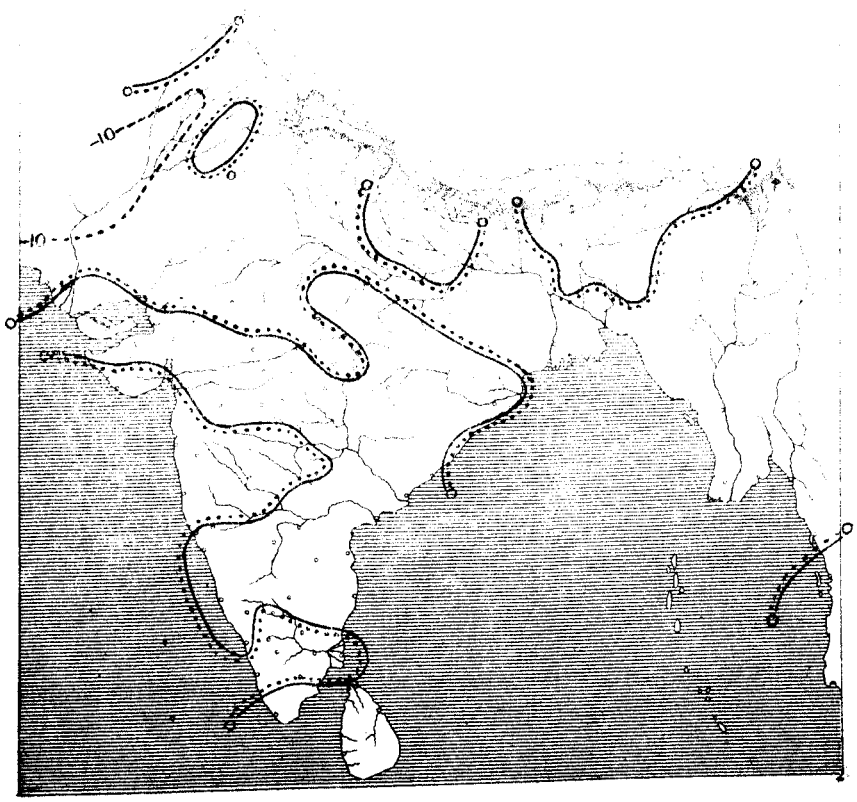


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF CLOUD AMOUNT AT 8 HRS.

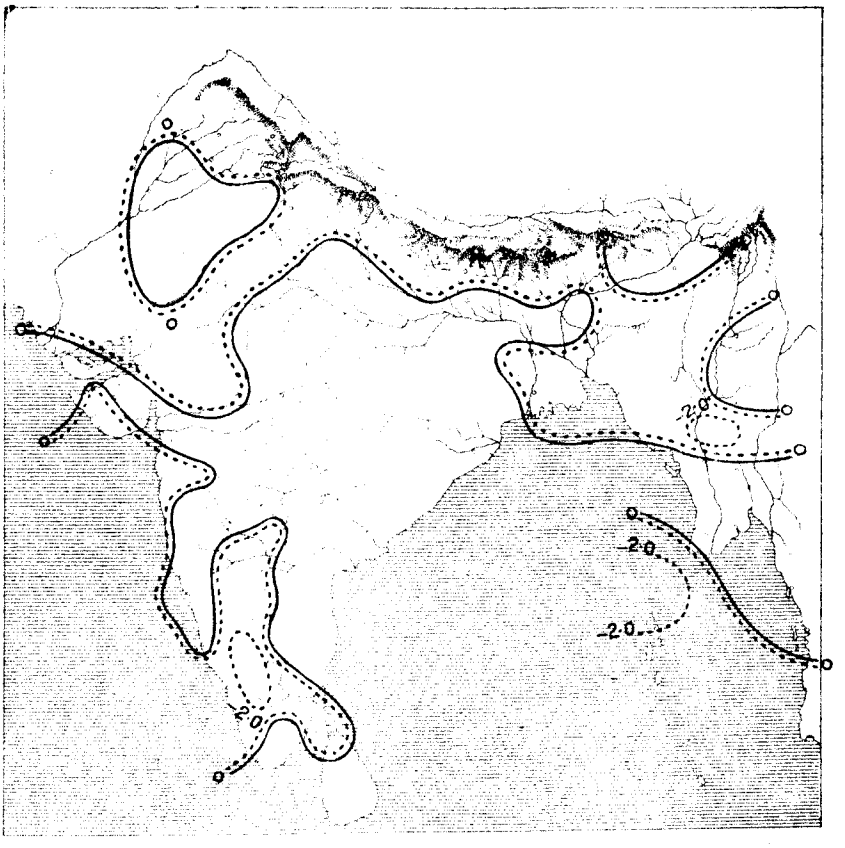
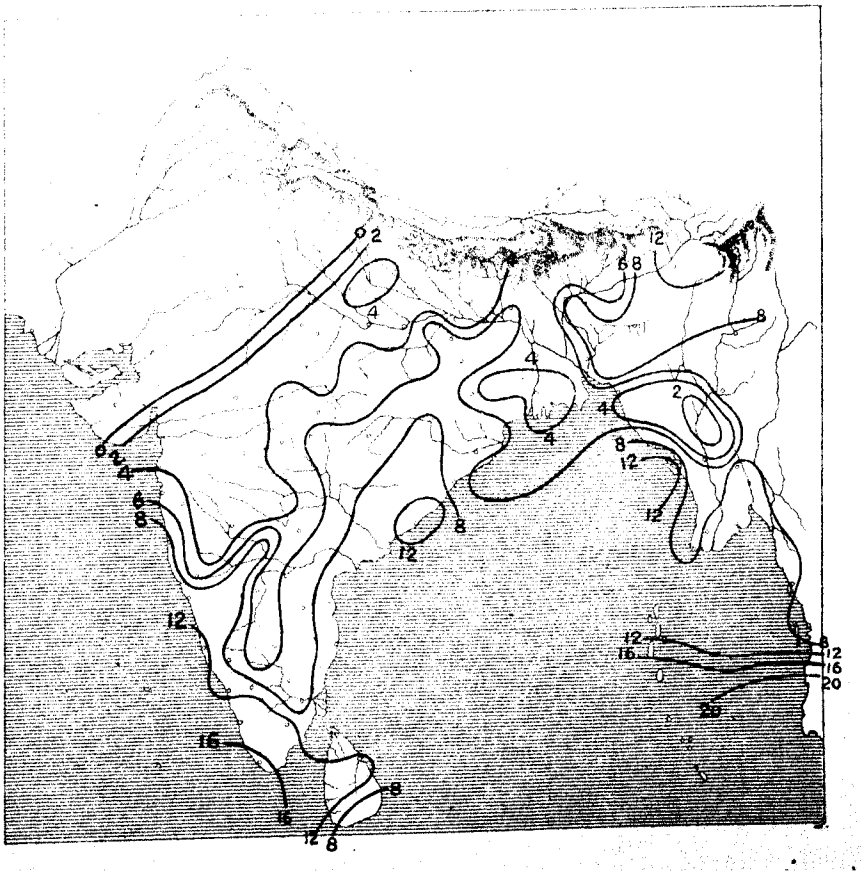
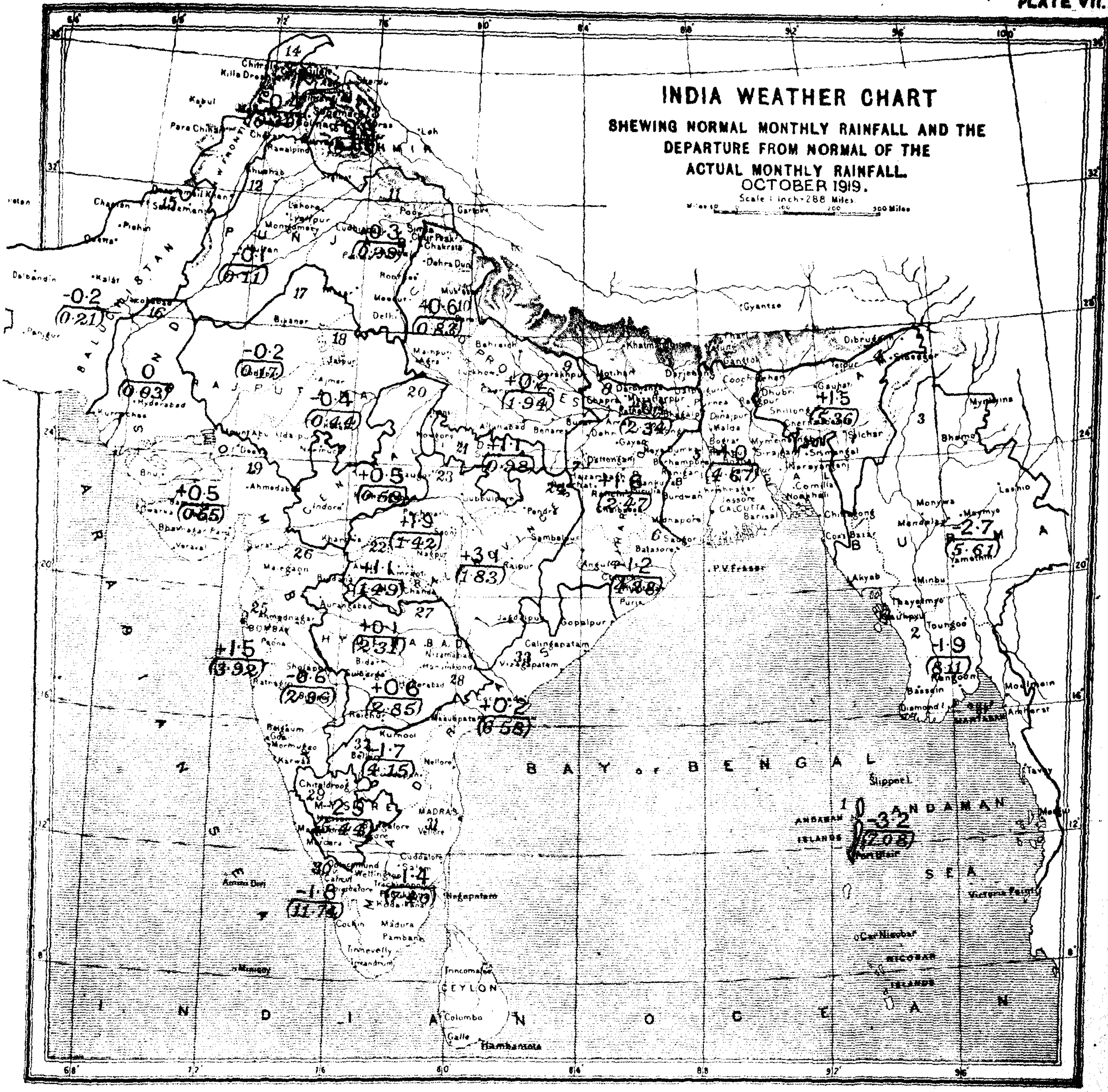


CHART SHEWING THE TOTAL NUMBER OF DAYS IN THE MONTH ON WHICH RAINFALL EQUALLED OR EXCEEDED 0·10 INCH.

(BASED ON THE RETURNS OF TABLE B.)





The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal monthly rainfall, the numbers above these give the departures from normal of the average actual rainfall over the divisions.

1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North

GOVERNMENT OF INDIA

METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, NOVEMBER, 1919.

INTRODUCTION.

THIS review of the weather in India during the month of November, 1919, is based on observations taken daily at 8 hrs. at 209 stations, and on additional observations taken at 10 hrs. and 16 hrs. at 13 stations. In the rainfall summary have been utilized the data furnished by the meteorological observatories, and the rainfall statements of the month published by the Provincial Governments.

The brief notes on solar, seismic and magnetic disturbances are supplied by the chief observatories in the Indian area.

For a statement of the methods adopted in recording and tabulating the data, for each of the elements of observation, reference should be made to the introductory portion of the review for January.

Summary of the chief features of the weather in India during the month.

2. The monsoon was unusually active in the Peninsula.

A depression from the southwest of the Bay passed into south Madras and from there into the Arabian Sea in the beginning of the month. It disappeared near the Kuria Muria Islands, having developed into a severe storm while in the middle of the Arabian Sea. Two more depressions formed in the Bay. All three of them caused rain in the Peninsula, and the last one moving up to the Bengal coast also produced widespread rain in Orissa, Bengal and Assam.

A feeble western disturbance caused a few light falls of rain in Kashmir on the 24th. Disturbed weather appeared in Gujarat on the 18th and rain fell there as well as in Rajputana, Central India, the Central Provinces and the Punjab between the 18th and the 23rd; rain fell again in the Central Provinces on the 25th and the 26th.

The month's fall over the country as a whole was nearly double the normal amount.

In Persia, where ordinarily winter rains begin early in November, the weather was practically dry.

Cloud amount was greatly in excess except in the extreme northwest, and the air was damper than usual in Central India, the Central Provinces, Gujarat and the Peninsula. The variations in minimum temperature agreed fairly with those of cloud.

The mean barometric pressure over the plains of India was 0·040″ in defect.

Solar, magnetic and seismic disturbances.

KODAIKANAL OBSERVATORY.

3. *Solar Observations.*—There were seven days on which no observations were possible, and on five other days prominences could not be photographed.

Sunspots.—12 new groups were observed during the month. The mean daily number was 2·7 and the average life of a spot was 6·9 days. The latitude distribution was as follows:—

TABLE 1.

—	0°—10°	11°—20°	21°—30°	Mean latitude.	Extreme latitude.
North . . .	3	5	...	10°·0	4° & 14°
South . . .	...	3	1	17°·0	14° & 23°

Prominences.—28 prominences, a minute or more in height and 8 metallic prominences were recorded. The tallest was 270″ high and was photographed on the 26th at +7° W.

Magnetic Disturbances.—"Moderate" disturbances were recorded from the 3rd to 6th, 11th to 12th, 16th to 19th, 22nd to 23rd and on 25th and 30th.

J. EVERSHED,
Director,
Kodaikanal and Madras Observatories.

Seismic records.

$\phi = 10° 13' 50''$ $\lambda = 77° 28' 00''$ $h = 2343$ m. *Subsoil* Rock.

Apparatus.—Milne Horizontal Pendulum Seismograph.

TABLE 2.

	V	To	G	$\frac{r}{To^2}$
AN:				
AE:	9·76	17·9	1	2·6
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.)	REMARKS.
1919.		h. m. s.						
Nov. 15th	e P	6 20 24	...	...	...	...	...	
	F	6 24 00	...	...	...	...	...	Widening of line.
„ 18th	e P	22 19 12	...	...	...	...	...	
	e L	22 27 00	...	...	...	...	...	
	M	22 35 18	...	...	90	...	...	
	F	22 55 36	...	...	...	...	...	
„ 20th	e P	14 34 48	...	...	...	...	...	
	e L	15 06 48	...	...	...	...	...	
	M	15 08 48	...	...	40	...	...	
	F	15 25 30	...	...	...	...	...	

T. ROYDS,
Assistant Director.

BOMBAY OBSERVATORY.

Alibag magnetic record.

4. During the month of November 1919, the traces showed 16 calm days, 13 days of small and 1 day of moderate disturbance.

The days of the month selected as "quiet" for the purposes of the Magnetic Survey of India are 5th, 7th, 15th, 20th and 28th.

The following table represents the magnetic character of each day during the month.

TABLE 3.

Day.	Character.	Day.	Character.	Day.	Character.	Day.	Character.
1	C	9	S	17	S	25	S
2	C	10	C	18	S	26	C
3	C	11	S	19	C	27	C
4	M	12	S	20	C	28	C
5	C	13	C	21	C	29	C
6	S	14	C	22	S	30	S
7	C	15	C	23	S		
8	S	16	S	24	S		

C = Calm ; S = Small ; M = Moderate ; G = Great ; V. G. = Very great.

The mean observed absolute values of the several magnetic elements reduced to the mean monthly tabulations of the magnetograms, as also the ranges and the summed ranges of the Horizontal Force and Declination for the month are as follows :—

Easterly Declination . .	0° 22′ 35″
Horizontal Force . . .	0·36909 C. G. S. Unit.
Vertical Force . . .	0·17093 „ „
Inclination	24° 51′·0.
Horizontal Force Range . .	0·00054 C. G. S. Unit.
Horizontal force Summed Range	0·00352 „ „
Declination Range . . .	1′·0.
Declination Summed Range .	6′·0.

NOTE.—Summed range means sum without regard to sign of 24 ordinates of the diurnal inequality.

Seismic records.

$\phi = 18° 53' 36''$ $\lambda = 72° 48' 56''$ $h = 11$ m. *Subsoil* Trap.

Apparatus.—Omori-Ewing Horizontal Pendulum Seismograph (E.-W.)

TABLE 4.

	V	To	ϵ	$\frac{r}{To^2}$
AN:				
AE:	20	32		
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.)	Remarks.
1919.		h. m. s.						
Nov. 18th	P	22 4 9	...	...	...	...	...	
	M	22 22 54	...	...	10	...	...	

A disturbance was recorded at about 11 hours on the 7th, but the movements are small and it is difficult to locate phases exactly.

T. K. CHINMAYANANDAM,

Director,

Bombay and Alibag Observatories.

5.—ALIPORE (CALCUTTA) OBSERVATORY.

Seismic records.

$\phi = 22° 32'$ N; $\lambda = 88° 20'$ E; $h = 6{\cdot}4$ m. *Subsoil* Alluvial.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs.

TABLE 5.

	V	To	ϵ	$\frac{r}{To^2}$
AN:	29	18	1	
AE:	29	30	1	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.)	Remarks.
1919.		h. m. s.						
Nov. 15th	P	6 32 12	2	...	...	...	...	
	S	6 34 12	7	...	...	...	...	
	F	6 51 12	...	...	...	...	...	
„ 18th	P	4 7 48	3	...	...	...	...	
	S	4 15 06	5	...	...	...	...	
	F	4 41 12	...	...	...	...	...	
„ 20th	P	14 23 54	3	...	...	...	...	
	L	14 34 18	6	...	...	...	...	
	F	15 7 18	...	...	...	...	...	

6.—SIMLA OBSERVATORY.

Seismic records.

$\phi = 31°$ 6′ N; $\lambda = 77°$ 11′ E; $h = 2{\cdot}1$ km. *Subsoil* Rock.

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs (Masses 50 kg.)

TABLE 6.

	V	To	ϵ	$\frac{r}{To^2}$
AN	14	45	1	
AE:	14	45	1	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.)	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.)	Remarks.
1919.		h. m. s.						
Nov. 5th	i P	22 21 48	...	...	...	...	...	
	F	22 27 48	...	...	...	...	...	Very slight local shock.
„ 7th	P	10 57 48	...	...	...	...	...	
	F	11 00 48	...	...	...	...	...	Very slight local shock.
„ 18th	P	4 16 42	...	...	...	...	...	
	M	4 35 48	...	32	...	...	...	
	F	4 47 24	...	...	..	...	...	

The following table contains a list of earthquakes that were reported :—

TABLE 7.

Place at which felt.	Date.	G. M. T. of earthquake.	Duration.	Intensity Rossi-Forel scale.	No. of shocks.	REMARKS.
	1919.	h. m.	Sec.			
Shillong . .	Nov. 9th	13 37	2 to 5	4	1	
" . .	" 10th	12 37	3 to 4	5	1	
Drosh . .	Nov. 11th	17 30	9	6	1	
Kyelang, Lahoul (Kangra District)	" 16th	14 20	11	7	2	

S. SITARAMAYYA,

Scientific Assistant.

Weather in the Indian Ocean.

7. The following table gives the departures from normal of pressure and rainfall, as well as the actual and normal wind direction and velocity at the three representative stations.

TABLE 8.

—	Mauritius.	Zanzibar.	Seychelles.
Departure from normal of mean pressure in inches.	—·033	—·008	—·062
Actual mean wind direction . .	S 77° E	S 13° E	S 36° E
Normal mean wind direction . .	S 85° E	S 45° E	S 56° E
Actual mean wind velocity (miles per diem).	121	58	89
Normal mean wind velocity (miles per diem).	133	82	93
Rainfall departure from normal in inches	—0·54	+3·65	—9·18.

Depressions and cyclonic storms.

8. A depression formed in the south of the Bay on the 30th and 31st October, and on the morning of the latter date the centre lay at about latitude 7½° N, longitude 87°. On the night of the 30th-31st October the S.S. "*Fazilka*" was driven ashore at the southern extremity of the Great Nicobars. The depression then began to move, and taking a somewhat curved course crossed the Madras-Negapatam coast early on the morning of the 2nd November. It passed out into the Arabian Sea near Mangalore on the 3rd, and travelling from there in an almost straight line, lay about 300 miles off the Kuria Muria Islands. On the morning of the 6th while crossing the Arabian Sea it developed into a severe cyclone with hurricane winds and a calm centre. The barometric depression at the centre was probably not less than 1″. The S.S. "*Zayani*" bound from Aden to Bombay was at the mercy of the storm from the afternoon of the 5th November till noon on the 7th, drifting helplessly for most of the time in the hurricane winds and mountainous seas; she was in the calm centre for a short while at 3 hours on the 6th. According to this ship's report weather moderated on the afternoon on the 7th. By the morning of the 8th the storm had appreciably filled up. Accounts of this storm are also given on pages 5 and 9 of the 1919-20 Administration Report. A feeble depression appeared on the 5th with centre at about latitude 8°N longitude 84°. The disturbance travelled in a direction roughly parallel to the east coast of the Peninsula, and disappeared near the head of the Bay on the 10th. Barometrically the depression was feeble, but it caused fairly widespread rain in the Peninsula, including some very heavy falls on the north Madras coast.

Weather was disturbed on the 11th in the southwestern quadrant of the Bay and a depression formed there on the 12th, the centre lying on the morning of the 13th about 300 miles east of Nellore. The disturbance moved along a slightly curved track in a northeasterly direction, reached the head of the Bay on the 16th and disappeared in Bengal during the course of that day. Widespread rain fell during this period along the east coast of the Peninsula and in northeast India.

S. S. *Mahanade* going to Calcutta from Ceylon overtook the depression on the 12th; she had only light winds till the evening of that day and had gales on the morning of the 13th, and it would therefore appear that the depression developed into a storm on the 13th. Gales and heavy seas occurred till the 16th in the area of the disturbance.

Pressure.

9. The following table gives the departure from normal of the mean 8 hours pressure in the 15 chief political divisions of India.

TABLE 9.

DIVISION.	Departure from normal of mean 8 hrs. pressure.
	"
Burma	—·027
Assam	—·034
Bengal	—·032
Bihar and Orissa	—·035
United Provinces	—·023
Punjab	—·020
North-West Frontier Province	—·030
Sind	—·033
Rajputana	—·037
Bombay	—·063
Central India	—·043
Central Provinces	—·057
Hyderabad	—·053
Mysore	—·047
Madras	—·055

The following table gives a comparison of the departure from normal of mean 8 hours pressure at 9 hill stations with the departure at an adjoining station in the plains.

TABLE 10.

HILL STATION.	Departure from normal pressure. A	PLAIN STATION.	Departure from normal pressure. B	Departure of pressure difference. B—A.
	"		"	"
Quetta	—·032	Jacobabad	—·022	+·010
Leh	—·022	Lahore	—·025	—·003
Murree	—·041	Peshawar	—·038	+·003
Simla	—·019	Ludhiana	—·010	+·009
Mukteswar	—·010	Bareilly	—·023	—·013
Darjiling	—·027	Dhubri	—·032	—·005
Mount Abu	—·059	Deesa	—·057	+·002
Pachmarhi	—·057	Khandwa	—·060	—·003
Kodaikanal	—·039	Madura	—·051	—·012

Temperature.

10. Table 11 gives the actual temperature and its departure from normal in the 33 sub-divisions, while table 12 gives only the departures from normal in the 15 chief political divisions.

TABLE 11.

SUB-DIVISION.	ACTUAL TEMPERATURE.				DEPARTURE FROM NORMAL OF		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
1. Bay Islands	85·5	77·6	81·6	7·9	—0·5	+0·3	—0·8
2. Lower Burma	86·8	73·0	79·9	13·8	+0·6	+1·0	—0·4
3. Upper Burma	84·4	67·3	75·8	17·1	+0·7	+3·5	—2·8
4. Assam	81·2	63·7	72·4	17·5	—0·3	+2·7	—3·0
5. Bengal	83·0	65·8	74·3	17·2	+0·1	+1·5	—1·4
6. Orissa	82·9	67·2	75·0	15·7	—1·6	+3·5	—5·1
7. Chota Nagpur	82·2	59·7	70·9	22·5	—0·2	+2·1	—2·3
8. Bihar	83·4	60·3	71·7	23·1	+0·5	+1·1	—0·6

Sub-Division.	Actual temperature.				Departure from normal of		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
9. United Provinces, East	83·1	56·0	69·0	27·2	+0·2	—0·3	+0·5
10. Do. do., West	82·5	53·4	68·0	29·2	—0·9	—0·7	—0·2
11. Punjab, East and North	80·5	48·5	64·5	32·0	—1·6	—1·9	+0·3
12. Do. South-west	82·9	48·7	65·7	34·2	—1·2	—2·9	+1·7
13. Kashmir	59·6	28·3	43·9	31·3	+1·7	—3·0	+4·7
14. North-West Frontier Province	78·5	45·1	61·7	33·4	—1·5	—2·1	+0·6
15. Baluchistan	74·4	38·8	56·7	35·6	+2·3	—2·7	+5·0
16. Sind	87·1	58·2	72·6	28·8	0	—0·9	+0·9
17. Rajputana, West	86·3	57·1	71·7	29·2	—2·1	+1·6	—3·7
18. Do., East	83·0	57·3	70·1	25·7	—3·4	+1·2	—4·6
19. Gujarat	90·1	66·5	78·3	23·6	—0·2	+3·1	—3·3
20. Central India, West	83·9	59·4	71·7	24·5	—0·3	+4·9	—5·2
21. Do. do., East	80·9	54·7	67·8	26·3	—0·9	+1·1	—2·0
22. Berar	87·2	65·1	76·1	22·2	+1·7	+5·7	—4·0
23. Central Provinces, West	83·8	60·8	72·3	23·1	0	+4·5	—4·5
24. Do. do., East	82·0	61·2	71·6	20·8	0	+4·1	—4·1
25. Konkan	87·5	74·5	81·0	13·0	—0·5	+3·1	—3·6
26. Bombay Deccan	86·6	64·8	75·7	21·9	+0·6	+5·3	—4·7
27. Hyderabad, North	88·1	65·3	76·7	22·7	+2·2	+6·5	—4·3
28. Do., South	85·3	68·1	76·7	17·1	—0·1	+4·1	—4·2
29. Mysore	80·2	64·6	72·4	15·6	—1·1	+2·1	—3·2
30. Malabar	84·7	73·9	79·3	10·8	—1·7	+0·3	—2·0
31. Madras, South-east	85·8	73·1	79·4	12·7	—0·1	+1·2	—1·3
32. Do., Deccan	87·0	70·5	78·8	16·5	—1·1	+4·1	—5·2
33. Do. Coast, North	83·5	72·4	77·9	11·1	—0·9	+2·3	—3·2

TABLE 12.

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	+0·7	+2·1	+1·4
Assam	—0·3	+2·7	+1·2
Bengal	+0·1	+1·5	+0·8
Bihar and Orissa	—0·5	+2·3	+0·9
United Provinces	—0·3	—0·5	—0·3
Punjab	—1·5	—2·2	—1·8
North-West Frontier Province	—1·5	—2·1	—1·8

Division.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Sind	0	—0·9	—0·5
Rajputana	—3·1	+1·3	—0·9
Bombay	0	+3·8	+1·9
Central India	—0·6	+3·0	+1·1
Central Provinces	+0·3	+4·7	+2·5
Hyderabad	+0·8	+5·1	+2·9
Mysore	—1·1	+2·1	+0·5
Madras	—0·7	+1·7	+0·6

Surface and upper air winds.

11. *Surface.*—Winds at some of the stations in northern and central India differed somewhat irregularly from the normal.

The following table gives the mean wind velocity and steadiness with their departures from normal.

TABLE 13.

Division.	Hourly wind velocity in miles.		Wind steadiness.	
	Actual.	Departure from normal.	Actual.	Departure from normal.
Burma	2·2	—0·2	42	—8
Assam	1·6	—0·4	34	—3
Bengal	1·4	—0·2	31	—14
Bihar and Orissa	1·7	—0·1	36	—1
United Provinces	0·8	—0·4	14	—4
Punjab	1·1	—0·1	19	+3
North-West Frontier Province	0	—1·0	3	—9
Sind	1·6	—2·1	27	—13
Rajputana	2·1	+0·1	29	+6
Bombay	3·4	—1·1	44	—13
Central India	1·8	—0·3	26	—6
Central Provinces	2·4	+0·2	49	+11
Hyderabad	4·0	—0·5	48	+ 3
Mysore	3·7	—0·5	31	—39
Madras	3·5	—0·2	44	—11

Upper air.—The monthly mean velocities and directions at different heights above Agra, Simla, Lahore, Bangalore, Akyab, Calcutta and Bombay during the month are given in the following table.

TABLE 14.

Height above sea Kms.	Agra. Height above sea 0·17 km.				Simla. Height above sea 2·13 kms.				Lahore. Height above sea 0·21 km.				Bangalore. Height above sea 0·92 km.				Akyab. Height above sea 0·01 km.				Calcutta Height above sea 0·01 km.				Bombay. Height above sea 0·01 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
Ground level.	30	1·8	1·3	272	27	1·2	0·3	123	24	0·0	0·0	...	10	3·1	1·2	81	23	0·8	0·5	20	28	1·8	1·2	2	26	2·4	0·5	28
0·5	31	3·8	1·7	1	...	...	...	...	24	4·0	2·8	337	...	...	...	...	25	2·5	1·0	11	27	4·3	3·6	32	26	4·5	2·0	86
1·0	31	4·0	1·5	355	...	...	...	...	24	3·4	2·7	327	12	3·6	1·6	63	25	2·8	0·8	212	28	4·0	2·7	15	26	4·9	2·6	91
1·5	31	5·2	2·4	320	...	...	...	...	24	3·6	2·4	321	17	4·2	1·8	58	25	3·4	1·8	205	22	4·7	3·1	332	25	5·3	1·9	88
2·0	31	6·2	3·8	309	...	...	...	...	24	3·9	2·6	327	17	4·5	2·5	56	24	3·5	2·0	193	18	6·9	4·7	288	25	5·3	1·5	106
2·5	30	6·6	4·5	300	27	3·5	0·5	358	23	4·2	2·1	325	15	5·1	2·4	57	23	4·1	2·4	216	13	5·8	4·0	279	24	5·2	1·3	127
3·0	30	6·8	5·3	281	27	2·6	0·3	289	23	4·3	1·7	328	14	4·8	2·0	86	22	4·5	2·9	247	11	5·7	4·7	265	24	5·1	0·3	167
3·5	30	7·3	5·8	277	27	3·4	0·7	240	23	5·1	2·2	299	13	5·0	2·1	147	21	4·7	3·3	263	6	8·4	8·1	271	23	5·5	0·4	245
4·0	29	8·5	7·3	275	27	4·3	1·8	275	23	5·7	2·8	290	12	5·7	2·0	207	20	5·8	4·2	271	3	11·3	10·8	273	23	5·5	0·7	219
4·5	29	10·3	9·1	272	27	5·5	3·3	271	23	6·5	3·9	289	11	6·9	1·9	226	20	5·9	4·3	281	...	...	...	...	22	5·9	1·0	251
5·0	29	12·4	11·2	273	26	6·9	5·4	267	23	8·0	5·6	282	9	7·1	0·6	236	18	6·2	4·9	290	...	...	...	...	21	6·2	1·0	234
5·5	26	14·4	13·2	267	25	10·0	8·9	271	23	10·1	7·2	283	6	6·2	0·7	69	15	6·0	5·3	299	...	...	...	...	18	5·7	1·4	190
6·0	25	16·2	14·9	265	23	13·0	12·2	271	23	11·4	8·7	279	6	4·7	1·5	73	15	6·2	5·5	292	...	...	...	...	17	7·2	3·0	203
6·5	24	18·6	17·1	267	18	15·3	14·4	270	23	13·5	11·2	279	6	4·7	2·5	58	15	7·0	6·0	287	...	...	...	...	16	7·8	4·2	212
7·0	23	20·1	18·8	266	18	19·7	18·9	270	23	16·1	13·9	276	4	5·9	5·0	73	14	6·8	5·8	299	...	...	...	...	16	7·9	4·9	226

Height above sea Kms.	Agra. Height above sea 0·17 km.				Simla. Height above sea 2·13 kms.				Lahore. Height above sea 0·21 km.				Bangalore. Height above sea 0·92 km.				Akyab. Height above sea 0·01 km.				Calcutta. Height above sea 0·01 km.				Bombay. Height above sea 0·01 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
7·5	18	21·3	20·0	271	17	24·1	23·1	267	23	17·9	16·2	272	4	4·0	2·6	69	14	7·0	6·8	295	...	...	...	...	15	8·9	5·6	224
8·0	18	24·3	22·8	271	18	30·1	29·1	265	23	21·2	19·7	271	4	3·7	1·5	103	14	8·9	7·5	279	...	...	...	...	12	7·2	3·6	206
8·5	16	27·3	25·2	269	13	35·5	34·1	266	22	26·1	24·9	273	4	3·5	2·5	98	13	9·3	7·4	281	...	...	...	...	10	7·2	3·6	205
9·0	15	30·4	28·7	266	11	41·4	39·7	267	17	26·1	24·4	267	4	4·5	2·1	106	10	7·9	6·7	283	...	...	...	...	10	6·8	4·3	198
9·5	11	33·1	32·1	272	5	42·8	42·0	269	14	27·0	26·5	264	4	6·4	3·1	121	10	7·5	6·8	273	...	...	...	...	8	6·0	4·1	203
10·0	10	35·5	34·4	272	3	35·5	35·5	263	11	24·9	24·3	257	4	6·0	3·9	137	9	6·9	6·4	275	...	...	...	...	8	6·4	5·1	198
10·5	7	39·2	37·8	267	2	37·5	37·5	264	9	25·4	24·2	259	4	6·7	4·6	146	9	7·8	7·2	273	..	...	...	...	7	5·8	5·0	190
11·0	5	42·3	40·9	267	2	39·5	39·3	267	7	31·3	31·1	265	4	8·9	6·1	140	7	9·2	8·2	276	...	...	...	...	5	7·0	6·8	189
11·5	3	46·8	45·3	263	...	...	...	...	6	36·0	35·5	259	1	11·0	11·0	100	7	9·8	9·1	274	...	...	...	...	4	9·0	8·8	178
12·0	1	48·0	48·0	260	...	...	...	...	4	38·7	38·1	259	...	..	...	...	6	10·7	9·9	277	...	...	...	...	3	8·5	8·1	181
12·5	1	53·0	53·0	260	...	...	...	...	1	32·0	32·0	255	...	...	...	...	4	12·9	11·9	278	...	...	...	...	2	8·0	7·2	171
13·0	...	...	...	..	...	...	...	..	1	33·5	33·5	260	...	...	...	...	4	15·3	14·1	273	...	...	...	...	1	5·0	5·0	220
13·5	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	4	16·5	14·8	239	...	...	...	...	1	6·5	6·5	235
14·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	18·0	15·8	271	...	...	...	...	1	7·0	7·0	225
14·5	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	1	8·0	8·0	225
15·0	...	...	...	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	9·0	9·0	230
15·5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	10·0	10·0	240
16·0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	10·5	10·5	235

N = Number of flights.
V = Velocity of Wind, regardless of direction, metre per second.
v = Velocity of Resultant Wind; taking account of direction, metre per second.
L = Direction of Resultant Wind: North wind = 0 or 360°; East wind = 90°.

Humidity and Cloud.

12. The following table gives the mean humidity, vapour tension and cloud amount at 8 hours with their departures from normal.

TABLE 15.

Division.	Hygrometry; 8 hrs. Mean humidity.	Departure from normal.	Mean vapour tension in inches of mercury.	Departure from normal in inches of mercury.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.
	%					
Burma . . .	85	0	·750	+·036	5·5	+1·5
Assam . . .	92	+2	·624	+·037	5·3	+2·0
Bengal . . .	83	0	·637	+·012	3·0	+1·0
Bihar and Orissa .	77	+3	·546	+·042	3·1	+1·8
United Provinces .	68	—2	·393	—·018	1·1	+0·3
Punjab. . .	62	—1	·279	—·032	0·9	—0·3
North-West Frontier Province.	69	+3	·252	—·035	0·1	—1·8
Sind . . .	51	—7	·323	—·084	0·6	—0·7
Rajputana . .	51	+2	·297	—·010	1·7	+0·6
Bombay . .	66	+7	·571	+·091	3·1	+1·5
Central India .	66	+7	·414	+·048	1·9	+0·8
Central Provinces .	67	+6	·479	+·077	4·0	+2·3
Hyderabad . .	71	+9	·596	+·100	4·7	+2·4
Mysore . .	83	+8	·599	+·051	6·4	+1·4
Madras. . .	85	+6	·780	+·062	6·0	+1·7

Rainfall.

13. The following tables give the actual, normal and departure from normal of rainfall in the 33 sub-divisions and 15 chief political divisions of India.

TABLE 16.

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
1. Bay Islands	11·7	6·8	8·25	5·61	+2·64	+47
2. Lower Burma	5·6	3·6	5·59	2·72	+2·87	+106
3. Upper Burma	3·6	2·9	2·44	1·78	+0·66	+37
4. Assam	2·4	1·5	1·74	0·88	+0·86	+98
5. Bengal	1·7	0·9	1·50	0·75	+0·75	+100
6. Orissa	4·2	1·2	4·55	1·19	+3·36	+282
7. Chota Nagpur	0·5	0·9	0·17	0·50	—0·33	—66
8. Bihar	0·1	0·6	0·02	0·40	—0·38	—95
9. United Provinces, East	0	0·4	0	0·20	—0·20	—100
10. Do., West	0·5	0·3	0·16	0·16	0	0
11. Punjab, East and North	0·4	0·3	0·11	0·14	—0·03	—21
12. Do., South-west	0	0·2	0	0·10	—0·10	—100
13. Kashmir	0·1	1·1	0·02	0·60	—0·58	—97
14. North-West Frontier Province	0	0·6	0	0·35	—0·35	—100
15. Baluchistan	0	0·9	0	0·36	—0·36	—100
16. Sind	0·1	0·1	0·08	0·06	+0·02	+33
17. Rajputana, West	0·5	0·2	0·21	0·07	+0·14	+200
18. Do., East	1·6	0·3	0·68	0·16	+0·52	+325
19. Gujarat	1·5	0·3	0·82	0·20	+0·62	+310
20. Central India, West	1·4	0·6	0·64	0·44	+0·20	+45
21. Do., East	0·2	0·6	0·04	0·39	—0·35	—90
22. Berar	2·1	0·9	1·05	0·55	+0·50	+91
23. Central Provinces, West	1·7	0·8	0·96	0·58	+0·38	+66
24. Do., East	0·6	0·7	0·33	0·42	—0·09	—21
25. Konkan	2·2	1·4	1·61	0·86	+0·75	+87
26. Bombay Deccan	3·0	1·4	1·67	0·86	+0·81	+94
27. Hyderabad, North	2·1	1·2	1·45	0·75	+0·70	+93
28. Do., South	5·7	1·7	4·99	0·90	+4·09	+454
29. Mysore	8·5	3·4	5·51	2·11	+3·40	+161
30. Malabar	12·5	7·8	10·83	6·16	+4·67	+76
31. Madras, South-east	10·8	7·8	11·52	6·76	+4·76	+70
32. Do., Deccan	6·1	3·0	3·78	2·01	+1·77	+88
33. Do., Coast, North	7·3	3·4	8·55	3·39	+5·16	+152

TABLE 17.

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Burma	3·69	2·15	+1·54	+72
Assam	1·74	0·88	+0·86	+97
Bengal	1·50	0·75	+0·75	+100
Bihar and Orissa	1·13	0·60	+0·53	+88
United Provinces	0·09	0·18	—0·09	—50
Punjab	0·08	0·13	—0·05	—38
North-West Frontier Province	0	0·35	—0·35	—100
Sind	0·08	0·06	+0·02	+33
Rajputana	0·50	0·12	+0·38	+317
Bombay	1·39	0·65	+0·74	+114
Central India	0·41	0·42	—0·01	0
Central Provinces	0·72	0·50	+0·22	+44
Hyderabad	3·13	0·82	+2·31	+282
Mysore	5·51	2·11	+3·40	+161
Madras	9·86	5·32	+4·54	+85
Mean of India	2·17	1·14	+1·03	+90

Snowfall.

I.—CENTRAL ASIA.

14. *Kashmir.*—2 inches fell on the 26th and an inch on the 27th.

II.—PERSIA.

Meshed.—No snow fell.

III.—NORTH-WEST FRONTIER PROVINCE.

Drosh.—No snow fell.

IV.—KASHMIR.

Srinagar.—A light fall occurred on the hills on the 24th.

Dras.—About three-quarters of an inch fell on the 25th.

Sonamarg.—No snow fell.

Skardu.—Snow fell on the 21th to a depth of 3 or 4 inches on the higher ranges and about an inch on the lower, with less than half an inch on low hills. A very slight amount was lying at the end of the month on the high mountains.

Kargil.—About 6 inches fell on the peaks on the 24th and half an inch on the ground.

V.—THE PUNJAB.

Kulu (Kangra).—Snow fell on 4 days on higher mountains; the fall was light on 2 days and moderate on the other 2 days (23rd and 24th). The fall of the 23rd and 24th extended down to 10,000 feet.

VI.—THE UNITED PROVINCES.

Almora.—

TABLE 18.

Locality.	Actual falls during month.		
	Depth.		Distance below perpetual snowline.
	Feet.	Inches.	
Malla Danpur	0	6	.....
Malla Darma	2	6	2½ miles.
Malla Johar	1	6	.....
Byans	10	0	7 or 8 miles.
Chaudas	1	6	1 mile.

TABLE 19.

Name of pass or peak.	Accumulation at the end of month.	
	Reported.	Normal.
	Feet.	Feet.
Nuwe pass	13	25½
Lampia „	18 or 19	10
Lipulekh „	12 or 13	7⅔
Binkaru „	4	13⅓
Milamdhura	4¾	6¾
Pindari peak	½	2
Kaphini „	½	2¼
Nandakot	½	...

VII.—THE EASTERN HIMALAYAS.

Gangtok.—No snow fell.

Yatung.—Had half an inch of snow.

Sadiya Frontier Tract.—No snow was observed on Sita and there were only occasional deposits on higher hills.

Summary.

15. The month's fall was in defect over the western and central Himalayas.

S. SITARAMAYYA,

Scientific Assistant.

Table A.—Abstract of observations taken at 10 hrs and 16 hrs. at 13 stations in India, etc., in November 1919.

Table

Abstract of observations taken at 10 hrs. and 16 hr

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hrs.	Pressure. Mean of 16 hrs.	Pressure. Mean daily range.	Pressure. Mean of daily mean pressures.	Pressure. Departure from normal.	Pressure. Mean reduced to sea-level and to gravity at 45° Lat.	Temperature of air. Mean maximum.	Temperature of air. Mean minimum.	Temperature of air. Mean daily range.	Temperature of air. Highest maximum.	Temperature of air. Lowest minimum.	Temperature of air. Absolute range.	Temperature of air. Mean 10 hrs.	Temperature of air. Mean 16 hrs.	Temperature of air. Mean of daily means.	Temperature of air. Departure from normal.	Temperature, wet-bul Mean minimum.	Temperature, wet-bul Mean 10 hrs.	Temperature, wet-bul Mean 16 hrs.	Temperature, wet-bul Mean of three
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal.																					
5	Calcutta	21	29·979	29·863	·116	29·917	—·047	29·885	82·3	66·2	16·1	86·1	58·1	28·0	77·7	79·7	73·6	+1·2	64·8	69·7	69·9	68
	VI.—Punjab.																					
11	Lahore	702	29·314	29·220	·094	29·259	—·027	29·948	81·0	47·9	33·1	88·0	43·3	44·7	68·7	79·6	62·5	—0·7	45·7	57·8	62·9	55
	IX.—Rajputana.																					
18	Jaipur	1,431	28·592	28·495	·097	28·534	—·028	29·925	82·7	55·8	26·9	91·5	45·2	46·3	76·3	80·7	67·6	—1·3	49·5	58·3	60·5	56
	X.—Bombay.																					
25	Bombay	37	29·906	29·803	·103	29·851	—·062	29·828	86·0	75·9	13·1	91·4	69·5	21·9	81·5	84·0	81·2	+1·0	69·4	74·3	75·4	71
	XIV.—Mysore.																					
29	Bangalore	3,021	26·964	26·867	·097	26·914	—·033	29·781	79·5	63·8	15·7	82·8	58·0	24·8	73·6	76·8	70·6	+1·0	63·1	67·3	67·3	6
	XV.—Madras.																					
30	Trivandrum	198	29·736	29·634	·102	29·690	—·024	29·818	82·5	73·8	8·7	84·7	71·1	13·6	79·1	80·7	77·4	—0·3		75·1	75·6	
31	Pudukkottai	318	29·631	29·508	·123	29·559		29·808	86·5	72·7	13·8	92·9	70·4	22·5	80·8	83·6	79·6			74·0	73·8	
	Madras	22	29·908	29·8[illegible]	·099	29·861	—·065	29·813	86·2	74·4	11·8	90·6	70·5	20·1	82·5	83·9	79·5	+1·6	73·4	77·5	77·0	7
	Kashmir.																					
13	Srinagar		25·011	24·889	·122	24·950	—·046	24·921	62·2	26·0	36·2	68·2	20·7	47·5	47·3	59·9	44·1	+0·1	35·0	40·4	49·6	1
	Hill stations, excluding Kashmir and Baluchistan.																					
	Katmandu	4,388	25·729	25·645	[illegible]	25·684	—·014	25·638	74·9	47·1	27·8	78·8	37·9	40·9	60·4	70·0	60·5	+3·7	44·9	54·8	58·6	
	Kodaikanal	7,688	22·825	22·758	·067	22·791		22·726	61·5	49·5	12·0	67·2	44·6	22·6	58·4	56·7	55·5		47·3	53·4	54·2	
	Extra India.																					
	Seychelles	15	29·973	29·880	·093	[illegible]940	—·002†	29·877	84·4	77·7	6·7	86·3	74·8	11·5	82·4	83·7	79·7	+2·1†	70·8	76·2	76·6	
	Mauritius	181				29[illegible]	—·033	29·920	83·8	68·4	15·4	87·8	61·0	26·8			75·6	+0·6				

N. B.—Elevations in italics indicate barometric determinations.
Note.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

13 stations in India, etc., in November, 1919.

Vapour tension in inches of mercury.					Humidity.					Cloud.				Wind direction.											Wind-steadiness.		Wind velocity.		Rainfall.		Station.	Number of sub-division.
														Total number of 10 hrs. and 16 hrs. winds from.																		
From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns.	Departure from normal.	Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																															III.—Bengal.	
·597	·620	·601	·621	+·043	92	66	60	76	+2	3·5	4·1	3·8	+1·3	1	10	10	9	1	3	2	0	24	N 3° W	N 12° W	48	58	50	44	1·95	1·74	Calcutta.	5
																															VI.—Punjab.	
·278	·334	·350	·317	+·001	83	49	36	60	+3	0·9	0·8	0·9	−0·6	33	0	2	0	5	0	1	7	12	N 64° W	42 W	22	18	13	23	0·04	0·03	Lahore.	11
																															IX.—Rajputana.	
·284	·267	·279	·278	−·019	65	31	28	46	−1	1·7	2·1	1·9	+0·4	6	6	4	15	13	2	5	4	5	S 81° E	N 24° W	27	35	60	47	0·32	0·28	Jaipur.	18
																															X.—Bombay.	
·633	·753	·768	·743	+·027	70	70	65	72	−1	3·6	3·0	2·8	+1·1	0	2	7	13	6	1	3	7	21	N 7° W	N 18° E	25	51	136	168	0·18	0·18	Bombay.	25
																															XIV.—Mysore.	
·568	·594	·571	·591	+·053	96	72	66	81	+6	6·7	7·3	7·0		5	6	18	16	5	1	2	6	1	N 61° E	N 60° E	47	68	101	88	5·30	1·62	Bangalore.	29
																															XV.—Madras.	
	·822	·819				83	79			7·8	8·1	7·9	+2·2	11	1	2	1	1	1	5	15	23	N 67° W	N 81° W	57	48	69	61	10.97	3.88	Trivandrum.	30
	·748	·707				72	64			5·7	6·2	5·9		20	6	19	6	6	1	0	1	1	N 55° E		43		66		7·85	2·09	Pudukkottai.	31
·809	·876	·849	·865	+·069	95	79	76	86	+2	7·2	6·3	6·7	+0·8	2	24	9	10	5	3	0	2	5	N 28° E	N 27° E	53	62	62	114	13·92	4·29	Madras.	
																															Kashmir.	
·125	·175	·242	·181	−·052	89	53	46	63	−16	1·0	1·0	1·0	−2·0	28	5	6	1	6	2	1	1	10	N 5° E	N 1° E	15	21	24	45	0·02	0·02	Srinagar.	13
																															Hill stations, excluding Kashmir and Baluchistan.	
·276	·368	·366	·337	+·001	85	70	50	72	−3	3·2	3·3	3·3	+0·7	0	0	0	28	0	0	0	32	0	W	N 81° W	13	42	11	10	0	0	Katmandu.	
·307	·359	·396	·354		86	75	86	82		6·4	8·3	7·3		1	13	7	3	5	7	2	8	14	N 26° W		28		207		8·30	2·31	Kodaikanal.	
																															Extra India.	
·661	·822	·820	·798	−·043	70	74	71	75	−8	5·6	5·3	5·5	−1·4†	6	2	8	7	8	19	4	0	6	S 36° E	S 56° E	32	14	89	93	1·23	0·45	Seychelles.	
			·624	+·018				69	0			5·2	+0·3										S 77° E	S 85° E			121	133	1·23	0·38	Mauritius.	

† Departure from old normal.

Table B.—Abstract of observations taken at 8 hrs. at 209 stations in India, etc., in November, 1919.

(1) Provincial means.

(2) Data of stations.

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(1) Provincial means based on the material in Table B (2) except that the statement of rainfall depends on the complete data of about 2,500 stations.

Division.	Pressure departure from normal.	Temperature of air.							Wind.		Hygrometry.				Cloud.		Rainfall.		
		Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Departure of velocity from normal.	Departure of steadiness from normal.	Mean humidity.	Departure from normal.	Mean vapour tension.	Departure from normal.	Mean cloud amount.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.
	"	°	°	°	°	°	°	°					"	"			"	"	
Burma	−·027	85·8	+0·7	70·7	+2·1	78·2	+1·4	15·1	−0·2	− 8	85	0	·750	+·036	5·5	+1·5	3·69	2·15	+1·54
Assam	−·034	81·2	−0·3	63·7	+2·7	72·4	+1·2	17·5	−0·4	− 3	92	+ 2	·624	+·037	5·3	+2·0	1·74	0·88	+0·86
Bengal	−·032	83·0	+0·1	65·8	+1·5	74·3	+0·8	17·2	−0·2	−14	83	0	·647	+·012	3·0	+1·0	1·50	0·75	+0·75
Bihar and Orissa	−·035	83·0	−0·5	62·2	+2·3	72·5	+0·9	20·8	−0·1	− 1	77	+ 3	·446	+·042	3·1	+1·8	1·13	0·60	+0·53
United Provinces of Agra and Oudh	−·023	82·8	−0·3	54·7	−0·5	68·8	−0·3	28·2	−0·4	− 4	68	− 2	·293	−·018	1·1	+0·3	0·09	0·18	−0·09
Punjab	−·020	81·3	−1·5	48·6	−2·2	64·9	−1·8	32·7	−0·1	+ 3	62	− 1	·279	−·032	0·9	−0·3	0·08	0·13	−0·05
North-West Frontier Province	−·030	78·5	−1·5	45·1	−2·1	61·7	−1·8	33·4	−1·0	− 9	69	+ 3	·252	−·035	0·1	−1·8	0	0·35	−0·35
Sind	−·033	87·1	0	58·2	−0·9	72·6	−0·5	28·8	−2·1	−13	51	− 7	·323	−·084	0·6	−0·7	0·08	0·06	+0·02
Rajputana	−·037	84·3	−3·1	57·2	+1·3	70·7	−0·9	27·1	+0·1	+ 6	51	+ 2	·297	−·010	1·7	+0·6	0·50	0·12	+0·38
Bombay	−·063	88·5	0	67·6	+3·8	78·1	+1·9	20·8	−1·1	−13	66	[illegible]	·571	+·091	3·1	+1·5	1·39	0·65	+0·74
Central India	−·043	82·5	−0·6	57·1	+3·0	69·7	+1·1	25·4	−0·3	− 6	66	+7	·414	+·048	1·9	+0·8	0·41	0·42	−0·01
Central Provinces	−·057	84·0	+0·3	61·9	+4·7	73·0	+2·5	22·2	+0·2	+11	67	6	·479	+·077	4·0	+2·3	0·72	0·50	+0·22
Hyderabad	−·053	86·3	+0·8	67·2	+5·1	76·7	+2·9	19·0	−0·5	+ 3	71	+ 9	·596	+·100	4·7	+2·4	3·13	0·82	+2·31
Mysore	−·047	80·2	−1·1	64·6	+2·1	72·4	+0·5	15·6	−0·5	−30	83	+ 8	·599	+·051	6·4	+1·4	5·51	2·11	+3·40
Madras	−·055	85·1	−0·7	72·7	+1·7	78·9	+0·6	12·4	−0·2	−11	8[illegible]	+ 6	·780	+·062	6·0	+1·7	9·86	5·32	+4·54

Table

(2) Abstract of observations taken at 8 hrs. at 209

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between and maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	I.—Burma.																					
2	Victoria Point	147	29·805		29·883	29·884	24th	29·728	11th	78·3	74·3	84·5		74·7		79·6		9·8	88·0	5th & 16th.	71·9	26th
	Mergui	66	29·901	−·009	29·897	29·989	24th	29·811	3rd	76·5	73·4	87·1	−0·2	72·7	+2·3	79·9	+1·1	14·4	91·9	6th	61·4	23rd
	Tavoy	19	29·940	−·032	29·893	30·036	24th	29·853	3rd	76·8	73·4	88·6	+0·8	70·6	+1·0	79·5	+0·9	18·0	95·2	4th	61·4	26th
	Moulmein	94	29·910	−·009	29·925	30·008	24th	29·834	3rd	77·3	73·0	87·8	−0·7	72·3	+0·7	80·0	0	15·5	92·0	4th	61·5	28th
	Rangoon	18	29·959	−·015	29·914	30·063	24th	29·877	11th	77·2	74·5	87·8	+0·4	73·3	+0·7	80·6	+0·5	14·5	92·0	1st	65·9	27th
	Bassein	7	29·953	−·014	29·916	30·057	24th	29·874	16th	77·9	75·0	83·0	+2·0	73·1	+1·3	80·6	+1·7	14·9	93·2	4th	66·3	26th
	Diamond Island	4	29·906	−·032	29·882	30·004	24th	29·811	11th	82·2	78·0	87·2	+1·8	77·3	+1·6	82·2	+1·7	9·9	91·4	3rd	74·4	27th
	Toungoo	164	29·818	−·014	29·926	29·921	24th	29·735	11th	76·1	73·8*	87·8	+0·9	70·5	+0·7	79·2	+0·8	17·3	92·6	1st	63·8	27th
	Kyaukpyu	18	29·928		29·886	30·044	24th	29·811	17th	78·6	75·4	84·8		75·1		79·9		9·7	90·3	13th	71·6	29th
	Akyab	20	29·932	−·042	29·894	30·045	24th & 29th.	29·793	16th	75·2	73·0	84·5	−0·3	70·5	−0·6	77·5	−0·5	14·0	88·9	13th	62·8	30th
3	Minbu	*165*	29·806	−·052	29·916	29·918	24th	29·659	17th	76·8	71·5	87·7	+0·4	72·4	+3·9	80·0	+2·1	15·3	94·6	5th	68·2	3rd & 27th.
	Yamethin	644	29·[illegible]20	−·037	29·923	29·424	24th	29·209	17th	75·1	72·2	88·2	+1·1	70·9	+3·7	79·5	+2·4	17·3	96·4	4th	65·4	26th
	Mandalay	250	29·7[illegible]0	−·021	29·942	29·876	24th	29·584	17th	76·5	72·3	89·5	+2·3	71·7	+4·0	80·6	+3·1	17·8	94·9	13th	64·5	24th
	Monywa	*280*	29·71[illegible]	−·034	29·950	29·844	24th	29·536	17th	74·6	71·1	87·2	+1·9	70·7	+3·3	79·0	+2·6	16·5	92·6	3rd	65·7	30th
	Lashio	*2,820*	27·197	−·031	27·143	27·317	24th	27·050	17th	64·3	62·9	77·0	−0·6	60·0	+5·0	68·5	+2·2	17·0	83·5	6th	52·0	7th
	Bhamo	*361*	29·629	−·026	29·955	29·755	24th	29·472	17th	67·6	65·9	81·1	+0·2	63·3	+3·4	72·2	+1·8	17·8	87·2	2nd	56·9	30th
	Myitkyina	458	29·527	−·033	29·964	29·653	24th	29·375	17th	67·2	64·6	80·0	−0·2	62·3	+1·0	71·1	+0·4	17·7	85·8	5th & 6th	55·2	30th
	II.—Assam.																					
4	Dibrugarh	353	29·652	−·[illegible]3	29·979	29·797	29th	29·448	17th	67·1	65·0	79·9	+0·7	63·3	+3·4	71·6	+2·1	16·6	84·1	13th	55·7	29th & 30th.
	Sibsagar	333	29·681	−·0[illegible]	29·985	29·822	29th	29·471	17th	65·8	65·0	77·1	−0·8	63·5	+3·8	70·3	+1·5	13·6	81·9	1st	55·1	30th
	Tezpur	252	29·764	−·03[illegible]	29·983	29·894	29th	29·559	17th	66·7	65·2	80·5	+0·2	64·4	+3·6	72·4	+1·9	16·1	85·6	1st	57·0	30th
	Gauhati	196	29·826	−·03[illegible]	29·984	29·945	24th & 29th.	29·628	17th	68·5	66·9	81·6	−0·2	64·3	+3·8	72·9	+1·8	17·3	86·2	1st	57·3	28th
	Dhubri	115	29·889	−·032	29·962	30·009	29th	29·706	16th & 17th.	69·8	66·9	80·0	−0·1	66·2	+2·9	73·1	+1·4	13·8	84·2	1st	58·6	29th
	Silchar	104	29·914	−·014	29·973	30·061	29th	29·696	17th	71·0	68·9	84·3	−0·6	64·7	+1·2	74·5	+0·3	19·6	89·1	6th	57·8	30th
	Srimangal	66	29·930		29·948	30·062	29th	29·730	17th	65·2	64·1	85·2	−1·2	59·6	+0·3	72·3	−0·5	25·6	88·9	2nd	51·6	29th
	III.—Bengal.																					
5	Cox's Bazar	36	29·923		29·[illegible]5	30·046	29th	29·747	16th	74·6	71·8	84·2		68·5		76·3		15·7	89·1	13th	58·7	30th
	Chittagong	87	29·885	−·033	29·[illegible]	30·006	30th	29·706	16th	70·1	68·2	83·0	0	66·5	+1·0	74·7	+0·5	16·5	89·3	23rd	56·9	30th
	Noakhali	43	29·951	−·013	29·[illegible]	30·087	29th	29·737	16th	72·6	69·6	83·5	+0·8	67·3	+3·8?	75·4	+2·3?	16·2	87·8	13th	59·8	30th
	Barisal	12	29·970	−·024	29·92[illegible]	30·102	29th	29·724	16th	73·8	70·3	82·3	−0·7	67·3	+2·3	74·8	+0·8	15·0	85·3	1st	59·2	30th
	Narayanganj	26	29·960	−·030	29·936	30·095	29th	29·735	16th	73·3	69·0	82·5	+0·1	67·9	+2·0	75·7	+1·1	15·6	87·9	1st	60·6	20th

N. B.—Elevations in italics indicate barometrical determinations.

* Mean of 29 days.

B.

stations in India, etc., in November, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th November 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															I.—Burma.
13	2	11	4	0	0	0	0	0	N 50° E		4·8			53		82		·794		6·9		15	+4·0	5·81	6·56	−0·75	126·88	163·39	−36·51	0·80	Victoria Point.
13	0	4	8	5	0	0	0	0	S 87° E	N 20° E	3·6	1·2	+2·4	46	− 6	86	+ 4	·792	+·019	4·7	+1·0	8	+1·9	3·18	3·79	−0·61	123·46	151·09	−27·63	1·10	Mergui.
25	2	2	0	1	0	0	0	0	N 38° E	N 29° E	1·1	0·9	+0·2	13	+ 5	84	+ 1	·773	+·016	4·9	+3·0	4	0	1·60	2·45	−0·85	208·35	209·38	−1·03	0·54	Tavoy.
5	0	10	10	3	2	0	0	0	N 81° E	N 4° E	2·1	1·8	+0·3	62	+40	80	− 4	·761	−·011	5·0	+1·9	3	+0·2	4·00	2·21	+1·79	214·05	184·89	+29·16	1·70	Moulmein.
1	7	13	5	2	1	1	0	0	N 49° E	N 68° E	2·6	2·8	−0·2	62	+ 2	87	+ 1	·819	+·039	7·0	+3·4	8	+4·8	5·50	2·73	+2·77	101·80	96·42	+5·38	1·47	Rangoon.
17	0	3	6	3	0	0	1	0	E	N 56° E	2·4	2·6	−0·2	31	−28	87	0	·839	+·062	4·6	+1·4	8	+3·9	4·04	3·22	+0·82	105·26	107·23	− 1·97	1·33	Bassein.
3	2	10	10	2	2	0	0	1	N 71° E	N 53° E	6·1	6·7	−0·6	62	−11	82	+ 4	·903	+·096	5·3	+1·6	10	+4·7	7·45	5·03	+2·42	110·63	115·43	− 4·80	2·93	Diamond Island.
4	6	8	3	4	2	0	1	2	N 47° E	N 12° W	1·4	1·2	+0·2	40	−12	80*	0	·796*	+·044	6·6	+2·0	2	−0·7	1·34	1·84	−0·50	78·53	80·12	−1·59	0·77	Toungoo.
27	0	1	0	1	1	0	0	0	S 52° E		0·2			3		86		·837		5·7		6	+1·3	18·57	5·33	+13·24	210·44	172·60	+37·84	7·35	Kyaukpyu.
5	9	13	4	0	0	1	0	0	N 35° E	N 26° E	1·7	1·7	0	69	−15	89	− 1	·778	+·032	5·3	+1·9	6	+2·5	16·78	4·08	+12·70	235·34	192·96	+42·38	10·28	Akyab.
4	3	1	0	4	0	0	0	18	N 34° W	N 48° W	2·0	5·2	−3·2	53	−23	76	− 3	·699	+·033	3·6	+0·3	3	+0·5	2·97	1·82	+1·15	25·49	33·17	−7·68	2·20	Minbu. —
										N 18° W	—	2·2				87	+ 2	·750	+·063	4·1	+0·3	4	+1·2	4·66	1·67	+2·99	30·47	35·32	−4·85	3·21	Yamethin.—
										N 11° E		1·5				81	− 4	·736	+·047	6·0	+2·6	2	−1·0	1·00	1·65	−0·65	29·00	31·52	− 2·52	0·60	Mandalay.
4	17	1	0	0	0	0	0	8	N 11° W		1·1			79		84	− 4	·718	+·023	5·7	+1·2	1	−1·2	0·69	1·77	−1·08	29·59	30·51	−0·92	0·64	Monywa.
25	0	0	1	0	0	2	1	1	S 72° W		1·3			7		93	0	·559	+·055	5·6	−1·1	7	+2·4	3·18	2·60	+0·58	50·34	58·02	−7·68	0·33	Lashio.
29	0	1	0	0	0	0	0	0	N 45° E	N 23° E	0·4	1·2	−0·8	3	−36	91	0	·612	+·033	7·2	+3·2	4	+1·3	3·22	1·50	+1·72	59·82	68·54	−8·72	1·45	Bhamo.
18	5	6	1	0	0	0	0	0	N 30° E		2·0			33		86	0	·577	−·006	5·0	+0·3	5	+2·9	5·31	1·02	+4·29	76·72	74·19	+2·53	3·36	Myitkyina.
																															II.—Assam.
27	0	1	2	0	0	0	0	0	N 75° E		0			10		94	+ 5	·622	+·083	4·2	+0·8	4	+1·6	0·80	1·26	−0·46	101·53	89·47	+12·06	0·30	Dibrugarh.
22	2	4	2	0	0	0	0	0	N 46° E	N 60° E	0·6	1·1	−0·5	27	0	96	− 1	·610	+·029	9·2	+3·5	4	+1·9	2·44	1·10	+1·34	84·46	77·59	+ 6·87	1·35	Sibsagar.
3	0	3	23	0	1	0	0	0	N 88° E		1·2			82		92	+ 3	·600	+·045	3·8	+1·2	4	+2·5	0·79	0·75	+0·04	47·42	61·02	−13·60	0·34	Tezpur.
36	0	1	3	0	0	0	0	0	N 79° E		0			13		92	− 1	·638	+·043	8·9	+3·4	2	+1·0	0·79	0·39	+0·40	48·39	54·78	− 6·39	0·60	Gauhati.
0	0	12	14	1	2	1	0	0	N 77° E	N 65° E	4·2	3·7	+0·5	72	− 5	85	− 2	·621	+·021	3·0	+1·4	0	−0·5	0·01	0·34	−0·33	89·67	87·46	+ 2·21	0·01	Dhubri.
30	0	0	0	0	0	0	0	0	Calm	N 79° E	0	1·2	−1·2	(a)		90	+ 3	·680	+·056	5·3	+1·5	3	+1·2	3·72	1·35	+2·37	76·76	100·09	−23·33	2·37	Silchar.
																94	+ 6	·594	−·017	2·4		4	+3·1	3·38	0·96	+2·42	21·57	94·40	− 2·83	1·85	Srimangal.
																															III.—Bengal.
16	1	8	3	1	0	0	0	1	N 52° E		1·1			37		87		·742		4·2		4	+0·6	6·45	4·75	+1·70	144·34	127·94	+16·40	4·44	Cox's Bazar.
3	6	18	1	0	1	0	0	1	N 35° E	N 43° E	1·9	2·0	−0·1	72	− 1	90	+ 2	·669	−·005	4·5	+1·5	2	+0·3	5·42	1·26	+3·56	119·42	91·65	+27·77	2·76	Chittagong.
9	7	11	0	1	0	0	0	2	N 35° E		0·9			57		85	− 2	·684	+·013	2·6	+1·0	3	+1·4	2·68	1·75	+0·93	105·25	110·26	− 5·01	1·40	Noakhali.
6	6	10	2	1	0	0	1	4	N 21° E	N 18° E	1·9	1·2	+0·7	53	+28	81	− 3	·678	−·002	3·1	+1·3	3	+1·4	2·93	1·55	+1·38	77·80	72·98	+ 4·82	1·14	Barisal.
19	2	2	2	0	0	0	0	5	N 1° W	N 13° E	0·8	1·5	−0·7	23	−20	79	− 6	·653	+·001	2·8	+0·3	3	+1·9	1·82	1·02	+0·80	68·64	62·65	+ 5·99	0·87	Narayanganj.

(a) Indeterminate.

* Mean of 29 days.

Table

(2) Abstract of observations taken at 8 hrs. at 209

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal—*concld.*																					
	Mymensingh	63	29·928	−·028	29·944	30·051	29th	29·736	16th	70·8	68·1	83·2	+0·9	66·4	+2·3	74·6	+1·6	16·8	87·0	1st	59·1	19th & 30th.
	Bogra	75	29·920	−·029	29·949	30·059	29th	29·714	16th	69·0	66·5	82·0	−0·5	63·5	+0·9	72·7	+0·2	18·5	85·6	2nd	54·8	20th
	Dinajpur	123	29·868	−·038	29·949	29·991	29th	29·684	16th	68·9	65·4	82·7	+0·2	62·4	+1·9	72·6	+1·1	20·3	86·3	1st	52·5	19th & 20th.
	Jalpaiguri	283	29·725	−·026	29·975	29·862	29th	29·544	17th	67·0	64·6	83·2	+1·5	62·4	+1·7	72·8	+1·6	20·8	86·3	1st	52·3	20th
	Saugor Island	10	29·966	−·044	29·922	30·103	29th	29·686	16th	73·5	70·3	82·3	+0·3	68·7	+1·7	75·5	+1·0	13·6	86·3	13th	60·7	30th
	Midnapore	149	29·828	−·047	29·930	29·973	29th	29·602	16th	71·4	65·8	83·2	−1·6	65·1	+2·1	74·1	+0·3	18·1	87·8	2nd	53·1	20th
	Calcutta	21	29·967	−·040	29·936	30·113	29th	29·713	16th	70·2	67·4	82·5	+0·5	66·1	+1·8	74·3	+1·1	16·4	86·6	1st	58·1	30th
	Jessore	30	29·966	−·025	29·943	30·090	29th	29·730	16th	71·2	67·1	83·2	0	64·6	+0·9	73·9	+0·5	18·6	86·0	5th	57·7	30th
	Burdwan	99	29·891	−·041	29·949	30·043	29th	29·654	16th	68·9	64·9	83·7	+0·1	64·7	+0·5	74·2	+0·3	19·0	87·6	1st & 3rd.	56·4	30th
	Berhampore	67	29·938	−·025	29·956	30·084	29th	29·733	16th	69·8	66·1	82·2	0	64·9	+0·8	73·5	+0·4	17·3	85·6	4th	57·2	20th
	IV.—Bihar and Orissa.																					
6	Balasore	50	29·941	−·042	29·937	30·080	29th	29·708	16th	69·1	66·2	83·1	−0·9	65·3	+2·8	74·2	+0·0	17·8	87·2	1st	58·4	30th
	Hukitala (False Point)	29	29·952	−·045	29·922	30·086	30th	29·738	16th													
	Cuttack	80	29·904	−·045	29·927	30·055	29th	29·706	15th	71·6	69·0	82·5	−2·7	68·7	+2·8	75·6	+0·1	13·8	86·7	5th	62·4	20th
	Puri	24	29·964	−·040	29·929	30·108	29th	29·744	15th	74·3	71·4	83·2	−1·6	71·7	+3·1	77·4	+0·7	11·5	90·1	4th	65·9	20th
	Angul	455	29·521	−·044	29·935	29·650	29th	29·330	15th & 16th.	70·6	67·7	82·4	−2·1	65·5	+5·8	73·9	+1·9	16·9	87·0	4th	57·8	20th
	Sambalpur	486	29·494	−·066	29·943	29·632	29th	29·338	15th	70·1	66·8	83·1	−0·6	64·6	+3·2	73·8	+1·3	18·5	86·8	4th	58·2	1st
7	Chaibasa	733	29·241	−·041	29·952	29·391	29th	29·051	16th	66·5	63·5	82·6	+0·2	62·0	+3·2	72·3	+1·7	20·6	87·2	4th	52·8	19th
	Ranchi	2,128	27·841	−·024	29·949?	27·968	29th	27·675	16th	65·8	58·8	77·8	−0·2	58·8	+1·0	68·3	+0·4	19·0	82·7	4th	51·3	20th
	Purulia	816	29·165	−·036	29·958	29·305	29th	28·981	16th	68·7	62·4	85·8	+2·0?	63·2	+1·7	74·0	+1·9?	23·6	94·5	9th	55·3	21st
	Daltonganj	730	29·281	−·029	29·993	29·427	29th	29·116	16th	65·5	60·5	82·7	−0·5	55·7	+2·2	69·2	+0·9	27·0	89·3	2nd	47·8	20th
8	Purnea	124	29·880	−·037	29·964	30·018	29th	29·697	17th	65·4	63·0	83·2	+1·2	59·4	+0·4	71·3	+0·8	23·8	86·6	1st	50·8	19th & 20th.
	Monghyr	155	29·852		29·964	29·971	29th	29·655	16th	69·5	63·4	82·6		62·5		72·5		20·1	86·2	4th & 5th.	53·9	20th & 30th.
	Darbhanga	165	29·848	−·022	29·973	29·995	29th	29·631	16th	69·3	64·0	83·7*	+3·4*	57·7	−3·6?	69·6*	−0·1?	26·0	86·5	16th	49·7	19th
	Pusa	188	29·814		29·965	29·953	29th	29·648	17th	65·0	62·3	84·8		58·3		71·6		26·5	87·0	13th	49·1	30th
	Patna	183	29·834	−·025	29·978	29·973	29th	29·674	16th	69·6	63·4	82·1	+0·2	62·2	+1·5	72·2	+0·9	19·9	85·0	5th	53·2	30th
	Buxar	239	29·768	−·027	29·973	29·909	29th	29·613	16th	66·3	60·7	85·5	+1·3	60·0	+0·3	72·8	+0·8	25·5	89·1	14th	51·6	30th
	Gaya	372	29·647	−·019	29·987	29·801	29th	29·476	16th	67·9	61·7	82·6	−0·8	61·8	+2·3	72·2	+0·7	20·8	85·6	2nd	52·3	30th
	Naya Dumka	489	29·510	−·023	29·968	29·653	29th	29·310	16th	69·1	64·0	82·6	+0·5	60·7	+0·8	71·6	+0·7	21·9	85·8	4th	51·8	30th
	V.—United Provinces of Agra and Oudh.																					
9	Gorakhpur	257	29·749	−·019	29·975	29·881	29th	29·588	17th	64·4	60·1	82·3	+0·4	56·8	−1·0	69·6	−0·3	25·5	86·2	2nd	49·8	29th & 30th.
	Benares	267	29·744	−·026	29·977	29·884	2 th	29·601	16th & 17th.	65·8	60·1	83·4	+0·6	55·4	−0·1	69·4	+0·3	28·0	87·5	4th	48·2	30th
	Allahabad	309	29·728	−·001?	30·004?	29·860	29th	29·593	16th	66·2	59·2	84·3	+0·8	55·9	+0·7	70·1	+0·7	28·4	88·3	4th	49·1	30th
	Cawnpore	416	29·598	−·015	29·993	29·723	29th	29·472	17th	60·9	56·0	82·4	−0·8	55·0	−1·1	68·7	−0·9	27·4	87·0	4th	48·5	29th

N.B.—Elevations in italics indicate barometrical determinations.

* Mean of 15 days.

B—*continued.*

stations in India, etc., in November, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury	Departure from normal.	Cloud. Mean amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th November 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															III.—Bengal—*concld.*
28	0	1	1	0	0	0	0	0	N 66° E	N 58° E	0·2	0·8	−0·6	7	−23	86	− 1	·656	+·013	2·2	−0·2	1	+0·1	0·86	0·81	+0·05	73·53	84·25	−10·72	0·77	Mymensingh.
25	1	1	2	0	0	0	1	0	N 45° E	N 27° E	0·3	1·0	−0·7	10	−25	87	+ 4	·620	+·024	2·5	+1·5	1	+0·2	0·49	0·74	−0·25	52·34	65·31	−12·97	0·44	Bogra.
12	2	7	4	0	0	0	5	0	N 30° E	N 21° E	1·0	1·6	−0·6	30	−25	82	− 1	·586	+·016	1·5	+0·2	0	−0·5	0	0·25	−0·25	60·25	65·72	−5·47	0	Dinajpur.
25	0	0	2	0	0	0	0	3	N 3° W	N 20° E	0·9			7	−45	86	+ 2	·580	+·025	1·0	−0·1	0	−0·5	0	0·22	−0·22	92·04	114·71	−22·67	0	Jalpaiguri.
0	13	12	2	1	0	0	1	1	N 23° E	N 10° E	5·5	4·3	+1·2	73	+ 3	84	− 2	·699	+·018	4·4	+1·7	3	+1·6	4·37	1·45	+2·92	65·17	65·19	−0·02	3·88	Saugor Island.
26	1	2	0	0	0	0	0	1	N 15° E		1·5			10		73	+ 2	·554	+·038	3·6	+2·2	1	−0·1	0·95	0·82	+0·13	56·37	52·99	+3·38	0·83	Midnapore.
3	10	4	2	0	1	1	1	8	N 9° W	N	2·1	1·8	+0·3	56	+11	85	+ 3	·634	+·022	3·1	+1·3	2	+0·9	1·95	0·66	+1·29	57·42	56·90	+0·52	1·74	Calcutta.
28	0	1	1	0	0	0	0	0	N 66° E	N 6° W	0·7	1·2	−0·5	7	−19	80	− 3	·613	−·017	2·8	+0·9	2	+0·9	2·12	1·08	+1·04	53·98	58·60	−4·62	1·34	Jessore.
23	3	2	0	0	0	0	0	2	N	N 5° W	0	1·2	−1·2	19	−21	79	+ 4	·566	+·014	3·1	+1·3	2	+1·0	0·75	0·72	+0·13	49·83	52·37	−2·54	0·44	Burdwan.
23	2	1	1	0	1	0	0	2	N 6° E	N 13° W	0·8	1·1	−0·3	10	−20	81	− 3	·604	+·010	3·3	+1·4	1	+0·3	0·68	0·62	+0·06	45·72	52·14	−6·42	0·68	Berhampore.
																															IV.—Bihar and Orissa.
13	9	3	0	0	0	0	0	5	N 6° W	N 21° W	1·2	1·5	−0·3	49	−18	85	+ 5	·610	+·047	4·8	+3·1	4	+2·7	4·07	1·27	+2·80	74·67	55·71	+18·96	2·80	Balasore.
2	18	8	0	0	0	0	0	2	N 9° E		5·2			82	+ 2					6·8	+3·4	4	+1·7	19·65	3·10	+16·55	74·86	58·87	+15·99	7·72	Hukitala (False Point).
26	0	1	2	0	0	0	1	0	N 66° E	N 45° W	0·9	1·2	−0·3	7	−10	87	+ 9	·673	+·005	4·6	+2·1	6	+4·3	5·18	1·50	+3·68	62·71	55·80	+6·91	1·81	Cuttack.
1	15	11	1	0	0	0	0	1	N 18° E		5·8			90		86	+ 8	·731	+·090	4·4	+2·4	8	+5·9	14·14	3·47	+10·67	53·66	51·45	+2·21	4·09	Puri.
13	1	1	0	1	0	0	2	2	N 45° W		2·5			43		85	+12	·641	+·137	4·0	+2·8	4	+2·8	3·87	1·12	+2·75	49·87	42·10	+7·77	1·37	Angul.
1	15	7	0	1	0	0	0	6	N 3° E	N 21° E	3·1	2·0	+1·1	76	+ 1	82	+ 8	·610	+·090	4·4	+2·6	2	+1·0	1·16	0·90	+0·26	73·7	61·78	+11·99	0·95	Sambalpur.
26	2	2	0	0	0	0	0	0	N 23° E	S 77° W	1·0	0·7	+0·3	10	−23	84	+ 2	·552	+·053	3·4	+1·7	1	−0·1	0·34	0·77	−0·43	47·34	47·22	+0·12	0·22	Chaibasa.
12	2	1	1	0	0	0	6	8	N 50° W	N 63 W	2·2	2·7	−0·5	43	+25	65	+ 2	·417	+·018	3·0	+1·4	0	−0·9	0	0·45	−0·45	70·12	51·27	+18·85	0	Ranchi.
16	1	0	0	0	0	3	5	5	N 80° W		0·4			37		69	− 1	·488	+·039	3·6	+2·4	1	0	0·41	0·61	−0·20	59·32	47·81	+11·51	0·35	Purulia.
30	0	0	0	0	0	0	0	0	Calm		0·6			(a)		74	− 5	·464	+·029	1·5	+0·4	0	−0·7	0·02	0·45	−0·43	51·85	38·51	+16·34	0·02	Daltonganj.
6	4	2	3	0	1	7	6	2	N 84° W	N 50° E	1·3	1·1	+0·2	30	+19	87	− 2	·559	+·005	3·4	+2·72	0	−0·4	0·02	0·24	−0·22	61·78	58·76	+3·02	0·[illegible]2	Purnea.
15	0	1	2	1	0	11	0	0	S 27° W		1·4			30		71		·508		1·9		0	−1·0	0	1·51	−1·51	53·93	47·85	+6·08	0	Monghyr.
28	0	0	0	0	0	1	1	0	S 66° W	N 48° W	0·6	1·2	−0·6	7	− 3	74	− 9?	·531	−·020	0·8	+0·2	0	−0·4	0	0·24	−0·24	33·02	48·72	−15·70	0	Darbhanga.
14	3	1	2	2	3	2	4	2	N 50° W		1·2			10		85		·527		0·9		0	−0·6	0	0·54	−0·54	30·21	46·48	−16·27	0	Pusa.
25	0	1	0	0	0	1	3	0	W	S 60° W	1·3	1·5	0	10	−17	69	− 2	·507	+·007	1·9	+0·8	0	−0·5	0	0·32	−0·32	39·26	45·78	−6·52	0	Patna.
15	1	2	1	1	1	4	5	0	S 68° W		0·9			17		71	+ 4	·458	+·003	2·8	+1·7	0	−0·5	0	0·44	−0·44	40·79	38·92	+1·87	0	Buxar.
11	1	0	0	2	6	7	2	1	S 31° W	S 7° E	0·9	1·7	−0·8	43	+10	69	− 2	·478	+·011	2·2	+0·7	0	−0·7	0	0·51	−0·51	54·15	44·11	+10·04	0	Gaya.
40	0	1	0	0	0	0	0	0	N 45° E		0·6			3		74	0	·532	+·023	1·7	+0·6	1	+0·3	0·18	0·45	−0·27	54·39	52·88	+1·51	0·10	Naya Dumka.
																															V.—United Provinces of Agra and Oudh.
17	0	2	7	0	0	0	4	0	N 72° E	N 67° W	0·7	1·7	0	13	−17	77	+ 1	·468	−·020	0·4	−0·3	0	−0·4	0	0·19	−0·19	37·13	48·28	−11·15	0	Gorakhpur.
24	0	0	2	0	3	3	0	7	S 32° W	S 53° W	0·5	1·4	−0·9	3	−19	70	− 5	·443	−·019	1·3	+0·3	0	−0·7	0	0·34	−0·34	39·98	38·05	+1·93	0	Benares.
21	1	0	1	0	0	1	6	0	N 87° W	N 82° W	0·5	1·7	−1·2	19	− 6	65	− 4	·414	−·073	0·9	−0·2	0	−0·6	0	0·36	−0·36	33·35	36·76	−3·41	0	Allahabad.
9	6	1	3	0	1	2	5	3	N 37° W	N 68° W	0·9	1·4	−0·5	27	+ 8	72	− 5	·387	−·008	0·6	−0·1	0	−0·4	0	0·39	−0·39	34·89	33·92	+0·97	0	Cawnpore.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs. at 20

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	V.—United Provinces of Agra and Oudh—*concld.*																					
	Lucknow	368	29·639	—·022	29·983	29·757	29 h	29·498	17th	62·6	56·9	83·8*	—0·1*	54·7	+1·6	68·5*	+0·7	29·1	89·4	2nd	47·5	30th
	Bahraich	407	29·585	—·028	29·972	29·704	29th	29·439	17th	63·1	59·0	83·3	—0·2	56·7	+0·2	70·0	0	26·6	87·1	1st & 2nd	47·2	30th
10	Jhansi	824	29·183	—·039	29·993	29·309	28th	29·065	17th	66·0	57·1	84·6	—1·2	56·1	—3·3?	70·3	—2·3?	28·5	9·6	1st	48·6	20th
	Agra	556	29·459	—·018	29·997	29·589	27th	29·357	17th	65·6	56·2	83·1	—1·6	56·7	+0·1	69·9	—0·7	26·4	89·3	3rd	49·3	30th
	Mainpuri	516	29·463	—·029	29·985	29·607	29th	29·355	17th	60·6	54·1	81·1	—0·7	53·0	—1·2	68·6	—0·9	31·1	89·1	3rd	46·2	30th
	Bareilly	568	29·423	—·023	29·981	29·639	29th	29·276	17th	61·1	56·8	82·3	+0·7	53·0	—0·2	67·7	+0·3	29·3	88·4	3rd	47·1	19th & 29th.
	Roorkee	899	29·099	—·008	30·018	29·205	29th	28·941	17th	56·3	52·4	78·6	—1·9	48·1	—1·7	63·3	—1·8	30·5	83·8	3rd	41·4	29th
	VI.—Punjab.																					
11	Delhi	718	29·289	—·012	30·009	29·396	27th	29·163	17th	60·3	51·6	79·7	—3·2	56·9	+0·2	68·3	—1·5	22·8	85·5	1st	49·1	30th
	Hissar	725	29·303	+·004?	30·036	29·435	27th	29·177	17th	57·1	50·0	83·2	1·9	48·7	—1·6	66·0	—1·7	34·5	90·9	3rd	41·0	30th
	Patiala	*818*	29·158	—·038?	29·989?	29·287	27th	29·017	17th	57·7	51·2	80·6	—1·5	49·1	—2·8	64·9	—2·1	31·5	86·6	2nd	42·4	30th
	Ambala	892	29·097	—·018	30·014	29·212	27th	28·941	17th	54·5	49·1	81·5	—1·0	46·8	—3·5	64·2	—2·3	34·7	87·6	1st & 4th	41·0	19th & 20th.
	Ludhiana	812	29·188	—·010	30·018	29·317	27th	29·040	17th	56·3	50·0	80·6	—0·3	50·7	—0·9	65·7	—0·6	29·9	87·1	1st	44·3	30th
	Lahore	702	29·288	—·025	30·010	29·429	27th	29·147	17th	53·1	49·8	81·5	—2·4	47·7	—0·5	64·6	—1·5	33·8	89·5	1st	43·3	30th
	Sialkot	830	29·161	—·021	30·019	29·287	27th	29·016	17th	53·5	49·[illegible]	78·7	2·7	45·3	—5·0	62·0	—3·9	33·4	84·7	2nd	39·5	29th
	Rawalpindi	1,674	28·304	—·038	30·050	28·399	21st	28·174	17th	50·0	44·7	78·2	+0·3	43·0	—1·3	60·6	—0·5	35·2	83·4	2nd	37·9	20th
12	Khushab	612	29·404	—·017	30·026	29·541	27th	29·273	16th	56·8	48·2	83·5	—0·1	44·5	—6·8	64·0	—3·5	39·0	90·2	1st	37·3	30th
	Lyallpur	605	29·395		30·006	29·537	27th	29·249	17th	56·1	50·8	81·7		46·4		64·1		35·3	89·2	1st	42·5	30th
	Montgomery	558	29·449	—·023	30·008	29·600	27th	29·306	17th	60·2	52·0	82·3	—2·5	50·0	—2·0	66·1	—2·3	32·3	90·5	1st	43·5	29th
	Multan	426	29·580	—·020	30·003	29·731	27th	29·442	17th	60·4	52·5	83·9	—0·9	53·7	+0·2	68·8	—0·3	30·2	90·6	3rd	40·6	19th & 22nd.
	VII.—North-West Frontier Province.																					
14	Peshawar	1,113	28·893	—·038	30·072	29·032	27th	28·755	18 h	55·2	41·8	76·2	—1·1	42·6	—3·5	59·4	—2·3	33·6	83·4	1st	37·1	30th
	Dera Ismail Khan	590	29·436	—·022	30·036	29·589	27th	29·287	17th	55·2	49·6	80·7	—1·9	47·5	—0·7	64·1	—1·3	33·2	90·4	1st	41·9	30th
	VIII.—Sind.																					
16	Jacobabad	186	29·834	—·022	29·990	30·001	28th	29·694	2nd	60·1	50·5	87·4	—0·4	49·8	—2·	68·6	—1·2	37·6	95·7	1st	42·5	20th
	Hyderabad	96	29·906	—·0[illegible]6	29·957	·0091	24 h	29·774	2nd	66·0	56·6	87·2	—1·9	59·1	+0·3	73·1	—0·9	28·1	94·0	9th	51·1	19th
	Karachi	18	29·997	—·042	29·962	30·184	24th	29·8[illegible]8	2nd	70·6	60·7	86·6	+2·3	65·8	—0·9	76·2	+0·7	20·8	94·5	6th	61·5	23rd & 29th.
	IX.—Rajputana.																					
17	Bikaner	*771*	29·230	—·028	30·001	29·386	28th	29·000	2nd	62·0	52·2	84·9	—0·5	54·0	—5·3?	69·5	—2·9?	30·9	93·7	2nd	46·5	20th
	Jodhpur	780	29·210	—·042	29·975	29·365	28th	29·070	2nd	67·4	54·7	87·6	—2·1	60·1	+1·6	73·8	—0·3	27·5	96·5	2nd	49·3	18th
18	Jaipur	1,431	28·577	—·027	30·013	28·695	28th	28·460	2nd	65·3	54·8	83·2	—3·3	55·8	+0·1	69·5	—1·6	27·4	91·5	2nd	45·2	18th
	Ajmer	1,611	28·377	—·051	30·016	28·517	28th	28·255	2nd	57·2	50·8	81·5	—2·9	56·3	+2·9	68·4	0	24·2	90·8	2nd	45·5	17th
	Kotah	832	29·162	—·043	29·976	29·305	28th	29·013	2nd	69·0	59·2	84·2	—4·0	60·8	+0·6	72·5	—1·7	23·4	92·6	4th	55·6	18th & 30th.

N.B.—Elevations in italics indicate barometrical determinations.

* Mean of 9 days.

B—*continued.*

stations in India, etc., in November, 1919—*continued.*

Wind direction.											Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									
Number of winds from																															
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Resultant direction.	Normal direction.	Mean velocity, miles per hour.	Normal.	Departure, from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th November 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32		33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																																V.—United Provinces of Agra and Oudh—*concld.*
30	0	0	0	0	0	0	0	0		Calm.	N 72° W	1·0	1·0	0	(a)		69	− 3	·394	−·029	1·3	+0·4	0	−0·4	0	0·21	−0·21	45·32	36·12	+9·20	0	Lucknow.
30	3	0	0	0	2	2	3	0		S 84° W	N 2° W	0·9	1·3	−0·4	15	+ 2	77	0	·450	−·030	2·0	+1·5	0	−0·7	0	0·33	−0·33	53·40	42·09	+11·31	0	Bahraich.
19	0	1	1	0	0	5	1	3		S 82° W	S 81° W	1·9	1·3	+0·6	17	− 6	56	+ 4	·350	−·019	0·8	+0·1	1	+0·6	0·18	0·14	+0·04	52·08	34·13	+17·95	0·10	Jhansi.
22	1	1	0	0	0	1	3	2		N 61° W	N 56° W	0·8	2·0	−1·2	13	−24	52	− 5	·327	−·010	1·4	+0·6	1	+0·7	0·12	0·13	−0·01	28·94	24·78	+4·16	0·12	Agra.
17	2	1	1	1	0	0	2	0		N 32° W	N 60° W	0·4	0·6	−0·2	23	+ 4	63	− 4	·346	−·019	1·5	+0·5	0	−0·3	0·09	0·21	−0·12	22·86	24·81	−1·95	0·09	Mainpuri.
20	2	2	0	0	0	0	4	2		N 40° W	N 7° E	0·5	0·9	−0·4	23	+14	75	− 1	·407	+ ·001	1·4	+0·7	0	−0·4	0	0·26	−0·26	34·04	41·04	−7·00	0	Bareilly.
20	0	0	0	1	0	0	0	0		S 45° E	S 81° E	0·6	0·8	−0·2	3	+ 1	76	− 1	·342	−·018	0·9	+0·1	1	+0·4	0·25	0·28	−0·03	40·77	37·17	+3·60	0·25	Roorkee.
																																VI.—Punjab.
17	0	0		1	0	0	9	3		N 83° W	N 89° W	0·7	1·5	−0·8	37	− 1	52	− 2	·271	−·032	1·0	0	0	−0·4	0·06	0·13	−0·07	13·73	24·12	−10·39	0·06	Delhi.
7	1	1	4	4	4	5	3	1		S 2° E	S 18° W	2·6	2·0	+0·6	26	+15	58	− 2	·269	−·038	1·2	0	0	−0·1	0	0·03	−0·03	8·96	11·83	−2·87	0	Hissar.
18	5	1	[illegible]	2	0	1	2	1		N 14° W		2·3			13		63	− 2	·297	−·055	1·4	+0·5	0	−0·4	0·07	0·19	−0·12	21·78	20·70	+1·08	0·07	Patiala.
21	2	1	2	1	1	0	0	2		N 41° E	N 34° W	1·5	1·0	+0·5	10	+ 2	65	− 1	·278	−·069	1·6	+0·7	[illegible]	+0·5	0·13	0·29	−0·16	20·15	25·07	−4·92	0·13	Ambala.
29	1	0	0	0	0	0	0	0		N	S 27° W	0·6	0·7	−0·1	3	− 4	61	− 3	·278	−·037	0·7	−0·8	1	+0·7	0·11	0·13	−0·02	25·86	22·81	+3·05	0·11	Ludhiana.
27	0	0	1	0	0	0	2	0		W	N 5° W	0·4	0·9	−0·5	3	+ 2	77	+ 6	·315	−·016	1·0	−0·2	0	−0·2	0·04	0·08	−0·04	17·30	15·73	+1·57	0·03	Lahore.
7	2	2	4	4	0	0	0	1		N 80° E	N 42° E	0·4	0·6	−0·2	23	+ 8	75	+ 9	·304	−·011	0·5	−0·6	0	−0·3	0	0·12	−0·12	28·90	23·68	+5·22	0	Sialkot.
14	1	1	1	1	1	1	6	4		N 54° W	N 50° W	1·5	0·9	+0·6	10	− 1	64	0	·231	−·025	0·2	−1·5	0	−0·5	0	0·29	−0·29	37·12	23·89	+13·23	0	Rawalpindi.
22	1	1	3	0	1	1	0	1		N 73° E	N 38° E	1·1	2·0	−0·9	7	−15	49	− 1	·226	−·030	0·5	−0·7	0	−0·2	0	0·10	−0·10	8·27	10·40	−2·13	0	Khushab.
[illegible]	0	3	2	2	1	1	0	1		S 86° E		1·0			[illegible]		68		·302		1·0		0	−0·2	0	0·09	−0·09	9·25	10·30	−1·05	0	Lyallpur.
2	0	3	9	4	6	4	1	1		S 47° E	S 72° E	2·1	2·1	0	43	+21	54	+ 3	·281	−·002	1·3	0	0	−0·2	0·01	0·07	−0·06	7·37	8·20	−0·83	0·01	Montgomery.
21	5	4	0	0	0	0	0	0		N 20° E	N 72° E	0·8	0·9	−0·1	27	+ 4	55	− 5	·291	−·037	0·1	−0·9	0	−0·2	0	0·08	−0·08	8·13	5·22	+2·91	0	Multan.
																																VII.—North-West Frontier Province.
29	0	0	0	0	0	0	0	1		N 45° W	S 31° W	0	1·5	−1·5	3	−17	74	+ 8	·222	−·054	0·2	−2·1	0	−0·6	0	0·31	−0·31	7·58	5·80	+1·78	0	Peshawar.
29	0	1	0	0	0	0	0	0		N 45° E	N 9° E	0·1	0·6	−0·5	3	− 1	65	− 1	·282	−·017	0	−1·5	0	−0·4	0	0·18	−0·18	3·06	6·04	−2·98	0	Dera Ismail Khan.
																																VIII.—Sind.
29		0	0	0	0	0	0	1		N 48° W	N 18° E	0·1	1·2	−1·1	3	− 9	47	−10	·241	−·050	0·1	−1·2	0	−0·1	0	0·08	−0·08	0·40	2·43	−2·03	0	Jacobabad.
27	3	0	0	0	0	0	0	0		N	N 10° W	0	4·6	−4·6	10	−31	53	+ 1	·329	−·043	0·3	−1·0	0	−0·1	0	0·07	−0·07	7·35	6·24	+1·11	0	Hyderabad.
6	9	12	2	0	0	0	0	1		N 28° E	N 49° E	4·9	5·5	−0·6	69	+ 2	53	−13	·398	−·120	1·4	+0·2	0	−0·1	0	0·09	−0·09	2·40	6·02	−3·62	0	Karachi.
																																IX.—Rajputana.
6	0	1	7	13	3	0	0	0		S 56° E	N 76° W	2·5	2·4	+0·1	66	+47	49	0	·261	−·046	1·7	+0·4	0	−0·1	0·08	0·05	+0·03	17·13	9·78	+7·35	0·08	Bikaner.
7	0	22	1	0	0	0	0	0		N 47° E		2·0			72		41	+ 3	·266	+·011	2·1	+1·0	1	+0·8	0·21	0·12	+0·09	10·64	11·93	−1·29	0·18	Jodhpur.
10	1	2	7	6	1	0	1	2		S 82° E	N 14° W	2·6	2·0	+0·6	33	+ 8	49	− 2	·289	−·032	1·6	+0·3	1	+0·7	0·32	0·15	+0·17	24·44	22·07	+2·37	0·28	Jaipur.
30	0	0	0	0	0	0	0	0		Calm.	N 24° W	0·8	1·2	−0·4	(a)		64	+ 1	·297	−·033	0·9	−0·2	2	+1·6	1·16	0·18	+0·92	14·57	18·87	−4·30	0·75	Ajmer.
31	0	0	0	6	0	1	0	2		S 31° E		1·1			13		54	+ 7	·374	+ ·051	2·1	+1·6	2	+2·7	0·78	0·08	+0·70	26·73	25·13	+1·60	0·29	Kotah.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs. at 209

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	X.—Bombay.																					
19	Deesa	466	29·507	—·057	29·938	29·658	24th	29·384	2nd	70·8	59·7	91·8	—0·5	60·7	+2·8	76·2	+1·1	31·1	101·0	1st	53·5	30th
	Bhuj	334	29·643	—·054	29·934	29·825	24th	29·526	2nd	74·4	65·2	90·1	+0·4	62·3	—0·7	76·2	—0·1	27·8	99·8	2nd	55·1	26th
	Jamnagar	61	29·917	—·066	29·925	30·088	24th	29·715	3rd	75·9	68·2	89·8	—0·2	64·1	+1·3	76·9	+0·5	25·7	96·5	2nd & 4th	56·6	26th
	Dwarka	37	29·942	—·068	29·925	30·128	24th	29·814	3rd	77·1	68·9	87·7	+1·2	70·7	+2·6	79·2	+1·9	17·0	96·8	5th	64·5	24th
	Rajkot	429	29·513	—·080	29·899	29·692	24th	29·408	3rd	73·6	61·6	9[illegible]·5	—0·3	66·5	+6·9	78·5	+3·3	24·0	98·9	2nd	56·1	26th
	Veraval	*18*	29·913*	—·085	29·873*	30·043	29th	29·799	3rd	76·2	66·7	87·5	—1·3	70·8	+3·3	79·2	+1·0	16·7	92·9	14th	62·6	25th
	Bhavnagar Para	55	29·896	—·080	29·898	30·067	24th	29·785	2nd	75·1	65·8	90·4	—0·8	65·6	+2·6?	78·0	+0·9?	24·8	100·2	2nd	55·8	24th
	Surat	39								75·6	68·1	91·3	—0·1	69·4	+5·9	80·4	+2·9	21·9	97·0	2nd	60·9	23rd
	Ahmadabad	163	29·819	—·053	29·934	29·678	24th	29·687	2nd	76·4	66·8	92·0	—0·9	68·4	+2·9	80·2	+1·0	23·6	101·4	1st	61·1	24th
25	Bombay	37	29·899	—·070	29·876	30·032	24th	29·800	3rd	77·8	72·9	88·2	+1·0	75·9	+2·4	82·0	+1·7	12·3	91·4	6th	69·5	25th
	Ratnagiri	207	29·711	—·063	29·858	29·825	24th	29·596	2nd	80·4	71·4	89·6	—1·0	74·2	+4·2	81·9	+1·6	15·4	96·7	5th	68·5	26th
	Marmagao	60	29·867	—·061	29·861	29·977	29th	29·736	3rd	77·3	74·3	84·9	—1·8	75·1	+2·1	80·0	+0·1	9·8	88·7	1st	73·1	27th
	Karwar	44	29·871	—·064	29·850	29·968	29th	29·741	3rd	75·1	72·9	87·5	—0·1	73·0	+3·5	80·2	+1·7	14·5	92·2	3rd	69·5	29th
26	Malegaon	1,420	28·523	—·069	29·916	28·614	19th	28·444	16th	73·1	65·1	90·2	+2·7	63·4	+6·5	76·8	+4·6	26·8	97·8	1st	54·4	13th
	Ahmadnagar	2,154	27·811	—·065	29·900	27·934	29th	27·759	17th	72·2	64·0	86·9	+1·4	63·8	+7·0	75·3	+4·2	23·1	94·5	2nd	56·8	26th
	Poona	1,846	28·120	—·050	29·922	28·225	24th	28·046	11th	70·8	65·7	87·8	+1·1	63·2	+4·4	75·5	+2·7	24·6	94·0	2nd	52·4	26th
	Sholapur	1,590	28·363	—·056	29·899	28·494	29th	28·185	14th	74·8	63·5	88·8	+1·2	67·0	+4·9	77·9	+3·1	21·8	95·3	3rd	58·5	7th
	Bijapur	*1,948*	28·008	—·049	29·893	28·177	30th	27·824	11th	73·4	67·5	84·2	—2·1	67·1	+6·0	75·7	+1·9	17·1	89·6	1st	60·3	30th
	Belgaum	2,562	27·411	—·040	29·897	27·515	29th	27·315	3rd	70·0	66·0	81·9	—0·5	64·0	+2·9	72·9	+1·2	17·9	86·1	1st & 2nd	59·8	21st
	XI.—Central India.																					
20	Neemuch	1,623	28·360	—·054	29·972	28·485	28th & 29th.	28·250	2nd	67·5	58·1	83·2	—1·7	58·8	+4·0	71·0	+1·1	24·4	93·6	2nd	52·2	17th
	Indore	1,823	28·151	—·054	29·939	28·279	29th	28·059	2nd	71·6	63·5	84·7	+1·0	60·0	+5·7	72·3	+3·3	24·7	92·8	3rd	52·1	13th
21	Nowgong	754	29·239	—·040	29·988	29·372	29th	29·135	17th	60·0	56·0	81·2	—1·1	53·6	+0·6	67·4	—0·3	27·6	87·1	1st	46·5	30th
	Sutna	1,041	28·954	—·024	29·988	29·057	29th	28·839	16th	64·2	57·9	80·7	—0·7	55·8	+1·7	68·2	+0·5	24·9	84·8	1st	46·3	30th
	XII.—Central Provinces.																					
22	Buldana	2,134								73·0	64·1	84·2	+1·0	64·9	+3·0?	74·5	+2·5?	19·3	90·4	3rd	61·4	30th
	Akola	925	29·043	—·065	29·934	29·163	29th	28·900	15th & 16th.	72·6	64·3	90·5	+2·9	64·8	+7·7	77·6	+5·3	25·7	95·2	2nd	57·1	9th
	Amraoti	1,215	28·751	—·059	29·931	28·885	29th	28·675	15th	73·4	64·3	87·0	+0·5	65·5	+3·8	76·3	+2·1	21·5	91·1	2nd	60·3	17th & 18th.
23	Khandwa	1,044	28·922	—·060	29·940	29·049	29th	28·830	2nd	70·9	64·2	88·2	+0·7	61·9	+5·9	75·0	+3·3	26·3	96·8	2nd	55·8	11th
	Hoshangabad	1,006	28·986	—·048	29·975	29·115	29th	28·878	2nd	67·1	61·3	83·4	—0·9	60·8	+4·1	72·1	+1·6	22·6	89·7	5th	56·4	18th & 30th.
	Saugor	1,807	28·151	—·073	29·949?	28·278	29th	28·047	17th	64·8	55·0	82·7	+0·5	59·4	+1·6	71·0	+1·1	23·3	89·8	3rd	53·0	30th
	Jubbulpore	1,327	28·633	—·063	29·949?	28·764	29th	28·527	16th	65·3	59·1	81·7	—0·3	58·0	+6·4	70·3	+3·1	22·8	87·5	1st	50·5	18th
	Seoni	2,033	27·950	—·040	29·958	28·079	29th	27·859	17th	67·7	59·7	81·0	—0·7	59·9	+4·8	70·5	+2·1	21·1	88·0	1st	52·9	30th
	Nagpur	1,017	28·967	—·042	29·955	29·104	29th	28·870	15th	70·9	63·7	86·0	+0·6	63·7	+4·1	74·9	+2·3	22·3	89·2	1st & 5th	56·7	18th
24	Pendra	2,040	27·950	—·035	29·981	28·068	29th	27·828	16th	64·3	58·4	77·5	—2·0?	56·2	+1·0	66·9	—0·5?	21·3	81·8	2nd & 3rd	48·9	30th

N.B.—Elevations in italics indicate barometrical determinations.

* Mean of 29 days.

B—*continued.*

stations in India, in November, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs., in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th November 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															X.—Bombay.
3	0	7	16	3	0	0	0	1	N 81° E	N 51° E	4·7	5·3	−0·6	72	+ 9	50	+ 9	·372	+ ·058	1·7	+0·9	0	−0·2	0·03	0·11	−0·08	44·75	23·13	+21·62	0·01	Deesa.
25	2	1	1	0	1	0	0	0	N 45° E	N 34° W	2·4	4·0	−1·6	10	−25	60	+ 2	·501	+ ·029	2·0	+1·0	0	−0·2	0	0·09	−0·09	13·81	13·89	−0·08	0	Bhuj.
1	0	8	13	0	1	1	4	2	N 67° E		4·4			45		66	+12?	·597	+ ·127?	0·8	+0·3	0	−0·1	0	0·01	−0·01	22·08	18·08	+4·00	0	Jamnagar.
2	6	14	5	0	0	0	0	3	N 36° E		6·6			72		65	− 6	·601	− ·050	1·7	+0·5	1	+1·0	0·53	0·01	+0·52	10·41	13·68	−3·27	0·49	Dwarka.
8	4	12	5	0	0	0	1	0	N 45° E	N 48° E	3·6	3·7	−0·1	56	+ 9	48	− 2	·395	− ·010?	3·1	+2·2?	2	+1·7	1·96	0·21	+1·75	32·53	25·76	+6·77	1·40	Rajkot.
3	13	8	2	3	0	0	0	1	N 28° E	N 22° E	5·1	4·2	+0·9	62	− 8	59	+ 5	·537	+ ·065	1·3	−0·1	0	−0·1	0·02	0·23	−0·21	12·98	18·04	−5·06	0·02	Veraval.
0	4	2	1	6	2	1	2	12	N 33° W	N 60° W	0·7	4·7	−4·0	28	−25	60	+ 6	·522	+ ·107	2·8	+1·5	2	+1·8	0·48	0·16	+0·32	17·70	21·96	−4·26	0·37	Bhavnagar Para.
2	4	7	10	6	1	0	0	0	N 79° E	N 55° E	2·0	3·4	−1·4	62	+ 9	67	+ 7	·589	+ ·101	2·5	+1·7	1	+0·7	0·17	0·22	−0·05	40·05	40·75	−0·70	0·11	Surat.
7	0	18	2	3	0	0	0	0	N 58° E	N 55° E	3·2	3·1	+0·1	66	+ 6	59	+13	·534	+ ·157	1·6	+0·3	3	+2·7	1·30	0·13	+1·17	29·06	28·87	+0·19	0·74	Ahmadabad.
0	3	8	14	5	0	0	0	0	N 78° E	N 73° E	5·6	7·0	−1·4	76	− 2	78	+ 5	·744	+ ·070	2·3	+0·6	1	+0·3	0·18	0·44	−0·26	68·21	70·88	−2·67	0·18	Bombay.
5	2	4	6	10	3	0	0	0	S 72° E	S 78° E	5·4	5·5	−0·1	53	−10	63	+ 5	·652	+ ·088	3·0	+1·3	2	+1·1	0·67	0·73	−0·06	92·06	99·98	−7·92	0·44	Ratnagiri.
4	0	14	12	0	0	0	0	0	N 66° E	S 81° E	5·2	5·3	−0·1	79	+ 1	86	+ 6	·808	+ ·087	5·2	+3·1	4	+2·2	1·47	0·99	+0·48	93·65	92·85	+0·80	0·51	Marmagao.
28	0	0	0	0	0	0	0	2	N 45° W	N 65° E	1·2	2·0	−0·8	3	−67	89	+ 8	·780	+ ·119	4·5	+2·5	3	+0·5	2·52	1·73	+0·79	115·45	119·81	−4·36	1·37	Karwar.
7	2	4	1	2	1	8	4	1	S 64° W	N 74° W	2·9	3·5	−0·6	20	−32	64	+13	·521	+ ·153	3·4	+1·8	1	0	0·47	0·60	−0·13	26·77	21·97	+4·80	0·42	Malegaon.
17	1	1	1	4	2	0	0	4	S 79° E	N 76° E	4·1	4·8	−0·7	6	− 9	63	+ 7	·496	+ ·083	2·8	+1·1	3	+1·8	1·71	0·62	+1·09	23·43	21·08	+2·35	1·42	Ahmadnagar.
										S 76° E		4·6				78	+15	·575	+ ·155	5·1	+3·3	4	+2·4	2·28	0·88	+1·40	30·35	26·32	+4·03	0·80	Poona.
4	1	6	5	9	3	1	0	1	S 74° E	S 87° E	5·9	6·1	−0·2	49	−15	51	0	·441	+ ·028?	4·7	+2·1	3	+1·7	2·25	0·87	+1·38	30·25	27·14	+3·11	1·11	Sholapur.
17	0	5	2	2	3	0	0	0	S 84° E	S 76° E	0·8	2·6	−1·8	27	−27	73	+ 8	·598	+ ·098	3·4	+0·9	3	+1·4	1·90	0·85	+1·05	21·20	19·02	+2·18	0·98	Bijapur.
18	3	6	3	0	0	0	0	0	N 45° E	S 87° E	3·0	7·9	−4·9	33	−25	81	+19	·589	+ ·130	6·2	+3·5	5	+2·9	2·10	1·40	+0·70	42·44	48·38	−5·94	1·28	Belgaum.
																															XI.—Central India.
9	1	7	6	4	1	0	2	0	N 80° E	N 51° E	2·5	3·9	−1·4	40	− 8	56	+ 8	·368	+ ·050	1·9	+1·0	3	+2·7	2·86	0·17	+2·69	30·40	27·23	+3·17	1·72	Neemuch.
4	0	3	3	0	0	0	16	4	N 70° W	N 45° E	3·5	1·4	+2·1	49	+31	64	+ 9	·485	+ ·106	1·9	+0·8	1	+0·3	0·72	0·42	+0·30	48·02	31·60	+16·42	0·62	Indore.
18	1	2	2	3	0	0	2	2	N 51° E	N 53° W	0·5	0·7	−0·2	10	− 3	76	+ 6	·395	+ ·005	3·0	+1·9	0	−0·7	0·08	0·37	−0·29	60·46	40·75	+19·71	0·07	Nowgong.
27	0	1	1	0	0	1	0	0	E	N 13° W	0·8	2·3	−1·5	3	−44	67	+ 3	·407	+ ·030	0·7	−0·6	0	−0·7	0	0·35	−0·35	61·14	41·60	+19·54	0	Sutna.
																															XII.—Central Provinces.
0	1	5	10	9	0	2	2	1	E 79° E		3·7	3·7	0	52		61		·491		4·4		3	+2·0	1·85	0·59	+1·26	32·61	33·00	−0·39	0·99	Buldana.
7	0	9	11	2	1	0	0	0	N 77° E	N 80° E	3·8	2·6	+1·2	62	+22	62	+ 6	·493	+ ·105	4·2	+2·8	1	+0·1	0·19	0·44	−0·25	25·78	30·17	−4·39	0·10	Akola.
8	1	11	11	0	0	0	0	1	N 62° E	N 67° E	3·6	2·8	+0·8	64	+13	59	+10	·485	+ ·102	5·6	+4·1	2	+1·0	1·46	0·54	+0·92	29·32	31·64	−2·32	0·96	Amraoti.
4	0	7	6	6	5	1	0	1	S 72° E	N 74° E	3·1	2·0	+1·1	49	+24	69	+14	·514	+ ·159	4·0	+2·7	4	+2·2	2·73	0·50	+2·23	32·76	28·63	+4·13	1·20	Khandwa.
11	0	17	0	2	0	0	0	0	N 52° E	N 66° E	1·2	1·5	−0·3	56	− 4	71	+ 6	·468	+ ·079	2·3	+1·1	2	+1·3	2·00	0·57	+1·43	67·41	46·79	+20·62	1·50	Hoshangabad.
9	0	4	8	8	1	0	0	0	S 77° E	S 73° E	3·0	2·0	+1·0	53	+20	52	+ 3	·313	− ·017	2·7	+1·7	1	+0·3	0·37	0·49	−0·12	60·72	42·76	+17·96	0·27	Saugor.
11	3	3	1	9	1	0	0	2	S 84° E	S 37° E	0·9	1·2	−0·3	27	−14	68	− 5	·428	+ ·033	2·8	+1·7	1	+0·1	0·81	0·53	+0·28	75·00	52·37	+22·63	0·75	Jubbulpore.
10	9	5	2	0	3	0	0	1	N 26° E	N 36° E	0·3*	1·7	−1·4	37	− 6	62	+ 2	·416	+ ·032	3·1	+1·8	1	+0·1	2·74	0·57	+2·17	67·60	49·35	+18·25	2·60	Seoni.
5	0	13	10	1	0	0	0	1	N 65° E	N 21° E	2·5	2·7	−0·2	69	+39	65	+ 6	·495	+ ·085	4·3	+2·6	2	+1·0	0·38	0·70	−0·32	52·12	46·57	+5·55	0·20	Nagpur.
27	1	1	0	0	0	0	0	1	N		1·4			8		69	+13	·420	+ ·076	3·7	+2·1		+0·1	0·35	0·41	−0·06	53·46	43·86	+9·60	0·35	Pendra.

* Mean of 9 days.

Table

(2) Abstract of observations taken at 8 hrs. at 209

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XII.—Central Provinces —*concld.*																					
	Raipur	970	28·992	−·061	29·934	29·156	29th	28·872	15th	69·3	63·3	83·4	+0·2	62·6	+2·4	73·0	+1·3	20·8	86·5	5th	55·9	30th
	Chanda	634	29·328	−·076	29·922	29·477	29th	29·221	15th	72·4	67·6	85·2	−0·2	64·1	+5·7	74·7	+2·7	21·1	88·7	4th	56·0	7th
	Jagdalpur	1,813	28·14[illegible]		29·928	28·28[illegible]	29th	27·998	14th	67·7	64·8	81·8		61·8		71·8		20·0	87·4	3rd	47·9	27th
	XIII.—Hyderabad.																					
27	Aurangabad	1,905	28·066	−·070	29·911	28·186	29th	27·993	16th	74·5	64·4	88·1	+1·4	65·3	+5·8	76·7	+4·1	22·8	94·6	2nd	58·0	8th
	Nizamabad	1,248	28·706		29·911	28·835	29th	28·616	14th	73·8	66·9	88·0	+[illegible]·0	65·4	+6·1	76·7	+4·5	22·6	93·5	20th	55·4	29th
	Bidar	*2,165*																				
28	Gulbarga	1,503	28·453	−·053	29·910	28·580	29th	28·352	14th	72·9	67·1	87·8	+[illegible]·4	67·3	+4·8	77·6	+2·6	20·5	94·0	1st	60·2	29th
	Raichur	*1,311*	28·631	−·040	29·892	28·746	29th	28·519	14th	75·0	69·7	86·5	0	70·0	+2·8	78·3	+1·4	16·5	91·8	1st	66·5	8th
	Hyderabad (Deccan)	1,738	28·244	−·045	29·916	28·363	29th	28·132	14th	71·7	67·0	81·7	−3·0?	66·4	+4·2	74·1	+0·6?	15·3	86·4	1st	61·1	2nd & 30th
	Hanamkonda	877	29·087	−·050	29·917	29·224	29th	28·962	14th	75·6	69·9	85·1	−0·6	68·8	+4·8	76·9	+2·1	16·3	91·0	3rd	62·0	29th
	XIV.—Mysore.																					
29	Chitaldrug	2,405	27·539	−·054	29·867	27·646	24th	27·442	3rd	70·6	67·1	81·2	−1·7	66·2	+2·1	73·7	+0·2	15·0	85·1	2nd	62·9	20th
	Hassan	3,149	26·841	−·038	29·871	26·941	24th	26·735	3rd	68·6	64·6	78·8	−1·5	63·2	+3·2	71·0	+0·9	15·6	82·7	1st	58·3	17th
	Bangalore	3,021	26·960	−·047	29·871	27·052	24th	26·838	2nd	69·8	65·8	79·8	+0·2	63·7	+1·8	71·7	+1·0	16·1	83·1	24th	58·0	18th
	Mysore	2,518	27·439	−·049	29·870	27·538	24th	27·336	3rd	70·6	66·9	81·0	−1·6	65·3	+1·3	73·1	−0·1	15·7	85·0	1st	59·0	17th
	XV.—Madras.																					
30	Mangalore	72	29·855	−·051	29·[illegible]58	29·957	24th	29·704	3rd	79·0	74·8	86·6	−1·5	73·8	+1·3	80·2	−0·1	12·8	92·0	30th	70·5	16th
	Calicut	27	29·892	−·047	29·8[illegible]	29·891	20th	29·779	2nd	76·9	75·0	84·2	−2·9	73·8	+0·3	79·0	−1·3	10·4	87·3	29th	69·3	18th
	Cochin	9	29·924	−·034	29·83[illegible]	30·019	22nd & 24th.	29·819	12th	78·6	74·7	85·4	−2·3	74·3	−0·2	79·9	−1·3	11·2	89·1	29th	70·2	18th
	Trivandrum	193	29·735	−·028	29·835	29·829	24th	29·634	12th	76·3	74·1	82·6	0	73·7	−0·4	78·1	−0·2	8·9	84·8	23rd	71·0	18th
31	Pamban	37	29·872	−·057	29·837?	29·986	20th	29·764	2nd	79·7	77·1	84·3	−0·6	79·0	+3·3?	81·6	+1·3?	5·3	86·2	17th	76·0	5th
	Madura	447	29·478	−·051	29·860	29·877	22nd	29·361	2nd	78·0	73·3	87·3	−0·1	73·5	+1·1	80·4	+0·5	13·8	91·1	29th	69·9	30th
	Pudukkottai	318	29·816	−·049	29·869	29·719	20th	29·490	2nd	77·4	73·2	86·4	−0·1	72·8	+0·9	79·6	+0·4	13·6	92·9	16th	70·4	16th
	Negapatam	31	29·888	−·051	29·848	29·93[illegible]	20th	29·794	2nd	78·1	74·5	84·3	−0·2	74·5	+0·2	79·4	0	9·8	89·0	11th	71·0	6th
	Trichinopoly	255	29·668	−·057	29·858	29·7[illegible]	20th	29·525	2nd	78·0	74·3	87·3	0	73·0	+1·1	80·2	+0·5	14·3	92·3	24th	69·1	17th
	Coimbatore	1,341	28·880	−·046	29·871	28·699	24th	28·491	12th	74·8	70·3	85·1	−0·9	68·9	+0·1	77·0	−0·4	16·2	90·4	26th	59·5	17th
	Salem	913	29·019	−·040	29·876	29·131	24th	28·902	2nd	74·5*	71·2*	85·6*	−1·9*	70·1*	+1·4*	77·8*	−0·3	15·5	90·7	26th & 28th	61·9	17th
	Cuddalore	37	29·884	−·060	29·851	30·002	20th	29·779	2nd	77·9	74·8	85·0	0	74·1	+2·1	79·5	+1·1	10·9	90·1	11th, 16th & 18th	71·2	6th & 20th
	Vellore	707	29·207	−·076	29·859	29·330	24th	29·088	2nd	75·4	73·1	86·1	+1·6	70·9	+2·2	78·5	+1·9	15·2	91·2	18th	67·0	19th & 27th
	Madras	22	29·898	−·069	29·852	30·018	24th	29·704	14th	79·2	76·5	86·2	+1·0	74·3	+2·1	80·3	+1·5	11·9	90·5	18th	70·3	26th
32	Cuddapah	428	29·507	−·064	29·876	29·631	24th	29·404	15th	77·4	73·6	87·3	−1·4	72·7	+3·5	80·0	+1·1	14·6	92·5	2nd	69·3	20th

N. B.—Elevations in italics indicate barometrical determinations.

* Mean of 28 days.

B—*continued.*

stations in India, etc., in November, 1919—*continued.*

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th November 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XII.—Central Provinces—*concld.*
19	2	2	4	1	1	0	0	1	N 66° E	N 40° E	1·5	2·3	−0·8	17	− 6	79	+ 5	·507	+·063	6·3	+4·6?	0	−0·9	0	0·39	−0·39	63·92	47·44	+16·48	0	Raipur.
2	5	7	7	4	0	0	1	4	N 48° E	N 39° E	2·1	1·2	+0·9	49	+20	77	+ 6	·619	+·133	4·7	+2·7	1	−0·3	1·07	0·72	+0·35	40·46	49·81	−9·35	1·05	Chanda.
25	3	1	1	0	0	0	0	0	N 26° E		0·5			17		86		·581		4·2		5	+4·0	2·61	0·54	+2·07	64·92	57·58	+7·34	0·82	Jagdalpur.
																															XIII.—Hyderabad.
1	0	3	18	8	0	0	0	0	S 82° E		5·4			86		50	+11	·482	+·089	4·3	+2·8	1	+0·2	0·49	0·63	−0·14	21·86	26·53	−4·67	0·42	Aurangabad.
13	3	8	3	2	0	1	0	0	N 55° E		1·9			37		69	0	·579	+·055	4·5	+2·5	1	+0·2	0·78	0·61	+0·17	29·40	38·64	−9·24	0·60	Nizamabad.
																															Bidar.
2	1	9	11	1	3	2	0	1	N 80° E	N 81° E	5·4	5·8	−0·4	53	+ 4	73	+10	·593	+·096	3·8	+1·6	3	+1·7	2·90	0·72	+2·18	31·88	29·52	+2·36	1·72	Gulbarga.
4	0	5	7	9		2	0	0	S 65° E	N 86° E	4·5	5·3	−0·8	53	−11	76	+12	·663	+·122	5·1	+2·5	5	+3·4	6·24	0·75	+5·49	22·88	26·08	−3·20	3·45	Raichur.
16	0	2	7	5	0	0	0	0	S 80° E	S 72° E	2·3	2·6	−0·3	40	+17	78	+ 9	·600	+·090	5·8	+3·2	8	+6·0	7·24	0·82	+6·42	36·65	29·35	+7·30	3·04	Hyderabad (Deccan).
26	1	1	1	1	0	0	0	0	N 67° E		0·8			7		74	+11	·657	+·146	4·8	+2·0	5	+3·0	3·87	0·67	+3·20	28·94	32·36	−3·42	2·52	Hanamconda.
																															XIV.—Mysore.
9	0	3	10	4	1	1	1	1	S 83° E	S 84° E	2·8	4·5	−1·7	43	−22	83	+14	·616	+·069	6·7	+2·6	7	+3·8	4·61	1·77	+2·84	30·01	22·69	+7·32	1·27	Chitaldrug.
9	0	2	12	3	0	2	2	0	S 81° E	N 77° E	3·3	2·2	+1·1	40	−35	81	+ 5	·567	+·016?	5·2	0	10	+5·7	6·83	2·63	+4·20	34·93	32·06	+2·87	1·94	Hassan.
6	1	7	6	2	1	1	5	1	N 59° E	N 71° E	4·2	3·7	+0·5	23	−51	85	+ 7	·600	+·055	7·0	+2·3	11	+6·6	5·30	2·66	+2·64	38·46	32·32	+6·14	1·62	Bangalore.
5	4	6	4	2	2	3	3	1	N 48° E	N 67° E	4·6	6·3	−1·7	17	−50	82	+ 5	·613	+·028	6·6	+0·7	7	+3·7	6·76	2·21	+4·55	31·52	27·88	+3·64	2·54	Mysore.
																															XV.—Madras.
0	2	5	20	2	0	0	0	1	N 79° E	S 82° E	3·9	1·9	+2·0	79	+ 2	81	+ 8	·802	+·069	5·3	+1·8	8	+3·8	7·86	2·85	+5·01	117·67	124·43	−6·76	1·55	Mangalore.
21	0	0	0	0	1	1	2	1	N 74° W	N 87° E	2·1	4·8	−2·7	23	−51	91	+ 9	·839	+·046	6·2	+2·0	13	+7·1	15·93	4·82	+11·11	120·88	111·54	+9·34	5·62	Calicut.
4	0	7	14	3	0	0	2	0	N 82° E	N 39° E	3·4	3·0	−0·4	62	− 5	83	+ 3	·806	+·009	5·6	+1·4	15	+6·7	16·46	6·17	+10·29	115·60	104·45	+11·15	3·68	Cochin.
15	4	4	1	0	0	0	0	6	N 2° W	N 5° W	2·8	2·6	+0·2	37	+11	89	+ 4	·809	+·012	7·5	+1·9	14	+4·7	10·97	6·37	+4·60	65·33	54·30	+11·03	3·88	Trivandrum.
3	7	2	2	0	4	3	3	6	N 43° W	N 21° E	7·1	7·4	−0·3	30	−22	89	+ 4	·892	+·031	4·5	−0·2?	16	+3·7	17·73	11·18	+6·55	32·97	24·38	+8·59	4·53	Pamban.
5	6	5	1	0	1	0	4	8	N 20° W	N 3° E	2·4	4·8	−2·4	49	−21	82	+ 5	·780	+·036	7·1	+2·0	10	+2·6	7·77	4·80	+2·97	33·81	28·36	+5·45	1·77	Madura.
11	9	6	0	0	1	0	0	3	N 8° E		2·7			47		81	+ 1	·764	+·024	7·3	+1·2	11	+2·5	7·85	5·59	+2·26	30·33	29·26	+1·07	2·09	Pudukkottai.
5	3	2	1	0	0	1	5	13	N 44° W	N 30° W	5·5	4·2	+1·3	53	+ 8	84	+ 2	·804	− 008	7·1	+0·6	15	+2·9	28·30	15·84	+12·46	51·34	39·04	+12·30	8·09	Negapatam.
0	6	5	1	1	0	6	8	3	N 53° W	N 13° E	2·2	2·8	−0·6	37	0	84	+ 5	·795	+·044	6·2	+0·8	12	+4·0	10·34	5·09	+5·25	35·73	26·61	+9·12	2·32	Trichinopoly.
19	1	5	2	1	0	2	0	0	N 63° E	N 81° E	2·4	1·8	+0·6	17	−31	79	− 6?	·684	−·038?	4·6	−0·7?	6	−0·6	2·80	3·43	−0·63	18·51	18·09	+0·42	1·10	Coimbatore.
16	1	4	2	0	2	4	1	0	S 45° E	N 50° E	1·6	2·3	−0·7	8	−24	85*	+ 7	·721*	+·011	6·1	+1·2	8	+2·2	5·12	3·58	+1·54	38·54	35·40	+3·14	2·16	Salem.
6	7	0	0	0	1	4	1	11	N 46° W	N 25° W	4·1	1·6	+2·5	49	−21	86	− 1	·815	+·002	6·4	+1·4	10	−0·7	17·24	13·29	+3·95	32·28	42·02	−9·74	4·68	Cuddalore.
27	0	0	2	0	0	0	1	0	E		1·1			3		89	+ 5	·781	+·071	4·9	+0·7	11	+3·1	13·10	6·15	+6·95	39·15	36·13	+3·02	2·66	Vellore.
11	5	3	1	1	0	0	1	8	N 13° W	N 1° E	2·6	4·7	−2·1	40	−23	88	+ 5	·868	+ 076	6·3	+0·9	9	−2·2	13·92	13·30	+0·62	41·09	41·68	−0·59	4·29	Madras.
17	2	2	1	3	1	0	1	3	N 31° E	N 89° E				7	−34	83	+ 8	·777	+·091	7·2	+3·1	8	+2·8	5·82	3·47	+2·35	33·00	28·89	+4·11	1·60	Cuddapah.

* Mean of 28 days.

Table

(2) Abstract of observations taken at 8 hrs. at 209

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XV.—Madras—*concld.*																					
	Bellary	1,475	28·463	−·056	29·884	28·580	24th	28·371	11th	74·8	69·3	85·9	−1·5	68·8	+3·1	77·4	+0·6	17·1	91·1	2nd	65·5	17th
	Kurnool	923	29·014	−·057	29·889	29·132	29th	28·893	14th	74·1	70·9	87·8	−0·4	69·9	+5·7	78·9	+2·7	17·9	91·4	29th	62·8	21st & 30th.
33	Nellore	66	29·859	−·072	29·860	29·987	24th	29·741	15th	77·6	76·1	85·1	−1·0	73·4	+1·9	79·2	+0·5	11·7	89·6	17th	70·1	28th
	Masulipatam	15	29·930	−·070	29·879	30·062	24th & 29th.	29·768	11th	76·7	73·3	84·5	−0·8	72·4	+1·3	78·5	+0·3	12·1	88·2	15th	69·2	19th & 30th.
	Cocanada	26	29·921	−·063	29·854	30·060	29th	29·746	14th	76·3	73·2	82·5	−0·4	72·6	+1·9	77·5	+0·7	9·9	86·5	5th	68·6	29th & 21st.
	Vizagapatam	*226*	29·909	−·005	29·883	30·055	29th	29·714	14th & 15th.	77·8	72·8	82·6	−1·8	74·4	+2·1	78·5	+0·1	8·2	86·0	5th	70·1	21st
	Calingapatam	19	29·939		29·896	30·089	29th	29·727	15th	74·7	72·4	85·0		70·9		77·0		12·1	88·5	18th	69·5	20th
	Gopalpur	33	29·914	−·054	29·912	30·059	29th	29·618	15th	73·9	7[illegible]·6	83·0	−0·5	7[illegible]·5	+4·2	75·7	+1·9	12·5	83·6	1st	64·7	2[illegible]th
	Bay Islands.																					
1	P. V. Fraser	8	29·930		29·910	30·069	30th	29·577	16th	79·8	73·1											
	Port Blair	58	29·873	−·022	29·851	29·954	24th	29·764	11th	81·4	77·3	86·0	−0·6	77·0	0	81·5	−0·3	9·0	88·4	5th	73·3	28th
	Table Island		29·847	−·013	29·871	29·941	24th	29·751	11th	81·7	76·7	85·1	−·3	78·2	+0·7	81·7	+0·2	6·9	88·0	2nd, 3rd & 6th.	73·3	15th
	Kashmir.																					
13	Muzaffarabad		27·600			27·693	22nd	27·413	10th	55·2	45·7	77·6		43·3		60·5		34·3	82·8	1st & 4th	37·3	30th
	Srinagar	5,204	25·000	−·024	24·971	25·111	28th	24·104	2nd	36·0	34·6*	62·7	+1·4	25·9	−6·2	44·3	−3·4	36·8	68·7	1st	20·7	30th
	Gulmarg	*8,569*																				
	Dras	*10,059*	20,897	−·001	20·865	21·004	28th	20·763	26th	17·3		44·7	+0·4	14·6	−1·3	29·6	−0·5	30·1	51·6	2nd	8·0	30th
	Leh	*11,503*	19·776	−·022	19·744	19·886	21st	19·615	25th	27·8		50·4	+2·7	20·5	−0·2	35·4	+1·3	29·9	58·1	1st	15·4	28th
	Skardu	*7,705*	22·994	−·039	22·964	23·133	21st	22·826	26th	28·9		55·9	+1·1	26·6	−3·6	41·2	−1·3	29·3	64·9	1st	21·6	30th
	Gilgit	4,800	25·291	−·023	25·264	25·484	28th	25·032	26th	46·0	37·6†	66·2	+2·9	39·0	−3·8	52·6	−0·5	27·2	72·7	1st	33·7	29th & 30th.
	Baluchistan.																					
15	Fort Sandeman	4,614																				
	Quetta	5,502	24·744	−·032	24·704	24·821	24th	24·532	18th	30·0		66·7	+0·9	27·7	−5·5	47·2	−2·3	39·0	70·7	5th	21·7	26th
	Chaman	4,311	25·775	−·048	25·737	25·884	24th	25·606	18th	49·3	39·9	71·2	+3·8	42·8	+0·1	57·0	+1·9	28·4	75·8	11th	3[illegible]·2	26th
	Kalat	6,630	23·797		23·759	23·893	24th	23·707	18th	25·2		64·8	−2·4	25·5		45·2	−1·2	39·3	68·5	5th	18·6	18th
	Dalbandin	2,172	27·242		27·205	27·362	24th	27·147	11th	42·7	36·3‡	77·5		37·0		57·3		40·5	84·2	11th	32·4	22nd
	Pasni		30·003		29·963	30·184	24th	29·907	3rd & 17th.	67·2	60·9	87·7		54·8		71·2		32·9	99·2	2nd	47·6	26th
	Panjgur		26·837		26·795	26·962	24th	26·750	18th	45·4	37·1	77·5		43·0		60·2		34·5	83·2	5th	37·6	26th
	Seistan		28·306			28·490	24th & 30th.	28·110	18th	46·4	41·1§	75·7		41·0		58·4		34·7	83·7	2nd	31·3	21st
	Hill stations excluding Kashmir and Baluchistan.																					
	Parachinar	6,000	24·527	−·023	24·503	24·631	27th	24·423	17th & 1-th.	50·6	39·3	66·0	+0·4	37·8	−3·2	51·9	−1·4	28·2	72·0	2nd	34·1	26th
	Cherat	*4,256*	25·803	−·020	25·771	25·911	27th	25·674	17th	55·6	42·0	67·1	+0·1	52·1	+2·2	59·3	+1·1	15·0	75·1	1st	44·5	26th
	Drosh (*c*)		25·172			25·275	27th & 28th.	25·000	19th	48·0	36·1†	67·8	+2·2	44·9	+0·5	56·3	+1·3	22·9	74·5	3rd	39·4	30th
	Murree	6,383	24·031	−·041	23·999	24·100	27th	23·919	17th	50·5	39·0	59·1	−1·7	47·7	+2·2	53·4	+0·3	11·4	65·6	1st	41·1	25th

N. B.—Elevations in italics indicate barometrical determinations.

Note.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.
(*c*) Aneroid.

* Mean of 17 days.
† " " 29 "
‡ " " 27 "
§ " " 28 "

B—*continued.*

stations in India, etc., in November 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th November 1919.	Normal rainfall for this period.	Departure from norm l of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XV.—Madras—*concld.*
6	2	3	6	4	3	1	2	3	S 87° E	S 85° E	2·3	2·3	0	20	−13	75	+10	·646	+·115	6·5	+2·6	8	+4·9	6·06	2·04	+4·02	23·12	18·78	+4·34	2·78	Bellary.
29	0	0	0	0	0	1	0	0	S 45° W	N 34° W	0·7			3	+ 2	85	+13	·719	+·140	4·6	+1·8	2	−0·2	0·82	1·11	−0·29	19·56	24·61	−5·05	0·35	Kurnool.
5	3	5	2	0	1	0	1	13	N 18° W	N 44° W	1·9	3·4	−1·5	53	− 2	93	+10	·879	+·108	6·8	+0·4	13	+5·1	18·22	9·90	+8·32	36·79	30·98	+5·81	3·86	Nellore.
0	14	12	3	1	0	0	0	0	N 29° E	N 14° E	4·4	3·9	+0·5	82	+ 4	84	+ 4	·773	+·0382	4·6	+0·9	5	+0·7	10·38	5·15	+5·23	44·94	37·76	+6·88	7·80	Masulipatam.
8	2	9	1	0	0	0	0	0	N 43° E	N 12° E	7·4	7·3	+0·1	69	−14	85	+11	·777	+·112	6·6	+3·0	8	+3·8	20·37	4·97	+15·40	51·73	35·74	+15·99	9·31	Cocanada.
4	1	14	0	0	0	0	7	4	N	N 15° W	5·2			45	+ 2	78	+15	·744	+·151	7·9	+4·0	10	+6·5	13·58	3·29	+10·29	43·27	35·76	+9·51	3·36	Vizagapatam.
1	12	6	3	0	0	0	0	8	N 5° E		6·0			73		88		·757		4·4		10	+8·2	15·36	2·54	+12·82	55·69	40·24	+15·45	4·53	Calingapatam.
0	29	1	0	0	0	0	0	0	N 1° E	N 25° W	6·4	6·1	−0·3	99	+12	84	+ 6	·706	+·090	4·7	+3·1	7	+4·1	16·99	3·89	+13·10	57·22	42·34	+14·88	8·12	Gopalpur.
																															Bay Islands.
2	8	6	7	1	0	0	0	6	N 27° E					60		72		·726		4·7		3	+1·3	5·91	1·80	+4·11	41·16	34·86	+6·30	3·60	P. V. Fraser.
3	1	2	9	0	2	0	2	2	S 71° E	N 72° E	6·4	4·9	+1·5	46	+26	83	− 2	·886	+·006	5·7	−0·1	21	+9·0	13·40	9·44	+3·96	79·94	104·19	−24·25	2·00	Port Blair.
1	0	4	13	6	3	2	1	0	S 72°		7·5			62		79	− 1	·856	+·007	5·1	−1·5	11	+4·4	5·43	5·59	−0·16	42·79	74·22	−31·43	0·88	Table Island.
																															Kashmir.
29	0	0	0	0	0	1	0	0	S 45° W		0·5			4		45		·104		0·5		0	−2·0	0	0·88	−0·88	37·03	31·95	+5·08	0	Muzaffarabad.
21	0	0	1	3	2	2	0	1	S 12° E	S 53° E	1·2	1·9	−0·7	17	− 6	¶67	−20	¶·156	−·033	0·7	−1·7	0	−1·4	0·02	0·48	−0·46	5·92	11·99	−6·07	0·02	Srinagar.
																															Gulmarg.
27	1	1	0	0	0	0	0	1	N		2·0			8						1·0	−1·7	0	−1·1	0·07	0·46	−0·39	3·21	6·47	−3·26	0·07	Dras.
24	0	4	2	0	0	0	0	0	N 59° E	S 46° W	1·9	1·5	+0·4	20	+ 6					0·6	−2·8	0	−0·2	0	0·03	−0·03	2·43	1·79	+0·70	0	Leh.
19	0	1	4	3	1	1	1	0	S 59° E		2·7			20						0·2	−3·3	0	−0·2	0	0·07	−0·07	0·32	3·43	−3·11	0	Skardu.
30	0	0	0	0	0	0	0	0	Calm		0·1			*		§41	− 5	†·126	−·026	0·3	−3·7	0	−0·2	0	0·05	−0·05	1·43	2·85	−1·42	0	Gilgit.
																															Baluchistan.
																									0·28						Fort Sandeman.
29	0	0	0	1	0	0	0	0	S 45° E	S 18° W	1·2	1·5	−0·3	3	− 2					0·4	−1·3	0	−1·0	0	0·36	−0·36	2·07	2·18	−0·11	0	Quetta.
10	0	0	16	4	0	0	0	0	S 82° E	S 61° E	2·6	4·7	−2·1	62	− 1	41	− 4	·139	−·026	0·4	−0·9	0	−1·1	0	0·34	−0·34	0·65	0·72	−0·07	0	Chaman.
10	0	0	0	1	10	9	0	0	S 18° W	S 20° W	3·8			59	+ 9					0·3		0	−1·2	0	0·40	−0·40	1·79	1·93	−0·14	0	Kalat.
12	2	4	1	0	0	1	0	0	N 37° E		1·7			17		‡46		‡·129		0·7		0	−0·6	0	0·24	−0·24	0	0·55	−0·55	0	Dalbandin.
6	4	1	2	0	0	0	3	14	N 35° W		3·5			59		68		·452		0·8		0	−0·4	0	0·09	−0·09	0·02	1·86	−1·84	0	Pasni.
2	0	1	12	1	0	0	0	0	N 67° E		4·3			52		50		·121		0·3		0		0			1·14			0	Panjgur.
22	1	0	0	0	0	0	0	7	N 40° W		4·6			27		§63		§·200		0·2		0		0						0	Seistan.
																															Hill stations, excluding Kashmir and Baluchistan.
30	0	0	0	0	0	0	0	0	Calm		0·6			*		35	− 9	·123	−·045	0·1	−1·8	0	−1·7	0	0·6	−0·60	20·17	15·19	+4·98	0	Parachinar.
7	18	0	0	1	2	0	0	2	N 2° W	N 13° W	4·8	8·5	−3·7	56	−11	26	−17	·111	−·080	0·1	−1·8	0	−0·7	0	0·24	−0·24	11·89	13·65	−1·76	0	Cherat.
30	0	0	0	0	0	0	0	0	Calm		0·8			*		37	−12	†·121	−·037	0·3	−1·9	0	−1·4	0·04	0·38	−0·34	6·35	6·42	−·07	0·04	Drosh.
16	4	0	0	3	3	0	2	2	N 75° W	N 75° E	3·1	4·2	−1·1	4	− 3	34	− 4	·120	−·021	0·4	−1·7	0	−1·2	0	0·84	−0·84	56·94	40·60	+16·34	0	Murree.

* Indeterminate.
† Mean of 29 days.
‡ „ „ 27 „
§ „ „ 28 „
¶ „ „ 17 „

Table

(2) Abstract of observations taken at 8 hrs. at 209

Number of sub-division.	Station.	Height of barometer above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Hill Stations excluding Kashmir and Baluchistan—*concld.*																					
	Simla	7,232	23·165	−·019	23·127	23·220	27th	23·016	17th	49·3	39·7	53·6	+0·5	45·1	+0·2	50·8	+0·3	11·5	8·9	2nd	37·9	26th
	Chakrata	7,072	23·422	−·040	23·382	23·493	21st	23·292	17th	52·4	43·3	62·3	+1·4	45·2	+1·3	53·8	+1·3	17·1	67·7	15th	37·9	26th
	Mukteswar	7,592	22·916	−·010	22·875	22·985	24th	22·709	17th	49·3	41·3	59·6	−0·8	41·0	−2·1	50·3	−1·5	18·6	65·5	1st	34·3	28th
	Darjiling	7,422	23·020	−·027	22·975	23·112	24th	22·868	17th	48·6	45·6	57·7	+2·3	44·2	+1·5	51·0	+2·1	13·5	62·5	14th	38·6	28th
	Shillong	4,920	25·217	−·013	25·169	25·308	24th	25·014	17th	56·7	52·6	66·1	−0·6	48·1	+1·8	57·1	+0·6	18·0	72·0	13th	32·7	19th
	Cherrapunji	4,309	25·753	−·027	25·704	25·854	24th	25·589	17th	61·1	56·1	67·8	+0·1	54·7	+0·7	61·2	+0·4	13·1	71·1	13th	47·4	30th
	Netarhat		26·075		26·024	26·158	29th	26·052	27th	62·4	56·5	71·6		51·1		61·4		20·5	75·7	5th & 10th	45·3	29th
	Maymyo	3,546	26·487	−·028	26·432	26·595	24th	26·355	17th	61·9	60·9	73·4	−0·1	57·1	+4·9	65·3	+2·4	16·3	77·4	1st	49·0	30th
	Pachmarhi	3,528	26·511	−·057	26·458	26·628	29th	26·433	17th	65·1	59·5	75·2	+1·4	55·6	+5·1	65·4	+3·3	19·6	82·0	1st, 2nd & 3rd.	49·1	9th & 30th.
	Mount Abu	3,945	26·113	−·059	26·063	26·217	28th	26·034	2nd	65·9	53·8	72·5	−1·2	58·8	+0·5	65·7	−0·3	13·7	82·0	1st & 3rd	50·4	24th
	Mercara	3,781	26·216	−·051	26·149	26·315	24th	26·113	3rd	64·2	62·6	74·9	−1·1	59·8	−0·4	67·3	−0·7	15·1	81·2	28th	53·8	17th
	Ootacamund	7,327	23·057	−·018	22·993	23·130	24th	22·952	2nd	55·8	51·9	63·5	+0·2	48·4	+0·8	56·0	+0·5	15·1	67·4	25th	37·4	17th
	Kodaikanal	7,688	22·817	−·039	22·752	22·890	24th	22·719	2nd	55·2	51·4	61·6	+0·6	49·5	+0·6	55·5	+0·6	12·1	67·2	28th	44·6	17th
	Extra India.																					
	Singapore (*a*)	10	29·848	−·097	29·779	29·916	24th	29·788	3rd	82·1		87·4	+·2	74·2	+0·7	80·8	+0·5	13·2	91·0	3rd & 4th	72·5	19th
	Penang (*a*)	17	28·851	−·074	29·793	29·886	9th & 23rd.	29·779	2nd	81·5		89·2	+1·7	72·6	−0·7	80·9	+0·5	16·6	90·5	6th & 18th	71·5	16th
	Trincomalee	99	29·818	−·035	29·846	29·930	20th	29·719	12th	77·0	74·2	87·3	+1·9	74·2	−0·4	80·7	+0·7	13·1	91·6	18th	71·3	26th
	Colombo	24	29·901	−·040	29·851	29·992	19th	29·807	12th	75·7	74·0	85·2	−1·4	74·0	−0·1	79·6	−0·7	11·2	87·1	23rd	70·2	18th
	Hambantota	64	29·854		29·844	29·949	20th & 24th.	29·758	12th	75·6	73·0	85·8		74·2		80·0		11·6	91·6	11th	70·3	16th
	Minicoy	7	29·945	−·014		30·041	24th	29·817	3rd													
	Amini Divi	13	29·911	−·048	29·852	30·015	24th	29·723	3rd	82·5	76·4	87·5	+1·5	76·5	+1·1	82·0	+1·3	11·0	90·8	26th & 27th.	69·1	19th
	Gyantse	13,110																				
	Pharijong	14,400																				
	Gangtok*	5,667	24·361	−·119	24·317	24·418	24th	24·214	17th	53·3	50·0	65·4	+0·7	50·6	+0·8	57·9	+5·3	14·8	70·0	24th	45·2	28th
	Gartok (*c*)	15,100																				
	Kashgar (*c*)†	4,255	25·736	−·035		26·250	20th	25·420	5th	34·6	?	55·3	+1·8	27·6	−1·4	41·5	+0·2	27·7	71·3	2nd	20·8	30th
	Meshed	3,104																				
	Jask	13	30·011	−·044	29·978	30·182	24th	29·915	11th	71·5	67·1	85·3	+2·9	66·4	−2·6	76·3	+0·1	19·9	93·4	4th	62·2	10th & 15th.
	Muscat	20	30·024	−·030	29·993	30·166	24th	29·913	11th	78·1	68·1	86·4	+3·9	72·9	−2·3	79·7	+0·8	13·5	97·1	4th	69·1	29th
	Bushire	14	30·021	−·022	29·997	30·205	29th	29·905	3rd	65·5	64·3	78·6	+0·7	62·9	+0·6	70·7	+0·7	15·7	86·2	5th	57·0	24th
	Basrah	25																				
	Isfahan (*c*)	5,817	24·317	−·033		24·490	1st	24·160	26th & 27th.	38·7	34·4‡	66·6	+5·3	37·0	+0·4	52·8	+2·9	31·6	74·4	2nd	29·2	29th & 30th.
	Teheran (*c*)§	4,002	25·790	−·130		26·000	30th	25·45[illegible]	26th	48·3	40·7	68·8	+6·0	45·9	+3·3	57·3	+4·7	22·9	75·5	3rd	36·0	30th
	Baghdad	127	29·962			30·196	29th	29·825	25th	54·8	48·5	79·2		53·3		66·3		25·9	90·4	3rd	41·9	30th
	Aden	94	29·917	−·034	29·941	30·034	25th	29·802	11th	76·0	69·1	86·6	+1·6	73·5	−1·3	80·1	+0·1	13·1	93·7	5th	69·9	21st
	Zanzibar	72	29·960	−·008	29·958	30·016	24th	29·915	27th	80·4	76·0	85·0	+0·8	77·4	+0·2	81·2	+0·5	7·6	90·2	11th	74·2	13th

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.
(*c*) 9 hrs. observations.
(*c*) Aneroid.

* Mean of 28 days.
† " " 29 "
‡ " " 24 "
§ " " 27 "

B—*concluded.*

stations in India, etc., in November 1919—*concluded.*

Wind direction. Number of winds from: Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hours.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th November 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Hill stations, excluding Kashmir and Baluchistan—*concld.*
																42	+ 1	·143	+ ·004	1·7	+0·2	2	+0·9	0·86	0·54	+0·32	55·20	51·34	+3·86	0·41	Simla.
6	0	12	7	0	0	5	0	0	N 68° E	N 34° E	6·7	3·9	+2·8	43	+ 6	48	− 3	·187	+ ·006	1·8	+0·7	1	+0·1	0·17	0·61	− 0·14	52·43	57·92	−5·49	0·40	Chakrata.
10	[illegible]	1	8	3	2	1	3	1	S 6[illegible]° E		4·0			24		51	+ 4	·179	+ ·015	2·2	+ ·9	1	+0·3	0·10	0·45	−0·35	40·09	42·97	−2·88	0·10	Mukteswar.
24	0	1	3	2	0	0	0	0	S 82° E	N 87° E	1·4	2·0	−0·6	17	−23	81	+ 4	·275	+·013	5·5	+2·2	1	−0·2	0·74	0·90	−0·16	120·53	117·81	+2·72	0·73	Darjiling.
25	0	1	3	1	0	0	0	0	E		0·4			15		76	+ 1	·353	+·004	3·7	+1·8	2	−0·6	1·15	1·45	−0·30	52·48	76·69	−24·21	0·80	Shillong.
7	0	5	6	0	0	0	1	1	N 61° E		0·8			30		72	+ 2	·392	+ ·019	3·0	+0·8	3	+1·5	4·60	2·35	+2·25	358·26	379·16	−20·90	3·80	Cherrapunji.
0	8	6	0	1	0	1	2	12	N 18° W		2·7			67		71		·396		1·6		2		0·40			85·29			0·20	Netarhat.
27	0	0	0	0	1	2	0	[illegible]	S 31° W		0·6			7		94	+ 5	·527	+·013	4·0	−0·1	8	+2·9	2·44	3·07	− 0·63	52·78	56·37	− 3·59	0·66	Maymyo.
7	0	1	9	6	3	0	1	3	S 7[illegible]° E	N 82° E	2·3	2·0	+0·3	37	+19	74	+19	·448	+·112	2·3	+0·8	5	+3·9	1·53	0·68	+0·85	93·37	73·22	+20·15	0·65	Pachmarhi.
11	5	5	2	1	1	2	2	1	N 1[illegible]° E	N 27° E	2·6	3·2	−0·6	20	− 7	45	+ 5	·278	+·017	2·3	+1·3	2	+1·7	0·50	0·21	+0·29	91·43	57·14	+34·29	0·31	Mount Abu.
7	4	8	6	1	0	1	2	1	N 45° E	N 71° E	2·9	3·8	−0·9	43	−27	92	+ 9	·550	+·034	6·2	+0·7	10	+5·0	7·12	2·84	+4·28	121·16	122·06	− 0·90	3·13	Mercara.
11	0	2	6	6	2	1	1	1	S 62° E		3·[illegible]			33		78	+ 3	·350	+·015	7·0	+1·9	13	+4·1	11·94	4·63	+7·31	53·68	48·48	+ 5·20	4·30	Ootacamund.
0	5	3	2	4	4	2	5	5	N 52° W		8·[illegible]			10		78	− 2	·337	−·01	5·8	+0·6	13	+2·2	8·30	7·36	+0·94	49·22	46·52	+2·70	2·31	Kodaikanal.
																															Extra India.
13	2	1	0	1	0	3	0	10	N 48° W					3[illegible]						7·5	+1·7	15	+1·3	9·28	9·66	−0·28	49·43	49·21	+0·22	3·01	Singapore.
0	6	12	0	1	6	1	0	4	N 30° E					20								15	−1·9	8·35	13·15	−4·80	70·63	77·72	−7·09	2·40	Penang.
1	0	1	0	1	1	15	10	1	S 61° W	S 57° W	4·6	3·9	+0·7	72	+5[illegible]	87		·804	−·045	6·9	+2·8	17	+3·3	11·90	14·37	−2·47	40·91	36·96	+3·95	2·88	Trincomalee.
23	0	2	0	0	1	1	2	1	N 79° W	N 48° E	2·7	4·5	−1·8	7	−23	92	+ 9	·818	−·021	6·9	+1·8	13	+0·1	9·06	12·74	−3·68	60·23	59·37	+0·86	1·63	Colombo.
0	9	1	0	0	0	3	5	12	N 48° W		5·2			69		88		·776		5·7		6		2·70	6·81	−4·11	17·47	22·34	−4·77	0·[illegible]7	Hambantota.
16	0	0	2	1	0	1	7	3	N 82° W	N 7[illegible]° W	3·3	4·5	−1·2	3	−11					4·2	+0·1	7	−0·1	5·91	5·55	+0·36	64·86	53·02	+11·84	2·34	Minicoy.
3	6	4	1	1	1	1	5	8	N 30° W		6·1			47		74	− 1	·824	−·007	5·4	+0·8	5	+1·3	7·0[illegible]	2·11	+4·[illegible]9	83·68	50·21	+33·47	2·23	Amini Divi.
																															Gyantse.
																															Pharijong.
25	1	1	1	0	0	0	0	0	N 45° E		0·4*			11		8[illegible]	+ 4	·329	−·012	4·8	+2·4	5	+0·9	2·05	2·20	− 0·15	124·07	114·86	+9·21	1·05	Gangtok.
																															Gartok.
27	1	0	0	0	0	0	0	1	N 27° W		0·6†			7	− 4	?		?		4·0	+1·4	2	+2·0	3·00	0·01	+2·99	3·[illegible]3	2·11	+1·12	2·00	Kashgar.
																															Meshed.
6	7	3	6	0	0	0	1	7	N 9° E	N 27° E	6·8	7·1	−0·3	46	−11	79	+12	·603	+·091	0·3	−1·2	0	−0·6	0	0·32	−0·32	0·37	0·46	−0·09	0	Jask.
14	0	0	0	4	1	0	0	11	N 51° W	S 74° W	4·2	2·5	+1·7	23	−10	65	− 1	·583	−·051	0·6	−0·9	0	−0·9	0	0·39	−0·39	0·16	0·64	−0·48	0	Muscat.
2	12	7	2	0	0	0	0	7	N 5° E	N 61° E	5·2	4·5	+0·7	72	+ 2	73	+ 5	·461	−·015	0·3	−2·4	0	−[illegible]·6	0	1·59	−1·59	0·11	1·71	−1·60	0	Bushire.
																															Busrah.
30	0	0	0	0	0	0	0	0	Calm	N 62° W	0·5	1·8	−1·3	(a)		55‡		·139‡		0·5		0		0	0·64	−0·64	0·05	1·11	−1·06	0	Ispahan.
6	8	12	0	0	0	1	0	0	N 27° E	N 11° E	2·6	1·6	+1·0	67		50	−14	·169	−·035	1·5	−2·1	0		0			0·08			0	Tehran.
4	3	0	1	2	1	0	12	7	N 69° W	N 5° W	6·3	1·7	+4·5	53	+29	59	− 8	·260	−·037	1·2	−1·8	0	−1·5	0	0·76	−0·76	1·22	1·09	+0·13	0	Baghdad.
10	1	18	0	0	0	0	1	0	N 41° E	N 76° E	6·0	9·4	−3·4	59	−21	70	− 2	·626	−·073	2·5	−0·8	0	−0·2	0	0·09	−0·09	0·45	0·67	−0·22	0	Aden.
15	0	1	1	5	3	5	0	0	S 13° E	S 45° E	2·4	3·4	−1·0	30	−12	81	− 1	·835	−·010	5·6	−0·5	10	−1·2	11·69	8·04	+3·65	24·00	36·51	−6·51	3·61	Zanzibar.

* Mean of 26 days.
† „ „ 28 „
‡ Mean of 24 days.
(a) Indeterminate.

Table C.—Abstract of observations taken at 8 hrs. at 60 fourth and fifth class stations in India, etc., in November 1919.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	II.—Assam.																								
4	Bishnath	68·1	65·0	81·8	+0·2	61·5	+7·2	71·7	+3·7	20·3	89·9	1st	51·9	30th	...	...	...	...	...	...	...	...	...	...	...
	Borjuli	73·7	70·6	82·2	−1·7	61·8	+2·5	71·5	+0·4	21·4	86·0	1st, 10th & 13th	54·4	30th		...	...	...	...	...	...	...	...	...	...
	Chaudkhira	66·2	65·3	83·0	+1·8	59·4	−0·4	72·7	+0·7	26·6	100·4	23rd	40·9	30th		...	...	...	...	...	...	...	...	...	...
	Doom Dooma	64·4	63·1	83·4	+5·3	61·8	+4·5	72·1	+4·9	22·6	89·1	6th	51·4	24th	...	...	...	...	...	...	...	...	...	...	
	Dikom	66·1	63·9	82·1	+1·0	60·2	+4·4	71·1	+2·7	21·9	86·2	13th	52·0	30th	...	...	...	...	...	...	...	...	...	...	...
	Golaghat	66·6	65·8	79·3	+1·4	59·5	...	69·5	...	19·7	84·1	1st	50·6	30th	...	...	...	...	...	...	...	...	...	...	...
	Hailakandi	67·5	63·8	84·1	−0·9	64·7	+3·0	74·4	+1·1	19·4	88·4	6th	56·2	30th	...	...	...		...	...	...	...	...	...	...
	Jorehat	66·1	64·9	81·0	−0·5	61·7	+2·0	71·3	+0·7	19·3	87·3	1st	53·3	30th	...	...	...	...	...	...	...	...	...	...	...
	Lumding (a)	68·0	66·4	80·4	...	61·3	...	70·9	...	19·1	86·4	1st	55·0	30th	...	...	...	...	...	...	...	...	...	...	...
	Messa	73·1	68·0	84·6	−2·8	60·5	+4·6	72·6	+0·9	24·0	88·3	14th	54·8	22nd	...	...	...	...	...	...	...	...	...	...	...
	Panerihat	66·0	64·5	83·8	+2·0	56·6	0	70·2	+·07	27·2	87·3	28th	50·5	30th	...	...	...	...	...	...	...	...	...	...	...
	III.—Bengal.																								
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Brahmanbaria	75·4	69·9	87·0	+1·8	62·2	−1·3	74·6	+0·3	24·8	90·3	1st	56·9	30th	...	...	...	...	...	...	...	...	...	...	...
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Goalundo	77·0	69·4	83·4	−1·4	65·9(b)	+4·1	74·7	+1·3	17·5	90·3	1st	60·5	30th	...	...	...	...	...	...	...	...	...	...	...
	Pabna	72·2	68·1	85·4	−2·7	64·1	+2·3	74·7	−0·2	21·3	90·0	2nd	57·9	30th	...	...	...	...	...	...	...	...	...	...	...
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dam Dim	63·1	62·2	87·9	+0·8	56·2	+2·7	72·1	+1·7	31·7	93·9	16th	48·8	28th	...	...	...	...	...	...	...	...	...	...	...
	Kalchini	72·4	68·1	83·8	−0·2	58·4	+2·1	71·1	+0·9	25·4	88·1	1st	51·5	28th	...	...	...	...	...	...	...	...	...	...	...
	Nagrakata	75·7	67·0	84·7	+0·3	60·5	+1·2	72·6	+0·7	24·2	89·1	1st	54·0	28th	...	...	...	...	...	...	...	...	...	...	...
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raniganj (Asansol)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IV.—Bihar and Orissa.																								
7	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzaffarpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Motihari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

(a) Mean of 26 days.
(b) ,, ,, 25 ,,

C.

and fifth class stations in India, etc., in November 1919.

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th November 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				II.—Assam.
...	...	...	...	...	84	− 5	·581	+·045	...	...	4	+2·5	3·03	0·55	+2·48	78·30	81·37	−3·07	2·25	Bishnath.
...	...	...	...	...	85	+ 4	·710	+·135	...	...	4	+2·2	1·73	0·84	+0·89	8 ·25	75·39	+4·86	0·92	Borjuli.
...	...	...	...	...	96	+ 1	·628	+·022	...	...	3	+1·9	3·15	1·16	+2·09	65·54	91·61	−2·07	1·50	Chandkhira.
...	...	...	...	...	93	0	·563	+ ·028	...	...	4	+2·7	0·90	0·65	+0·25	85·10	78·79	+6·31	0·22	Doom Dooma.
...	...	...	...	...	88	− 1	·565	+·046	...	...	3	+1·6	0·68	0·65	+0·03	95·35	84·82	+10·53	0·32	Dikom.
...	...	...	...	...	95	+ 4	·622	+·033	...	...	2	+0·7	1·72	0·61	+1·11	57·14	56·07	+1·07	1·25	Golaghat.
...	...	...	...	...	96	+ 3	·651	+·053	...	...	2	+0·5	3·23	1·04	+2·19	75·65	100·31	−24·66	1·95	Hailakandi.
...	...	...	...	...	93	− 1	·597	+·018	...	...	3	+1·5	0·90	0·64	+0·26	85·90	67·62	+18·28	0·44	Jorehat.
...	...	...	...	...	92	...	·631	...	...	...	3	+1·5	1·15	1·24	−0·09	34·41	42·66	−8·25	0·60	Lumding.
...	...	...	...	...	76	− 4	·616	−·001	...	...	2	+1·0	1·15	0·35	+0·80	63·74	71·31	−7·57	0·65	Messa.
...	...	...	...	...	92	− 1	·598	+·122	...	...	1	−0·2	0·95	0·47	+0·48	88·04	68·80	+19·24	0·74	Panerihat.
																				III.—Bengal.
...	...	...	...	...	...	...	...	...	...	...	3	+1·5	1·48	1·12	+0·36	74·50	79·73	−5·23	0·70	Comilla.
...	...	...	...	...	62	− 18	·550	−·133	...	...	3	+2·0	1·69	0·74	+0·95	51·57	73·63	−22·06	0·90	Brahmanbaria.
...	...	...	...	...	...	...	...	...	...	...	2	+0·7	1·40	1·20	+0·20	66·35	61·97	+4·38	0·91	Faridpur.
...	...	...	...	...	67	−12	·618	−·005	...	...	2	+1·5	1·01	0·71	+0·30	59·70	57·76	+1·94	0·57	Goalundo.
...	...	...	...	...	80	+ 2	·636	+·021	...	...	1	+0·2	0·75	0·61	+0·14	52·29	53·99	−1·70	0·65	Pabna.
...	...	...	...	...	...	...	...	...	...	...	1	+0·3	1·13	0·54	+0·58	59·27	58·28	+0·99	1·07	Sirajganj.
...	...	...	...	...	...	...	...	...	...	...	1	+0·3	0·46	0·49	−0·03	55·98	50·83	+5·15	0·44	Rampur Boalia.
...	...	...	...	...	...	...	...	...	...	...	1	+0·3	0·37	0·38	−0·01	74·66	49·47	+25·19	0·37	Malda.
...	...	...	...	...	...	...	...	...	...	...	0	−0·3	0·04	0·23	−0·19	67·18	75·30	−8·12	0.04	Rangpur.
...	...	...	...	...	95	+2	·549	+ ·021	...	...	1	−0·2	0·18	0·94	−0·76	133·99	144·23	−10·24	0·18	Dam Dim.
...	...	...	...	...	79	+4	·635	+·019	...	...	2	+0·2	0·49	0·80	−0·31	143·12	136·12	+7·00	0·36	Kalchini.
...	...	...	...	...	63	−11	·546	+·015	...	...	0	−1·9	0	1·07	−1·07	138·26	145·91	−7·65	0	Nagrakata.
...	...	...	...	...	...	...	...	...	...	...	0	−0·5	0·01	0·29	−0·28	124·97	134·81	−10·14	0·01	Cooch Behar.
...	...	...	...	...	...	...	...	...	...	...	2	+0·8	1·31	1·02	+0·29	50·42	52·12	−1·70	0·90	Krishnagar.
...	...	...	...	...	...	...	...	...	...	...	8	+1·9	0·57	0·64	−0·07	81·68	50·93	+30·75	0·26	Bankura.
...	...	...	...	...	...	...	...	...	...	...	1	+0·2	0·30	0·59	−0·29	54·96	48·25	+6·71	0·25	Raniganj (Asansol).
																				IV.—Bihar and Orissa.
...	...	...	...	...	...	...	...	...	...	...	0	−0·9	0	0·42	−0·42	58·81	48·93	+9·88	0	Hazaribagh.
...	...	...	...	...	...	...	...	...	...	...	0	−0·4	0	0·31	−0·31	44·79	46·52	−1·73	0	Bhagalpur.
...	...	...	...	...	...	...	...	...	...	...	0	−0·4	0	0·27	−0·27	27·28	47·37	−20·09	0	Muzaffarpur.
...	...	...	...	...	...	...	...	...	...	...	0	−0·3	0	0·23	−0·23	39·52	52·94	−13·42	0	Motihari.
...	...	...	...	...	...	...	...	...	...	...	0	−0·5	0	0·30	−0·30	49·25	40·24	+9·01	0	Chapra.
...	...	...	...	...	...	...	...	...	...	...	0	−0·5	0	0·32	−0·32	60·44	42·57	+17·87	0	Arrah.
...	...	...	...	...	...	...	...	...	...	...	0	−0·7	0	0·53	−0·53	51·61	39·61	+12·00	0	Dehri.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	V.—United Provinces of Agra and Oudh.																								
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehra Dun	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IX.—Rajputana.																								
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XII.—Central Provinces.																								
28	Chhindwara	65·3	59·7	82·3	...	58·3	...	70·3	...	24·0	88·5	2nd	51·7	18th	28	1	1	0	0	0	0	0	0	N 20° E	...
	XIII.—Hyderabad.																								
27	Parbhani	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XV.—Madras.																								
31	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Anantapur	74·5	71·9	83·3	...	70·2	...	78·2	...	16·1	99·2	1st	65·8	20th	...	...	...	...	...	...	...	...	...	...	...
33	Guntur	76·6	72·7	86·5	...	71·5	...	79·0	...	15·0	91·2	2nd	66·1	19th	...	...	...	...	...	...	...	...	...	...	...
	Koraput	65·5	63·0	77·2	...	58·7	...	67·9	...	18·5	84·4	5th	49·8	25th	...	...	...	...	...	...	...	...	...	...	...
	Bay Islands.																								
1	Car Nicobar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kashmir.																								
13	Jammu	58·8	50·0	78·5	...	54·7	...	66·6	...	23·8	83·2	4th	48·3	30th	0	9	15	3	1	0	0	1	1	N 33° E	...
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kargil	32·5	?	57·1	...	14·1	...	35·6	..	43·0	65·8	1st	8·2	30th	7	0	0	0	9	3	9	0	2	S 4° W	...
	Baluchistan.																								
15	Harnai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill stations, exclusive of Kashmir.																								
	Panighatta	68·3	61·6	81·6	−0·7	61·4	+0·7	71·5	0	20·2	85·5	1st	54·7	29th	...	...	...	...	...	...	...	...	...	...	...
	Kurseong	60·8	59·6	67·0	+1·1	53·9	+0·6	60·5	+0·9	13·1	75·3	15th	48·9	28th	...	...	...	...	...	...	...	...	...	...	...
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dharamsur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mussooree	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Poo	...	...	62·1	+4·0	35·1	+0·6	48·6	+2·3	27·0	70·0	1st	29·2	27th	1	4	8	3	5	7	3	2	2	S 31° E	...
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pishin	...	...	69·0	+0·1	22·6	−0·0	45·8	−4·5	46·4	78·8	16th	16·0	26th	...	...	...	...	...	...	...	...	...	...	...

C—*continued.*

and fifth class stations in India, etc., in November 1919—*continued.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th November 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				V.—United Provinces of Agra and Oudh.
...	...	...	...	...	...	...	...	...	...	...	1	+0·6	0·31	0·16	+ 0·15	25·90	28·37	−2·47	0·31	Meerut.
...	...	...	...	...	...	...	...	...	...	...	1	+0·3	0·26	0·42	− 0·16	53·97	76·04	−22·07	0·26	Dehra Dun.
																				IX.—Rajputana.
...	...	...	...	...	...	...	...	...	...	...	2	+1·9	0·56	0·04	+ 0·52	20·87	22·09	−1·22	0·28	Udaipur.
																				XII.—Central Provinces.
0·9	...	...	6	...	71	...	·446	...	3·6	...	2	+0·1	1·19	1·32	− 0·13	49·69	37·42	+12·27	1·03	Chhindwara.
																				XIII.—Hyderabad.
...	...	...	...	...	...	...	...	...	...	...	1	0	0·26	0·53	− 0·27	26·14	31·42	−5·28	0 19	Parbhani.
																				XV.—Madras.
...	...	...	...	...	...	...	...	...	...	...	7	−2·7	3·18	7·19	− 4·01	11·62	18·82	−7·20	0·66	Tinnevelly.
...	...	...	...	...	88	...	·751	...	6·6	...	8	+4·2	6·47	2·19	+4·28	36·67	23·19	+13·48	2·60	Anantapur.
...	...	...	...	...	82	...	·753	...	1·7	...	7	+3·5	7·19	2·28	+ 4·91	32·94	30·51	+2·43	2·88	Guntur.
...	...	...	...	...	87	...	·555	...	...	...	5	...	1·36	...	...	65·70	...	...	0·44	Koraput.
																				Bay Islands.
...	...	...	...	...	...	...	...	...	...	...	15	+2·8	11·65	11·08	+ 0·57	63·35	80·70	−17·35	2·35	Car Nicobar.
																				Kashmir.
...	...	...	80	...	51	...	·250	...	0 5	...	0	−1·2	0	0·45	− 0·45	47·42	30·66	+16·76	0	Jammu.
...	...	...	...	...	...	...	...	...	...	...	1	−1·6	0·25	1·63	− 1·38	16·18	22·46	−6·28	0·25	Sonamarg.
...	...	...	47	...	?	...	?	...	0·5	...	0	−0·4	0·01*	0·11	− 0·10	0·90	1·88	−0·98	0·01	Kargil.
																				Baluchistan.
...	...	...	...	...	...	...	...	...	...	...	0	−0·7	0	0·40	− 0·40	11·71	6·85	+4·86	0	Harnai.
																				Hill stations exclusive of Kashmir.
...	...	...	...	...	67	+6	·459	−·007	...	...	0	−1·5	0	0·71	−0·71	131·99	131·08	+0·91	0	Panighatta.
...	...	...	...	...	93	+15	·497	+·141	...	...	0	−1·3	0	0·93	−0·93	155·47	152·17	+3·30	0	Kurseong.
...	...	...	...	...	...	...	...	...	...	...	2	−1·4	1·65	5·37	−3·72	121·07	142·41	−21·34	0·95	Gnatong.
...	...	...	...	...	...	...	...	...	...	...	1	−2·6	0·27	1·71	−1·44	43·64	47·71	−1·07	0·10	Lachung.
...	...	...	...	...	...	...	...	...	...	...	1	...	0·48	...	...	42·48	...	...	0·48	Dharampur.
...	...	...	...	...	...	...	...	...	...	...	2	+1·3	1·26	0·50	+0·76	96·49	83·78	+12·71	0·95	Mussooree.
...	...	...	20	...	...	...	...	...	1·5	...	0	−0·8	0	0·28	−0·28	1·08	3·58	−2·50	0	Poo.
...	...	...	...	...	...	...	...	...	...	...	1	0	0·13	0·40	−0·27	4·63†	9·28	−4·65	0·13	Kailang.
...	...	...	...	...	...	...	...	...	...	...	0	−0·9	0	0·29	−0·29	...	0·94	...	0	Pishin.

* Snow fall. † Rainfall of October wanting.

Tabl

Abstract of observations taken at 8 hrs. at 60 fourt

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
															Number of winds from										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Calm.	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Extra India.																								
	Chumbi . . .	35·2	36·6(a)	55·7	...	30·1	...	42·9	...	25·6	59·2	14th & 15th	22·2	30th	...	...	...	...	...	...	...	...	...	...	...
	Pemba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abadan	67·3	57·4	82·0	...	57·0	...	69·5	...	25·0	92·0	2nd & 3rd	46·0	29th & 30th	0	21	0	0	0	4	3	1	1	N. 4° W.	...

(a) Mean of 19 days.

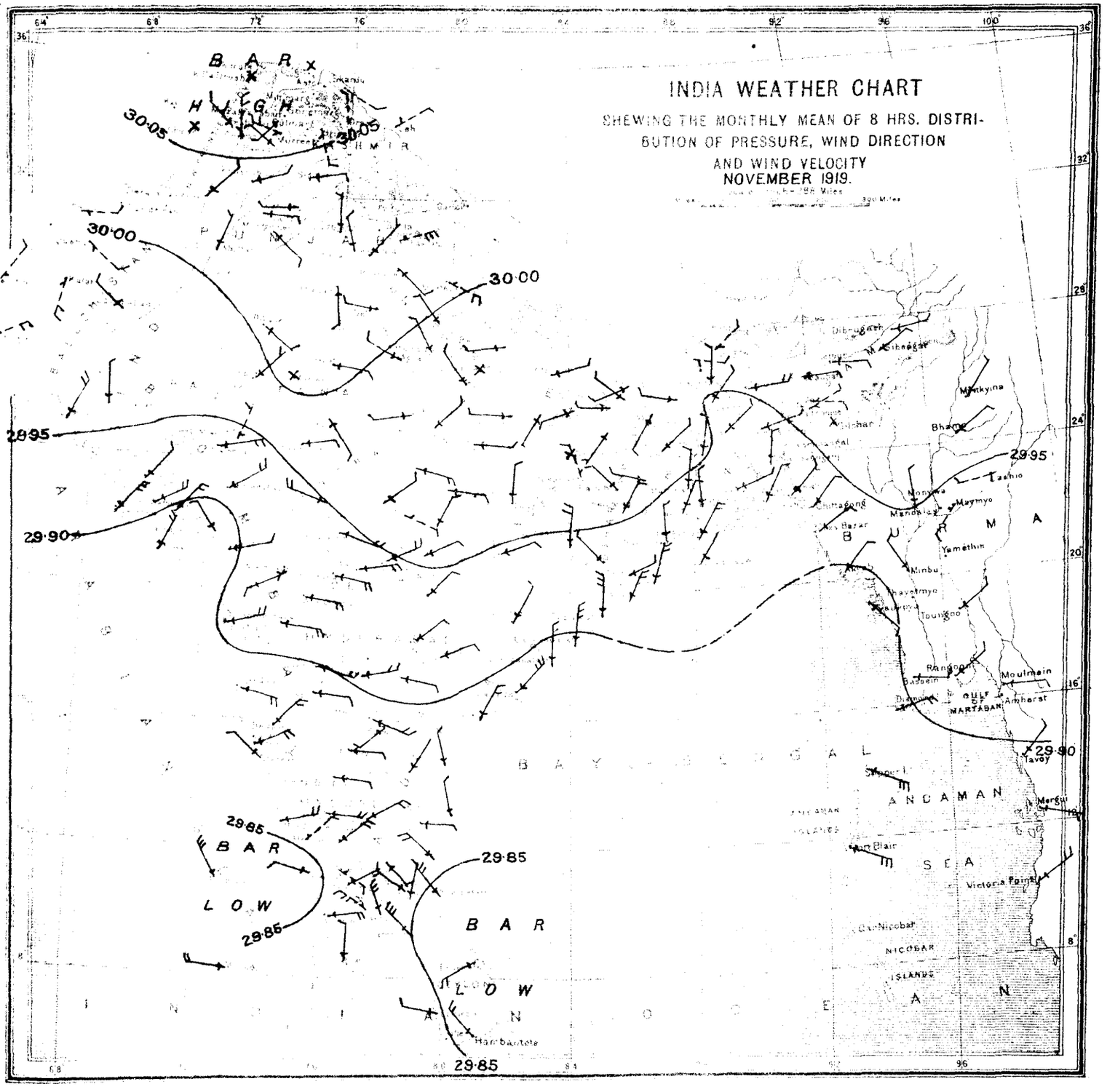
C—*concluded.*

and fifth class stations in India, etc., in November 1919—*concluded.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st May to 30th November 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				Extra India.
...	...	...	...	...	91(a)	...	·210(a)	...	1·5	...	0	−0·5	0	0·15	−0·15	26·31	26·60	−0·29	0	Chumbi.
...	...	...	...	...	...	...	...	...	...	...	11	−0·3	9·09	7·71	+1·38	...	38·51	...	2·30	Pemba.
...	...	...	49	...	56	...	·549	...	...	...	0	...	0·01	...	...	0·27	...	...	0·01	Abadan.

(a) Mean of 19 days.

SGPI-21-471 DGOb.—10-10-22—325.

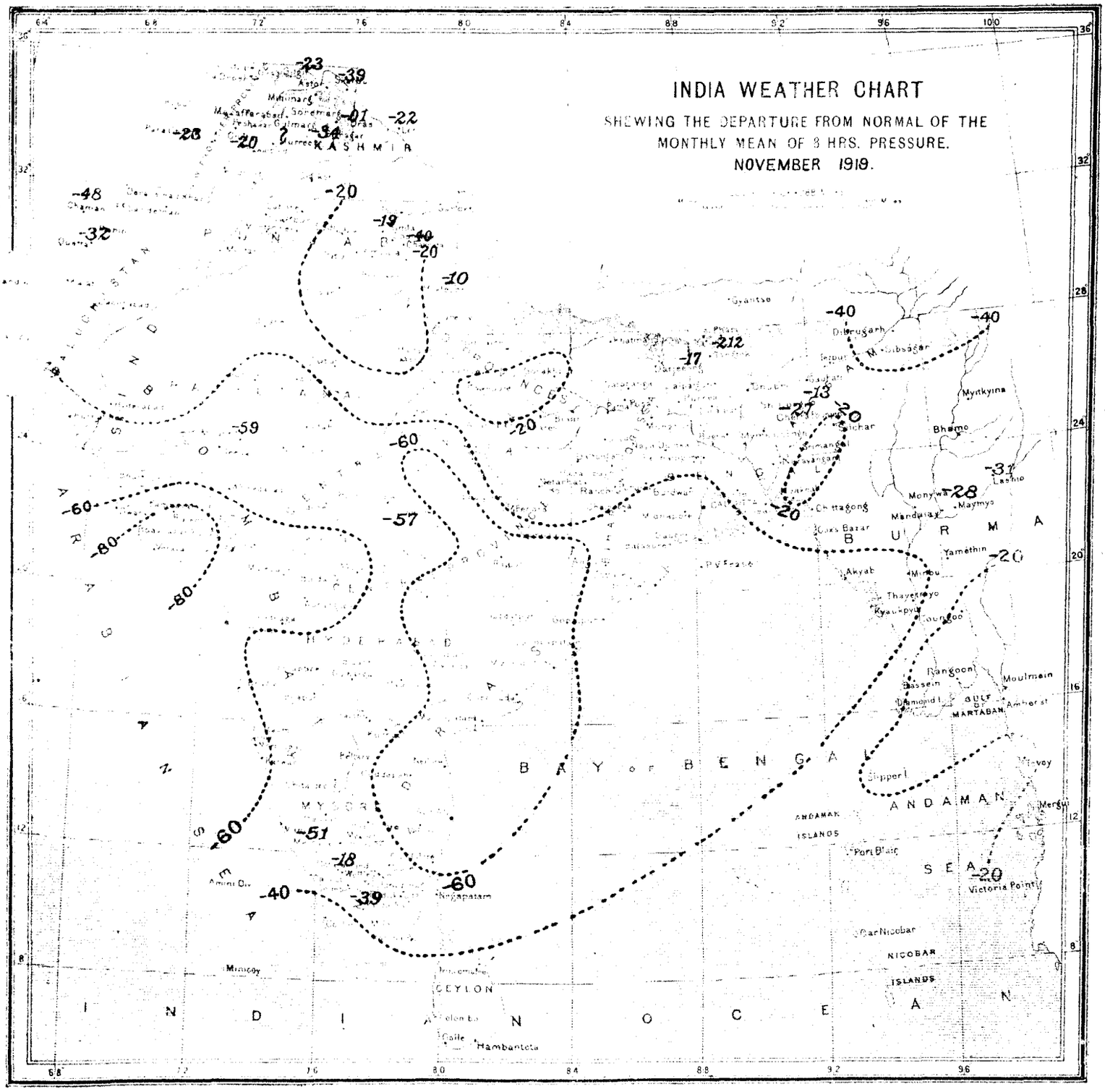


The lines of the above chart represent isobars or lines of equal barometric pressure, the numbers attached indicating the barometric pressure in inches and being drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the normal distribution of pressure.

The mean 8 hrs. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table B of the 8 hrs. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of	0 to 2 miles per hour	...	one	feather added to the wind arrow.
,, ,,	2 to 5 ,, ,, ,,	...	two	feathers ,, ,, ,, ,,
,, ,,	5 to 10 ,, ,, ,,	...	three	,, ,, ,, ,, ,,
,, ,,	10 to 20 ,, ,, ,,	...	four	,, ,, ,, ,, ,,
	over 20 ,, ,, ,,	...	five	,, ,, ,, ,, ,,

Wind strengths are based on factor 2·2 for the standard type of Beckley Robinson anemograph, instead of 3·0 as used for this plate up to December 1911 inclusive.



The chart shows the departure from normal of the mean during the month of 8 hrs. pressure by means of lines drawn for equal amounts of departure. The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no departure, the dotted line facing the area of deficient pressure or negative departures.

CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MAXIMUM TEMPERATURE.

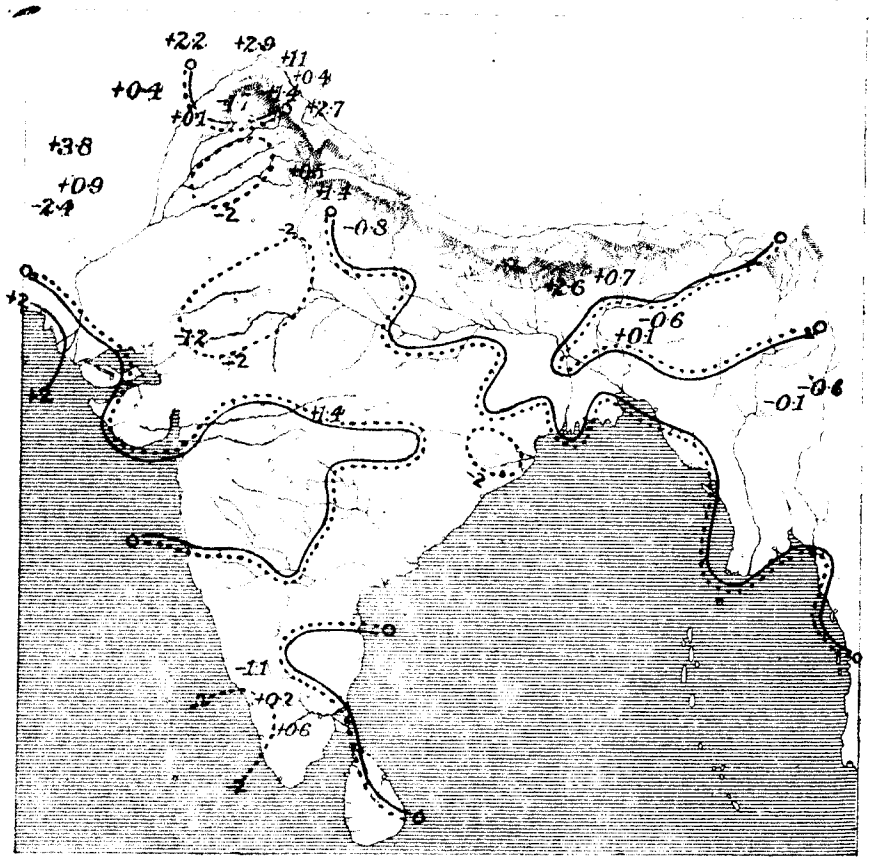


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MINIMUM TEMPERATURE.

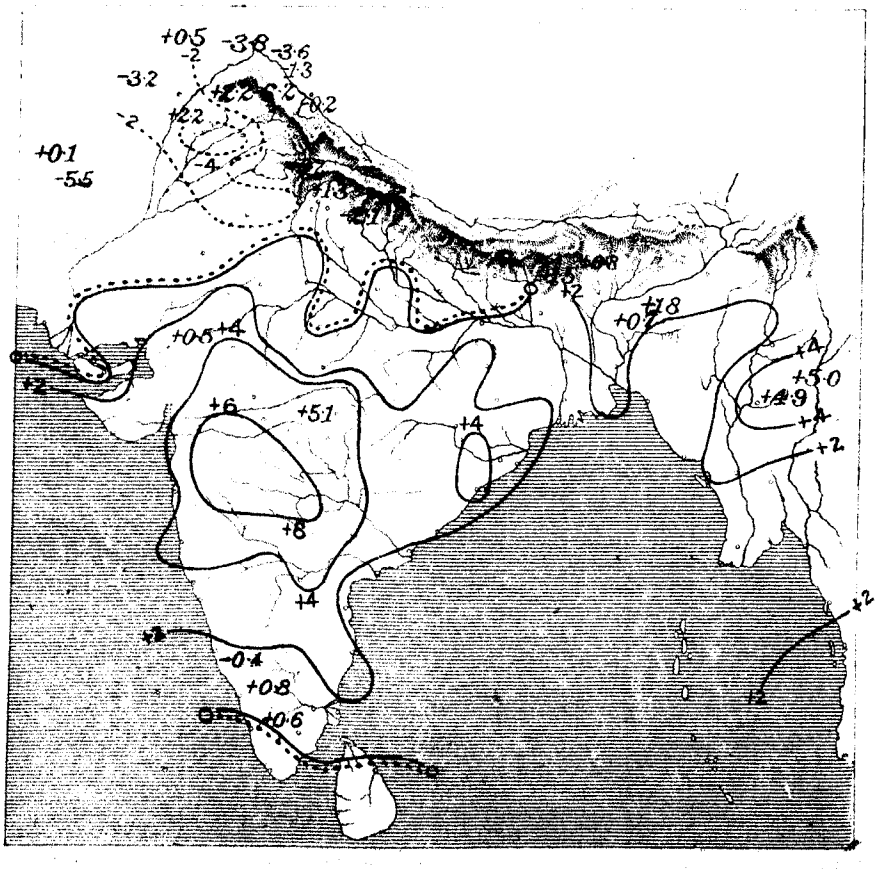


CHART SHEWING THE DEPARTURE FROM NORMAL
OF THE MONTHLY MEAN OF DAILY
MEAN TEMPERATURE.

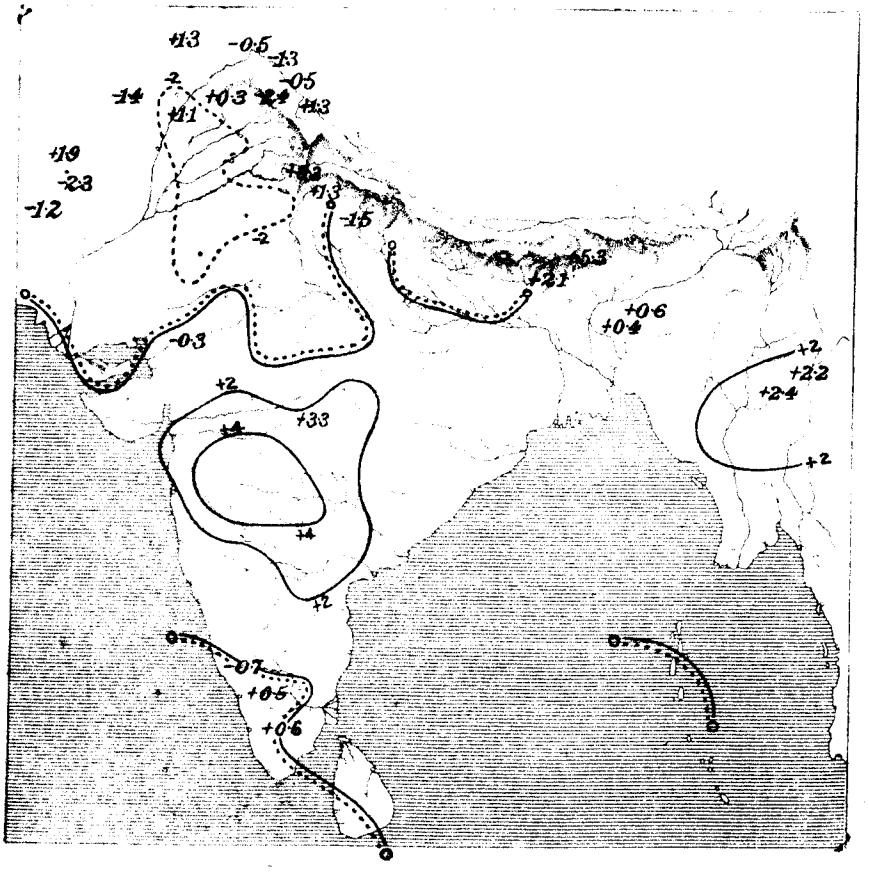


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF ABSOLUTE HUMIDITY AT 8 HRS.

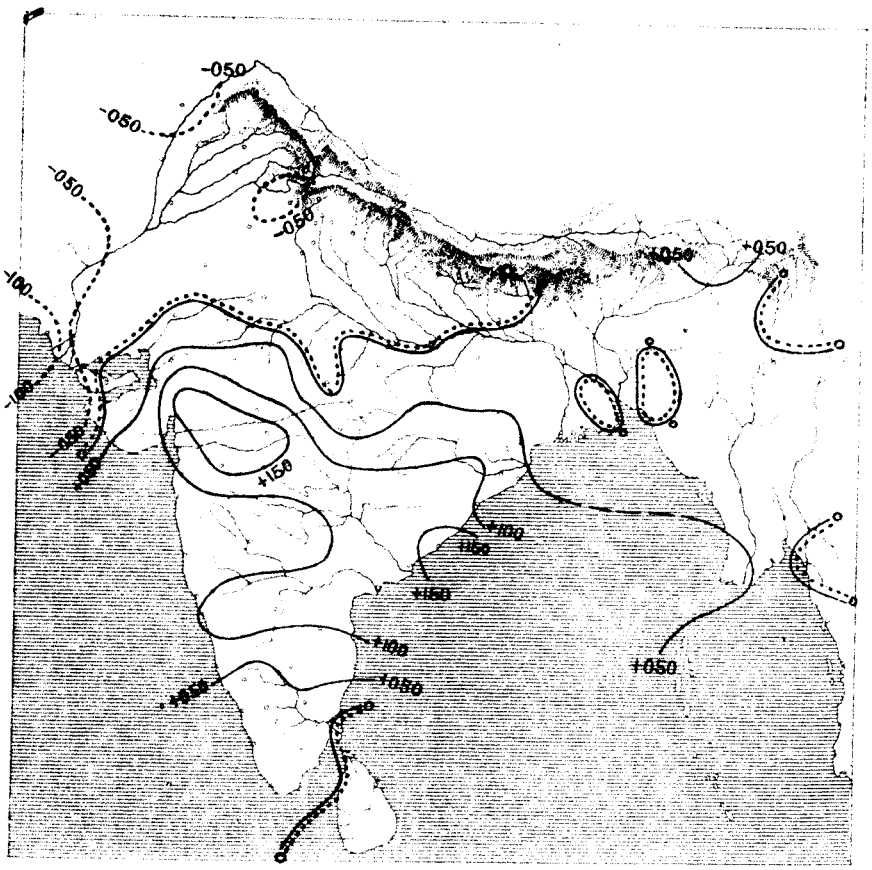


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF RELATIVE HUMIDITY AT 8 HRS.

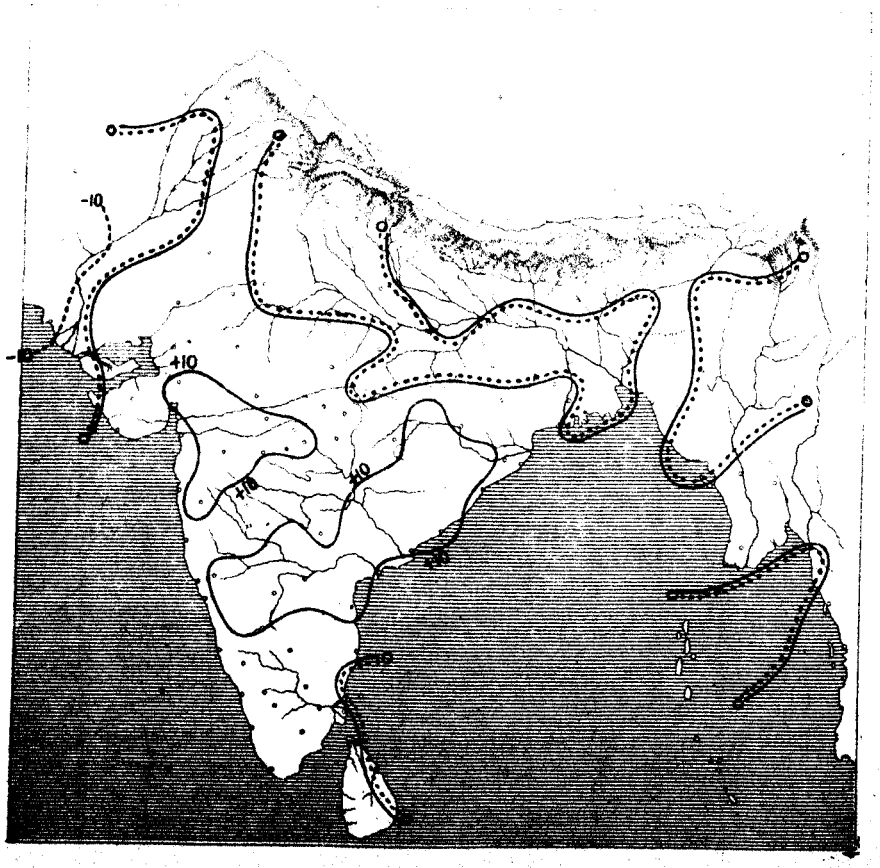


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF CLOUD AMOUNT AT 8 HRS.

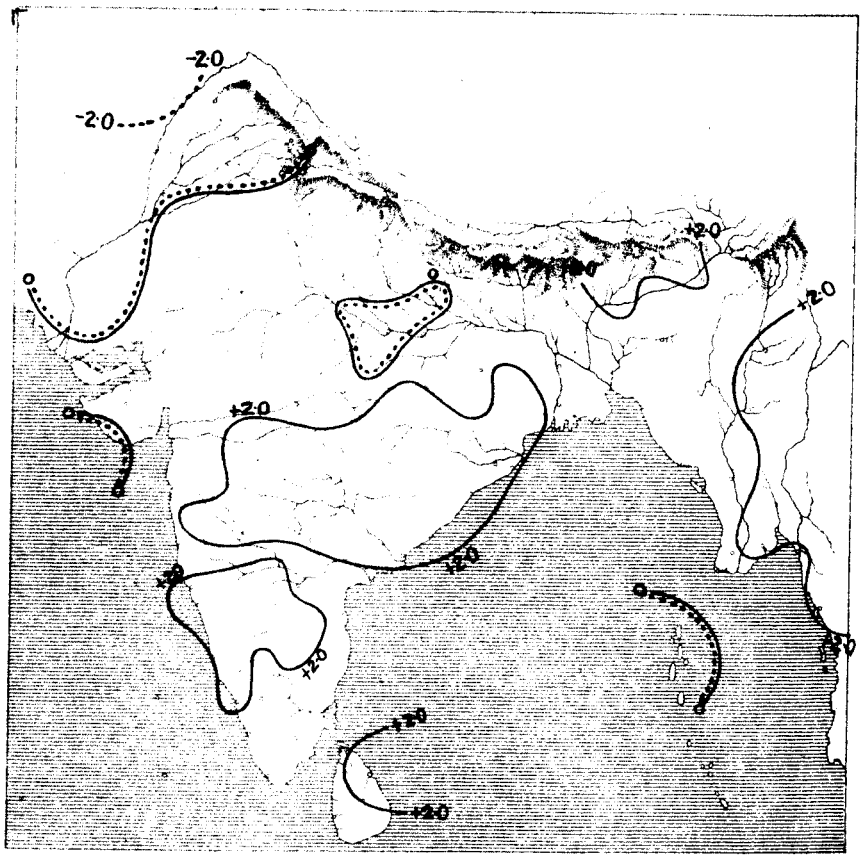
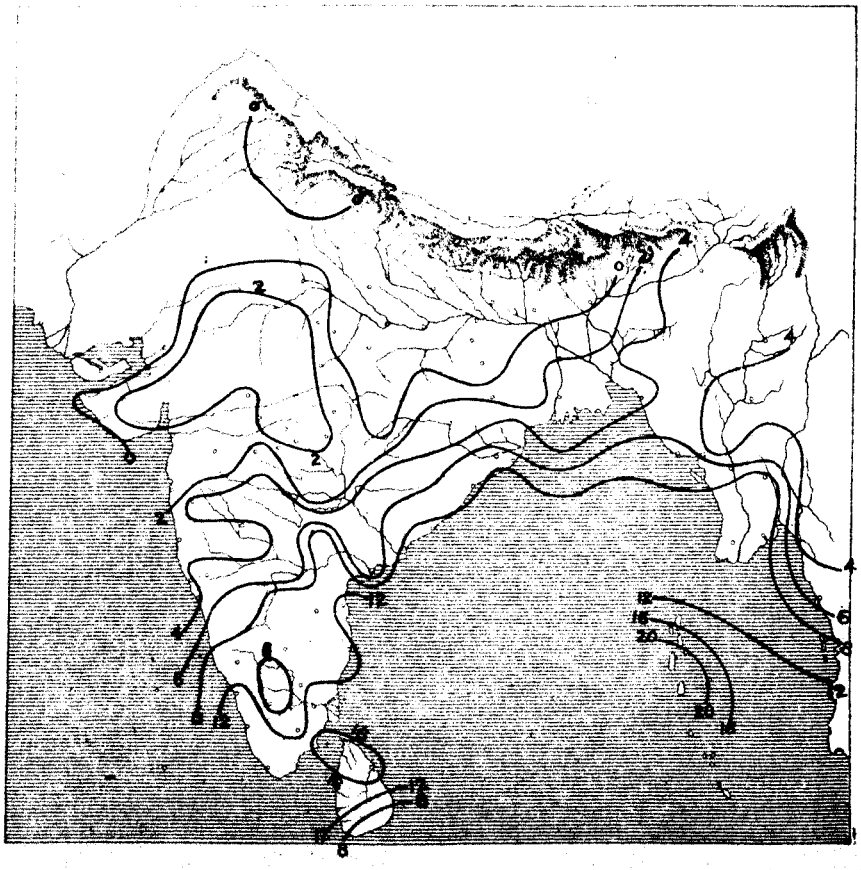
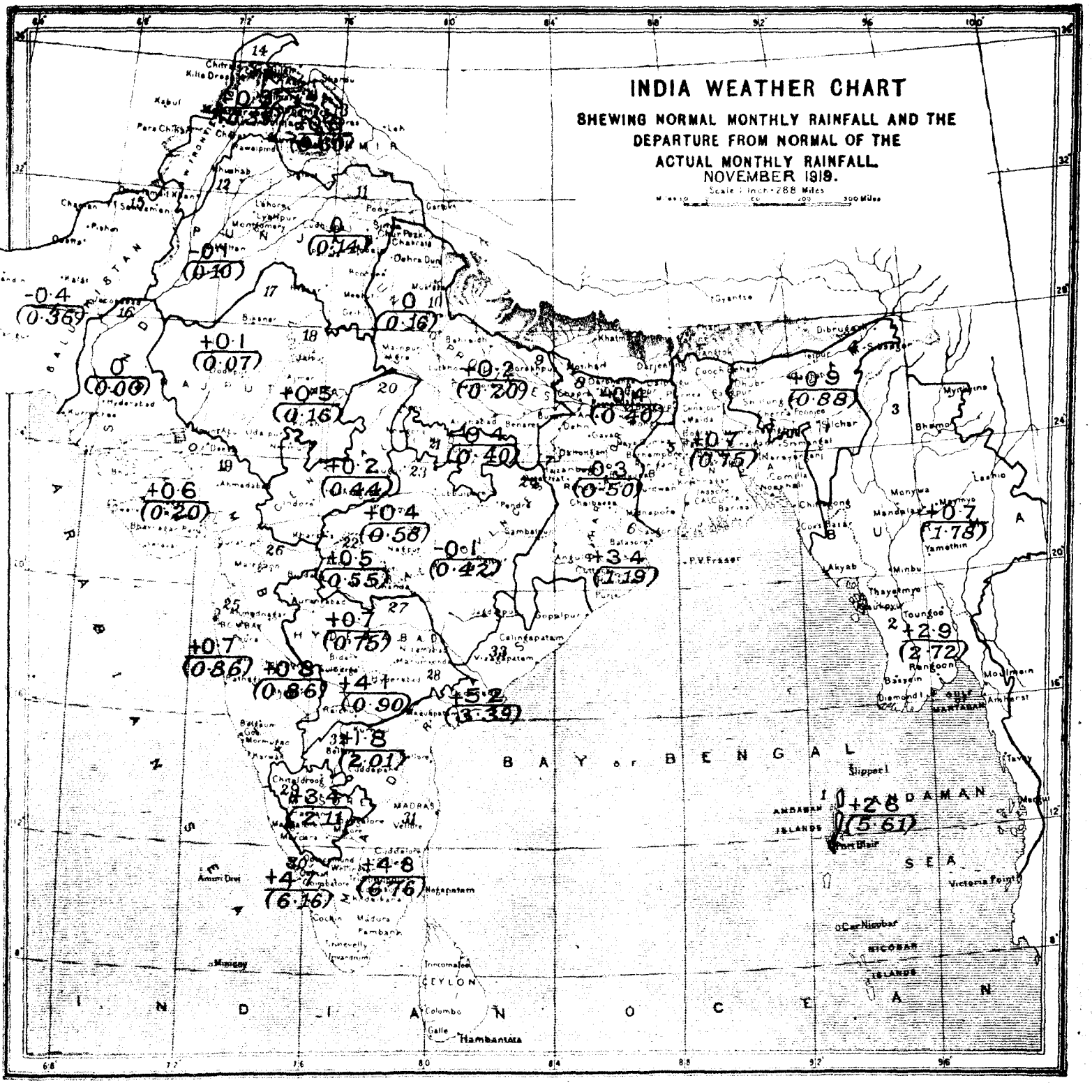


CHART SHEWING THE TOTAL NUMBER OF DAYS IN THE MONTH ON WHICH RAINFALL EQUALLED OR EXCEEDED 0·10 INCH.

(BASED ON THE RETURNS OF TABLE B.)





The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal monthly rainfall, the numbers above these give the departures from normal of the average actual rainfall over the divisions.

1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North

GOVERNMENT OF INDIA.

METEOROLOGICAL DEPARTMENT.

MONTHLY WEATHER REVIEW

PUBLISHED BY ORDER OF

THE GOVERNMENT OF INDIA.

CALCUTTA, DECEMBER, 1919.

INTRODUCTION.

THIS review of the weather in India during the month of December, 1919, is based on observations taken daily at 8 hrs. at 210 stations, and on additional observations taken at 10 hrs. and 16 hrs. at 18 stations. In the rainfall summary have been utilized the data furnished by the meteorological observatories, and the rainfall statements of the month published by the Provincial Governments.

The brief notes on solar, seismic and magnetic disturbances are supplied by the chief observatories in the Indian area.

For a statement of the methods adopted in recording and tabulating the data, for each of the elements of observation, reference should be made to the introductory portion of the review for January.

Summary of the chief features of the weather in India during the month.

2. Four winter disturbances entered northwest India and caused abundant rain over almost the whole of that area. The first was a "double" depression and simultaneously caused disturbed weather also in the central parts of the country, the Konkan and the Bombay Deccan.

The monsoon persisted in south Madras to the end of the month, and a depression that formed in the neighbourhood of the Andamans caused general rain in Burma on the 14th, 15th and 16th. Another depression formed in the southwest of the Bay towards the end of the month.

In Persia rainfall was nearly general and much heavier than usual.

Variations of cloud amount agreed roughly with those of rain, and humidity was in excess in northwest and central India and Mysore. Maximum temperature tended to be low in northwest India, and minimum temperature to be high in the Peninsula.

The mean barometric pressure over the plains of India was 0·008" in defect.

Solar, seismic and magnetic disturbances.

KODAIKANAL OBSERVATORY.

3. There were four days during the month on which no observations were possible. The prominence record was imperfect on six other days.

Sunspots.—23 new groups were observed during the month. The mean daily number was 3·2 and the average life of a spot was 3·8 days. The distribution in latitude was as follows:—

TABLE 1.

—	0—10°	11—20°	21—30°	31—40°	Mean latitude.	Extreme latitude.
North . .	6	...	...	1	11°4	3 & 31
South . .	4	8	...	...	12° 8	8 & 19

Prominences.—45 prominences a minute or more in height, and 8 metallic prominences were recorded. The tallest prominence of the month (160″ high) was photographed on the 22nd at 7° W.

Magnetic Disturbances.—There was a "Great" disturbance from the 15th to 16th and "moderate" disturbances were registered from the 3rd to the 14th and from 21st to 24th.

J. EVERSHED,

Director,

Kodaikanal and Madras Observatories.

Seismic records.

$\phi = 10°\ 13'\ 50''$; $\lambda = 77°\ 28'\ 00''$; $h = 2{,}343$ m. Subsoil—*Rock.*

Apparatus.—Milne Horizontal Pendulum Seismograph.

TABLE 2.

	V	To	∈	r/To²
AN:				
AE:	9·76	18·0	1	2·6
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
Dec. 14th	e P	2 06 54	...	...	...	...	...	
	e L	2 10 42	...	...	...	...	...	
	M	2 16 12	...	...	60	...	...	
	F	2 35 06	...	...	...	...	...	
„ 20th	e P	19 58 42	...	...	...	...	...	
	e L	20 02 48	...	...	...	...	...	
	M	20 08 00	...	...	50	...	...	
	F	20 25 24	...	...	...	...	...	
„ 20th	e P	20 45 54	...	...	...	...	...	
	i L	20 52 00	...	...	...	...	...	
	M	21 05 54	...	...	150	..	...	
	F	22 23 18	...	...	...	...	...	

T. ROYDS,

Assistant Director.

BOMBAY OBSERVATORY.

Alibag magnetic record.

4. During the month of December 1919, the traces showed 8 calm days, 21 days of small, 1 day of moderate and 1 day of great disturbance.

The days of the month selected as "quiet" are the 1st, 2nd, 18th, 28th and 31st.

The following table represents the magnetic character of each day during the month :—

TABLE 3.

Day.	Character.	Day.	Character.	Day.	Character.	Day.	Character.
1	C	9	S	17	S	25	S
2	C	10	S	18	C	26	C
3	S	11	S	19	S	27	S
4	S	12	S	20	S	28	C
5	S	13	S	21	S	29	C
6	S	14	M	22	S	30	C
7	S	15	G	23	S	31	C
8	S	16	S	24	S		

C=calm ; S=small ; M=moderate ; G= great; V. G. = very great.

The mean observed absolute values of the several magtic elements reduced to the mean monthly tabulations of the magnetograms, as also the ranges and the summed ranges of the Horizontal Force and Declination for the month, are as follows :—

Easterly declination . . .	0° 22′ 32″.
Horizontal force	0·36911 C. G. S. unit.
Vertical force	0·17117 C. G. S. unit.
Inclination	24° 52′·7.
Horizontal force range . . .	0·00047 C. G. S. unit.
Horizontal force summed range .	0·00291 C. G. S. unit.
Declination range	1′·6.
Declination summed range . .	8′·7.

(NOTE.—Summed range means sum without regard to sign of twenty-four ordinates of the diurnal inequality.)

Seismic records.

$\phi = 18° 53' 36''$; $\lambda = 72° 48' 56''$; $h = 11$ m. Subsoil—*Trap.*

Apparatus.—Omori-Ewing Horizontal Pendulum (E.-W.).

TABLE 4.

	V	To	ϵ	$\frac{r}{To^2}$
AN:				
AE:	20	32		
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
Dec. 20th	P	19 42 37	...	...	...	...	...	
	M	20 8 25	...	...	5	...	...	
„ 20th	P	20 45 57	...	...	...	...	...	
	S	20 52 34	...	...	...	...	...	
	M	21 6 13	...	...	70	...	...	

T. K. CHINMAYANANDAM,

Director,

Bombay and Alibag Observatories.

5.—CALCUTTA (ALIPORE) OBSERVATORY.

Seismic records.

$\phi = 22° 32'$ N ; $\lambda = 88° 20'$ E ; $h = 6·4$ m. Subsoil—*Alluvial.*

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs.

TABLE 5.

	V	To	ϵ	$\frac{r}{To^2}$
AN:	29	18	1	
AE:	29	30	1	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
Dec. 9th	P	20 26 54	2	...	...	...	...	
	S	20 29 18	4	...	...	...	...	
	L	20 31 54	7	...	...	...	...	
	F	20 54 18	...	...	...	...	...	
„ 20th	P	19 40 18	5	...	...	...	...	
	S	19 46 18	7	...	...	...	...	
	L	19 53 18	10	...	...	...	...	
	F	20 15 18	...	...	...	...	...	
„ 20th	P	20 43 48	3	...	...	...	...	
	S	20 50 42	5	...	...	...	...	
	L	20 55 06	13	...	...	...	...	
	M	20 58 18	...	793	1207	...	...	
	F	21 34 18	...	...	...	...	...	

6.—SIMLA OBSERVATORY.

Seismic records.

$\phi = 31° 6' N$; $\lambda = 77° 11' E$; $h = 2{\cdot}1$ km. Subsoil—*Rock.*

Apparatus.—Two Omori-Ewing Horizontal Pendulum Seismographs (Masses 50 kg.).

TABLE 6.

	V	To	ϵ	r / To²
AN:	14	45	1	
AE:	14	45	1	
AZ:				

Date.	Phase.	Time G. M. T.	Period (Sec.).	Amplitude (μ) AN.	AE.	AZ.	Distance Δ (Km.).	Remarks.
1919.		h. m. s.						
Dec. 9th	P	20 31 48	...	...	...	...	...	
	M	20 36 00	...	36	...	...	...	
	F	20 42 42	...	...	...	...	...	
Dec. 20th	P	19 48 30	...	...	...	...	...	
	L	19 55 48	20	...	...	...	...	
	M	19 56 12	...	114	...	...	...	
	F	20 20 36	...	...	...	...	...	
„ 20th	P	20 50 54	...	...	..	...	...	
	L	20 55 42	30	...	...	...	...	
	M	20 59 30	...	786	...	..	...	
	F	21 48 42	...	...	...	...	...	
„ 21st	P	22 00 12	...	...	...	...	...	
	F	22 16 00	...	...	...	...	...	Tremors.
„ 23rd	P	0 08 24	...	...	...	...	...	
	F	0 24 00	...	...	..	...	...	Slight tremors.

S. SITARAMAYYA,

Scientific Assistant.

Weather in the Indian Ocean.

7. The following table gives the departures from normal of pressure and rainfall, as well as the actual and normal wind direction and velocity at the three representative stations :—

TABLE 7.

—	Mauritius.	Zanzibar.	Seychelles.
Departure from normal of mean pressure in inches.	—·033	+·003	—·003
Actual mean wind direction . .	S 85° E	N 45° E	N 38° W
Normal mean wind direction . .	S 88° E	N 85° E	N 44° W
Actual mean wind velocity (miles per diem).	98	79	119
Normal mean wind velocity (miles per diem).	13	110	109
Rainfall departure from normal in inches.	—2·59	—0·78	—1·78

Depressions and cyclonic storms.

8. A depression formed on the 14th in the northeast of the Bay, and developed during that afternoon into a moderate storm with winds of gale force and "high mountainous" seas. The storm had a barometric depth of about ½", caused fairly widespread rain in Burma, but was very short-lived, having filled up on the night of the 15th.

Weather was rough to the east of Ceylon on the 28th, and by the morning of the 29th a depression had formed there. The centre was roughly at —

TABLE 8.

lat. °	long. °	on the
8½ N	85½	29th
8	83	30th
7½	81	31st
and 6½	79	1st January.

Weather continued somewhat rough in the south Arabian Sea for a few days more, but there is no information to show that the depression persisted as such after the 1st January. The S.S. *Mahranda* and S.S. *Media* recorded gales in the southwest of the Bay between the 29th and 31st. A sailing vessel called *Haskincposa* encountered the storm and was wrecked off the Tanjore coast on the 31st. This storm was of slight intensity with barometric depth about ¼".

Pressure.

9. The following table gives the departure from normal of the mean 8 hours' pressure in the 15 chief political divisions of India :—

TABLE 9.

DIVISION.	Departure from normal of mean 8 hrs. pressure.
	"
Burma	—·001
Assam	—·009
Bengal	—·004
Bihar and Orissa	0
United Provinces	+·004
Punjab	+·002
North-West Frontier Province	—·001
Sind	0
Rajputana	—·002
Bombay	—·019
Central India	—·015
Central Provinces	—·018
Hyderabad	—·009
Mysore	—·018
Madras	—·022

The following table gives a comparison of the departure from normal of the mean 8 hours' pressure at 9 hill stations with the departure at an adjoining station in the plains :—

TABLE 10.

HILL STATION.	Departure from normal pressure, A.	PLAIN STATION.	Departure from normal pressure, B.	Departure of pressure difference, B—A.
	"		"	"
Quetta	—·025	Jacobabad	+·005	+·030
Leh	—·045	Lahore	—·004	+·041
Murree	—·013	Peshawar	—·006	+·007
Simla	—·006	Ludhiana	+·006	+·012
Mukteswar	+·004	Bareilly	+·014	+·010
Darjiling	—·012	Dhubri	—·008	+·004
Mount Abu	—·017	Deesa	—·003	+·014
Pachmarhi	—·030	Khandwa	—·017	+·0 3
Kodaikanal	—·012	Madura	—·029	—·017

Temperature.

10. Table 11 gives the actual temperature and its departure from normal in the 33 sub-divisions, while table 12 gives only the departures from normal in the 15 chief political divisions.

TABLE 11.

Sub-division.	Actual temperature.				Departure from normal of		
	Mean maximum.	Mean minimum.	Monthly mean of mean between maximum and minimum.	Mean daily range of temperature.	Maximum.	Minimum.	Daily range.
	°	°	°	°	°	°	°
1. Bay Islands	84·5	77·7	81·1	6·7	−0·3	+1·3	−1·6
2. Lower Burma	84·8	67·9	76·3	17·0	+0·2	+0·8	−0·6
3. Upper Burma	78·2	57·5	67·8	20·7	−1·0	+2·0	−3·0
4. Assam	75·9	53·4	64·7	22·5	+0·4	+1·4	−1·0
5. Bengal	77·4	55·5	66·5	21·9	−0·2	−0·2	0
6. Orissa	79·2	57·4	68·3	21·8	−0·4	+0·3	−0·7
7. Chota Nagpur	76·7	50·1	63·4	26·7	−0·3	−0·3	0
8. Bihar	75·7	50·7	63·2	25·1	−0·1	−0·2	+0·1
9. United Provinces, East	74·6	47·5	61·1	27·1	−0·5	−0·5	0
10. Do. do., West	72·9	46·6	59·8	26·3	−2·0	−0·2	−1·8
11. Punjab, East and North	67·1	43·7	55·4	23·4	−4·3	+0·5	−4·8
12. Do., South-west	69·0	42·7	55·9	26·3	−3·4	+0·2	−3·6
13. Kashmir	43·1	22·7	32·9	20·3	−1·1	0	−1·1
14. North-West Frontier Province	63·7	40·3	52·1	23·3	−6·0	+0·5	−6·5
15. Baluchistan	60·5	34·4	47·4	26·1	−1·9	−2·3	+0·4
16. Sind	75·9	51·6	63·8	24·3	−2·0	−0·5	−1·5
17. Rajputana, West	76·5	48·9	62·7	27·6	−1·4	−0·6	−0·8
18. Do., East	73·7	49·1	61·4	24·6	−3·1	−0·9	−2·2
19. Gujarat	83·2	56·0	69·6	27·2	−1·1	−0·2	−0·9
20. Central India, West	77·9	49·9	63·9	28·0	−1·2	+0·5	−1·7
21. Do. do., East	73·5	46·7	60·1	26·8	−1·7	−0·3	−1·4
22. Berar	82·8	56·4	69·6	26·4	0	−0·2	+0·2
23. Central Provinces, West	78·5	51·5	65·1	27·0	−0·9	+0·2	−1·1
24. Do. do., East	78·3	52·2	65·2	26·0	−1·0	+0·2	−1·2
25. Konkan	86·1	69·8	77·9	16·3	−0·1	+1·4	−1·5
26. Bombay Deccan	83·6	56·3	69·9	27·3	−0·5	+1·1	−1·6
27. Hyderabad, North	84·3	56·9	70·7	27·3	−0·2	+3·1	−3·3
28. Do., South	82·7	61·5	72·1	21·3	−0·3	+1·2	−1·5
29. Mysore	80·5	61·4	71·0	19·1	+0·1	+2·5	−2·4
30. Malabar	86·7	73·4	80·0	13·3	−0·3	+1·7	−2·0
31. Madras, South-east	84·2	71·4	77·8	12·8	−0·2	+2·3	−2·5
32. Do., Deccan	86·4	65·1	75·8	21·3	−0·1	+2·5	−2·6
33. Do., Coast, North	81·1	66·8	73·9	14·3	−0·4	+1·5	−1·9

TABLE 12.

DIVISION.	Departure from normal of		
	Mean maximum temperature.	Mean minimum temperature.	Mean temperature.
	°	°	°
Burma	—0·4	+1·3	+0·5
Assam	+0·4	+1·4	+0·9
Bengal	—0·2	—0·2	—0·2
Bihar and Orissa	—0·3	—0·1	—0·2
United Provinces	—1·1	—0·4	—0·7
Punjab	—4·1	+0·4	—1·8
North-West Frontier Province	—6·0	+0·5	—2·7
Sind	—2·0	—0·5	—1·3
Rajputana	—2·5	—0·8	—1·6
Bombay	—0·7	+0·6	0
Central India	—1·5	+0·1	—0·7
Central Provinces	—0·7	+0·1	—0·3
Hyderabad	—0·3	+1·7	+0·7
Mysore	+0·1	+2·5	+1·3
Madras	—0·2	+2·0	+0·9

Surface and upper air winds.

11. *Surface.*—Wind directions were on the whole normal. The following table gives the mean wind velocity and steadiness with their departures from normal :—

TABLE 13.

DIVISION.	Hourly wind velocity in miles.		Wind steadiness.	
	Actual.	Departure from normal.	Actual.	Departure from normal.
Burma	2·8	+0·3	55	— 2
Assam	1·6	—0·3	24	—12
Bengal	1·4	—0·2	34	—14
Bihar and Orissa	1·6	—0·2	40	— 7
United Provinces	1·1	—0·2	22	— 1
Punjab	1·6	+0·4	24	+ 7
North-West Frontier Province.	0·5	—0·7	14	— 6
Sind	2·3	—1·9	55	+ 4
Rajputana	2·0	—0·1	28	+11
Bombay	3·4	—1·1	56	— 5
Central India	1·2	—1·0	26	— 9
Central Provinces	2·5	+0·4	49	+ 9
Hyderabad	3·6	—0·7	65	+23
Mysore	4·4	—0·6	69	—17
Madras	4·5	+0·4	58	— 9

Upper air.—The monthly mean velocities and directions at different heights above Agra, Simla, Lahore, Bangalore, Akyab, Calcutta and Bombay during the month are given in the following table :—

TABLE 14.

Height above sea, kms.	Agra. Height above sea 0·17 km.				Simla. Height above sea 2·13 kms.				Lahore. Height above sea 0·21 km.				Bangalore. Height above sea 0·92 km.				Akyab. Height above sea 0·01 km.				Calcutta. Height above sea 0·01 km.				Bombay. Height above sea 0·01 km.			
	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L	N	V	v	L
Ground level.	32	2·7	1·2	284	23	2·2	1·4	134	30	0·2	0·1	15	25	3·5	3·1	79	29	0·9	0·8	35	29	2·4	1·9	338	27	2·5	1·8	68
0·5	32	5·3	2·5	342	...	...	...	...	30	5·2	2·7	329	...	...	...	...	29	3·9	2·6	28	29	3·6	3·1	353	27	5·5	4·2	80
1·0	32	5·2	2·7	318	...	...	...	...	30	4·9	2·6	301	25	4·3	3·8	77	29	4·2	0·6	229	28	4·7	3·9	332	27	4·0	2·5	114
1·5	32	5·7	3·9	307	...	...	...	...	30	5·3	1·9	288	25	5·4	4·1	77	29	4·9	2·4	259	23	6·3	4·6	306	27	3·5	2·1	152
2·0	32	6·6	5·0	291	...	...	...	...	29	4·7	2·0	284	24	4·8	2·5	79	29	5·6	3·5	273	18	6·6	5·6	292	27	3·9	1·8	157
2·5	32	7·6	5·9	273	23	4·1	1·4	144	28	5·0	2·3	273	23	4·8	2·6	100	26	6·0	4·6	277	14	8·1	7·3	281	25	4·4	0·8	178
3·0	32	9·1	7·4	273	23	4·3	1·9	145	26	5·7	3·1	270	22	5·0	3·3	102	25	6·6	5·5	278	9	8·9	8·4	286	25	5·6	0·7	228
3·5	30	11·0	9·2	274	23	5·1	2·6	187	26	7·6	5·1	264	21	5·7	3·9	107	26	8·5	7·3	284	4	10·9	10·7	299	24	6·7	1·0	260
4·0	30	13·5	11·4	274	21	5·8	3·5	248	25	9·5	7·3	264	16	6·1	2·7	95	26	10·0	8·7	281	2	12·5	12·3	297	22	7·3	3·2	294
4·5	30	15·6	13·7	271	21	8·9	6·5	267	24	11·9	10·1	275	15	6·9	2·5	73	26	1[illegible]·8	9·0	281	2	13·5	13·5	297	22	8·6	4·8	287
5·0	30	16·9	14·8	269	21	11·9	9·5	268	23	14·4	12·6	279	13	7·6	3·0	64	25	12·5	10·4	270	2	14·7	14·7	292	22	9·8	6·0	288
5·5	29	18·4	16·5	270	18	16·5	14·1	269	23	17·7	15·6	275	13	8·2	2·1	70	19	12·9	11·8	277	1	11·5	11·5	310	20	10·5	7·6	297
6·0	29	20·6	19·1	272	14	18·5	17·7	275	22	20·6	18·3	274	12	9·2	1·9	64	15	13·4	12·2	277	1	12·0	12·0	305	19	11·7	9·3	297
6·5	26	23·0	21·5	274	9	20·7	20·3	270	20	22·3	20·5	277	12	10·0	1·7	51	12	13·7	12·4	275	...	...	...	...	18	12·5	9·9	291
7·0	26	25·0	23·1	273	9	23·7	23·3	271	19	25·1	23·6	279	11	8·8	2·1	81	11	14·7	13·4	271	...	...	...	...	17	13·2	11·1	283
7·5	19	27·1	26·0	273	8	24·6	24·3	270	18	27·7	26·4	275	10	8·9	0·7	41	7	13·9	12·8	273	...	...	...	...	13	10·1	7·8	272
8·0	19	29·7	28·7	273	5	27·1	26·6	269	15	29·7	28·6	273	9	8·8	1·8	29	6	14·[illegible]	13·5	277	...	...	...	...	12	11·9	9·4	266
8·5	14	40·3	31·9	274	4	25·4	24·8	275	11	32·5	32·1	269	7	5·9	3·2	259	5	16·0	13·3	274	...	...	...	...	11	13·8	11·8	267
9·0	11	35·8	34·9	277	4	29·3	28·5	278	8	28·4	27·4	272	7	6·1	4·5	251	5	16·1	13·6	280	...	...	...	...	8	16·4	15·7	268
9·5	6	40·7	39·7	279	4	36·4	35·9	291	6	29·8	28·8	264	5	7·6	6·1	260	2	17·3	16·3	274	...	...	...	...	6	19·3	18·9	261
10·0	4	48·0	46·4	282	3	33·5	33·0	276	3	23·7	22·2	271	4	9·6	8·4	251	1	26·0	26·0	285	...	...	...	...	6	22·1	21·7	258
10·5	1	38·0	38·0	295	2	33·2	32·1	272	3	26·7	24·7	274	3	8·2	6·4	242	...	...	...	...	...	...	...	...	2	21·7	21·0	273
11·0	1	40·5	40·5	290	...	...	...	...	2	28·3	26·7	276	3	8·0	6·9	245	...	...	...	...	...	...	...	...	...	...	...	...
11·5	1	43·0	43·0	290	...	..	...	...	1	25·0	25·0	290	2	10·0	9·6	223	...	...	...	...	...	...	...	...	...	...	...	...
12·0	1	48·0	48·0	285	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

N = Number of flights.
V = Velocity of wind, regardless of direction, metre per Sec.
v = Velocity of Resultant Wind, taking account of direction, metre per Sec.
L = Direction of Resultant Wind; North Wind = 0° or 360°, East Wind = 90°.

Humidity and cloud.

12. The following table gives the mean humidity, vapour tension and cloud amount at 8 hours with their departures from normal.

TABLE 15.

Division.	Hygrometry; 8 hrs.				Cloud.	
	Mean humidity.	Departure from normal.	Mean vapour tension in inches of mercury.	Departure from normal in inches of mercury.	Mean cloud amount at 8 hrs.	Departure from normal.
	%					
Burma . .	85	— 1	·592	+ ·014	4·4	+ 1·5
Assam . . .	93	— 1	·445	+ ·031	4·4	+ 1·3
Bengal . .	82	— 2	·444	— ·014	1·5	— 0·1
Bihar and Orissa .	77	+ 1	·383	— ·002	1·9	+ 0·4
United Provinces .	76	— 1	·306	— ·012	1·9	+ 0·4
Punjab . .	79	+ 6	·262	+ ·016	3·6	+ 0·9
North-West Frontier Province.	79	+ 8	·232	+ ·019	3·7	+ 0·6
Sind . . .	64	+ 4	·281	— ·006	1·5	— 0·7
Rajputana . .	63	+ 6	·258	+ ·007	2·3	+ 0·3
Bombay . .	61	+ 3	·406	+ ·013	1·6	+ 0·1
Central India .	71	+ 7	·315	+ ·021	1·4	— 0·2
Central Provinces .	65	+ 3	·345	+ ·007	1·9	— 0·2
Hyderabad . .	64	+ 1	·439	+ ·013	2·7	+ 0·7
Mysore . .	80	+ 6	·535	+ ·044	5·2	+ 1·0
Madras . .	81	+ 3	·684	+ ·046	4·8	+ 1·2

Rainfall.

13. Four disturbances of the cold weather type entered north-west India during the month. The first gave widespread rain or snow in the North-West Frontier Province and the Simla-Kumaon hills on the 12th and 13th, and there were local falls in Baluchistan, Kashmir, the Punjab, Rajputana and the west of the United Provinces during the period 9th to the 15th. The second depression entered Baluchistan on the 18th and was comparatively feeble causing only scattered falls of rain or snow in Baluchistan, the North-West Frontier Province and Kashmir. The third crossed into Baluchistan on the 21st; the rainfall due to it lasted from that day to the 25th and extended over Baluchistan, the North-West Frontier Province, Kashmir the Punjab and the United Provinces, the falls in Kashmir, the Punjab and the west of the United Provinces being heavy and widespread. The last disturbance gave nearly general rain in Baluchistan on the 26th and local rain in the North-West Frontier Province, the Punjab, Kashmir and the Kumaon hills on the next two days. Unsettled conditions in the central parts of the country gave, on the 12th, light local rain in Central India West and the Bombay Deccan with a few light falls in the Konkan.

The total fall of the month was well in excess in Burma, the greater part of north-west India and of Madras, and south Hyderabad.

Weather was dry at Baghdad and Qurmah.

The following tables give the actual, normal and departures from normal of rainfall in the 33 sub-divisions and 15 chief political divisions of India.

TABLE 16.

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
1. Bay Islands	7·7	3·2	3·64	3·50	+ 0·14	+ 4
2. Lower Burma	1·2	0·7	1·00	0·48	+ 0·52	+ 108
3. Upper Burma	1·2	0·8	0·63	0·47	+ 0·16	+ 34
4. Assam	0·5	0·9	0·18	0·39	— 0·21	— 54
5. Bengal	0	0·3	0	0·20	— 0·20	— 100
6. Orissa	0	0·5	0·01	0·30	— 0·29	— 97
7. Chota Nagpur	0	0·4	0·01	0·20	— 0·19	— 95
8. Bihar	0·1	0·3	0·03	0·14	— 0·11	— 79

Sub-division.	Number of rainy days.		Rainfall.			
	Actual.	Normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
			"	"	"	
9. United Provinces, East	0·4	0·5	0·13	0·24	− 0·11	− 46
10. Do. do., West	1·2	0·8	0·71	0·38	+ 0·33	+ 87
11. Punjab, East and North	2·7	0·9	1·32	0·45	+ 0·87	+ 193
12. Do., South-west	2·0	0·5	0·96	0·20	+ 0·76	+ 380
13. Kashmir	6·1	2·9	4·16	1·91	+ 2·25	+ 118
14. North-West Frontier Province	4·8	1·0	2·66	0·56	+ 2·10	+ 375
15. Baluchistan	2·2	1·8	0·73	0·74	− 0·01	− 1
16. Sind	0·5	0·2	0·14	0·09	+ 0·05	+ 56
17. Rajputana, West	0·2	0·3	0·10	0·13	− 0·03	− 23
18. Do., East	0·9	0·6	0·37	0·25	+ 0·12	+ 48
19. Gujarat	0	0·1	0	0·05	− 0·05	−100
20. Central India, West	0·3	0·5	0·08	0·20	− 0·12	− 60
21. Do. do., East	0·1	0·5	0·03	0·23	− 0·20	− 87
22. Berar	0	0·8	0·01	0·44	− 0·43	− 98
23. Central Provinces, West	0·3	0·8	0·10	0·39	− 0·29	− 74
24. Central Provinces, East	0·1	0·7	0·03	0·38	− 0·35	− 92
25. Konkan	0·4	0·3	0·16	0·15	+ 0·01	+ 7
26. Bombay Deccan	0·2	0·5	0·08	0·31	− 0·23	− 74
27. Hyderabad, North	0·3	0·7	0·13	0·37	− 0·24	− 65
28. Do., South	1·2	0·4	0·65	0·21	+ 0·44	+ 210
29. Mysore	0·6	0·9	0·17	0·49	− 0·32	− 65
30. Malabar	4·0	2·5	2·59	1·84	+ 0·75	+ 41
31. Madras, South-east	6·3	4·2	5·12	3·49	+ 1·63	+ 47
32. Do., Deccan	0·9	0·8	0·30	0·46	− 0·16	− 35
33. Do., Coast, North	1·0	1·0	1·07	0·94	+ 0·13	+ 14

TABLE 17.

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Burma	0·78	0·48	+ 0·30	+ 63
Assam	0·18	0·39	− 0·21	− 54
Bengal	0	0·20	− 0·20	− 100
Bihar and Orissa	0·02	0·19	− 0·17	− 89
United Provinces	0·44	0·32	+ 0·12	+ 37
Punjab	1·23	0·39	+ 0·84	+ 215
North-West Frontier Province	2·66	0·56	+ 2·10	+ 375
Sind	0·14	0·09	+ 0·05	+ 56

Division.	Rainfall.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Rajputana	0·29	0·21	+ 0·08	+ 38
Bombay	0·07	0·20	− 0·13	− 65
Central India	0·06	0·22	− 0·16	− 73
Central Provinces	0·05	0·40	− 0·35	− 87
Hyderabad	0·38	0·30	+ 0·08	+ 27
Mysore	0·17	0·49	− 0·32	− 65
Madras	3·10	2·21	+ 0·89	+ 40
Mean of India	0·65	0·50	+ 0·15	+ 30

Snowfall.

I.—PERSIA.

14. *Meshed.*—No snow fell.

II.—BALUCHISTAN.

(*Report dated 21st December*).—Snow fell on hills on the 11th, 19th and 20th. A quarter of an inch was registered at Quetta on the morning of the 12th.

III.—THE NORTH-WEST FRONTIER PROVINCE.

Tochi.—Light snow fell on hills in north Waziristan on the 20th and 22nd. The report is dated the 22nd.

Kurram.—Snow fell on the Kohi-Sufed on several days beginning from the 8th. On the 14th the snowfall extended to Parachinar cantonment where it fell to a thickness of 2 inches.

Drosh.—About 8 inches fell on the 11th on peaks 6,000 feet high. On the 12th an inch and a half fell on the ground and a comparatively large amount on peaks; on the 13th four inches and four feet fell at those two levels, and on the 14th half an inch and a foot respectively.

The total fall up to the 14th was said to be 12 feet on Lowarai Pass (10,000 feet) and 5 to 6 feet on lower levels. Snow was thin on the southern aspects of higher ranges and thick on northern aspects in the middle of the month.

Hazara.—The falls during the latter half of the month were as follows:—

TABLE 18.

Locality.	Height.	Total depth of snowfall.	
	Feet.	Feet.	Inches.
Narang	8,000	8	6
Paluderan	7,300	6	4
Kagan	6,600	4	2
Jared	5,000	1	4
Malkandi	4,500	1	4
Sundigali	7,000	4	5
Jachha	6,500	3	0
Thandiani	8,800	6	6
Dungagali	8,000	5	7

IV.—KASHMIR.

Srinagar.—Snow began to fall at Srinagar on the 13th, which is the usual time, and the precipitation was considerably higher than normal.

Sonamarg—Had about 6 feet till the 25th.

Dras.—Snowfall commenced on the 12th and occurred on 11 days, the total fall being about 2 feet.

Skardu.—Snow fell on 8 days at the station and on 14 days on the mountains, the total amounts being about 10 inches and 10 feet respectively at the two levels. The first fall was on the 12th. The snow covering at the end of the month was four or five feet deep on the higher mountains, 2 or 3 feet on the lower mountains and about 4 inches at the level of the station. The actual falls and accumulations were above normal.

Kargil.—Snow fell on 8 days (the first fall was on the 12th) to a total depth of nearly 4 feet on mountains and a foot at the station level.

Leh.—Light falls occurred on high hills.

V.—THE PUNJAB.

Murree.—9½ inches fell on the 23rd — 24th, 3¼ inches on the 26th — 27th and 3½ inches on the 28th.

Kulu (*Kangra*).—Snow fell on the 11th and 12th and came down to 4,000 feet. The report is dated the 12th.

Kilba (*Simla hills*).—Snow fell on 5 days.

TABLE 19.

Date.	Altitude to which snow descended.	Thickness.
	Feet.	Inches.
13	9,000	2
23	9,000	3
24	7,000	4
27	5,750	6
28	5,750	9

The fall was normal.

The accumulations at the end of the month were as follows:—

TABLE 20.

At Kilba raingauge	1½ feet.
Harang Pass	7 „
Chitkul „	10 „
Rupan „	10 „
Brua „	10 „
Shatul „	10 „

All passes were closed.

VI.—THE UNITED PROVINCES.

Garhwal.—Snow fell about one foot deep down to the level of 5,000 feet.

Almora.—(Report dated the 21st).

TABLE 21.

Locality.	Actual falls during month.		
	Depth.		Distance below perpetual snowline.
	Feet	Inches	
Malla Danpur	2	0	3 or 4 miles.
Malla Darma	2	9	2 miles.
Malla Johar	3	0	5 miles.
Byans	4	5	12 or 13 miles.
Chaudas	1	6	1 mile.

TABLE 22.

Name of pass or peak.	Accumulation.	
	Reported (till the 21st).	Normal (whole month).
	Feet.	Feet.
Nuwe pass	13	29
Lampia "	16 or 17	15¼
Lipulekh pass	11 or 12	11½
Binkaru "	4	15
Pindari peak	2	3
Kaphini "	2	3½
Puwalidwar	2	...
Nandakot	2	...
Untadhura	6¼	9
Ralamdhura	6¼	6¼
Milamdhura	2	7½

VII.—THE EASTERN HIMALAYAS.

Gangtok.—No snow fell.

Yatung.—Had 3½ feet of snow.

Sadiya Frontier Tract.—No snow was observed on Sita and there were only occasional deposits on higher hills.

Balipara Frontier Tract.—Heavy snow fell in the early part of the month, but it was not unusually heavy.

Kamrup.—About 2 feet fell on the Khergongpa and Tonglagongpa peaks.

Summary.

15. The month's fall was on the whole in excess in the hills of the North-West Frontier Province as well as over the western and central Himalayas.

S. SITARAMAYYA,
Scientific Assistant.

Table A.—Abstract of observations taken at 10 hrs. and 16 hrs. at 13 stations in India, etc., in December, 1919.

Table

Abstract of observations taken at 10 hrs. and 16 hrs. at 13

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure. Mean of 10 hrs.	Mean of 16 hrs.	Mean daily range.	Mean of daily mean pressures.	Departure from normal.	Mean reduced to sea-level and to gravity at 45° Lat.	Temperature of air. Mean maximum.	Mean minimum.	Mean daily range.	Highest maximum.	Lowest minimum.	Absolute range.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Temperature, Wet-bulb. Mean minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of three previous columns
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal.																					
5	Calcutta . .	21	30·088	29·955	·133	30·015	—·013	29·984	77·2	55·9	21·3	79·6	52·1	27·5	70·0	75·3	65·6	+0·3	54·6	61·8	63·2	59·8
	VI.—Punjab.																					
11	Lahore . .	702	29·404	29·311	·093	29·348	—·007	30·059	67·0	43·4	23·6	75·7	37·3	38·4	56·3	65·7	53·0	—1·6	41·8	51·0	56·0	49·6
	IX.—Rajputana.																					
18	Jaipur . .	1,421	28·672	28·572	·100	28·611	+·001	30·037	73·9	48·4	25·5	81·7	40·9	40·8	66·2	71·6	59·2	—2·3	44·9	53·4	55·8	51·4
	X.—Bombay.																					
25	Bombay . .	37	29·986	29·879	·107	29·928	—·025	29·904	84·7	70·5	14·2	89·4	61·7	27·7	76·8	80·8	76·8	+0·4	63·1	68·4	71·1	67·5
	XIV.—Mysore.																					
29	Bangalore . .	3,021	27·029	26·922	·107	26·976	—·006	29·851	79·2	60·8	18·4	82·5	53·2	29·3	72·4	76·4	69·1	+1·6	59·9	64·6	65·6	63·4
	XV.—Madras.																					
30	Trivandrum . .	198	29·764	29·662	·102	29·717	—·010	29·845	83·4	73·9	9·5	85·7	71·0	14·7	79·9	82·3	77·8	+0·4		74·6	75·7	
31	Pudukkottai .	318	29·696	29·536	·110	29·641		29·892	84·0	71·6	12·4	88·3	66·5	21·8	78·9	81·1	77·8			71·9	72·7	
	Madras . .	22	30·000	29·898	·102	29·948	—·032	29·901	83·4	72·3	11·1	86·3	67·4	18·9	80·1	80·6	77·1	+1·4	70·3	74·3	74·1	72·9
	Kashmir.																					
13	Srinagar . .	5,204	25·043	24·960	·083	25·001	—·020	24·973	43·5	27·7	15·8	56·7	16·3	40·4	35·9	42·0	35·6	—0·7	27·1	34·1	38·0	33·1
	Hill stations, excluding Kashmir and Baluchistan.																					
	Katmandu . .	4,388	25·755	25·684	·071	25·716	+·006	25·670	67·0	39·1	27·9	70·6	31·6	39·0	50·6	62·8	52·1	—0·5	37·2	46·8	52·0	45·7
	Kodaikanal . .	7,688	22·858	22·796	·062	22·827		22·762	61·9	48·5	13·4	67·5	42·8	24·7	58·9	56·6	55·2		45·3	53·5	53·8	50·9
	Extra India.																					
	Seychelles . .	15	29·966	29·879	·087	29·933	—·003*	29·871	84·1	78·3	5·8	85·9	75·4	10·5	81·7	82·4	80·1	+2·2*	71·5	76·2	76·6	74·9
	Mauritius . .	181				29·791	—·033	29·857	87·6	71·4	16·2	91·6	64·9	26·7			78·6	+0·9				

N.B.—Elevations in italics indicate barometric determinations.

Note.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

A.

stations in India, etc., in December, 1919.

Vapour tension in inches of mercury.					Humidity.					Cloud.				Wind direction.											Wind steadiness.		Wind velocity.		Rainfall.		Station.	Number of sub-division.
														Total number of 10 hrs. and 16 hrs. winds from																		
From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	From minimum.	Mean 10 hrs.	Mean 16 hrs.	Mean of daily means.	Departure from normal.	Mean 10 hrs.	Mean 16 hrs.	Mean of two previous columns.	Departure from normal.	Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean wind direction.	Normal mean wind direction of month.	Average percentage.	Normal percentage.	Mean velocity in miles per diem.	Normal.	Total rainfall for the month.	Heaviest rainfall during the month.		
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
																															III.—Bengal.	
·409	·442	·419	·435	—·003	81	60	48	69	− 2	2·0	2·2	2·1	+0·3	1	17	6	6	3	0	0	3	26	N 14° W	N 13° W	63	63	46	44	0	0	Calcutta	5
																															VI.—Punjab.	
·247	·306	·321	·289	+·018	66	69	53	71	+ 8	4·1	3·6	3·9	+1·1	25	0	3	2	8	0	0	4	20	N 38° W	N 36° W	21	21	20	23	0·66	0·24	Lahore	11
																															IX.—Rajputana.	
·257	·253	·254	·255	−·012	76	40	34	55	+ 2	2·6	3·3	2·9	+0·4	6	8	13	6	2	1	5	8	13	N 11° W	N 27° W	34	27	54	51	0·66	0·43	Jaipur	18
																															X.—Bombay.	
·482	·584	·631	·591	—·048	64*	63	60	65	− 7	1·3	1·6	1·5	—0·4	0	6	12	16	1	0	1	7	19	N 9° E	N 15° E	43	55	147	170	0	0	Bombay	25
																															XIV.—Mysore.	
·508	·519	·504	·524	+·058	95	66	56	74	+ 4	5·4	5·4	5·4		3	2	27	22	3	1	3	1	0	N 69° E	N 72° E	69	81	118	96	1·28	0·63	Bangalore	29
																															XV.—Madras.	
	·788	·798				77	73			7·1	6·5	6·8	+2·5	13	1	5	1	3	2	15	12	10	S 82° W	N 81° W	37	34	60	65	9·76	5·36	Trivandrum	30
	·690	·692				71	66			4·9	5·4	5·1		5	7	37	10	3	0	0	0	0	N 38° E		68		106		7·69	2·48	Pudukkottai	31
·716	·768	·756	·766	+·037	90	75	73	81	− 1	6·7	6·7	6·7	+1·2	1	32	21	8	0	0	0	0	0	N 26° E	N 24° E	85	81	101	128	5·94	1·29	Madras.	
																															Kashmir.	
·146	·177	·190	·170	—·006	94	84	73	84	+ 3	7·0	7·0	7·0	+1·9	27	4	3	2	5	2	3	3	13	N 42° W	S 36° E	16	3	31	45	3·14	0·57	Srinagar.	13
																															Hill stations, excluding Kashmir and Baluchistan.	
·202	·277	·291	·262	—·006	85	75	51	73	− 2	3·0	2·7	2·9	+0·3														11	16	0	0	Katmandu.	
·275	·358	·385	·339		79	74	85	79		5·1	7·7	6·4		1	9	10	10	15	5	0	8	4	N 78° E		27		203		4·39	0·78	Kodaikanal.	
																															Extra India.	
·679	·831	·835	·807	—·025	70	77	75	76	− 7	6·0	6·6	6·3	—0·5*	5	16	2	0	0	6	2	3	28	N 38° W	N 44° W	60	55	119	109	12·66	4·40	Seychelles.	
			·699	+·009				70	− 2			5·7	+0·2										S 85° E	S 88° E			98	137	2·38	0·67	Mauritius.	

* Departure from old normal.

Table B.—Abstract of observations taken at 8 hrs. at 210 stations in India, etc., in December, 1919.

(1) Provincial means.

(2) Data of stations.

(1) Provincial means based on the material in Table B (2) except that the statement of rainfall depends on the complete data of about 2,300 stations.

Division.	Pressure departure from normal.	Temperature of air.							Wind.		Hygrometry.				Cloud.		Rainfall.		
		Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Departure of velocity from normal.	Departure of steadiness from normal.	Mean humidity.	Departure from normal.	Mean vapour tension.	Departure from normal.	Mean cloud amount.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.
	"	°	°	°	°	°	°	°					"	"			"	"	"
Burma	—·001	82·1	—0·4	63·6	+1·3	72·8	+0·5	18·5	+0·3	— 2	85	— 1	·592	+·014	4·4	+1·5	0·78	0·48	+0·30
Assam	—·009	75·9	+0·4	53·4	+1·4	64·7	+0·9	22·5	—0·3	—12	93	— 1	·445	+·031	4·4	+1·3	0·18	0·39	—0·21
Bengal	—·004	77·4	—0·2	55·5	—0·2	66·5	—0·2	21·9	—0·2	—14	82	— 2	·444	—·014	1·5	—0·1	0	0·20	—0·20
Bihar and Orissa	0	77·1	—0·3	52·6	—0·1	64·8	—0·2	24·4	—0·2	— 7	77	+ 1	·383	—·002	1·9	+0·4	0·02	0·19	—0·17
United Provinces of Agra and Oudh	+·004	73·9	—1·1	47·1	—0·4	60·5	—0·7	26·8	—0·2	— 1	76	— 1	·306	—·012	1·9	+0·4	0·44	0·32	+0·12
Punjab	+·002	67·7	—4·1	43·4	+0·4	55·6	—1·8	24·3	+0·4	+ 7	79	+ 6	·262	+·016	3·6	+0·9	1·23	0·39	+0·84
North-West Frontier Province	—·001	63·7	—6·0	40·3	+0·5	52·1	—2·7	23·3	—0·7	— 6	79	+ 8	·232	+·019	3·7	+0·6	2·66	0·56	+2·10
Sind	0	75·9	—2·0	51·6	—0·5	63·8	—1·3	24·3	—1·9	+ 4	64	+ 4	·281	—·006	1·5	—0·7	0·14	0·09	+0·05
Rajputana	—·002	74·8	—2·5	48·0	—0·8	61·9	—1·6	25·8	—0·1	+11	63	+ 6	·258	+·007	2·3	+0·3	0·29	0·21	+0·08
Bombay	—·019	83·9	—0·7	59·0	+0·6	71·5	0	24·9	—1·1	— 5	61	+ 3	·406	+·013	1·6	+0·1	0·07	0·20	—0·13
Central India	—·015	75·7	—1·5	48·3	+0·1	62·0	—0·7	27·4	—1·0	— 9	71	+ 7	·315	+·021	1·4	—0·2	0·06	0·22	—0·16
Central Provinces	—·018	79·4	—0·7	52·9	+0·1	66·2	—0·3	26·6	+0·4	+ 9	65	+ 3	·345	+·007	1·9	—0·2	0·05	0·40	—0·35
Hyderabad	—·009	83·3	—0·3	60·0	+1·7	71·6	+0·7	23·3	—0·7	+23	64	+ 1	·439	+·013	2·7	+0·7	0·38	0·30	+0·08
Mysore	—·018	80·5	+0·1	61·4	+2·5	71·0	+1·3	19·1	—0·6	—17	80	+ 6	·525	+·044	5·2	+1·0	0·17	0·49	—0·32
Madras	—·022	84·1	—0·2	69·7	+2·0	76·9	+0·9	14·4	+0·4	— 9	81	+ 3	·684	+·046	4·8	+1·2	3·10	2·21	+0·8

Table

(2) Abstract of observations taken at 8 hrs. at 210

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	I.—Burma.																					
2	Victoria Point	147	29·828		29·907	29·881	19th	29·777	13th	78·3	73·3	86·1		74·4		80·2		11·7	89·8	16th	70·8	2nd
	Mergui	66	29·941	+·003	29·937	29·996	21st	29·887	13th	75·1	73·1	88·5	+1·5	71·6	+4·3	80·1	+2·9	16·9	91·3	13th	61·6	31st
	Tavoy	19	29·982	—·020P	29·932	30·036	23rd	29·924	13th	74·4	70·2	89·7	+2·0	67·4	+2·3	78·6	+2·1	22·3	91·5	8th	60·9	31st
	Moulmein	94	29·958	—·001	29·973	30·022	23rd	29·857	15th	74·2	70·1	87·0	−0·3	68·8	+1·8	77·9	+0·7	18·2	90·0	15th & 16th.	63·0	31st
	Rangoon	18	30·017	0	29·973	30·067	23rd	29·914	15th	71·4	67·7	87·4	+0·2	67·7	+0·4	77·5	+0·3	19·7	89·9	14th	64·3	22nd
	Bassein	27	30·017	+·004	29·981	30·091	23rd	29·911	15th	72·1	67·3	85·8	+1·5	65·5	+0·1	75·6	+0·8	20·3	89·0	3rd	59·3	23rd
	Diamond Island	41	29·967	—·019	29·944	30·060	21st	29·854	14th	76·4	71·4	84·1	+0·5	72·8	+0·3	78·5	+0·4	11·3	87·4	1st & 4th.	68·4	22nd
	Toungoo	164	29·890	+·008	30·002	29·972	23rd	29·774	15th	67·1	64·7	82·2	—1·0	60·3*	—1·2	71·2*	−1·1	21·9	87·3	6th	55·0	22nd
	Kyaukpyu	18	30·014		29·972	30·096	23rd	29·874	15th	71·9	68·1	79·3		68·2		73·7		11·1	83·5	14th	62·8	10th
	Akyab	20	30·019	—·010	29·980	30·090	23rd	29·867	15th	65·9	63·7	78·3	−2·8	62·0	—1·5	70·1	−2·1	16·3	81·2	3rd	57·0	19th
3	Minbu	*165*	29·893	—·017	30·007	29·979	20th	29·775	15th	66·5	62·6	79·6	−3·3	62·4	+1·9	71·0	—0·7	17·2	85·9	2nd	56·8	21st
	Yamethin	644	29·392		30·012	29·474	20th	29·282	15th	64·4	62·3	81·0	−2·8	59·8	+1·8	70·4	−0·5	21·2	86·7	6th	55·3	10th
	Mandalay	250	29·834	+·015	30·043	29·927	19th	29·714	15th	65·5	63·0	83·0	—0·2	60·8	+1·4	71·8	+0·6	22·2	89·1	3rd & 7th.	55·0	22nd
	Monywa	*980*	29·805	—·005	30·046	29·889	19th	29·715	15th	64·5	61·8	81·7	+1·4	60·6	+1·1	71·2	+1·3	21·1	86·7	7th	55·1	28th
	Lashio	*2,520*	27·246	+·004	27·192	27·343	20th	27·150	15th	55·2	54·2	71·6	—2·2	50·5	+2·4	61·1	+0·1	21·1	74·7	3rd	42·0	20th
	Bhamo	*361*	29·719	+·008	30·052	29·813	22nd	29·627	15th	57·9	57·3	75·0	—0·2	54·4	+3·2	64·7	+1·5	20·6	81·7	10th	48·8	21st
	Myitkyina	458	29·613	—·007	30·060	29·740	19th	29·498	15th	58·8	57·2	75·2	+0·2	53·7	+2·0	64·4	+1·1	21·5	78·4	6th & 7th.	46·6	22nd
	II.—Assam.																					
4	Dibrugarh	352	29·724	—·026	30·060	29·875	19th	29·602	15th	56·5	56·3	74·6	+1·5	52·7	+2·4	63·6	+1·9	21·9	78·7	6th	45·7	21st
	Sibsagar	333	29·753	—·032	30·066	29·906	19th	29·639	15th	55·8	55·1	71·6	+0·3	53·2	+2·7	62·4	+1·5	18·4	76·4	4th	46·7	22nd
	Tezpur	252	29·840	—·005	30·066	29·970	19th	29·714	15th	57·4	56·2	75·3	+1·2	55·0	+1·9	65·2	+1·5	20·3	79·2	7th	49·8	24th
	Gauhati	196	29·911	+·001	30·073	30·040	19th	29·770	15th	59·8	58·7	75·9	+0·6	53·6	+2·3	64·7	+1·5	22·3	79·2	2nd	48·7	22nd
	Dhubri	115	29·970	—·008	30·045	30·107	19th	29·835	15th	60·2	57·7	74·3	—0·1	56·4	+1·8	65·3	+0·9	17·9	78·0	3rd	51·5	31st
	Silchar	104	29·999	+·013	30·060	30·122	19th	29·847	15th	62·2	60·2	79·6	—0·1	55·2	+0·4	67·4	+0·1	24·4	83·4	2nd	50·7	28th
	Srimangal	66	30·016		30·037	30·136	19th	29·876	15th	51·0	50·5	80·3	—0·7	47·7	—1·9	64·0	—1·3	32·6	84·5	16th	43·6	19th
	III.—Bengal.																					
5	Cox's Bazar	36	30·011		29·993	30·098	19th	29·856	14th	65·4	62·7	79·2		58·5		68·9		20·7	83·7	16th	52·7	10th
	Chittagong	87	29·881	+·004	30·017	30·077	19th	29·824	14th	61·4	59·6	78·1	—0·2	56·2	—1·4	67·2	—0·8	21·9	82·3	13th	51·8	10th
	Noakhali	43	30·037	+·013	30·029	30·139	19th	29·879	14th	63·5	60·5	78·2	+0·2	57·0	+2·5P	67·6	+1·3P	21·2	82·4	16th	52·2	9th & 19th.
	Barisal	12	30·051	—·006	30·010	30·172	19th	29·904	14th	63·3	60·4	76·5	—1·3	56·7	+0·6	66·6	−0·3	19·8	79·6	4th	51·4	20th
	Narayanganj	26	30·048	—·003	30·024	30·174	19th	29·899	14th	62·4	59·1	77·4	—0·7	57·2	—0·1	67·3	—0·4	20·2	80·1	3rd	51·0	19th
	Mymensingh	63	30·012	—·005	30·030	30·140	19th	29·875	15th	61·7	58·8	77·4	+0·6	55·7	+0·7	66·5	+0·7	21·7	80·0	1st	50·0	20th
	Bogra	75	30·006	—·008	30·037	30·148	19th	29·866	14th	57·8	55·8	75·6	—1·0	53·6	—0·2	64·6	—0·6	22·0	78·3	2nd & 4th.	48·0	19th
	Dinajpur	123	29·951	—·013	30·036	30·086	19th	29·823	15th	57·8	51·8	76·8	—0·1	51·6	+0·7	64·2	+0·3	25·2	79·8	2nd & 3rd.	45·5	18th & 19th.
	Jalpaiguri *	283	29·809	+·004	30·067	29·960	19th	29·686	14th	57·7	55·5	77·0	+1·3	54·2	+1·6	65·6	+1·5	22·8	81·0	2nd	46·3	19th

N.B.—Elevations in italics indicate barometrical determinations.

* Mean of 30 days.

B.

stations in India, etc., in December, 1919.

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rain days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st December, 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															I.—Burma.
13	0	9	7	2	0	0	0	0	N 71° E		4·9			53		78		·752		5·2		4	− 0·8	1·26	2·16	− 0·90	1·26	2·16	− 0·90	0·40	Victoria Point.
14	1	6	7	2	1	0	0	0	N 77° E	N 14° E	4·0	1·3	+2·7	43	−22	90	+13?	·792	+·105?	3·4	+0·3	2	+ 0·8	1·46	0·41	+ 1·05	1·46	0·41	+ 1·05	0·97	Mergui.
26	1	3	1	0	0	0	0	0	N 45° E	N 30° E	1·5	0·9	+0·6	13	+ 2	81	− 2	·683	+·025	2·4	+1·3	1	+ 0·6	0·15	0·24	− 0·09	0·15	0·24	− 0·09	0·15	Tavoy.
1	0	14	15	0	0	0	0	1	N 66° E	N 50° E	2·5	2·0	+0·5	86	+29	81	− 2	·682	+·032	2·3	+0·4	1	+ 0·7	0·83	0·21	+ 0·62	0·83	0·21	+ 0·62	0·83	Moulmein.
0	11	16	3	0	0	1	0	0	N 33° E	N 44° E	3·8*	3·3	+0·5	79	+ 7	82	− 1	·638	+·014	4·1	+1·7	1	+ 0·5	0·71	0·36	+ 0·35	0·71	0·36	+ 0·35	0·71	Rangoon.
8	5	11	2	0	1	0	1	0	N 38° E	N 40° E	2·6	2·6	0	59	− 6	77	− 9	·613	+·001	3·5	+1·2	1	+ 0·4	0·40	0·39	+ 0·01	0·40	0·39	+ 0·01	0·21	Bassein.
1	3	19	6	0	1	0	0	1	N 49° E	N 42° E	9·3	6·5	+2·8	79	− 7	77	+ 3	·702	+·025	3·6	+0·6	1	+ 0·2	1·43	0·84	+ 0·59	1·43	0·84	+ 0·59	1·43	Diamond Island.
4	14	10	0	1	0	0	0	2	N 16° E	N 10° W	1·9	1·5	+0·4	76	+ 4	87	− 2	·577	+·002	4·6	+1·9	3	+ 2·5	1·91	0·42	+ 1·49	1·91	0·42	+ 1·49	1·65	Toungoo.
18	2	9	2	0	0	0	0	0	N 45° E		0·6			37		82		·639		5·7		1	+ 0·4	4·96	0·29	+ 4·67	4·96	0·29	+ 4·67	4·90	Kyaukpyu.
2	15	13	0	0	0	0	0	1	N 19° E	N 18° E	2·1†	1·8	+0·3	89	+ 7	88	− 2	·561	−·017	3·6	+1·5	1	+ 0·2	1·51	0·70	+ 0·81	1·51	0·70	+ 0·81	1·50	Akyab.
4	1	0	0	0	0	0	3	22	N 48° W	N 50° W	1·7	5·0	−3·3	82	+ 8	79	+ 1	·515	+·012	3·8	+1·6	1	+ 0·3	1·81	0·50	+ 1·31	1·81	0·50	+ 1·31	1·74	Minbu.
										N 13° W						88	+ 3	·535	+·024	4·0	+1·9	2	+ 1·2	1·95	0·49	+ 1·46	1·95	0·49	+ 1·46	1·59	Yamethin.
										N 4° W						87	+ 1	·541	+·012	7·4	+5·3	2	+ 1·2	0·67	0·36	+ 0·31	0·67	0·36	+ 0·31	0·42	Mandalay.
9	18	0	0	0	0	0	0	4	N 8° W		1·0			69		85	− 4	·519	−·002	5·2	+2·1	1	+ 0·2	0·16	0·42	− 0·26	0·16	0·42	− 0·76	0·13	Monywa.
29	1	1	0	0	0	0	0	0	N 23° E		1·1			7		94	0	·411	+·025	3·7	−2·0	2	+ 0·6	0·44	0·93	− 0·49	0·44	0·93	− 0·49	0·25	Lashio.
31	0	0	0	0	0	0	0	0	Calm	N 1° E	0·2	1·2	−1·0	(a)		96	+ 2	·464	+·036	8·5	+5·1	1	− 0·1	0·86	0·61	+ 0·25	0·86	0·61	+ 0·25	0·72	Bhamo.
26	2	3	0	0	0	0	0	0	N 28° E		1·7			17		90	+ 1	·448	+·003	4·5	+0·2	0	− 1·5	0	0·47	− 0·47	0	0·47	− 0·47	0	Myitkyina.
																															II.—Assam.
24	0	4	3	0	0	0	0	0	N 64° E		0			23		99	+ 4	·457	+·064	3·2	+0·3	0	− 1·3	0·04	0·44	− 0·40	0·04	0·44	− 0·40	0·02	Dibrugarh.
25	0	2	1	0	3	0	0	0	S 56° E	N 63° E	0·5	1·2	−0·7	10	−19	96	− 3	·432	+·014	3·5	+3·0	0	− 1·6	0·09	0·53	− 0·44	0·09	0·53	− 0·44	0·05	Sibsagar.
10	1	9	11	0	0	0	0	0	N 67° E		1·5			59		93	0	·441	+·033	4·3	+2·2	1	+ 0·3	0·11	0·29	− 0·18	0·11	0·29	− 0·18	0·11	Tezpur.
31	0	0	0	0	0		0	0	Calm		0			(a)		94	− 3	·481	+·043	9·0	+2·0	0	− 0·6	0	0·21	− 0·21	0	0·21	− 0·21	0	Gauhati.
2	2	10	11	1	2	1	2	0	N 71° E	N 54° E	4·0	3·4	+0·6	56	−16	86	− 4	·453	+·006	2·6	+1·4	0	− 0·1	0	0·08	− 0·08	0	0·08	− 0·08	0	Dhubri.
28	0	2	1	0	0	0	0	0	N 59° E	S 81° E	0·4	1·1	−0·7	7	0	88	− 2	·493	+·029	1·3	−1·3	0	− 0·8	0·07	0·43	− 0·36	0·07	0·43	− 0·36	0·07	Silchar.
																96	+ 6?	·360	−·073?	1·1		0	− 0·8	0	0·31	− 0·31	0	0·31	− 0·31	0	Srimangal.
																															III.—Bengal.
23	0	7	1	0	0	0	0	0	N 50° E		1·0			27		85		·533		2·6		0	− 1·0	0·02	1·06	− 1·04	0·02	1·06	− 1·04	0·02	Cox's Bazar.
7	4	17	2	0	0	0	0	1	N 38° E	N 32° E	1·0	2·0	−1·0	69	− 5	89	0	·489	−·018	2·5	+0·4	0	− 0·9	0·02	0·80	− 0·78	0·02	0·80	− 0·78	0·02	Chittagong.
9	15	5	0	1	0	0	0	1	N 9° E		0·5			61		84		·489	−·011	1·2	−0·2	0	− 0·4	0·02	0·31	− 0·29	0·02	0·31	− 0·29	0·02	Noakhali.
12	6	8	1	0	0	0	0	4	N 15° E	N 11° E	2·2	1·2	+1·0	49	+31	84	− 2	·489	−·020	1·1	−0·1	1	+ 0·3	0·14	0·44	− 0·30	0·14	0·44	− 0·30	0·14	Barisal.
26	2	1	0	0	0	0	0	2	N 10° W	N 5° W	0·5	1·5	−1·0	13	−34	81	− 6	·458	−·024	1·3	−0·9	0	− 0·5	0	0·19	− 0·19	0	0·19	− 0·19	0	Narayanganj.
30	0	0	1	0	0	0	0	0	E	N 36° E	0·1	0·7	−0·6	3	−29	83	− 7	·459	−·009	1·2	−0·3	0	− 0·3	0	0·08	− 0·08	0	0·08	− 0·08	0	Mymensingh.
28	2	1	0	0	0	0	0	2	N 10° W	N 1° W	0·1	1·0	−0·9	13	−32	88	+ 5?	·422	0	1·2	+0·7	0	− 0·2	0	0·06	− 0·06	0	0·06	− 0·06	0	Bogra.
2	3	8	0	1	2	2	11	2	N 53° W	N 12° W	1·3	1·4	−0·1	30	−24	81	− 6	·392	−·016	0·5	−0·6	0	− 0·1	0	0·07	− 0·07	0	0·07	− 0·07	0	Dinajpur.
26	1	0	0	0	0	0	0	3	N 34° W	N 12° E	0·4*			13	−41	87	0	·417	−·002	0·6	−0·5	0	− 0·4	0	0·13	− 0·13	0	0·13	− 0·13	0	Jalpaiguri.

(a) Indeterminate.

* Mean of 29 days.
† " " 23 "

Table

(2) Abstract of observations taken at 8 hrs. at 210

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity, at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	III.—Bengal—*concld.*																					
	Saugor Island	10	30·070	−·008	30·026	30·197	19th	29·903	14th	64·4	61·4	77·0	+0·4	58·6	−0·4	67·8	0	18·4	80·1	8th	52·7	19th & 22nd.
	Midnapore	149	29·928	−·015	30·034	30·070	19th	29·783	14th	61·4	55·6	79·2	−0·8	54·6	−0·9	66·9	−0·9	24·6	82·0	8th & 17th.	48·7	21st
	Calcutta	21	30·067	−·008	30·035	30·207	19th	29·905	14th	59·4	57·1	77·3	+0·3	55·9	−0·1	66·6	+0·1	21·4	79·6	15th	52·1	19th
	Jessore	30	30·053	−·004	30·032	20·191	19th	29·905	14th	59·9	56·4	76·3	−1·2	54·2	−0·5	65·3	−0·9	22·1	78·8	3rd	49·1	11th
	Burdwan	99	29·986	−·014	30·038	30·130	19th	29·831	14th	58·7	54·5	78·9	+0·4	54·6	−1·5	66·7	−0·5	24·3	81·0	3rd	50·0	19th
	Berhampore	67	30·034	+·005	30·053	30·180	19th	29·884	15th	59·1	56·2	76·1	−0·5	54·0	−1·4	65·0	−0·9	22·1	79·6	3rd	47·6	19th
	IV.—Bihar and Orissa.																					
6	Balasore	50	30·044	−·008	30·042	30·178	19th	29·883	14th	59·1	56·0	79·1	−0·8	54·8	−0·9	66·9	−0·9	24·3	81·6	10th	47·4	20th
	Hukitala (False Point)	29	30·063	0	30·033	30·187	19th	29·884	14th													
	Cuttack	80	30·013	−·003	30·039	30·148	19th	29·836	14th	62·4	59·4	78·2	−3·4?	59·3	+0·4	68·8	−1·5?	18·9	80·3	27th	52·2	20th
	Puri	24	30·077	+·008	30·042	30·207	19th	29·889	14th	66·5	63·2	80·5	0	63·4	+1·3	71·9	+0·7	17·1	83·2	27th	56·9	20th
	Angul	455	29·627	+·002	30·051	29·758	19th	29·465	14th	62·6	59·0	78·4	−0·7	55·6	+1·0	67·0	+0·1	22·8	81·0	8th & 11th.	47·4	20th
	Sambalpur	486	29·595	−·020	30·063	29·730	19th	29·436	14th	60·7	57·4	79·7	−0·1	53·9	−0·2	66·8	−0·1	25·8	82·0	8th, 11th & 16th.	46·0	20th
7	Chaibasa	*733*	29·334	−·006	30·065	29·459	19th	29·204	14th	55·4	52·6	78·2	+0·7	51·0	0	64·6	+0·3	27·2	81·9	11th	44·8	20th
	Ranchi	2,128	27·904	−·002	30·063	28·019	19th	27·827	13th	56·3	50·3	72·7	−0·6	50·2	−1·0	61·5	−0·8	22·5	75·7	11th	44·2	21st
	Purulia	*816*	29·258	+·007	30·070	25·393	19th	29·119	14th	59·0	52·7	80·3	+2·2?	53·2	−0·1	66·7	+1·1?	27·1	88·7	4th	47·5	19th
	Daltonganj	*730*	29·364	−·002	30·097	29·514	19th	29·221	14th	50·7*	49·1*	75·7*	−1·0	45·9*	0	60·8*	−0·5	29·8	79·6	25th	40·1	21st
8	Purnea	124	29·981	+·003	30·068	30·110	19th	29·832	14th	55·3	53·3	75·3	−0·5	48·5	−0·9	61·9	−0·7	26·8	79·4	1st	40·9	8th
	Monghyr	155	29·949		30·065	30·079	19th	29·806	14th	57·9	53·4	74·8		52·5		63·6		22·3	77·2	11th & 17th.	47·7	19th
	Darbhanga	165	29·940	+·005	30·068	30·101	19th	29·782	14th	60·4	55·9	77·3	+2·4?	48·4	−4·3?	62·8	−0·9?	28·9	81·6	2nd	41·8	19th
	Dinapore	188	29·902		30·058	30·045	19th	29·765	14th	54·2	52·6	76·8		48·5		62·6		28·3	79·7	17th	43·7	20th
	Pusa	182	29·925	+·001	30·074	30·072	19th	29·786	14th	53·3	53·6	73·6	−0·7	52·1	+0·3	62·8	−0·2	21·5	76·7	11th	44·5	19th
	Patna	239	29·863	−·003	30·074	30·013	19th	29·727	14th	56·8	52·9	76·4	+0·3	50·5	−0·4	63·5	−0·1	25·9	86·0	1st	43·5	20th
	Buxar	372	29·737	+·009	30·087	29·883	19th	29·596	14th	57·6	52·6	75·7	−0·6	52·2	+0·9	63·9	+0·1	23·5	79·7	10th	46·1	20th
	Gaya	489	29·602	+·011	30·070	29·734	19th	29·455	14th	60·2	54·6	77·0	+0·9	50·4	−1·1	63·7	−0·1	26·6	80·0	11th	45·0	19th
	Naya Dumka																					
	V.—United Provinces of Agra and Oudh.																					
9	Gorakhpur	257	30·840	+·012	30·074	29·973	19th	29·725	14th	53·1	50·3	73·9	−0·3	48·0	−2·0	61·0	−1·1	25·9	76·9	4th	42·0	18th
	Benares	267	29·835	0	30·073	29·983	19th	29·697	14th	56·5	52·8	75·0	−0·1	47·3	−0·5	61·1	−0·3	27·7	80·9	10th	41·3	20th
	Allahabad	309	29·819	+·024?	30·105?	29·977	19th	29·685	14th	55·8	50·9	76·0	+0·2	48·1	+0·3	62·1	+0·3	27·9	81·9	10th	40·7	20th
	Cawnpore	416	29·686	+·003	30·092	29·834	19th	29·565	14th	51·2	48·5	73·4	−1·1	47·3	−1·2	60·4	−1·1	26·1	79·2	9th	43·1	20th
	Lucknow	368	29·729	+·004	30·082	29·844	19th	29·613	14th	52·5	48·9	75·3	−0·4	46·6	+0·3	61·0	−0·1	28·7	80·5	9th	43·5	7th, 11th & 20th.
	Bahraich	407	29·670	+·002	30·068	29·769	20th	29·557	14th	51·8	48·7	74·1†	−1·6†	47·8	+0·1	61·3†	−0·7	26·3	79·5	3rd	40·4	17th
18	Jhansi	824	29·263	−·016	30·097	29·405	19th	29·112	14th	54·6	49·7	76·4	−1·9	47·9	−4·5?	62·2	−3·2?	28·5	82·6	9th	41·8	18th
	Agra	556	29·550	+·003	30·103	29·681	19th	29·431	14th	56·0	50·7	73·1	−2·4	48·9	−0·2	61·0	−1·3	24·2	80·8	9th	42·4	17th
	Mainpuri	516	29·569	−·002	30·080	29·698	19th	29·437	14th	51·8	47·5	73·6	−1·3	46·8	−0·3	60·2	−0·8	26·8	80·3	9th	39·6	17th
	Bareilly	568	29·515	+·014	30·087	29·627	19th	29·407	14th	52·3	49·5	71·9	−0·8	46·6	+0·6	59·3	−0·1	25·3	76·8	4th	40·2	19th
	Roorkee	899	29·173	+·018	30·109	29·294	19th	29·036	14th	49·1†	46·7†	69·7†	−3·5†	42·8†	−1·0†	56·3†	−2·3	26·9	74·2	3rd	36·4	7th

N. B.—Elevations in italics indicate barometrical determinations.

* Mean of 20 days.
† „ „ 21 „

B—*continued.*

stations in India, etc., in December, 1919—*continued.*

Wind direction. Number of winds from: Calm	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 31st to December, 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															III.—Bengal—*concld.*
0	18	8	1	0	0	0	0	4	N 8° E	N 15° E	5·0	4·3	+0·7	86	+ 4	83	− 4	·507	−·009	2·2	−0·3	0	−0·6	0	0·30	−0·30	0	0·30	−0·30	0	Saugor Island.
25	2	1	0	0	0	0	0	3	N 11° W		1·3			16		67	− 1	·364	−·019	2·2	+1·0	0	−0·3	0	0·29	−0·29	0	0·29	−0·29	0	Midnapore.
8	6	2	1	1	0	0	0	13	N 21° W	N 4° W	2·2	1·8	+0·4	56	+ 6	87	+ 6	·443	+·003	2·3	+0·8	0	−0·4	0	0·22	−0·22	0	0·22	−0·22	0	Calcutta.
31	0	0	0	0	0	0	0	0	Calm	N 11° W	0·7	1·1	−0·4	(a)		80	− 4	·411	−·039	0·4	−0·9	0	−0·5	0	0·22	−0·22	0	0·22	−0·22	0	Jessore.
25	2	0	0	0	0	0	1	5	N 40° W	N 22° W	0·9	1·2	−0·3	27	−12	75	+ 2	·371	−·019	2·1	+0·5	0	−0·3	0	0·17	−0·17	0	0·17	−0·17	0	Burdwan.
24	3	0	0	0	1	0	0	3	N 27° W	N 41° W	0·8	1·0	−0·2	17	−23	83	− 1	·415	−·012	1·2	−0·5	0	−0·3	0	0·14	−0·14	0	0·14	−0·14	0	Berhampore.
																															IV.—Bihar and Orissa.
11	9	1	0	0	0	1	1	8	N 25° W	N 25° W	1·0	1·5	−0·5	56	−16	81	+ 3	·408	−·014	2·1	+0·7	0	−0·5	0	0·24	−0·24	0	0·24	−0·24	0	Balasore.
0	20	5	0	0	0	0	2	4	N 3° W		4·2			86	0					4·8	+2·1	0	−0·8	0	0·67	−0·67	0	0·67	−0·67	0	Hukitala (False Point).
30	0	0	0	0	0	0	1	0	W	N 48° W	0·6	0·9	−0·3	3	−11	85	+ 8	·481	+·027	2·3	0	0	−0·6	0	0·32	−0·32	0	0·32	−0·32	0	Cuttack.
0	23	9	1	0	0	0	0	0	N 15° E		5·3			90		82	+ 5	·535	+·026	2·3	+0·9	0	−0·5	0·07	0·35	−0·28	0·07	0·35	−0·28	0·07	Puri.
10	0	1	0	0	0	0	4	16	N 51° W		2·8†			61		80	+ 1	·456	+·029	2·0	+0·4	0	−0·8	0	0·31	−0·31	0	0·31	−0·31	0	Angul.
0	17	5	0	0	0	0	1	8	N 7° W	N 16° E	2·7	1·8	+0·9	86	+ 5	81	+ 7	·429	+·023	2·0	+0·2	0	−0·4	0	0·24	−0·24	0	0·24	−0·24	0	Sambalpur.
25	0	1	0	0	3	1	1	0	S 18° W	S 68° W	1·0	0·7	+0·3	10	−30	83	− 3	·364	−·014	1·6	+0·1	0	−0·5	0	0·21	−0·21	0	0·21	−0·21	0	Chaibasa.
13	1	0	0	0	1	1	7	9	N 72° W	N 68° W	2·3	3·1	−0·8	49	+10	66	+ 2	·293	−·016	1·9	+0·3	0	−0·6	0	0·21	−0·21	0	0·21	−0·21	0	Ranchi.
8	1	0	0	0	1	8	8	5	S 83° W		0·6			55		64	− 5	·317	−·028	1·9	+0·6	0	−0·5	0	0·14	−0·14	0	0·14	−0·14	0	Purulia.
24	1	0	1	5	0	0	0	0	S 59° E		1·4			19		89*	+ 8	·332*	−·013	0·6	−0·6	0	−0·5	0	0·23	−0·23	0	0·23	−0·23	0	Daltonganj.
2	0	4	3	0	0	13	8	1	S 65° W	S 88° W	1·6	1·1	+0·5	43	+24	87	− 4	·382	+·003	2·7	+1·9	0	−0·2	0	0·14	−0·14	0	0·14	−0·14	0	Purnea.
8	0	0	0	3	0	16	4	0	S 45° W		2·2			58		74		·356		1·2		0	−0·3	0	0·46	−0·46	0	0·46	−0·46	0	Monghyr.
28	0	0	0	0	0	1	2	0	S 75° W	N 86° W	0·7	1·5	−0·8	10	−20	75	−12?	·394	−·010	0·8	0	0	−0·2	0	0·09	−0·09	0	0·09	−0·09	0	Darbhanga.
10	0	1	1	1	5	8	4	1	S 39° W		1·8			42		83		·377		1·2		0	−0·3	0·02	0·13	−0·11	0·02	0·13	−0·11	0·02	Pusa.
18	0	1	1	2	0	5	4	0	S 46° W	S 78° W	1·6	1·4	+0·2	20	−34	72	− 3	·350	−·021	1·5	+0·4	0	−0·3	0·02	0·10	−0·08	0·02	0·10	−0·08	0·02	Patna.
10	0	0	4	1	1	7	7	1	S 53° W		1·7			32		76	+ 5	·349	+·001	2·4	+1·0	1	+0·5	0·24	0·21	+0·03	0·24	0·21	+0·03	0·24	Buxar.
26	0	0	0	2	5	3	1	0	S 11° W	S 10° W	0·9	1·8	−0·9	30	− 2	70	− 2	·333	−·010	1·1	−0·5	0	−0·2	0	0·15	−0·15	0	0·15	−0·15	0	Gaya.
30	1	0	0	0	0	0	0	0	N		1·1			3		69	− 4	·353	−·012	0·5	−0·6	0	−0·3	0	0·12	−0·12	0	0·12	−0·12	0	Naya Dumka.
																															V.—United Provinces of Agra and Oudh.
17	0	0	0	0	0	1	13	0	S 87° W	N 69° W	0·6	0·8	−0·2	46	+14	81	0	·327	−·041	0·5	−0·6	1	+0·6	0·14	0·15	−0·01	0·14	0·15	−0·01	0·14	Gorakhpur.
17	0	0	1	3	1	7	1	1	S 26° W	S 56° W	1·0	1·7	−0·7	27	− 2	76	− 5	·351	−·002	1·8	+0·6	0	−0·5	0·06	0·23	−0·17	0·06	0·23	−0·17	0·06	Benares.
16	0	0	2	1	0	1	10	1	S 86° W	N 76° W	1·3	2·2	−0·9	30	+ 1	69	− 8	·307	−·033	2·2	+0·7	0	−0·5	0·05	0·25	−0·20	0·05	0·25	−0·20	0·05	Allahabad.
8	1	2	1	2	1	3	8	5	N 81° W	N 82° W	1·4	1·8	−0·4	33	+ 4	81	− 4	·305	−·009	0·7	−0·5	1	+0·4	0·10	0·19	−0·09	0·10	0·19	−0·09	0·10	Cawnpore.
30	0	1	0	0	0	0	0	0	N 45° E	N 76° W	0·9	1·2	−0·3	3	−26	76	− 3	·303	−·018	0·9	−0·5	0	−0·7	0·05	0·31	−0·26	0·05	0·31	−0·26	0·05	Lucknow.
19	2	0	2	1	0	0	2	5	N 31° W	N 51° W	1·1	1·1	0	20	− 4	79	− 3	·305	−·040	1·7	+0·6	1	+0·3	0·72	0·30	+0·42	0·72	0·30	+0·42	0·72	Bahraich.
17	1	1	2	0	0	6	3	1	S 71° W	N 79° W	2·2	1·5	+0·7	17	− 1	70	+11	·292	−·014	0·9	−0·2	1	+0·3	0·22	0·25	−0·03	0·22	0·25	−0·03	0·22	Jhansi.
9	1	3	3	0	0	6	6	3	N 82° W	N 61° W	2·0	2·1	−0·1	23	−13	67	0	·299	+·021	2·7	+1·3	1	+0·2	0·20	0·29	−0·09	0·20	0·29	−0·09	0·21	Agra.
14	2	0	2	2	0	0	4	7	N 45° W	N 66° W	0·9	0·8	+0·1	27	+ 3	71	− 2	·271	−·017	2·9	+1·0	1	+0·1	0·53	0·38	+0·15	0·53	0·38	+0·15	0·50	Mainpuri.
20	0	1	0	1	0	1	5	3	N 78° W	N 44° W	0·8	1·2	−0·4	20	+ 6	81	0	·320	+·013	3·1	+1·6	1	+0·2	1·40	0·33	+1·07	1·40	0·33	+1·07	1·32	Bareilly.
21	0	0	0	3	0	0	0	7	N 45° W	N 39° W	1·4	1·0	+0·4	13	+ 6	82‡	− 2	·287‡	+·010	3·0	+0·9	2	+0·8	0·66	0·57	+0·09	0·66	0·57	+0·09	0·36	Roorkee.

(a) Indeterminate.

* Mean of 20 day
† „ „ 29 „
‡ „ „ 21 „

Table

(2) Abstract of observations taken at 8 hrs. at 210 stations

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	VI.—Punjab.																					
11	Delhi	718	29·367	+·008	30·103	29·484	19th	29·273	14th	51·9	47·0	67·8	−5·5	49·3	+0·3	58·6	−2·6	18·5	73·8	12th	45·0	31st
	Hissar	725	29·373	+·012	30·123	29·490	19th	29·255	12th	48·4	44·6	70·4	−3·8	43·1	+0·1	56·8	−1·9	27·3	77·6	8th	37·3	18th
	Patiala	*818*	29·226	−·023?	30·075?	29·330	18th	29·121	14th	48·8	46·0	67·7	−3·5	44·9	+0·7	56·3	−1·4	22·8	75·6	3rd	37·1	8th
	Ambala	892	29·170	+·006	30·102	29·275	19th	29·085	9th	48·4	45·6	68·7	−3·4	44·4	+0·9	56·5	−1·3	24·3	77·0	3rd	35·0	8th
	Ludhiana	812	29·259	+·006	30·106	29·370	19th	29·168	9th	48·0	45·2	66·8	−3·6	45·3	+0·9	56·0	−1·3	21·5	75·5	12th	40·0	7th
	Lahore	702	29·370	−·004	30·105	29·473	18th	29·260	15th	45·5	44·1	67·3	−5·5	42·4	+1·5	54·8	−2·0	24·9	75·7	2nd	31·2	21st
	Sialkot	830	29·239	0	30·114	29·342	17th	29·129	12th	46·0	44·7	64·8	−4·8	41·5	−1·2	53·2	−3·0	23·3	73·9	1st	34·5	6th
	Rawalpindi	1,674	28·369	−·015	30·145	28·464	20th	28·255	13th	43·2	41·1	62·9	−4·2	38·5†	+1·1	51·1†	−1·5	24·4	71·9	2nd	32·8	6th
12	Khushab	612	29·495	+·007	30·130	29·610	21st	29·358	13th	43·9	44·7	62·7	−3·4	40·5	−1·6	54·6	−2·5	28·2	77·2	1st	33·2	6th, 7th & 10th.
	Lyallpur	605	29·480		30·108	29·590	20th	29·332	13th	45·8	43·8	68·2		40·8		54·5		27·4	76·8	1st	36·0	16th
	Montgomery	558	29·535	−·005	30·109	29·652	19th	29·395	13th	48·8	45·2	69·0	−3·5	43·0	+0·4	55·0	−1·5	26·0	77·8	1st	38·1	17th
	Multan	426	29·693	+·006	30·118	29·830	20th	29·548	15th	50·4	46·9	70·1	−3·4	46·7	+1·7	58·4	−0·9	23·4	80·1	1st	42·1	17th
	VII.—North-West Frontier Province.																					
14	Peshawar	1,113	28·982	−·006	30·173	29·168	21st	28·866	13th	42·1	40·2	59·8	−7·2	38·5	−0·7	49·2	−3·9	21·3	68·8	5th	29·9	9th
	D. I. Khan	590	29·533	+·004	30·158	29·639	21st	29·397	13th	45·2	43·0	67·5	−4·8	42·2	+1·7	54·9	−1·5	25·3	74·3	4 days	36·9	16th
	VIII.—Sind.																					
16	Jacobabad	186	29·943	+·005	30·104	30·072	21st	29·824	13th	50·1	44·0	73·6	−3·1	44·6	+0·3	59·1	−1·4	29·0	83·1	1st	39·6	14th
	Hyderabad	96	30·020	−·005	30·073	30·127	29th	29·888	10th	55·2	51·1	76·6	−2·4	51·3	−1·0	63·9	−1·7	25·3	87·0	1st	44·1	28th
	Karachi	13	30·109	−·001	30·073	30·213	29th	29·985	10th	61·8	54·1	77·6	−0·6	58·9	−0·7	68·3	−0·7	18·7	85·1	4th	53·3	29th
	IX.—Rajputana.																					
17	Bikaner	*771*	29·325	+·008	30·116	29·446	18th & 20th.	29·189	11th	51·5	45·6	74·7	−0·4?	45·7	−4·7?	60·2	−2·5?	29·0	83·4	1st	40·5	29th
	Jodhpur	780	29·303	+·004	30·088	29·420	18th	29·152	13th	57·2	48·6	78·3	−1·4	52·1	−0·6	65·2	−1·0	26·2	85·7	7th	44·9	26th
18	Jaipur	1,431	28·647	+·002	30·120	28·781	19th	28·516	13th	54·1	47·8	74·1	−3·2	48·3	−0·8	61·2	−2·0	25·8	81·7	9th	40·9	18th
	Ajmer	1,611	28·447	−·020	30·122	28·570	18th	28·324	13th	48·1	45·3	70·9	−5·3?	46·7	+0·2	58·8	−2·5?	24·2	78·2	8th & 9th.	41·3	18th
	Kotah	832	29·248	−·005	30·081	29·383	19th	29·118	11th	58·8	52·4	76·2	−3·0	52·4	−0·9	64·3	−1·9	23·8	84·6	12th	46·6	31st
	X.—Bombay.																					
19	Deesa	466	29·605	−·003	30·050	29·711	20th	29·454	13th	60·2	51·1	84·3	−1·4	51·1	−1·5	67·7	−1·5	33·2	90·0	6th	44·2	26th
	Bhuj	334	29·744	−·003	30·045	29·842	29th	29·633	13th	62·5	57·6	80·7	−1·3	49·8	−6·2?	65·2	−3·7?	30·9	87·0	20th	42·7	29th
	Jamnagar	61	30·035	+·009?	30·044	30·131	29th	29·914	10th	63·4	57·3	80·7	−1·3	53·1	−2·2	66·9	−1·7	27·6	88·0	1st	47·8	27th
	Dwarka	37	30·045	−·010	30·028	30·129	2	29·930	13th	68·1	59·9	81·0	+0·1	61·5	+0·7	71·2	+0·4	19·5	87·1	4th	56·1	26th
	Rajkot	429	29·612	−·027	30·011	29·704	20th	29·504	13th	62·0	51·5	83·1	−2·1	54·8	+1·9	69·0	−0·1	28·3	89·1	11th	47·4	27th
	Veraval	*18*	30·024	−·018	29·986	30·121	29th	29·842	13th	66·6	58·6	83·5	−0·7	61·7	−0·5	72·6	−0·6	21·8	90·5	1st	52·6	29th
	Bhavnagar Para	55	29·999	−·022	30·002	30·111	19th	29·867	13th	61·6	53·2	83·9	−1·5	53·8	−2·5?	68·8	−2·0?	30·1	88·4	1st	45·6	26th
	Surat	39	30·037*	+·004*	30·020*	30·128	19th	29·926	11th	66·2	57·7	86·5	−1·2	59·6	+1·3	73·0	+0·1	26·9	90·7	8th	51·3	29th
	Ahmadabad	163	29·921	+·004	30·039	30·051	19th	29·767	13th	66·9	58·3	85·2	−1·2	58·3	−1·2	71·8	−1·2	26·9	89·9	6th & 12th.	51·9	29th
25	Bombay	37	29·977	−·030	29·954	30·066	19th	29·889	14th	72·5	66·3	89·6	−0·1	70·2	+0·2	77·4	+0·1	14·4	89·4	19th	61·7	29th
	Ratnagiri	207	29·780	−·032	29·929	29·868	20th	29·684	14th	76·5	65·5	89·0	−0·3	69·3	+2·0	79·2	+0·9	19·7	95·1	1st	64·5	29th
	Marmagao	*60*	29·932	−·031	29·927	30·024	19th	29·822	14th	73·1	68·8	82·9	−2·9?	71·3	+0·8	77·1	−1·1?	11·6	86·6	8th	65·1	23rd
	Karwar	44	29·941	−·030	29·920	30·022	20th	29·824	14th	70·5	67·1	87·8	+0·2	68·5	+2·1	78·1	+1·1	19·3	92·1	1st	62·9	23rd

N.B.—Elevations in italics indicate barometrical determinations.

* Mean of 18 days.
† „ „ 28 „

B—*continued.*

in India, etc., in December, 1919—*continued.*

Wind Direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st December 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															VI.—Punjab.
7	0	1	0	2	0	1	11	9	N 73° W	N 87° W	1·3	1·8	−0·5	53	+ 9	68	+ 5	·255	+·002	2·6	+0·4	2	+1·0	0·56	0·43	+0·13	0·56	0·43	+0·13	0·41	Delhi.
3	4	2	2	1	6	7	4	2	S 52° W	N 84° W	3·3	2·0	+1·3	27	+20	72	+ 1	·247	+·003	2·5	+0·1	3	+2·2	0·94	0·30	+0·64	0·94	0·30	+0·64	0·59	Hissar.
11	3	2	1	3	0	0	2	9	N 24° W		3·9			32		80	+ 2	·276	+·002	3·4	+1·0	3	+1·9	1·03	0·34	+0·69	1·03	0·34	+0·69	0·58	Patiala.
16	10	0	2	1	0	0	1	1	N 6° E	N 44° W	2·6	1·1	+1·5	33	+12	79	− 3	·270	−·001	4·5	+2·1	3	+1·6	1·53	0·59	+0·94	1·53	0·59	+0·94	1·25	Ambala.
23	1	3	0	1	0	0	1	2	N 6° E	N 47° W	0·9	0·9	0	12	− 5	72	+ 4	·266	+·008	2·7	−0·2	3	+1·7	1·20	0·69	+0·61	1·30	0·69	+0·61	0·60	Ludhiana.
23	0	0	0	1	1	0	3	3	N 84° W	N 58° W	0·8	0·9	−0·1	14	+ 7	89	+ 7	·275	+·020	3·9	+1·3	3	+2·0	0·66	0·38	+0·28	0·66	0·38	+0·28	0·24	Lahore.
18	1	1	5	2	2	0	0	2	S 87° E	N 63° E	0·7	0·7	0	18	+11	91	+16	·284	+·032	3·4	+1·0	4	+2·9	2·43	0·65	+1·78	2·43	0·65	+1·78	1·61	Sialkot.
11	1	1	2	0	2	2	11	1	S 84° W	N 41° W	2·0	0·9	+1·1	33	+19	83	+ 9	·234	+·027	3·2	−0·4	7	+5·2	3·00	1·00	+2·00	3·00	1·00	+2·00	1·23	Rawalpindi.
20	2	2	2	1	2	2	0	0	S 75° E	N 27° E	2·0	1·5	+0·5	10	− 4	70	+10	·243	+·045	4·2	+1·7	5	+4·4	2·11	0·41	+1·70	2·11	0·41	+1·70	1·15	Khushab.
12	0	2	1	1	4	5	2	4	S 52° W		1·3			23		84		·262		5·0		2	+1·6	0·98	0·19	+0·79	0·98	0·19	+0·79	0·75	Lyallpur.
11	2	2	2	4	4	1	1	4	S 52° E	N 68° E	2·2	1·9	+0·3	7	−11	74	+10	·252	+·025	4·0	+1·5	1	0	0·45	0·33	+0·12	0·45	0·33	+0·12	0·37	Montgomery.
19	5	3	0	0	0	0	0	4	N 4° W	N 53° E	1·1	0·8	+0·3	33	+15	76	+ 7	·275	+·017	3·4	+1·3	2	+1·4	1·03	0·22	+0·81	1·03	0·22	+0·81	0·74	Multan.
																															VII.—North-West Frontier Province.
31	0	0	0	0	0	0	0	0	Calm	S 16° W	0·4	1·7	−1·3	(a)		83	+13	·228	+·013	4·4	+0·7	8	+6·9	4·35	0·50	+3·85	4·35	0·50	+3·85	1·17	Peshawar.
29	0	1	0	0	0	0	0	1	N	N 32° W	0·5	0·6	−0·1	5	− 6	75	+ 3	·236	+·014	3·1	+0·5	2	+1·4	0·61	0·20	+0·41	0·61	0·20	+0·41	0·31	D. I. Khan.
																															VIII.—Sind.
29	0	0	0	1	0	0	0	1	Calm	N 7° E	1·0	1·2	−0·2	(a)		60	− 6	·209	−·040	1·4	−1·2	1	+0·6	0·35	0·14	+0·21	0·35	0·14	+0·21	0·35	Jacobabad.
31	0	0	0	0	0	0	0	0	Calm	N 2° E	0·1	5·1	−5·0	(a)		73	+18	·318	+·047	0·6	−1·4	0	−0·2	0·05	0·06	−0·01	0·05	0·06	−0·01	0·05	Hyderabad.
0	8	19	4	0	0	0	0	0	N 39° E	N 54° E	5·5	6·1	−0·6	86	+ 4	58	0	·317	−·024	2·5	+0·6	1	+0·6	0·12	0·13	−0·01	0·12	0·13	−0·01	0·12	Karachi.
																															IX.—Rajputana.
8	2	1	6	10	3	0	0	1	S 63° E	N 4° W	2·4	2·4	0	46	+24	61	+ 7	·227	+·001	2·4	0	0	−0·4	0·05	0·20	−0·15	0·05	0·20	−0·15	0·05	Bikaner.
7	0	24	0	0	0	0	0	0	N 45° E		2·6			76		50	+ 6	·230	+·017	3·9	+1·7	0	−0·5	0·01	0·13	−0·12	0·01	0·13	−0·12	0·01	Jodhpur.
15	1	4	4	0	0	2	1	4	N 17° E	N 2° W	2·3	2·1	+0·2	20	− 2	62	+ 4	·253	−·002	2·7	+0·7	2	+1·4	0·66	0·22	+0·44	0·66	0·22	+0·44	0·43	Jaipur.
31	0	0	0	0	0	0	0	0	Calm	N 24° E	0·6	1·2	−0·6	(a)		80	+ 8	·270	0	0·9	−1·1	1	+0·5	0·60	0·31	+0·29	0·60	0·31	+0·29	0·60	Ajmer.
28	0	0	0	1	0	0	0	2	N 45° W		1·4			3		62	+ 4	·309	+·020	1·6	+0·3	1	+0·3	0·81	0·28	+0·53	0·81	0·28	+0·53	0·75	Kotah.
																															X.—Bombay.
3	0	13	14	1	0	0	0	0	N 71° E	N 72° E	4·9	5·8	−0·9	82	+10	43	+ 3	·260	+·014	1·5	+0·2	0	−0·1	0	0·05	−0·05	0	0·05	−0·05	0	Deesa.
25	2	0	4	0	0	0	0	0	N 63° E	N 15° W	2·4	4·2	−1·8	13	+ 6	73	+16	·413	+·064	0·8	−0·6	0	−0·1	0	0·04	−0·04	0	0·04	−0·04	0	Bhuj.
1	0	13	15	0	1	0	0	1	N 69° E		0·2			81		67	+15	·392	+·072	0·7	0	0	−0·2	0	0·05	−0·05	0	0·05	−0·05	0	Jamnagar.
0	6	19	5	1	0	0	0	0	N 46° E		7·8			89		59	− 8	·412	−·061	0·8	−0·6	0	−0·3	0	0·05	−0·05	0	0·05	−0·05	0	Dwarka.
10	4	9	7	1	0	0	0	0	N 55° E	N 69° E	3·5	3·4	+0·1	56	+ 6	44	− 5	·244	−·049	1·5	+0·5	0	−0·1	0	0·04	−0·04	0	0·04	−0·04	0	Rajkot.
1	16	12	0	1	0	0	0	1	N 19° E	N 27° E	4·8	4·2	+0·6	86	+11	58	+ 7	·310	+·027	0·5	−1·1	0	−0·2	0	0·09	−0·09	0	0·09	−0·09	0	Veraval.
3	6	2	0	0	0	2	5	13	N 43° W	N 77° W	0·1*	4·6	−4·5	67	+ 9	54	0	·296	−·023	0·8	−0·8	0	−0·2	0	0·08	−0·08	0	0·08	−0·08	0	Bhavnagar Para.
9	5	9	6	2	0	0	0	0	N 54° E	N 48° E	2·2	3·2	−1·0	56	− 2	57	− 4	·369	−·028	0·6	−0·7	0	−0·1	0	0·04	−0·04	0	0·04	−0·04	0	Surat.
2	0	17	8	2	0	0	0	2	N 59° E	N 62° E	3·3	3·4	−0·1	76	+ 2	57	+10	·377	+·082	0·8	−0·6	0	0	0	0·03	−0·03	0	0·03	−0·03	0	Ahmadabad.
0	5	11	15	0	0	0	0	0	N 60° E	N 70° E	6·1	7·1	−1·0	86	0	70	− 2	·567	−·018	1·1	−0·6	0	−0·2	0	0·06	−0·06	0	0·06	−0·06	0	Bombay.
2	3	7	12	6	0	0	0	0	N 80° E	S 74° E	6·3	5·8	+0·5	69	+ 4	53	− 2	·478	+·004	1·4	+0·1	0	−0·3	0	0·09	−0·09	0	0·09	−0·09	0	Ratnagiri.
2	2	16	11	0	0	0	0	0	N 59° E	S 77° E	6·0	5·8	+0·2	82	+ 2	80	+ 4	·649	+·027	3·5	+2·0	2	+1·6	2·43	0·19	+2·24	2·43	0·19	+2·24	2·03	Marmagao.
23	3	0	0	0	0	0	0	0	N	N 67° E	1·5	2·2	−0·7	10	−70	83	+ 7	·622	+·069	2·8	+1·6	1	+0·6	0·59	0·24	+0·35	0·59	0·24	+0·35	0·50	Karwar.

* Mean of 14 days.

(a) Indeterminate.

Table

(2) Abstract of observations taken at 8 hrs. at 210 stations

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	X.—Bombay—*concld.*																					
26	Malegaon	1,430	28·590	—·035	30·023	28·726	19th	28·448	14th	62·9	54·7	85·6	+0·9	51·8	0	68·7	+0·5	33·8	91·1	10th	43·6	26th & 29th.
	Ahmadnagar	2,154	27·878	—·027	30·010	27·993	19th	27·767	14th	64·6	54·6	82·9	—0·3	53·9	+1·7	68·4	+0·7	29·0	86·4	6th & 9th.	47·5	22nd
	Poona	1,846	28·185	—·017	30·027	28·287	20th	28·081	14th	62·2	55·9	81·1	—0·5	53·6	—0·2	68·8	—0·3	30·5	87·2	9th	46·4	29th
	Sholapur	1,590	28·428	—·029	29·990	28·540	19th	28·304	14th	68·9	58·2	85·2	—0·3	59·7	+1·7	72·5	+0·7	25·5	89·1	17th	51·5	23rd
	Bijapur	*1,948*	28·074	—·017	29·987	28·184	19th	27·957	15th	68·3	60·6	82·9	—1·7	60·3	+3·0	71·6	+0·7	22·6	85·8	16th	54·6	23rd
	Belgaum	2,562	27·464	—·016	29·981	27·557	19th	27·357	14th	65·6	59·8	80·9	—0·8	58·6	+0·3	69·7	—0·3	22·3	83·1	29th	52·3	23rd
	XI.—Central India.																					
20	Neemuch	1,626	28·429	—·020	30·081	28·556	19th	28·280	13th	57·1	50·6	76·4	—2·1	49·3	+0·1	62·8	—1·0	27·1	83·7	11th	42·5	20th
	Indore	1,823	28·219	—·017	30·047	28·361	19th	28·092	13th & 14th.	62·5	55·6	79·4	—0·3	50·5	+0·9	64·9	+0·3	23·9	84·7	10th	43·6	23rd
21	Nowgong	754	29·320	—·017	30·089	29·472	19th	29·184	14th	49·8	47·2	73·6	—1·6	46·0	—0·7	59·8	—1·1	27·6	79·5	9th	39·6	19th
	Sutna	1,041	29·024	—·008	30·088	29·175	19th	28·895	13th & 14th.	53·3	49·8	73·5	—1·8	47·5	+0·2	60·5	—0·8	25·0	80·3	10th	40·8	20th
	XII.—Central Provinces.																					
22	Buldana	2,134								66·4	56·0	79·7	+0·1	57·1	—0·7	68·4	—0·3	22·6	84·3	9th & 11th.	50·6	26th
	Akola	925	29·119	—·027	30·024	29·261	19th	28·984	14th	63·6	55·8	86·0	+2·1	54·6	+2·7?	70·3	+2·4?	31·4	89·6	9th	44·5	27th
	Amraoti	1,215	28·822	—·029	30·027	28·948	19th	28·674	14th	65·5	56·5	82·7	—0·2	57·5	+0·3	70·1	+0·1	25·2	85·8	11th	49·9	23rd
23	Khandwa	1,044	29·006	—·017	30·047	29·141	19th	28·868	14th	62·0	56·0	82·8	—0·7	51·9	+1·1	67·4	+0·2	30·9	88·2	10th	42·9	27th
	Hoshangabad	1,006	29·064	—·016	30·075	29·213	19th	28·898	13th	57·9	53·1	78·7	—0·7	51·5	—0·2	65·1	—0·5	27·2	84·1	10th	43·4	21st
	Saugor	1,807	28·209	—·053?	30·048?	28·344	19th	28·066	13th	55·5	48·2	77·2	+0·4	52·0	—0·5	64·6	—0·1	25·2	83·4	9th	43·6	30th
	Jubbulpore	1,327	28·705	—·034	30·058	28·850	19th	28·570	14th	55·4	49·9	76·3	—0·8	49·0	+2·6?	62·6	+0·9?	27·3	81·9	10th	40·9	20th
	Seoni	2,033	28·018	—·007	30·071	28·155	19th	27·881	14th	58·8	52·7	75·0	—2·9	51·2	+1·1	63·1	—0·9	23·8	81·4	10th	44·9	19th & 21st.
	Nagpur	1,017	29·050	—·003	30·061	29·180	19th	28·920	14th	61·8	55·3	81·2	—0·4	53·7	—0·7	67·5	—0·5	27·5	84·3	8th	46·8	22nd
24	Pendra	2,040	28·016	+·006	30·085	28·154	19th	27·879	14th	56·7	51·2	73·0	—2·2	48·7	—1·2	60·8	—1·7	24·3	77·9	10th	42·0	20th
	Raipur	970	29·078	—·023	30·041	29·210	19th	28·938	14th	60·8	54·9	79·0	—0·4	54·4	+0·3	66·7	—0·1	24·6	82·5	11th	48·6	20th
	Chanda	*634*	29·419	—·029	30·028	29·550	19th	29·282	14th	63·1	58·6	82·2	—0·4	53·6	+1·5	67·9	+0·5	28·6	84·5	16th	45·0	22nd
	Jagdalpur	1,813	28·234		30·060?	28·353	19th	28·101	14th	58·8	56·3	78·8		52·2		65·5		26·6	83·0	7th	44·8	21st
	XIII.—Hyderabad.																					
27	Aurangabad	1,905	28·135	—·036	30·018	28·255	19th	28·013	14th	66·5	55·0	83·6	—0·2	57·6	+3·1	70·6	+1·5	26·0	88·4	27th	48·7	27th
	Nizamabad	1,248	28·784	?	30·011	28·919	19th	28·650	14th	67·0	59·9	85·0	+2·0?	56·3	+2·6?	70·7	+2·2?	28·7	88·9	17th	48·3	5th
	Bidar	*2,165*																				
28	Gulbarga	1,503	28·527	—·022	30·006	28·641	19th	28·405	14th	66·8	59·9	85·0	—0·3	59·5	+1·0	72·2	+0·3	25·5	88·0	16th	51·7	22nd
	Raichur	*1,311*	28·713	—·006	29·985	28·825	19th	28·584	14th	72·3	64·7	84·5	—0·2	65·2	+1·7	74·8	+0·7	19·3	88·1	18th	60·9	22nd
	Hyderabad (Deccan)	1,738	28·321	—·010	30·019	28·440	19th	28·200	14th	66·0	60·9	78·6	—4·2?	59·8	+1·8	69·2	—1·2?	18·8	84·1	16th	55·7	22nd
	Hanamkonda	877	29·175	—·003	30·017	29·290	19th	29·039	14th	70·3	63·7	82·9	—0·5	61·5	+0·8	72·2	+0·1	21·4	92·3	3rd	55·9	21st
	XIV.—Mysore.																					
29	Chitaldrug	2,405	27·602	—·018	29·947	27·700	19th	27·486	14th	68·5	63·3	81·7	—0·2	62·7	+1·7	72·2	+0·7	19·0	85·5	18th	56·0	22nd
	Hassan	3,149	26·893	—·011	29·955	26·969	19th	26·811	15th	65·3	62·6	79·4	—0·3	59·5	+3·6	69·5	+1·7	19·9	82·4		52·9	22nd
	Bangalore	3,021	27·019	—·018	29·954	27·101	19th	26·943	14th	66·1	62·8	79·2	+0·7	60·6	+2·1	69·9	+1·4	18·6	82·5	29th	53·2	21st
	Mysore	2,518	27·489	—·025	29·931	27·568	19th	27·406	14th	69·8	64·8	81·9	0	62·9*	+2·7	72·3*	+1·3	19·0	85·6	30th	56·5	22nd

N.B.—Elevations in italics indicate barometrical determinations.

* Mean of 29 days.

B—*continued.*

in India, etc., in December, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st Dec. 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															X.—Bombay—*concld.*
3	0	2	0	1	7	13	11	0	S 62° W	N 69° W	2·5	3·1	−0·6	66	+ 5	56	+ 3	·330	+ ·023	1·5	−0·3	0	−0·4	0	0·21	−0·21	0	0·21	− 0·21	0	Malegaon.
18	1	0	1	4	3	0	0	4	S 27° E	N 21° E	3·2	3·9	−0·7	7	+ 2	50	− 8	·306	−·045	1·3	−0·2	1	+0·4	0·10	0·48	−0·38	0·10	0·48	− 0·38	0·10	Ahmadnagar.
16	0	0	8	7	0	0	0	0	S 68° E	N 88° E	4·3	4·4	−0·1	46	+24?	67	+ 9	·373	+ ·013	2·2	+0·5	1	+0·5	0·10	0·17	−0·07	0·10	0·17	− 0·07	0·10	Poona.
2	0	6	10	10	2	0	0	1	S 79° E	S 74° E	6·2	5·8	+0·4	69	+ 1	50	+ 1	·253	+ ·010	2·4	+0·3	0	−0·6	0	0·50	−0·50	0	0·50	− 0·50	0	Sholapur.
18	1	1	3	3	5	0	0	0	S 47° E	S 67° E	0·4	2·8	−2·4	27	−42	63	− 4	·433	−·015	1·3	−0·9	1	+0·5	0·50	0·26	+0·24	0·50	0·26	+ 0·24	0·50	Bijapur.
13	1	8	8	1	0	0	0	0	N 68° E	S 81° E	2·8	8·8	−6·0	49	−27	70	+12	·451	+ ·059	4·2	+2·2	1	+0·4	0·37	0·41	−0·04	0·37	0·41	+ 0·04	0·34	Belgaum.
																															XI.—Central India.
15	1	10	2	1	0	0	0	2	N 44° E	N 58° E	1·6	4·2	−2·6	40	−25	62	+ 7	·290	+ ·027	1·4	−0·1	1	+0·5	0·10	0·19	−0·09	0·10	0·19	− 0·09	0·10	Neemuch.
12	0	6	3	0	0	0	4	6	N 7° W	N 68° E	1·8*	1·3	+0·5	27	+ 9	64	+ 5	·361	+ ·047	0·5	−1·1	0	−0·6	0·05	0·24	−0·19	0·05	0·24	− 0·19	0·05	Indore.
19	1	0	1	0	0	2	4	4	N 72° W	N 75° W	0·6	0·8	−0·2	23	+ 9	81	+ 7	·291	−·018	2·7	+1·0	0	−0·7	0·03	0·46	−0·43	0·03	0·46	− 0·43	0·02	Nowgong.
25	0	0	1	3	0	2	0	0	S 27° E	N 21° W	0·9	2·5	−1·6	13	−31	78	+10	·319	+ ·027	1·1	−0·6	0	−0·8	0	0·38	−0·38	0	0·38	− 0·38	0	Sutna.
																															XII.—Central Provinces.
0	0	1	11	13	0	1	2	3	S 66° E		3·7	4·0	−0·3	55		50		·324		1·3		0	−1·0	0	0·61	−0·61	0	0·61	− 0·61	0	Buldana.
7	3	7	9	4	1	0	0	0	N 76° E	S 85° E	2·9	2·3	+0·6	56	+12	58	+ 1	·343	+ ·022	1·6	−0·4	0	−1·1	0	0·68	−0·68	0	0·68	− 0·68	0	Akola.
3	0	16	11	1	0	0	0	0	N 65° E	N 72° E	4·2	2·9	+1·3	82	+10	54	+ 2	·341	+ ·009	1·5	−0·3	0	−0·8	0·02	0·55	−0·53	0·02	0·55	− 0·53	0·02	Amraoti.
3	3	9	8	2	4	1	0	1	N 75° E	N 63° E	2·7	2·0	+0·7	49	+17	67	+10?	·376	+ ·078?	1·1	−0·4	0	−0·4	0·03	0·31	−0·28	0·03	0·31	− 0·28	0·03	Khandwa.
20	0	11	0	0	0	0	0	0	N 45° E	N 63° E	1·1	1·9	−0·8	37	−28	71	+ 4	·345	+ ·024	0·8	−0·3	0	−0·7	0	0·47	−0·47	0	0·47	− 0·47	0	Hoshangabad.
10	0	6	7	5	1	1	1	0	S 86° E	S 77° E	3·1	2·0	+1·1	43	+11	57	+ 3	·249	−·027	1·3	−0·1	1	+0·4	0·16	0·48	−0·32	0·16	0·48	− 0·32	0·16	Saugor.
8	3	1	2	13	3	0	0	1	S 55° E	S 41° E	0·9	1·2	−0·3	46	+10	69	− 6?	·300	−·021	1·2	−0·2	0	−0·6	0	0·29	−0·29	0	0·29	− 0·29		Jubbulpore.
7	9	6	2	0	0	2	2	3	N 3° E	N 30° E	3·5	1·6	+1·9	46	+ 4	65	+ 1	·326	−·001	1·5	−0·2	1	+0·1	0·62	0·55	+0·07	0·62	0·55	+ 0·07	0·62	Seoni.
4	2	19	6	0	0	0	0	0	N 52° E	N 7° E	2·3	2·2	+0·1	79	+50	64	+ 4	·354	+ ·009	1·7	−0·4	0	−1·0	0·07	0·58	−0·51	0·07	0·58	− 0·51	0·07	Nagpur.
26	1	0	0	0	1	1	0	2	N 72° W		1·9			7		67	+ 6	·309	+ ·015	3·4	+2·2?	0	−0·6	0	0·35	−0·35	0	0·35	− 0·35	0	Pendra.
21	2	2	4	1	0	0	0	1	N 57° E	N 14° E	1·0	1·8	−0·8	20	+ 4	67	+ 2	·356	+ ·004	3·2	+1·3	0	−0·4	0	0·26	−0·26	0	0·26	− 0·26	0	Raipur.
5	5	7	5	3	1	1	1	3	N 45° E	N 39° E	1·7	1·2	+0·5	37	+ 5	75	+ 2	·425	+ ·036	1·5	−0·2	0	−0·7	0	0·26	−0·26	0	0·26	− 0·26	0	Chanda.
30	0	0	0	1	0	0	0	0	S 45° E		0·3			3		85		·425		4·2		1	+0·9	0·55	0·15	+0·40	0·55	0·15	+ 0·40	0·55	Jagdalpur.
																															XIII.—Hyderabad.
5	1	4	16	4	1	0	0	0	E		4·4			70		44	− 6	·281	−·047	1·5	+0·2	0	−0·6	0·03	0·31	−0·28	0·03	0·31	− 0·28	0·03	Aurangabad.
20	0	2	3	5	1	0	0	0	S 68° E		1·3			27		65	− 2	·423	−·012	2·6	+0·7	1	+0·6	0·65	0·12	+0·53	0·65	0·12	+ 0·53	0·58	Nizamabad.
																															Bidar.
6	1	13	15	0	1	1	0	0	N 71° E	N 76° E	4·2	5·3	−1·1	79	+32	66	+ 5	·433	+ ·024	1·6	−0·1	0	−0·3	0	0·19	−0·19	0	0·19	− 0·19	0	Gulbarga.
1	0	1	10	15	3	1	0	0	S 56° E	S 77° E	4·5	5·4	−0·9	79	+13	65	+ 1	·514	+ ·045	3·2	+1·0	1	+0·8	0·13	0·17	−0·04	0·13	0·17	− 0·04	0·13	Raichur.
19	0	0	8	4	0	0	0	0	S 75° E	S 62° E	2·1	2·3	−0·2	37	+23	74	+ 2	·470	+ ·026	3·5	+1·5	2	+1·7	0·50	0·14	+0·36	0·50	0·14	+0·36	0·37	Hyderabad (Deccan).
25	1	2	1	2	0	0	0	0	N 75° E		0·4			13		68	+ 3	·563	+ ·041	3·5	+1·0	1	+0·6	0·19	0·22	−0·03	0·19	0·22	− 0·03	0·12	Hanamkonda.
																															XIV.—Mysore.
8	0	1	13	9	0	0	0	0	S 74° E	S 77° E	3·6	5·7	−2·1	69	−19	75	+ 8	·520	+ ·042	4·7	+1·7	1	+0·4	0·15	0·37	−0·22	0·15	0·37	− 0·22	0·15	Chitaldrug.
11	0	2	14	4	0	0	0	0	S 87° E	N 82° E	3·0	2·5	+0·5	58	−27	86	+10	·539	+ ·051	4·8	+0·9	1	+0·1	0·52	0·79	−0·27	0·52	0·79	− 0·27	0·49	Hassan.
1	0	12	13	3	0	1	0	0	N 75° E	N 67° E	4·9	4·0	+0·9	79	− 7	83	+ 4	·580	+ ·042	6·5	+2·4?	2	+0·7	1·28	0·46	+0·82	1·28	0·46	+ 0·82	0·63	Bangalore.
6	1	11	12	1	1	0	1	0	N 70° E	N 68° E	5·8	7·5	−1·7	66	−17	76	+ 1	·552	+ ·040	4·9	+0·5	0	−1·0	0·07	0·39	−0·32	0·07	0·39	− 0·32	0·05	Mysore.

*Mean of 26 days.

Table

(2) Abstract of observations taken at 8 hrs. at 210 station

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	XV.—Madras.																					
30	Mangalore	72	29·906	−·029	29·910	29·982	19th	29·805	14th	77·9	71·0	88·9	−0·1	72·0	+1·8	80·5	+0·9	16·9	93·0	3rd & 20th	68·2	23rd
	Calicut	27	29·938	−·027	29·894	29·999	19th	29·873	14th	76·4	73·2	86·0	−1·2	73·2	+2·5	79·6	+0·7	12·8	88·0	12th	65·4	22nd
	Cochin	9	29·958	−·021	29·899	30·009	22nd	29·836	31st	79·0	73·3	88·1	−0·6	74·5	+1·7	81·3	+0·5	13·6	92·3	20th	71·0	12th & 22nd.
	Trivandrum	198	29·763	−·012	29·892	29·812	13th & 27th.	29·690	6th	76·1	73·0	83·6	+0·5	73·9	+0·8	78·7	+0·7	9·7	85·8	21st	76·1	28th
31	Pamban	37	29·932	−·036	29·897	30·021	19th	29·856	14th	78·1	76·0	82·6	+0·4	77·2	+2·7	79·9	+1·5	5·4	84·8	17th	75·1	24th
	Madura	447	29·547	−·029	29·932	29·642	19th	29·468	31st	77·0	72·5	86·4	+0·3	72·7	+2·5	79·5	+1·4	13·7	90·3	27th	66·2	21st
	Padukkottai	318	29·683	−·017	29·838	29·748	19th	29·606	14th	75·3	71·0	84·3	−1·5	71·6	+2·7	77·9	+0·6	12·7	88·3	14th	66·5	21st
	Negapatam	31	29·953	−·027	29·913	30·034	19th	29·867	31st	76·2	73·1	81·8	−0·3	73·3	+1·2	77·5	+0·5	8·5	84·6	15th	69·2	21st
	Tri hinopoly	255	29·741	−·030	29·833	29·833	19th	29·657	14th	76·3	72·2	85·5	+0·1	71·2	+1·9	78·3	+1·0	14·3	90·6	29th	64·4	21st
	Coimbatore	1,341	28·657	−·016	29·946	28·728	19th	28·573	14th	73·3	69·2	84·9	+0·1	68·0	+2·2	76·4	+1·1	16·9	90·8	17th	60·5	22nd
	Salem	913	29·091	−·013	29·953	29·175	19th	29·002	14th	72·8	68·9	85·9	−0·5	67·5	+2·1	76·7	+0·8	18·4	90·9	28th	59·6	12th
	Cuddalore	37	29·967	−·026	29·934	30·063	19th	29·885	14th	75·5	72·4	82·8	−0·4	72·5	+2·8	77·7	+1·2	10·8	89·3	1st	68·6	21st
	Vellore	707	29·299	−·027	29·957	29·388	19th	29·201	14th	71·8	69·5	83·9	+2·2?	67·5	+3·0	75·7	+2·6?	16·4	88·0	16th & 27th.	61·8	21st
	Madras	22	29·992	−·030	29·945	30·090	19th	29·906	14th	76·2	73·3	83·7	+0·4	72·5	+2·8	78·1	+1·6	11·2	86·2	18th	67·6	11th
32	Cuddapah	428	29·599	−·025	29·974	29·656	19th	29·474	14th	73·5	69·2	86·5	−0·2	67·7	+2·4	77·1	+1·1	18·8	90·0	18th	62·1	22nd
	Bellary	1,475	28·544	−·017	29·980	28·660	19th	28·418	14th & 15th.	71·8	65·5	85·9	0	63·8	+2·5	74·9	+1·3	22·1	91·1	16th	55·7	22nd
	Kurnool	923	29·104	−·016	29·992	29·210	19th	28·977	14th	69·1	65·2	86·8	+0·1	63·8	+4·2?	75·3	+2·1?	23·0	89·4	29th	56·8	22nd
33	Nellore	66	29·951	−·029	29·953	30·070	19th	29·843	14th	74·2	72·5	82·5	−1·7	69·9	+1·8	76·2	+0·1	12·6	88·6	16th	65·3	21st
	Masulipatam	15	30·041	−·022	29·990	30·153	19th	29·905	14th	72·5	68·4	83·0	−0·1	67·4	+0·9	75·2	+0·4	15·6	86·3	27th	62·2	22nd
	Cocanada	26	30·031	−·017	29·994	30·137	19th	29·888	14th	71·4	66·8	80·3	−0·3	67·2	+1·1	73·8	+0·4	13·1	83·0	15th	63·7	23rd
	Vizagapatam	*226*	30·021	−·015	29·993	30·133	19th	29·863	14th	73·9	68·6	80·7	0	70·0	+1·8	75·3	+0·9	10·7	83·2	2nd	64·2	21st
	Calingapatam	19	30·054		30·011	30·179	19th	29·883	14th	68·6	65·2	80·1		63·8		71·9		16·3	83·4	16th	56·3	21st
	Gopalpur	33	30·028	−·006	30·026	30·155	19th	29·854	14th	66·7	62·6	80·2	+0·3	62·4	+1·7	71·3	+1·0	17·8	83·0	27th	55·0	21st
	Bay Islands.																					
1	P. V. Fraser	8	30·046		30·026	30·155	19th	29·852	14th	74·7	67·4											
	Port Blair	58	29·909	−·015	29·897	29·970	19th	29·841	13th	80·5	76·0	85·3	−0·5	77·4	+0·9	81·3	+0·2	7·9	88·0	14th	74·1	1st
	Table Island		29·900	−·005	29·925	29·963	19th	29·807	14th	79·8	74·3	83·6	−0·1	78·1	+1·7	80·8	+0·8	5·5	86·0	14th	72·9	9th
	Kashmir.																					
13	Muzaffarabad		27·631			27·733	31st	27·477	13th	45·9	42·0	60·8		38·8		49·8		22·0	72·8	1st & 5th	34·3	5th
	Srinagar	5,204	25·017	−·020	24·988	25·197	18th	24·839	27th	31·0	33·6*	44·1	−4·2	27·3	−0·6	35·7	−2·4	16·8	56·7	2nd	16·3	5th
	Gulmarg	*8,569*																				
	Dras	*10,059*	20·818	−·020	20·786	21·015	18th	20·638	14th	9·5	?	28·4	+0·7	3·8	+3·6	16·1	+2·1	24·6	43·6	2nd	−20·0	31st
	Leh	*11,503*	19·677	−·045	19·645	19·872	18th	19·504	14th	18·3	?	36·2	+0·2	13·8	+0·7	25·0	+0·5	22·4	45·4	2nd	4·0	31st
	Skardu	*7,505*	22·956	−·052	22·926	23·163	18th	22·740	14th	22·6	?	38·5	−3·0	19·9	−2·7	29·2	−2·9	18·6	48·9	2nd	7·3	31st
	Gilgit	4,890	25·319	−·004	25·292	25·531	31st	25·142	14th	36·2	35·4†	50·3	+0·9	32·7	−1·2	41·5	−0·1	17·6	58·2	1st	28·2	5th

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

* Mean of 13 days.
† „ „ 14 „

B—*continued.*

in India, etc., in December, 1919—*continued.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st Dec. 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															XV.—Madras.
0	1	5	23	1	1	0	0	0	N 84° E	S 86° E	4·4	2·1	+2·3	89	+ 3	70	+ 3	·667	+·038	4·1	+1·6	2	+ 1·2	1·35	0·50	+ 0·85	1·35	0·50	+0·85	1·16	Mangalore.
22	1	2	1	2	0	1	0	2	N 45° E	N 85° E	2·2	5·1	−2·9	10	−73	84	+ 6	·774	+·083	4·3	+2·0	2	+ 0·1	1·42	1·15	+ 0·27	1·42	1·15	+ 0·27	1·14	Calicut.
12	0	6	12	1	0	0	0	0	N 78° E	N 36° E	2·0	3·1	−1·1	56	−23	75	+ 1	·736	+·057	2·9	+0·1	4	+ 1·4	2·71	1·76	+ 0·95	2·71	1·76	+ 0·95	1·57	Cochin.
17	1	10	1	0	0	1	1	0	N 41° E	N 49° E	2·5	2·7	−0·2	30	− 6	85	+ 6	·766	+·050	6·5	+2·3	2	− 1·7	9·81	2·40	+ 7·41	9·81	2·40	+ 7·41	5·86	Trivandrum.
0	11	5	3	0	1	1	0	10	N 4° W	N 13° E	11·3*	2·6	+1·7	66	−17	90	+ 2	·869	+·050	5·0	+0·6	15	+ 5·5	11·80	7·64	+ 4·16	11·80	7·64	+ 4·16	2·75	Pamban.
2	11	10	2	1	0	1	1	3	N 17° E	N 5° E	4·0	3·4	+0·6	66	−17	80	+ 5	·740	+·070	7·0	+2·8?	9	+ 5·5	2·52	1·81	+ 0·71	2·52	1·81	+ 0·71	0·56	Madura.
3	10	16	1	1	0	0	0	0	N 32° E		4·4			78		80	+ 3	·703	+·049	4·8	−0·5	7	+ 2·8	7·69	2·92	+ 4·77	7·69	2·92	+ 4·77	2·48	Pudukkottai.
1	7	6	2	0	1	1	0	13	N 11° W	N 6° W	10·0	6·6	+3·4	66	−20	86	+ 4	·775	+·023	6·7	+0·4	13	+ 3·4	22·26	11·84	+10·42	22·26	11·84	+10·42	6·10	Negapatam.
3	9	10	1	0	1	1	0	6	N 9° E	N 16° E	3·2	3·3	−0·1	62	+12	81	+ 4	·733	+·065	6·0	+1·3	7	+ 2·3	5·44	2·69	+ 2·75	5·44	2·69	+ 2·75	1·50	Trichinopoly.
9	3	14	5	0	0	0	0	0	N 49° E	N 77° E	2·6	2·2	+0·4	62	−21	81	− 2	·662	+·017	3·5	−1·3?	3	+ 0·3	0·95	1·22	− 0·27	0·95	1·22	− 0·27	0·52	Coimbatore.
15	3	8	3	0	0	0	2	0	N 33° E	N 40° E	2·5	2·8	−0·3	37	+ 8	81	+ 4	·655	+·021	4·5	+0·6	4	+ 1·7	1·93	1·01	+ 0·92	1·93	1·01	+ 0·92	1·42	Salem.
3	10	2	0	0	0	1	1	14	N 26° W	N 10° W	5·9	2·0	+3·9	76	− 3	86	− 1	·755	+·012	7·1	+2·5	10	+ 3·8	11·22	7·65	+ 3·57	11·22	7·65	+ 3·57	4·49	Cuddalore.
23	1	0	0	1	0	0	1	0	N 45° W		2·0			13		69	+ 3	·693	+·061	4·4	+0·4	6	+ 2·0	1·98	3·15	− 1·17	1·98	3·15	− 1·17	0·90	Vellore.
4	14	4	0	1	0	0	1	7	N 6° W	N 8° E	4·3	5·3	−1·0	69	−14	86	+ 3	·767	+·041	6·5	+1·6	10	+ 4·8	5·94	5·97	− 0·03	5·94	5·97	− 0·03	1·29	Madras.
14	3	1	1	6	2	1	0	3	S 71° E	S 75° E				10	−33	79	+ 2	·660	+·044	4·7	+1·3	2	+ 0·4	0·39	0·99	− 0·60	0·39	0·99	− 0·60	0·20	Cuddapah.
7	1	1	10	9	2	1	0	0	S 66° E	S 59° E	2·2	2·4	−0·2	53	+13	70	+ 4	·550	+·081	3·8	+0·5	0	− 0·3	0·05	0·12	− 0·07	0·05	0·12	− 0·07	0·05	Bellary.
27	0	2	2	0	0	0	0	0	N 67° E	S 80° E	0·8			10	+ 9	80	+ 8	·572	+·071	2·6	+0·7	0	− 0·5	0	0·27	− 0·27	0	0·27	− 0·27	0	Kurnool.
3	7	3	3	0	1	0	2	12	N 18° W	N 51° W	4·2	3·1	−0·9	59	−13	92	+ 7	·775	+·073	5·6	−0·2	6	+ 2·9	11·34	3·00	+ 8·34	11·34	3·00	+ 8·34	5·66	Nellore.
1	8	19	2	0	0	0	0	1	N 33° E	N 15° E	4·7	3·8	+0·9	86	0	80	− 1	·638	−·001	3·0	+0·3	1	− 0·1	0·15	0·93	− 0·78	0·15	0·93	− 0·78	0·15	Masulipatam.
5	9	17	0	0	0	0	0	0	N 30° E	N 5° E	7·4	6·6	+0·8	79	−11	78	+ 5	·592	+·029	5·2	+2·4	1	0	0·34	0·97	− 0·63	0·34	0·97	− 0·63	0·34	Cocanada.
4	5	9	1	0	0	0	5	7	N 9° W	N 31° W	5·2			53	+ 4	66	+ 4	·558	+·051	6·0	+2·9	0	− 1·1	0·03	0·87	− 0·84	0·03	0·87	− 0·84	0·03	Vizagapatam.
1	14	2	1	0	0	0	0	13	N 16° W		5·2			84		82		·577		2·8		0	− 0·9	0·02	1·49	− 1·47	0·02	1·49	− 1·47	0·02	Calingapatam.
0	31	0	0	0	0	0	0	0	N	N 23° W	5·9	6·0	−0·1	100	+25	78	+ 1	·515	+·018	3·6	+2·4	0	− 1·0	0	0·84	− 0·84	0	0·84	− 0·84	0	Gopalpur.
																															Bay Islands.
1	12	15	0	0	0	0	1	2	N 18° E					84		67		·573		2·6		0	− 0·5	0	1·33	− 1·33	0	1·33	− 1·33	0	P. V. Fraser.
0	5	8	11	5	0	0	0	2	N 65° E	N 55° E	7·0	5·3	+1·7	69	+11	81	0	·829	+·020	5·2	0	20	+12·7	10·17	6·87	+ 3·30	10·17	6·87	+3·30	1·94	Port Blair.
0	3	14	11	1	1	0	1	0	N 61° E		9·2			76		76	0	·775	+·012	4·0	−2·2?	3	+ 1·1	0·75	2·31	− 1·56	0·75	2·31	− 1·56	0·31	Table Island.
																															Kashmir.
23	0	0	1	4	1	2	0	0	S 22° E		0·9			10		71		·220		4·9		7	+ 3·0	5·55	2·29	+ 3·26	5·55	2·29	+ 3·26	2·15	Muzaffarabad.
21	2	0	0	4	1	1	0	2	S 33° E	S 42° E	1·5	1·9	−0·4	3	−16	92†	+ 4	·182†	+·030	7·3	+1·8	10	+ 6·6	3·14	1·36	+ 1·78	3·14	1·36	+ 1·78	0·57	Srinagar.
																															Gulmarg.
28	0	1	0	1	0	0	0	1	N 45° E		0·9			3						6·6	+1·5	10	+ 4·3	2·02	1·66	+ 0·36	2·02	1·66	+ 0·36	0·33	Dras.
25	0	5	1	0	0	0	0	0	N 52° E	S 22° W	1·0	0·9	+0·1	23	+ 6					6·2	+0·5	0	− 0·5	0·17	0·17	0	0·17	0·17	0	0·07	Leh.
17	0	1	1	0	3	5	3	1	S 47° W		1·7			27						6·7	+0·7	3	+1·8	0·77	0·38	+ 0·39	0·77	0·38	+ 0·39	0·19	Skardu.
27	0	0	0	0	0	3	0	1	S 63° W		0·3			10		77‡	+18	·177‡	+·046	6·1	+0·1	1	+ 0·7	0·37	0·11	+ 0·26	0·37	0·11	+ 0·26	0·14	Gilgit.

* Mean of 29 days.
† " " 13 "
‡ " " 14 "

Table

(2) Abstract of observations taken at 8 hrs. at 210 stations

Number of sub-division.	Station.	Height of bar-cistern above sea-level in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Baluchistan.																					
15	Fort Sandeman	4,614	25·497		25·466	25·584	21st	25·389	27th	37·9	35·1***	57·6		31·6		44·6		26·0	68·3	1st	24·0	29th
	Quetta	5,502	24·726	−·025	24·686	24·814	4th	24·618	10th	29·9	35·8†††	52·3	−4·3	26·6	−2·8	39·5	−3·5	25·7	65·7	10th	18·5	15th
	Chaman	4,311	25·781	−·058	25·743	25·891	3rd	25·643	26th	39·5	37·8†	56·0	+0·5	34·5‡	−1·8‡	44·8‡	−0·7	21·5	73·8	10th	29·3	29th
	Kalat	6,630	23·763		23·725	23·859	1st & 4th.	23·656	13th	27·3	36·4§	50·6	−6·1	24·3		37·7		25·8	61·9	10th	15·1	14th
	Dalbandin	2,772	27·275		27·238	27·400	4th	27·126	26th	39·1	41·4‖	63·3		33·5		48·4		29·8	76·7	10th	23·2	13th
	Pasni		30·108		30·068	30·216	27th	29·984	10th	60·6	56·0	77·9		49·7		63·8		28·2	85·5	2nd	41·9	14th
	Panjgur		26·869		26·827	26·952	28th	26·772	9th	41·9	39·5¶	64·8		38·4		51·6		26·4	75·6	9th	31·0	13th
	Seistan		28·387			28·570	27th	28·160	9th	38·6	39·4**	61·6		35·9		48·7		25·7	70·6	9th	25·8	14th
	Hill stations, excluding Kashmir and Baluchistan.																					
	Parachinar	6,000	24·598	−·023	24·484	24·614	20th	24·370	13th	37·3	34·2**	51·5	−3·0	31·3	−1·5	41·4	−2·3	20·2	62·4	5th	23·1	14th
	Cherat	*4,256*	25·810	−·008	25·778	25·926	20th	25·686	13th	44·2	36·8	50·1	−4·8						62·3	5th		
	Drosh (c)		25·215			25·350	31st	25·050	13th	35·0	33·5††	46·3	−6·8	33·4	−2·3	39·8	−4·5	12·9	60·1	1st	28·0	30th
	Murree	8,333	24·028	−·013	23·996	24·122	19th	23·875	15th	40·3	33·9‡‡	46·6	−5·5	36·8	−1·8	41·7	−3·7	9·8	58·5	5th	29·9	28th
	Simla	7,232	23·148	−·006	23·110	23·261	19th	23·050	15th	41·6	34·8§§	48·7	−1·2	38·5	−0·8	43·6	−1·0	10·2	56·9	1st	30·2	29th
	Chakrata	7,072	23·409	−·037	23·369	23·509	19th	23·331	16th	43·6	37·3‖‖	53·3	−2·1	38·9	−0·4	46·1	−1·3	14·4	64·1	22nd	29·1	29th
	Mukteswar	7,592	22·896	+·004	22·855	22·978	19th	22·808	25th	42·9	¶¶ 34·6	53·3	−1·1	35·9	−2·3	44·6	−1·7	17·4	61·5	23rd	25·8	29th
	Darjiling	7,432	23·003	−·012	22·958	23·087	19th	22·923	14th	41·0	37·6*	51·0	+1·8	37·9	+1·2	44·5	+1·5	13·1	57·2	26th	34·3	18th
	Shillong	4,920	25·225	+·005	25·177	25·316	19th	25·132	15th	49·0	44·8	62·2	0	40·1	+0·9	51·2	+0·5	22·1	66·7	4 days.	35·7	20th
	Cherrapunji	4,309	25·778	+·008	25·729	25·864	19th	25·669	15th	55·4	49·2	62·5	+0·3	47·5	+0·1	55·0	+0·2	15·0	68·7	15th	42·9	10th
	Netarhat		26·081		26·030	26·175	18th	25·949	14th	56·3	53·7	67·7		43·8		55·8		23·9	70·7	8th, 11th & 24th.	37·3	20th
	Maymyo	3,546	26·524	+·009	26·469	26·591	20th	26·442	15th	51·5	50·8	68·6	−1·0	46·9	+4·3	57·7	+1·7	21·7	71·9	1st	41·2	20th
	Pachmarhi	3,528	26·555	−·030	26·502	26·691	19th	26·428	14th	55·5	51·1	70·4	−0·2	46·4	+0·6	58·4	+0·2	24·0	75·0	8th, 9th & 10th	38·1	19th
	Mount Abu	3,945	26·147	−·017	26·097	26·264	20th	26·020	13th	57·7	47·6	66·2	−2·1	50·7	−2·3	58·5	−2·2	15·5	72·0	10th	41·0	30th
	Mercara	3,781	26·261	−·023	26·194	26·336	19th	26·192	14th	61·7	60·0	75·1	−0·4	57·7	0	66·4	−0·2	17·4	78·8	24th	52·4	21st
	Ootacamund	*7,327*	23·088	+·008	23·024	23·150	19th	23·034	14th	55·3	50·4	65·4	+1·1	45·7	+1·4	55·6	+1·3	19·7	70·5	23rd	36·7	11th
	Kodaikanal	7,688	22·848	−·012	22·783	22·922	19th	22·736	14th	54·5	50·2	61·9	−0·5	48·4	+0·8	55·1	+0·1	13·5	67·5	14th	42·8	11th
	Extra India.																					
	Singapore (a)	10	29·868	−·062	29·799	29·911	30th	29·817	9th	80·2		85·3	−0·6	73·6	+1·0	79·5	+0·2	11·7	91·5	5th	71·5	18th
	Penang (a)	17	29·865	−·065	29·807	29·900	17th & 29th.	29·790	23rd	80·5		88·7	+0·8	71·8	−1·9	80·3	−0·5	16·9	90·5	15th	69·0	28th
	Trincomalee	99	29·871	−·008	29·899	29·934	19th	29·780	31st	77·5	74·9	82·4	−0·6	74·4	+0·2	78·4	−0·2	8·0	88·8	1st	71·6	31st
	Colombo	24	29·924	−·027	29·874	29·974	19th	29·809	31st	74·1	72·3	85·9	−1·0	73·2	+0·3	79·5	−0·3	12·7	90·1	20th	70·3	2nd
	Hambantota	64	29·878		29·869	29·940	19th	29·770	31st	74·3	72·4	83·4		73·6		78·5		9·8	87·8	5th	71·3	9th
	Minicoy	7	29·975	+·001		30·027	19th	29·921	14th													
	Amini Divi	*13*	29·957	−·028	29·899	30·014	19th	29·878	14th	83·0	76·1	87·7	+1·9	75·2	+1·6	81·5	+1·7	12·5	89·8	31st	68·9	25th
	Gyantse	13,110																				
	Pharijong	14,400																				
	Gangtok*	5,667	24·360	−·111	24·315	24·448	19th	24·275	14th	46·1	43·4	58·5	−1·8	43·5	+9·4	51·0	+3·8	15·0	63·9	13th	39·8	18th

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.

(a) 9 hrs. observations.
(c) Aneroid.

* Mean of 30 days.
† " " 21 "
‡ " " 17 "
§ " " 6 "
‖ " " 16 "
¶ " " 24 "
** " " 20 "

†† Mean of 15 days.
‡‡ " " 25 "
§§ " " 22 "
‖‖ " " 29 "
¶¶ " " 20 "
*** " " 18 "
††† " " 11 "

B—*continued.*

in India, etc., in December, 1919—*continued.*

Wind direction. Number of winds from Calm (24)	N. (25)	N.E. (26)	E. (27)	S.E. (28)	S. (29)	S.W. (30)	W. (31)	N.W. (32)	Resultant direction. (33)	Normal direction. (34)	Wind velocity. Mean velocity, miles per hour. (35)	Normal. (36)	Departure from normal. (37)	Wind steadiness. Actual percentage. (38)	Departure from normal. (39)	Hygrometry, 8 hrs. Mean humidity at 8 hrs. (40)	Departure from normal. (41)	Mean vapour tension at 8 hrs. in inches of mercury. (42)	Departure from normal. (43)	Cloud. Mean cloud amount at 8 hrs. (44)	Departure from normal. (45)	Rainfall. Number of rainy days. (46)	Departure from normal. (47)	Rainfall of month. (48)	Normal rainfall of month. (49)	Departure from normal. (50)	Total rainfall from 1st to 31st December 1919. (51)	Normal rainfall for this period. (52)	Departure from normal of this period. (53)	Heaviest rainfall during month. (54)	Station. (55)
																															Baluchistan.
26	1	1	1	1	1	0	0	0	E		1·4*			8		66†		·163†		3·1		1	−0·1	0·55	0·39	+0·16	0·55	0·39	+0·16	0·25	Fort Sandeman.
21	1	1	0	3	3	1	0	1	S 23° E	S 7° E	1·8	1·7	+0·1	10	+ 1	81‡	+ 4	·181‡	+·029	3·8	+0·7	3	+0·8	0·92	0·92	0	0·92	0·92	0	0·46	Quetta.
13	0	0	9	6	2	1	0	0	S 61° E	S 52° E	2·2	4·9	−2·7	46	−26	70§	+ 5	·184§	+·017	4·8	+1·0	7	+4·2	1·15	1·08	+0·07	1·15	1·08	+0·07	0·23	Chaman.
15	0	0	1	1	6	6	0	2	S 23° W	S 24° W	3·4			33	−14	86‖	+22	·200‖	+·047	3·5		3	+0·7	1·22	1·04	+0·18	1·22	1·04	+0·18	0·60	Kalat.
19	3	7	1	0	0	0	0	1	N 31° E		2·5			33		71		·220		4·1		2	+0·4	0·52	0·38	+0·14	0·52	0·38	+0·14	0·33	Dalbandin.
9	11	1	2	0	0	0	0	8	N 9° W		3·3			56		74		·394		2·5		3	+1·6	1·15	0·71	+0·44	1·15	0·71	+0·44	0·52	Pani.
5	1	13	10	0	0	2	0	0	N 64° E		4·9			66		68 ¶		·201 ¶		2·8		2		0·38			0·38			0·15	Panjgur.
26	1	1	0	0	0	0	0	3	N 21° W		4·2			13		79		·220		2·2		2		0·84			0·84			0·55	Seistan.
																															Hill stations excluding Kashmir and Baluchistan.
10	0	1	0	0	0	0	0	0	N 45° E		0·2			3		** 61	0	** ·143	−·008	4·4	+1·0	7	+3·9	1·53	1·21	+0·32	1·53	1·21	+0·32	0·40	Parachinar.
3	19	3	0	0	0	0	0	6	N 5° W	N 13° W	11·0	9·6	+1·4	82	+ 7	50	+ 4	·135	−·008	4·8	+1·3	6	+4·3	5·85	1·35	+4·50	5·85	1·35	+4·50	1·87	Cherat.
11	0	0	0	0	0	0	0	0	Calm		0·4			(a)		†† 86	+23	†† ·175	+·029	4·5	+0·5	5	+2·1	1·90	1·01	+0·89	1·90	1·01	+0·89	0·70	Drosh.
2	6	3	0	12	5	1	1	1	S 57° E	S 84° E	5·3	5·2	+0·1	30	+ 1	‡‡ 45	− 3	‡‡ ·112	−·015	4·4	+0·6	6	+3·3	2·64	1·49	+1·15	2·64	1·49	+1·15	0·86	Murree.
																§§ 47	+ 6	§§ ·122	+·016	5·6	+2·0	5	+2·9	0·94	1·21	−0·27	0·94	1·21	−0·27	0·24	Simla.
4	2	16	7	0	0	2	0	0	N 54° E	N 28° E	6·9	3·7	+3·2	66	+28	‖‖ 49	0	‖‖ ·159	+·028	3·9	+1·2	5	+2·8	1·95	1·31	+0·64	1·95	1·31	+0·64	0·86	Chakrata.
4	2	2	5	6	0	1	10	1	S 45° W		5·4			3		** 34	− 9	** ·096	−·019	4·0	+1·2	1	−0·6	0·23	0·78	−0·55	0·23	0·78	−0·55	0·10	Mukteswar.
18	2	2	2	0	0	1	0	0	N 45° E	S 89° E	1·2	2·1	−0·9	13	−28	71*	− 2	·189*	−·006	4·7	+1·6	0	−0·7	0	0·28	−0·28	0	0·28	−0·28	0	Darjiling.
26	0	0	2	2	0	1	0	0	S 52° E		0·5			10		72	+ 2	·251	+·011	1·3	−0·3	0	−0·8	0·12	0·23	−0·11	0·12	0·23	−0·11	0·07	Shillong.
15	1	7	6	1	0	1	0	0	N 67° E		0·9			40		65	+ 1	·278	+·011	2·1	+0·5	0	−1·0	0·02	0·42	−0·40	0·02	0·42	−0·40	0·02	Cherrapunji.
0	2	2	1	2	1	5	9	9	N 75° W		3·2			52		84		·390		0·6		0		0			0			0	Netarhat.
31	0	0	0	0	0	0	0	0	Calm		0·4			(a)		96	+ 6	·355	−·017	3·8	+1·2	2	+0·9	0·77	0·64	+0·13	0·77	0·64	+0·13	0·59	Maymyo.
15	0	1	2	7	3	3	0	0	S 31° E	S 52° E	2·2	2·0	+0·2	33	+23	75	+13	331	+·026	0·5	−1·3	0	−0·8	0	0·51	−0·51	0	0·51	−0·51	0	Pachmarhi.
15	3	3	2	1	1	4	2	0	N	N 8° E	2·6	3·0	−0·4	2	−12	46	+ 4	·222	+·006	1·6	+0·1	0	−0·3	0	0·14	−0·14	0	0·14	−0·14	0	Mount Abu.
6	0	12	12	0	0	1	0	0	N 69° E	N 72° E	3·3	4·7	−1·4	69	−14	90	+ 7	·498	+·036	6·5	+1·5	0	−1·2	0·20	0·78	−0·58	0·20	0·78	−0·58	0·08	Mercara.
15	0	1	3	8	4	0	0	0	S 46° E		2·7			43		73	+14	·317	+·048	5·0	+1·4	7	+2·5	2·26	2·16	+0·10	2·26	2·16	+0·10	0·62	Ootacamund.
0	3	6	4	7	3	0	3	5	N 66° E		8·4			23		77	+15	·321	+·067	5·2	+1·3	11	+3·8	4·39	5·02	−0·63	4·39	5·02	−0·63	0·78	Kodaikanal.
																															Extra India.
8	4	8	0	0	1	0	1	9	N 7° W					49						7·7	+2·6	13	−1·5	7·31	11·14	−3·83	7·31	11·14	−3·83	1·24	Singapore.
0	10	12	4	2	1	1	0	1	N 38° E					66								11	−1·4	5·51	6·10	−0·59	5·51	6·10	−0·59	1·46	Penang.
1	7	8	1	1	2	4	6	1	N 16° W	N 23° E	7·7*	5·3	+2·4	27	−12	88	+ 1	·826	+·003	7·1	+2·4	18	+3·8	19·60	14·27	+5·33	19·60	14·27	+5·33	7·01	Trincomal.
14	9	5	2	0	0	0	0	1	N 20° E	N 33° E	3·5	6·1	−2·6	46	−32	91	+10	·768	−·017	6·1	+1·7	7	−0·6	8·76	5·55	+3·21	8·76	5·55	+3·21	3·04	Colombo.
7	12	7	0	1	0	0	0	4	N 8° E		4·9	5·4	−0·5	62		91		·768		6·6		16		6·98	5·57	+1·41	6·98	5·57	+1·41	1·28	Hambantota.
15	4	1	1	4	3	1	1	1	S 63° E	N 42° E	3·3	4·5	−1·2	6	−54					3·8	+0·5	11	+6·7	4·44	3·59	+0·85	4·44	3·59	+0·85	0·97	Minicoy.
0	11	7	8	1	0	0	0	4	N 31° E		4·2			68		72	+ 1	·805	+·024	5·0	+1·4	6	+4·0	4·10	1·13	+2·97	4·10	1·13	+2·97	1·85	Amini Divi.
																															Gyantse.
																															Pharijong.
8	0	1	2	0	1	0	0	0	S 85° E		‖‖ 0·6			10		82	+ 7	·256	+·002	3·4	+1·4	3	+0·8	1·29	1·12	+0·17	1·29	1·12	+0·17	0·55	Gangtok.

* Mean of 30 days.
† " " 18 "
‡ " " 11 "
§ " " 21 "
‖ " " 0 "
¶ " " 24 "

** Mean of 20 days.
†† " " 15 "
‡‡ " " 25 "
§§ " " 22 "
‖‖ " " 29 "

(a) Indeterminate.

Tabl

(2) Abstract of observations taken at 8 hrs. at 21

Number of sub-division.	Station.	Height of barometer above sea-level in feet.	Pressure, 8 hrs., in inches.							Temperature of air.												
			Mean 8 hrs. pressure reduced to 32°.	Departure from normal.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity at 45° Lat.	Highest pressure of month.	Date.	Lowest pressure of month.	Date.	Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	Extra India—*concld.*																					
	Gartok (*c*)	15,100																				
	Kashgar (*c*)	4,255	25·723	—·067		25·990	13th	25·552	15th	21·1		35·7	−2·1	17·6	+0·7	26·7	−0·7	18·1	42·8	3rd	9·3	31st
	Kabul (*c*)	...																				
	Meshed	3,104																				
	Jask	13	30·101	—·018	30·068	30·258	27th	29·958	9th	65·9	60·9	78·8	+1·2	60·2	−3·8	69·5	−1·3	18·6	85·4	3rd	55·0	17th
	Muscat	20	30·106	—·008	30·075	30·216	27th & 28th.	29·998	9th	70·2	63·6	78·6	+1·7	68·0	−2·3	73·3	−0·3	10·6	85·7	10th	63·7	28th
	Bushire	14	30·093	—·030	30·069	30·266	27th	29·936	17th	58·5	54·9	70·2	+1·7	54·9	−0·3	62·6	+0·7	15·3	82·2	8th	48·9	27th
	Busrah	25																				
	Ispahan (*c*)	*5,817*	24·255	—·035		24·460	1st	24·070	25th	32·3	?	51·2	−0·6	29·8	+1·1	40·5	+0·3	21·4	63·4	7th	26·9	1st
	Tehran (*c*)	*4,002*	25·731	—·129		26·000	1st	25·550	26th	37·1	36·3†	51·6	+0·3	34·2	+0·7	42·9	+0·5	17·4	58·5	30th	30·0	22nd, 23rd & 24th.
	Baghdad	127	29·999			30·212	26th	29·764	17th	45·9	43·2	63·8		44·7		54·3		19·1	70·4	3rd & 13th.	39·0	21st
	Aden	94	29·986	—·006	30·014	30·040	27th	29·910	16th	74·4	67·9	80·8	−0·7	72·2	−1·0	76·5	−0·9	8·6	88·0	17th	69·1	24th
	Zanzibar	72	29·931	+·003	29·929	29·981	24th	29·887	14th	82·5	77·8	86·7	+1·0	79·8	+0·7	83·2	+0·9	6·9	89·0	26th	76·3	16th & 30th.

N.B.—Elevations in italics indicate barometrical determinations.
NOTE.—The barometric readings are not reduced to sea-level, in the case of hill or plateau stations, the elevations of which exceed 3,200 feet.
(*c*) Aneroid.

† Mean of 18 days.

B—*concluded.*

tations in India, etc., in December, 1919—*concluded.*

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.	Wind velocity. Mean velocity, miles per hour.	Normal.	Departure from normal.	Wind steadiness. Actual percentage.	Departure from normal.	Hygrometry, 8 hrs. Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st December 1919.	Normal rainfall for this period.	Departure from normal of this period.	Heaviest rainfall during month.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
																															Extra India —*concld.*
																									0			0			Gartok.
31	0	0	0	0	0	0	0	0	Calm	N 8° W	0·2	0·7	−0·5	(a)						5·8	+1·6	0	−0·2	0	0·09	−0·09	0	0·09	−0·09	0	Kashgar.
										S 56° W															0·43			0·43			Kabul.
																									0·72			0·72			Meshed.
0	12	8	9	0	0	0	0	2	N 34° E	N 23° E	7·5	7·5	0	76	+ 3	74	+ 2	·474	+·021	1·9	−0·9	4	+2·0	2·67	1·14	+1·53	2·67	1·14	+1·53	1·33	Jask.
22	1	0	0	2	0	0	0	6	N 37° W	S 74° W	2·5	2·9	−0·4	17	−20	68	0	·504	−·033	1·5	−1·0	0	−1·5	0	0·61	−0·61	0	0·61	−0·61	0	Muscat.
2	7	12	4	1	0	1	0	4	N 30° E	N 63° E	6·5	4·7	+1·8	66	+ 8	78	+3	·386	+·004	4·7	+1·5	3	−1·2	1·66	3·06	−1·40	1·66	3·06	−1·40	0·70	Bushire.
																									1·18			1·18			Busrah.
31	0	0	0	0	0	0	0	0	Calm	S 85° W	0·8	1·9	−1·1	(a)		78*	P	·180*	P	3·3	0	3	+1·2	1·28	0·82	+0·46	1·28	0·82	+0·46	1·00	Ispahan.
12	7	8	1	0	0	1	0	0	N 27° E	N 11° E	2·4	2·0	+0·4	48	+14	76†	P	·179†	P	4·8	+0·8	5	+1.1	1·57	1·29	+0·28	1·57	1·29	+0·28	0·35	Tehran.
7	0	1	2	3	2	1	11	4	N 82° W	N 3° W	5·4	2·2	+3·2	33	+13	79	+ 2	·250	+·007	3·9	+0·3	2	−1·1	1·17	1·18	−0·01	1·17	1·18	−0·01	0·59	Baghdad.
6	5	15	5	0	0	0	0	0	N 45° E	N 76° E	8·0	9·4	−1·4	69	− 3	70	− 4	·600	−·063	6·0	+1·3	1	+0·8	0·10	0·11	−0·01	0·10	0·11	−0·01	0·10	Aden.
7	8	10	1	4	1	0	0	0	N 45° E	N 85° E	3·3	4·6	−1·3	48	+ 7	80	− 2	·835	+·009	5·8	−0·1	7	−1·4	4·69	5·47	−0·78	4·69	5·47	−0·78	1·41	Zanzibar.

(a) Indeterminate.

† Mean of 18 days.
* " " 9 "

Table C.—Abstract of observations taken at 8 hrs. at 60 fourth and fifth class stations in India, etc., in December, 1919.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	II.—Assam.																								
4	Bishnath	58·4	55·3	75·4	+0·5	50·3	+6·1	62·9	+3·3	25·1	81·1	6th	39·9	29th	...	...	...	...	...	...	...	...	...	...	...
	Borjuli	62·5	59·3	78·7	+0·7	48·6	+3·6	63·7	+2·1	30·1	85·2	15th	42·6	18th	...	...	...	...	...	...	...	...	...	...	...
	Chandkhira	58·2	57·2	79·2	−1·1	45·7	−4·6	62·5	−2·9	33·5	99·7	6th	40·6	11th & 20th.	...	...	...	...	...	...	...	...	...	...	...
	Doom Dooma	53·4	52·3	77·1	+8·3	50·6	+3·1	63·9	+5·7	26·5	87·3	7th	44·2	20th & 29th.	...	...	...	...	...	...	...	...	...	...	...
	Dikom	54·6	52·8	76·5	+1·6	48·5	+2·6	62·5	+2·1	28·0	81·8	4th & 6th.	41·0	21st & 22nd.	...	...	...	...	...	...	...	...	...	...	...
	Golaghat	57·1	55·9	73·5	+2·4	49·5	...	61·5	...	24·0	76·9	17th.	42·4	21st & 23rd.	...	...	...	...	...	...	...	...	...	...	...
	Hailakandi	57·5	57·0	79·5	−0·1	54·8	+2·2	67·1	+1·1	24·7	83·0	16th	48·6	20th	...	...	...	...	...	...	...	...	...	...	...
	Jorehat	56·8	55·5	75·1	+0·4	52·2	+2·4	63·7	+1·4	22·9	79·9	6th	44·3	23rd	...	...	...	...	...	...	...	...	...	...	...
	Lumding	59·6	58·0	75·2	...	51·8	...	63·5	...	23·4	79·1	4th	45·8	23rd & 24th.	...	...	...	...	...	...	...	...	...	...	...
	Messa	65·1	59·7	79·6	−1·9	47·7	+2·2	63·7	+0·1	31·9	80·9	1st, 4th & 10th.	42·5	25th	...	...	...	...	...	...	...	...	...	...	...
	Panerihat	65·2	64·0	77·7	+1·5	50·5	+2·4	64·1	+1·9	27·2	81·9	9th	40·5	31st	...	...	...	...	...	...	...	...	...	...	...
	III.—Bengal.																								
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Brahmanbaria	67·7	59·7	83·6	+3·6	53·5	−0·6	68·5	+1·5	30·1	85·6	23rd	50·1	23rd & 30th.	...	...	...	...	...	...	...	...	...	...	...
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Goalundo	67·8	61·7	77·9	+0·3	56·9	+5·4	67·4	+2·9	21·0	80·7	4th	48·7	30th	...	...	...	...	...	...	...	...	...	...	...
	Pabna	60·9	57·8	79·7	−1·2	53·8	+0·7	66·7	−0·3	25·9	82·6	4th	49·9	9th & 20th.	...	...	...	...	...	...	...	...	...	...	...
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dam Dim	53·3	52·3	75·7	−8·9	45·4	+2·0	60·5	−3·5	30·3	79·4	4th	39·8	19th	...	...	...	...	...	...	...	...	...	...	...
	Kalchini	61·0	57·2	77·8	−0·1	47·7	+0·5	62·7	+0·2	30·1	83·6	2nd	42·0	19th & 25th.	...	...	...	...	...	...	...	...	...	...	...
	Nagrakata	67·2	59·7	78·1	0	52·4	+0·2	65·3	+0·1	25·7	84·1	2nd	47·0	16th	...	...	...	...	...	...	...	...	...	...	...
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raniganj (Asansol)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IV.—Bihar and Orissa.																								
7	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzaffarpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Motihari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

C.

and fifth class stations in India, etc., in December, 1919.

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st December 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				II.—Assam.
...	...	...	...	...	81	−11	·396	+·031	...	...	2	+0·5	0·83	0·47	+0·36	0·83	0·47	+0·36	0·68	Bishnath.
...	...	...	...	...	82	−4	·467	+·088	...	...	2	+1·3	0·73	0·23	+0·50	0·73	0·23	+0·50	0·55	Borjuli.
...	...	...	...	...	97	+1	·463	+·016	...	...	0	−1·0	0	0·46	−0·46	0	0·46	−0·46	0	Chandkhira.
...	...	...	...	...	92	−3	·384	−·001	...	...	1	−0·7	0·31	0·53	−0·22	0·31	0·53	−0·22	0·11	Doom Dooma.
...	...	...	...	...	88	−5	·382	+·019	...	...	0	−1·5	0	0·57	−0·57	0	0·57	−0·57	0	Dikom.
...	...	...	...	...	92	+1	·435	+·006	...	...	0	−1·2	0·04	0·54	−0·50	0·04	0·54	−0·50	0·04	Golaghat.
...	...	...	...	...	95	+3	·461	+·019	...	...	0	−1·4	0	0·52	−0·52	0	0·52	−0·52	0	Hailakandi.
...	...	...	...	...	91	−4	·427	+·003	...	...	0	−1·6	0·11	0·66	−0·55	0·11	0·66	−0·55	0·07	Jorehat.
...	...	...	...	...	91	...	·462	...	...	...	2	...	0·55	...	...	0·55	...	...	0·27	Lumding.
...	...	...	...	...	71	−7	·442	+·010	...	...	0	−1·5	0	0·54	−0·54	0	0·54	−0·54	0	Messa.
...	...	...	...	...	94	+2	·581	+·232	...	...	0	−1·5	0	0·43	−0·43	0	0·43	−0·43	0	Panerihat.
																				III.—Bengal.
...	...	...	...	...	...	...	...	...	...	...	0	−0·4	0	0·26	−0·26	0	0·26	−0·26	0	Comilla.
...	...	...	...	...	61	−23	·404	−·100	...	...	0	−1·0	0	0·44	−0·44	0	0·44	−0·44	0	Brahmanbaria.
...	...	...	...	...	...	...	...	...	...	...	0	−0·3	0	0·14	+0·14	0	0·14	−0·14	0	Faridpur.
...	...	...	...	...	69	−14	·465	+·017	...	...	0	−0·5	0	0·33	−0·33	0	0·33	−0·33	0	Goalundo.
...	...	...	...	...	82	+2	·438	+·004	...	...	0	−0·6	0	0·27	−0·27	0	0·27	−0·27	0	Pabna.
...	...	...	...	...	...	...	...	...	...	...	0	−0·4	0	0·12	−0·12	0	0·12	−0·12	0	Sirajganj.
...	...	...	...	...	...	...	...	...	...	...	0	−0·2	0	0·07	−0·07	0	0·07	−0·07	0	Rampur Boalia.
...	...	...	...	...	...	...	...	...	...	...	0	−0·1	0	0·06	−0·06	0	0·06	−0·06	0	Malda.
...	...	...	...	...	...	...	...	...	...	...	0	−0·2	0	0·05	−0·05	0	0·05	−0·05	0	Rangpur.
...	...	...	...	...	94	−1	·384	+·025	...	...	0	−0·6	0	0·21	−0·21	0	0·21	−0·21	0	Dam Dim.
...	...	...	...	...	77	+4	·424	−·003	...	...	0	−0·8	0	0·38	−0·38	0	0·38	−0·38	0	Kalchini.
...	...	...	...	...	63	−10	·412	+·016	...	...	0	−1·0	0	0·37	−0·37	0	0·37	−0·37	0	Nagrakata.
...	...	...	...	...	...	...	...	...	...	...	0	−0·4	0	0·13	−0·13	0	0·13	−0·13	0	Cooch Behar.
...	...	...	...	...	...	...	...	...	...	...	0	−0·2	0	0·11	−0·11	0	0·11	−0·11	0	Krishnagar.
...	...	...	...	...	...	...	...	...	...	...	0	−0·2	0	0·09	−0·09	0	0·09	−0·09	0	Bankura.
...	...	...	...	...	...	...	...	...	...	...	0	−0·3	0	0·12	−0·12	0	0·12	−0·12	0	Raniganj (Asansol).
																				IV.—Bihar and Orissa.
...	...	...	...	...	...	...	...	...	...	...	0	−0·4	0	0·23	−0·23	0	0·23	−0·23	0	Hazaribagh.
...	...	...	...	...	...	...	...	...	...	...	0	−0·1	0	0·10	−0·10	0	0·10	−0·10	0	Bhagalpur.
...	...	...	...	...	...	...	...	...	...	...	0	−0·2	0	0·07	−0·07	0	0·07	−0·07	0	Muzaffarpur.
...	...	...	...	...	...	...	...	...	...	...	0	−0·4	0	0·16	−0·16	0	0·16	−0·16	0	Motihari.
...	...	...	...	...	...	...	...	...	...	...	0	−0·3	0·07	0·13	−0·06	0·07	0·13	−0·06	0·07	Chapra.
...	...	...	...	...	...	...	...	...	...	...	0	−0·4	0	0·17	−0·17	0·17	0·17	−0·17	0	Arrah.
...	...	...	...	...	...	...	...	...	...	...	0	−0·4	0·01	0·25	−0·24	0·01	0·25	−0·24	0·01	Dehri.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

Number of sub-division.	Station.	Temperature of air. Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Resultant direction.	Normal direction.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	V.—United Provinces of Agra and Oudh.																								
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehra Dun	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IX.—Rajputana.																								
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XII.—Central Provinces.																								
23	Chhindwara	54·6	50·8	77·0	...	49·1	...	63·1	...	27·9	81·9	7th	42·4	19th	31	0	0	0	0	0	0	0	0	Calm	...
	XIII.—Hyderabad.																								
27	Parbhani	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XV.—Madras.																								
31	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Anantapur	71·2	68·4*	85·5*	...	65·0	...	75·1*	...	20·3	88·8	26th	56·4	22nd	...	...	...	...	...	...	...	...	...	...	...
33	Guntur	72·1	67·8	85·4	...	66·5	...	75·9	...	18·9	88·2	27th	60·0	22nd	...	...	...	...	...	...	...	...	...	...	...
	Koraput	57·2	55·2	74·9	...	49·8	...	62·3	...	25·1	80·0	7th	41·8	21st	...	...	...	...	...	...	...	...	...	...	...
	Bay Islands.																								
1	Car Nicobar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kashmir.																								
13	Jammu	50·4	46·1	64·9	...	47·5	...	56·2	...	17·4	75·7	12th	44·3	16th & 18th	0	11	8	4	1	0	2	2	3	N 16° E	...
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kargil	23·6	...	38·2	...	6·8	...	22·5	...	31·4	50·6	9th	−6·8	31st	9	0	0	1	11	2	4	1	2	S 15° E	...
	Baluchistan.																								
15	Harnai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill stations, exclusive of Kashmir.																								
	Panighatta	60·1	53·9	75·4	−1·2	53·8	−0·4	64·6	−0·8	21·6	79·5	13th	49·9	18th	...	...	...	...	...	...	...	...	...	...	...
	Kurseong	55·6	54·5	61·1	+0·6	48·1	+0·5	54·6	+0·5	13·0	66·5	2nd	44·5	18th	...	...	...	...	...	...	...	...	...	...	...
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dharampore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mussooree	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Poo	...	...	47·1	+0·7	27·2	+0·5	37·2	+0·6	19·9	61·6	1st	16·5	31st	11	8	5	2	2	1	0	1	1	N 27° E	...
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pishin	...	...	53·8	−3·2	21·4	−5·7	37·6	−4·5	32·4	68·3	10th	11·0	6th	...	...	...	...	...	...	...	...	...	...	...

* Mean of 30 days.

C—*continued.*

and fifth class stations in India, etc., in December, 1919—*continued.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st December 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				V.—United Provinces of Agra and Oudh.
...	...	...	...	...	...	...	...	...	...	...	4	+ 2·9	0·66	0·44	+ 0·22	0·66	0·44	+0·22	0·28	Meerut.
...	...	...	...	...	...	...	...	...	...	...	2	+0·5	1·59	0·81	+0·78	1·59	0·81	+0·78	1·00	Debra Dun.
																				IX.—Rajputana.
...	...	...	...	...	...	...	...	...	...	...	0	—0·3	0·02	0·10	—0·08	0·02	0·10	—0·08	0·02	Udaipur.
																				XII.—Central Provinces.
0·4	...	...	(a)	...	76	...	3·28	...	1·2	...	2	+0·6	0·49	0·62	—0·13	0·49	0·62	—0·13	0·37	Chhindwara.
																				XIII.—Hyderabad.
...	...	...	...	...	...	...	...	...	...	...	0	—0·7	0	0·30	—0·30	0	0·30	— 0·30	0	Parbhani.
																				XV.—Madras.
...	...	...	...	...	...	...	...	...	...	...	6	+ 2·4	3·56	4·26	—0·70	3·56	4·26	— 0·70	1·22	Tinnevelly.
...	...	...	...	...	87*	...	·664*	...	4·3	...	2	+1·8	0·38	0·27	+0·11	0·38	0·27	+0·11	0·21	Anantapur.
...	...	...	...	...	79	...	·626	...	0·4	...	2	+2·0	2·27	0	+2·27	2·27	0	+ 2·27	1·50	Guntur.
...	...	...	...	...	85	...	·419	...	...	...	0	...	0	...	...	0	...	...	0	Korsput.
																				Bay Islands.
...	...	...	...	...	...	...	...	...	...	...	15	+6·8	12·52	7·56	+4·96	12·52	7·56	+ 4·96	3·49	Car Nicobar.
																				Kashmir.
...	...	...	58	...	72	...	·263	...	4·6	...	6	+3·7	3·01	0·67	+ 2·34	3·01	0·67	+ 2·34	1·54	Jammu.
...	...	...	...	...	...	...	...	...	...	...	10	+2·7	5·76	5·83	— 0·07	5·76	5·83	— 0·07	1·20	Sonamarg.
...	...	...	36	...	...	...	...	...	6·3	...	1	—1·0	0·46	0·79	—0·33	0·46	0·79	— 0·33	0·10	Kargil.
																				Baluchistan.
...	...	...	...	...	...	...	...	...	...	...	1	— 0·6	0·24	0·68	—0·44	0·24	0·68	— 0·44	0·24	Harnai.
																				Hill stations exclusive of Kashmir.
...	...	...	...	...	65	+ 6	·338	—·007	...	...	0	—1·1	0	0·47	— 0·47	0	0·47	— 0·47	0	Panighatta.
...	...	...	...	...	93	+20	·413	+·146	...	...	0	—1·3	0	0·56	— 0·56	0	0·56	— 0·56	0	Kurseong.
...	...	...	...	...	...	...	...	...	...	...	1	—1·7	0·95	1·40	— 0·45	0·95	1·40	— 0·45	0·95	Gnatong.
...	...	...	...	...	...	...	...	...	...	...	1	—0·5	0·20	0·60	— 0·40	0·20	0·60	—0·40	0·13	Lachung.
...	...	...	...	...	...	...	...	...	...	...	4	...	1·63	...	...	1·63	...	...	0·65	Dharampore.
...	...	...	...	...	...	...	...	...	...	...	5	+3·2	1·48	1·02	+0·46	1·48	1·02	+ 0·46	0·61	Mussooree.
...	...	...	36	...	...	...	...	...	5·6	+1·6	6	+3·6	1·44	0·77	+0·67	1·44	0·77	+ 0·67	0·29	Poo.
...	...	...	...	...	...	...	...	...	...	...	7	+4·5	1·36	1·05	+0·31	1·36	1·05	+ 0·31	0·38	Kailang.
...	...	...	...	...	...	...	...	...	4·1	...	4	+1·1	1·64	1·25	+0·39	1·64	1·25	+ 0·39	0·65	Pishin.

(a)—Indeterminate.
* Mean of 30 days.

Table

Abstract of observations taken at 8 hrs. at 60 fourth

Number of sub-division.	Station.	Temperature of air.													Wind direction.										
		Mean of 8 hrs. dry bulb.	Mean of 8 hrs. wet bulb.	Mean maximum.	Departure from normal.	Mean minimum.	Departure from normal.	Monthly mean of mean between maximum and minimum.	Departure from normal.	Mean daily range of temperature.	Highest temperature observed during month.	Date.	Lowest temperature observed during month.	Date.	Number of winds from									Resultant direction.	Normal direction.
															Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	Extra India.																								
	Chumbi	21·3	?	47·8	...	18·5	...	29·3	...	33·1	56·0	2nd	12·7	22nd	...	...	...	...	...	...	...	...	...	...	...
	Pemba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abadan	58·8	53·6	69·2	...	51·8	...	60·5	...	17·4	78·0	6th	45·0	21st & 26th.	0	22	0	0	0	8	0	1	0	N 4° W	...

C—*concluded.*

and fifth class stations in India, etc., in December, 1919—*concluded.*

Wind velocity.			Wind steadiness.		Hygrometry, 8 hrs.				Cloud.		Rainfall.									Station.
Mean velocity, miles per hour.	Normal.	Departure from normal.	Actual percentage.	Departure from normal.	Mean humidity at 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall from 1st to 31st December, 1919.	Normal rainfall of this period.	Departure from normal of this period.	Heaviest rainfall during month.	
27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
																				Extra India.
...	...	...	...	...	...	...	...	...	1·3	...	0	...	0	...	...	0	...	...	0	Chumbi.
...	...	...	...	...	...	...	...	...	...	...	14	+3·9	9·44	6·86	+2·56	9·44	6·88	+2·56	3·95	Pemba.
...	...	...	46	...	72	...	·432	...	...	...	4	...	1·61	...	...	1·61	...	...	0·85	Abadan.

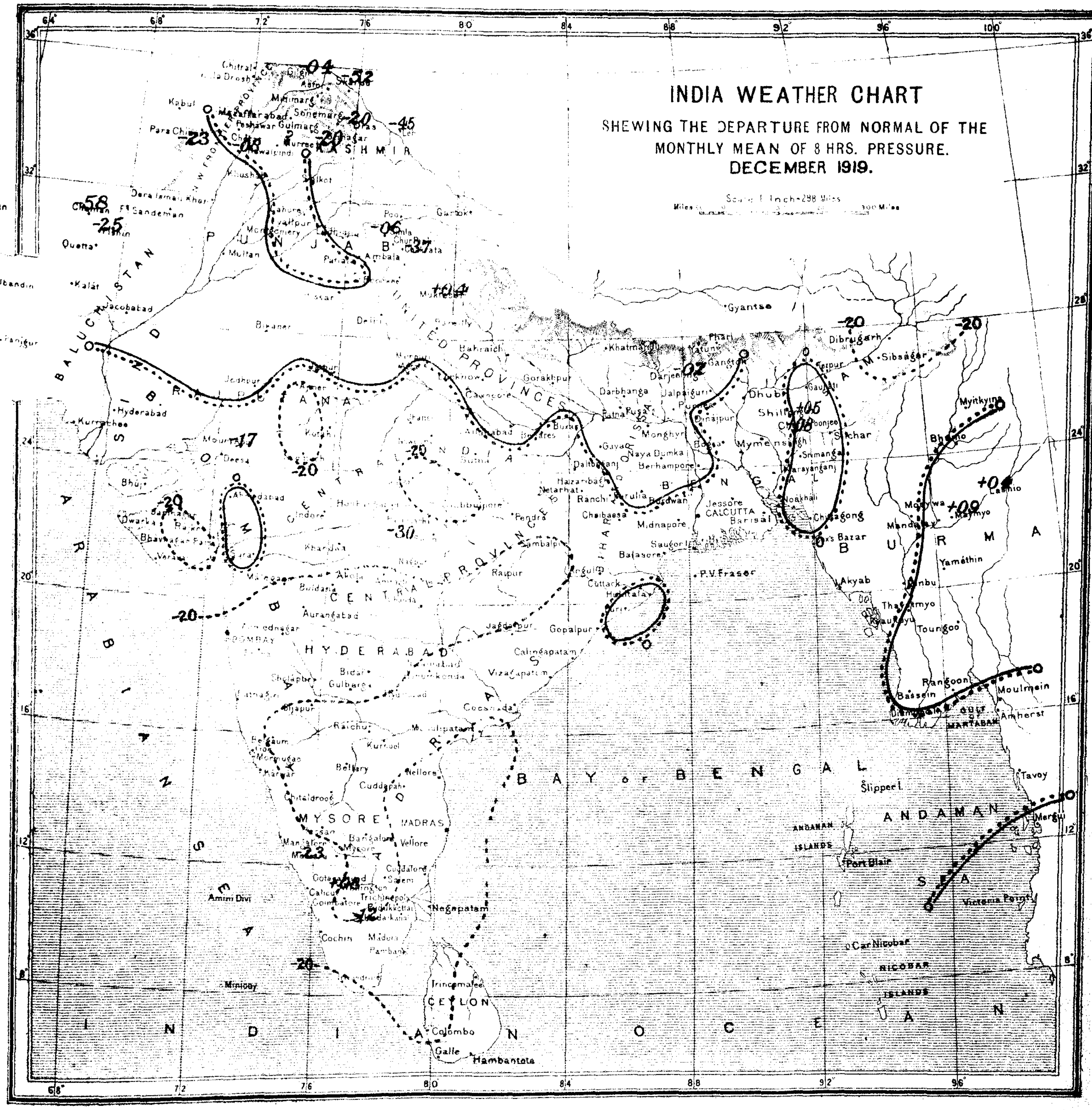
SGPI-21-4721DGObs.-12-10-22-325.

The lines of the above chart represent isobars or lines of equal barometric pressure, the numbers attached indicating the barometric pressure in inches and being drawn for differences of pressure of ·05 inch. The isobars in the Bay of Bengal are filled in by means of the shore observations, and by comparison with the normal distribution of pressure.

The mean 8 hrs. wind directions of the month are shewn by means of arrows flying with the wind, and are calculated by means of Lambert's formula applied to the winds as given in Table B of the 8 hrs. observations. The mean wind directions for the hill stations are indicated by broken arrows to distinguish them from the wind arrows for the plain stations. The mean velocity of the winds during the month is shewn by the following notation:—

Velocity of 0 to 2 miles per hour	...	one feather added to the wind arrow.
,, ,, 2 to 5 ,, ,, ,,	...	two feathers ,, ,, ,, ,,
,, ,, 5 to 10 ,, ,, ,,	...	three ,, ,, ,, ,, ,,
,, ,, 10 to 20 ,, ,, ,,	...	four ,, ,, ,, ,, ,,
over 20 ,, ,, ,,	...	five ,, ,, ,, ,, ,,

Wind strengths are based on factor 2·2 for the standard type of Beckley Robinson anemograph, instead of 3·0 as used for this plate up to December 1911 inclusive.



The chart shows the departure from normal of the mean during the month of 8 hrs. pressure by means of lines drawn for equal amounts of departure. The numbers are given in thousandths of an inch, 20 representing ·020″ or two hundredths of an inch, &c. Continuous lines indicate that the pressure was in excess by amounts indicated by the numbers attached to the lines, and broken or dotted lines that it was in defect by amounts indicated by the numbers attached to the lines. Two parallel lines near to each other, one continuous and the other broken or dotted, represent the line of no departure, the dotted line facing the area of deficient pressure or negative departures.

CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MAXIMUM TEMPERATURE.

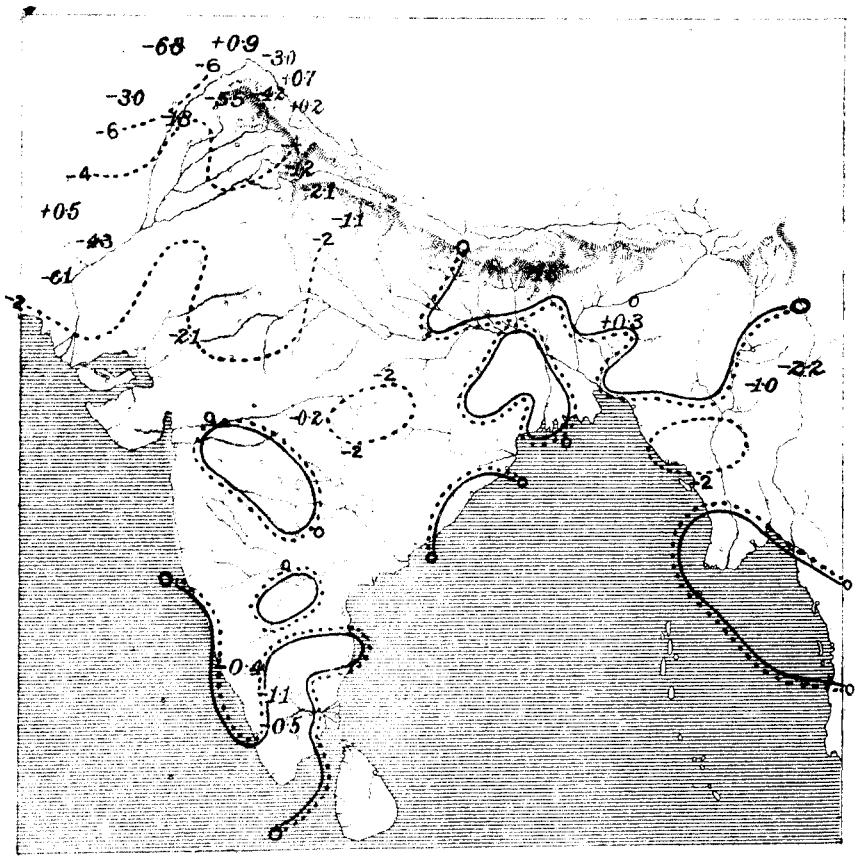


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MINIMUM TEMPERATURE.

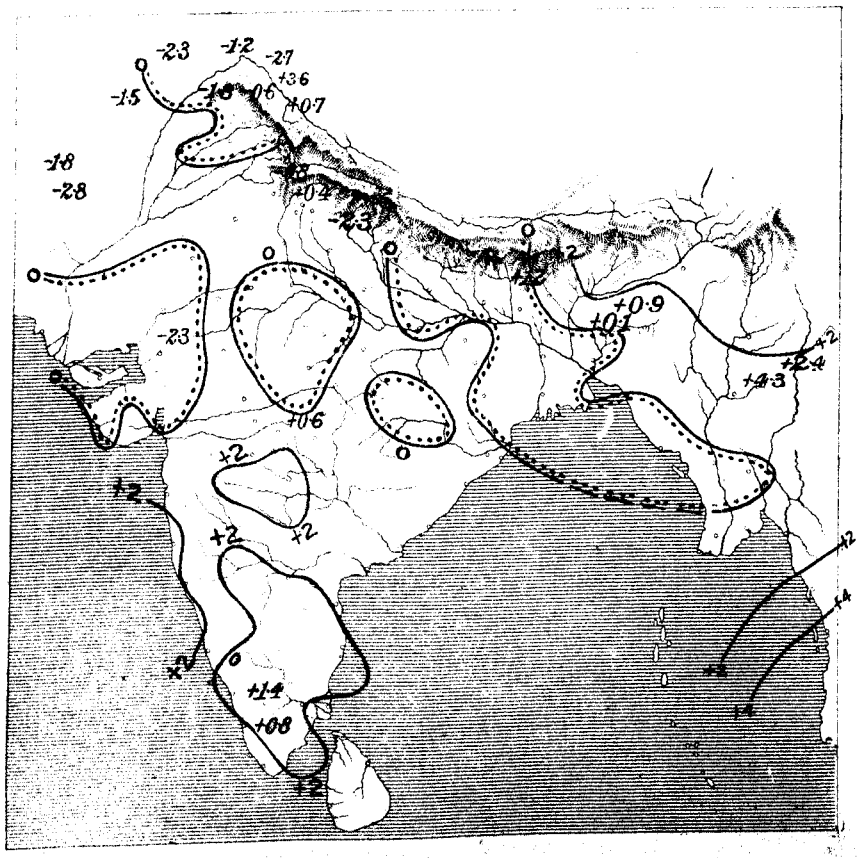


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF DAILY MEAN TEMPERATURE.

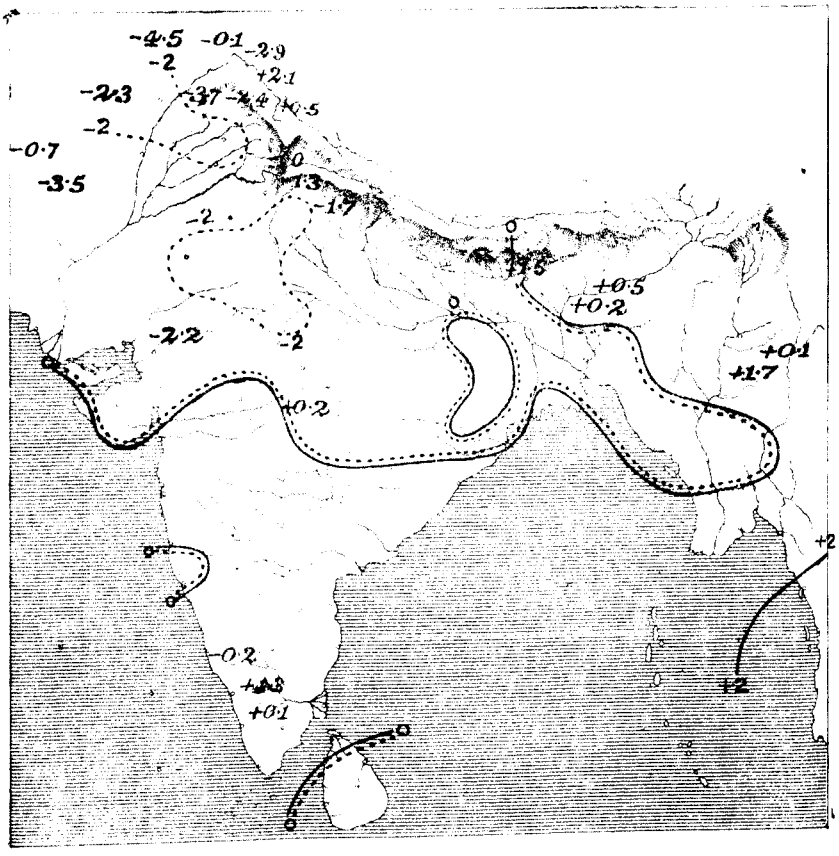


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF ABSOLUTE HUMIDITY AT 8 HRS.

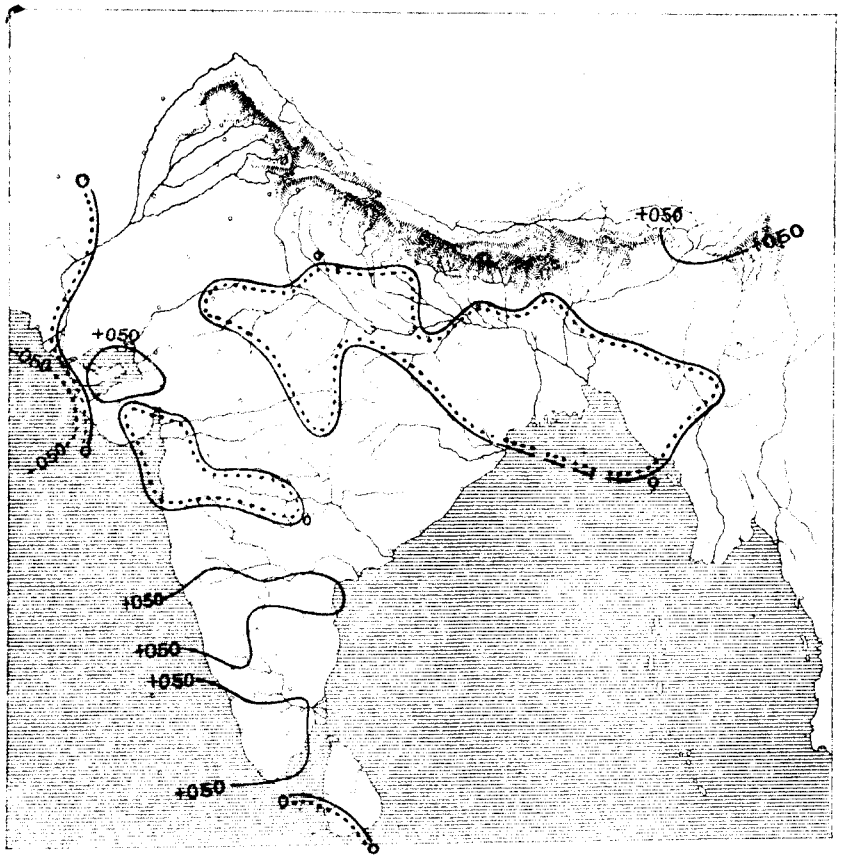


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF RELATIVE HUMIDITY AT 8 HRS.

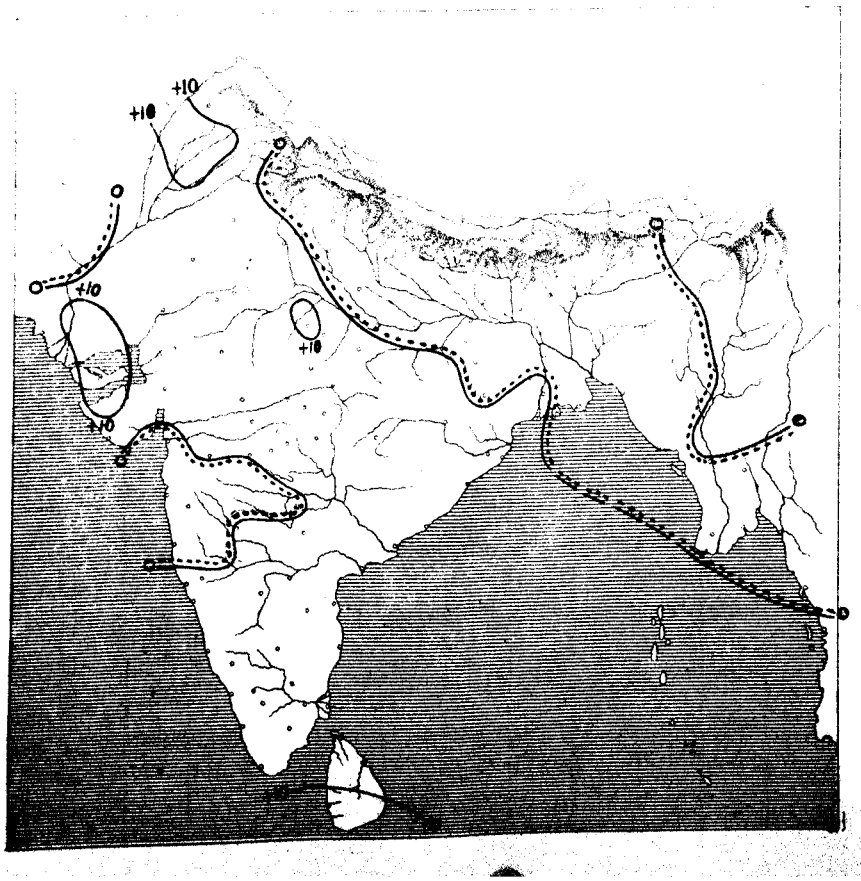


CHART SHEWING THE DEPARTURE FROM NORMAL OF THE MONTHLY MEAN OF CLOUD AMOUNT AT 8 HRS.

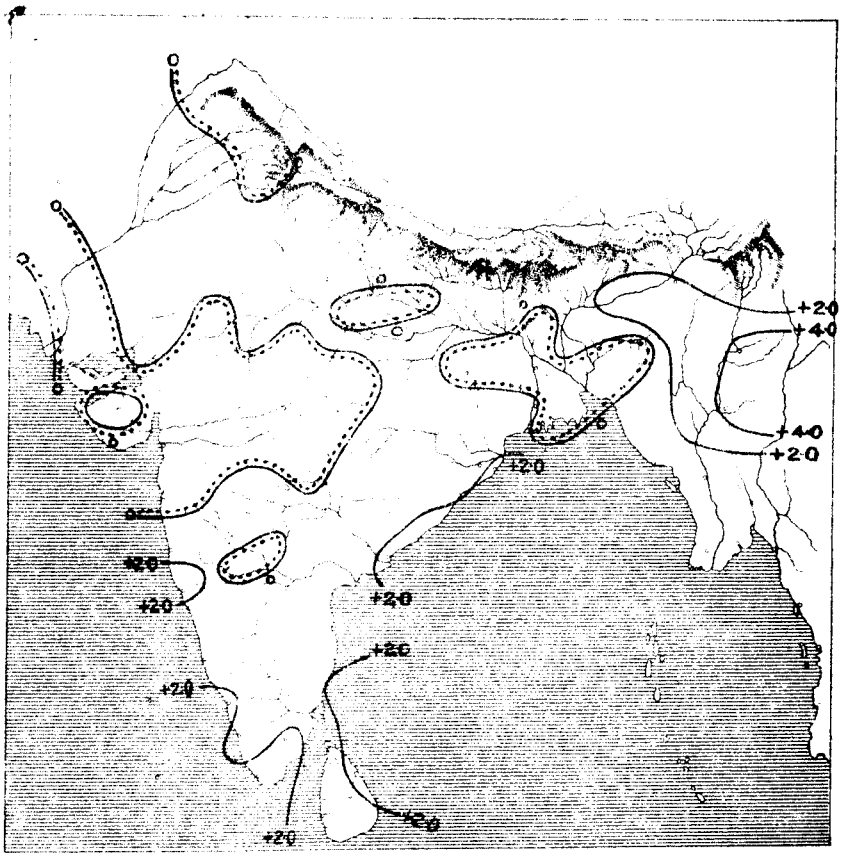
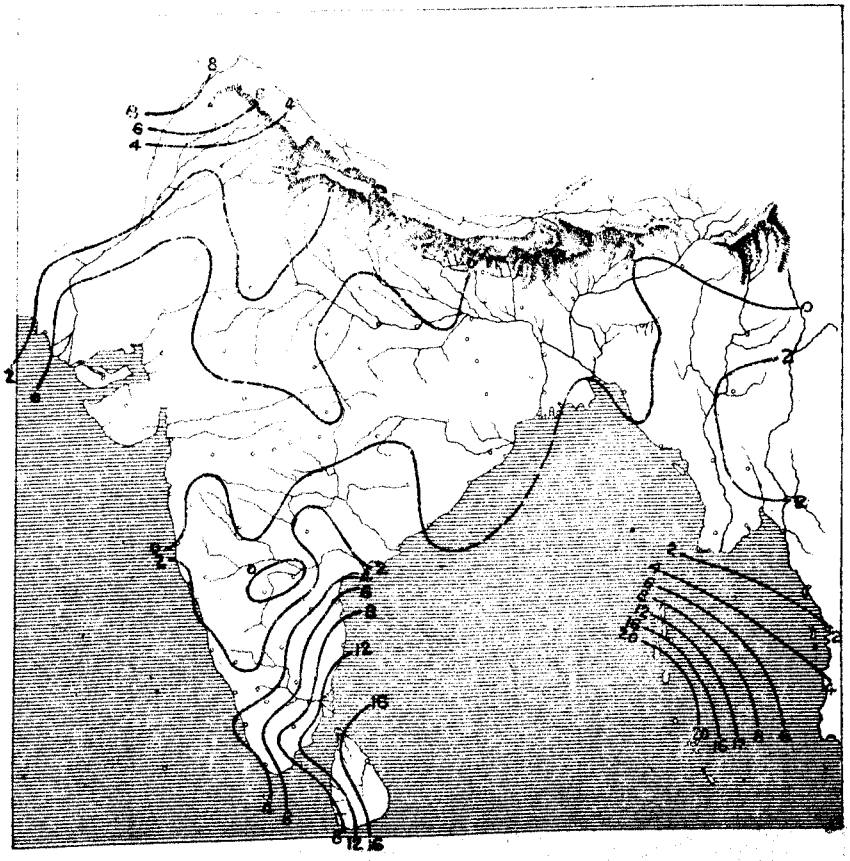
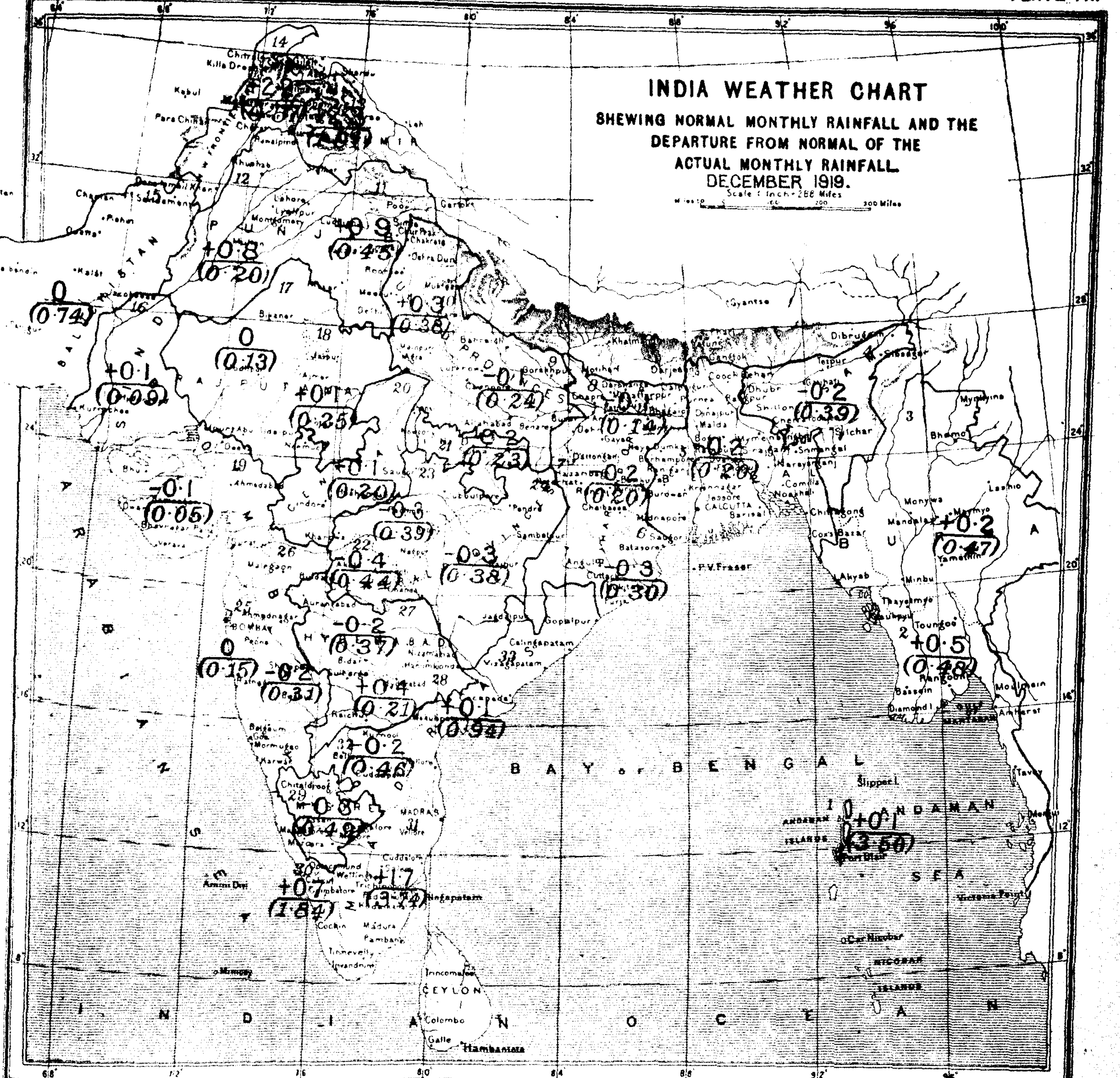


CHART SHEWING THE TOTAL NUMBER OF DAYS IN THE MONTH ON WHICH RAINFALL EQUALLED OR EXCEEDED 0·10 INCH.

(BASED ON THE RETURNS OF TABLE B.)





The country is divided into 33 areas as shewn in the list below. The numbers in that list correspond with the red numbers on the chart, and serve to identify the areas. The numbers in brackets on the chart give the average over the divisions of the normal monthly rainfall, the numbers above these give the departures from normal of the average actual rainfall over the divisions.

1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, East
19. Gujarat
20. Central India, West
21. Do., East
22. Berar
23. Central Provinces, West
24. Do., East
25. Konkan
26. Bombay, Deccan
27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North