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FOR THE YEAR

1912

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ANNUAL SUMMARY, 1912.

INTRODUCTION.

THE present account of the meteorology of 1912 is based on revised data and is intended primarily for scientific reference; for those needing prompt information the Annual Supplement to the India Daily Weather Report was issued on January 8, 1913.

Several systems of territorial division of India have come into use from time to time for meteorological purposes, each having been adopted to meet the needs of some particular set of data. A certain amount of confusion had been found to result from the consequent want of uniformity of boundaries, and, with a view of obviating the inconvenience caused, the Government of India in 1907 authorised the adoption of the following system of division :—

Chief political divisions.	Sub-divisions.
	Bay Islands.
Burma	Lower Burma.
	Upper Burma.
Eastern Bengal and Assam	Assam.
	Eastern Bengal.
Bengal	Bengal.
	Orissa.
	Chota Nagpur.
	Bihar.
United Provinces	United Provinces, East.
	United Provinces, West.
Punjab	Punjab, East and North.
	Punjab, South-west.
North-West Frontier Province.	North-West Frontier Province.
	Baluchistan.
Sind	Sind.
Rajputana	Rajputana, West.
	Rajputana, East.
Bombay	Gujarat.
	Konkan.
	Bombay Deccan.
Central India	Central India, West.
	Central India, East.
Central Provinces	Berar.
	Central Provinces, West.
	Central Provinces, East.
Hyderabad	Hyderabad, North.
	Hyderabad, South.
Mysore	Mysore.
Madras	Malabar.
	Madras, South-east.
	Madras, Deccan.
	Madras Coast, North.

From the 1st April 1912 a fresh territorial division of Eastern Bengal and Assam and Bengal was sanctioned by which Eastern Bengal was restored to Bengal while Orissa, Chota Nagpur and Bihar were constituted into a separate province under the name of Bihar and Orissa. The present arrangement is shown below :—

Chief political divisions.	Sub-divisions.
Assam	Assam.
Bengal	Bengal.
Bihar and Orissa	Orissa.
	Chota Nagpur.
	Bihar.

In the present review the new division has been adopted throughout.

The system of division is illustrated in Plate I at the end of this Annual Summary, and its relationship to the old system of divisions which was adopted for the tables of the 'Geographical Summary' given in former issues can be obtained by reference to pages 9 to 14 of Volume III of the Indian Meteorological Memoirs.

The data of Table B in the monthly reviews and in the present annual part are obtained, with a few exceptions, from the observations telegraphed daily to Simla for publication in the Daily Weather Report. In the case of thermometric observations, they are telegraphed to the nearest half degree. Hence the maximum and minimum temperature data of the second class observatories derived from these telegraphic

reports and given in table B, occasionally differ to some slight extent from the means of the more exact data (recorded to the tenth of a degree) tabulated in the observation forms sent to the Calcutta Office, and used in the calculation of the mean temperature data in Table A. There is also another reason why the data of mean maxima and minima in Tables A and B differ to a slight extent. In Table B the daily or 24-hour period is assumed to end at 8 hrs. and in Table A at midnight [except for rainfall the period of which ends at 8 hrs.], and hence the maximum temperature in Table B for any month of 31 days at any station gives the mean for 31 periods of 24 hours ending at 8 hrs. of the 31st and in Table A for the same number of 24-hour period ending at midnight on the 31st, and virtually, therefore, of a monthly period one day in advance of the former. Similarly for months of 28, 29 or 30 days. These remarks will explain some of the slight discrepancies which may be found between the mean data of maximum and minimum temperature in Tables A and B, and in the monthly mean departure data given in these tables in the monthly reviews and annual summary.

Solar, Magnetic and Seismic Activity.

Report from Kodaikanal Observatory.

The following table shows for each month the solar observations that were made :—

SOLAR OBSERVATIONS.

TABLE 1.

—	1912.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
A	30	29	17	...	16	18	24	26	27	25	23	26	261
B	...	...	2	1	...	...	...	...	...	...	...	...	3
C	30	29	29	28	31	18	15	22	25	13	16	24	280
D	30	29	31	30	31	27	22	29	28	26	22	24	329
E	30	29	31	30	31	26	24	28	29	26	22	25	331

A—spots observed; B—spot spectra; C—prominences; D—photoheliograms; E—spectroheliograms.

The sun's disc was examined visually for spots etc., on 261 days only whilst in 1911 it was examined on 333 days. The reduction in the number of observations was mainly due to an interruption of 66 days whilst the Lerebour and Secretan telescope was being adapted for both visual and photographic work. The observing conditions were perhaps not so good as in 1911, and there were as many as 25 days when there was no sunshine recorded.

Summary of Sunspot and Prominence Observations.

Sun-spots.—The following table shows the monthly numbers of new groups observed, the mean daily numbers of spots visible, and the distribution between the northern and southern hemispheres :—

TABLE 2.

—	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
New groups	...	...	1	2	2	1	3	2	5	1	1	4	22
Daily number	...	...	0·4	0·3	0·4	0·5	0·3	0·1	0·7	0·3	...	0·4	0·3
North	...	...	...	...	...	...	...	...	...	...	...	2	2
South	...	...	1	2	2	1	3	2	5	1	1	1	19
Equator	...	...	...	...	...	...	...	...	...	...	...	1	1

The decline in spot activity noted in the last few years continued in 1912, but the rate of decrease between 1911 and 1912 has lessened very slightly.

It seems probable that the minimum of spot activity occurred during the early part of 1912, not a single spot having been recorded in January and February, whilst there was a slight recovery of activity in September and in December. The appearance of a spot in latitude + 27° in December may probably be considered as the beginning of a new cycle of activity.

Of the twenty-two groups recorded during the year, nineteen were in the southern hemisphere and were, on the whole, closer to the equator than in 1911. Their mean latitude was—7°·2 against—9°·8 in 1911. Of the three remaining spots, one was a small dot on the equator, one was at + 20° and the third, the last group of the year was at + 27°; all three spots were observed in the latter part of December.

Prominences.—The mean areas of prominences for each hemisphere of the sun are shown in the following table in which the figures for the previous two years are given for comparison :—

Mean daily profile areas of Prominences in square minutes of arc.

TABLE 3.

—	1910.	1911.	1912.
North	2·03	1·27	0·95
South	2·07	1·64	1·51
Total	4·10	91	2·46

The reduction of prominence area is here shown to be very much less than the reduction of spot numbers or of new groups, also the rate of decrease has lessened considerably between 1911 and 1912.

The area curve underwent a marked change in the second-half of 1911. There were several sharp, though small, maxima and a pronounced maximum near 50° south. These features were maintained in a general way in 1912.

Metallic Prominences.

TABLE 4.

—	Number observed.	Mean latitude.	Extreme latitudes.
North	3	14°·5	1°·5 35°
South	9	18°·0	8° 46°·5

The prominence activity in each month may be estimated from the following table :—

Number of Prominences.

TABLE 5.

Months.	Prominences— one minute or more in height.	Metallic.	Eruptive.
January	84	1	4
February	63	1	3
March	63	3	4
April	39	1	6
May	32	...	1
June	24	2	...
July	16	1	5
August	42	...	2
September	34	1	1
October	31	...	...
November	33	2	3
December	58	...	3

The metallic and eruptive prominences show a decrease corresponding to that of the spot activity. But there is actually an increase in the number of "large" prominences; this is particularly striking in January and February when there was no spot recorded, but the numbers of large prominences are the highest in the year.

J. EVERSHED,

Director,

Kodaikanal and Madras Observatories.

Bombay Observatory : Note on the (Alibag) magnetic record.

During the year there were 150 calm days, 207 days of small and 9 days of moderate disturbance, as against 95 calm days, 253 days of small, 15 days of moderate and 2 days of great disturbance of the preceding year.

The following table prepared in accordance with the suggestions made by the International Commission, Terrestrial Magnetism, represents the magnetic character of each day during the year :—

Table 6.

1912.	Month.											
Date.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	1	0	1	1	0	1	1	1	1	1	1	1
2	0	0	0	0	1	1	0	1	0	0	1	1
3	1	1	0	0	1	1	1	0	0	1	0	1
4	0	0	0	1	1	0	1	0	1	1	1	0
5	1	0	1	1	2	0	1	1	1	0	1	0
6	0	0	1	1	1	0	1	2	1	1	1	1
7	0	0	1	1	1	0	1	1	0	1	1	1
8	1	0	1	0	1	1	1	0	1	1	1	1
9	1	0	1	0	0	1	0	0	1	0	1	1
10	0	1	1	1	1	1	0	0	1	1	2	0
11	1	1	1	0	1	1	0	1	1	1	1	1
12	1	1	1	0	1	1	0	0	1	1	0	0
13	1	1	0	0	1	0	0	0	1	1	0	1
14	1	0	1	1	1	1	1	1	1	2	2	1
15	0	0	1	2	1	0	0	1	0	1	1	1
16	0	1	0	1	0	0	1	1	0	1	1	0
17	1	1	0	1	0	1	1	1	2	1	1	0
18	1	1	0	1	0	0	1	1	1	0	1	1
19	1	0	0	1	0	0	1	2	1	0	1	1
20	1	0	0	0	0	0	1	1	0	1	0	0
21	0	0	0	0	0	0	0	1	0	1	0	0
22	1	0	1	0	0	1	0	1	1	1	1	1
23	1	1	0	1	0	1	0	1	1	1	1	1
24	1	1	0	0	1	1	0	1	2	1	0	1
25	0	1	0	1	1	0	1	1	1	1	0	1
26	0	1	0	0	0	0	1	0	0	0	1	1
27	0	1	0	0	0	1	1	1	1	0	1	0
28	1	0	1	0	0	1	0	1	0	1	0	0
29	0	0	1	0	1	1	0	1	0	1	0	1
30	1		0	1	0	1	0	0	1	1	0	1
31	0		0		1		1	0		0		1
Σ	18	13	14	16	18	17	17	23	22	24	22	21

In the above table 0 represents Calm day.
" 1 " small disturbance.
" 2 " larger disturbance.

The following is a list of days during the year 1912 selected as "quiet" from the Alibag records for the purposes of the Magnetic Survey, as suitable for the determination of the magnetic diurnal inequalities :—

TABLE 7.

MONTHS.	Selected quiet days.				
1912.					
January . . .	4	7	16	21	27
February . . .	1	9	14	20	28
March	2	13	18	20	25
April	2	9	12	21	29
May	1	9	17	23	28
June	4	7	16	20	26
July	2	12	13	24	28
August	3	4	13	26	30
September . . .	3	7	15	16	29
October	5	9	18	19	26
November . . .	3	12	13	21	25
December . . .	5	12	16	21	28

The mean values of the magnetic elements obtained from all days in year are as follows :—

Mean easterly declination . . . . 0° 51′ 11″

" Horizontal Force . . . . 0·36874 C. G. S.

" Vertical Force (standardised by Inductor). 0·16367 "

Mean inclination by the Inductor { Observed . 23° 54′·8 / Calculated . 23° 56′·1

The inclination shown as 'calculated' is derived from the corrected mean values of H. and V. for the year.

The Vertical Force upto the end of the year 1911 was derived from the results of the Dip circle. From the beginning of the year 1912, however, it has been derived from the Inclination results of the Inductor. To maintain the continuity between the past record and the present, a correction of about 25 γ (equivalent to 2′ of Dip) is indicated, the Inductor result giving higher values of V.

The following table gives the corrected monthly mean values of the several magnetic elements as also the summed ranges of the Horizontal Force :—

TABLE 8.

MONTHS.	ABSOLUTE VALUES OF				HORIZONTAL FORCE.	
	Horizontal Force.	Vertical Force.	Inclination.	Easterly Declination.	Summed ranges.	Summed ranges (smoothed)
1912.	C. G. S.	C. G. S.	° ′	′ ″	C. G. S.	C. G. S.
January .	0·36873	0·16314	23 52·0	0 52 52	0·00146	0·00204
February . .	0·36874	0·16328	23 53·0	0 52 32	0·00172	0·00205
March . .	0·36878	0·16341	23 53·9	0 52 8	0·00244	0·00204
April . .	0·36870	0·16345	23 54·5	0 52 8	0·00255	0·00205
May . .	0·36873	0·16357	23 55·4	0 51 42	0·00234	0·00208
June . .	0·36877	0·16356	23 55·1	0 51 9	0·00239	0·00211
July . .	0·36879	0·16371	23 56·2	0 51 1	0·00277	0·00215
August . .	0·36869	0·16376	23 57·0	0 50 44	0·00171	0·00219
September .	0·36869	0·16388	23 57·9	0 50 27	0·00171	0·00222
October . .	0·36875	0·16400	23 58·6	0 50 10	0·00233	0·00223
November . .	0·36873	0·16410	23 59·5	0 49 47	0·00250	0·00223
December . .	0·36877	0·16415	23 59·7	0 49 31	0·00169	0·00224

NOTE.—Summed range means sum without regard to sign of the 24 ordinates of the diurnal inequality. Smoothed ranges are derived from running means of twelve consecutive monthly values reduced to the proper epoch so as to eliminate the annual variation.

In the secular march of the range curve as roughly indicating the activity of the 11-year period, it appears from the progress of the figures in the last column that the lowest figure 202 showing a record minimum of magnetic activity in the Colaba Data of 65 years, was reached in November-December 1911. Since then the curve has risen steadily. Unless therefore a marked fall ensues by the interference of some other smaller period, which is not unlikely, the turning point of the 11-year magnetic activity may be regarded as having been definitely passed about the end of 1911 or the beginning of 1912. Comparing the actual figures of the corresponding months for the years 1911, 1912, 1913, the decay of magnetic energy appears however to continue to run into May 1912, the corresponding monthly figures thereafter only, indicating growth by steadily increasing numbers.

TABLE 9.—*In the following table will be found a list of Seismic disturbances recorded by the Milne's Seismograph at Bombay.*

(All times given in this table denote G. M. T.)

No.	Date 1912.	Commencement.		Max.		End.		Max. Amp.	Duration.		Remarks.
		h.	m.	h.	m.	h.	m.	mm.	h.	m.	
4	January 4	16	10·9	16	40·7	17	13·2	0·9	1	2·3	
18	„ 26	14	50·7	14	59·2	15	8·8	0·4	0	18·1	
24	„ 31	.....		21	15·5	.....		0·5	.....		Beginning and end mixed up in tremors.
82	March 24	12	29·0	12	35·5	12	47·8	0·3	0	18·8	
89	April 1	5	19·1	5	23·1	5	30·3	0·4	0	11·2	
116	„ 23	21	52·4	21	59·6	22	10·7	0·5	0	18·3	
119	„ 25	10	34·7	10	35·9	10	42·4	0·2	0	7·7	
141	May 6	19	21·1	19	44·5	20	52·5	1·9	1	31·4	
147	„ 11	17	36·7	17	40·5	18	13·9	1·1	0	37·2	
149	„ 15	.....		0	34·8	.....		0·3	.....		Beginning and end mixed up in tremors.
157	„ 21	8	38·1	8	44·6	9	26·9	1·0	0	48·8	
161	„ 23	2	28·9	.....		4	42·7	.....	2	13·8	Traces overlap.
183	June 7	10	42·9	10	49·2	.....		1·1	.....		End mixed up with the beginning of the following disturbance.
184	„ 7	.....		11	30·5	11	55·3	0·5	.....		Beginning mixed up with the end of the preceding disturbance.
185	„ 7	12	59·7	13	8·1	13	30·0	0·4	0	30·3	
187	„ 7	18	56·9	19	12·5	19	51·4	1·0	0	54·5	
194	„ 8	7	40·3	8	29·1	.....		1·8	.....		End mixed up with the beginning of the following disturbance.
195	„ 8	.....		9	45·0	.....		1·3	.....		Beginning mixed up with the end of the preceding disturbance; end mixed up with the beginning of the following disturbance.
196	„ 8	.....		11	26·9	12	21·0	0·5	.....		Beginning mixed up with the end of the preceding disturbance.
197	„ 8	13	45·7	13	52·6	14	29·4	1·3	0	43·7	
201	„ 10	16	39·4	16	59·8	17	44·3	2·5	1	4·9	
206	„ 12	7	53·8	7	58·8	8	14·9	0·5	0	21·1	
217	„ 17	11	58·0	12	1·9	12	17·4	0·7	0	19·4	
220	„ 18	12	16·4	12	50·2	13	49·5	1·0	1	33·1	
227	„ 26	17	2·3	17	9·5	17	26·0	0·6	0	23·7	
241	July 7	8	21·3	8	56·2	11	11·0	5·8	2	49·7	
255	„ 24	12	9·0	12	18·7	.....		0·7	.....		End mixed up with the beginning of the following disturbance.
256	„ 24	.....		13	27·0	13	49·9	0·5	.....		Beginning mixed up with the end of the preceding disturbance.
258	„ 25 and 26 . .	23	19·5	23	59·2	0	40·9	0·5	1	21·4	
274	August 6	13	33·1	13	41·9	14	20·1	1·5	0	47·0	
279	„ 9	1	37·3	.....		5	1·8	.....	3	24·5	Traces overlap.

TABLE 9.—*In the following table will be found a list of Seismic disturbances recorded by the Milne's Seismograph at Bombay*—concld.

(All times given in this table denote G. M. T.)

No.	Date 1912.	Commencement.		Max.		End.		Max. Amp.	Duration.		Remarks.
		h.	m.	h.	m.	h.	m.	mm.	h.	m.	
296	August 17	19	21·1	19	34·6	21	24·5	4·4	2	3·4	
302	„ 21	17	48·8	18	4·8	18	19·4	0·4	0	30·6	
306	„ 23	14	6·6	14	12·2	14	45·6	1·3	0	39·0	
307	„ 23	21	48·4	21	48·8	22	31·6	1·1	0	43·2	
316	„ 31	23	5·4	23	10·9	23	36·2	0·7	0	30·8	
325	September 11	0	58·8	1	5·5	1	47·1	2·5	0	48·3	Beginning doubtful as it is mixed up in tremors; end mixed up in tremors.
331	„ 13	23	45·4	23	58·7	.....		1·0	.....		
342	„ 26	19	42·5	19	44·4	19	51·2	0·5	0	8·7	
346	„ 29	21	2·9	21	34·6	22	47·8	1·5	1	44·9	
347	„ 29 and 30 . . .	23	21·7	23	41·0	0	2·4	0·5	0	40·7	
359	October 12	16	3·1	16	12·7	16	44·6	0·5	0	41·5	
372	„ 18	12	25·8	12	41·3	13	15·0	2·3	0	49·2	
387	„ 31	17	43·5	18	7·6	18	32·0	0·2	0	48·5	
399	November 7	8	5·0	8	41·6	9	25·1	2·6	1	20·1	
426	„ 28	21	2·3	.....		.....		.....	.....		Very small disturbance; phases ill-defined.
447	December 9	.....		0	28·9	.....		1·0	.....		Beginning and end mixed up in tremors.
448	„ 9	8	54·0	10	10·9	10	58·7	0·5	2	4·7	
468	„ 24	0	7·5	0	31·6	.....		0·3	.....		End mixed up in tremors.
470	„ 24	18	26·5	18	35·7	18	51·6	0·3	0	25·1	
476	„ 28	8	6·9	8	34·6	9	9·4	0·8	1	2·5	

Sensibility to tilt 1·0 mm. of amplitude equals 0·40″ between 1st January and 23rd July, 0·37″ between 24th July and 3rd December and 0·35″ between 4th and 31st December 1912.

N. A. F. MOOS,

Director, Bombay and Alibag Observatories.

Solar Radiation.

The following table shows, in absolute measure, the value of solar radiation as measured at Simla by means of Angstrom's electric compensation pyrheliometer :—

TABLE 10.

1912.	Intensity in gramme-calories per sq. cm. per min.			Number of days of observation.
	Maximum.	Minimum.	Mean.	
January		No obser	vations.	
February . . .	1·55	1·44	1·49	12
March	1·49	1·28	1·43	8
April	1·47	1·40	1·44	5
May	1·47	1·24	1·37	7
June	1·24	1·18	1·22	4
July		No obser	vations.	
August		No obser	vations.	
September . . .	1·35	1·24	1·31	7
October	1·37	1·23	1·30	16
November . . .	1·36	1·24	1·32	14
December . . .	1·43	1·28	1·38	4

Nocturnal Radiation.

Observations of the terrestrial radiation thermometers, which are as a rule not very reliable, were recorded during the year 1912 at the following stations—

Srinagar.	Jodhpur.	Calcutta (Alipore).
Lahore.	Allahabad.	Bombay.
Simla.	Ootacamund.	

The following Table 11 gives the average data of past years for the above stations; and Table 12 the departure from the normal.

TABLE 11.—*Average depression of mean monthly and annual nocturnal radiation temperatures below mean monthly and annual minimum shade temperatures.*

Station.	Number of years observations used.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
Srinagar . . .	14—19	8·3	8·7	9·8	10·2	11·1	11·1	11·0	10·6	12·3	11·9	11·4	11·1	10·6
Simla . . .	20—21	3·9	3·4	3·5	5·3	4·3	3·6	2·9	2·2	3·5	4·8	4·7	4·5	3·9
Lahore . . .	35—36	9·6	9·4	8·8	9·2	9·1	6·4	4·0	4·2	6·6	9·8	10·7	10·1	8·2
Jodhpur . . .	15—17	8·5	8·4	8·3	7·9	5·5	2·8	2·1	2·3	4·8	9·4	10·9	10·0	6·7
Allahabad . . .	35—36	11·1	11·6	12·6	12·3	9·1	5·0	3·0	2·6	4·2	9·3	12·3	12·4	8·8
Calcutta (Alipore) .	35—36	7·4	6·9	5·8	4·4	3·0	2·1	1·8	1·9	2·5	4·3	6·4	7·8	4·5
Bombay . . .	37	9·4	8·9	7·9	6·3	4·5	2·8	2·1	2·4	3·0	6·1	9·2	10·0	6·1
Ootacamund . .	9—10	10·7	10·5	9·5	7·5	5·1	2·8	2·0	3·2	3·5	3·8	5·4	8·6	6·1

TABLE 12.—*Departures from the averages of Table 11 of mean monthly and annual depression of nocturnal radiation temperatures in 1912.*

Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Srinagar	+2·4	+2·5	+1·9	+1·6	+2·2	+2·9	+3·8	+3·8	−0·2	0	+0·5	−1·2	+1·7
Simla	0	+2·3	+2·8	+0·1	+1·2	+1·4	+0·9	+1·7	+2·3	+3·0	+1·7	+2·8	+1·7
Lahore	−0·2	+2·6	+3·7	−0·4	+1·8	+2·5	+0·4	0	+3·9	+2·6	+2·0	+1·7	+1·7
Jodhpur	−0·9	+0·6	+2·5	−0·2	+2·5	+1·6	+1·0	+1·8	+2·4	+0·8	−0·3	+1·4	+1·1
Allahabad	+3·1	+4·1	+2·0	−0·6	+0·4	+1·4	−1·7	−0·6	+0·5	+1·4	−1·2	+0·9	+0·8
Calcutta (Alipore) . . .	−1·7	−1·8	−0·9	−1·0	−0·1	−0·1	−0·2	−0·3	+0·2	−0·9	−1·7	−1·7	−0·9
Bombay	−2·1	−2·4	−1·8	−1·3	−1·0	−0·5	+0·5	+0·1	+0·3	−1·2	−4·2	−2·3	−1·3
Ootacamund	+5·2	+1·6	+3·2	+2·0	+0·7	−1·0	−0·5	+0·4	+2·2	+0·7	+1·3	+3·7	+1·6

Temperature of the ground.

Observations of the temperature of the surface of the ground were recorded during the year 1912 at five stations, Lahore, Jaipur, Allahabad, Calcutta (Alipore) and Bombay; and of the temperature under ground at Bombay only.

The thermometers used for the purpose are verified standard mercurial thermometers with attached scales of porcelain, the scale being engraved also on the tube.

At Lahore the surface thermometer is read four times daily; at Jaipur at 10 and 16 hrs., at Allahabad at 6, 14, and 22 hrs., and at Calcutta at 13 hrs. 45 mins. At Bombay the two nearest to the surface are read five times a day, the deeper instruments being read once only.

The thermometers below the surface have their bulbs protected with pointed copper shoes which rest on ground

at the bottom of a wooden tube, inserted to the specified depth and projecting six inches above the surface, the upper ends being closed by a cap of metal or wood. Those at depths of five feet or more are attached to the lower ends of stout wooden bars of about half the diameter of the tube.

Those at one foot have a brass ring attached to the top of the wooden frame by which they are lifted; and in all these the lower part of the frame around the bulb has been cut away, and the lower end fitted with the copper shoe above mentioned.

The average monthly data are here given at length, but a paper published by Mr. R. L. Jones (Meteorological Memoirs, Vol. XV, Pt. III, 1904) makes it clear that the results of the measurement of underground temperatures lead to inconsistent results when analysed on the lines developed by Lord Kelvin. It may be that this is due to irregus larities from percolation of rainfall as well as to imperfection in the mode of measurement.

Under these circumstances a table of departures from the average of past years is more likely to give indications of value than a statement of absolute temperatures recorded; such a table is therefore given below. The number of years included in the averages in the different cases lies between 21 and 27.

TABLE 13.—*Departures from normal of the mean monthly and annual temperatures of the air and of the ground in 1912.*

Station.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
LAHORE	Air	+ 2·2	+ 4·8	— 0·7	— 1·2	+ 1·8	+ 2·8	+ 1·4	— 0·5	— 0·2	+ 1·3	+ 1·7	+ 0·5	+ 1·2
	Surface	+ 2·6	+ 3·6	+ 0·5	— 0·1	+ 0·3	+ 2·1	— 0·4	— 2·9	— 1·0	— 0·1	— 1·6	0	+ 0·3
JAIPUR	Air	+ 1·9	+ 3·4	— 2·0	+ 0·3	+ 0·7	+ 4·4	+ 0·7	— 1·2	— 1·7	+ 0·5	— 0·5	— 0·4	+ 0·5
	Surface	—0·6	— 0·3	—2·8	—4·8	—2·6	+ 5·0	—4·7	—6·1	—3·9	—2·0	—5·1	—1·0	—2·4
ALLAHABAD	Air	+ 0·6	+ 2·5	— 2·4	— 1·0	+ 0·4	+ 2·9	0	0	— 0·8	— 0·2	+ 1·1	— 1·2	+ 0·2
	Surface	+ 1·5	+ 4·7	+ 0·9	+ 4·6	+ 4·1	+ 7·6	— 1·9	— 0·4	— 0·6	+ 0·7	— 0·8	+ 18·3	+ 3·2
CALCUTTA (ALIPORE).	Air	+ 2·2	+ 3·5	+ 0·9	— 1·4	+ 0·6	+ 1·2	+ 0·6	+ 1·0	+ 1·6	+ 0·2	+ 0·5	— 0·1	+ 0·9
	Surface	+ 9·2	+ 3·2	— 6·1	— 4·4	+ 1·3	+ 1·7	— 2·1	— 1·5	— 0·6	— 3·9	— 3·7	+ 1·4	—0·5
BOMBAY	Air	+ 2·0	+ 2·3	+ 0·5	+ 1·8	+ 0·9	+ 1·9	+ 0·9	+ 0·4	+ 1·5	+ 1·2	+ 0·4	+ 0·6	+ 1·2
	1 inch deep	+ 1·9	+ 1·3	+ 0·7	+ 1·8	+ 1·2	+ 1·9	+ 1·1	+ 0·4	+ 1·3	+ 1·0	+ 0·1	0	+ 1·1
	9 inches deep	+ 1·8	+ 1·9	+ 0·7	+ 1·4	+ 1·2	+ 1·5	+ 1·2	+ 0·6	+ 0·8	(No	data.)		
	1 foot 8 inches deep	+ 1·8	+ 2·0	+ 1·3	+ 1·6	+ 1·5	+ 1·5	+ 1·4	+ 0·8	+ 0·8	+ 1·2	+ 0·9	+ 0·4	+ 1·3
	5 feet deep	+ 1·9	+ 1·8	+ 1·6	+ 1·4	+ 1·4	+ 1·4	+ 1·3	+ 1·0	+ 0·8	+ 1·0	+ 1·1	+ 0·7	+ 1·3
	11 feet deep	+ 1·6	+ 1·7	+ 1·7	+ 1·6	+ 1·3	+ 1·1	+ 0·6	+ 0·5	+ 0·6	+ 0·9	+ 1·1	+ 1·1	+ 1·2

Temperature.

The methods of exposing the thermometers at observatories in India were described in pages 18-19 of the Annual Report for 1890.

The method of deducing the daily and monthly means from the observed readings of the instruments was described in pages 5 and 6 of the Monthly Weather Review for January 1912.

The departures from normal of the mean temperature of each month given in Table A of the Monthly Weather Reviews are deduced by a comparison of the actual monthly means with the normal monthly means given in the "Indian Meteorological Memoirs," Volume XVII, pages 16 to 24.

The departures obtained by a comparison of these normal means with the actual monthly means in Table A of the Monthly Weather Reviews for the year are given in Table 14.

In Table B, published in each Monthly Review, the mean temperature of the day is calculated, as in the Daily Weather Report, by the formula:—daily mean $= \frac{\text{maximum} + \text{minimum}}{2}$. It differs from the true daily mean by amounts varying slightly with the season. In Table B of the Monthly Weather Reviews of the year 1912 are given the departures from normal of the monthly means of daily maximum and minimum temperatures, as well as the departures of the monthly means of daily mean temperature given by the formula $\frac{1}{2}$ (maximum + minimum).

Tables 15 to 20 give summaries of the temperature departure data for each month of the year 1912 and for the whole year. In the first set of tables (Tables 15, 16 and 17) the departure data are given for the 15 chief political divisions, and in the last three tables (Tables 18 to 20) the data are given for the 33 sub-divisions:—

TABLE 14.—*Departure from normal of monthly and annual mean air temperatures at first and second class observatories in 1912.*

Division.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		°	°	°	°	°	°	°	°	°	°	°	°	°
BENGAL	Calcutta	+2·2	+3·5	+0·9	—1·4	+0·6	+1·2	+0·6	+1·0	+1·6	+0·2	+0·5	—0·1	+0·9
UNITED PROVINCES OF AGRA AND OUDH.	Allahabad	+0·6	+2·5	—2·4	—1·0	+0·4	+2·9	0	0	—0·8	—0·2	+1·1	—1·2	+0·2
PUNJAB	Lahore	+2·2	+4·8	—0·7	—1·2	+1·8	+2·8	+1·4	—0·5	—0·2	+1·3	+1·7	+0·5	+1·2
RAJPUTANA	Jaipur	+1·9	+3·4	—2·0	+0·3	+0·7	+4·4	+0·7	—1·2	—1·7	+0·5	—0·5	—0·4	+0·5
BOMBAY	Bombay	+2·0	+2·3	+0·5	+1·8	+0·9	+1·9	+0·9	+0·4	+1·5	+1·2	+0·4	+0·6	+1·2
MYSORE	Bangalore	+0·6	+3·2	+1·6	+1·3	+2·8	+0·3	—0·3	+0·2	+0·9	—0·1	+0·9	—0·6	+0·9
MADRAS	Madras	—1·5	+1·5	+1·9	+0·1	+1·5	+2·6	+1·1	+1·2	+1·5	+0·9	+0·9	—0·6	+0·9
KASHMIR	Srinagar	...	+7·9	...	...	...	...	...	...	...	...	...	...	...
HILL STATIONS EXCLUDING KASHMIR AND BALUCHISTAN.	Simla	+2·2	+5·0	—2·5	—1·4	—0·9	+1·2	+0·2	—0·5	—0·8	+0·9	—2·6	+1·2	+0·2
	Katmandu	—0·2	+2·0	+0·1	+1·0	+1·2	+0·8	+0·4	+0·8	+0·7	+0·8	—0·5	—1·1	+0·5
EXTRA INDIA	Seychelles	+0·4	+0·9	+2·6	+2·1	+1·7	+2·0	+0·8	+0·6	+0·8	+1·0	+2·6	+0·7	+1·3
	Mauritius	+1·3	+0·1	+0·2	+0·1	+1·1	+0·2	0	—0·3	+0·4	—0·3	—1·4	—1·5	0

TABLE 15.—*Departure of the mean monthly and annual maximum temperature from the normal in the fifteen chief political divisions of India in 1912, as given by all observatories.*

Division.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Burma	—1·2	—0·7	—0·3	+0·1	+1·0	+0·1	+0·2	—0·3	+0·2	—1·3	—0·7	—0·7	—0·3
Assam	+0·2	—0·1	—0·7	—6·4	—0·3	+1·0	—0·6	+0·3	+0·7	—1·0	—1·7	—1·1	—0·8
Bengal	+0·8	+1·9	+0·3	—5·2	—0·7	+0·9	—0·2	+0·7	+1·5	+0·2	—1·1	—0·6	—0·1
Bihar and Orissa	—0·3	+0·8	0	—4·2	—0·3	+2·9	—0·2	+0·2	+0·9	+1·2	—1·7	—1·7	—0·2
United Provinces	—1·1	+2·2	—1·3	—3·2	0	+4·6	+1·8	+0·4	—0·9	+0·3	—2·2	—1·6	—0·1
Punjab	—1·7	+5·1	—0·3	—4·0	—0·3	+3·4	+1·0	—0·9	—0·2	+1·4	—1·7	—0·4	+0·1
North-West Frontier Province	—2·7	+4·5	+0·1	—3·1	+0·2	+2·1	+1·3	—1·8	—0·9	+0·6	—1·7	—1·1	—0·2
Sind	+0·1	+5·0	+1·0	—0·9	+1·5	+3·3	+2·2	+1·5	+0·6	+1·2	—0·4	—0·2	+1·2
Rajputana	+1·3	+4·7	—0·7	—1·1	+1·3	+4·8	+0·8	—1·9	—1·0	+0·5	—0·8	+0·3	+0·4
Bombay	+2·1	+1·4	+0·3	+0·8	+1·5	+3·2	—0·1	—0·5	+2·2	+1·0	—0·8	+0·1	+0·9
Central India	+1·0	+2·8	—0·9	—1·5	+1·1	+6·5	+2·1	—0·8	—1·0	+0·5	—2·3	—1·0	+0·5
Central Provinces	+1·1	—0·2	—0·2	—1·3	+0·7	+8·2	+1·7	—0·9	+0·5	+1·7	—0·7	—0·6	+0·8
Hyderabad	+1·9	—0·5	+1·7	—0·1	+1·6	+5·9	—1·2	—1·1	+2·7	+1·7	—0·1	—0·3	+1·0
Mysore	+1·5	+0·7	+1·3	+1·7	+2·0	+0·9	—0·5	—0·6	+0·3	—0·7	—0·8	+0·1	+0·5
Madras	0	+0·6	+1·3	+0·8	+0·8	+1·7	—0·2	+0·5	+0·7	—0·3	—0·5	—0·9	+0·4

TABLE 16.—*Departure of the mean monthly and annual minimum temperature from the normal in the fifteen chief political divisions of India in 1912.*

DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Burma	+2·6	+0·7	+1·0	—0·7	+0·7	+0·4	+0·3	+0·2	+0·3	+0·2	+1·8	—1·1	+0·5
Assam	+0·6	+1·8	—1·6	—2·7	+0·1	—1·3	—0·8	0	—0·2	—0·7	+0·9	+0·9	—0·3
Bengal	+0·9	+3·3	—0·9	—2·5	—0·2	—0·2	—0·1	+0·3	+0·3	—0·5	+0·2	+0·1	+0·1
Bihar and Orissa	+0·6	+2·5	—1·3	—1·5	+0·2	+0·3	—0·1	+0·2	—0·5	—0·8	—0·6	—1·3	—0·2
United Provinces	+2·0	+1·5	—3·4	—0·5	—0·4	+0·6	+0·7	+0·2	—2·2	—1·0	—0·3	—0·7	—0·3
Punjab	+3·3	+2·5	—2·3	+0·5	—0·1	+1·4	+1·4	+0·1	—3·6	0	+0·3	+0·6	+0·3
North-West Frontier Province	+1·9	+2·7	—2·7	+0·3	+0·7	—0·5	+2·0	+0·3	—4·9	—0·5	+0·5	+2·3	+0·2
Sind	+4·1	+3·1	—1·8	+2·6	+0·2	+0·7	+2·8	+1·6	—1·8	+0·7	—0·3	+0·1	+1·0
Rajputana	+3·2	+3·6	—3·3	+1·2	+0·9	+3·1	+0·3	—1·5	—2·8	—1·2	—0·1	—1·7	+0·1
Bombay	+1·9	+1·5	—1·2	+1·3	+0·8	+1·1	+0·3	+0·2	—0·4	+0·4	+0·1	—0·3	+0·5
Central India	+2·1	+3·2	—2·3	+1·2	+1·0	+2·5	+0·9	+0·3	—2·4	—1·4	+0·4	—0·6	+0·4
Central Provinces	+1·3	+3·1	—1·0	+0·5	+1·2	+4·1	+0·7	+0·1	—1·0	—0·5	+0·2	—1·3	+0·6
Hyderabad	+0·1	+3·4	+0·3	+1·2	+0·9	+3·2	+0·4	+0·1	+0·7	+0·9	+0·3	—2·0	+0·8
Mysore	—0·4	+3·4	+1·0	+1·5	+1·7	+0·4	+0·5	+0·6	+0·7	+0·3	+0·1	—1·1	+0·7
Madras	—1·0	+2·9	+1·7	+1·4	+1·1	+1·5	+0·7	+0·5	+0·7	+0·4	0	—1·3	+0·7

TABLE 17.—*Departure of mean monthly and annual temperature from the normal in the fifteen chief political divisions of India in 1912.*

DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
Burma	+0·7	0	+0·4	—0·4	+0·8	+0·3	+0·3	0	+0·3	—0·5	+0·5	—0·9	+0·1
Assam	+0·4	+0·9	—1·1	—4·6	—0·1	—0·1	—0·7	+0·2	+0·3	—0·9	—0·4	—0·1	—0·5
Bengal	+0·9	+2·6	—0·3	—3·8	—0·4	+0·4	—0·1	+0·5	+0·9	—0·1	—0·5	—0·2	0
Bihar and Orissa	+0·1	+1·7	—0·7	—2·8	0	+1·6	—0·1	+0·2	+0·2	+0·2	—1·1	—1·5	—0·2
United Provinces	+0·5	+1·9	—2·4	—1·8	—0·2	+2·6	+1·3	+0·3	—1·5	—0·4	—1·3	—1·1	—0·2
Punjab	+0·8	+3·8	—1·3	—1·7	—0·2	+2·4	+1·2	—0·4	—1·9	+0·7	—0·7	+0·1	+0·2
North-West Frontier Province	—0·3	+3·6	—1·3	—1·4	+0·5	+0·8	+1·7	—0·8	—2·9	+0·1	—0·6	+0·7	0
Sind	+2·1	+4·0	—0·4	+0·8	+0·9	+2·0	+2·5	+1·6	—0·6	+1·0	—0·3	0	+1·1
Rajputana	+2·2	+4·1	—2·0	0	+1·2	+4·0	+0·6	—1·7	—1·8	—0·4	—2·0	—0·7	+0·3
Bombay	+2·0	+1·5	—0·4	+1·0	+1·1	+2·1	+0·1	—0·1	+0·9	+0·7	—0·3	—0·1	+0·7
Central India	+1·5	+3·0	—1·7	—0·1	+1·1	+4·5	+1·5	—0·3	—1·7	—0·5	—0·9	—0·8	+0·5
Central Provinces	+1·2	+1·4	—0·6	—0·4	+0·9	+6·2	+1·2	—0·4	—0·3	+0·6	—0·2	—1·0	+0·7
Hyderabad	+1·0	+1·4	+1·0	+0·6	+1·2	+4·5	—0·4	—0·5	+1·7	+1·3	+0·1	—1·1	+0·9
Mysore	+0·5	+2·1	+1·1	+1·6	+1·9	+0·7	0	0	+0·5	—0·2	—0·3	—0·5	+0·6
Madras	—0·5	+1·7	+1·4	+1·1	+0·9	+1·6	+0·3	+0·5	+0·7	0	—0·2	—1·1	+0·5
Mean of India	+0·9	+2·1	—0·5	—0·7	+0·6	+2·5	+0·6	—0·1	—0·3	+0·1	—0·5	—0·7	+0·3

TABLE 18.—*Departure of the monthly and annual maximum temperature from the normal in 33 sub-divisions of India in 1912.*

SUB-DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
1. Bay Islands	—2·6	—1·4	—2·6	—0·4	+0·1	—0·7	—0·7	—1·0	—0·8	—1·1	—0·4	+0·1	—1·0
2. Lower Burma	—1·9	—0·4	—0·3	+0·9	+1·2	+0·4	+0·2	—0·1	+0·7	—0·5	—0·5	—0·3	—0·1
3. Upper Burma	0	—1·3	—0·2	—1·3	+0·6	—0·4	+0·4	—0·7	—0·5	—2·6	—1·2	—1·3	—0·7
4. Assam	+0·2	—0·1	—0·7	—6·4	—0·3	+1·0	—0·6	+0·3	+0·7	—1·0	—1·7	—1·1	—0·8
5. Bengal	+0·8	+1·9	+0·3	—5·2	—0·7	+0·9	—0·3	+0·7	+1·5	+0·2	—1·1	—0·6	—0·1
6. Orissa	—0·2	—1·6	+0·1	—2·5	+0·4	+2·9	+0·2	0	+0·4	+0·1	—0·9	—2·2	—0·3
7. Chota Nagpur	—0·3	+1·0	+0·7	—2·9	—0·7	+4·7	+0·5	—0·1	+0·2	+0·7	—2·0	—2·1	0
8. Bihar	—0·4	+2·6	—0·5	—6·0	—0·6	+2·1	—0·8	+0·4	+1·6	+2·1	—1·9	—1·3	—0·2
9. United Provinces, East	—0·7	+2·1	—1·3	—3·5	—0·5	+4·2	+0·6	+0·5	+0·5	+1·7	—1·9	—1·7	0
10. Do. do., West	—1·5	+2·2	—1·3	—2·8	+0·6	+5·1	+3·0	+0·3	—2·4	—1·0	—2·8	—1·5	—0·2
11. Punjab, East and North	—1·6	+4·4	—0·7	—3·7	—0·1	+3·9	+1·4	—1·2	—0·3	+1·3	—1·9	—0·8	+0·1
12. Punjab, Southwest	—1·8	+6·9	+0·8	—4·6	—0·7	+2·4	+0·1	—0·3	+0·2	+1·5	—1·3	+0·4	+0·3
13. Kashmir	+2·1	+3·3	+0·4	+1·6	—2·9	—2·1	+4·6	+0·5	—0·3	+2·4	—0·3	—3·3	+0·5
14. North-West Frontier Province	—2·7	+4·5	+0·1	—3·1	+0·2	+2·1	+1·3	—1·8	—0·9	+0·6	—1·7	—1·1	—0·2
15. Baluchistan	—0·9	+5·7	0	—2·5	—0·9	—0·7	+3·0	+0·3	—5·9	+1·7	—3·5	—1·5	—0·4
16. Sind	+0·1	+5·0	+1·0	—0·9	+1·5	+3·3	+2·2	+1·5	+0·6	+1·2	—0·4	—0·2	+1·2
17. Rajputana, West	+1·3	+6·2	—0·6	—1·1	+1·6	+4·7	+1·8	—1·2	+0·6	+0·5	—3·7	+1·1	+0·9
18. Do., East	+1·2	+3·7	—0·7	—1·1	+1·2	+4·9	+0·3	—2·7	—1·7	+0·5	—3·9	—0·1	+0·1
19. Gujarat	+3·6	+3·3	+0·5	+0·7	+1·4	+2·9	—0·7	—0·9	+1·0	+0·9	—1·0	+0·8	+1·0
20. Central India, West	+2·3	+3·3	—0·3	—0·5	+1·5	+5·9	+1·9	—1·3	0	+2·1	—2·1	—0·1	+1·1
21. Do. do., East	—0·3	+2·2	—1·6	—2·4	+0·7	+7·1	+2·5	—0·3	—2·1	—1·0	—2·5	—2·9	—0·1
22. Berar	+2·3	+0·7	+1·4	+0·3	+1·5	+8·3	+1·4	—1·7	+2·7	+2·5	+0·5	+2·5	+1·9
23. Central Provinces, West	+0·9	+0·5	—0·4	—1·4	+0·7	+8·2	+2·5	—0·4	—0·1	+1·5	—1·4	—1·2	+0·8
24. Do. do., East	+0·3	—3·4	—1·0	—2·5	—0·3	+8·1	—0·3	—1·7	—0·2	+1·3	+0·5	—0·5	0
25. Konkan	—0·3	—1·0	—1·5	+0·6	+0·8	+0·8	+0·1	+0·2	+0·9	+0·6	—1·1	—1·6	—0·1
26. Bombay, Deccan	+2·1	+0·8	+1·3	+1·0	+2·2	+5·6	+0·6	—0·5	+4·8	+1·5	—0·3	+0·7	+1·7
27. Hyderabad, North	+2·9	—0·6	+2·5	+0·2	+1·9	+5·9	—1·2	—1·5	+3·5	+2·5	—0·2	+0·3	+1·3
28. Do., South	+1·7	—0·5	+1·5	—0·2	+1·5	+5·9	—1·2	—1·0	+2·3	+1·3	0	—0·6	+0·9
29. Mysore	+1·5	+0·7	+1·3	+1·7	+2·0	+0·9	—0·5	—0·6	+0·3	—0·7	—0·8	+0·1	+0·5
30. Malabar	—0·6	—0·1	—0·2	+0·8	+0·8	—0·4	—0·2	—0·4	+0·8	—1·0	—0·8	—0·9	—0·2
31. Madras, Southeast	—0·2	+1·2	+1·8	+0·7	+0·5	+0·9	+0·5	+1·1	+0·5	—0·6	—0·1	—0·5	+0·5
32. Do., Deccan	+1·9	+1·0	+1·9	+1·0	+1·9	+4·3	—0·3	+0·7	+2·0	+0·4	—0·6	—1·1	+1·1
33. Do., Coast North	—0·4	—0·3	+0·9	+0·5	+0·5	+3·7	—1·2	0	—0·1	+0·8	—0·7	—1·3	+0·2

TABLE 19.—*Departure of the monthly and annual minimum temperature from the normal in 33 sub-divisions of India in 1912.*

SUB-DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
1. Bay Islands	—1·4	+1·0	—1·6	+1·4	+0·2	—0·2	—0·4	—0·3	—0·8	—1·3	—1·1	+0·2	—0·4
2. Lower Burma	+2·7	+0·7	+0·9	—0·2	+0·8	+0·6	+0·5	+0·4	+0·6	+0·7	+1·4	—1·1	+0·7
3. Upper Burma	+2·3	+0·7	+1·3	—1·7	+0·6	+0·1	0	—0·1	—0·1	—0·5	+2·4	—1·2	+0·3
4. Assam	+0·6	+1·8	—1·6	—2·7	+0·1	—1·3	—0·8	0	—0·2	—0·7	+0·9	+0·9	—0·3
5. Bengal	+0·9	+3·3	—0·9	—2·5	—0·2	—0·2	—0·3	+0·3	+0·3	—0·5	+0·2	+0·1	0
6. Orissa	+1·2	+2·4	+0·6	—0·2	+1·2	+0·5	—0·1	+0·3	—0·3	—0·6	—0·5	—2·5	+0·2
7. Chota Nagpur	+0·7	+2·9	—0·7	—1·7	—0·2	+1·2	+0·1	+0·2	—0·3	+0·3	—0·4	—1·4	+0·1
8. Bihar	0	+2·4	—3·3	—2·5	—0·5	—0·2	—0·2	+0·1	—0·8	—1·5	—0·7	—0·6	—0·7
9. United Provinces, East	+1·4	+1·7	—3·2	—0·4	—0·8	—0·1	+0·1	0	—1·7	—1·1	—0·6	—0·8	—0·5
10. Do. do., West	+2·9	+1·3	—3·6	—0·5	+0·1	+1·5	+1·4	+0·3	—2·7	—0·9	+0·3	—0·5	0
11. Punjab, East and North	+3·1	+2·1	—2·5	+0·5	—0·2	+1·6	+1·4	—0·1	—3·5	—0·3	+0·5	+0·4	+0·3
12. Punjab Southwest	+3·8	+3·6	—1·6	+0·5	+0·2	+1·0	+1·5	+0·4	—3·9	+0·7	—0·1	+1·1	+0·6
13. Kashmir	+1·5	+1·0	—1·5	+1·7	—0·9	—2·6	+1·7	—0·2	—3·0	—0·3	—1·9	—2·2	—0·6
14. North-West Frontier Province	+1·9	+2·7	—2·7	+0·3	+0·7	—0·5	+2·0	+0·3	—4·9	—0·5	+0·5	+2·3	+0·2
15. Baluchistan	+2·0	+2·5	—2·5	—1·9	—2·3	—3·0	+2·7	—1·1	—8·7	—0·5	—5·4	+0·2	—1·5
16. Sind	+4·1	+3·1	—1·8	+2·6	+0·2	+0·7	+2·8	+1·6	—1·8	+0·7	—0·3	+0·1	+1·0
17. Rajputana, West	+2·5	+2·7	—3·9	—0·1	+0·5	+1·9	+1·2	—1·5	—2·9	—1·8	—2·1	—1·6	—0·4
18. Do., East	+3·7	+4·1	—2·7	+2·1	+1·2	+3·7	—0·2	—1·3	—2·7	—0·6	+0·6	—1·7	+0·5
19. Gujarat	+3·5	+1·7	—1·4	+1·8	+0·9	+1·2	+0·1	+0·1	—1·3	—0·7	—0·9	—0·3	+0·4
20. Central India, West	+2·2	+3·4	—1·8	+2·1	+1·7	+2·4	+0·7	+0·1	—2·4	—0·9	+0·1	—0·5	+0·6
21. Do. do., East	+2·1	+2·9	—2·9	+0·3	+0·3	+2·7	+1·2	+0·5	—2·4	—1·9	+0·7	—0·8	+0·2
22. Berar	+1·5	+3·2	0	+1·3	+1·8	+3·9	+0·8	+0·5	—0·1	+1·3	+0·1	—1·0	+1·1
23. Central Provinces, West	+1·3	+3·0	—1·3	+0·6	+1·3	+3·8	+0·8	+0·1	—1·5	—0·8	+0·3	—1·2	+0·5
24. Do. do., East	+1·5	+3·3	—1·0	—0·7	+0·5	+5·1	0	—0·1	—0·5	—1·1	0	—1·7	+0·4
25. Konkan	0	+1·2	—0·8	+0·6	+0·9	+0·5	+0·2	+0·2	+0·4	+0·7	+0·3	—0·8	+0·3
26. Bombay, Deccan	+1·4	+1·6	—1·1	+1·3	+0·5	+1·4	+0·8	+0·3	0	+1·6	+1·0	+0·1	+0·7
27. Hyderabad, North	+0·2	+3·8	—0·4	+1·5	+0·8	+2·5	+0·2	+0·1	+0·3	+1·7	+1·3	—0·5	+1·0
28. Do., South	+0·1	+3·2	+0·5	+1·0	+0·9	+3·5	+0·5	+0·2	+0·9	+0·5	—0·3	—2·7	+0·7
29. Mysore	—0·4	+3·4	+1·0	+1·5	+1·7	+0·4	+0·5	+0·6	+0·7	+0·3	+0·1	—1·1	+0·7
30. Malabar	—0·6	+2·5	+1·5	+1·6	+1·4	+0·9	+1·1	+0·8	+1·1	+0·8	+0·1	+0·2	+0·9
31. Madras, Southeast	—1·8	+2·9	+2·0	+1·4	+1·1	+1·2	+1·3	+0·7	+0·9	+0·2	+0·2	—1·3	+0·7
32. Do., Deccan	—0·3	+4·4	+1·5	+2·0	+1·4	+2·2	+0·8	+0·6	+0·7	+0·5	—0·5	—2·2	+0·9
33. Do., Coast, North	—0·3	+2·1	+1·1	+0·5	+0·5	+2·0	—0·9	—0·1	—0·1	+0·2	—0·2	—2·0	+0·2

TABLE 20.—*Departure of the mean monthly and annual temperature from the normal in 33 sub-divisions of India in 1912.*

Sub-division.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	°	°	°	°	°	°	°	°	°	°	°	°	°
1. Bay Islands	—2·0	—0·2	—2·1	+0·5	+0·1	—0·5	—0·5	—0·7	—0·8	—1·2	—0·7	+0·1	—0·7
2. Lower Burma	+0·4	+0·1	+0·3	+0·3	+1·0	+0·5	+0·3	+0·1	+0·7	+0·1	+0·5	—0·7	+0·3
3. Upper Burma	+1·1	—0·3	+0·5	—1·5	+0·6	—0·1	+0·2	—0·4	—0·3	—1·5	+0·6	—1·3	—0·2
4. Assam	+0·4	+0·9	—1·1	—4·5	—0·1	—0·1	—0·7	+0·1	+0·3	—0·9	—0·4	—0·1	—0·5
5. Bengal	+0·9	+2·6	—0·3	—3·9	—0·5	+0·3	—0·3	+0·5	+0·9	—0·1	—0·5	—0·3	—0·1
6. Orissa	+0·5	+0·4	+0·3	—1·3	+0·8	+1·7	+0·1	+0·1	+0·1	—0·3	—0·7	—2·3	—0·1
7. Chota Nagpur	+0·2	+1·9	0	—2·3	—0·5	+2·9	+0·3	+0·1	—0·1	+0·5	—1·2	—1·7	0
8. Bihar	—0·2	+2·5	—1·9	—4·3	—0·5	+0·9	—0·5	+0·3	+0·4	+0·3	—1·3	—0·9	—0·4
9. United Provinces, East	+0·3	+1·9	—2·3	—1·9	—0·7	+2·1	+0·3	+0·3	—0·6	+0·3	—1·3	—1·3	—0·2
10. Do. do., West	+0·7	+1·7	—2·5	—1·7	+0·3	+3·3	+2·2	+0·3	—2·5	—0·9	—1·3	—1·0	—0·1
11. Punjab, East and North	+0·7	+3·3	—1·6	—1·6	—0·1	+2·7	+1·4	—0·7	—1·9	+0·5	—0·7	—0·2	+0·1
12. Punjab, Southwest	+1·0	+5·3	—0·4	—2·1	—0·3	+1·7	+0·8	+0·1	—1·9	+1·1	—0·7	+0·7	+0·4
13. Kashmir	+1·8	+2·1	—0·5	+1·7	—1·9	—2·3	+3·1	+0·1	—1·7	+1·1	—1·1	—2·7	0
14. North-West Frontier Province.	—0·4	+3·6	—1·3	—1·4	+0·5	+0·8	+1·7	—0·7	—2·9	+0·1	—0·6	+0·6	0
15. Baluchistan	+0·5	+4·1	—1·3	—2·2	—1·6	—1·9	+2·9	—0·4	—7·3	+0·6	—4·5	—0·7	—1·0
16. Sind	+2·1	+4·1	—0·4	+0·9	+0·9	+2·0	+2·5	+1·5	—0·6	+0·9	—0·3	—0·1	+1·1
17. Rajputana, West	+1·9	+4·5	—2·3	—0·6	+1·1	+3·3	+1·5	—1·3	—1·1	—0·7	—2·9	—0·3	+0·3
18. Do., East	+2·5	+3·9	—1·7	+0·5	+1·2	+4·3	+0·1	—2·0	—2·2	—0·1	—1·7	—0·9	+0·3
19. Gujarat	+3·5	+2·5	—0·5	+1·3	+1·1	+2·1	—0·3	—0·4	—0·1	+0·1	—0·9	+0·3	+0·7
20. Central India, West	+2·3	+3·3	—1·1	+0·8	+1·6	+4·1	+1·3	—0·6	—1·2	+0·6	—1·0	—0·3	+0·8
21. Do. do., East	+0·9	+2·5	—2·3	—1·1	+0·5	+4·9	+1·9	+0·1	—2·3	—1·5	—0·9	—1·9	+0·1
22. Berar	+1·9	+1·9	+0·7	+0·8	+1·7	+6·1	+1·1	—0·6	+1·3	+1·9	+0·3	+0·7	+1·5
23. Central Provinces, West	+1·1	+1·7	—0·9	—0·4	+1·0	+6·0	+1·7	—0·1	—0·8	+0·3	—0·5	—1·2	+0·7
24. Do. do., East	+0·9	—0·1	—1·0	—1·6	+0·1	+6·6	—0·1	—0·9	—0·3	+0·1	+0·3	—1·1	+0·2
25. Konkan	—0·1	+0·1	—1·1	+0·6	+0·9	+0·7	+0·1	+0·2	+0·7	+0·7	—0·4	—1·2	+0·1
26. Bombay, Deccan	+1·7	+1·2	+0·1	+1·1	+1·3	+3·5	+0·7	—0·1	+2·4	+1·5	+0·3	+0·4	+1·[illegible]
27. Hyderabad, North	+1·5	+1·6	+1·1	+0·9	+1·3	+4·2	—0·5	—0·7	+1·9	+2·1	+0·5	—0·1	+1·1
28. Do., South	+0·9	+1·3	+1·0	+0·4	+1·2	+4·7	—0·3	—0·4	+1·6	+0·9	—0·1	—1·7	+0·8
29. Mysore	+0·5	+2·1	+1·1	+1·6	+1·9	+0·7	0	0	+0·5	—0·2	—0·3	—0·5	+0·6
30. Malabar	—0·6	+1·2	+0·7	+1·2	+1·1	+0·3	+0·5	+0·2	+0·9	—0·1	—0·3	—0·3	+0·4
31. Madras, Southeast	—1·0	+2·1	+1·9	+1·1	+0·8	+1·1	+0·9	+0·9	+0·7	—0·2	+0·1	—0·9	+0·6
32. Do., Deccan	+0·8	+2·7	+1·7	+1·5	+1·7	+3·3	+0·3	+0·7	+1·3	+0·5	—0·5	—1·7	+1·0
33. Do., Coast, North	—0·3	+0·9	+1·0	+0·5	+0·5	+2·9	—1·1	—0·1	—0·1	+0·5	—0·5	—1·7	+0·2

In the following discussion the year is divided into four seasons according to the following arrangement :—

1st.—The cold weather period, including the months of January and February.

2nd.—The hot weather period, including the months of March, April and May.

3rd.—The period of the south-west monsoon rains proper, including the months of June, July, August and September.

4th.—The period of the retreating south-west monsoon, including the months of October, November and December.

I—The cold weather period.—The winter rains commenced in northern India on the 4th January, somewhat later than usual, and were on the whole weak. Rainfall was on the other hand markedly in excess in the Central Provinces and Hyderabad owing mainly to the prevalence of abnormally disturbed weather in February.

The temperature conditions of the period did not differ greatly from the normal and were determined only partially by the abnormal features of cloud and rainfall distribution.

No well marked hot or cool waves were recorded.

(*a*) On the mean of the period day temperature was above the normal in all the larger divisions with the exception of Burma, but the amount of excess was small except in the case of Sind and Rajputana where it amounted to 3°.

TABLE 21.

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

(*b*) Night or minimum temperature was higher than usual throughout the plains of India, the excess being most marked in the Punjab, Sind, Rajputana and Central India where it averaged 3°.

TABLE 22.

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

(*c*) The mean temperature of the period was in excess by 3° in Sind and Rajputana, and by 2° in Bengal, the Punjab, the North-West Frontier Province, Bombay and Central India, but nowhere else did the departures exceed 1½° in amount.

TABLE 23.

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

TABLE 23—*contd.*

Division.	Departure of mean temperature from normal.		
	January.	February.	Period, January and February.
	°	°	°
Sind	+2·1	+4·0	+3·1
Rajputana	+2·2	+4·1	+3·1
Bombay	+2·0	+1·5	+1·7
Central India	+1·5	+3·0	+2·3
Central Provinces	+1·2	+1·4	+1·3
Hyderabad	+1·0	+1·4	+1·2
Mysore	+0·5	+2·1	+1·3
Madras	—0·5	+1·7	+0·6

The temperature conditions in Persia, Baluchistan and the Himalayas were on the whole similar to those of the plains of northern India.

TABLE 24.

Station.	Departure from normal of period, January and February.		
	Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
Aden	—0·9	+0·3	—0·3
Baghdad	+0·5	+3·2	+1·9
Bushire	—0·1	—0·2	—0·1
Tehran	+2·5	+2·0	+2·3
Ispahan	—2·1	—0·7	—1·4
Jask	+1·5	+0·5	+1·0
Muscat	+5·2	—0·6	+2·3
Meshed	...	+1·7	...
Chaman	+2·5	+2·5	+2·5
Quetta	+2·2	+1·9	+2·1
Cherat	+1·9	+1·6	+1·7
Murree	+0·7	+2·2	+1·5
Gilgit	+2·2	+0·7	+1·5
Kashgar	— 0·8	—0·1	—0·5
Srinagar	+8·0	+5·6	+6·8
Skardu	—1.9	—0·3	—1·1
Simla	+3·8	+3·3	+3·5
Leh	+2·5	—0·8	+0·9
Chakrata	+4·7	—0·1	+2·3
Mukteswar	+2·9	+1·3	+2·1
Darjiling	+1·1	+1·5	+1·3

The lowest temperatures of the year were by no means remarkable and occurred at different times in different parts of northern and central India, an indication that they were caused by local actions and not by the passage of a cold wave as is ordinarily the case.

II.—The hot weather period.—The abnormally dry weather which had characterized February held until the end of the third week in March. During the rest of the period a series of disturbances of the cold weather type passed into India from the west, but their influence on the weather was exerted chiefly in the extreme north.

Although the majority of these disturbances did not produce any heavy or widespread precipitation, nevertheless they were instrumental in delaying materially the establishment of the usual hot weather conditions. Owing to the prolongation of the winter characteristics thunderstorms and dust-storms were neither so frequent nor so numerous as usual, and in May there was an almost complete absence on the west coast of the Peninsula of the preliminary irruptions of the monsoon winds which ordinarily occur and are the forerunners of the permanent advance of the monsoon current.

The precipitation of the season fell short of the normal in all parts of the Indian region with the exception of Lower Burma, Assam, Bengal, Bihar, the Punjab Southwest, Kashmir and Malabar.

On the mean of the period temperature in the plains differed but little from the normal.

TABLE 25.

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

In the highlands to the west of the Indus as well as in Kashmir the departures from normal of temperature were small and irregular and did not indicate the presence of any marked abnormal snowfall influence.

TABLE 26.

Station.	Departure from normal of period, March to May.		
	Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
Aden	—1·4	+0·8	—0·3
Baghdad	+4·2	+1·2	+2·7
Bushire	—0·7	—0·4	—0·5
Tehran	—1·1	+0·5	—0·3
Ispahan	+0·9	+1·2	+1·1
Jask	+0·8	—0·3	+0·3
Muscat	+6·4	—·2	+2·6
Meshed	...	—3·0	...
Chaman	—1·8	—3·2	—2·5
Quetta	—0·4	—1·2	—0·8
Cherat	—2·8	—1·6	—2·2
Murree	—2·8	+1·6	—0·6
Gilgit	+0·4	—1·1	—0·3
Kashgar	+4·7	+1·8	+3·3
Srinagar	—3·0	—0·7	—1·9
Skardu	+0·9	+1·4	+1·1
Simla	—1·2	—1·6	—1·4
Leh	+1·6	—0·	+0·7
Chakrata	—0·1	—2·6	—1·3
Mukteswar	—1·5	—2·1	—1·8
Darjiling	—0·7	—0·8	—0·7

The highest temperatures of the year were recorded generally between the 6th and 18th May in Orissa, the south-west Punjab, Sind, Rajputana, Gujarat, Central India, the Central Provinces and the Deccan, in the first week of June in the west of the United Provinces and in Chota Nagpur, in the third week of June in Assam, the United Provinces East and the east and north of the Punjab and in the first half of July in Kashmir and Baluchistan. They were unprecedentedly high in the case of several stations in the Deccan. The absolute maximum (126°·1) was as usual registered at Jacobabad.

III.—The south-west monsoon period.—The monsoon was from five to twelve days behind the normal date in becoming established on the west coast of the Peninsula, and although occasional rainfall occurred in northern and central India during the last fortnight of June and the first week of July, the rains proper did not set in fully in the interior until July 10. During the next four weeks the monsoon was unusually vigorous and gave abundant rain. A break supervened between August 12 and 23, after which the current became active again. The rains came to an end in northwest India in the beginning of September, about a fortnight earlier than usual. In September the monsoon was exceedingly fitful and, except during the first and last weeks, gave comparatively little rain.

The total rainfall of the period differed from the normal by less than 20 per cent. over by far the greater part of the country. It was in defect upwards of 20 per cent. only in Kashmir and Hyderabad North, while in Mysore alone did the fall exceed the normal by more than 20 per cent.

Temperature of the period was very nearly normal, almost all the provincial departures being less than 1° in magnitude.

TABLE 27.

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

In the Himalayas and the region to the west of the Indus the conditions were variable but not far removed from the average.

TABLE 28.

Station.	Departure from normal of period, June to September.		
	Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
Aden	−0·3	−0·1	−0·2
Baghdad	+4·1	−0·1	+2·0
Bushire	−1·2	+0·1	−0·5
Tehran	−0·1	+0·7	+0·3
Ispahan	−1·8	+0·9	−0·5
Jask	+1·3	+0·1	+0·7
Muscat	+7·1	0	+3·5
Meshed	...	−5·7	...
Chaman	−1·8	−3·1	−2·5
Quetta	+0·2	−1·9	−0·9
Cherat	−1·1	−0·5	−0·8
Murree	−0·5	+2·5	+1·0
Gilgit	+0·7	−2·9	−1·1
Srinagar	+1·0	−1·2	−0·1
Skardu	+1·1	+0·5	+0·8
Simla	−0·3	+0·4	+0·1
Leh	−1·5	−1·3	−1·4
Chakrata	+0·9	−1·1	−0·1
Mukteswar	−1·4	−2·5	−1·9
Darjiling	+1·2	+0·5	+0·9

IV.—The retreating south-west monsoon period.—In October the activity of the monsoon was displayed chiefly in Bengal, Assam, Burma and the south of the Peninsula to the detriment of the Gangetic plain and the central parts of the country. During November on the other hand the precipitation was above the normal over the greater part of the country. December was unusually dry except in Baluchistan.

There was nothing strikingly abnormal in the temperature conditions of the period in the plains of India.

TABLE 29.

Division.	Departure from normal of period, October to December.		
	Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
Burma	−0·9	+0·3	−0·3
Assam	−1·3	+0·4	−0·5
Bengal	−0·5	−0·1	−0·3
Bihar and Orissa	−0·7	−0·9	−0·8
United Provinces	−1·2	−0·7	−0·9
Punjab	−0·2	+0·3	0
North-West Frontier Province	−0·7	+0·8	+0·1
Sind	+0·2	+0·2	+0·2
Rajputana	−1·0	−1·0	−1·0
Bombay	+0·1	+0·1	+0·1
Central India	−0·9	−0·5	−0·7
Central Provinces	+0·1	−0·5	−0·2
Hyderabad	+0·4	−0·3	+0·1
Mysore	−0·5	−0·2	−0·3
Madras	−0·6	−0·3	−0·5

In Persia, Baluchistan and the Himalayas also temperature did not vary to any great extent from the normal.

TABLE 30.

Station.	Departure from normal of period, October to December.		
	Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
Aden	−0·7	−0·3	−0·5
Baghdad	+0·6	−1·0	−0·2
Bushire	−0·8	−0·9	−0·9
Tehran	−1·8	−1·8	−1·3
Ispahan	+0·3	−0·4	0
Jask	−0·7	−1·4	−1·1
Muscat	+6·3	−2·3	+2·0
Meshed	...	−3·6	...

TABLE 30—*concld.*

STATION.	DEPARTURE FROM NORMAL OF PERIOD, OCTOBER TO DECEMBER.		
	Maximum temperature.	Minimum temperature.	Mean temperature.
	°	°	°
Chaman	—1·7	—2·5	—2·1
Quetta	—0·5	—1·3	—0·9
Cherat	—2·1	—1·0	—1·5
Murree	—2·6	+0·7	—0·9
Gilgit	+0·5	—1·9	—0·7
Srinagar	+0·7	—0·4	+0·1
Skardu	—1·9	—1·9	—1·9
Simla	+0·1	—0·1	0
Leh	—0·9	—1·6	—1·3
Chakrata	+1·5	—2·1	—0·3
Mukteswar	—1·6	—2·2	—1·9
Darjiling	+1·4	+0·4	+0·9

The year.—Temperature in the Indian plains was in excess by more than half a degree in January, February, May, June and July in the first four of which months, as also in the early part of July, weather was very dry over the greater part of the country. It was on the other hand about half a degree below the normal in March, April, November and December; the defect in April and November accompanied an excess of precipitation, while that of March was associated with a marked dryness of the air and low cloud amount. For the lowness in December the reasons are not apparent, although in part it was attributable to the disturbed weather of the previous month.

The mean departure of the twelve months was +0·3°, which is 0·2° greater than that of the previous year.

TABLE 31.

MONTH.	Departure from normal of mean temperature.
	°
January	+0·9
February	+2·1
March	—0·5
April	—0·7
May	+0·6
June	+2·5
July	+0·6
August	—0·1
September	—0·3
October	+0·1
November	—0·5
December	—0·7
Year	+0·3

Atmospheric pressure.

Full information regarding the types of barometers in use at Indian observatories and of the methods of reducing the observations and obtaining the mean daily and monthly pressures will be found in pages 4 and 5 of the Monthly Review for January 1912.

In Table A, called Table II prior to 1907, of each Monthly Review the monthly mean daily pressure (corrected for temperature) is given in the seventh column, and the departure from the normal in the eighth column. The normal monthly mean pressure values were recalculated in 1904 for all first and second class stations, and will be found in pages 66-69 of the "Indian Meteorological Memoirs," Volume XVII. The departure data in the Monthly Reviews for the year 1912, were obtained by a comparison of the actual monthly means with these normals; the departures of the monthly pressure of all first and second class stations in 1912 are given in Table 32. The figures in the seventh and eighth columns of Table A, appended to the present Annual Summary, giving data of the mean pressure of the air and its departure from the normal for all first and second class stations, are comparable with the corresponding data of previous years published in the Annual Reports and Annual Summaries.

In the ninth column of Table A in each Monthly Review are given the mean pressures reduced to sea-level and corrected to constant gravity (Lat. 45°). These are not directly comparable with the sea-level pressure values of the years 1875-90 as given in the Annual Reports for those years, for previous to 1891 no correction was made to reduce the monthly pressure means to standard gravity.

In Table B of each Monthly Review, and also in that appended to the Annual Summary, are given the pressure data for 8 hours local time. The fourth column in that table gives the mean 8 hours pressures for the month corrected for temperature. In the fifth column are given the departures of these mean 8 hours pressures from the normal pressures.

TABLE 32—*Departure from normal of monthly and annual mean pressure of first and second class stations in 1912.*

Division.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		"	"	"	"	"	"	"	"	"	"	"	"	"
Bengal	Calcutta	+·014	—·020	—·004	+·055	+·023	+·006	—·024	—·023	+·028	+·021	—·021	+·010	+·005
United Provinces of Agra and Oudh.	Allahabad	+·034	—·021	+·018	+·063	+·023	—·013	—·029	—·010	+·036	+·023	+·005	+·022	+·013
Punjab	Lahore	+·039	—·031	0	+·060	+·026	—·026	—·012	+·002	+·021	+·014	+·004	+·018	+·010
Rajputana	Jaipur	+·028	—·019	+·001	+·039	+·019	—·017	—·027	+·003	+·028	+·020	—·005	+·021	+·008
Bombay	Bombay	+·037	—·004	+·013	+·032	+·014	—·012	—·042	—·014	+·012	+·013	—·013	+·018	+·005
Mysore	Bangalore	+·039	—·003	+·017	+·055	+·029	—·002	—·015	+·002	+·003	+·007	0	+·028	+·013
Madras	Madras	+·037	—·012	—·006	+·053	+·011	—·022	—·032	—·027	—·006	0	—·015	+·026	+·001
Kashmir	Srinagar	...	+·014	...	...	...	...	...	...	...	...	...	...	...
Hill stations excluding Kashmir and Baluchistan.	Simla	+·049	+·037	—·011	+·036	+·045	+·012	+·009	+·014	+·013	+·027	—·006	+·017	+·020
	Katmandu	+·074	+·059	+·033	+·090	+·092	+·056	+·060	+·064	+·049	+·025	—·001	+·008	+·051
Extra India	Seychelles	+·042	0	+·017	+·003	—·026	—·014	—·047	—·007	—·021	+·031	+·016	+·019	+·001
	Mauritius	+·054	—·077	—·031	+·029	—·039	—·023	—·019	0	—·024	+·002	+·028	+·032	—·006

TABLE 33.—*Departure of the mean monthly pressure from the normal in the fifteen chief political divisions of India in 1912.*

Division.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	"	"	"	"	"	"	"	"	"	"	"	"	"
Burma	+·022	+·011	+·010	+·057	+·019	—·020	—·011	—·013	+·002	+·031	—·017	+·014	+·009
Assam	+·021	—·006	+·003	+·087	+·025	—·015	—·007	—·011	+·010	+·029	—·011	+·005	+·011
Bengal	+·021	—·013	+·004	+·073	+·034	—·005	—·012	—·012	+·021	+·019	—·013	+·014	+·011
Bihar and Orissa	+·032	—·011	+·003	+·068	+·032	—·004	—·023	—·017	+·031	+·021	—·001	+·023	+·013
United Provinces	+·028	—·013	+·008	+·062	+·034	—·020	—·025	—·006	+·021	+·025	+·002	+·016	+·011
Punjab	+·039	—·010	+·004	+·062	+·033	—·021	—·011	+·005	+·022	+·022	+·009	+·026	+·015
North-West Frontier Province	+·022	—·036	—·012	+·039	+·018	—·017	—·031	—·020	+·009	—·009	—·015	+·013	—·003
Sind	+·022	—·032	+·021	+·043	+·026	—·012	—·037	—·008	+·029	+·017	—·003	+·028	+·008
Rajputana	+·020	—·017	+·003	+·039	+·016	—·016	—·030	+·004	+·025	+·024	—·011	+·019	+·006
Bombay	+·028	—·017	+·010	+·039	+·015	—·012	—·039	—·011	+·014	+·015	—·006	+·017	+·004
Central India	+·031	—·014	+·007	+·046	+·026	—·003	—·033	—·004	+·040	+·031	+·002	+·028	+·013
Central Provinces	+·032	—·016	+·001	+·045	+·020	—·004	—·033	—·010	+·041	+·031	+·001	+·029	+·011
Hyderabad	+·041	—·010	+·002	+·048	+·017	—·007	—·030	—·010	+·015	+·013	—·007	+·023	+·008
Mysore	+·041	+·006	+·021	+·046	+·020	0	—·024	—·003	+·004	+·007	—·005	+·019	+·011
Madras	+·040	—·001	+·007	+·050	+·017	—·004	—·027	—·012	0	+·003	—·004	+·022	+·008
Mean of India	+·030	—·010	+·006	+·053	+·023	—·011	—·025	—·008	+·019	+·021	—·005	+·020	+·009

I.—The cold weather period.—Pressure in the plains was in large excess in January, and in slight defect in February.

TABLE 34.

MONTH.	Departure from normal of mean 8 hrs. pressure.
	"
January	+·030
February	—·010

The excess in January was as marked in the Indian Ocean as in India, and was therefore caused chiefly by general and not local actions. Further it was not a mere temperature effect as temperature was on the whole very slightly above the normal. The defect in February on the other hand accompanied a distinct excess of temperature.

TABLE 35.

STATION.	DEPARTURE OF PRESSURE FROM NORMAL.		
	January.	February.	Period, January and February.
	"	"	"
Mauritius	+·054	—·077	—·011
Seychelles	+·042	0	+·021
Zanzibar	+·036	0	+·018
Aden	+·031	+·024	+·027
Baghdad	+·051	—·009	+·021
Bushire	—·015	—·030	—·023
Jask	—·023	—·014	—·019
Muscat	0	—·004	—·002

Notwithstanding that January was a wet and February a dry month in northern India, the local features of the pressure distribution were similar in both months.

TABLE 36.

DIVISION.	EXCESS OF PRESSURE DEPARTURE OVER GEOGRAPHICAL MEAN FOR INDIA.		
	January.	February.	Period, January and February.
	"	"	"
Burma	—·008	+·021	+·007
Assam	—·009	+·004	—·003
Bengal	—·009	—·003	—·006
Bihar and Orissa	+·002	—·001	+·001
United Provinces	—·002	—·003	—·003
Punjab	+·009	0	+·005
North-West Frontier Province	—·008	—·026	—·017
Sind	—·008	—·022	—·015
Rajputana	—·010	—·007	—·009
Bombay	—·002	—·007	—·005
Central India	+·001	—·004	—·001
Central Provinces	+·002	—·006	—·002
Hyderabad	+·011	0	+·005
Mysore	+·011	+·016	+·013
Madras	+·010	+·009	+·009

The vertical gradient in northern India was on the whole normal in January and very weak in February; it was on the other hand considerably stronger than usual throughout in the south of the Peninsula.

TABLE 37.

PAIR OF STATIONS.	DEPARTURE FROM NORMAL OF VERTICAL PRESSURE DIFFERENCES.		
	January.	February.	Period, January and February.
	"	"	"
Jacobabad and Quetta	—·006	—·077	—·041
Lahore and Leh	+·038	—·113	—·037
Peshawar and Murree	—·005	—·067	—·036
Ludhiana and Simla	+·004	—·045	—·021
Roorkee and Chakrata	—·002	—·027	—·015
Dhubri and Darjiling	+·008	+·004	+·006
Deesa and Mount Abu	—·021	—·031	—·026
Khandwa and Pachmarhi	—·004	—·013	—·009
Madura and Kodaikanal	+·036	+·020	+·028

II.—The hot weather period.—Pressure in the plains was above the normal in all the three months. The excess was very large in April when it amounted to about a twentieth of an inch.

TABLE 38.

MONTH.	Departure from normal of mean 8 hrs. pressure.
	"
March	+·006
April	+·053
May	+·023

It is noteworthy that over a large part of the Indian region the temperature conditions in April differed to no important extent from the normal, thus showing that the high density of the air was not due merely to variations of temperature of the lower atmospheric strata.

The local peculiarities of the pressure distribution were nowhere strongly marked.

TABLE 39.

Division.	Excess of pressure departure over geographical mean for India.			
	March.	April.	May.	Period, March to May.
	"	"	"	"
Burma	+·004	+·004	—·004	+·001
Assam	—·003	+·034	+·002	+·011
Bengal	—·002	+·020	+·011	+·010
Bihar and Orissa	—·003	+·015	+·009	+·007
United Provinces	+·002	+·009	+·011	+·007
Punjab	—·002	+·009	+·010	+·006
North-West Frontier Province.	—·018	—·014	—·005	—·012
Sind	+·015	—·010	+·008	+·003
Rajputana	—·003	—·014	—·007	—·008
Bombay	+·004	—·014	—·008	—·006
Central India	+·001	—·007	+·003	—·001
Central Provinces	—·005	—·008	—·003	—·005
Hyderabad	—·004	—·005	—·006	—·005
Mysore	+·015	—·007	—·003	+·002
Madras	+·001	—·003	—·006	—·003

In Persia and Arabia, as in India, pressure was above the normal throughout the period. In the Indian Ocean the pressure conditions were however not so steady. During May pressure was distinctly below the normal at Mauritius and Seychelles, a circumstance favourable to the prospects of a good monsoon over India.

TABLE 40.

Station.	Departure of pressure from normal.			
	March.	April.	May.	Period, March to May.
	"	"	"	"
Mauritius	—·031	+·029	—·039	—·014
Seychelles	+·017	+·003	—·026	—·002
Zanzibar	+·035	+·008	—·003	+·013
Aden	+·035	+·025	+·044	+·035
Baghdad	—·002	—·042	+·003	—·014
Bushire	+·032	+·028	+·028	+·029
Jask	+·008	+·017	—·001	+·008
Muscat	+·046	+·045	+·046	+·046

The vertical gradient over northern India was, as is usually the case when the winter conditions are protracted much beyond the normal date, distinctly steeper than usual in March and April, and of about normal value in May.

TABLE 41.

Pair of stations.	Departure from normal of vertical pressure differences.			
	March.	April.	May.	Period, March to May.
	"	"	"	"
Jacobabad and Quetta	—·023	—·002	—·008	—·011
Lahore and Leh	+·030	+·042	+·004	+·025
Peshawar and Murree	+·004	+·007	—·008	+·001
Ludhiana and Simla	+·015	+·030	—·012	+·011
Roorkee and Chakrata	+·016	+·036	—·004	+·016
Dhubri and Darjiling	+·044	+·081	+·026	+·050
Deesa and Mount Abu	—·002	+·004	—·022	—·007
Khandwa and Pachmarhi	+·012	+·012	+·001	+·008
Madura and Kodaikanal	+·006	+·043	+·023	+·024

III.—The southwest monsoon period.—In the plains barometric pressure was in defect during the first three months of the season, and higher than usual in September.

TABLE 42.

Month.	Departure from normal of mean 8 hours pressure.
	"
June	—·011
July	—·025
August	—·008
September	+·019

The local modifications of the distribution of pressure were very feebly marked.

TABLE 43.

Division.	Excess of pressure departure over geographical mean for India.				
	June.	July.	August.	September.	Period, June to September.
	"	"	"	"	"
Burma	—·009	+·014	—·005	—·017	—·004
Assam	—·004	+·018	—·003	—·009	+·001
Bengal	+·006	+·013	—·004	+·002	+·004
Bihar and Orissa	+·007	+·002	—·009	+·012	+·003

TABLE 43—*contd.*

DIVISION.	EXCESS OF PRESSURE DEPARTURE OVER GEOGRAPHICAL MEAN FOR INDIA.				
	June.	July.	August.	September.	Period, June to September.
	"	"	"	"	"
United Provinces	—·009	0	+·002	+·002	—·001
Punjab	—·010	+·014	+·013	+·003	+·005
North-West Frontier Province.	—·006	—·006	—·012	—·010	—·009
Sind	—·001	—·012	0	+·010	—·001
Rajputana	—·005	—·005	+·012	+·006	+·002
Bombay	—·001	—·014	—·003	—·005	—·006
Central India	+·008	—·008	+·004	+·021	+·006
Central Provinces	+·007	—·008	—·002	+·022	+·005
Hyderabad	+·004	—·005	—·002	—·004	—·002
Mysore	+·011	+·001	+·005	—·015	+·001
Madras	+·007	—·002	—·004	—·019	—·005

In the Indian Ocean the pressure conditions were throughout such as are associated with a good monsoon over the land area of India. In Persia the changes of pressure from month to month were similar in character to those in the Indian region.

TABLE 44.

STATION.	DEPARTURE OF PRESSURE FROM NORMAL.				
	June.	July.	August.	September.	Period, June to September.
	"	"	"	"	"
Mauritius	—·023	—·019	0	—·024	—·017
Seychelles	—·014	—·047	—·007	—·021	—·022
Zanzibar	—·006	—·011	+·010	—·021	—·007
Aden	+·022	+·001	—·005	+·044	+·015
Baghdad	—·061	—·041	—·028	—·004	—·033
Bushire	+·006	—·045	—·006	+·039	—·001
Jask	—·015	—·069	—·025	+·035	—·019
Muscat	+·008	—·067	—·014	+·041	—·008

The vertical gradient over north-west India was weak during June and July, and of about normal intensity in August and September; while in southern India it was more than usually steep in the terminal months, and of the average strength in July and August.

TABLE 45.

PAIR OF STATIONS.	DEPARTURE FROM NORMAL OF VERTICAL PRESSURE DIFFERENCES.				
	June.	July.	August.	September.	Period, June to September.
	"	"	"	"	"
Jacobabad and Quetta	—·041	—·032	—·017	—·008	—·025
Lahore and Leh	—·044	—·021	+·001	+·027	—·009
Peshawar and Murree	—·013	—·028	—·022	—·005	—·017
Ludhiana and Simla	—·029	—·018	—·009	+·011	—·011
Roorkee and Chakrata	—·022	—·016	—·002	+·007	—·008
Dhubri and Darjiling	+·023	+·025	+·015	...	...
Deesa and Mount Abu	—·029	—·009	—·002	—·003	—·011
Khandwa and Pachmarhi	—·001	—·006	+·001	+·005	0
Madura and Kodaikanal	+·026	—·002	+·007	+·022	+·013

IV.—The retreating south-west monsoon period.—Pressure ranged well above the normal in October and December, and was in very slight defect in November.

TABLE 46.

MONTH.	Departure from normal of mean 8 hours pressure.
	"
October	+·021
November	—·005
December	+·020

The local distribution of pressure presented no marked abnormal features.

TABLE 47.

DIVISION.	EXCESS OF PRESSURE DEPARTURE OVER GEOGRAPHICAL MEAN FOR INDIA.			
	October.	November.	December.	Period, October to December.
	"	"	"	"
Burma	+·010	—·012	—·006	—·003
Assam	+·008	—·006	—·015	—·004
Bengal	—·002	—·008	—·006	—·005
Bihar and Orissa	0	+·004	+·003	+·002
United Provinces	+·004	+·007	—·004	+·002
Punjab	+·001	+·014	+·006	+·007
North-West Frontier Province	—·030	—·010	—·007	—·016
Sind	—·004	+·002	+·008	+·002
Rajputana	+·003	—·006	—·001	—·001

TABLE 47—*concld.*

Division.	Excess of pressure departure over geographical mean for India.			
	October.	November.	December.	Period, October to December.
	″	″	″	″
Bombay	—·006	—·001	—·003	—·003
Central India	+·010	+·007	+·008	+·008
Central Provinces	+·010	+·006	+·009	+·008
Hyderabad	—·008	—·002	+·003	—·002
Mysore	—·014	0	—·001	—·005
Madras	—·018	+·001	+·002	—·005

The excess in October and December and the defect in November extended westwards into Persia. In the Indian Ocean the barometer stood higher than usual throughout the period.

TABLE 48.

Station.	Departure of pressure from normal.			
	October.	November.	December.	Period, October to December.
	″	″	″	″
Mauritius	+·002	+·028	+·032	+·021
Seychelles	+·031	+·016	+·019	+·022
Zanzibar	+·026	+·005	+·023	+·018
Aden	+·025	+·020	+·001	+·015
Baghdad	+·017	+·035	+·079	+·044
Bushire	+·016	—·019	+·023	+·007
Jask	+·015	—·010	0	+·002
Muscat	+·015	—·007	+·017	+·008

The vertical gradient in north-west India was on the whole weak in October, and approximately normal in November and December. In north-east India and the south of the Peninsula pressure was in defect at the level of the hills, relatively to the plains, throughout the period.

TABLE 49.

Pair of stations.	Departure from normal of vertical pressure differences.			
	October.	November.	December.	Period, October to December.
	″	″	″	″
Jacobabad and Quetta	—·023	+·012	+·012	0
Lahore and Leh	—·005	+·055	+·006	+·019

TABLE 49—*concld.*

Pair of stations.	Departure from normal of vertical pressure differences.			
	October.	November.	December.	Period, October to December.
	″	″	″	″
Peshawar and Murree	—·031	—·006	—·022	—·020
Ludhiana and Simla	0	+·021	+·007	+·009
Roorkee and Chakrata	—·007	+·008	—·004	—·001
Dhubri and Darjiling	+·039	+·020	+·030	+·030
Deesa and Mount Abu	+·005	+·008	—·015	—·001
Khandwa and Pachmarhi	—·002	+·006	0	+·001
Madura and Kodaikanal	+·022	+·030	+·025	+·026

The year.—The mean 8 hrs. pressure was almost equal to the average in March, August and November, and distinctly above the normal in January, April, May, September, October and December, the excess in April amounting to as much as ·053″. It was on the other hand in appreciable defect in February and June, and in considerable defect in July. The excess was thus on the whole more decided and prolonged than the opposite variation, and in consequence the yearly mean was ·009″ above the average.

As mean temperature of the year was only a third of a degree higher than usual, it is evident that the high density of the atmosphere was not due to this factor.

TABLE 50.

Month.	Departure from normal of	
	Pressure.	Mean temperature.
	″	°
January	+·030	+0·9
February	—·010	+2·1
March	+·006	—0·5
April	+·053	—0·7
May	+·023	+0·6
June	—·011	+2·5
July	—·025	+0·6
August	—·008	—0·1
September	+·019	—0·3
October	+·021	+0·1
November	—·005	—0·5
December	+·020	—0·7
Year	+·009	+0·3

The statement below shows that the high pressure conditions were not confined to India.

TABLE 51.

STATION.	Departure from normal of pressure.
	"
Mauritius	—·006
Seychelles	+·001
Zanzibar	+·009
Aden	+·022
Baghdad	0
Bushire	+·005
Jask	—·007
Muscat	+·011

The vertical distribution over northern and central India was on the whole very nearly normal in character. In southern India pressure was somewhat in defect at the level of Kodaikanal relatively to the plains.

TABLE 52.

PAIR OF STATIONS.	Departure from normal of vertical pressure differences.
	"
Jacobabad and Quetta	—·018
Lahore and Leh	+·002
Peshawar and Murree	—·017
Ludhiana and Simla	—·002
Roorkee and Chakrata	+·005
Dhubri and Darjiling	+·029
Deesa and Mount Abu	—·009
Khandwa and Pachmarhi	+·001
Madura and Kodaikanal	+·022

Storms of the year.

A large number of disturbances appeared over the Bay of Bengal but of these only six were of sufficient intensity to be classed as storms. In the Arabian Sea also weather was unsettled on several occasions, but according to the available marine information only two definite storms were recorded.

The statement below gives a very brief account of the storms of the year. Plate VI at the end of the Summary shows their tracks.

BAY OF BENGAL.

No.	Month.	Date.	Greatest observed barometric depression.	Character of storm.	Details of storm.
1	July	27th to 30th	·34″	Cyclonic storm of moderate intensity.	This storm was generated off the Orissa coast on the 26th; it crossed inland in the afternoon of the 28th and travelling rapidly along a line through False Point, Jubbulpore and Deesa, disappeared during the 30th in the vicinity of the coast between Karachi and Dwarka. It occasioned moderate to heavy rain along its track. The strongest recorded winds over the Bay during its existence were of force 9.
2	Augt.	1st to 5th	·2″	Ditto	This storm originated slowly over the northwest of the Bay on July 31st, crossed the Orissa coast near Puri on the morning of the 2nd and broke up in the neighbourhood of Sutna during the 5th. The strongest recorded winds due to it over the Bay were of force 9.
3	Sept.	5th to 7th	·28″	Cyclonic storm of moderate intensity.	This storm was apparently formed over the Sandheads during the 4th: it travelled rapidly through Chota Nagpur, the east of Central India and the west of the United Provinces, and was practically dissipated during the 7th in the Chakrata hills. The strongest recorded winds over the Bay caused by the storm were of force 9.
4	"	22nd to 27th	·15″	Cyclonic storm of feeble intensity.	This storm was developed off the north Madras coast during the 21st and crossed inland between Waltair and Cocanada on the 24th. It was central near Amraoti on the morning of the 25th, near Saugor on the 26th and near Agra on the 27th, and disappeared in the hills near Naini Tal during the next 24 hours. Although feeble barometrically, it gave very opportune rain to the Central Provinces, Central India and the United Provinces. The greatest recorded force of winds connected with it was 7.
5	Octr. to Nov.	28th to 2nd.	At least ·4″	Cyclonic storm of considerable intensity.	This storm appeared during the 27th October in the vicinity of the Nicobars and travelling by a curved path disappeared over Bengal on the 2nd November. The strongest winds actually recorded by ships in the Bay were of force 10.

BAY OF BENGAL—*concld.*

No.	Month.	Date.	Greatest observed barometric depression.	Character of storm.	Details of storm.
6	Decr.	17th and 18th.	At least ·25″	Cyclonic storm of moderate intensity.	This storm was formed to the south east of Ceylon during the 16th, advanced north westwards and on the morning of the 18th was central about 100 miles to the west by north of Colombo. On the 19th it was situate to the west of Malabar, but had become much reduced in intensity. It apparently disappeared on the 21st while moving westwards. Winds of force 8 were recorded on board the *Catalone* in the storm area.

ARABIAN SEA.

No.	Month.	Date.	Greatest observed barometric depression.	Character of storm.	Details of storm.
1	Octr.	25th to 30th.	·2″ (?)	Probably a storm of considerable intensity.	This was the development of a feeble depression which originally formed over the Bay on the 20th and travelling across the south of the Peninsula, entered the Arabian sea during the 24 hours preceding 8 hours of the 23rd. It advanced westwards until the 29th when its path changed to south west. By the morning of the 31st the disturbance had become diffuse. On most days there were no vessels near the centre of the storm, and it is therefore not possible to form an exact idea of its character. The strongest winds actually recorded did not exceed force 10.
2	Novr.	19th to 22nd.	·35″ (?)	Probably severe.	An extensive belt of low pressure lay on the 16th over the region between the Laccadives and the South Tenasserim coast. A small cyclonic vortex was developed within it on the 17th. Presumably it travelled westwards and by the morning of the 20th had reached a position in about Latitude 8½° N and Longitude 59°E. Here its progress was arrested owing to the formation on the 18th of a second cyclonic storm near and to the south-east of Ceylon, and during the next two days it was displaced slightly eastwards. The second storm apparently advanced along a northwesterly course and passing across the extreme south of the Peninsula passed out into the Arabian Sea near Cochin, probably on the evening of the 19th. On the morning of the 20th the centre was about 140 miles west-by-north of Calicut and in Latitude 16°N and Longitude 70°E at 8 hours of the 21st. Its path changed to north east during the day and on the morning of the 22nd the centre had reached a position within 50 miles almost due west of Bombay. It weakened rapidly after crossing about noon the coast between Surat and Bombay, but continued to move eastwards and on the morning of the 23rd was shown over the east of the Central Provinces as a shallow residual depression. On the 22nd when it was approaching Bombay the storm was probably a small concentrated disturbance with a calm central area, but there is no direct evidence for this. The strongest winds actually recorded on board vessels, none of which were, however, close to the centre, were only of force 9. It did considerable damage in the Bombay harbour, 5 lives and 27 small vessels being lost. The disturbance was noteworthy (*a*) for its rapidity of motion, (*b*) for striking the coast to the south of Gujarat, and (*c*) for the burst of rain which it gave to practically the whole of the Peninsula, the Central Provinces, Central India, the United Provinces and north east India.

Winds.

The mean direction of the wind and the mean diurnal movement of the air as measured by Robinson anemometers are given for all second class stations in Table A in each Monthly Weather Review. The normal values are also stated for the sake of ready comparison. The normal data of these elements, utilized in Table A of the Monthly Reviews of the year 1912, will be found in a collected form in Tables XXII, XXVI and XXVII of Volume XVII of Indian Meteorological Memoirs. The mean 8 hours wind directions for each month are laid down in the first chart in each Monthly Review. They are calculated in the usual manner by finding the resultant of equal winds in the directions actually observed at 8 hours and given in Table B, in each Monthly Review. As a general rule, the mean 8 hours wind directions vary little from the mean wind directions (calculated from the 10 and 16 hours wind data) in Table A of the Monthly Reviews, but in some cases and at certain seasons of the year they differ very considerably. The normal values used in Table B have been published in Volume XVII of the departmental Memoirs.

Hitherto 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 1911 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 is a summary of the more important features of the air movement over India for each period of the year 1912 :—

I.—The cold weather period.

The air movement during this period presented no marked unusual features.

II.—The hot weather period.

(*a*) Owing to the delay in the development of the hot weather characteristics the air movement was below the normal strength over the greater part of the country, but particularly in Bengal, Sind and Hyderabad.

(*b*) The direction of movement was less steady than usual in Burma, Bengal and Central India, and somewhat more persistent than is ordinarily the case in the Punjab, Sind and the United Provinces.

(*c*) The effects of the prolongation of the winter conditions were visible in April as far south as Port Blair and Colombo. Thus at the former station the usual westerly element in the mean wind direction for April was replaced by an easterly element and at Colombo calms were recorded on no less than twenty-nine days—indications that over the sea also the transition from the winter to the summer type of air circulation was occurring more slowly than usual.

(*d*) In the west equatorial belt as represented by Seychelles and Zanzibar the air movement during May was lighter than usual, and in the former locality the direction was variable during nearly the whole month.

(*e*) The information collected from ships crossing the equatorial belt during May also shows that the northward progress of the southeast trades was taking place unusually slowly. Thus the steamship *Surada* which crossed this region from south to north between the meridians of 61° and 66° E. in the beginning of the second week in May experienced light irregular airs and calms.

III.—The south-west monsoon period.

(*a*) On the average of the whole period the influx of air across the Indian coasts into the interior was weaker and more fitful than usual.

TABLE 53.

Division.	Departure from normal of period, June to September.	
	Hourly wind velocity.	Wind steadiness.
Burma	−0·8	−11
Assam	−0·2	+ 5
Bengal	−1·1	−11
Bihar and Orissa	0	0
United Provinces	−0·3	+ 6
Punjab	0	+ 1
North-West Frontier Province	−0·6	− 4
Sind	−1·7	−13
Rajputana	+0·4	− 7
Bombay	−1·1	− 3
Central India	−0·5	− 4
Central Provinces	+0·5	0
Hyderabad	−1·1	+ 1
Mysore	+0·1	+ 1
Madras	+0·5	0

(*b*) During June, August and September when the Bay current was weak very abnormal winds were recorded at Darjiling.

TABLE 54.

Station.	Mean wind direction.					
	June.		August.		September.	
	Actual.	Normal.	Actual.	Normal.	Actual.	Normal.
Darjiling	N 72° W	S 76° E	W	N 88° E	S 75° W	S 89° E

The absence of the usual easterly winds at Darjiling would suggest that the Bay current was very shallow.

(*c*) In June when the monsoon conditions were in abeyance in the interior the mean direction of movement on the Malabar coast was east-south-east instead of from north or west which is normally the case. At Cherat, where the ordinary direction in June is S 79° E, there was an undue predominance of northerly winds due probably to unusual snowfall accumulations in the region to the north.

(*d*) In September, during which month the monsoon was very weak and fitful, westerly winds prevailed along the foot of the Himalayas from Ludhiana to Darbhanga in place of the usual easterly current, while in the north Konkan the opposite deflection was recorded.

(*e*) The delay in the establishment of the monsoon in the Indian area was associated with the prevalence of light variable winds in the west of the equatorial belt. According to the scanty information available the air movement was of about the normal character from the middle of the second week in July up to about the end of the third week in August when light unsteady winds re-appeared and proved to be the forerunners of the final retreat of the monsoon from north-west India in the beginning of September, about a fortnight before the normal date.

TABLE 55.

Date.	Hour.	Name of vessel.	Position.		Wind.	
			Lat.	Long.	Direction.	Force.
5th June	4 A.M.	*S. S. Umhloti*	...	...	S. S. W.	2
Ditto	8 A.M.	*Ditto*	1·48 S.	51·47	S.	2
Ditto	8 P.M.	*Ditto*	...	...	S.	2
Ditto	Midnight	*Ditto*	...	...	Var.	2
6th June	4 A.M.	*Ditto*	...	...	S.	2
Ditto	Noon	*Ditto*	1·09 N.	55·15	Var.	2
Ditto	4 P.M.	*Ditto*	...	...	Var.	2
Ditto	Midnight	*Ditto*	...	...	S.	2
7th June	4 A.M.	*Ditto*	...	...	E.	2
Ditto	8 A.M.	*Ditto*	3·18 N.	57·20	S.	2
Ditto	4 P.M.	*Ditto*	...	...	S. E.	1
Ditto	Midnight	*Ditto*	...	...	Var.	1
10th June	4 A.M.	*S. S. Shirala*	...	...	E.	4
Ditto	Noon	*Ditto*	10·31 S.	65·14	E. N. E.	6
Ditto	8 P.M.	*Ditto*	...	...	E. N. E.	4
Ditto	Midnight	*Ditto*	...	...	Var.	2
11th June	4 A.M.	*Ditto*	...	...	E. S. E.	4
Ditto	8 A.M.	*Ditto*	8·26 S.	66·56	E. N. E.	4
Ditto	4 P.M.	*Ditto*	...	...	E. N. E.	2
Ditto	Midnight	*Ditto*	...	...	E. N. E.	2
12th June	4 A.M.	*Ditto*	...	...	E. N. E.	2
Ditto	8 A.M.	*Ditto*	5·36 S.	69·21	E. N. E.	2
Ditto	8 P.M.	*Ditto*	...	...	E. N. E.	2
Ditto	Midnight	*Ditto*	...	...	E. N. E.	2
13th June	4 A.M.	*Ditto*	...	...	E.	2
Ditto	8 A.M.	*Ditto*	3·00 S.	71·45	E. N. E.	2
Ditto	Noon	*Ditto*	2·35 S.	72·09	S. E.	2
Ditto	4 P.M.	*Ditto*	...	...	E. by N.	2
Ditto	Midnight	*Ditto*	...	...	S. E.	2
14th June	4 A.M.	*Ditto*	...	...	E.	2
Ditto	8 A.M.	*Ditto*	0·10 S.	74·13	E.	2
Ditto	4 P.M.	*Ditto*	...	...	E.	2
Ditto	8 P.M.	*Ditto*	...	...	Var.	2
15th June	4 A.M.	*Ditto*	...	...	S. E.	2
Ditto	8 A.M.	*Ditto*	3·20 N.	76·49	S.	2
Ditto	Noon	*Ditto*	3·33 N.	77·15	Var.	2
Ditto	Midnight	*Ditto*	...	...	Var.	2

TABLE 55—*contd.*

Date.	Hour.	Name of vessel.	Position.		Wind.	
			Lat.	Long.	Direction.	Force.
2nd July	4 A.M.	*S. S. Ville De Oran*	...	...	E. S. E.	5
Ditto	8 A.M.	*Ditto*	6·00 S.	56·57	S. E.	4
Ditto	4 P.M.	*Ditto*	...	...	E. S. E.	2
Ditto	8 P.M.	*Ditto*	...	...	N. N. E.	2
Ditto	Midnight	*Ditto*	...	...	Calm.	0
3rd July	8 A.M.	*Ditto*	1·55 S.	60·14	E. N. E.	1
Ditto	Noon	*Ditto*	1·15 S.	60·38	W. N. W.	2
Ditto	8 P.M.	*Ditto*	...	...	Calm.	0
Ditto	Midnight	*Ditto*	...	...	W.	2
4th July	4 A.M.	*Ditto*	...	...	W.	2
Ditto	8 A.M.	*Ditto*	2·18 N.	61·50	W. S. W.	3
10th July	4 A.M.	*S. S. Mineric*	...	...	S.	3
Ditto	8 A.M.	*Ditto*	1·04 N.	64·54	S.	4
Ditto	8 P.M.	*Ditto*	...	...	Var.	2
Ditto	Midnight	*Ditto*	...	...	Var.	2
11th July	8 A.M.	*Ditto*	1·22 N.	69·11	Var.	2
Ditto	8 P.M.	*Ditto*	...	...	Var.	2
Ditto	Midnight	*Ditto*	...	...	Var.	1
12th July	4 A.M.	*Ditto*	...	...	Var.	1
Ditto	8 A.M.	*Ditto*	1·53 N.	73·21	N. W.	2
Ditto	Midnight	*Ditto*	...	...	N. W.	3
10th August	4 A.M.	*S. S. Katanga*	...	...	S. E.	3
Ditto	8 A.M.	*Ditto*	0·53 N.	67·24	S. E.	3
Ditto	4 P.M.	*Ditto*	...	...	Var.	1
Ditto	8 P.M.	*Ditto*	...	...	S. E.	1
11st August	4 A.M.	*Ditto*	...	...	S. E.	1
Ditto	8 A.M.	*Ditto*	0·59 N.	70·24	S. E.	1
Ditto	4 P.M.	*Ditto*	...	...	S.	1
12nd August	4 A.M.	*Ditto*	...	...	S.	1
Ditto	8 A.M.	*Ditto*	1·37 N.	73·10	Calm.	0
Ditto	Noon	*Ditto*	1·40 N.	73·39	Var.	1
Ditto	4 P.M.	*Ditto*	...	...	W. N. W.	1
10th August	4 A.M.	*S. S. Australind*	...	...	S.	2
Ditto	8 A.M.	*Ditto*	2·14 N.	56·29	S.	2
Ditto	Noon	*Ditto*	2·47 N.	56·57	Var.	1
Ditto	4 P.M.	*Ditto*	...	...	S. W.	1
11st August	4 A.M.	*Ditto*	...	...	S. W.	4
Ditto	Noon	*Ditto*	5·33 N	59·38	Var.	1
Ditto	4 P.M.	*Ditto*	...	...	Var.	1
Ditto	8 P.M.	*Ditto*	...	...	S. W.	2
Ditto	Midnight	*Ditto*	...	...	W.	3

IV.—The retreating south-west monsoon period.—The only noteworthy peculiarities of the air movement over the land area of India were, (*a*) its great steadiness in the United Provinces, the Punjab, the Central Provinces and Hyderabad, (*b*) its low velocity in Sind, Central India and Hyderabad and (*c*) the prevalence during the period of abnormal westerly or north-easterly winds in the greater part of the area comprising Hyderabad, the Madras Deccan and the Bombay Deccan.

Humidity.

The departure from normal of the mean monthly and annual aqueous vapour pressure and relative humidity for first and second class stations for the year 1912 are given in Tables 56 and 57. The normal values employed in the determination of the departures are given in Tables XXX and XXXIII of the Indian Meteorological Memoirs, Volume XVII. The two tables (Tables 58 and 59) give departure data of 8 hrs. aqueous vapour pressure and relative humidity for each month of the year and for the year for the fifteen chief political divisions.

TABLE 56.—*Departure of the monthly and annual mean vapour pressure data of 1912 from average of past years.*

Division.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
		"	"	"	"	"	"	"	"	"	"	"	"	"
Bengal	Calcutta	+·014	+·080	+·005	+·001	+·010	—·024	—·007	0	—·018	—·001	—·026	—·013	+·002
United Provinces of Agra and Oudh.	Allahabad	+·018	+·016	—·117	+·012	—·030	—·116	—·017	—·005	—·091	—·121	—·027	—·024	—·042
Punjab	Lahore	+·064	+·028	—·051	+·085	—·013	—·061	+·007	+·047	—·137	—·021	+·017	—·005	—·003
Rajputana	Jaipur	+·040	+·024	—·096	+·022	—·063	—·108	+·033	+·033	—·055	—·037	—·019	—·046	—·023
Bombay	Bombay	+·009	+·026	—·040	—·007	—·004	—·004	—·005	+·001	—·013	—·024	—·018	—·008	—·007
Mysore	Bangalore	—·048	+·053	—·013	—·041	0	+·007	+·013	+·007	+·026	+·029	—·015	—·023	0
Madras	Madras	—·001	+·077	+·047	+·020	+·071	+·063	+·056	+·043	+·061	+·042	+·012	—·046	+·037
Kashmir	Srinagar		+·036											
Hill Stations excluding Kashmir and Baluchistan.	Simla	+·005	—·008	—·069	+·005	—·029	—·076	—·003	—·017	—·077	—·015	—·011	—·023	—·027
	Katmandu	+·002	+·008	—·075	+·027	+·003	—·041	—·012	—·006	—·020	—·028	—·015	+·008	—·012
Extra India	Seychelles	+·004	+·001	—·028	+·017	—·011	+·023	—·005	—·021	—·008	—·021	—·091	—·027	—·014
	Mauritius	—·007	+·078	—·013	0	+·054	—·009	—·019	—·001	+·022	+·041	—·017	—·020	

TABLE 57.—*Departure of the monthly and annual mean relative humidity data of 1912 from the average of past year.*

Division.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Bengal	Calcutta	— 4	+ 3	— 2	+ 2	0	— 3	0	— 1	— 5	— 3	— 5	— 2	— 2
United Provinces of Agra and Oudh.	Allahabad	+ 2	— 2	— 9	+ 1	— 4	—12	0	— 1	— 8	—10	— 8	— 2	— 4
Punjab	Lahore	+ 7	— 2	— 7	+11	— 3	— 8	— 2	+ 3	— 8	— 1	0	0	— 1
Rajputana	Jaipur	+ 4	0	—10	0	— 7	—16	— 2	+ 2	— 5	— 5	— 5	— 8	— 4
Bombay	Bombay	— 2	+ 2	— 3	— 4	— 2	— 3	— 1	— 1	— 5	— 4	— 1	— 2	— 2
Mysore	Bangalore	— 5	+ 4	— 2	— 4	— 5	+ 1	+ 3	+ 1	+ 1	+ 3	— 3	— 1	— 1
Madras	Madras	+ 1	+ 3	+ 1	0	+ 1	— 1	+ 2	+ 2	+ 1	0	+ 1	— 5	+ 1
Kashmir	Srinagar		— 4											
Hill Stations excluding Kashmir and Baluchistan.	Simla	+ 3	—10	— 5	+ 6	— 4	—13	— 1	+ 1	— 9	— 4	+ 3	— 5	— 3
	Katmandu	0	— 3	—11	+ 5	— 2	— 6	— 2	— 2	— 4	— 6	+ 1	+ 3	— 2
Extra India.	Seychelles	0	— 3	— 6	— 1	— 4	— 1	— 2	— 4	— 4	— 5	—10	— 5	— 4
	Mauritius	— 4	+ 7	— 3	0	+ 4	— 1	— 2	+ 4	+ 2	+ 6	+ 2	+ 1	+ 1

TABLE 58.—*Departure of the mean monthly aqueous vapour pressure from the normal in the fifteen chief political divisions of India in 1912.*

DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
	"	"	"	"	"	"	"	"	"	"	"	"	"
Burma	+·037	—·007	—·002	—·034	—·012	—·001	—·006	—·003	—·009	—·013	+·052	—·011	—·001
Assam	+·004	+·011	—·053	—·048	—·004	—·006	—·011	—·002	—·014	—·015	+·008	+·020	—·009
Bengal	+·009	+·050	—·036	—·041	—·008	—·012	—·007	+·006	0	—·016	—·025	—·005	—·007
Bihar and Orissa	+·021	+·052	—·027	+·009	+·021	—·032	—·007	+·001	—·024	—·036	—·018	—·016	—·005
United Provinces	+·043	+·022	—·069	+·044	—·040	—·079	+·001	—·002	—·067	—·009	—·013	—·014	—·015
Punjab	+·052	+·017	—·080	+·028	—·066	—·130	—·008	—·003	—·120	—·027	+·006	—·007	—·028
North-West Frontier Province	+·037	+·022	—·059	+·053	+·029	+·008	+·076	+·023	—·111	+·037	+·001	—·003	+·009
Sind	+·076	+·052	—·045	+·082	+·058	+·077	+·097	+·036	—·055	+·076	+·025	+·013	+·041
Rajputana	+·040	+·006	—·085	—·013	—·119	—·099	+·022	—·007	—·110	—·022	—·036	—·060	—·040
Bombay	+·007	+·026	—·041	+·017	+·002	—·014	+·015	+·024	—·024	—·003	—·011	—·027	—·002
Central India	+·024	+·043	—·025	—·050	—·072	—·091	+·003	+·015	—·065	—·020	—·010	—·007	—·021
Central Provinces	+·007	+·067	—·087	—·055	—·080	—·114	—·015	—·013	—·086	—·045	—·039	—·044	—·042
Hyderabad	—·063	+·090	+·006	—·044	—·023	—·036	—·008	—·009	—·039	—·032	—·061	—·049	—·022
Mysore	—·043	+·069	—·008	0	+·003	+·003	+·007	+·007	+·011	+·001	+·015	+·001	+·005
Madras	—·027	+·054	+·016	+·028	+·021	+·009	+·011	+·005	+·019	+·008	—·007	—·036	+·008
Mean of India	+·017	+·035	—·040	—·004	—·028	—·045	+·005	+·003	—·046	—·014	—·008	—·022	—·012

TABLE 59.—*Departure of the mean monthly and annual relative humidity from the normal in the fifteen chief political divisions of India in 1912.*

DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Burma	+ 1	— 1	+ 1	— 1	— 3	0	0	+ 1	— 1	+ 2	+ 5	+ 2	+ 1
Assam	— 3	— 3	— 6	+ 5	— 2	— 2	— 1	— 3	— 4	— 1	0	— 1	— 2
Bengal	0	+ 2	— 2	+ 4	+ 1	— 2	— 1	— 1	— 2	0	— 1	+ 1	0
Bihar and Orissa	+ 3	+ 5	— 4	+ 7	+ 1	— 6	0	— 1	— 3	— 5	0	+ 1	0
United Provinces	+ 6	0	— 7	+ 6	— 3	—12	— 2	— 2	— 3	— 2	— 1	— 1	— 2
Punjab	+ 8	— 2	—12	+ 9	— 4	—13	— 2	+ 1	— 7	— 4	+ 3	— 1	— 2
North-West Frontier Province	+ 8	+ 1	— 7	+11	+ 4	— 1	+ 4	+ 5	— 4	+ 8	+ 4	— 4	+ 2
Sind	+ 6	— 2	— 8	+ 5	0	+ 1	+ 2	0	— 4	+ 7	+ 5	+ 1	+ 1
Rajputana	+ 7	— 3	—11	+ 1	—10	— 9	+ 3	+ 4	— 6	— 1	— 1	— 9	— 3
Bombay	— 1	+ 2	— 3	0	— 1	— 3	+ 2	+ 3	— 3	— 1	0	— 3	— 1
Central India	+ 3	+ 2	— 3	— 3	— 6	—14	0	+ 1	— 2	0	+ 3	+ 6	— 1
Central Provinces	0	+ 7	—11	— 5	— 7	—19	— 2	— 1	— 7	— 7	— 4	— 2	— 5
Hyderabad	— 9	+ 7	— 5	— 5	— 5	—11	+ 2	+ 1	— 7	— 5	— 5	— 3	— 4
Mysore	— 8	+ 8	— 1	— 3	— 2	— 1	+ 2	+ 3	+ 2	+ 2	+ 4	+ 7	+ 1
Madras	— 1	+ 1	— 1	0	0	— 2	+ 1	+ 1	0	+ 2	+ 1	+ 1	0
Mean of India	+ 2	+ 1	— 5	+ 2	— 3	— 7	0	+ 1	— 4	— 1	+ 1	— 1	— 1

I.—The cold weather period.—In the plains the amount of vapour in the air was on the mean of the period more or less in excess, while the percentage of saturation was very nearly normal.

TABLE 60.

Division.	Departure of mean 8 hrs. vapour pressure from normal.			Departure of mean 8 hrs. relative humidity from normal.		
	January.	February.	Period, January and February.	January.	February.	Period, January and February.
	"	"	"			
Burma . .	+·037	−·007	+·015	+ 1	− 1	0
Assam . .	+·004	+·011	+·007	− 3	− 3	− 3
Bengal . .	+·009	+·050	+·029	0	+ 2	+ 1
Bihar and Orissa	+·021	+·052	+·037	+ 3	+ 5	+ 4
United Provinces	+·043	+·022	+·033	+ 6	0	+ 3
Punjab . .	+·052	+·017	+·035	+ 8	− 2	+ 3
North-West Frontier Province.	+·037	+·022	+·029	+ 8	+ 1	+ 5
Sind . .	+·076	+·052	+·064	+ 6	− 2	+ 2
Rajputana .	+·040	+·006	+·023	+ 7	− 3	+ 2
Bombay . .	+·007	+·026	+·017	− 1	+ 2	+ 1
Central India .	+·024	+·043	+·033	+ 3	+ 2	+ 3
Central Provinces	+·007	+·067	+·037	0	+ 7	+ 3
Hyderabad .	−·063	+·090	+·013	− 9	+ 7	− 1
Mysore . .	−·043	+·069	+·013	− 8	+ 8	0
Madras . .	−·027	+·054	+·013	− 1	+ 1	0

A reference to the corresponding abnormalities of rainfall will show that in eight of the above divisions the seasonal rainfall was short of the normal.

Over the greater part of the mountain zone bordering India on the north and west as well as in Persia the conditions were variable—an indication that they were determined by local rather than general actions.

TABLE 61.

Station.	Departure of mean 8 hrs. vapour pressure from normal.			Departure of mean 8 hrs. relative humidity from normal.		
	January.	February.	Period, January and February.	January.	February.	Period, January and February.
	"	"	"			
Aden . .	+·036	+·005	+·021	+ 4	+ 2	+ 3
Baghdad . .	−·026	+·016	−·005	0	+ 2	+ 1
Bushire . .	+·016	+·028	+·022	+ 9	+ 9	+ 9
Tehran . .	+·017	−·002	+·007	+17	+ 3	+10
Ispahan . .	−·023	−·054	−·039	+ 2	−14	− 6
Jask . .	−·027	−·009	−·018	− 2	+ 5	+ 1
Muscat . .	+·008	+·007	+·007	+ 1	+ 2	+ 1
Chaman . .	+·051	+·021	+·036	+14	− 3	+ 5
Quetta . .	+·020	−·011	+·005	− 1	−11	− 6
Cherat . .	+·001	−·025	−·012	0	−17	− 9
Murree . .	+·017	+·002	+·009	+ 8	−11	− 1
Gilgit . .	+·002	−·010	−·004	+ 5	− 8	− 1
Srinagar . .	+·025	+·022	+·023	− 2	− 2	− 2
Skardu . .	...	...	...	−18	−11	−15
Dras . .	...	...	...	+ 1	+ 2	+ 1
Simla . .	+·027	−·017	+·005	+ 6	−14	− 4
Leh . . .	+·018	+·022	+·020	+14	+18	+16
Chakrata . .	+·018	+·008	+·013	+ 3	− 8	− 3
Mukteswar .	...	...	...	+ 5	−12	− 3
Darjiling . .	+·005	+·014	+·009	− 5	− 3	− 4
Maymyo . .	...	...	...	+ 7	+ 5	+ 6
Pachmarhi .	+·040	+·080	+·060	+11	+14	+13
Mount Abu .	+·023	+·006	+·015	+ 2	− 2	0
Kodaikanal .	...	...	...	−26	+ 4	−11

II.—The hot weather period.—Except in Rajputana nd the Central Provinces where the air was drier than sual, both absolutely and relatively, the hygrometric conditions of the period in the plains of India, differed to no important extent fro.n the normal.

TABLE 62.

Division.	Departure of mean 8 hrs. vapour pressure from normal.				Departure of mean 8 hrs. relative humidity from normal.			
	March.	April.	May.	Period, March to May.	March.	April.	May.	Period, March to May.
	"	"	"	"				
urma	—·002	—·034	—·012	—·016	+ 1	— 1	— 3	— 1
ssam	—·053	—·048	—·004	—·035	— 6	+ 5	— 2	— 1
engal	—·036	—·041	—·008	—·028	— 2	+ 4	+ 1	+ 1
ihar and Orissa	—·027	+·009	+·021	+·001	— 4	+ 7	+ 1	+ 1
nited Provinces	—·069	+·044	—·040	—·022	— 7	+ 6	— 3	— 1
unjab	—·080	+·028	—·066	—·039	—12	+ 9	— 4	— 2
orth-West Frontier Province	—·059	+·053	+·029	+·008	— 7	+11	+ 4	+ 3
nd	—·045	+·082	+·058	+·032	— 8	+ 5	0	— 1
ajputana	—·085	—·013	—·119	—·072	—11	+ 1	—10	— 7
ombay	—·041	+·017	+·002	—·007	— 3	0	— 1	— 1
entral India	—·025	—·050	—·072	—·049	— 3	— 3	— 6	— 4
entral Provinces	—·087	—·055	—·080	—·074	—11	— 5	— 7	— 8
yderabad	+·006	—·044	—·023	—·020	— 5	— 5	— 5	— 5
ysore	—·008	0	+·003	—·002	— 1	— 3	— 2	— 2
adras	+·016	+·028	+·021	+·022	— 1	0	0	0

In most divisions the departures were related to the character of the precipitation.

In the Himalayas as well as in the highlands to the west of the Indus the distribution of humidity was characterized by much irregularity.

TABLE 63.

Station.	Departure of mean 8 hrs. vapour pressure from normal.				Departure of mean 8 hrs. relative humidity from normal.			
	March.	April.	May.	Period, March to May.	March.	April.	May.	Period, March to May.
Aden	—·002	+·052	—·021	+·010	0	+ 5	0	+ 2
Baghdad	—·029	—·024	—·111	—·055	— 2	— 6	—12	— 7
Bushire	+·045	+·111	+·057	+·071	+11	+17	+ 9	+12
Tehran	—·007	+·016	+·009	+·006	+ 6	+ 9	+ 7	+ 7
Ispahan	—·056	—·099	—·161	—·105	—12	—13	—22	—16
Jask	—·099	—·074	—·115	—·096	— 8	+ 4	— 1	— 2
Muscat	—·029	—·034	—·199	—·087	— 6	+ 2	—18	— 7
Chaman	—·048	+·033	+·034	+·006	— 9	— 4	+ 5	— 3
Quetta	—·061	+·004	—·040	—·032	—19	+ 2	— 5	— 7
Cherat	—·079	+·015	+·003	—·020	—19	+10	+ 4	— 2
Murree	—·012	—·026	+·060	+·007	— 3	— 1	+11	+ 2
Gilgit	—·035	—·006	+·037	—·001	— 6	— 3	+13	+ 1
Srinagar	—·028	—·010	—·043	—·027	— 4	— 1	0	— 2
Skardu	...	...	...	...	—19	—14	— 4	—12
Dras	...	...	...	...	— 1	— 5	— 9	— 5
Simla	—·028	+·024	—·019	—·008	— 8	+10	— 3	0
Leh	+·015	+·029	+·003	+·016	+12	+ 7	— 1	+ 6
Chakrata	+·002	+·041	+·028	+·024	+ 4	+13	+ 4	+ 7
Mukteswar	...	...	...	...	— 6	+ 7	+ 1	+ 1
Darjiling	—·033	—·008	—·014	—·018	—12	+10	— 3	— 2
Maymyo	...	...	...	...	+ 4	+ 7	+ 3	+ 5
Pachmarhi	—·030	+·001	—·050	—·026	0	+ 2	— 7	— 2
Mount Abu	—·038	+·048	—·065	—·018	— 5	+ 7	—12	— 3
Kodaikanal	...	...	...	...	+ 8	+ 2	+ 3	+ 4

III.—The south-west monsoon period.—Over north-n and central India and in the Deccan the deviations om normal of the hygrometric conditions were in ir accord with the abnormal features of rainfall. Thus umidity, both absolute and relative, was apparently in ffect in most parts of these areas in June and September when the monsoon currents were very weak, and about the average in the two intervening months both of which were characterized by the prevalence of strongly marked monsoon conditions.

In the rest of the country humidity departed but little from the normal according to either estimation.

TABLE 64.

Division.	Departure of mean 8 hrs. vapour pressure from normal.					Departure of mean 8 hrs. relative humidity from normal.				
	June.	July.	August.	September.	Period, June to September.	June.	July.	August.	September.	Period, June to September.
	"	"	"	"	"					
irma	—·001	—·006	—·003	—·009	—·005	0	0	+ 1	— 1	0
ssam	—·006	—·011	—·002	—·014	—·008	— 2	— 1	— 3	— 4	— 3
engal	—·012	—·007	+ ·006	0	—·003	— 2	— 1	— 1	— 2	— 1
har and Orissa	—·032	—·007	+ ·001	—·024	—·015	— 6	0	— 1	— 3	— 3
nited Provinces	—·079	+ ·001	—·002	—·067	—·037	—12	— 2	— 2	— 3	— 5
unjab	—·130	—·008	—·003	—·120	—·065	—13	— 2	+ 1	— 7	— 5
orth-West Frontier Province	+ ·008	+ ·076	+ ·023	—·111	—·001	— 1	+ 4	+ 5	— 4	+ 1
nd	+ ·077	+ ·097	+ ·036	—·055	+ ·039	+ 1	+ 2	0	— 4	0
ajputana	—·099	+ ·022	—·007	—·110	—·049	— 9	+ 3	+ 4	— 6	— 2
ombay	—·014	+ ·015	+ ·024	—·024	0	— 3	+ 2	+ 3	— 3	0
entral India	—·091	+ ·003	+ ·015	—·065	—·035	—14	0	+ 1	— 2	— 4
entral Provinces	—·114	—·015	—·013	—·086	—·057	—19	— 2	— 1	— 7	— 7
yderabad	—·036	—·008	—·009	—·039	—·023	—11	+ 2	+ 1	— 7	— 4
ysore	+ ·003	+ ·007	+ ·007	+ ·011	+ ·007	— 1	+ 2	+ 3	+ 2	+ 1
adras	+ ·009	+ ·011	+ ·005	+ ·019	+ ·011	— 2	+ 1	+ 1	0	0

In the Himalayas, the Satpuras and the Aravalis the epartures from the normal were of the same general charac-er as in the neighbouring plains. In Baluchistan, unlike Sind, the air was on the whole drier than usual, both absolutely and relatively.

TABLE 65.

Station.	Departure of mean 8 hrs. vapour pressure from normal.					Departure of mean 8 hrs. relative humidity from normal.				
	June.	July.	August.	September.	Period, June to September.	June.	July.	August.	September.	Period, June to September.
	"	"	"	"	"					
Aden	+·016	−·029	−·013	−·045	−·018	− 1	− 1	+ 1	+ 1	0
Baghdad	+·052	−·129	−·191	−·094	−·091	+ 2	− 7	−10	− 8	− 6
Bushire	+·192	+·071	+·012	+·154	+·107	+12	+12	+10	+18	+13
Tehran	+·056	+·046	−·021	−·039	+·011	+ 8	+ 5	0	0	+ 3
Ispahan	−·110	−·086	−·062	−·068	−·081	−10	− 7	− 6	− 2	− 6
Jask	−·078	+·018	−·066	−·192	−·079	+ 4	+ 7	+ 2	− 5	+ 2
Muscat	−·071	−·039	−·043	−·130	−·071	−13	− 5	− 6	−12	− 9
Chaman	−·002	−·035	+·001	−·056	−·023	+ 1	− 5	+ 3	+ 7	+ 1
Quetta	−·140	+·056	−·025	−·181	−·073	−15	+ 2	− 5	−22	−10
Cherat	−·070	+·002	+·080	−·188	−·044	− 9	+ 2	+ 9	−24	− 5
Murree	+·036	−·028	+·019	−·103	−·019	+ 1	− 5	+ 8	−15	− 3
Gilgit	+·059	−·016	−·043	−·086	−·021	+20	− 6	0	− 5	+ 2
Srinagar	−·074	+·010	−·052	−·089	−·051	− 1	− 6	− 6	− 8	− 5
Skardu	...	...	...	...	...	− 6	−12	−12	−20	−13
Dras	...	...	...	...	...	− 7	− 4	+ 3	− 3	− 3
Simla	−·066	+·017	+·004	−·038	−·021	−15	+ 2	+ 1	− 5	− 4
Leh	−·005	+·004	+·002	−·028	−·007	+ 3	− 6	− 2	− 9	− 3
Chakrata	−·057	−·001	+·014	−·026	−·017	−13	− 1	+ 1	− 4	− 4
Mukteswar	...	...	...	...	...	0	+ 3	0	− 1	+ 1
Darjiling	−·006	+·001	+·002	+·007	+·001	− 2	0	0	0	− 1
Maymyo	...	...	...	...	...	+ 6	+ 5	+ 3	+ 3	+ 4
Pachmarhi	−·115	+·012	+·024	−·047	−·031	−23	+ 1	+ 3	− 2	− 5
Mount Abu	−·018	+·043	+·030	−·058	−·001	− 9	0	0	− 6	− 4
Kodaikanal	...	...	...	...	...	+ 4	− 3	+ 2	− 1	+ 1

IV.—The retreating south-west monsoon period.—hroughout the period both vapour pressure and the perentage of saturation were inclined to be low in Rajputana, the Central Provinces and Hyderabad, and to be high in Sind, but in the rest of the country the deviations from normal of humidity were hardly of any significance.

TABLE 66.

Division.	Departure of mean 8 hrs. vapour pressure from normal.				Departure of mean 8 hrs. relative humidity from normal.			
	October.	November.	December.	Period, October to December.	October.	November.	December.	Period, October to December.
	"	"	"	"				
urma	—·013	+·052	—·011	+·009	+ 2	+ 5	+ 2	+ 3
ssam	—·015	+·008	+·020	+·004	— 1	0	— 1	— 1
engal	—·016	—·025	—·005	—·015	0	— 1	+ 1	0
ihar and Orissa	—·036	—·018	—·016	—·023	— 5	0	+ 1	— 1
nited Provinces	—·009	—·013	—·014	—·012	— 2	— 1	— 1	— 1
unjab	—·027	+·006	—·007	—·009	— 4	+ 3	— 1	— 1
orth-West Frontier Province	+·037	+·001	—·003	+·012	+ 8	+ 4	— 4	+ 3
ind	+·076	+·025	+·013	+·038	+ 7	+ 5	+ 1	+ 4
ajputana	—·022	—·036	—·060	—·039	— 1	— 1	— 9	— 4
ombay	—·003	—·011	—·027	—·014	— 1	0	— 3	— 1
entral India	—·020	—·010	—·007	—·012	0	+ 3	+ 6	+ 3
entral Provinces	—·045	—·039	—·044	—·043	— 7	— 4	— 2	— 4
yderabad	—·032	—·061	—·049	—·047	— 5	— 5	— 3	— 4
ysore	+·001	+·015	+·001	+·006	+ 2	+ 4	+ 7	+ 4
adras	+·008	—·007	—·036	—·012	+ 2	+ 1	+ 1	+ 1

Over the highlands of Persia and Baluchistan the bsolute humidity was generally in defect, but in virtue f the prevailing low temperature the percentage of saturaon was somewhat higher than usual. In Kashmir the vapour tension was about the average and the relative humidity in defect. In the Himalayas, the Satpuras and the Aravalis humidity differed but little from the normal, according to either estimation.

TABLE 67.

Station.	Departure of mean 8 hrs. vapour pressure from normal.				Departure of mean 8 hrs. relative humidity from normal.			
	October.	November.	December.	Period, October to December.	October.	November.	December.	Period, October to December.
	"	"	"	"				
Aden	+·005	—·057	+·006	—·015	+ 1	— 6	+ 1	— 1
Baghdad	—·014	—·057	—·043	—·038	+ 1	— 7	— 2	— 3
Bushire	+·113	—·003	—·006	+·035	+15	+ 6	+ 8	+10
Tehran	+·018	—·040	—·001	—·008	+ 2	— 2	+15	+ 5
Ispahan	—·024	—·062	—·031	—·039	— 5	— 5	+ 3	— 2
Jask	—·100	—·109	—·023	—·077	+ 5	— 4	+ 5	+ 2
Muscat	—·091	—·097	—·035	—·081	—10	— 7	— 2	— 6
Chaman	+·007	—·071	0	—·021	+ 6	+16	+10	+11
Quetta	—·039	—·036	+·008	—·022	— 8	+19	+ 8	+ 6
Cherat	—·004	—·009	—·015	—·009	0	0	— 2	— 1
Murree	+·015	+·021	—·008	+·009	+ 4	+13	— 4	+ 4
Gilgit	+·046	—·056	—·031	—·014	+10	—14	—12	— 5
Srinagar	—·025	—·027	—·018	—·023	—10	—10	—10	—10
Skardu	...	...	...	...	—16	— 7	— 6	—10
Dras	...	...	...	...	0	— 3	...	...
Simla	0	+·007	—·008	0	— 3	+ 6	— 4	0
Leh	—·019	—·021	—·005	—·015	—12	—13	— 4	—10
Chakrata	+·027	—·015	0	+·004	+ 7	+ 2	0	+ 3
Mukteswar	...	...	...	...	— 1	+ 3	— 1	0
Darjiling	—·016	—·006	+·019	—·001	— 9	0	+ 5	— 1
Maymyo	...	...	...	...	+ 6	+ 8	+ 8	+ 7
Pachmarhi	0	—·003	—·027	—·010	+ 1	+ 6	+ 1	+ 3
Mount Abu	+·011	—·032	—·026	—·016	+ 2	— 2	— 7	— 2
Kodaikanal	...	...	...	...	+ 3	+ 5	—26	— 6

The Year—1912, like the previous year, was drier than sual, both in point of absolute humidity and the percentage f saturation. January, February, July and August were ıe only months in which the proportion of the vapour con- ituent exceeded the normal, and in February alone was the excess at all marked. On the other hand the air was considerably drier than usual in March, May, June and September.

The statement below illustrates the relationship of the anomalies of humidity with those of rainfall and temperature.

TABLE 68.

—	Departure from normal of the Indian area.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
apour pressure at 8 hrs. . .	+·017	+·035	—·040	—·004	—·028	—·045	+·005	+·003	—·046	—·014	—·008	—·022	—·012
elative humidity at 8 hrs. .	+2	+1	—5	+2	—3	—7	0	+1	—4	—1	+1	—1	—1
ainfall (percentage departure) .	+7	+17	—2	+19	—11	—28	+14	+7	—28	—5	+113	—79	—8
ean temperature . . .	+0·9	+2·1	—0·5	—0·7	+0·6	+2·5	+0·6	—0·1	—0·3	+0·1	—0·5	—0·7	+0·8

Cloud.

Normal values of the mean monthly and annual amount f cloud at first and second class stations have been obtained om the whole of the available data up to the end of the ear 1899 given in Tables XXXV and XXXVI of the ndian Meteorological Memoirs, Volume XVII. These ıeans are the arithmetical averages of the cloud amounts as ıgistered at 10 and 16 hrs., and hence represent the mean amount during the day period rather than of the whole 24 hours.

Departure data of this element of meteorological observation for first and second class stations for the year 1912 are given in Table 69. Table 70 gives the departures of the 8 hrs. cloud for the fifteen chief political provinces of India.

TABLE 69.—*Departure of the monthly and annual mean cloud proportion of 1912 from the average of past years.*

Division.	Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
ENGAL	Calcutta . . .	+0·4	+0·8	0	+1·1	+0·6	—1·0	+0·1	0	—1·0	—0·2	—0·2	—1·1	0
NITED PROVINCES OF AGRA AND OUDH.	Allahabad . . .	+1·3	—1·1	—1·0	+0·6	+0·3	—2·9	+0·4	—0·4	—0·8	—1·2	+0·7	—0·6	—0·4
UNJAB	Lahore	+1·2	—2·3	—0·8	+0·7	—0·2	—1·5	—0·6	—0·7	—1·0	—0·5	—0·6	+0·5	—0·5
AJPUTANA	Jaipur	+0·9	—1·4	—0·6	+1·8	—0·4	—2·0	—0·3	—0·1	+0·2	—0·2	+0·3	0	—0·1
OMBAY	Bombay . . .	+1·5	+0·4	—0·2	+0·7	+0·7	—1·1	—0·1	+0·1	—1·8	+1·2	+0·1	—0·3	+0·1
YSORE	Bangalore . . .	...	...	...	...	...	...	...	...	...	...	...	...	...
ADRAS	Madras . . .	—1·6	—0·4	—0·8	—1·3	—1·2	—2·2	+0·1	—0·2	—1·3	—0·3	—0·4	—1·5	0 —·9
ASHMIR	Srinagar . . .	...	—1·6	...	...	...	...	...	...	...	...	...	...	...
ILL STATIONS EXCLUDING KASHMIR AND BALUCHISTAN.	Simla	+1·5	—1·9	—0·1	+1·5	0	—1·6	—0·5	—0·2	—1·9	—0·5	+0·4	+0·3	—0·3
	Katmandu . . .	+0·9	—1·0	—0·2	+1·7	—0·2	—0·6	+1·1	0	—0·9	—1·5	+0·1	+0·3	0
XTRA INDIA . . .	Seychelles . . .	+0·3	—0·5	—1·5	+1·0	+0·4	—1·2	+0·5	—0·3	+0·3	—1·1	—1·5	—0·5	—0·3
	Mauritius . . .	+0·5	+2·6	—0·7	+0·1	+0·3	+0·3	+0·1	+0·8	+0·9	+2·0	—0·5	+0·8	+0·6

TABLE 70.—*Departure of the mean monthly and annual cloud amount from normal in the fifteen chief political divisions of India in 1912.*

DIVISION.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
Burma	+1·8	—0·1	+0·9	+0·3	—0·9	—0·2	+0·1	0	—0·4	+0·9	+1·0	+0·3	+0·3
Assam	—1·1	0	—1·7	+0·8	—2·0	—1·4	—1·3	—2·0	—2·3	—1·0	+0·6	—0·2	—1·0
Bengal	+0·9	+0·9	0	+1·0	+0·1	—0·9	—0·3	—0·4	—1·6	—0·1	+0·8	—0·4	0
Bihar and Orissa	+0·7	+0·2	—0·5	+0·8	—0·4	—1·0	—0·1	—0·5	—1·4	—0·7	+0·3	—0·7	—0·3
United Provinces	+1·1	—1·4	—0·7	+0·6	0	—2·5	—0·3	—0·9	—0·9	—0·9	+0·5	—0·3	—0·5
Punjab	+1·3	—1·9	—0·6	+0·9	+0·4	—0·7	+0·2	—0·5	—0·7	—0·3	—0·6	+0·2	—0·2
North-West Frontier Province	+0·6	—1·3	—1·0	+1·3	+0·9	+0·3	+1·0	—0·4	—0·3	—0·2	—1·0	+1·3	+0·1
Sind	+0·2	—1·7	—0·9	+1·2	—0·9	—1·1	—0·3	—0·8	—1·2	—0·1	—0·9	+0·2	—0·5
Rajputana	+1·3	—1·4	—0·9	+0·7	—0·5	—2·0	—0·4	0	—0·5	+0·1	—0·3	—0·2	—0·3
Bombay	+1·0	+0·4	—0·4	+0·3	—0·7	—1·0	0	+0·2	—1·9	+0·4	+0·5	—0·1	—0·1
Central India	+1·7	+0·2	—0·4	+2·4	+1·2	—0·2	+0·8	+0·6	—0·7	—0·1	+0·8	0	+0·5
Central Provinces	+0·6	+0·7	—1·3	+0·5	—0·2	—2·5	+0·2	—0·1	—1·3	—0·3	+0·5	—0·4	—0·3
Hyderabad	—0·1	+1·2	—0·8	—0·2	—1·1	—2·2	+0·6	—0·8	—2·1	—0·3	—0·1	—0·5	—0·5
Mysore	—0·3	+1·1	—0·2	—1·3	0	—0·3	+0·1	+0·4	—0·1	+0·6	+0·5	+0·3	+0·1
Madras	+0·2	+0·9	0	+0·1	—0·2	—0·6	+0·3	+0·1	—0·9	+0·1	+0·4	—0·2	0
Mean of India	+0·8	—0·1	—0·5	+0·6	—0·3	—1·2	0	—0·3	—1·1	—0·1	+0·3	—0·1	—0·2

I.—The cold weather period.—(*a*) On the mean of the period the cloud proportion was high in Burma, Bengal, Bihar and Orissa, Central India, the Central Provinces and the whole of the Peninsula, and low in Assam and Sind, but in the remaining provinces the skies were clouded to about the customary extent.

TABLE 71.

DIVISION.	DEPARTURE OF MEAN 8 HOURS CLOUD AMOUNT FROM NORMAL.		
	January.	February.	Period, January and February.
Burma	+1·8	—0·1	+0·9
Assam	—1·1	0	—0·5
Bengal	+0·9	+0·9	+0·9
Bihar and Orissa	+0·7	+0·2	+0·5
United Provinces	+1·1	—1·4	—0·1
Punjab	+1·3	—1·9	—0·3
North-West Frontier Province	+0·6	—1·3	—0·3
Sind	+0·2	—1·7	—0·7
Rajputana	+1·3	—1·4	—0·1
Bombay	+1·0	+0·4	+0·7
Central India	+1·7	+0·2	+0·9
Central Provinces	+0·6	+0·7	+0·7
Hyderabad	—0·1	+1·2	+0·5
Mysore	—0·3	+1·1	+0·4
Madras	+0·2	+0·9	+0·5

In the case of most divisions these departures were independent of those of humidity and precipitation.

(*b*) In Persia, Baluchistan, the western Himalayas and ashgaria skies were unusually cloudy in January, and abormally clear in February.

TABLE 72.

Station.	Departure of mean 8 hours cloud amount from normal.		
	January.	February.	Period, January and February.
den	−0·2	+0·4	+0·1
ghdad	+0·6	−0·2	+0·2
ushire	+1·0	...	...
hran	−0·7	−1·2	−0·9
pahan	+1·0	−1·1	−0·1
sk	+1·6	−1·1	+0·3
uscat	+2·2	+0·5	+1·3
shed	−0·3	+0·9	+0·3
aman	+1·7	−1·3	+0·2
etta	+2·0	−2·0	0
erat	+0·8	−0·2	+0·3
irree	+1·3	−0·9	+0·2
git	−0·1	−1·2	−0·7
shgar	+0·7	−1·2	−0·3
nagar	+0·7	−1·3	−0·3
ila	+1·8	−1·1	+0·3
i	+0·7	−0·2	+0·3
ikrata	+1·4	−1·2	+0·1
jiling	+0·6	+1·5	+1·1
hmarhi	−1·1	−0·9	−1·0
unt Abu	+1·4	−1·0	+0·2

II.—The hot weather period.—On the average of the ole period the quantity of cloud was appreciably less than usual in Assam, and in decided excess in Central India, but elsewhere the state of the skies was very nearly normal.

TABLE 73.

Division.	Departure of mean 8 hrs. cloud amount from normal.			
	March.	April.	May.	Period, March to May.
Burma	+0·9	+0·3	−0·9	+0·1
Assam	−1·7	+0·8	−2·0	−1·0
Bengal	0	+1·0	+0·1	+0·4
Bihar and Orissa	−0·5	+0·8	−0·4	0
United Provinces	−0·7	+0·6	0	0
Punjab	−0·6	+0·9	+0·4	+0·2
North-West Frontier Province	−1·0	+1·3	+0·9	+0·4
Sind	−0·9	+1·2	−0·9	−0·2
Rajputana	−0·9	+0·7	−0·5	−0·2
Bombay	−0·4	+0·3	−0·7	−0·3
Central India	−0·4	+2·4	+1·2	+1·1
Central Provinces	−1·3	+0·5	−0·2	−0·3
Hyderabad	−0·8	−0·2	−1·1	−0·7
Mysore	−0·2	−1·3	0	−0·5
Madras	0	+0·1	−0·2	0

Below are given the corresponding departures in Persia, Arabia and the hill districts of northern and central India.

TABLE 74.

Station.	Departure of mean 8 hrs. cloud amount from normal.			
	March.	April.	May.	Period, March to May.
Aden	−1·3	+2·0	0	+0·2
Baghdad	+0·4	−0·4	+0·9	+0·3
Bushire	+0·8	+0·3	−0·9	+0·1
Tehran	−1·6	−1·3	−1·7	−1·5
Ispahan	−1·1	−0·7	−0·2	−0·7
Jask	−0·4	+1·6	−0·7	+0·2
Muscat	0	+3·5	−0·4	+1·0
Meshed	−1·6	+1·3	+1·9	+0·5
Chaman	−0·9	+2·0	+0·1	+0·4
Quetta	−0·7	+0·3	0	−0·1
Cherat	−1·0	+2·4	+1·9	+1·1

TABLE 74—*concld.*

STATION.	DEPARTURE OF MEAN 8 HRS. CLOUD AMOUNT FROM NORMAL.			
	March.	April.	May.	Period, March to May.
Murree	−0·2	+0·4	+0·4	+0·2
Gilgit	−0·5	−0·9	−0·3	−0·6
Srinagar	−0·2	+1·0	+1·4	+0·7
Simla	−0·3	+1·4	−0·8	+0·1
Leh	−1·6	−0·3	+0·5	−0·5
Chakrata	−0·1	+1·4	0	+0·4
Darjiling	−1·1	+2·8	+0·1	+0·6
Pachmarhi	−2·1	−1·3	−0·7	−1·4
Mount Abu	−0·3	+1·2	−0·3	+0·2

These data are interesting as showing that the effects of the disturbances of the cold weather class which advanced into India during the hot season were more marked along the shores of the Persian Gulf and in Baluchistan, north-east Persia and the western Himalayas than in central and north Persia.

III.—The south-west monsoon period.—(*a*) There was less cloud than usual in north-east India, the United Provinces, Sind, Rajputana, Bombay, the Central Provinces and Hyderabad, the defect in the first three areas persisting throughout the season. Elsewhere the amount of cloud recorded during the period as a whole differed but little from the normal.

TABLE 75.

DIVISION.	DEPARTURE OF MEAN 8 HRS. CLOUD AMOUNT FROM NORMAL.				
	June.	July.	August.	September.	Period, June to September.
Burma	−0·2	+0·1	0	−0·4	−0·1
Assam	−1·4	−1·3	−2·0	−2·3	−1·7
Bengal	−0·9	−0·3	−0·4	−1·6	−0·8
Bihar and Orissa	−1·0	−0·1	−0·5	−1·4	−0·7
United Provinces	−2·5	−0·3	−0·9	−0·9	−1·1
Punjab	−0·7	+0·2	−0·5	−0·7	−0·4
North-West Frontier Province.	+0·3	+1·0	−0·4	−0·3	+0·1
Sind	−1·1	−0·3	−0·8	−1·2	−0·9
Rajputana	−2·0	−0·4	0	−0·5	−0·7
Bombay	−1·0	0	+0·2	−1·9	−0·7
Central India	−0·2	+0·8	+0·6	−0·7	+0·1
Central Provinces	−2·5	+0·2	−0·1	−1·3	−0·9
Hyderabad	−2·2	+0·6	−0·8	−2·1	−1·1
Mysore	−0·3	+0·1	+0·4	−0·1	0
Madras	−0·6	+0·3	+0·1	−0·9	−0·3

The abnormalities disclosed in the last figure column of the above statement agreed closely with those of rainfall, except in the case of Central India, Rajputana, Bombay, Mysore and Madras.

(*b*) In the Satpuras, the Aravalis and the Himalayas and Baluchistan the state of the skies was practically the same as in the adjacent plains.

TABLE 76.

STATION.	DEPARTURE OF MEAN 8 HRS. CLOUD AMOUNT FROM NORMAL.				
	June.	July.	August.	September.	Period, June to September.
Aden	−0·2	+0·9	−0·5	−0·4	−0·1
Baghdad	+0·5	0	−0·2	+0·2	+0·1
Bushire	0	−0·3	−0·4	+0·3	−0·1
Tehran	+0·4	−0·5	?	−0·4	?
Ispahan	+0·5	−0·5	−0·1	0	0
Jask	−0·5	+3·7	+1·8	−1·3	+0·9
Muscat	+0·5	+5·5	+1·0	−0·8	+1·5
Meshed	+0·1	+0·5	?	−0·6	?
Chaman	−0·5	0	−0·6	−0·2	−0·3
Quetta	−0·3	+0·7	+0·2	−0·2	+0·1
Cherat	+0·8	+1·9	+1·1	−1·5	+0·6
Murree	−1·8	+1·7	+2·0	−1·4	+0·1
Gilgit	0	−2·0	−1·4	−1·3	−1·2
Srinagar	−1·5	−1·3	−0·9	−1·1	−1·2
Simla	−2·3	−0·2	−0·1	−0·8	−0·9
Leh	−0·1	−1·8	+0·7	−1·5	−0·7
Chakrata	+1·2	+2·9	+3·3	+1·5	+2·2
Darjiling	0	−0·1	−0·1	−0·1	−0·1
Pachmarhi	−3·1	+0·7	+0·4	−2·9	−1·2
Mount Abu	−1·5	+0·2	−0·2	−0·7	−0·5

IV.—The retreating south-west monsoon period.—most parts of the country the sky was clearer even than ual in October and December, and was covered to more an the average extent in November. For the period as a ole the departures from normal were of no consequence.

TABLE 77.

Division.	Departure of mean 8 hrs. cloud amount from normal.			
	October.	November	December.	Period, October to December.
rma	+0·9	+1·0	+0·3	+0·7
sam	−1·0	+0·6	−0·2	−0·2
ngal	−0·1	+0·8	−0·4	+0·1
har and Orissa	−0·7	+0·3	−0·7	−0·4
ited Provinces	−0·9	+0·5	−0·3	−0·2
njab	−0·3	−0·6	+0·2	−0·2
rth-West Frontier Province	−0·2	−1·0	+1·3	0
nd	−0·1	−0·9	+0·2	−0·3
jputana	+0·1	−0·3	−0·2	−0·1
mbay	+0·4	+0·5	−0·1	+0·3
ntral India	−0·1	+0·8	0	+0·2
ntral Provinces	−0·3	+0·5	−0·4	−0·1
yderabad	−0·3	−0·1	−0·5	−0·3
ysore	+0·6	+0·5	+0·3	+0·5
dras	+0·1	+0·4	−0·2	+0·1

In the western Himalayas, Baluchistan and the greater rt of Persia the proportion of cloud was low in October d November and excessive in December, an indication that e winter conditions there were late in setting in.

TABLE 78.

Station.	Departure of mean 8 hrs. cloud amount from normal.			
	October.	November.	December.	Period, October to December.
Aden	−0·7	−2·1	+0·7	−0·7
Baghdad	+2·3	+1·0	+2·7	+2·0
Bushire	+0·1	−2·4	+1·3	−0·3
Tehran	+0·5	−1·8	+1·5	+0·1
Ispahan	0	−2·4	−1·3	−1·2
Jask	−0·4	−1·1	+1·5	0
Muscat	−0·3	+0·5	+3·6	+1·3
Meshed	−0·7	−2·2	−0·4	−1·1
Chaman	−0·6	−2·0	−0·2	−0·9
Quetta	−0·4	−1·7	+1·2	−0·3
Cherat	−0·3	−1·0	+1·8	+0·2
Murree	−0·4	−0·8	+1·3	0
Gilgit	−2·0	−2·0	−1·8	−1·9
Srinagar	−1·4	−0·9	+0·5	−0·6
Simla	−0·1	−0·6	−0·2	−0·3
Leh	−1·5	−2·1	+0·2	−1·1
Chakrata	−0·2	−0·3	+0·2	−0·1
Darjiling	−1·5	+0·4	+0·6	−0·2
Pachmarhi	−2·5	−0·6	−1·4	−1·5
Mount Abu	+0·6	−0·5	+0·5	+0·2

The year.—On the mean of all the observing stations in the plains of India the cloud amount of the whole year was 0·2 short of the normal value. The defect was not persistent through the year, for the proportion of cloud was higher than usual in January, April and November and equal to the normal in July.

TABLE 79.

—	Departure from Normal of the Indian Area.												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Year.
oud amount at 8 hours	+0·8	−0·1	−0·5	+0·6	−0·3	−1·2	0	−0·3	−1·1	−0·1	+0·3	−0·1	−0·2

These anomalies were parallel with those of rainfall in ine of the twelve months and with those of the absolute umidity in seven months.

In point of geographical distribution Central India had more than the normal amount of cloud, and Assam, the United Provinces, Sind and Hyderabad had less than the average, while in the rest of the country the state of the skies was almost normal.

Snowfall.

(A).—The cold weather of 1911-1912 and the succeeding hot weather :—

(*a*) According to the very limited information available the winter was very severe and prolonged over a portion of Central Asia. In Transcaspia and Russian Turkistan snowfall is reported to have occurred as late as the end of April.

(*b*) In the Persian area the winter commenced in November, before the average date. Conditions were more unsettled than usual in December and January, but during the three succeeding months the weather was on the whole drier than usual. Little or no information is available for May, but it is almost certain that no abnormal precipitation occurred in that month.

(*c*) In Baluchistan precipitation was much heavier than the average in November, January and April, and about normal or in defect in other months.

(*d*) In Afghanistan conditions were nearly normal.

(*e*) In the hill districts of the North-West Frontier Province, according to the available information, the snowfall was above the average in October, November and January, and probably also in April and the earlier part of May, was equal to the normal in December, and was lighter than usual in February and March.

(*f*) In Kashmir the snowfall was in excess in November and in excess locally also in May, and was about normal or in defect in December, March and April. On the higher hills near Kargil snow lay five feet deep in the beginning of June.

(*g*) In the Punjab Himalayas the snowfall was probably on the whole less than usual; it was above the average only in October and November. In the Chamba and Kulu Hills snow fell as low as 10,000 feet on the 25th May. The unsettled weather of April and May had the effect of retarding to some extent the melting of the snow, and the amount lying at the end of May was probably in some places thicker than usual.

(*h*) In the Kumaon Hills the winter began abnormally early, and in November snow is reported to have fallen as low as 4,000 feet in the hills north of Chakrata. The fall was very light in December and rather heavy in January. During the following three months the quantity received was apparently by no means excessive and the aggregate fall of the whole period, October to May, was probably not very different from the normal.

(*i*) The snowfall in the Assam Himalayas was, as far as can be judged from the few reports received, heavier than that of the two preceding winters, and probably in excess.

(*j*) On the whole it may be said that the winter, although it began unusually early, was not severe, the snowfall during December, February and March having been below the normal. Depressions of the winter type were more in evidence than usual in April and May, but it is almost certain that no widespread fall of snow occurred in those months.

The accumulations existing at the close of May appeared however to be on the whole somewhat in excess, owing chiefly to the abnormal thickness of the unmelted residue of last year's heavy snowfall.

(B).—The south-west monsoon period, June to September :—

During June there was no widespread heavy snowfall and the previous accumulations were melting fast.

During July no snow fell except the usual amounts on the higher ranges.

In August there was no widespread heavy snowfall and the previous accumulations were melting fast.

In September the snowfall of the month and the accumulations of snow were approximately normal.

(C).—The period October to December :—

During October so far as can be estimated the snowfall of the month was probably in excess locally in the North-west Frontier Province, but was normal in the Punjab and the United Provinces.

So far as can be judged from the available information the snowfall of November was much in excess of the normal in Tibet, Sikkim and parts of Afghanistan, and probably in defect in the North-West Frontier Province. In the Punjab Himalayas and the Kumaon Hills the snowfall was on the whole either normal or slightly above it.

In December the snowfall was probably heavier than usual locally in Baluchistan and Afghanistan, but was deficient in the western Himalayas and the greater part of the North-West Frontier Province.

Rainfall.

The rainfall data of India are now issued annually in a separate volume entitled "Rainfall of India." The twenty-second volume, that of 1912, contains the whole rainfall data of 2,791 stations which are there classified under their res-

ctive administrative divisions according to the following ɔeme :—

Province.	Number of stations.
rma	198
ɜam	124
ıgal	225
ɜar and Orissa	259
ited Provinces of Agra and Oudh	276
ıjab	1·8
rth-West Frontier Province	33
ɔbay	289
dras (including Puddukkottai, Travancore and Cochin)	490
ɔrg	10
ıtral Provinces	173
sore	77
uchistan	89
ɜhmir	37
jputana	185
ıtral India	116
derabad (Deccan)	22
Total	2,791

The information includes monthly statements of—

(*a*) the actual rainfall, day by day, of all the rainfall stations;

(*b*) the total rainfall of the month;

(*c*) the number of rainy days during the month;

(*d*) the average or normal rainfall of the month of all stations for which rainfall data of at least five years are available;

(*e*) the average or normal number of rainy days of the month for all stations for which rainfall data of five years or upwards are available.

Symons' rain-gauges are now used at all rain-gauge stations with the exception of those in Mysore. The time of measuring rainfall is 8 hrs. by local time throughout India, and the amounts registered give the rainfall of the previous 24 hours, and hence generally of the previous civil day.

The three tables (Tables 80 to 82) give summaries of the rainfall data of the year. The first and second tables give average rainfall data based on the returns of about 2,000 rain-gauge stations for the 15 chief political divisions and the 33 sub-divisions respectively, while the third table (Table 82) contains data of the number of rainy days for the 33 sub-divisions for the four seasons into which the year has been divided.

BLE. 80—*Average, over the 15 chief political divisions, of the actual and normal rainfall for the four seasons of the year 1912, and for the whole year.*

Division.	January and February.				March to May.				June to September.				October to December.				Whole year.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"		"	"	"		"	"	"		"	"	"		"	"	"	
·ma	0·70	0·27	+0·43	+159	10·41	10·79	−0·38	− 4	58·58	61·32	−2·74	− 4	9·22	7·28	+1·94	+27	78·91	79·66	−0·75	− 1
ɜam	2·81	2·02	+0·79	+ 39	26·18	25·09	+1·09	+ 4	63·66	64·70	−1·04	− 2	8·63	6·33	+2·30	+36	101·28	98·14	+3·14	+ 3
ıgal	0·68	1·26	−0·58	− 46	17·16	12·36	+4·80	+39	52·08	56·31	−4·23	− 8	9·84	5·40	+4·44	+82	79·76	75·33	+4·43	+ 6
ɜar and Orissa	0·93	1·19	−0·26	− 22	4·26	3·97	+0·29	+ 7	36·83	43·37	−6·54	−15	4·09	3·95	+0·14	+ 4	46·11	52·48	−6·37	−12
ited Provinces	1·25	1·52	−0·27	− 18	0·97	1·21	−0·24	−20	31·07	34·99	−3·92	−11	0·80	1·81	−1·01	−56	34·09	39·53	−5·44	−14
ıjab	2·30	2·09	+0·21	+ 10	1·58	1·69	−0·11	− 7	15·13	16·01	−0·88	− 5	0·46	0·81	−0·35	−43	19·47	20·60	−1·13	− 5
rth-West Frontier Province	3·56	2·66	+0·90	+ 34	2·92	3·89	−0·97	−25	8·96	8·46	+0·50	+ 6	0·34	1·23	−0·89	−72	15·78	16·24	−0·46	− 3
d	0·35	0·53	−0·18	− 34	0·11	0·39	−0·28	−72	4·66	5·49	−0·83	−15	0	0·22	−0·22	−100	5·12	6·63	−1·51	−23
jputana	0·53	0·55	−0·02	− 4	0·36	0·64	−0·28	−44	21·47	19·19	+2·28	+12	0·30	0·68	−0·38	−56	22·66	21·06	+1·60	+ 8
ɔbay	0·01	0·18	−0·17	− 94	1·23	1·60	−0·37	−23	43·06	42·39	+0·67	+ 2	4·89	3·67	+1·22	+33	49·19	47·84	+1·35	+ 3
ıtral India	0·41	0·87	−0·46	− 53	0·19	0·53	−0·34	−64	32·31	35·14	−2·83	− 8	2·29	1·56	+0·73	+47	35·20	38·10	−2·90	− 8
ıtral Provinces	1·89	0·75	+1·14	+152	0·39	1·17	−0·78	−67	34·20	36·92	−2·72	− 7	1·42	2·55	−1·13	−44	37·90	41·39	−3·49	− 8
derabad	1·19	0·25	+0·94	+376	1·13	1·86	−0·73	−39	19·98	26·25	−6·27	−24	1·98	4·12	−2·14	−52	24·28	32·48	−8·20	−25
sore	0·21	0·14	+0·07	+ 50	4·48	5·34	−0·86	−16	29·30	22·98	+6·32	+28	10·03	7·78	+2·25	+29	44·02	36·24	+7·78	+21
ıdras	0·43	0·84	−0·41	− 49	3·18	4·60	−1·42	−31	25·86	24·06	+1·80	+ 7	16·29	13·76	+2·53	+18	45·76	43·26	+2·50	+ 6
ɜan of India	1·01	0·90	+0·11	+ 12	4·28	4·39	−0·11	− 3	33·66	35·40	−1·74	− 5	4·93	4·33	+0·60	+14	43·88	45·02	−1·14	− 3

TABLE 81.—*Average over the 33 sub-divisions of the actual and normal rainfall for the four seasons of the year 1912, and for the whole year.*

Sub-division.	January and February.				March to May.				June to September.				October to December.				Whole year.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"		"	"	"		"	"	"		"	"	"		"	"	"	
1. Bay Islands	19·26	1·24	+18·02	+1453	6·72	15·38	−8·66	−56	63·20	61·44	+1·76	+3	14·93	20·73	−5·80	−28	104·11	98·79	+5·32	+5
2. Lower Burma	1·28	0·25	+1·03	+412	14·94	14·81	+0·13	+1	92·85	99·06	−6·21	−6	10·76	8·75	+2·01	+23	129·83	122·87	+6·96	+6
3. Upper Burma	0·21	0·27	−0·06	−22	6·46	7·29	−0·83	−11	29·11	28·44	+0·67	+2	7·89	5·99	+1·90	+32	43·67	41·99	+1·68	+4
4. Assam	2·81	2·02	+0·79	+39	26·18	25·09	+1·09	+4	63·66	64·70	−1·04	−2	8·63	6·33	+2·30	+36	101·28	98·14	+3·14	+3
5. Bengal	0·68	1·26	−0·58	−46	17·16	12·36	+4·80	+39	52·08	56.31	−4·23	−8	9·84	5·40	+4·44	+82	79·76	75·33	+4 43	+6
6. Orissa	2·33	1·00	+1·33	+133	4·57	5·77	−1·20	−21	40·44	44·01	−3·57	−8	6·73	6·94	−0·21	−3	54·07	57·72	−3·65	−6
7. Chota Nagpur	1·08	1·27	−0·19	−15	3·12	3·91	−0·79	−20	37·42	44·90	−7·48	−17	3·19	3·32	−0·13	−4	44·81	53·40	−8·59	−16
8. Bihar	0·38	1·23	−0·85	−69	4·49	3·30	+1·19	+36	35·23	42·62	−7·39	−17	3·31	2·99	+0·32	+11	43·41	50·14	−6·73	−13
9. United Provinces, East	0·77	1·23	−0·46	−37	0·97	1·12	−0·15	−13	30·55	35·46	−4·91	−14	1·17	2·31	−1·14	−49	33·46	40·12	−6·66	−17
10. Do. do. West	1·80	1·85	−0·05	−3	0·99	1·31	−0·32	−24	31·72	34·49	−2·77	−8	0·38	1·25	−0·87	−70	34·86	38·90	−4·04	−10
11. Punjab, East and North	2·44	2·34	+0·10	+4	1·55	1·80	−0·25	−14	17·76	18·61	−0·85	−5	0·56	0·91	−0·35	−38	22·30	23·66	−1·36	−6
12. Punjab, South-west	1·74	1·12	+0·62	+55	1·67	1·28	+0·39	+30	5·01	6·02	−1·01	−17	0·12	0·40	−0·28	−70	8·51	8·82	−0·31	−4
13. Kashmir	5·40	6·08	−0·68	−11	7·46	6·48	+0·98	+15	7·04	10·66	−3·62	−34	1·73	2·36	−0·63	−27	21·63	25·58	−3·95	−15
14. North-West Frontier Province.	3·56	2·66	+0·90	+34	2·92	3·89	−0·97	−25	8·96	8·46	+0·50	+6	0·34	1·23	−0·89	−72	15·78	16·24	−0·46	−3
15. Baluchistan	3·69	2·85	+0·84	+29	1·18	1·78	−0·60	−34	2·50	2·14	+0·36	+17	1·02	1·52	−0·50	−33	8·39	8·29	+0·10	+1
16. Sind	0·35	0·53	−0·18	−34	0·11	0·39	−0·28	−72	4·66	5·49	−0·83	−15	0	0·22	−0·22	−100	5·12	6·63	−1·51	−23
17. Rajputana, West	0·35	0·29	+0·06	+21	0·28	0·44	−0·16	−36	11·51	10·67	+0·84	+8	0·39	0·41	−0·02	−5	12·53	11·81	+0·72	+6
18. Do. East	0·62	0·65	−0·03	−5	0·38	0·73	−0·35	−48	26·13	22·35	+3·78	+17	0·26	0·78	−0·52	−67	27·39	24·51	+2·88	+12
19. Gujarat	0	0·15	−0·15	−100	0·05	0·27	−0·22	−81	40·24	33·47	+6·77	+20	1·60	1·16	+0·44	+38	41·89	35·05	+6·84	+20
20. Central India, West	0·38	0·54	−0·16	−30	0·13	0·39	−0·26	−67	29·75	32·20	−2·45	−8	2·52	1·18	+1·34	+114	32·71	34·31	−1·60	−5
21. Do. East	0·43	1·50	−1·07	−71	0·33	0·80	−0·47	−59	35·09	40·86	−5·77	−14	1·46	2·29	−0·83	−36	37·33	45·45	−8·12	−18
22. Berar	0·91	0·52	+0·39	+75	0·20	0·98	−0·78	−80	24·00	27·16	−3·16	−12	0·82	2·57	−1·75	−68	25·93	31·23	−5·30	−17
23. Central Provinces, West	1·87	0·93	+0·94	+101	0·19	0·97	−0·78	−80	36·23	41·31	−5·08	−12	2·42	2·42	0	0	40·99	45·63	−4·64	−10
24. Do., East	3·66	0·85	+2·81	+331	1·02	1·84	−0·82	−45	49·48	47·49	+1·99	+4	0·77	2·72	−1·95	−72	54·89	52·90	+1·99	+4
25. Konkan	0	0·18	−0·18	−100	1·54	1·98	−0·44	−22	102·16	105·56	−3·40	−3	7·20	5·43	+1·77	+33	110·90	113·15	−2·25	−2
26. Bombay Deccan	0·03	0·19	−0·16	−84	1·89	2·31	−0·42	−18	23·25	25·03	−1·78	−7	6·20	4·65	+1·55	+33	31·37	32·18	−0·81	−3
27. Hyderabad, North	0·93	0·24	+0·69	+287	0·83	1·50	−0·67	−45	20·05	30·15	−10·10	−33	1·58	3·90	−2·32	−59	23·39	35·79	−12·40	−35
28. Do., South	1·40	0·26	+1·14	+438	1·38	2 15	−0·77	−36	19·95	23·01	−3·06	−13	2·32	4·30	−1·98	−46	25·05	29·72	−4·67	−16
29. Mysore	0·21	0·14	+0·07	+50	4 48	5·34	−0·86	−16	29·30	22·98	+6·32	+28	10·03	7·78	+2·25	+29	44·02	36·24	+7·78	+21
30. Malabar	0·12	0·40	−0·28	−70	11·73	10·64	+1·09	+10	120·29	102·37	+17·92	+18	19·00	13·96	+5·04	+36	151·14	127·37	+23·77	+19
31. Madras, South-east	0·39	1·18	−0·79	−67	2·67	4·68	−2·01	−43	9·61	11·75	−2·14	−18	22·14	17·33	+4·81	+28	34·81	34·94	−0·13	0
32. Do., Deccan	0·20	0·19	+0·01	+5	1·30	2·46	−1·16	−47	15·50	14·98	+0·52	+3	8·87	6·59	+2·28	+35	25·87	24·22	+1·65	+7
33. Do., Coast, North	0·67	0·68	−0·01	−1	2·22	3·51	−1·29	−37	28·58	24·51	+4·07	+17	8·64	10·64	−2·00	−19	40·11	39·34	+0·77	+2

TABLE 82.—*Average, over the 33 sub-divisions of the actual and normal number of rainy days for the four seasons of the year 1912, and for the whole year.*

Sub-division.	January and February			March to May.			June to September.			October to December.			Whole year.		
	Actual.	Normal.	Departure from normal.	Actual.	Normal.	Departure from normal.	Actual.	Normal.	Departure from normal.	Actual.	Normal.	Departure from normal.	Actual.	Normal.	Departure from normal.
Bay Islands	10·0	2·3	+7·7	10·0	20·3	—10·3	76·5	79·9	—3·4	24·5	26·7	—2·2	121·0	129·2	—8·2
Lower Burma	2·3	0·4	+1·9	12·4	16·5	— 4·1	87·1	90·1	—3·0	15·1	12·3	+2·8	116·9	119·3	—2·4
Upper Burma	0·7	0·7	0	10·0	11·2	— 1·2	40·7	40·7	0	11·3	9·0	+2·3	62·7	61·6	+1·1
Assam	6·1	5·0	+1·1	36·2	32·7	+ 3·5	65·5	67·9	—2·4	10·7	8·8	+1·9	118·5	114·4	+4·1
Bengal	1·5	2·3	—0·8	21·7	14·4	+ 7·3	58·9	59·7	—0·8	8·3	6·1	+2·2	90·4	82·5	+7·9
Orissa	4·8	1·8	+3·0	7·4	8·9	— 1·5	52·0	52·2	—0·2	4·3	7·7	—3·4	68·5	70·6	—2·1
Chota Nagpur	2·2	2·7	—0·5	6·9	7·1	— 0·2	51·0	53·9	—2·9	3·4	4·6	—1·2	63·5	68·3	—4·8
Bihar	1·2	2·6	—1·4	7·5	5·3	+ 2·2	42·3	46·7	—4·4	3·8	3·5	+0·3	54·8	58·1	—3·3
United Provinces, East	1·6	2·7	—1·1	2·2	2·4	— 0·2	35·6	38·4	—2·8	2·3	2·4	—0·1	41·7	45·9	—4·2
Do. do., West	3·1	3·6	—0·5	2·7	3·1	— 0·4	32·1	34·9	—2·8	0·9	1·9	—1·0	38·8	43·5	—4·7
Punjab, East and North	4·0	4·5	—0·5	4·7	4·0	+ 0·7	18·3	19·9	—1·6	1·4	1·7	—0·3	28·4	30·1	—1·7
Punjab, South-west	4·1	2·7	+1·4	4·3	3·1	+ 1·2	6·9	8·1	—1·2	0·3	0·9	—0·6	15·6	14·8	+0·8
Kashmir	8·8	9·8	—1·0	14·4	12·9	+ 1·5	11·8	15·5	—3·7	5·0	5·2	—0·2	40·0	43·4	—3·4
North-West Frontier Province	6·5	5·1	+1·4	8·0	7·7	+ 0·3	11·9	11·6	+0·3	1·3	2·1	—0·8	27·7	26·5	+1·2
Baluchistan	8·0	6·6	+1·4	3·6	4·8	— 1·2	4·3	3·7	+0·6	2·8	3·5	—0·7	18·7	18·6	+0·1
Sind	1·0	1·5	—0·5	0·2	1·0	— 0·8	7·1	6·2	+0·9	0	0·5	—0·5	8·3	9·2	—0·9
Rajputana, West	1·0	0·8	+0·2	0·6	1·1	— 0·5	16·6	13·4	+3·2	0·9	0·8	+0·1	19·1	16·1	+3·0
Do., East	1·5	1·6	—0·1	1·1	1·9	— 0·8	30·1	27·6	+2·5	0·9	1·6	—0·7	33·6	32·7	+0·9
Gujarat	0	0·3	—0·3	0·2	0·6	— 0·4	41·0	36·4	+4·6	1·7	1·6	+0·1	42·9	38·9	+4·0
Central India, West	0·7	1·2	—0·5	0·4	0·9	— 0·5	38·1	39·1	—1·0	2·5	2·3	+0·2	41·7	43·5	—1·8
Do., East	1·5	3·1	—1·6	1·2	1·9	— 0·7	41·8	44·1	—2·3	1·6	3·2	—1·6	46·1	52·3	—6·2
Berar	1·8	1·1	+0·7	0·8	2·1	— 1·3	34·1	38·1	—4·0	2·1	3·6	—1·5	38·8	44·9	—6·1
Central Provinces, West	3·7	1·8	+1·9	0·6	2·3	— 1·7	42·2	47·1	—4·9	1·6	3·5	—1·9	48·1	54·7	—6·6
Do., East	6·7	1·6	+5·1	2·4	3·9	— 1·5	48·8	51·7	—2·9	1·6	3·9	—2·3	59·5	61·1	—1·6
Konkan	0	0·3	—0·3	2·4	2·7	— 0·3	79·7	85·9	—6·2	8·0	7·7	+0·3	90·1	96·6	—6·5
Bombay, Deccan	0·1	0·4	—0·3	3·7	4·4	— 0·7	33·1	38·3	—5·2	8·7	7·0	+1·7	45·6	50·1	—4·5
Hyderabad, North	2·3	0·5	+1·8	2·5	3·6	— 1·1	32·6	42·3	—9·7	2·9	5·9	—3·0	40·3	52·3	—12·0
Do., South	2·9	0·6	+2·3	3·3	4·3	— 1·0	32·9	37·7	—4·8	4·5	7·0	—2·5	43·6	49·6	—6·0
Mysore	0·6	0·3	+0·3	7·6	8·9	— 1·3	39·9	33·1	+6·8	15·2	11·8	+3·4	63·3	54·1	+9·2
Malabar	0·3	0·4	—0·1	12·9	12·9	0	89·7	85·3	+4·4	21·9	18·0	+3·9	124·8	116·6	+8·2
Madras, South-east	1·0	1·7	—0·7	4·9	6·9	— 2·0	15·7	18·1	—2·4	24·0	20·8	+3·2	45·6	47·5	—1·9
Do., Deccan	0·4	0	+0·4	3·2	4·4	— 1·2	26·9	25·2	+1·7	11·9	9·5	+2·4	42·4	39·1	+3·3
Do., Coast, North	1·5	0·8	+0·7	4·1	5·5	— 1·4	39·5	35·3	+4·2	9·5	10·9	—1·4	54·6	52·5	+2·1

I.—The cold weather period.—In point of precipitation and the general character of the associated disturbances there was a well-marked resemblance between the cold weather season of 1912 and the corresponding period of 1911.

A large number of disturbances were recorded in Persia, but with the exception of a few they were of small vitality, and either failed altogether to advance into India or produced comparatively little precipitation. On the other hand there was during February a marked tendency to the formation in the north Deccan of shallow depressions which were attended by thunderstorms there and over Orissa and the north coast of Madras.

The distribution of seasonal rainfall was somewhat unusual. Thus the aggregate quantity was in decided excess of the normal in Lower Burma, Assam, Orissa, the Punjab South-west, the North-West Frontier Province, the whole of the Central Provinces and Hyderabad, and was well below the average in Bengal, Bihar, the United Provinces East, Central India East and Madras South-east.

TABLE 83.

Sub-division.	Rainfall of period, January and February.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Lower Burma	1·28	0·25	+1·03	+412
Assam	2·81	2·02	+0·79	+ 39
Orissa	2·33	1·00	+1·33	+133
Punjab, South-west	1·74	1·12	+0·62	+ 55
North-West Frontier Province	3·56	2·66	+0·90	+ 34
Berar	0·91	0·52	+0·39	+ 75
Central Provinces, West	1·87	0·93	+0·94	+101
Central Provinces, East	3·66	0·85	+2·81	+331
Hyderabad, North	0·93	0·24	+0·69	+287
Hyderabad, South	1·40	0·26	+1·14	+438
Bengal	0·68	1·26	−0·58	− 46
Bihar	0·38	1·23	−0·85	− 69
United Provinces, East	0·77	1·23	−0·46	− 37
Central India, East	0·43	1·50	−1·07	− 71
Madras, South-east	0·39	1·18	−0·79	− 67

Over the rest of the plains of India the fall was very nearly normal in amount.

A noteworthy feature of the meteorology of the period was the occurrence during the first fortnight of January of remarkably heavy rainfall in the Bay Islands—a circumstance prejudicial to winter precipitation in northern India.

TABLE 84.

Sub-division.	Rainfall of period, January and February.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Bay Islands	19·26	1·24	+18·02	+1453

In Persia, Afghanistan as represented by Kabul and in Kashmir the weather was on the whole drier than usual, but in Baluchistan, and at Kashgar the total precipitation of the season was distinctly above the average.

TABLE 85.

Station or sub-division.	Rainfall of period, January and February.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Aden	0·55	0·72	—0·17	—24
Baghdad	1·56	2·41	—0·85	—35
Busrah	1·50	2·22	—0·72	—32
Bushire	3·68	4·74	—1·06	—22
Bahrein	1·16	0·96	+0·20	+21
Tehran	1·25	2·73	—1·48	—54
Ispahan	1·79	1·07	+0·72	+67
Jask	2·32	1·65	+0·67	+41
Muscat	2·82	1·86	+0·96	+52
Meshed	1·42	1·71	—0·29	—17
Kabul	0·40	2·93	—2·53	—86
Kashgar	1·53	0·27	+1·26	+467
Kashmir	5·40	6·08	—0·68	—11
Baluchistan	3·69	2·85	+0·84	+29

In the west of the equatorial belt there was in both months a pronounced excess of precipitation at Seychelles and a slight excess at Zanzibar.

TABLE 86.

Station.	Departure from normal of rainfall in		
	January.	February.	Period January and February.
	"	"	"
Zanzibar	+0·99	+2·89	+3·88
Seychelles	+8·66	+9·93	+18·59
Mauritius	—0·18	+24·40	+24·22

II.—The hot weather period.—During this period also a series of disturbances of the cold weather type were transmitted into north-west India from the highlands to the west of the Indus, but most of them were feebly marked, and within India the precipitation due to them occurred almost entirely in the extreme north. They had however the effect of hindering greatly the development of the usual hot weather characteristics.

The total precipitation of the whole season, March to May, fell short of the normal all over the country with the exception of Lower Burma, Assam, Bengal, Bihar, the Punjab South-west and Malabar. The deficiency was more than an inch in amount in Orissa and the whole of Madras excluding Malabar.

There was an almost entire absence in May of the usual temporary advances of monsoon winds, and it is owing to this circumstance that the Bay Islands which under ordinary conditions receive about 13″ of rain in May had only 6″.

Below are given the data for the region of greatest deficiency of rainfall:—

TABLE 87.

Sub-division.	Rainfall of period, March to May.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	″	″	″	
Bay Islands	6·72	15·38	—8·66	—56
Orissa	4·57	5·77	—1·20	—21
North-West Frontier Province	2·92	3·89	—0·97	—25
Madras, South-east	2·67	4·68	—2·01	—43
Madras, Deccan	1·30	2·46	—1·16	—47
Madras Coast, North	2·22	3·51	—1·29	—37

In Kashmir there was an excess of precipitation, but in Baluchistan and Persia the season was on the whole appreciably drier than usual. Conditions were apparently different in Arabia, for there all the three representative stations had more than their proper allowance.

TABLE 88.

Station or sub-division.	Rainfall of period, March to May.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	″	″	″	
Aden	1·26	1·05	+0·21	+ 20
Baghdad	0·82	2·45	—1·63	— 67
Busrah	1·53	2·03	—0·50	— 25
Bushire	0·49	1·41	—0·92	— 65
Bahrein	1·36	0·65	+0·71	+109
Tehran	2·05	3·51	—1·46	— 42
Ispahan	0·49	1·91	—1·42	— 74
Jask	0·53	0·83	—0·30	— 36
Muscat	3·81	0·87	+2·94	+338
Meshed	4·64	5·46	—0·82	— 15
Kashgar	1·32	1·35	—0·03	— 2
Kashmir	7·46	6·48	+0·98	+ 15
Baluchistan	1·18	1·78	—0·60	— 34

In the equatorial belt the total of the period was below the normal both at Zanzibar and Seychelles—at the former station due largely to the scanty fall in May and at the latter owing solely to the shortage in March and April, the quantity received in May having exceeded the normal by 50 per cent.

TABLE 89.

Station.	Departure from normal of rainfall in			
	March.	April.	May.	Period, March to May.
	″	″	″	″
Zanzibar	+1·33	—0·92	—7·97	—7·56
Seychelles	—6·72	—2·29	+3·11	—5·90
Mauritius	—6·29	+0·86	+2·86	—2·57

III.—The south-west monsoon period.—The monsoon rains of 1912 were distinctly more favourable than those of 1911.

The regular burst of the monsoon occurred on June 8th on the Malabar coast, on the 17th at Bombay, on the 18th in Gujarat and on the 20th in Bengal. The currents however failed to extend into the interior in the normal manner and it was not until July 10th that the rains were fully established in northern and central India. During the rest of July and the whole of August, with the exception of the interval between the 12th and the 23rd when an almost complete break obtained in north-west and central India, the monsoon was more active than usual; but its activity was shown chiefly in the tract of country stretching from Ganjam to Gujarat.

The currents weakened materially in the beginning of September and withdrew from north-west India on the 3rd, about a fortnight in advance of the normal date. The rainfall of September was in consequence in defect throughout the country with the exception of a few localities.

When summed over the whole period the rainfall was in excess by 20 per cent. in Gujarat and by 28 per cent. in

Mysore, in defect between 15 and 35 per cent. in Bihar, Chota Nagpur, the Punjab South-west, Sind, Hyderabad North and Madras South-east and nearly normal over the rest of the country.

TABLE 90.

Sub-division.	Rainfall of period, June to September.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Bay Islands	63·20	61·44	+ 1·76	+ 3
Lower Burma	92·85	99·06	− 6·21	− 6
Upper Burma	29·11	28·44	+ 0·67	+ 2
Assam	63·66	64·70	− 1·04	− 2
Bengal	52·08	56·31	− 4·23	− 8
Orissa	40·44	44·01	− 3·57	− 8
Chota Nagpur	37·42	44·90	− 7·48	−17
Bihar	35·23	42·62	− 7·39	−17
United Provinces, East	30·55	35·46	− 4·91	−14
Do. do., West	31·72	34·49	− 2·77	− 8
Punjab, East and North	17·76	18·61	− 0·85	− 5
Punjab, South-west	5·01	6·02	− 1·01	−17
North-West Frontier Province	8·96	8·46	+ 0·50	+ 6
Sind	4·66	5·49	− 0·83	−15
Rajputana, West	11·51	10·67	+ 0·84	+ 8
Do., East	26·13	22·35	+ 3·78	+17
Gujarat	40·24	33·47	+ 6·77	+20
Central India, West	29·75	32·20	− 2·45	− 8
Do. do., East	35·09	40·86	− 5·77	−14
Berar	24·00	27·16	− 3·16	−12
Central Provinces, West	36·23	41·31	− 5·08	−12
Do. do., East	49·48	47·49	+ 1·99	+ 4
Konkan	102·16	105·56	− 3·40	− 3
Bombay, Deccan	23·25	25·03	− 1·78	− 7
Hyderabad, North	20·05	30·15	−10·10	−33
Do., South	19·95	23·01	− 3·06	−13
Mysore	29·30	22·98	+ 6·32	+28
Malabar	120·29	102·37	+17·92	+18
Madras, South-east	9·61	11·75	− 2·14	−18
Do., Deccan	15·50	14·98	+ 0·52	+ 3
Do., Coast, North	28·58	24·51	+ 4·07	+17

On the mean of all the rain-gauge stations in the plains of India the aggregate fall of the period was in defect by 1·7″ or 5 per cent., as compared with 4″ or 11 per cent., in the previous year.

At stations in the Indian Ocean also the rainfall of the period varied but slightly from the normal.

TABLE 91.

Station.	Rainfall of period, June to September.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Zanzibar	8·13	8·39	−0·26	−3
Seychelles	16·92	14·63	+ 2·29	+16
Mauritus	6·17	8·34	−2·17	−26

Kashmir had less than its ordinary share of precipitation, but in Baluchistan there occurred an excess of 17 per cent. The data for Persia indicate that during June, when the monsoon in India was very weak and unsteady, weather was unusually disturbed at Tehran, Ispahan and Meshed.

TABLE 92.

Station or Sub-division.	Rainfall of period, June to September.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Aden	0·02	0·37	−0·35	−95
Baghdad	0	0·05	−0·05	−100
Busrah	0	0·19	−0·19	−100
Bushire	0	0·01	−0·01	−100
Bahrein	0	0	0	0
Tehran	0·54	0·43	+0·11	+26
Ispahan	0·22	0·08	+0·14	+175
Jask	0	0·06	−0·06	−100
Muscat	0·26	0·17	+0·09	+53
Meshed	0·69	0·45	+0·24	+53
Kabul	0	0·55	−0·55	−100
Kashmir	7·04	10·66	−3·62	−34
Baluchistan	2·50	2·14	+0·36	+17

IV.—The retreating south-west monsoon period.—In October the weather was unusually dry in the Gangetic plain and the central parts of the country owing to the abrupt retreat of the monsoon from these areas at the beginning of the month, about a fortnight before the normal date. On the other hand the monsoon was more than usually vigorous in Bengal, Assam, Burma and the south of the Peninsula.

ıring November the weather was controlled chiefly by three ıformed disturbances which produced precipitation in ɔess of the normal over by far the greater part of the coun-. December was abnormally dry except in Baluchistan: s was especially the case in Madras South-east and the Bay ands, where the defect in the month's rainfall amounted to "and 3¾" respectively.

Several disturbances of the cold weather type advanced vards India from Persia during December, but they failed give any rain of importance in the plains.

The rainfall of the period was abundant in Burma, the eater part of north-east India, Central India West, Gujarat Konkan, the Bombay Deccan, Mysore and Madras except- the northern coast districts, the excess being large in ount in Bengal, Malabar and Madras South-east. It was the other hand in large defect in Hyderabad, Berar, the ntral Provinces East and the United Provinces East which ıally receive moderate to heavy rain during the period.

Over nearly the whole of north-west India also the period s remarkably dry.

The statement below gives data for the areas where the artures from the normal were most marked.

TABLE 93.

SUB-DIVISION.	RAINFALL OF PERIOD, OCTOBER TO DECEMBER.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Islands	14·93	20·73	— 5·80	—28
er Burma	10·76	8·75	+ 2·01	+ 23
er Burma	7·89	5·99	+ 1·90	+ 32
m	8·63	6·33	+ 2·30	+ 36
gal	9·84	5·40	+ 4·44	+ 82
ed Provinces, East	1·17	2·31	—1·14	—49
ed Provinces, West	0·38	1·25	—0·87	—70
r	0·82	2·57	—1·75	—68
ral Provinces, East	0·77	2·72	—1·95	—72
erabad, North	1·58	3·90	—2·32	—59
erabad, South	2·32	4·30	—1·98	—46
re	10·03	7·78	+ 2·25	+ 29
bar	19·00	13·96	+ 5·04	+ 36
as, South-east	22·14	17·33	+ 4·81	+ 28
as, Deccan	8·87	6·59	+ 2·28	+ 35
as Coast, North	8·64	10·64	—2·00	—19

recipitation was as largely in defect in Persia, Baluchis- and Kashmir as in the plains of upper India.

TABLE 94.

STATION OR SUB-DIVISION.	RAINFALL OF PERIOD, OCTOBER TO DECEMBER.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Aden	0·07	0·51	−0·44	− 86
Baghdad	1·38	2·04	−0·66	− 32
Busrah	1·70	1·79	−0·09	− 5
Bushire	1·18	4·91	−3·73	− 76
Bahrein	1·82	0·86	+0·96	+112
Tehran	2·06	2·63	−0·57	− 22
Ispahan	0·07	1·68	−1·61	− 96
Jask	1·93	1·63	+0·30	+ 18
Muscat	1·17	1·04	+0·13	+ 13
Meshed	2·28	1·75	+0·53	+ 30
Kashmir	1·73	2·36	−0·63	− 27
Baluchistan	1·02	1·52	−0·50	− 33

At Zanzibar precipitation was 37 per cent. above the normal, owing entirely to an unusually large rainfall in December, while it was deficient at Seychelles in all the three months. At Mauritius there was an excess in October, and a deficiency in the rest of the period.

TABLE 95.

STATION.	DEPARTURE FROM NORMAL OF RAINFALL IN			
	October.	November	December.	Period, October to December.
	"	"	"	"
Zanzibar	−2·69	−2·94	+12·28	+6·65
Seychelles	−0·48	−6·00	− 1·37	−7·85
Mauritius	+5·25	−0·72	− 0·14	+4·39

The year.—On the whole 1912 was a year of deficient rainfall, though not to the same extent as 1911. The defect occurred mainly in the period of the south-west monsoon, the rainfall

amounts received in the other three seasons being not appreciably different from the average.

TABLE 96.

PERIOD.	RAINFALL OF INDIA (WHEN THE SIZE OF AREAS IS TAKEN INTO ACCOUNT) IN 1912.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Cold weather	1·01	0·90	+0·11	+12
Hot "	4·28	4·39	—0·11	− 3
South-west monsoon	33·66	35·40	—1·74	− 5
Retreating south-west monsoon	4·93	4·33	+0·60	+14
Whole year	43·88	45·02	−1·14	− 3

There were also considerable geographical variations. Thus of the larger provinces Assam, Bengal and Mysore had between 3″ and 8″ more than their normal annual fall, while in Bihar and Orissa, the United Provinces and Hyderabad the recorded amounts were upwards of 5″ in defect.

At the three stations representative of the conditions in the Indian Ocean the recorded yearly aggregate was above the normal; the excess at Seychelles and Mauritius was due chiefly to the unusual rainfall of the early part of the year, and that at Zanzibar to the abundant fall in December.

In Persia the weather was drier even than usual in almost all months of the year, but further east in Baluchistan the fall was normal.

In Kashmir the total quantity received during the year fell short of the normal by 15 per cent.

TABLE 97.

STATION OR SUB-DIVISION.	ANNUAL RAINFALL.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	"	"	"	
Zanzibar	66·01	63·30	+ 2·71	+ 4
Seychelles	104·41	97·28	+ 7·13	+ 7
Mauritius	72·90	49·03	+ 23·87	+ 49
Aden	1·90	2·65	— 0·75	— 28
Baghdad	3·76	6·95	— 3·19	— 46
Busrah	4·73	6·23	— 1·50	— 24
Bushire	5·35	11·07	— 5·72	— 52
Bahrein	4·34	2·47	+ 1·87	+ 76
Tehran	5·90	9·30	— 3·40	— 37
Ispahan	2·57	4·74	— 2·17	— 46
Jask	4·78	4·17	+ 0·61	+ 15
Muscat	8·06	3·94	+ 4·12	+ 105
Meshed	9·03	9·37	— 0·34	— 4
Kashmir	21·63	25·58	— 3·95	— 15
Baluchistan	8·39	8·29	+ 0·10	+ 1

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Table A.—Abstract of observations taken at 10 hrs. and 16 hrs. at 20 stations in India, etc., in the year 1912.

TABLE

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

Number of sub-division.	Station.	Elevation of barometer 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 gravity, 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.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	III.—Bengal.																	
5	Calcutta	21	29·851	29·738	·113	29·793	+·005	29·761	87·6	71·2	16·4	102·2	52·0	50·2	81·8	84·9	78·9	+0·9
	V.—United Provinces of Agra and Oudh.																	
9	Allahabad	309	29·552	29·434	·118	29·489	+·013	29·751	90·7	66·4	24·3	115·5	40·5	75·0	82·4	80·0	77·5	+0·2
	VI.—Punjab.																	
11	Lahore	702	29·135	29·042	·093	29·081	+·010	29·751	90·2	63·4	26·8	118·2	37·2	81·6	79·5	88·0	75·9	+1·2
	IX.—Rajputana.																	
18	Jaipur	1,431	28·441	28·341	·100	28·385	+·00[illegible]	29·748	91·3	66·1	25·2	116·3	40·1	76·2	82·9	88·7	77·6	+0·5
	X.—Bombay.																	
25	Bombay	37	29·885	29·785	·100	29·832	+·005	29·809	87·3	75·9	11·4	95·2	64·5	30·8	81·5	84·0	80·5	+1·2
	XIV.—Mysore.																	
29	Bangalore	3,021	26·967	26·855	·112	26·914	+·013	29·741	85·3	64·7	20·6	98·6	48·8	49·8	77·0	82·4	73·7	+0·9
	XV.—Madras.																	
31	Pudukkottai	318	29·615	29·474	·141	29·547	...	29·793	93·8	74·9	18·9	106·8	61·1	45·7	85·3	90·5	84·4	...
	Madras	22	29·896	29·782	·114	29·843	0	29·796	91·9	75·5	16·4	108·2	60·5	47·7	86·8	86·8	82·7	+0·9
	Kashmir.																	
14	Srinagar ‖	5,204	25·007	24·931	·076	24·963	...	24·933	48·7	32·9	15·8	57·4	25·8	31·6	38·5	46·7	38·9	...
	Hill stations, excluding Kashmir and Baluchistan.																	
	Simla	7,232	23·127	23·081	·046	23·096	+·020	23·058	61·1	50·1	11·0	82·1	30·1	52·0	56·4	57·9	55·3	+0·2
	Sarain	...	23·165	23·109	·056	23·212	...	23·091	61·3	43·0	18·3	83·3	21·0	62·3	55·7	56·1	51·7	...
	Kalabagh¶	...	20·142	20·090	·052	20·102	...	20·080	52·6	41·5	11·1	64·0	26·1	37·9	49·4	49·9	46·7	...
	Mukteswar	7,592	22·853	22·794	·059	22·817	...	22·775	63·4	46·6	16·8	84·0	27·1	56·9	56·6	59·5	54·8	...
	Katmandu	4,388	25·667	25·571	·096	25·616	+·051*	25·575	77·2	53·6	23·6	89·4	32·2	57·2	67·4	73·1	65·1	+0·5*
	Ootacamund	7,327	23·079	23·010	·069	23·041	...	22·977	66·8	49·3	17·5	77·0	34·7	42·3	62·8	61·4	57·8	...
	Kodaikanal	7,688	22·853	22·791	·062	22·822	...	22·762	65·8	52·2	13·6	77·3	40·7	36·6	62·1	60·1	58·2	...
	Dodabetta	8,539†	22·092	22·027	·065	22·056	...	21·993	60·0	48·2	11·8	70·9	38·8	32·1	56·9	56·1	53·8	...
	Extra India.																	
	Diego Garcia†	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Seychelles	15	29·964	29·894	·080	29·945	+·001*	29·882	83·6	77·6	6·0	88·3	72·5	15·8	81·3	82·2	79·4	+1·3*
	Mauritius‡	181	...	...	...	29·881	—·006	30·010	79·8§	67·4§	12·4	90·2	53·9	36·3	...	...	73·0§	...

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

stations in India, etc., in the year 1912.

Temperature, Wet-bulb.			Vapour tension in inches of mercury.					Humidity.					Cloud.				Rainfall.		Station.	Number of sub-division.
Mean 10 hrs.	Mean 16 hrs.	Mean of three previous columns.	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 rainfall for the year.	Heaviest rainfall during the year.		
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
																			III.—Bengal.	
74·2	74·3	72·5	·703	·767	·725	·746	+·002	89	69	60	75	— 2	4·3	4·7	4·5	—0·1	56·82	3·72	Calcutta	5
																			V.—United Provinces of Agra and Oudh.	
68·3	69·2	66·4	·537	·532	·475	·526	—·041	79	48	36	57	— 4	3·1	3·1	3·1	—0·4	28·42	3·31	Allahabad	9
																			VI.—Punjab.	
66·0	68·6	64·3	·468	·496	·467	·487	—·011	75	49	36	55	— 1	2·2	2·6	2·4	—0·5	14·70	3·36	Lahore	11
																			IX.—Rajputana.	
65·9	67·0	63·8	·433	·456	·417	·442	—·023	63	40	32	48	— 5	2·8	4·2	3·5	—0·2	31·75	4·45	Jaipur	18
																			X.—Bombay.	
74·9	76·0	71·2	·724	·782	·793	·784	—·008	80	72	68	76	— 2	4·0	3·8	3·9	+0·1	84·05	6·47	Bombay	25
																			XIV.—Mysore.	
67·2	67·1	65·6	·537	·558	·503	·541	—·001	88	61	48	67	— 1	4·7	5·0	4·9	...	43·11	4·91	Bangalore	29
																			XV.—Madras.	
75·7	76·8	75·5	·785*	·771	·754	·781*	...	92*	63	53	69*	...	5·0	5·9	5·5	...	37·60	2·47	Pudukkottai	31
77·8	78·3	76·5	·801	·834	·856	·846	+·037	91	66	67	77	+ 1	4·3	4·0	4·1	—0·9	46·69	5·79	Madas.	
																			Kashmir.	
36·4	43·4	37·0	·159	·192	·249	·198	...	85	81	77	81‡‡	...	6·7	6·1	6·4	...	3·95	1·57	Srinagar	14
																			Hill stations, excluding Kashmir and Baluchistan.	
47·9	49·5	46·9	·227	·264	·284	·257	—·026	58	54	57	58	— 3	4·8	5·3	5·1	0	58·92	3·66	Simla.	
47·7	48·7	...	...	·272	·291	...	...	...	59	62	...	...	5·0	6·1	5·5	...	59·78	5·22	Sarain.	
43·9	44·7	...	...	·250	·261	...	...	...	68	70	...	...	5·6	6·5	6·1	...	55·32	7·78	Kalabagh.	
48·9	51·2	46·9	·209	·283	·310	·268	...	60	58	59	60	...	4·6	5·9	5·3	...	52·86	4·74	Mukteswar.	
60·2	62·2	58·0	·388	·462	·455	·437	—·012	86	67	55	71	— 2	3·9	5·2	4·5	0	48·98	2·15	Katmandu.	
54·1	54·9	51·9	·301	332	·364	·332	...	84	60	69	71	...	5·9	5·6	5·7	...	54·25	2·02	Ootacamund.	
54·5	55·6	52·3	·281	·357	·401	·338	...	73	65	77	72	...	5·3	7·3	6·3	...	65·23	4·07	Kodaikanal.	
50·5	51·4	48·3	·224	·307	·335	·288	...	64	67	75	69	...	6·4	7·6	7·0	...	54·84	3·01	Dodabetta.	
																			Extra India.	
...	...	...	...	...	...	...	...	...	...	...	...	...	5·7	5·3	5·5	...	53·66	3·80	Diego Garcia.	
75·9	76·3	74·6	·694	·828	·827	·799	—·013	73	77	74	77	— 4	5·9	6·1	6·0	—0·2**	104·41	8·35	Seychelles.	
...	...	68·5	...	...	...	·626	...	...	...	...	76	...	...	...	5·8	...	68·08	7·32	Mauritius.	

† Observations of 8 months and of 9 hrs. and 15 hrs.
‡ Mean of 11 months.
° " " 10 "
* " " 5 "

‖ Observations of 2 months only.
¶ " " 7 "
** Departure from old normal.

‡‡ Mean of three previous columns.

Table B.—Abstract of observations taken at 8 hrs. at 222 stations in India, etc., in the year 1912.

(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 2,000 stations.

	Pressure departure from normal of year.	Temperature of air.								Wind	Hygrometry.				Cloud.		Rainfall.		
		Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Absolute range during year.	Departure of velocity from normal.	Mean humidity of year.	Departure from normal of year.	Mean vapour tension of year.	Departure from normal of year.	Mean cloud amount of year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.
urma	+·008	88·4	−0·3	71·5	+0·5	79·9	+0·1	16·9	46·7	−0·5	84	+1	·748	0	5·1	+0·3	78·91	79·66	−0·75
ssam	+·012	82·6	−0·8	66·5	−0·3	74·5	−0·5	16·1	48·8	0	89	−2	·692	−·009	5·2	−1·0	101·28	98·14	+3·14
engal	+·011	86·1	−0·1	69·7	+0·1	77·9	0	16·4	48·7	−0·8	85	0	·749	−·007	4·5	0	79·76	75·33	+4·43
ihar and Orissa	+·013	88·3	−0·3	68·4	−0·2	78·3	−0·3	19·9	61·7	+0·1	76	−1	·668	−·001	3·5	−0·2	46·11	52·48	−6·37
nited Provinces of Agra and Oudh	+·012	89·1	−0·1	65·7	−0·5	77·4	−0·3	23·4	71·3	−0·3	67	−2	·565	−·015	2·5	−0·5	34·09	39·53	−5·44
unjab	+·015	89·4	0	63·6	+0·3	76·5	+0·2	25·8	80·3	0	61	−2	·472	−·028	2·5	−0·2	19·47	20·60	−1·13
orth-West Frontier Province .	−·003	87·9	−0·1	61·0	+0·2	74.5	0	26·8	84·1	−0·5	66	+3	·497	+·011	2·6	+0·1	15·78	16·24	−0·46
nd	+·008	92·3	+1·2	69·1	+1·0	80·7	+1·2	23·2	70·4	−1·1	64	+1	·613	+·042	2·2	−0·6	5·12	6·63	−1·51
ajputana	+·008	91·7	+0·2	67·9	+0·2	79·8	+0·2	23·8	75·2	+0·3	51	−3	·451	−·039	2·6	−0·3	22·66	21·06	+1·60
ombay	+·005	89·9	+0·9	69·6	+0·4	79·8	+0·6	20·3	53·6	−0·7	68	0	·632	−·008	3·5	−0·1	49·19	47·84	+1·35
entral India	+·013	89·3	+0·6	65·2	+0·3	77·2	+0·5	24·1	73·6	−0·6	61	−1	·501	−·020	3·5	+0·5	35·20	38·10	−2·90
entral Provinces	+·011	90·7	+0·8	67·5	+0·6	79·0	+0·7	23·2	70·2	+0·3	58	−5	·500	−·042	3·2	−0·3	37·82	41·39	−3·57
yderabad	+·005	92·1	+1·0	69·6	+0·7	81·3	+0·9	22·3	60·9	−0·9	61	−4	·558	−·028	3·7	−0·5	24·28	32·48	−8·20
ysore	+·011	85·5	+0·5	65·5	+0·7	75·4	+0·6	19·9	46·4	+0·1	76	+1	·587	+·005	5·3	+0·1	44·02	36·24	+7·78
adras	+·007	90·8	+0·3	74·3	+0·7	82·6	+0·6	16·5	45·1	+0·3	77	0	·770	+·006	4·7	0	45·76	43·26	+2·50

TABLE

(2) *Abstract of observations taken at 8 hrs. at 222*

Number of sub-division.	STATION.	Elevation 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 of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity, at 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 hrs. temperature of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	I.—Burma.																				
2	Victoria Point	147	29·796	...	29·872	29·957	29·657	·300	·152	78·9	86·7	...	74·9	...	80·8	...	11·7	96·1	65·2	30·9	19·3
	Mergui	65	29·875	+·010	29·871	30·057	29·706	·351	·159	77·4	87·2	—0·3	71·5	+0·3	79·3	0	15·8	97·0	60·8	36·2	23·9
	Tavoy	19	29·923	—·001	29·875	30·105	29·719	·386	·170	76·2	88·2	+0·3	72·7	+1·5	80·4	+0·9	15·5	99·5	58·3	41·2	25·4
	Moulmein	94	29·844	+·020?	29·876	30·039	29·582	·457	·186	75·7	88·2	+0·1	73·0	+0·6	80·5	+0·4	15·2	99·5	61·3	38·2	23·9
	Rangoon	18	29·907	+·008	29·863	30·108	29·637	·471	·197	76·7	89·1	—0·4	73·3	+0·4	81·2	0	15·9	102·0	60·0	42·0	23·9
	Bassein	27?	29·887	+·012	29·850	30·106	29·591	·515	·205	77·5	88·6	+0·5	73·4	+1·4	81·0	+0·9	15·1	102·2	59·9	42·3	23·1
	Diamond Island	41	29·873	+·005	29·849	30·102	29·608	·494	·195	80·7	85·5	0	75·6	+0·4	80·5	+0·2	9·9	92·9	64·5	28·4	16·9
	Toungoo	164	29·754	+·017	29·863	29·973	29·476	·497	·204	75·7	89·7	—0·5	71·2	+0·5	80·5	0	18·5	105·0	53·4	51·6	27·7
	Kyaukpyu	18	29·876	...	29·834	30·133	29·490	·643	·225	77·3	85·1	...	72·7	...	78·9	...	12·4	95·0	56·4	38·6	21·7
	Akyab	20	29·883	+·011	29·843	30·152	29·461	·691	·237	75·6	85·7	—0·4	72·0	—0·2	78·9	—0·3	13·7	98·9	54·5	44·4	23·2
3	Thayetmyo	121	29·772	+·003	29·836	30·024	29·445	·579	·214	77·0	91·1	—0·7	70·4	+0·8	80·8	+0·1	20·7	106·9	49·4	57·5	31·7
	Minbu	*165*	29·727	+·003	29·837	29·994	29·379	·615	·222	76·5	91·3	—1·0	71·4	+0·3	81·4	—0·3	19·9	108·8	52·0	56·8	32·2
	Yamethin	657	29·222	—·009	29·836	29·467	28·903	·564	·213	74·7	91·3	—0·9	70·2	+0·8	80·7	—0·1	21·1	107·8	51·5	56·3	31·5
	Mandalay	250	29·640	+·010	29·840	29·898	29·299	·599	·229	77·3	98·8	+1·3?	70·9	—0·2	82·3	+0·5?	22·8	110·7	52·1	58·6	34·1
	Monywa	280	29·622	...	29·854	29·892	29·268	·624	·240	76·1	91·9	...	71·4	...	81·7	...	20·5	110·3	53·1	57·2	31·5
	Lashio	2,820	27·126	+·009	27·072	27·345	26·831	·514	·217	65·5	72·8‡	—3·0‡	62·1§	+0·7§	60·9‡	—1·4‡	24·3‖	85·8	42·5	43·3	35·7
	Bhamo	*381*	29·529	+·029	29·881	29·818	29·160	·658	·257	69·8	85·9	—0·7	64·8	—0·3	75·4	—0·5	21·1	102·4	43·1	59·3	33·2
	Myitkyina	458	29·427	...	29·855	29·729	29·074	·655	·254	68·6	83·6	...	65·5	...	74·5	...	18·1	100·2	46·0	54·2	29·6
	II.—Assam.																				
4	Dibrugarh	353	29·537	...	29·863	29·963	29·145	·718	·273	68·3	80·1	...	65·2	...	72·6	...	14·9	95·4	45·6	49·8	26·5
	Sibsagar	333	29·575	+·008	29·875	29·909	29·175	·734	·276	69·9	80·9	—0·9	65·4	—0·5	73·2	—0·7	15·5	94·6	44·0	50·6	25·6
	Tezpur	252	29·649	...	29·866	30·000	29·256	·744	·278	70·2	83·1	...	66·9	...	75·1	...	16·2	95·1	47·8	47·3	26·9
	Gauhati	195	29·707	...	29·862	30·051	29·252	·799	·282	71·7	83·8	...	66·1	...	75·0	...	17·7	95·8	47·1	48·7	27·6
	Dhubri	115	29·777§	+·014§	29·849§	30·132	29·325	·807	·259	71·9	82·1	—0·7	67·8	—0·3	75·0	—0·5	14·3	92·5	48·1	44·4	24·3
	Silchar	104	29·799	+·013	29·858	30·130	29·389	·741	·266	72·0	85·4	—0·7	67·5	0	76·4	—0·4	17·9	98·3	46·3	52·0	30·1
	III.—Bengal.																				
5	Cox's Bazar	36	29·852	...	29·834	30·158	29·392	·766	·247	75·5	84·9	...	69·8	...	77·4	...	15·1	94·2	53·2	41·0	24·4
	Chittagong	87	29·800	+·009	29·834	30·130	29·333	·797	·256	74·1	84·8	0	69·3	—0·2	77·0	—0·1	15·5	92·0	50·5	41·5	24·8
	Noakhali	43	29·845	...	29·835	30·180	29·407	·773	·264	74·6	83·9	...	69·7	...	76·8	...	14·1	92·8	49·9	42·9	23·5
	Barisal	12	29·860	+·013	29·819	30·220	29·408	·812	·266	76·5	85·9	—0·1	70·1	—0·3	78·0	—0·2	15·8	95·3	51·6	43·7	26·2
	Narayanganj	26	29·839	+·006	29·814	30·189	29·397	·792	·277	75·3	86·2	—0·3	70·5	0	78·3	—0·1	15·7	95·5	52·3	43·2	25·2
	Mymensingh	63	29·821	+·016	29·837	30·163	29·397	·766	·263	72·5	84·8	+0·5	69·2	+0·8	77·0	+0·7	15·6	95·1	49·6	45·5	26·0
	Bogra	75	29·797	+·017	29·824	30·160	29·363	·797	·271	72·9	85·7	—0·7	68·3	+0·2	77·0	—0·3	17·4	101·2	48·7	52·5	29·6
	Dinajpur	123	29·734	+·009	29·815	30·110	29·286	·824	·283	71·6	85·3	—0·8	66·8	—0·3	76·1	—0·5	18·5	97·3	43·0	54·3	30·4
	Jalpaiguri	283	29·590	+·010	29·838	29·948	29·150	·798	·287	71·1	85·1	+1·4	66·5	+0·6	75·8	+1·0	18·5	96·9	45·9	51·0	29·3
	Saugor Island	25	29·833	+·009	29·803	30·193	29·264	·929	·311	77·6	84·9	—0·6	73·7	0	79·3	—0·3	11·2	93·7	53·7	40·0	22·6

N.B.—Elevations in italics indicate barometrical determinations.
‡ Mean of 3 months.
§ „ „ 11 „
‖ „ „ 2 „

3.

tations in India, etc., in the year 1912.

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind velocity. Mean velocity in miles per hour of year.	Normal velocity of year.	Departure from normal of year.	Hygrometry, 8 hrs. Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs in inches of mercury of year.	Departure from normal in inches of mercury of year.	Cloud. Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Rainfall. Number of rainy days during year.	Normal number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	STATION.
23	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
																									I.—Burma.
21	39	114	53	51	23	33	22	10	4·9*	...	...	84	...	·825	...	5·8	...	143	...	...	170·13	...	...	4·36	Victoria Point.
82	...	8	8	8	4	6	...	...	2·6	1·4	+1·2	88	+ 3	·826	+·010	4·4	− 0·9	144	155·7	−11·7	168·73	163·22	+ 5·51	5·64	Mergui.
53	1	1	...	...	6	5	...	...	1·2*	1·1	+0·1	87	0	·795	−·006	4·1	− 1·0	130	147·0	−17·0	187·73	216·84	−28·11	9·35	Tavoy.
81	6	74	121	31	42	5	6	...	2·8	2·3	+0·5	88	+ 1	·795	−·005	5·2	+ 0·3	146	139·9	+ 6·1	184·56	187·86	− 3·30	7·90	Moulmein.
91	40	68	24	23	56	29	19	16	1·8	3·1	−1·3	86	− 2	·801	−·004	7·2	+ 2·2	134	121·4	+12·6	99·43	97·63	+ 1·80	3·44	Rangoon.
27	10	16	16	15	24	11	20	27	3·4	3·2	+0·2	87	− 1	·835	+·018	4·4	− 0·5	119	125·8	− 6·8	101·74	109·77	− 8·03	4·80	Bassein.
15	36	68	41	18	25	58	42	63	7·7	6·4	+1·3	81	+ 2	·854	+·037	4·7	− 0·7	120	112·9	+ 7·1	115·34	116·61	− 1·27	6·35	Diamond Island.
38	27	28	13	62	66	18	1	13	1·4	2·4	−1·0	85	− 1	·756	−·022	6·2	+ 1·0	119	114·3	+ 4·7	87·83	82·26	+ 5·57	4·03	Toungoo.
57	15	104	29	120	18	8	2	13	3·3*	...	...	84	...	·802	...	4·4	...	123	...	...	162·97	...	...	7·99	Kyaukpyu.
43	71	93	69	41	30	8	1	10	2·6	2·4	+0·2	89	+ 1	·792	−·013	4·7	− 0·4	135	123·8	+11·2	235·90	191·44	+44·46	8·19	Akyab.
75	10	19	4	39	93	20	2	4	2·1*	3·7	−1·6	79	+ 3	·751	+·043	5·6	+ 1·4	79	72·7	+ 6·3	45·65	37·34	+ 8·31	2·43	Thayetmyo.
7	11	13	2	112	80	23	1	117	2·9	6·3	−3·4	76	+ 1	·700	−·002	4·5	+ 1·1	51	56·3	− 5·3	35·21	34·33	+ 0·88	2·86	Minbu.
33	22	3	...	107	75	1	...	25	2·8	4·2	−1·4	79	+ 1	·686	−·016	3·9	+ 1·2	61	62·4	− 1·4	34·08	38·65	− 4·57	2·02	Yamethin.
15	8	14	6	112	63	21	8	17	3·2	3·7	−0·5	73	− 2	·665	−·045	2·7	− 1·6	49	50·3	− 1·3	30·46	32·97	− 2·51	2·92	Mandalay. †
68	111	8	14	94	25	4	2	40	2·2	...	...	78	...	·711	...	5·4	...	41	44·1	− 0·1	29·73	32·18	− 2·45	2·68	Monywa.
52	6	31	10	5	17	31	7	7	2·1*	...	...	86	0	·551	−·010	7·2	+ 0·5	108	99·8	+ 8·2	56·98	62·25	− 5·27	2·46	Lashio.
00	13	30	2	1	2	7	...	2	1·0	1·8	−0·8	91	+ 4	·684	+·010	6·6	+ 1·5	95	99·6	− 4·6	82·56	71·69	+10·87	7·20	Bhamo.
91	6	25	14	9	13	4	...	4	1·0	...	...	87	...	·639	...	5·3	...	108	105·0	+ 3·0	86·85	76·14	+10·71	4·44	Myitkyina.
																									II.—Assam.
56	...	2	6	2	...	...	...	...	0·7	...	...	95	...	·676	...	5·0	...	135	134·8	+ 0·2	112·85	106·50	+ 6·35	5·45	Dibrugarh.
76	41	84	10	5	20	17	...	12	2·0	1·8	+0·2	91	− 4	·689	−·022	7·3	+ 0·2	123	129·1	− 6·1	97·22	96·27	+ 0·95	5·84	Sibsagar. ¶
44	18	123	128	5	9	13	19	1	2·4	...	...	87	...	·669	...	4·9	...	112	106·5	+ 5·5	71·93	69·46	+ 2·47	4·16	Tezpur. **
81	1	11	9	7	2	2	2	1	1·2	...	...	87	...	·700	...	6·1	...	102	92·8	+ 9·2	74·96	62·88	+12·08	4·90	Gauhati.
42	10	124	125	19	22	22	1	1	4·1	3·8	+0·3	86	− 1	·699	+·001	4·7	− 0·2	108	93·9	+14·1	120·69	94·62	+26·07	7·50	Dhubri.
68	5	37	32	16	2	5	...	1	1·3	1·7	−0·4	88	0	·720	−·007	3·4	− 3·0	146	136·6	+ 9·4	127·47	124·56	+ 2·91	7·33	Silchar.
																									III.—Bengal.
3	25	69	80	146	27	6	4	6	3·9*	...	...	87	...	·778	...	4·6	...	113	...	...	131·10	...	...	7·32	Cox's Bazar.
25	2	85	59	91	2	1	...	1	1·6	3·6	−2·0	86	− 1	·746	−·017	4·7	− 0·3	102	93·6	+ 8·4	103·55	98·23	+ 5·32	4·42	Chittagong.
65	60	37	25	97	39	30	6	7	2·8	...	...	88	...	·771	...	4·1	...	123	112·5	+10·5	106·23	120·30	−14·07	3·32	Noakhali.
79	8	7	8	11	34	16	1	2	0·5	2·3	−1·8	85	− 1	·785	−·017	4·9	+ 0·1	115	101·3	+13·7	97·32	79·72	+17·60	9·24	Barisal.
43	13	8	45	50	55	18	15	19	2·1	3·6	−1·5	85	− 1	·762	−·016	5·5	+ 0·2	104	91·0	+13·0	85·18	70·45	+14·73	5·72	Narayanganj.
32	3	7	53	50	12	1	...	8	1·2	2·0	−0·8	87	− 1	·733	−·006	5·5	+ 0·7	109	106·4	+ 2·6	111·70	93·04	+18·66	5·82	Mymensingh.
32	9	12	59	9	24	13	1	6	0·8	2·2	−1·4	85	+ 1	·729	−·001	5·0	+ 1·0	100	84·2	+15·8	88·93	67·90	+21·03	5·62	Bogra. ¶
65	19	62	102	27	16	12	41	22	1·9	2·6	−0·7	87	+ 4	·708	+·014	3·9	− 0·3	95	79·1	+15·9	93·86	68·92	+24·94	5·15	Dinajpur.
81	3	37	11	25	1	3	...	5	1·2	...	...	85	− 1	·681	−·005	3·0	− 0·8	111	102·2	+ 8·8	116·16	122·42	− 6·26	5·27	Jalpaiguri.
...	62	67	14	12	91	83	16	21	9·0	8·6	+0·4	87	+ 1	·835	+·002	4·9	− 0·8	77	80·3	− 3·3	55·60	70·21	−14·61	4·10	Saugor Island.

* Uncorrected for scale error.
† Wind observations for 364 days.
¶ " " " 365 "
** " " " 360 "

TABLE

(2) *Abstract of observations taken at 8 hrs. at 222*

Number of sub-division.	Station.	Elevation 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 of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity, at 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 hrs. temperature.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	III.—Bengal— *concld.*																				
	Midnapore	149	29·698	...	29·797	30·085	29·163	·922	·311	76·2	89·7	...	70·5	...	80·1	...	19·3	106·3	48·7	57·6	32·7
	Calcutta	21	29·839	+·009	29·807	30·217	29·313	·904	·307	75·3	87·7	+1·1	71·1	+0·5	79·3	+0·6	16·5	102·1	52·0	50·1	28·2
	Jessore	33	29·839	+·017	29·820	30·214	29·375	·839	·292	75·2	86·6	—1·2	69·5	—0·4	78·1	—0·8	17·0	98·5	45·2	53·3	28·3
	Burdwan	99	29·758	+·008	29·806	30·153	29·289	·864	·309	74·7	89·1	0	70·4	—0·2	79·7	—0·1	18·6	108·9	51·3	57·6	31·2
	Berhampore	67	29·794	+·010	29·812	30·181	29·320	·861	·305	73·5	87·2	—0·6	69·6	+0·1	78·4	—0·2	17·6	107·6	51·7	55·9	29·2
	IV.—Bihar and Orissa.																				
6	Balasore	50	29·809	+·011	29·805	30·174	29·222	·952	·320	75·6	88·9	+0·3	70·8	+0·3	79·8	+0·3	18·0	107·4	49·1	58·3	31·7
	Hukitala (False Point).	29	29·839	+·012	29·804	30·199	29·244	·955	·310	80·2*	87·5*	+0·5*	74·4*	+0·2*	81·0*	+0·3*	13·1*	105·7	47·6	58·1	26·8*
	Cuttack	80	29·788	+·017	29·810	30·153	29·206	·947	·300	76·7	90·5	—0·9	72·5	0	81·5	—0·4	18·0	113·4	52·2	61·2	30·1
	Puri	24	29·839	...	29·802	30·189	29·285	·904	·297	77·9	86·6	...	74·3	...	80·4	...	12·3	95·1	55·6	39·5	22·0
	Angul	455	29·406	...	29·829	29·752	28·869	·883	·289	75·8	90·3	...	69·5	...	79·9	...	20·8	114·1	47·0	67·1	34·1
	Sambalpur	486	29·379	+·011	29·820	29·738	28·859	·879	·284	76·0	90·2	—0·8	70·5	+0·5	80·3	—0·2	19·7	115·1	44·6	70·5	32·9
7	Chaibasa	733	29·105	+·009	29·801	29·460	28·625	·835	·284	72·5	90·0	—0·4	68·0	—0·4	79·0	—0·4	22·0	111·1	42·3	68·8	35·1
	Ranchi	2,128	27·727	+·021	29·798	28·033	27·288	·745	·274	71·0	84·8	+0·3	65·9	+0·6	75·3	+0·5	18·9	106·2	44·9	61·3	31·9
	Purulia	816	29·029	...	29·810	29·396	28·575	·821	·298	72·6	89·6	...	67·9	...	78·8	...	21·7	111·0	48·1	62·9	35·7
	Daltonganj	730	29·122	...	29·828	29·502	28·655	·847	·288	70·7	90·4	...	65·7	...	78·1	...	24·7	113·6	39·0	74·6	39·7
8	Purnea	134	29·711†	+·019†	29·802†	30·122	29·275	·847	·301†	72·5	85·2	—1·5	65·7†	0†	75·1†	—0·7†	18·8†	98·6	42·2	56·4	30·7†
	Monghyr	155	29·699	...	29·810	30·095	29·240	·855	·294	75·0	86·9	...	68·2	...	77·5	...	18·7	104·2	49·9	54·3	30·7
	Darbhanga	165	29·687	+·009	29·810	30·079	29·247	·832	·289	72·8	86·4	+0·5	65·9	—2·8	76·1	—1·1	20·5	102·6	45·2	57·4	33·2
	Pusa	188	29·658	...	29·781	30·034	29·213	·821	·290	72·4	87·7	...	65·3	...	76·5	...	22·4	105·7	44·1	61·6	34·7
	Patna	183	29·661	0	29·803	30·050	29·214	·836	·286	74·6	86·5	—1·3	68·4	—0·1	77·4	—0·7	18·1	107·0	42·7	64·3	30·5
	Buxar	239	29·596	...	29·797	29·989	29·137	·852	·286	72·9	89·4	...	67·8	...	78·6	...	21·6	110·5	45·6	64·9	36·2
	Gaya	372	29·470	+·005	29·799	29·863	29·007	·856	·290	75·5	90·7	+0·7	68·8	0	79·7	+0·3	21·9	112·4	46·7	65·7	35·5
	Naya Dumka	489	29·365	+·025	29·816	29·739	28·907	·832	·298	73·5	87·6	+0·2	67·5	—0·3	77·5	—0·1	20·1	106·9	47·0	59·9	33·4
	V.—United Provinces of Agra and Oudh.																				
9	Gorakhpur	257	29·579	+·010	29·799	29·958	29·112	·846	·286	72·6	87·3	—0·7	63·7	—3·7	75·6	—2·2	23·5	106·6	44·8	61·8	35·3
	Benares	267	29·578	+·014	29·803	29·974	29·090	·884	·291	75·5	90·1	+0·6	66·4	—0·5	78·3	0	23·7	112·5	43·1	69·4	38·8
	Allahabad	309	29·535	+·012	29·805	29·942	29·050	·892	·301	74·6	90·7	+0·5	66·4	—0·4	78·5	+0·1	24·3	115·6	40·5	75·1	39·4
	Cawnpore	416	29·414	+·010	29·795	29·812	28·934	·878	·297	73·2	90·2	+0·2	66·3	—0·1	78·2	0	23·9	113·2	40·9	72·3	39·8
	Lucknow	368	29·472	+·016	29·805	29·871	28·994	·877	·292	73·8	89·5	—0·2	66·1	+0·5	77·8	+0·1	23·4	112·0	42·6	69·4	38·1
	Bahraich	401	29·422	+·004	29·792	29·790	28·939	·851	·289	72·1	87·2	—1·0	65·6	—0·1	76·4	—0·6	21·6	108·6	43·5	65·1	35·1
10	Jhansi	824	29·029	+·008	29·819	29·420	28·555	·865	·295	75·5	91·3	+0·2	67·3	—1·7	79·3	—0·8	23·9	117·5	41·5	76·0	40·2
	Agra	556	29·283	+·006	29·807	29·701	28·816	·885	·315	74·9	91·1	+0·4	68·0	+0·4	79·5	+0·4	23·2	117·5	44·5	73·0	38·8
	Mainpuri	516	29·310	+·010	29·797	29·709	28·842	·867	·306	71·7	89·9	+0·1	65·4	—0·1	77·7	0	24·4	117·3	41·1	76·2	40·2
	Bareilly	568	29·252	+·008	29·794	29·638	28·796	·842	·297	71·5	87·9	+0·3	65·0	+0·3	76·4	+0·3	22·9	111·3	39·5	71·8	38·3
	Roorkee	899	28·942	+·032	29·828	29·314	28·503	·811	·291	70·0	85·3	—1·8	62·7	+0·1	74·0	—0·9	22·6	111·5	37·4	74·1	37·9

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

* Mean of 9 months.
† „ „ 11 „

—contd.

tations in India, etc., in the year 1912.

Wind direction. Number of winds from Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind velocity. Mean velocity in miles per hour of year.	Normal velocity of year.	Departure from normal of year.	Hygrometry, 8 hrs. Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal in inches of mercury of year.	Cloud. Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Rainfall. Number of rainy days during year.	Normal number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	Station.
23	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
																									III.—Bengal *—concld.*
51	47	47	26	59	64	27	10	32	2·1	...	...	80	...	·746	...	3·5	...	84	80·2	+3·8	60·20	58·12	+2·08	3·13	Midnapore. (e)
39	22	25	29	44	40	98	5	64	3·3*	3·2	+0·1	55	+ 2	·774	+·006	4·6	+0·4	90	85·1	+4·9	56·82	61·81	−4·99	3·72	Calcutta.
76	16	12	20	60	42	14	13	13	2·4	2·2	+0·2	83	− 3	·759	−·032	4·1	−0·6	81	88·8	−7·8	75·13	65·79	+9·34	3·26	Jessore.
96	45	31	21	24	24	56	23	45	1·7	2·3	−0·6	80	+ 4	·727	+·021	4·9	+0·4	75	76·8	−1·8	51·33	58·00	−6·67	3·78	Burdwan.
38	26	19	54	32	61	31	5	10	1·7	2·4	−0·7	82	− 3	·707	−·036	4·6	−0·1	76	76·0	0	46·87	55·27	−8·40	3·27	Berhampore.
																									IV.—Bihar and Orissa.
59	62	15	10	2	37	114	12	45	2·5	3·5	−1·0	76 **	− 7	·700 **	−·076	4·0	−0·9	67	77·4	−10·4	54·38	61·72	−7·34	4·74	Balasore.
38	23	11	10	15	28	114	64	82	7·1	6·8	+0·3	83	− 2	·856	+·030	5·1	−0·1	61	72·0	−11·0	57·11	62·98	−5·87	6·07	Hukitala (False Point.) †
58	4	18	11	4	27	81	58	5	1·9*	2·1	−0·2	79	+ 1	·750	+·011	4·4	+0·1	70	74·1	− 4·1	53·96	59·30	−5·34	3·99	Cuttack.
17	96	29	3	5	17	122	45	32	7·9	...	...	84	...	·815	...	4·7	...	73	60·3	+12·7	69·29	53·57	+15·72	4·33	Puri.
36	17	36	9	32	22	8	58	148	4·6	...	...	76	...	·699	...	4·1	...	70	72·0	− 2·0	45·52	47·93	−2·41	3·85	Angul.
4	46	74	17	28	52	100	30	15	3·6	2·6	+1·0	73	+ 2	·662	+·003	4·4	+0·5	64	74·9	−10·9	50·68	66·54	−15·86	5·54	Sambalpur.
47	4	16	8	2	23	125	36	5	2·0	1·3	+0·7	78	+ 3	·644	−·014	4·2	+0·6	82	74·9	+ 7·1	62·46	52·62	+ 9·84	8·45	Chaibasa.
59	20	8	17	22	36	44	75	85	5·1	4·6	+0·5	67	0	·522	−·016	3·7	+0·2	71	80·4	− 9·4	47·70	56·67	− 8·97	4·38	Ranchi.
55	7	13	16	13	19	12	74	47	2·1	...	...	76	...	·638	...	2·0	...	70	76·1	− 6·1	48·76	52·15	− 3·39	3·05	Purulia
31	9	13	54	26	7	29	6	5	2·4	...	...	75	...	·581	...	2·5	...	52	62·5	−10·5	30·80	42·07	−11·27	3·04	Daltonganj. ‖
74	4	50	55	26	3	18	24	10	2·2¶	2·3	−0·1	84	0	·698	+·009	2·8	−0·8	76	70·1	+ 5·9	69·78	61·86	+ 7·92	5·25	Purnea. ‡
43	5	18	115	38	2	35	89	21	4·3	...	...	76	...	·690	...	3·1	...	62	...	...	46·22	...	...	4·62	Monghyr.
59	...	2	147	2	1	7	45	3	2·2	2·9	−0·7	83¶	+ 4	·727¶	+·046	2·7	−0·2	49	59·3	−10·3	39·37	50·37	−11·00	5·83	Darbhanga.
63	8	33	83	72	13	39	21	11	2·9	...	...	81	...	·673	...	2·8	...	57	...	...	41·92	...	...	3·46	Pusa. §
78	4	3	134	19	12	49	65	2	3·9	2·7	+1·2	74	+ 2	·674	+·021	2·8	−0·8	52	56·1	− 4·1	35·43	47·03	−11·60	3·08	Patna.
35	4	12	110	26	30	91	59	8	3·7	...	...	72	...	·607	...	3·1	...	44	53·3	− 9·3	31·62	41·22	− 9·60	3·91	Buxar. †
35	3	52	10	19	45	41	58	3	2·1	2·7	−0·6	70	− 1	·646	+·009	2·7	−1·0	46	57·9	−11·9	24·03	46·57	−22·54	3·65	Gaya.
78	4	5	22	24	16	4	4	9	1·4	...	...	72	−12	·629	...	3·0	...	60	77·8	−17·8	49·46	55·73	− 6·27	3·15	Naya Dumka.
																									V.—United Provinces of Agra and Oudh.
97	12	66	64	11	1	10	58	17	1·6	1·7	−0·1	75	0	·632	−·010	1·3	−1·4	47	57·3	−10·3	43·96	50·77	− 6·81	11·20	Gorakhpur.
90	6	13	41	53	11	68	45	29	2·2	2·7	−0·5	67	− 7	·601	−·024	2·7	−0·7	37	52·0	−15·0	32·86	39·87	− 7·01	3·35	Benares.
76	6	31	55	10	9	34	119	26	2·8	3·8	−1·0	63	− 4	·552	−·042	3·3	−0·2	45	48·8	− 3·8	28·42	39·16	−10·74	3·31	Allahabad.
14	20	13	49	24	11	55	66	14	2·2	2·7	−0·5	67	0	·570	−·018	1·5	−1·4	42	44·4	− 2·4	32·66	36·06	− 3·40	3·28	Cawnpore.
16	2	13	49	13	11	14	43	5	1·8	2·2	−0·4	67	− 3	·592	−·001	2·3	−1·0	44	47·7	− 3·7	29·14	38·05	− 8·91	2·40	Lucknow.
15	16	18	76	66	11	34	50	40	2·2	2·3	−0·1	72	− 3	·591	−·050	2·4	−0·4	51	50·6	+ 0·4	38·85	44·82	− 5·97	4·42	Bahraich.
14	10	25	14	12	12	121	65	33	3·0	2·4	+0·6	54	− 1	·475	−·038	4·9	+2·5	42	47·7	− 5·7	34·95	37·57	− 2·62	5·84	Jhansi.
33	13	22	30	18	24	52	51	23	3·0	3·3	−0·3	58	− 3	·515	−·018	2·7	−0·1	29	37·9	− 8·9	25·91	27·32	− 1·41	4·59	Agra.
35	28	14	40	42	18	28	75	56	1·5	1·4	+0·1	67	+ 1	·544	−·010	1·4	−1·9	44	38·1	+ 5·9	35·77	27·42	+ 8·35	2·86	Mainpuri.
44	...	1	27	2	...	2	9	1	0·5	2·0	−1·5	74	+ 2	·605	+·032	2·9	−0·1	42	47·8	− 5·8	42·02	44·96	− 2·94	8·14	Bareilly.
33	...	12	6	53	1	1	...	30	1·8	1·8	0	72	+ 1	·537	+·014	2·6	−0·5	40	47·6	− 7·6	43·42	42·30	+ 1·12	7·49	Roorkee.

* Uncorrected for scale error.

† Wind observations for 365 days.
‡ " " " 364 "
§ " " " 362 "
‖ " " " 360 "
¶ Mean of 11 months.
** " " 9 "

(e) Wind observations for 363 days.

TABLE

(2) *Abstract of observations taken at 8 hrs. at 222*

Number of sub-division.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure, 8 hrs., in inches. Mean 8 hrs. pressure reduced to 32°.	Departure from normal of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity, at 45° lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Temperature of air. Mean of 8 hrs. temperature of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	VI.—Punjab.																				
11	Delhi	718	29·114	+·016	29·811	29·502	28·667	·835	·306	72·3	88·3	—0·7	67·2	—0·2	77·7	—0·5	21·1	113·0	43·8	69·2	36·7
	Sirsa	662	29·164	+·015	29·807	29·570	28·688	·882	·326	72·2	91·1	—0·8	64·5	+0·4	77·8	—0·2	26·7	119·8	37·0	82·8	44·1
	Patiala	*818*	28·939		29·794	29·379	28·536	·843	·310	69·8	87·2		64·3*		75·7*		22·8*	113·4	38·8	74·6	35·2
	Ambala	892	28·924	+·016	29·803	29·300	28·464	·836	·299	70·3	89·3	+1·4	63·0	—0·1	76·2	+0·6	26·4	116·5	35·9	80·6	42·4
	Ludhiana	812	29·013	+·021	29·814	29·401	28·544	·857	·306	69·7	88·3	0	64·3	+0·6	76·3	+0·3	24·0	115·1	40·0	77·1	40·4
	Lahore	702	29·114	+·012	29·806	29·510	28·612	·898	·328	69·6	90·2	—0·5	63·2	+2·3	76·7	+0·9	27·0	118·4	37·2	81·2	43·0
	Sialkot	830	28·991	+·020	29·815	29·385	28·479	·906	·326	71·3	87·0	—0·7	61·1	—1·5	74·0	—1·1	25·9	115·5	34·0	81·5	42·8
	Rawalpindi	1,674	28·156	+·011	29·832	28·528	27·674	·854	·330	66·5	85·1	+0·8	57·7	+0·1	71·4	+0·5	27·4	117·4	30·9	86·5	45·1
12	Khushab	612	29·215	+·021	29·813	29·650	28·681	·969	·355	72·1	90·2	+0·6	64·1	+0·5	77·2	+0·6	26·1	116·4	36·4	80·0	45·3
	Montgomery	558	29·256	+·012	29·795	29·687	28·746	·941	·353	72·8	91·4	—0·9	64·4	0	77·9	—0·4	27·0	120·4	37·0	83·4	45·2
	Multan	420	29·403	+·008	29·796	29·872	28·858	1·014	·362	73·6	93·0	+1·1	66·6	+1·3	79·8	+1·2	26·4	120·3	39·5	80·8	43·5
	VII.—North-West Frontier Province.																				
14	Peshawar	1,113	28·728	—·003	29·847	29·134	28·197	·937	·358	66·4	86·6	+1·0	59·5	+0·3	73·1	+0·6	27·1	119·2	32·4	86·8	44·8
	Dera Ismail Khan	590	29·237	—·004	29·815	29·704	28·655	1·049	·374	69·2	89·1	—1·3	62·5	+0·1	75·8	—0·6	26·5	116·9	35·6	81·3	44·7
	VIII.—Sind.																				
16	Jacobabad	186	29·634	+·003	29·783	30·111	29·098	1·013	·342	75·9	97·2	+1·6	66·5	+1·3	81·9	+1·5	30·7	126·1	37·8	88·3	47·8
	Hyderabad	96	29·760	+·008	29·799	30·156	29·285	·871	·301	75·4	94·3	+0·9	68·8	+0·5	81·6	+0·7	25·5	120·5	45·0	75·5	42·3
	Karachi	13	29·865	+·012	29·829	30·233	29·398	·835	·274	75·7	85·3	+1·2	72·1	+1·3	78·7	+1·3	13·3	102·5	55·0	47·5	24·3
	IX.—Rajputana.																				
17	Bikaner	*771*	29·052	+·007	29·799	29·441	28·623	·818	·310	74·6	93·3	+1·5	68·4	—1·2	80·9	+0·1	24·9	120·0	39·0	81·0	43·0
	Jodhpur	780	29·071	+·008	29·821	29·417	28·653	·764	·285	74·3	93·1	0	67·7	—0·6	80·4	—0·3	25·4	120·0	45·8	74·2	42·4
18	Jaipur	1,431	28·424	+·008	29·824	28·792	28·012	·780	·284	74·0	91·3	+0·4	66·0	+0·4	78·6	+0·4	25·3	116·2	40·1	76·1	42·3
	Ajmer	1,611	28·254	+·008	29·839	28·597	27·841	·756	·274	70·3	88·2	—0·6	67·4	+3·0	77·8	+1·2	20·8	114·4	41·7	72·7	36·7
	Kotah	819?	29·022	+·008	29·805	29·391	28·569	·822	·282	77·2	92·6	—0·1	69·9	—0·5	81·3	—0·3	22·7	117·6	45·6	72·0	39·5
	X.—Bombay.																				
19	Deesa	466	29·409	+·008	29·836	29·714	28·966	·748	·240	75·3	95·8	+2·0	67·0	0	81·4	+1·0	28·8	121·8	43·9	77·9	43·8
	Bhuj	334	29·534	+·011	29·880	29·885	29·063	·822	·240	75·5	92·5	+1·1	68·4	—0·3	80·4	+0·4	24·1	116·0	45·0	71·0	38·9
	Jamnagar	61	29·835		29·842	30·128	29·379	·749	·221	78·6	90·8		67·9		79·3		22·9	106·6	46·7	59·9	35·5
	Dwarka	37?	29·862	0	29·845	30·158	29·397	·761	·225	77·1	85·4	+1·3	73·8	+1·3	79·6	+1·3	11·6	97·3	56·7	40·6	22·4
	Rajkot	429	29·456	+·009	29·840	29·720	29·028	·692	·221	75·2	93·4	+0·4	66·1	0	79·8	+0·2	27·3	114·6	42·3	72·3	42·1
	Veraval	*18*	29·876	+·006	29·837	30·134	29·459	·675	·215	76·4	85·2	0	71·6	+0·6	78·4	+0·3	13·6	102·1	53·5	48·6	27·7
	Bhavnagar Para	55	29·843	—·017?	29·845	30·127	29·408	·719	·234	76·4	94·3	+1·4	69·2†	—0·6†	81·8†	+0·5†	25·2†	116·0	47·0	69·0	39·5†
	Surat	39	29·864	+·008	29·846	30·131	29·438	·693	·213	77·4	92·4	+0·8	70·7	+1·3	81·5	+1·1	21·8	109·9	53·1	56·8	34·6
	Ahmadabad	163	29·713	—·005	29·827	30·006	29·272	·734	·230	76·9	95·4	+1·4	69·6*	—0·1*	81·0*	+0·6*	22·8*	117·6	52·7	64·9	35·9*
25	Bombay	37	29·873	0	29·851	30·114	29·528	·586	·199	78·6	87·3	+1·5	75·8	+0·9	81·5	+1·2	11·5	95·5	64·5	31·0	19·7
	Ratnagiri	110	29·794	+·001	29·843	29·997	29·488	·509	·170	78·1	87·5	0	73·4	+0·4	80·5	+0·2	14·1	97·8	60·9	36·9	24·9
	Goa	199	?	?	?	?	?	?	?	77·0	84·8	—1·2	74·9	+0·4	79·8	—0·4	9·9	92·1	63·6	28·5	19·3

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

* Mean of 9 months.

† Mean of 11 months.

3.—contd.

Stations in India, etc., in the year 1912.

Wind direction. Number of winds from: Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind velocity: Mean velocity in miles per hour of year.	Normal velocity of year.	Departure from normal of year.	Hygrometry, 8 hrs.: Mean humidity at 8 hours of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal in inches of mercury of year.	Cloud: Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Rainfall: Number of rainy days during year.	Normal number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	Station.
23	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
																									VI.—Punjab.
44	13	19	43	41	11	19	127	49	2·9†	2·5	+0·4	64	+6	·530	+·040	2·9	—0·5	31	37·1	—6·1	33·43	27·52	+ 5·91	6·79	Delhi.
11	31	16	34	26	50	50	32	16	3·8‡	3·7‡	+0·1	57	—2	·463	—·024	2·1	—1·2	27	23·2	+3·8	14·89	13·88	+ 1·01	2·15	Sirsa.
49	22	9	37	94	13	3	35	102	4·4			68		·512		2·1		36	36·5	—0·5	22·51	25·46	—2·95	3·55	Patiala. (a)
90	56	2	70	62	12	3	25	47	3·1	1·5	+1·6	65	—9	·492	—·065	2·8	+0·1	37	42·3	—5·3	29·50	30·19	— 0·69	4·30	Ambala.
28	9	10	3	39	7	1	11	8	0·6	1·4	—0·8	62	—4	·460	—·056	2·4	—1·2	26	36·7	—10·7	24·45	29·05	— 4·60	3·57	Ludhiana.
72	32	11	27	51	21	7	20	25	1·6	1·8	—0·2	65	0	·493	—·010	2·7	0	25	27·7	—2·7	14·70	19·69	— 4·99	3·36	Lahore.
72	31	39	56	29	5	7	7	20	1·1	1·5	—0·4	71	+5	·507	—·003	2·3	—0·2	32	40·4	—8·4	20·22	31·66	—11·44	2·19	Sialkot.
96	64	13	15	9	21	8	23	17	1·8	1·6	+0·2	63	—5	·431	—·029	3·5	+0·3	39	48·0	—9·0	21·88	34·29	—12·41	2·63	Rawalpindi.
38	7	56	100	15	25	14	15	6	3·5	3·6	—0·1	50	—5	·414	—·034	3·2	+1·0	28	23·2	+4·8	12·00	14·44	— 2·44	1·14	Khushab.
70	33	30	46	60	56	40	13	18	4·4	4·3	+0·1	49	—6	·397	—·078	1·9	—0·3	17	18·2	—1·2	8·01	10·46	— 2·45	1·88	Montgomery.
29	59	13	1	22	26	12		4	0·9	1·5	—0·6	58	—2	·495	—·020	1·6	—0·1	14	12·2	+1·8	8·50	6·73	+ 1·77	1·83	Multan.
																									VII.—North-West Frontier Province.
7	27	10	7	9	41	28	24	23	1·6	2·4	—0·8	62	—1	·432	—·023	3·1	+0·1	25	25·1	—0·1	10·85	13·29	— 2·44	1·10	Peshawar.
4	21	55	1	17	5	5	2	35	1·1	1·3	—0·2	70	+6	·562	+·046	2·1	+0·1	12	16·5	—4·5	8·22	9·37	— 1·15	4·05	Dera Ismail Khan. (b)
																									VIII.—Sind.
3	6	34	11	22	12	5	1	12	2·1	2·5	—0·4	60	+5	·591	+·083	1·2	—0·8	3	7·6	—4·6	1·41	3·65	— 2·24	0·70	Jacobabad.
7	75	8		8	89	112	9	38	5·3	8·1	—2·8	60	+2	·556	+·027	2·3	—0·4	9	9·6	—0·6	5·39	7·11	— 1·72	1·99	Hyderabad.
2	35	68	13	3	1	59	134	31	9·2	9·2	0	72	—4	·693	+·015	3·1	—0·5	4	9·2	—5·2	3·17	7·78	— 4·61	1·87	Karachi.
																									IX.—Rajputana.
3	9	28	32	47	48	61	60	16	4·4	4·3	+0·1	47	—6	·441	—·058	2·1	—0·5	17	19·4	—2·4	8·35	11·49	— 3·14	1·50	Bikaner.
4	20	103	9	2	26	106	32	4	3·0			45	—3	·416		2·7		20	18·5	+1·5	17·75	13·34	+ 4·41	4·01	Jodhpur.
3	40	55	39	13	4	12	53	52	3·6*	3·2	+0·4	53	—5	·462	—·032	2·9	—0·3	32	35·5	—3·5	31·75	24·07	+ 7·68	4·45	Jaipur.
9	4	13	4	7	8	59	60	22	3·9	3·6	+0·3	61	—2	·475	—·027	2·5	—0·2	26	30·1	—4·1	13·87	21·09	— 7·22	1·81	Ajmer.
9	12	15	2	7	2	33	53	40	1·7			50	+1	·462		2·7		31	35·0	—4·0	24·66	28·12	— 3·46	2·84	Kotah.
																									X.—Bombay.
.	17	53	52	9	23	73	40	32	6·9†	7·5	—0·6	57	+ 1	·534	+·010	3·1	—0·3	32	28·3	+3·7	23·80	24·10	—0·30	3·80	Deesa. (c)
.	14	13	1	9	3	62	127	76	6·9	8·1	—1·2	63	— 1	·589	—·022	3·5	+0·6	19	16·9	+2·1	20·26	14·15	+6·11	4·58	Bhuj.
7	11	84	33	...	9	104	70	48	9·6†	...	...	67	...	·686	...	1·9	...	33	20·8	+12·2	29·90	19·28	+10·62	4·60	Jamnagar.
.	57	47	15	3	10	81	86	56	8·9	...	...	78	+ 1	·757	...	3·4	...	20	16·9	+3·1	22·81	14·38	+8·43	5·61	Dwarka.
9	19	30	23	7	11	85	86	55	7·4	6·6	+0·8	63	— 4	·583	—·041	3·6	+0·6	43	30·9	+12·1	32·11	26·54	+5·57	4·11	Rajkot.
5	67	23	4	3	...	35	80	29	4·8	6·1	—1·3	73	+ 3	·689	+·023	3·3	—0·6	25	24·2	+0·8	27·84	17·95	+9·89	7·80	Veraval.
9	24	8	4	...	11	67	85	77	2·7	7·3	—4·6	62	— 7	·599	—·060	3·4	+0·1	36	29·8	+6·2	39·55	20·66	+18·89	5·77	Bhavnagar Pan.
5	50	47	44	25	53	67	35	25	3·9	5·5	—1·6	74	+ 3	·721	+·041	3·2	—0·2	59	46·1	+12·9	57·49	41·12	+16·37	6·05	Surat. (a)
1	12	93	13	13	21	77	19	58	3·8	3·6	+0·2	61	+ 1	·604	+·022	2·6	—1·0	43	34·1	+8·9	38·72	29·62	+9·10	5·71	Ahmadabad. (d)
	22	83	85	38	16	39	64	17	6·8*	8·6	—1·8	78	0	·779	+·008	4·5	+0·3	61	73·3	—12·3	54·05	71·88	—17·83	6·47	Bombay.
	32	40	30	65	17	47	22	20	6·8	6·2	+0·6	73	+ 1	·724	—·003	4·2	+0·3	90	92·7	—2·7	99·91	101·22	—1·31	9·60	Ratnagiri. (d)
	25	70	149	17	9	30	33	26	5·7	4·8	+0·9	83	+ 5	·765	—·013	5·7	+1·5	105	97·8	+7·2	114·68	98·68	+16·00	4·38	Goa. (a)

* Uncorrected for scale error.

† —Mean of 11 months.

‡ — „ „ 6 „

(a) Wind observations for 364 days.
(b) „ „ „ 365 „
(c) „ „ „ 362 „
(d) „ „ „ 315 „
(e) „ „ „ 320 „

TABLE

(2) *Abstract of observations taken at 8 hrs. at 222*

Number of sub-division.	Station.	Elevation of bar-cistern above sea-level, in feet.	Pressure 8 hrs., in inches.							Temperature of air.											
			Mean 8 hr. pressure reduced to 32°.	Departure from normal of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity, at 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 hrs. temperature of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	X.—Bombay— *concld.*																				
	Marmagao . .	60	29·862	+·002	29·857	30·062	29·625	·437	·161	78·2	85·9	—0·3	74·6	—0·4	80·3	—0·4	11·3	94·0	65·7	28·3	19·2
	Karwar . .	44	29·888	+·009	29·866	30·090	29·660	·430	·155	76·0	85·8	—0·4	72·7	0	79·2	—0·2	13·1	93·7	58·5	35·2	22·2
26	Malegaon . .	1,430	28·464	+·006	29·846	28·741	28·068	·673	·203	76·1	94·5	+2·9	66·1	+1·0	80·3	+1·9	28·3	113·4	47·1	66·3	42·3
	Ahmadnagar .	2,154	27 759	+·009	29·832	27·992	27·411	·581	·185	74·2	91·7	+2·9	64·9	+1·5	78·3	+2·3	26·8	110·1	44.5	65·6	40·4
	Poona . .	1,846	28·063	+·001	29·873	28·302	27·717	·585	·185	70·2	90·7	+1·3	65·1	+0·3	77·9	+0·8	25·6	106·5	47·8	58·7	38·0
	Sholapur . .	1,590	28·313	+·004	29·841	28·559	28·005	·554	·183	76·3	93·6	+0·7	69·1	+1·2	81·4	+0·9	24·5	113.3	50·1	63·2	37·7
	Bijapur . .	*1,948*	27·961	+·006	29·834	28·190	27·696	·494	·163	75·5	92·0	+2·1?	68·4	+1·0	80·2	+1·5?	23·5	110·2	50·8	59·4	35·3
	Belgaum . .	2,562	27·381	+·008	29·853	27·592	27·115	·477	·159	71·8	84·6	+0·2	63·6	—0·4	74·1	—0·1	21·0	99·3	49·5	40·8	32·0
	XI.—Central India.																				
20	Neemuch . .	1,626	28·244	+·007	29·826	28·573	27·803	·770	·246	72·9	89·8	+0·9	64·9	+0·3	77·3	+0·6	24·9	116·4	41·0	75·4	41·1
	Indore . .	1,823	28·058	+·016	29·830	28·364	27·603	·761	·224	74·2	89·2	+1·2	64·5	+0·9	76·9	+1·0	24·7	112·1	43·1	69·0	39·4
21	Nowgong . .	754	29·102	+·017	29·825	29·488	28·634	·854	·286	72·8	88·9	—0·7	65·6	0	77·3	—0·3	23·3	117 0	41·0	76·0	38·3
	Sutna . .	1,041	28·802	+·013	29·814	29·149	28·317	·832	·290	72·6	89·1	+1·0	65·7	+0·1	77·4	+0·6	23·4	114·3	40·2	74·1	39·1
	XII.—Central Provinces.																				
22	Buldana . .	2,132	27·733		29·763?	28·026	27·353	·673	·200	75·9	89·5		68·9		79·2		20·6	108·8	50·6	58·2	32·7
	Akola . . .	925	28·958	+·014	29·840	29·273	28·538	·735	·210	76·7	95·3	+2·4	68·1	+1·0	80·0	+1·7	27·2	116·7	41·5	75·2	42·7
	Amraoti . .	1,215	28·661	+·015	29·805	28·969	28·220	·749	·216	76·9	93·2	+1·2	70·5	+1·6	81·8	+1·4	22·7	115·8	51·8	64·0	36·2
23	Khandwa . .	1,044	28·835	+·013	29·840	29·147	28·369	·778	·223	74·0	93·7	+1·9	67·8	+0·9	80·8	+1·4	25·9	116·2	43·6	72·6	41·9
	Hoshangabad .	1,006	28·872	+·012	29·843	29·219	28·399	·820	·243	73·2	91·4	+1·0	67·0	0	79·2	+0·5	24·4	116·1	43·4	72·7	39·0
	Saugor . . .	1,807	28·045	+·003	29·802	28·376	27·583	·793	·252	72·6	88·7	+0·7	67·1	+1·0	77·9	+0·8	21·5	113·3	44·6	68·7	36·1
	Jubbulpore . .	1,327	28·513	—·003	29·807	28·865	28·022	·843	·267	71·5	88·9	+0·5	65·2	+0·8	77·1	+0·6	23·7	113·3	39·8	73·5	38·4
	Seoni . . .	2,033	27·848	+·019	29·821	28·162	27·367	·795	·240	73·9	87·7	—0·1	63·9	—0·9	75·8	—0·5	23·7	112·1	41·5	70·6	37·7
	Nagpur . .	1,017	28·852	+·017	29·825	29·175	28·384	·791	·236	76·5	92·7	+0·7	69·2	+0·3	80·9	+0·5	23·5	117·6	44·3	73·3	38·7
24	Pendra . . .	2,123?	27·824		29·797	28·145	27·387	·758	·267	73·2	86·3		65·3		75·8		21·0	109·3	42·7	66·6	34·4
	Raipur . . .	*970*	28·895	+·020	29·823	29·247	28·433	·814	·259	75·1	90·6	+0·1	69·9	+0·7	80·2	+0·4	20·7	116·7	48·6	68·1	33·7
	Chanda . . .	*634*	29·231	+·002	29·818	29·556	28·827	·729	·231	76·5	92·8	0	68·8	+0·2	80·8	+0·1	24·1	119·5	43·5	76·0	39·3
	Jabalpur . .	1,813	28·073		29·829	28·345	27·651	·694	·231	73·1	88·3		66·1		77·2		22·3	115·2	42·1	73·1	35·6
	XIII.—Hyderabad.																				
27	Aurangabad . .	1,905	28·007	—·006	29·846	28·264	27·644	·620	·189	76·2	91·2*	+0·6*2	65·6†	+1·7†	76·9‡	+1·2‡?	24·8	111·9	47·7	64·2	37·2
	Nizamabad . .	1,248	28·632		29·827	28·906	28·277	·629	·199	76·0	93·0	+1·6	69·1	+0·6	81·1	+1·1	23·9	116·4	44·7	71·7	38·7
	Bidar . . .	*2,165*								77·4	89·9		69·4		79·6		20·5	108·5	54·4	54·1	30·5
28	Gulbarga . .	1,503	28·405	+·009	29·850	28·653	28·110	·543	·178	75·8	93·6	+1·2	69·4	+0·6	81·5	+0·9	24·2	113·0	50·8	62·2	36·3
	Raichur . .	*1,311*	28·600	+·021?	29·851	28·837	28·320	·517	·172	78·0	93·1	+1·1	71·9	+0·3	82·5	+0·7	21·2	110·0	56·1	53·9	32·7
	Hyderabad (Deccan)	1,690	28·206	+·008	29·832	28·461	28·016	·445	·182	75·1	91·4	+0·8	70·0	+1·7	80 7	+1·3	21·4	110·8	52·2	58·6	32·8
	Hanamkonda .	877	29·012	+·008	29·837	29·303	28·663	·641	·204	78·4	62.3	+0·4	72·1	+0·2	82·2	+0·3	20·3	114·5	52·7	61·8	32·0

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

* Mean of 11 months.
† „ „ 10 „
‡ „ „ 9 „

—contd.

tions in India, etc., in the year 1912.

Wind direction. Number of winds from N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Wind velocity. Mean velocity in miles per hour of year.	Normal velocity of year.	Departure from normal of year.	Hygrometry, 8 hrs. Mean humidity at 8 hours of year.	Departure from normal of year.	Mean vapour tension at 8 hours in inches of mercury of year.	Departure from normal in inches of mercury of year.	Cloud. Mean cloud amount at 8 hours of year.	Departure from normal of year.	Rainfall. Number of rainy days during year.	Normal number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	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
																								X.—Bombay—*concld.*
32	57	97	13	16	34	47	29	6·3*	6·7	—0·4	84	+ 1	·816	+ ·001	5·4	+1·6	95	94·3	+0·7	93·88	93·85	+0·03	4·24	Marmagao.
54	51	...	...	10	50	2	7	2·5	3·0	—0·5	84	+ 1	·765	+ ·021	4·0	+0·2	103	103·7	—0·7	104·65	122·45	—17·80	4·12	Karwar.
7	9	5	5	9	80	134	45	6·3	6·5	—0·2	53	—10	·489	—·076	1·6	—1·9	24	35·0	—11·0	17·65	22·71	—5·06	4·14	Malegaon.
41	10	3	12	24	43	67	133	4·7	8·3	—3·6	49	—18?	·429	—·135?	2·6	—0·7	26	35·8	—9·8	11·31	22·29	—10·98	1·07	Ahmadnagar.
2	3	9	1	1	27	144	12	6·7	7·6	—0·9	67	+ 4	·504	—·003	1·7	—2·2	39	46·8	—7·8	24·07	27·23	—3·16	3·15	Poona.
17	63	33	36	10	51	38	107	9·6	7·1	+2·5	56	+ 1	·513	+·010	3·6	—0·4	35	42·1	—7·1	15·93	29·50	—13·57	1·54	Sholapur.
18	27	10	33	27	68	58	39	6·2	4·7	+1·5	62	— 8	·547	—·057?	3·6	—0·3	34	36·5	—2·5	13·91	20·93	—7·02	0·97	Bijapur.
7	21	52	32	4	43	73	18	9·2	11·0	—1·8	70	0	·543	+·006	4·6	+0·3	85	81·0	+4·0	71·81	49·67	+22·14	7·00	Belgaum.
																								XI.—Central India.
12	33	77	6	9	49	87	9	6·4	6·4	0	57	— 1	·459	—·043	3·5	+0·9	38	35·4	+2·6	24·43	28·57	—4·14	2·50	Neemuch.
16	40	19	9	6	13	75	67	3·3	3·0	+0·3	57	— 6	·481	—·042	3·4	0	43	44·9	—1·9	29·68	32·79	—3·11	2·22	Indore.
16	12	26	8	52	37	111	8	1·8	1·9	—0·1	65	— 1	·525	—·020	3·5	+0·3	44	48·3	—4·3	46·15	43·35	+2·80	5·27	Nowgong.
11	...	23	15	8	67	72	13	1·8	4·4	—2·6	66	+ 5	·537	+·025	3·8	+0·9	51	54·9	—3·9	41·05	44·44	—3·39	3·56	Sutna.
																								XII.—Central Provinces.
20	22	38	39	21	36	107	82	4·8	5·7	—0·9	49		·431		2·5		35	52·3	—17·3	21·60	35·05	—13·45	2·45	Buldana. (*a*)
8	37	34	28	19	38	92	75	5·0	4·4	+0·6	48	—10	·447	—·066	3·4	0	34	46·2	—12·2	20·13	32·79	—12·66	2·40	Akola.
11	55	75	14	11	19	86	52	6·1	4·2	+1·9	53	— 6	·487	—·050	3·2	—0·3	32	47·8	—15·8	22·07	33·84	—11·77	3·07	Amraoti. (*a*)
16	41	22	18	9	33	107	66	4·8	4·4	+0·4	54	— 5	·474	—·027	3·0	0	30	41·0	—11·0	19·91	29·91	—10·00	2·65	Khandwa.
	71	42	26	8	80	47	33	2·9	2·3	+0·6	61	— 5	·491	—·060	3·5	0	46	55·6	—9·6	41·51	49·10	— 7·59	7·00	Hoshangabad.
11	34	36	42	19	40	102	34	5·2	3·2	+2·0	54	— 5	·445	—·050	3·4	+0·4	45	56·3	—11·3	35·74	46·25	—10·51	5·71	Saugor.
9	12	8	51	66	32	48	30	1·5	2·3	—0·8	65	— 2	·498	—·037	3·2	—0·2	51	64·1	—13·1	45·32	55·51	—10·19	3·10	Jubbulpore.
63	56	17	13	38	40	46	45	3·6	2·7	+0·9	55	— 9	·449	—·081	3·1	—0·4	60	70·4	—10·4	47·71	52·63	— 4·92	3·22	Seoni.
56	61	35	17	10	27	45	74	3·5	4·1	—0·6	55	— 6	·509	—·044	3·6	—0·3	50	62·9	—12·9	52·27	49·16	+ 3·11	5·66	Nagpur. (*c*)
53	15	4	20	49	42	11	52	3·5			59		·485		3·2		62	74·4	—12·4	42·35	51·50	— 9·15	2·97	Pendra. (*d*)
28	32	19	3	24	101	46	18	3·5	4·3	—0·8	64	+ 1	·561	—·004	2·5	—1·6	57	63·5	—6·5	49·15	49·99	— 0·84	5·20	Raipur.
7	4	17	33	22	32	76	20	2·9	2·7	+0·2	65	0	·589	0	3·0	—0·6	52	63·7	—11·7	47·39	53·43	— 6·04	4·80	Chanda.
31	6	11	29	49	49	71	21				76		·628		3·4		80			57·61			5·00	Jagdalpur.
																								XIII.—Hyderabad.
31	36	60	44	5	43	73	50	8·9			53	— 2?	·472		3·8		35	44·3	—9·3	16·94	28·37	—11·43	1·18	Aurangabad.
7	3	5	15	16	76	43	9	3·6			62	— 5	·552		3·3		56	54·9	+1·1	37·21	40·87	— 3·66	2·30	Nizamabad.
7	28	7	49	6	98	31	54	5·4			58		·546		5·0		49	53·7	—4·7	33·05	37·55	— 4·50	2·25	Bidar. (*b*)
21	59	67	20	24	49	58	41	6·5	7·4	—0·9	58	— 6	·524	—·047	2·0	—1·8	51	48·4	+2·6	28·70	33·14	— 4·44	2·05	Gulbarga.
14	36	32	65	31	71	75	42	6·9	7·1	—0·2	62	— 3	·603	—·002	3·9	+0·2	44	44·7	—0·7	20·91	28·62	— 7·71	2·12	Raichur.
	6	1	4		1	105	1	2·5	4·0	—1·5	67	— 3	·588	—·034	3·7	+0·1	40	49·4	—9·4	25·72	31·32	— 5·60	2·74	Hyderabad (Deccan).
19		5	88	48	20	67	26	5·2			64	— 3	·619		4·2		51	50·5	+0·5	28·61	34·75	— 6·14	2·07	Hanamkonda.

* Uncorrected for scale error.

(*a*) Wind observations for 365 days.
(*b*) " " " 363 "
(*c*) " " " 355 "
(*d*) " " " 362 "

TABLE

(2) *Abstract of observations taken at 8 hrs. at 222*

Number of sub-division.	Station.	Elevation 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 of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity, at 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 hrs. temperature of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	Kashmir—*concld.*																				
	Leh	*11,503*	19·713	+·010	19·681	19·952	19·286	·666	·332	37·2	55·5	+0·1	28·8	−1·0	42·2	−0·5	26·8	84·9	−2·0	86·9	43·5
	Skardu	*7,505*	22·896	+·017	22·866	23·355	22·517	·838	·435	46·6	62·0	−0·2	40·4	0	51·2	−0·1	21·6	99·0	−4·9	103·9	43·6
	Gilgit	4,890	25·135	...	25·108	25·604	24·6 0	·964	·430	56·7	73·6	+0·8	51·7	−1·6	62·6	−0·4	21·9	111·2	16·7	94·5	40·6
	Baluchistan.																				
15	Fort Sandeman *	...	25·363	...	25·332	25·655	25·054	·601	·262	65·5	86·0	...	56·3	...	71·3	...	29·8	106·9	23·1	83·8	47·2
	Quetta	5,502	24·642	+·021	24·602	24·866	24·320	·546	·245	55·2	73·7	+0·2	43·5	−0·9	58·6	−0·3	30·2	99·1	18·7	80·4	47·9
	Chaman	4,311	25·681	+·010	25·643	25·951	25·317	·634	·267	64·1	77·8	−1·1	54·1	−2·0	65·9	−1·5	23·7	107·8	21·8	86·0	44·4
	Kalat	6,630	23·779	...	23·741	24·049	23·461	·588	·222	45·8	71·2	...	36·8†	...	57·2†	...	40·6†	99·0	5·2	93·8	57·2†
	Dalbandin	2,779	27·104	...	29·836	27·459	26·683	·776	·304	67·5	88·6	...	56·3	...	72·4	...	32·3	115·3	28·8	86·5	52·9
	Pasni	...	29·863	...	29·823	30·202	29·388	·814	·274	73·0	87·5	...	70·1	...	78·8	...	17·4	106·0	51·0	55·0	30·7
	Panjgur	...	26·727	...	26·685	26·998	26·358	·640	·249	61·6	84·3	...	57·7	...	71·0	...	26·6	108·8	30·5	78·3	45·1
	Robat	...	26·800	...	26·758	27·223	26·377	·846	·267	65·8	86·0	...	59·8	...	72·9	...	26·2	118·0	26·3	91·7	49·1
	Hill stations excluding Kashmir and Baluchistan.																				
	Chitral ‡	*5,486*	...	...	...	...	...	...	...	55·2	71·1	...	47·2	...	59·2	...	23·9	106·6	14·2	92·4	43·6
	Para Chinar	6,000	24·435	...	24·411	24·673	24·129	·544	·276	57·0	70·0	...	47·4	...	58·7	...	22·6	99·2	14·1	85·1	41·1
	Cherat	*4,256*	25·701	+·033	25·669	26·004	25·324	·680	·297	62·0	72·5	−1·3	56·2	−0·5	64·3	−0·9	16·3	104·2	32·4	71·8	35·8
	Drosh§	...	...	...	...	...	...	...	...	56·5	75·3	...	52·3	...	63·9	...	23·0	101·2	22·6	78·6	39·9
	Murree	6,333	23·843	+·014	23·811	24·046	23·578	·467	·266	55·4	64·4	−1·4	52·6	+1·8	58·5	+0·2	11·8	93·6	28·7	64·9	30·1
	Simla	7,232	23·107	+·023	23·069	23·283	22·889	·394	·246	54·1	61·1	+0·2	50·2	+0·3	55·6	+0·3	10·9	82·1	30·1	52·0	25·8
	Saraiu	...	23·145	...	23·107	23·326	22·915	·411	·240	48·5	61·3	...	42·8	...	52·1	...	18·5	83·8	21·0	62·8	33·5
	Kalabagh ‖	...	20·117	...	20·079	20·274	19·862	·412	·200	49·0	54·5	...	43·6	...	49·1	...	10·8	64·0	32·1	31·9	21·4
	Chakrata	7,022	23·291	+·027	23·251	23·494	23·062	·432	·240	54·5	65·7	+1·4	48·1	−1·5	56·9	−0·1	17·5	85·7	28·7	57·0	30·7
	Mukteswar	7,592	22·832	−·004	22·791	23·080	22·600	·480	·248	53·5	63·4	−0·8	46·7	−1·7	55·1	−1·2	16·7	84·0	27·0	57 0	31·7
	Darjiling	7,376	22·991	−·015	22·946	23·171	22·744	·427	·220	52·4	59·2	+0·7	47·8	+0·3	53·5	+0·5	11·4	71·8	30·2	41·6	21·9
	Shillong	4,920	25·126	...	25·078	25·317	24·776	·541	·234	60·6	69·6	...	53·3	...	61·4	...	16·3	79·9	32·7	47·2	27·7
	Cherrapunji	4,309	25·689	...	25·640	25·874	25·342	·532	·227	62·2	68·4	...	56·9	...	62·7	...	11·5	80·7	33·1	47·6	25·2
	Maymyo	3,545	26·434	+·007	26·379	26·615	26·136	·479	·208	63·1	76·3	−0·8	57·3	+1·8	66·9	+0·5	19·0	91·0	35·6	55·4	30·2
	Pachmarhi	3,528	26·438	+·012	26·385	26·708	26·013	·695	·220	70·0	80·9	+1·4	61·1	−0·1	71·0	+0·7	19·8	104·5	36·1	68·4	35·0
	Mount Abu	3,945	26·046	+·017	25·996	26·288	25·676	·612	·231	68·6	77·1	+1·0	63·0	+1·0	70·1	+1·0	14·0	100·2	45·4	54·8	27·2
	Mercara	3,781	26·230	−·001	26·163	26·398	26·075	·323	·127	66·0	76·9	+0·4	61·4	+0·1	69·2	+0·3	15·5	90·5	51·0	39·5	24·4
	Ootacamund	7,327	23·072	...	23·008	23·206	22·918	·288	·119	57·7	66·8	...	49·3	...	58·0	...	17·5	77·0	34·7	42·3	28·4
	Kodaikanal	7,688	22·839	−·001	22·774	22·969	22·690	·279	·114	57·4	65·7	+1·0	51·4	+0·2	58·6	+0·6	14·3	78·0	40·5	37·5	25·5
	Extra India.																				
	Singapore (*a*)	10	29·938	...	29·869	30·100	29·828	·272	·148	83·3	88·3	...	75·0	...	81·6	...	13·3	93·0	70·5	22·5	19·4
	Penang (*a*)	17	29·884	...	29·829	30·016	29·728	·288	·170	52·8	90·1	...	74·1	...	82·1	...	16·1	95·0	68·0	27·0	21·7
	Trincomalee	99	29·777†	P	29·805†	29·960	29·650	·310	·146†	77·7	90·1	+1·6	75·4	−0·9	82·8	+0·3	14·7	99·0	67·5	31·5	23·3

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.

* Mean of 9 months.
† „ 8 „
‡ „ 7 „
§ „ 5 „
‖ „ 6 „

3—contd.

tations in India, etc., in the year 1912.

Wind direction. Number of winds from									Wind velocity.			Hygrometry, 8 hrs.				Cloud.		Rainfall.							Station.
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour of year.	Normal velocity of year.	Departure from normal of year.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal in inches of mercury of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Normal number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	
23	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
																									Kashmir—*concld.*
0	8	12	2	1	25	7	1	...	2·2	1·5	+0·7	52	0	·132	+·001	4·2	—0·6	15	9·6	+5·4	3·14	3·26	— 0·12	0·32	Leh.
9	...	2	28	14	12	48	12	1	3·0	...	...	59	—12	·188	...	4·5	...	20	19·0	+1·0	9·30	7·48	+ 1·82	2·30	Skardu.
3	...	...	3	4	3	18	34	1	0·9	...	...	51	0	·257	—·012	3·7	—1·1	13	15·9	—2·9	3·22	5·11	— 1·89	0·41	Gilgit.
																									Baluchistan.
3	22	24	29	10	6	41	44	6	3·1	...	...	51	...	·352	...	1·4	...	14	...	...	5·82	...	...	0·94	Fort Sandeman.
4	6	12	4	21	19	17	4	9	1·7	2·1	—0·4	54	— 4	·250	—·037	1·8	—0·1	28	24·3	+3·7	10·13	10·02	+0·11	1·34	Quetta.
1	5	3	41	52	48	61	16	9	4·0	5·9	—1·9	46	+ 4	·262	—·005	1·8	—0·2	23	18·6	+4·4	8·59	6·68	+1·91	1·54	Chaman.
2	2	4	1	36	80	61	1	9	4·4	...	...	58	...	·208	...	1·1	...	20	17·8	+2·2	7·52	6·74	+0·78	1·03	Kalat.
3	20	41	102	33	30	49	22	26	4·9	...	...	46	...	·324	...	1·6	...	11	...	...	3·73	...	...	1·07	Dalbandin.
3	21	5	13	3	1	10	44	26	3·6	...	...	85	...	·724	...	2·3	...	9	...	...	4·08	...	...	0·82	Pasni.
9	26	123	94	12	10	27	6	9	5·3	...	...	63	...	·372	...	1·2	...	11	...	...	4·62	...	...	1·38	Panjgur.
1	11	27	31	28	46	56	84	8	3·1	...	...	50	...	·323	...	2·3	...	11	...	...	6·16	...	...	1·73	Robat.§
																									Hill stations excluding Kashmir and Baluchistan.
5	23	1	6	3	7	2	3	3	2·8	...	...	63	...	·284	...	4·6	...	20	35·2	—15·2	7·22	15·42	— 8·20	0·98	Chitral.
5	29	22	8	12	13	23	28	26	1·9	...	...	59	...	·272	...	2·4	...	61	63·8	— 2·8	29·56	27·85	+ 1·71	1·72	Para Chinar.
0	133	18	...	18	29	14	10	74	8·0	8·3	—0·3	49	— 4	·295	—·024	3·8	+0·7	42	41·7	+ 0·3	22·18	27·48	— 5·30	2·57	Cherat.
3	4	2	9	6	3	4	4	...	1·8	...	...	47	...	·242	...	1·1	...	9	40·2	—31·2	2·43	16·94	—14·51	0·32	Drosh.**
3	47	9	13	96	21	7	...	20	3·7	5·3	—1·6	56	+ 1	·265	+·002	3·9	+0·1	75	76·3	— 1·3	48·79	57·97	— 9·18	3·23	Murree.
	...	...	...	...	...	...	...	...	...	...	...	55	— 3	·253	—·007	4·0	—0·2	88	85·1	+ 2·9	58·67	63·11	— 4·44	3·66	Simla.
0	1	3	4	...	30	14	1	...	¶ 1·2	...	...	75	...	·274	...	4·4	...	94	91·0	+ 3·0	59·78	64·55	— 4·77	5·22	Sarain.
5	38	...	...	21	16	3	1	35	4·9	...	...	72	...	·255	...	5·3	...	72	63·5	+ 8·5	55·08	55·00	+ 0·08	7·78	Kalabagh.††
	119	34	2	26	50	2	...	12	3·0	4·6	—1·6	64	0	·295	+·004	4·2	+0·8	95	87·5	+ 7·5	81·34	72·44	+ 8·90	4·71	Chakrata.
	7	26	60	16	10	4	113	17	5·7	...	...	61	0	·269	...	4·2	...	77	79·6	— 2·6	52·69	50·90	+ 1·79	4·74	Mukteswar.
	4	22	13	11	1	14	24	4	1·1	3·5	—2·4	85	—2	·354	—·003	6·3	+0·3	136	121·3	+14·7	128·77	121·00	+ 7·77	8·65	Darjiling.
	...	5	12	13	17	52	3	1	1·7	...	...	75	...	·411	...	4·3	...	125	125·7	— 0·7	92·87	84·65	+ 8·22	3·66	Shillong.
	4	30	13	5	9	56	17	8	2·9	...	...	81	...	·466	...	5·9	...	155	161·8	— 6·8	387·87	409·90	—22·03	15·10	Cherrapunji.
	1	18	1	14	3	104	3	...	1·6	...	...	89	+6	·532	...	4·7	...	92	90·6	+ 1·4	55·80	56·57	— 0·77	3·06	Maymyo.
	17	30	19	26	15	64	33	70	3·7	4·3	—0·6	60	0	·424	—·010	2·6	—1·3	65	76·9	—11·9	74·96	75·33	— 0·37	7·50	Pachmarhi.
	49	39	5	10	35	89	44	47	4·7	5·7	—1·0	53	—2	·366	—·007	3·3	0	56	53·9	+ 2·1	43·99	60·80	—16·81	4·14	Mount Abu.
	9	47	44	4	2	17	57	35	3·2	4·3	—1·1	88	+5	·555	+·019	6·1	+0·2	133	133·3	— 0·3	133·40	126·88	+ 6·52	6·10	Mercara.
	9	33	74	42	14	13	51	29	2·9	...	...	70	...	·333	...	5·4	...	117	104·7	+12·3	54·25	56·20	— 1·95	2·02	Ootacamund.
	46	53	69	36	9	5	76	67	9·9*	...	...	69	—1	·326	...	4·7	...	102	107·7	— 5·7	65·23	61·65	+ 3·58	4·07	Kodaikanal.
																									Extra India.
	19	65	6	60	26	46	1	27	‖ 4·2*	...	...	...	...	...	...	5·8	...	129	133·4	— 4·4	99·75	93·99	+ 5·76	4·57	Singapore.
	23	194	6	62	9	10	...	58	8·2*	...	...	...	...	...	...	...	...	110	132·6	—22·6	92·58	106·41	—13·83	6·61	Penang.
	3	66	7	7	3	235	11	4	5·9*	7·3	—1·4	84	+3	·810	—·054	6·1	+2·8	63	71·8	— 8·8	44·99	62·16	—17·17	2·61	Trincomalee.

* Uncorrected for scale error.
§ Wind observations for 362 days.
¶ Mean of 5 months.
** Wind observations for 148 days.
†† „ „ „ 172 „

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TABLE

(2) *Abstract of observations taken at 8 hrs. at 222*

Number of sub-division.	Station.	Elevation 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 of year.	Mean 8 hrs. pressure reduced to sea-level and to constant gravity, at 45° Lat.	Highest pressure recorded during year.	Lowest pressure recorded during year.	Absolute range during year.	Mean monthly range of pressure.	Mean of 8 hrs. temperature of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	Extra India —*concld.*																				
	Colombo	24	29·908	—·013	29·858	30·057	29·795	·262	·136	75·8	87·9	+0·9	74·1	—1·5	81·0	—0·3	13·8	97·0	61·5	35·5	21·9
	Minicoy	7	29·954	...	...	30·110	29·827	·283	·127	...	...	...	...	...	...	...	...	...	...	...	...
	Amini Divi†	*13*	29·931	0	29·872	30·118	29·743	·375	·145	82·3	88·2	+2·3	77·2	+0·5	82·7	+1·4	10·9	98·8	65·9	32·9	20·3
	Gyantse	13,120	17·096	...	17·057	17·305	16·935	·370	·178	37·0	58·5	...	22·3	...	40·4	...	36·2	53·7	—3·0	86·7	52·9
	Pharijong	14,400	...	...	...	...	...	...	...	34·0†	44·6	...	17·1†	...	31·6†	...	29·0†	74·4	—25·1	99·5	50·3†
	Gangtok	5,660?	24·575§	...	24·530§	24·684	24·416	·268	·161§	57·6	68·2	...	52·9	...	60·5	...	15·3	80·3	37·2	43·1	25·6
	Gartok (*c*)	15,100	17·570	...	...	17·775	17·390	·385	·141	25·3	47·5	...	11·3	...	29·5	...	36·2	79·7	—32·3	112·0	58·1
	Kashgar (*c*)**	4,255	25·559**	...	...	26·170	25·210	·960	·521**	49·1	65·1	+2·4	41·4	+0·8	53·3	+1·6	23·6	98·9	4·5	94·4	46·8
	Kabul††	...	24·244	...	24·213	24·441	23·973	·468	·232	54·4	76·8	+3·1	51·9	+8·2	64·3	+5·6	24·9	106·4	7·8	98·6	42·1
	Meshed	3,104	26·793	...	29·917	27·290	26·369	·921	·436	52·8	70·6	...	42·7	—3·1	56·7	...	27·9	105·2	—7·9	113·1	52·3
	Jask	13	29·859	—·007	29·825	30·267	29·352	·915	·297	75·3	87·2	+0·7	73·1	—0·3	80·1	+0·2	14·2	107·8	53·3	54·5	26·1
	Muscat	20	29·869	+·011	29·837	30·269	29·313	·956	·287	81·3	89·8	+6·4	77·7	—1·0	83·8	+2·7	12·1	112·3	60·1	52·2	25·7
	Bahrein	18	29·901	...	29·873	30·393	29·366	1·027	·308	77·4	82·7	...	72·1	...	77·4	...	10·6	103·3	48·7	54·6	26·9
	Bushire	14	29·866	+·005	29·843	30·347	29·368	·979	·321	72·8	81·4	—0·8	68.2	—0·3	74·8	—0·6	13·2	101·8	39·5	62·3	29·8
	Busrah	25	29·883	...	29·877	30·389	29·357	1·032	·380	72·3	85·6	...	66·7	...	76·2	...	18·9	116·9	35·1	81·8	35·9
	Kerman†	...	24·720§§	...	...	25·120	24·240	·880	·391§§	59·0	81·9	...	44·6	...	63·2	...	37·4	110·8	15·8	95·0	59·1
	Ispahan (*b*)	5,817	24·273	...	...	24·530	23·890	·640	·349	54·0	73·5	—0·6	45·6	+0·4	59·5	—0·1	27·9	101·9	0·2	101·7	44·1
	Tehran (*b*)	4,002	25·746	...	...	26·050	25·395	·655	·363	57·9	72·8	—0·2	51·4	+0·4	62·1	+0·1	21·4	105·8	16·5	89·3	41·3
	Baghdad	127	29·791	0	29·807	30·397	29·258	1·139	·438	66·6	87·7	+2·7	60·0	+0·5	73·8	+1·6	27·7	117·2	27·2	90·0	45·8
	Beirut (*a*)	...	...	...	29·941	...	...	...	...	68·4	73·6	...	63·1	...	67·8	...	11·5	98·8	44·1	54·7	28·5
	Aden	94	29·848	+·022	29·874	30·090	29·540	·550	·185	80·9	87·5	—0·8	77·9	+0·2	82·7	—0·3	9·6	98·1	67·4	30·7	18·8
	Zanzibar	72	30·001	+·009	29·999	30·153	29·842	·311	·135	78·7	84·2	+0·6	76·4	0	80·3	+0·3	7·8	90·7	69·3	21·4	14·7

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*) 8½ hrs. observations.
(*b*) Aneroid uncorrected.
(*c*) Aneroid corrected.

† Mean of 11 months.
§ " " 4 "
†† " " 10 "
§§ " " 7 "
** " " 6 "

—contd.

ations in India, etc., in the year 1912.

Wind direction. Number of winds from									Wind velocity.			Hygrometry, 8 hrs.				Cloud.		Rainfall.							
Calm.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean velocity in miles per hour of year.	Normal velocity of year.	Departure from normal of year.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal in inches of mercury of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Normal number of rainy days during year.	Departure from normal of year.	Rainfall of year.	Normal rainfall of year.	Departure from normal of year.	Heaviest rainfall during year.	Station.
23	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
																									Extra India —*concld.*
1	17	52	4	1	2	63	27	29	3·5*	5·8	−2·3	91	+14	·814	−·031	7·2	+2·1	139	108·7	+30·3	101·11	84·53	+16·58	4·63	Colombo.
..	92	48	14	3	10	39	81	79	5·2	6·9	−1·7	...	...	...	...	5·1	+0·5	97	92·5	+ 4·5	65·15	61·84	+ 3·31	3·54	Minicoy.
9	98	45	4	5	16	69	21	58	6·9	...	...	75	−4	·829	−·050	4·8	−0·5	72	74·6	− 2·6	44·66	52·36	− 7·70	3·51	Amini Divi.
1	1	15	21	37	1	6	2	2	1·4‡	...	...	80	...	·195	...	0·8	...	40	...	...	9·29	...	...	0·78	Gyantse.
3	15	18	3	60	22	22	4	9	7·8	...	...	76‡	...	·183‡	...	2·8	...	58	...	...	28·12	...	...	2·00	Pharijong.
7	5	11	7	4	4	1	2	4	1·1	...	...	86	...	·429	...	2·7	...	179	165·4	+13·6	150·36	135·11	+15·25	4·47	Gangtok.‖
2	...	1	2	87	19	29	...	...	6·2	...	...	...	...	...	...	3·1	...	7	...	...	1·28	...	...	0·30	Gartok.¶
3	...	...	...	...	...	2	...	17	0·5	2·1	−1·6	66	?	·273	?	3·4	−0·8	6	8·8	− 2·8	2·85	3·28	− 0·43	1·25	Kashgar.
2	11	9	41	47	82	30	55	9	...	...	...	69	...	·342	...	(a) 1·7	(a) +0·1	3	27·8	−24·8	2·40	12·89	−10·49	1·00	Kabul.‡‡
7	13	7	7	9	9	3	5	6	1·2	...	...	62	...	·249	...	3·0	?	27	22·5	+ 4·5	9·03	9·37	− 0·34	0·78	Meshed.
0	65	60	104	14	3	...	20	70	6·3	8·7	−2·4	71	0	·654	−·073	2·9	+0·4	11	8·9	+ 2·1	4·78	4·17	+ 0·61	1·08	Jask.
4	22	5	64	7	3	4	41	106	4·2	3·1	+1·1	63	− 6	·677	−·065	2·9	+1·3	16	8·2	+7·8	8·06	3·94	+4·12	2·02	Muscat.
...	62	10	18	19	17	25	81	133	5·3	...	...	70	...	·676	...	1·6	...	9	6·9	+2·1	4·34	2·47	+1·87	1·12	Bahrein.‖
9	46	59	39	20	4	3	21	84	6·9	5·8	+1·1	78	+11	·673	+·065	1·9	...	14	18·0	−4·0	5·35	11·07	−5·72	1·49	Bushire.‖
1	10	20	14	26	28	45	126	66	3·0	...	...	60	...	·481	...	2·3	...	18	14·7	+3·3	4·73	6·23	−1·50	0·69	Busrah.
5	32	12	7	6	14	21	12	18	3·1	...	...	47	...	·236	...	1·1‡	...	7	...	...	2·08	...	...	0·44	Kerman.
1	4	...	3	5	4	22	29	8	2·1	2·9	−0·8	57	− 7	·250	−·069	1·6	−0·5	8	13·7	−5·7	2·57	4·74	−2·17	0·65	Ispahan.
55	33	92	18	8	14	27	5	2	2·3	2·2	+0·1	53	+ 5	·256	+·005	2·0†	−0·5	22	26·9	−4·9	5·90	9·30	−3·40	0·44	Tehran.‖‖
05	57	11	8	19	19	7	11	126	5·2	2·7	+2·5	55	− 4	·354	−·055	1·8	+0·6	12	16·0	−4·0	3·76	6·95	−3·19	0·51	Baghdad.¶¶
99	7	16	8	30	116	51	31	8	...	...	...	68	...	·488	...	4·3	...	55	...	...	44·43	...	...	2·36	Beirut.
78	26	175	44	15	2	23	...	3	8·7	9·1	−0·4	74	+ 1	·782	+·001	4·0	−0·2	4	4·5	−0·5	1·90	2·65	−0·75	1·10	Aden.
45	34	36	5	38	100	92	13	3	4·5	4·0	−0·4	83	0	·811	−·006	5·7	−0·2	92	88·8	+3·2	66·01	63·30	+2·71	4·88	Zanzibar.

* Uncorrected for scale error.
‡ Mean of 9 months.
‖ Wind observations for 365 days.
¶ „ „ „ 350 „
** Mean of 6 months.
‡‡ Wind observations for 286 days.
‖‖ „ „ „ 354 „
¶¶ „ „ „ 363 „

(a) Mean of 2 months.
† „ „ 11 „

Table C.—Abstract of observations taken at 8 hrs. at 67 fourth and fifth class stations in India, etc., in the year 1912.

TABLE

Abstract of observations taken at 8 hrs. at 67 fourth and

Number of sub-division.	Station.	Temperature of air. Mean of 8 hrs. temperature of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.	Wind direction. Number of winds from 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
	II.—Assam.																					
4	Balek*	...	87·3	...	73·8	...	80·5	...	13·5	98·1	69·6	28·5	26·9	...	...	...	...	...	...	...	...	...
	Bishnath	70·2	83·9	...	65·1	...	74·5	...	18·8	95·6	44·7	50·9	29·7	...	...	...	...	...	...	...	...	...
	Borjuli	71·3	84·4	...	63·6	...	74·0	...	20·8	96·0	39·4	56·6	32·6	...	...	...	...	...	...	...	...	...
	Chandkhira ‡	70·0	87·8	...	63·8	...	75·8	...	24·0	104·0	39·8	64·2	36·1	...	...	...	...	...	...	...	...	...
	Doom Dooma	66·5	82·5	...	63·6	...	73·1	...	18·9	98·5	41·4	57·1	31·8	...	...	...	...	...	...	...	...	...
	Dikom	68·4	82·7	...	63·7	...	73·3	...	19·0	98·6	39·6	59·0	32·3	...	...	...	...	...	...	...	...	...
	Golaghat	70·7	72·9‖	...	65·2	...	67·2‖	...	7·7	92·3	42·2	50·1	23·2‖	...	...	...	...	...	...	...	...	...
	Haliakandi §	72·4	86·6	...	66·4**	...	76·2**	...	20·2	96·4	51·0	45·4	28·3**	...	...	...	...	...	...	...	...	...
	Jorehat	70·2	82·5	...	66·5	...	74·0	...	17·0	97·1	44·3	52·8	28·4	...	...	...	...	...	...	...	...	...
	Lumding ‖	72·8	86·8	...	68·7	...	77·2	...	17·1	96·7	45·4	51·3	27·4	...	...	...	...	...	...	...	...	...
	Messa	76·5	87·7	...	62·9	...	75·3	...	24·8	99·7	39·0	60·7	36·5	...	...	...	...	...	...	...	...	...
	Panerihat	65·8	83·4	...	61·7	...	72·5	...	21·7	96·0	39·0	57·0	33·1	...	...	...	...	...	...	...	...	...
	Srimangal	72·4	87·9	...	65·7	...	76·8	...	22·2	97·4	40·2	57·2	33·5	...	...	...	...	...	...	...	...	...
	III.—Bengal.																					
5	Comilla	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Brahmanbaria	77·3	86·7	...	68·5	...	77·6	...	18·2	98·7	48·1	50·6	20·5	...	...	...	...	...	...	...	...	...
	Faridpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Goalundo	77·7	88·1	...	67·6	...	77·8	...	20·5	102·2	45·5	56·7	32·8	...	...	...	...	...	...	...	...	...
	Pabna	75·4	87·8	...	68·2	...	78·0	...	19·6	101·0	46·2	54·8	30·8	...	...	...	...	...	...	...	...	...
	Sirajganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rampur Boalia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Malda	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rangpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dam Dim	68·4†	89·0†	...	60·3†	...	74·4†	...	28·7	98·7	36·2	62·5	40·0†	...	...	...	...	...	...	...	...	...
	Kalchini	74·1	84·5	...	60·7	...	72·6	...	23·8	96·6	38·4	58·2	35·2	...	...	...	...	...	...	...	...	...
	Nagrakata	73·5	84·4	...	64·5	...	74·5	...	19·9	95·1	44·0	51·1	30·8	...	...	...	...	...	...	...	...	...
	Cooch Behar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Krishnagar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bankura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Raniganj	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	IV.—Bihar and Orissa.																					
7	Hazaribagh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Bhagalpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Muzaffarpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Motihari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chapra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Arrah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Mean of 2 months. † Mean of 10 months. ‡ Mean of 11 months.

h class stations in India, etc., in the year 1912.

Wind velocity.			Hygrometry, 8 hrs.				Cloud.		Rainfall.							
miles per hour.	Normal.	Departure from normal.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal in inches of mercury of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Normal number of rainy days during year.	Departure from normal of year.	Total rainfall for the year.	Normal rainfall for the year.	Departure from normal of year.	Heaviest rainfall during the year.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
																II.—Assam.
...	...	...	...	...	...	...	...	...	28	...	...	71·20	...	...	7·58	Balek.
...	...	...	94	..	·727	...	...	...	112	...	...	85·93	88·58	— 2·65	7·19	Bishnath.
...	...	...	83	...	·668	...	...	...	129	...	...	90·96	77·73	+13·23	4·20	Borjuli.
...	...	...	91	...	·703	...	...	...	119	...	...	92·12	...	...	4·25	Chandkhira.
...	...	...	95	...	·649	...	...	...	127	...	...	103·73	96·74	+ 6·99	6·15	Doom Dooma.
...	...	...	90	...	·657	...	...	...	127	...	...	103·38	...	...	4·40	Dikom.
...	...	...	88	...	·690	...	...	...	110	...	...	73·53	...	...	3·63	Golaghat.
...	...	...	93	...	·752	...	...	...	36	...	...	28·97	...	...	4·55	Hailakandi.
...	...	...	91	...	·693	...	...	...	133	...	...	89·46	76·37	+13·09	3·24	Jorehat.
...	...	...	90	...	·741	...	...	...	68?	...	...	44·97	...	...	4·15	Lumding.
...	...	...	79	...	·742	...	...	...	122	...	...	76·25	83·62	— 7·37	2·70	Messa.
...	...	...	94	...	·627	...	...	...	111	...	...	81·80	74·30	+ 7·50	4·10	Panerihat.
...	...	...	89	...	·732	...	...	...	135	...	...	102·59	95·88	+ 6·71	4·69	Srimangal.
																III.—Bengal.
...	...	...	...	...	...	...	...	...	115	...	...	103·51	88·38	+15·13	3·87	Comilla.
...	...	...	79	...	·750	...	...	...	100	...	...	79·67	79·33	+ 0·34	9·32	Brahmanbaria.
...	...	...	...	...	...	...	...	...	96	...	...	71·66	69·30	+ 2·36	5·93	Faridpur.
...	...	...	77	...	·758	...	...	...	88	...	...	68·02	...	...	5·22	Goalundo.
...	...	...	82	...	·749	...	...	...	89	...	...	62·23	60·11	+ 2·12	6·39	Pabna.
...	...	...	...	...	...	...	...	...	83	...	...	55·87	64·30	— 8·43	4·10	Sirajganj.
...	...	...	...	...	...	...	...	...	62	...	...	37·68	53·98	—16·30	3·47	Rampur Boalia.
...	...	...	...	...	...	...	...	...	68	...	...	53·84	52·82	+ 1·02	3·80	Malda.
...	...	...	...	...	...	...	...	...	89	...	...	97·20	80·53	+16·67	5·05	Rangpur.
...	...	...	90†	...	·654†	...	...	...	127	...	...	149·45	...	...	7·05	Dam Dim.
...	...	...	77	...	·681	...	...	...	109	...	...	106·80	...	...	7·19	Kalchini.
...	...	...	75	...	·646	...	...	...	125	...	...	152·20	161·05	— 8·85	6·08	Nagrakata.
...	...	...	...	...	...	...	...	...	113	...	...	135·58	145·70	—10·12	6·40	Cooch Behar.
...	...	...	...	...	...	...	...	...	85	...	...	62·18	57·05	+ 5·13	4·46	Krishnagar.
...	...	...	...	...	...	...	...	...	71	...	...	65·67	54·39	+11·28	4·82	Bankura.
...	...	...	...	...	...	...	...	...	76	...	...	45·41	52·72	— 7·31	2·52	Raniganj.
																IV.—Bihar and Orissa.
...	...	...	...	...	...	...	...	...	56	...	...	44·01	52·25	— 8·24	3·39	Hazaribagh.
...	...	...	...	...	...	...	...	...	59	...	...	46·65	49·00	— 2·35	2·95	Bhagalpur.
...	...	...	...	...	...	...	...	...	60	...	...	46·91	49·11	— 2·20	3·99	Muzaffarpur.
...	...	...	...	...	...	...	...	...	53	...	...	46·04	56·17	—10·13	7·75	Motihari.
...	...	...	...	...	...	...	...	...	51	...	...	34·69	41·81	— 7·12	4·81	Chapra.
...	...	...	...	...	...	...	...	...	51	...	...	37·19	44·25	— 7·06	2·82	Arrah.
...	...	...	...	...	...	...	...	...	52	...	...	31·62	42·16	—10·54	4·67	Dehri.

§ Mean of 5 months. ‖ Mean of 9 months. ** Mean of 4 months.

TABLE

Abstract of observations taken at 8 hrs. at 67 fourth and

Number of sub-division.	Station.	Temperature of air. Mean of 8 hrs. temperature of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.	Wind direction. Number of winds from 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
	V.—United Provinces of Agra and Oudh.																					
9	Ballia	73·8	90·7‡	...	66·5	...	79·4‡	...	24·2	108·2	44·6	63·6	35·5‡	...	...	...	...	...	...	...	...	...
10	Meerut	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Dehra Dun	...	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...
	IX.—Rajputana.																					
18	Udaipur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	XII.—Central Provinces.																					
23	Chhindwara	71·5	88·0	...	63·8	...	75·9	...	24·2	110·7	39·8	70·9	38·2	...	26	35	12	11	14	64	107	97
	XV.—Madras.																					
31	Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
32	Anantapur	77·9	93·9	...	71·1	...	82·5	...	22·8	108·5	51·1	57·4	33·5	...	...	...	...	...	...	...	...	...
33	Guntur	80·1	94·1	...	73·8	...	83·9	...	20·3	117·2	56·3	60·9	33·3	...	...	...	...	...	...	...	...	...
	Bay Islands.																					
1	Car Nicober	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kashmir.																					
13	Jammu	74·4	85·1	...	64·4	...	74·8	...	20·7	110·6	41·5	69·1	38·1	...	133	168	15	4	36	...	10	...
	Sonamarg	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Kargil	41·5	60·5	...	39·4	...	46·9	...	27·1	100·7	—16·0	125·7	51·0	...	129	92	72	57	...	3	...	13
	Astor	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Hill stations, exclusive of Kashmir.																					
	Panighatta	71·6	82·2	...	65·1	...	74·0	...	17·1	94·0	43·4	50·6	28·6	...	...	...	...	...	...	...	...	...
	Kurseong	61·1	67·6	...	56·5	...	62·1	...	11·1	81·7	40·9	40·8	21·9	...	...	...	...	...	...	...	...	...
	Gnatong	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lachung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Ringim	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Poo	...	61·4‡	...	42·5	...	51·4‡	...	18·9	91·5	20·9	70·6	35·7‡	168	8	4	49	20	3	10	71	28
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bakloh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Drosh ¶	56·2	72·4	...	51·3	...	61·8	...	21·1	110·1	24·1	86·0	40·1	46	18	28	47	16	24	13	15	4
	Pishin	...	75·3	...	45·4	...	60·3	...	29·9	103·9	18·0	85·9	48·6	...	...	...	...	...	...	...	...	...

‡ Mean of 11 months.

¶ Mean of 7 months.

-contd.

h class stations in India, etc., in the year 1912—contd.

Wind velocity.			Hygrometry, 8 hrs.				Cloud.		Rainfall.							
Mean velocity in miles per hour.	Normal.	Departure from normal.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal in inches of mercury of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Normal number of rainy days during year.	Departure from normal of year.	Total rainfall for the year.	Normal rainfall for the year.	Departure from normal of year.	Heaviest rainfall during the year.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
																V.—United Provinces of Agra and Oudh.
...	...	...	74	...	·653	...	...	...	...	...	...		No rain	gauge.		Ballia.
...	...	...	...	...	...	...	...	...	39	...	...	35·13	32·27	+2·86	4·05	Meerut.
...	...	...	...	...	...	...	...	...	67	...	...	62·74	85·22	—22·48	10·37	Dehra Dun.
																IX.—Rajputana.
...	...	...	...	...	...	...	...	...	35	...	...	25·45	23·40	+2·05	3·75	Udaipur.
																XII.—Central Provinces.
2·2	...	...	65	...	·526	...	2·2	...	58	...	...	42·22	...	...	3·70	Chhindwara.
																XV.—Madras.
...	...	...	...	...	...	...	...	...	37	...	...	24·54	27·29	—2·75	3·75	Tinnevelly.
...	...	...	69	...	·663	...	5·8	...	43	...	...	28·36	...	...	3·28	Anantapur.
...	...	...	83	...	·853	...	4·5	...	48	...	...	20·71	...	...	1·85	Guntur.
																Bay Islands.
...	...	...	...	...	...	...	...	...	126	...	...	122·01	96·97	+25·04	5·90	Car Nicobar.
																Kashmir.
...	...	...	60	...	·523	...	2·3‡	...	41	...	...	32·22	41·79	—9·57	3·48	Jammu.
...	...	...	...	...	...	...	...	...	108	...	...	62·51	77·84	—15·33	4·50	Sonamarg.
...	...	...	50	...	·161	...	3·3	...	18	...	...	11·40	9·85	+1·55	2·10	Kargil.
...	...	...	...	...	...	...	...	...	26	...	...	18·47	...	...	4·70	Astor. ††
																Hill stations, exclusive of Kashmir.
...	...	...	71	...	·578	...	...	...	129	...	...	146·70	137·53	+9·17	7·77	Panighatta.
...	...	...	80	...	·448	...	...	...	139	...	...	167·20	153·72	+13·48	6·92	Kurseong.
...	...	...	...	...	...	...	...	...	199	...	...	166·84	...	...	5·27	Gnatong.
...	...	...	...	...	...	...	...	...	90	...	...	45·13	...	...	2·30	Lachung. ‡‡
...	...	...	...	...	...	...	...	...	119	...	...	144·63	...	...	8·49	Ringim. §§
...	...	...	...	...	...	...	4·6	...	23	...	...	8·93	14·50	—5·57	1·01	Poo.
...	...	...	...	...	...	...	...	...	...	...	...	1·72*	23·08	...	0·39	Kailang.
...	...	...	...	...	...	...	...	...	71	...	...	80·44	...	...	5·00	Bakloh. ‖‖
...	...	...	56	...	·280	...	1·6	...	22	...	...	9·06	...	...	1·27	Dros.
...	...	...	...	...	...	...	1·7‡	...	28	...	...	12·73	8·12	+4·61	1·65	Pishin.

‡‡ Total rainfall of 10 months only.
†† " " " 4 "

§§ Total rainfall of 7 months only.
* Rainfall since 20th September 1912.

‖‖ Total rainfall of 9 months only.

x

TABLE

Abstract of observations taken at 8 hrs. at 67 fourth and

Number of sub-division.	Station.	Temperature of air.												Wind direction. Number of winds from								
		Mean of 8 hrs. temperature of year.	Mean maximum of year.	Departure from normal of year.	Mean minimum of year.	Departure from normal of year.	Yearly mean of mean between maximum and minimum.	Departure from normal of year.	Mean daily range of temperature.	Highest temperature observed during year.	Lowest temperature observed during year.	Absolute range during year.	Mean monthly absolute range.	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
	Extra India.																					
	Ahwaz	...	87·5	...	72·8	...	80·4	...	14·7	117·3	36·8	80·5	30·9	...	...	...	...	...	...	...	...	...
	Chumbi ‖	41·3	56·8	...	35·6	...	46·2	...	21·2	73·3	14·1	59·2	37·3	...	...	...	...	...	...	...	...	...
	Kirmanshah	54·0	70·1	...	41·7	...	55·9	...	28·4	106·4	—9·0	115·4	49·5	...	...	...	...	...	...	...	...	...
	Koweit	...	85·7	...	66·5	...	77·1	...	17·2	115·4	36·2	79·2	35·9	25	32	1	29	3	19	29	95	133
	Maidan ‡	...	88·4	...	64·4	...	76·4	...	24·0	122·6	35·2	87·4	39·9	...	...	...	...	...	...	...	...	...
	Muhammerah	...	85·3	...	66·7	...	76·0	...	18·6	108·4	36·8	71·6	32·7	...	3	...	...	38	5	25	...	194
	Pemba	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Prison Island	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Seistan ‡	...	83·7	...	58·0	...	70·9	...	25·7	114·8	26·0	88·8	49·7	37	77	12	7	7	2	3	21	169

‖ Mean of 9 months.

—concld.

fth class stations in India, etc., in the year 1912—concld.

Wind velocity.			Hygrometry, 8 hrs.				Cloud.		Rainfall.							
Mean velocity in miles per hour.	Normal.	Departure from normal.	Mean humidity at 8 hrs. of year.	Departure from normal of year.	Mean vapour tension at 8 hrs. in inches of mercury of year.	Departure from normal in inches of mercury of year.	Mean cloud amount at 8 hrs. of year.	Departure from normal of year.	Number of rainy days during year.	Normal number of rainy days during year.	Departure from normal of year.	Total rainfall for the year.	Normal rainfall for the year.	Departure from normal of year.	Heaviest rainfall during the year.	Station.
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
																Extra India.
...	...	...	...	...	...	...	1·8	...	12	...	...	4·97	...	...	0·73	Ahwaz.
...	...	...	79	...	·229	...	3·4	...	74	...	...	24·74	...	...	0·80	Chumbi.
...	...	...	55	...	·223	...	...	...	30	...	...	14·26	...	...	2·92	Kirmanshah.
...	...	...	...	...	...	...	1·5	...	8	...	...	2·66	...	...	0·54	Koweit.
...	...	...	...	...	...	...	...	...	24	...	...	13·77	...	...	1·88	Maidan. ‡
...	...	...	...	...	...	...	...	...	17	...	...	5·51	...	...	1·15	Muhammerah.
...	...	...	...	...	...	...	...	...	97	...	...	58·21	83·58	—25·37	2·70	Pemba.
...	...	...	...	...	...	...	...	...	Not received.		...	...	...	...	...	Prison Island.
10·1	...	...	...	...	...	..	...	...	7	...	...	1·92	...	...	0·85	Seistan.

‡ Mean of 11 months.

Addenda sheet of 10 hrs. and 16 hrs. observations in Table A of 1912, Monthly Weather Review.

Addenda sheet of 10 hrs. and 16 hrs. observations

Number of sub-division.	Station.	Elevation 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 gravity, 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
	January 1912.																					
14	Srinagar	5,204	25·017	24·949	·068	24·974	—·017	24·945	45·2	32·4	12·8	51·2	25·8	25·4	36·5	43·0	36·8	+6·1	31·0	34·7	40·2	35·3
	Diego Garcia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mauritius	181	...	...	...	29·809	+·054	29·934	87·4	73·4	14·0	90·2	68·0	22·2	...	...	79·8	+1·3	...	...	...	73·9
	February 1912.																					
	Diego Garcia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mauritius	181	...	...	...	29·660	—·077	29·786	83·7	74·8	8·9	88·0	71·1	16·9	...	...	78·6	+0·1	...	...	...	75·9
	March 1912.																					
	Diego Garcia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mauritius	181	...	...	...	29·734	—·031	29·860	83·8	72·6	11·2	86·7	67·5	19·2	...	...	77·7	+0·2	...	...	...	73·4
	April 1912.																					
	Diego Garcia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mauritius	181	...	...	...	29·849	+·029	29·976	82·1	70·1	12·0	84·7	66·1	18·6	...	...	75·4	+0·1	...	...	...	71·3
	May 1912.																					
	Diego Garcia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mauritius	181	...	...	...	29·854	—·039	29·983	79·0	68·0	10·2	81·5	62·3	19·2	...	...	73·1	+1·0	...	...	...	69·5
	June 1912.																					
	Diego Garcia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mauritius	181	...	...	...	29·947	—·023	30·077	75·6	62·3	13·3	77·8	53·9	23·9	...	...	68·6	+0·2	...	...	...	64·0
	July 1912.																					
	Diego Garcia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mauritius	181	...	...	...	29·992	—·019	30·123	74·5	61·9	12·6	77·3	57·4	19·9	...	...	67·6	0	...	...	...	62·6
	August 1912.																					
	Diego Garcia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Mauritius	181	...	...	...	30·014	0	30·145	75·1	61·4	13·7	77·2	55·5	21·7	...	...	67·6	—0·3	...	...	...	62·9
	December 1912.																					
	Mauritius	181	...	...	...	29·848	+·032	29·975	...	...	...	...	...	...	...	...	76·1	—1·5	...	...	...	70·8

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.

Table A of 1912, Monthly Weather Review.

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																		
	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
																															January 1912.	
·159	·181	·218	·186	+·028	86	83	78	82	−2	8·1	7·5	7·8	+0·6	12	4	3	...	8	3	1	5	26	N 47° W	S 21° E	35	4	45	54	2·90	1·57	Srinagar.	14
...	...	...	...	...	...	...	...	...	...	(a) 5·1	(b) 5·2	5·1	...	...	3	4	4	10	...	2	...	11	(c) N 42° E	...	21	...	(d) 55	...	12·39	2·20	Diego Garcia. (f)	
...	...	...	·731	−·007	...	...	...	72	−4	...	...	6·5	+0·5	...	...	...	...	...	...	...	...	...	N 84° E	S 86° E	...	...	202*	169	7·31	1·93	Mauritius.	
																															February 1912.	
...	...	...	...	...	...	...	...	...	...	6·3	6·7	6·5	...	...	6	7	2	8	2	2	3	22	(g) N 23° W	...	37	...	218	...	10·81	2·02	Diego Garcia. (f)	
...	...	...	·838	+·078	...	...	...	86	+7	...	...	8·5	+2·6	...	...	...	...	...	...	...	...	...	N 54° E	S 83° E	...	...	231*	162	31·51	7·32	Mauritius.	
																															March 1912.	
...	...	...	...	...	...	...	...	...	...	(h) 6·4	(i) 5·6	6·0	...	...	4	2	...	2	2	3	3	37	(j) N 47° W	...	73	...	(h) 173	...	13·03	1·55	Diego Garcia. (f)	
...	...	...	·741	−·013	...	...	...	78	−2	...	...	5·4	−0·7	...	...	...	...	...	...	...	...	...	S 67° E	S 82° E	...	...	182*	165	2·92	1·11	Mauritius.	
																															April 1912.	
...	...	...	...	...	...	...	...	...	...	(k) 5·1	(l) 4·8	4·9	...	...	2	5	2	30	3	1	2	10	(m) S 54° E	...	38	...	(k) 122	...	5·57	2·15	Diego Garcia. (f)	
...	...	...	·694	0	...	...	...	79	0	...	...	5·2	+0·1	...	...	...	...	...	...	...	...	...	S 69° E	S 72° E	...	...	164*	159	5·89	2·21	Mauritius.	
																															May 1912.	
...	...	...	...	...	...	...	...	...	...	(n) 6·5	(o) 5·6	6·1	...	...	2	5	4	15	2	5	...	12	(p) S 72° E	...	15	...	(n) 127	...	9·10	3·80	Diego Garcia. (f)	
...	...	...	·660	+·054	...	...	...	81	+4	...	...	5·6	+0·8	...	...	...	...	...	...	...	...	...	S 62° E	S 64° E	...	...	208*	158	6·41	1·20	Mauritius.	
																															June 1912.	
...	...	...	...	...	...	...	...	...	...	(r) 5·0	(s) 3·7	4·3	...	...	...	...	...	44	4	...	...	...	(t) S 42° E	...	98	...	(n) 180	...	0·42	0·27	Diego Garcia. (f)	
...	...	...	·527	−·009	...	...	...	75	−2	...	...	4·9	+0·3	...	...	...	...	...	...	...	...	...	S 58° E	S 63° E	...	...	181*	174	0·91	0·27	Mauritius.	
																															July 1912.	
...	...	...	...	...	...	...	...	...	...	(n) 5·3	(l) 6·0	5·7	...	...	1	1	3	39	7	...	1	2	(v) S 43° E	...	79	...	(n) 211	...	1·25	0·42	Diego Garcia. (f)	
...	...	...	·492	−·019	...	...	...	73	−2	...	...	4·9	+0·1	...	...	...	...	...	...	...	...	...	S 59° E	S 64° E	...	...	234*	185	1·95	0·63	Mauritius.	
																															August 1912.	
...	...	...	...	...	...	...	...	...	...	(x) 6·0	(x) 4·7	5·3	...	...	...	...	...	6	...	...	...	...	(y) S 45° E	...	99	...	(x) 338	...	1·09	0·47	Diego Garcia. (f)	
...	...	...	·502	−·001	...	...	...	75	+1	...	...	5·9	+0·8	...	...	...	...	...	...	...	...	...	S 63° E	S 66° E	...	...	204*	185	1·75	0·29	Mauritius.	
																															December 1912.	
...	...	...	·663	−·020	...	...	...	74	+1	...	...	6·4	+0·8	...	...	...	...	...	...	...	...	...	N 73° E	S 88° E	...	...	150	166	4·83	...	Mauritius.	

(a) Mean of 19 days.
(b) ,, ,, 16 ,,
(d) ,, ,, 18 ,,
(h) ,, ,, 29 ,,
(i) ,, ,, 24 ,,
(k) ,, ,, 28 ,,

(l) Mean of 27 days.
(n) ,, ,, 26 ,,
(r) ,, ,, 25 ,,
(s) ,, ,, 22 ,,
(x) ,, ,, 3 ,,

* Uncorrected for scale error.
(f) Observations of 9 hrs. and 15 hrs.
(c) Wind observations 28 less.
(g) ,, ,, 6 ,,
(j) ,, ,, 9 ,,

(m) Wind observations 5 less.
(p) ,, ,, 17 ,,
(t) ,, ,, 12 ,,
(v) ,, ,, 8 ,,
(y) ,, ,, 56 ,,

Addenda sheet of 8 hrs. observations in Table B of 1912, Monthly Weather Review.

Addenda sheet of 8 hrs. observations

Number of sub-division.	Station.	Elevation 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 recorded during month.	Date.	Lowest pressure recorded during month.	Date.	Total range of pressure during month.	Temperature of air. Mean of 8 hrs. temperature.	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.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	January 1912.																						
	Gartok (c)	14,140	17·566	...	...	17·750	17th	17·450	11th	·300	6·0	29·3	...	—	...	7·4	...	43·7	38·9	27th	—32·3	3rd	71·2
	February 1912.																						
	Kerman	...	...	...	...	...	...	...	...	...	41·6	64·3	...	33·1	...	48·7	...	31·2	74·8	19th	25·5	16th & 22nd.	49·3
	May 1912.																						
	Amini Divi	13	29·877	—·005	29·818	29·924	8th	29·815	1	·109	87·0	93·4	+3·3	82·3	+1·8	87·9	+2·5	11·1	97·6	21st	75·3	8th & 29th.	22·3
	October 1912.																						
	Beirut (b)	...	...	...	29·946	...	...	...	...	...	73·6	78·7	...	67·2	...	72·9	...	11·5	89·1	7th & 8th.	51·8	30th	37
	November 1912.																						
	Beirut (b)	...	...	...	30·073	...	...	...	...	...	65·7	70·8	...	60·5	...	65·7	...	10·3	75·6	22nd	54·3	30th	21
	December 1912.																						
	Beirut (b)	...	...	...	30·121	...	...	...	...	...	57·4	63·0	...	53·8	...	58·4	...	9·2	72·0	5th	48·7	28th	23

(c) Aneroid corrected.

(b) 8½ hrs. observations.

Table B of 1912, Monthly Weather Review.

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 in inches of mercury.	Mean cloud amount at 8 hrs.	Departure from normal.	Number of rainy days.	Normal number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall for period.	Normal rainfall for period.	Departure from normal of period.	Heaviest rainfall during month.	
N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.																									
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	57
																																January 1912.
...	...	...	13	...	5	...	...		S 25° E	...	6·7	...	...	45	...	...	...	...	...	4·1	...	0	...	...	0	...	...	0	...	...	0	Gartok.
																																February 1912.
1	...	...	...	8	3	2	1		S 32° W	...	3·7	...	...	35	...	59	...	·151	...	1·2	...	3	...	...	1·00	...	...	3·25	...	...	0·49	Kerman.
																																May 1912.
1	...	...	...	...	7	11	7		N 87° W	...	5·6	...	...	68	...	71	...	·906	...	5·8	...	3	...	...	2·92	3·14	—0·22	2·92	3·14	—0·22	1·94	Amini Divi.
																																October 1912.
...	1	1	2	8	2	...	...		S 11° E	...	...	...	...	32	...	69	...	·571	...	4·1	...	7	...	...	7·08	...	...	8·44	...	...	1·78	Beirut.
																																November 1912.
...	1	...	2	15	1	...	...		S 4° E	...	...	...	...	53	...	62	...	·391	...	3·9	...	9	...	...	7·62	...	...	16·06	...	...	2·36	Beirut.
																																December 1912.
2	...	...	9	13	1	1	...		S 16° E	...	...	...	...	61	...	66	...	·314	...	4·8	...	9	...	...	9·08	...	...	9·08	...	...	1·65	Beirut.

Addenda sheet of 8 hrs. observations in Table C of 1912, Monthly Weather Review.

Addenda sheet of 8 hrs. observations in

Number of sub-division.	Station.	Temperature of air.												
		Mean of 8 hrs. temperature.	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.	Absolute range during month.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	August 1912.													
	Extra India.													
	Chumbi	58·0	66·5	...	51·2	...	58·9	...	15·3	69·0	9th	45·4	30th	24·5
	September 1912.													
	Hill Stations, exclusive of Kashmir.													
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...
	October 1912.													
	Extra India.													
	Chumbi *	40·5	61·6†	...	38·2†	...	49·9†	...	23·4	66·7	8th	34·2	17th, 19th & 25th.	32·5
	Hill Stations, exclusive of Kashmir.													
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...
	November 1912.													
	Extra India.													
	Chumbi	33·3	55·5	...	33·1‡	...	44·3‡	...	22·4	56·2	13th & 29th	32·1	9th	24·1
	Hill Stations, exclusive of Kashmir.													
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...
	December 1912.													
	III.—Bengal.													
5	Goalundo	62·9	78·5	...	51·5	...	65·0	...	27·0	83·0	21st	48·7	15th	34·3
	Hill Stations, exclusive of Kashmir.													
	Kailang	...	...	...	...	...	...	...	...	...	...	...	...	...

* Observations of 30 days.
† Mean of 29 days.
‡ „ „ 27 „

Table C of 1912, Monthly Weather Review.

Wind direction. Number of winds from 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, 8 hrs.	Departure from normal.	Mean vapour tension at 8 hrs. in inches of mercury.	Departure from normal in inches of mercury.	Cloud. Mean cloud amount at 8 hrs.	Departure from normal.	Rainfall. Number of rainy days.	Normal number of rainy days.	Departure from normal.	Rainfall of month.	Normal rainfall of month.	Departure from normal.	Total rainfall for period.	Normal rainfall for period.	Departure from normal of period.	Heaviest rainfall during month.	Station.
16	17	18	19	20	21	22	23	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
																																August 1912.
																																Extra India.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	86	...	·385	...	...	...	17	...	...	4·71	...	...	18·26	...	...	0·97	Chumbi.
																																September 1912.
																																Hill Stations, exclusive of Kashmir.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2·7	−1·7	0·46*	1·93†	−1·47	0·46*	1·93†	−1·47	0·39	Kailang.
																																October 1912.
																																Extra India.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	78	...	·206	...	...	...	5	...	...	1·42	...	...	21·11	...	...	0·59	Chumbi.
																																Hill Stations, exclusive of Kashmir.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	0	1·2	−1·2	0	0·52	−0·52	0·46*	2·45†	−1·99	0	Kailang.
																																November 1912.
																																Extra India.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	77	...	·146	...	...	...	1	...	...	0·21	...	...	21·32	...	...	0·21	Chumbi.
																																Hill Stations, exclusive of Kashmir.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	0·9	+1·1	0·50	0·37	+0·13	0·96*	2·82†	−1·86	0·28	Kailang.
																																December 1912.
																																III.—Bengal.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	79	...	·456	...	...	...	0	0·7	−0·7	0	0·23	−0·23	0	0·23	−0·23	0	Goalundo.
																																Hill Stations, exclusive of Kashmir.
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	2·3	+1·7	0·76	1·00	−0·24	0·76	1·00	−0·24	0·18	Kailang.

* Actual rainfall since 20th September 1912.
† Normal " " 1st "

Corrigenda in the India Monthly Weather Reviews for the year 1912.

TEXT.

Page.	Column.	Part.	Correction.
11	1	January 1912 .	*For* "2·00, + 0·87 and + 77" *read* "2·01, + 0·88 and + 78" respectively against Punjab in the figure Columns 1, 3 and 4 of table 15.
20	...	February 1912 .	*For* "0·35, —0·52 and — 60" *read* "0·36, — 0·51 and —59" respectively against United Provinces, West, in the figure Columns 3, 5 and 6 of table 12.
20	...	Ditto . .	*For* "3·2, 1·94, + 1·56 and + 411" *read* "3·1, 1·66, + 1·29 and + 337" respectively against Central Provinces West, in the figure Columns 1, 3, 5 and 6 of table 12.
20	...	Ditto . .	*For* "6·1, 3·46, + 3·01 and + 669" *read* "6·2, 3·50, + 3·05 and + 678" respectively against Central Provinces, East, in the figure Columns 1, 3, 5 and 6 of table 12.
21	2	Ditto . .	*For* "1·86, + 1·52 and + 4·47" *read* "1·77, + 1·43 and + 4·21" repectively against Central Provinces, in the figure Columns 1, 3 and 4 of table 13.
29	...	March 1912 . .	*For* "0·48, 0 and 0" *read* "0·49, + 0·01 and + 2" respectively against United Provinces, West, in the figure Columns 3, 5 and 6 of table 14.
40	...	April 1912 . .	*For* "0·21, — 0·02 and — 9" *read* "0·22, — 0·01 and — 4" respectively against United Provinces, West, in the figures Columns 3, 5 and 6 of table 14.
40	...	Ditto . .	*For* "0·80, + 0·37 and + 90" *read* "0·81, + 0·38 and + 88" respectively against Punjab, East and North, in the figure Columns 3, 5 and 6 of table 14.
40	...	Ditto . .	*For* "1·22, + 0·85 and + 230" *read* "1·25, + 0·88 and + 238" respectively against Punjab, Southwest, in the figure Columns 3, 5 and 6 of table 14.
40	...	Ditto . .	*For* "0·11 — 0·11, and — 50" *read* "0·12, — 0·10 and — 45" respectively against Central Provinces, West in the figure Columns 3, 5 and 6 of table 14.
41	1	Ditto . .	*For* "0·89, + 0·47 and + 112" *read* "0·90, + 0·48 and + 114" respectively against the Punjab, in the figure Columns 1, 3 and 4 of table 15.
50	...	May 1912 . .	*For* "0·30, — 0·35 and — 54" *read* "0·31, — 0·34 and —52" respectively against the Punjab, East and North, in the figure Columns 3, 5 and 6 of table 15.
51	1	Ditto . . .	*For* "0·29, — 0·31 and — 52" *read* "0·30, — 0·30 and — 50" respectively against the Punjab in the figure Columns 1, 3 and 4 of table 16.
60	...	June 1912 . .	*For* "2·9, 1·88' — 3·47 and — 65" *read* "3·0, 1·90, — 3·45 and — 64" respectively against United Provinces, East, in the figure Columns 1, 3, 5 and 6 of table 16.
60	...	Ditto . . .	*For* "1·32, — 3·32 and — 72" *read* "1·33, — 3·31 and 71" respectively against United Provinces, West, in figure Columns 3, 5 and 6 of table 16.
61	1	Ditto . . .	*For* "0·61, — 1·74 and — 74" *read* "0·63, — 1·72 and —73" respectively against the Punjab, East and North, in the figure Columns 3, 5 and 6 of table 16.
61	...	Ditto . . .	*For* "1·0" *read* "1·1 against Punjab, Southwest, in the figure Column 1 of table 16.
61	...	Ditto . . .	*For* "3·2, 1·65, — 5·52 and — 77" *read* "3·3, 1·71, — 5·46 and — 76" respectively against Central Provinces, West, in the figure Columns 1, 3, 5 and 6 of table 16.
61	...	Ditto . . .	*For* "3·7, 2·01, — 6·45 and — 76" *read* "3·8, 2·17, 6·29 and — 74" respectively against Central Provinces, East, in the figure Columns 1, 3, 5 and 6 of table 16.
61	1	Ditto . . .	*For* "1·62, — 3·39 and — 68" *read* "1·63, — 3·38 and — 67" respectively against United Provinces, in the figure Columns 1, 3 and 4 of table 17.
61	...	Ditto . . .	*For* "0·56, — 1·45 and — 72" *read* "0·58, — 1·43 and — 71" respectively against the Punjab, in the figure Columns 1, 3, and 4 of table 17.
61	2	Ditto . . .	*For* "2·62, — 4·49 and — 66" *read* "2·38, — 4·43 and — 65" respectively against Central Provinces, in the figure Columns 1, 3 and 4 of table 17.
68	2	July 1912 . .	*For* "+ 0·5" *read* "+ 0·6" against Rajputana, in the figure Column 3 of table 13.
69	...	Ditto . . .	*For* "10" *read* "19" against United Provinces, West, in the figure Column 6 of table 16.
70	...	Ditto . . .	*For* "6·71 and + 0·04" *read* "6·73 and + 0·06" respectively against the Punjab, East and North, in the figure Columns 3 and 5 of table 16.
70	...	Ditto . . .	*For* "14·89 and + 0·49" *read* "14·90 and + 0·50" respectively against Central Provinces, West, in the figure Columns 3 and 5 of table 16.

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TEXT—*concld.*

Page.	Column.	Part.	Correction.
70	1	July 1912 . .	*For* "5·79 and — 0·01" *read* "3·81 and + 0·01" respectively against the Punjab, in the figure Columns 1 and 3 of table 17.
70	2	Ditto . . .	*For* "13·58 and + 0·83" *read* "13·59 and + 0·84" respectively against Central Provinces, in the figure Columns 1 and 3 of table 17.
80	...	August 1912 . .	*For* "12·" *read* "12·5" against United Provinces, East, in the figure Column 2 of table 14.
90	...	September 1912 .	*For* "3·29, — 2·46 and — 43" *read* "3·36, — 2·39 and — 42" respectively against Central India, West, in the figure Columns 3, 5 and 6 of table 14.
90	...	Ditto . .	*For* "5·4, 5·40, — 1·57 and — 23" *read* "6·4, 7·38, + 0·41 and + 6" respectively against Central India, East, in the figure Columns 1, 3, 5 and 6 of table 14.
91	2	Ditto . .	*For* "3·57, — 2·59 and — 42" *read* "4·76, — 1·40 and — 23" respectively against Central India, in the figure Columns 1, 3 and 4 of table 15.
120	...	December 1912 .	*For* "0·07, — 0·29 and — 81" *read* "0·08, — 0·28 and — 78" respectively against Central Provinces, West, in the figure Columns 3, 5 and 6 of table 14.
120	...	Ditto . .	*For* "0·04, — 0·26 and — 87" *read* "0·05, — 0·25 and — 83" respectively against Central Provinces, in the figure Columns 1, 3 and 4 of table 15.

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Tables A, B & C.

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column No.	Correction.
ii	January 1912	A	Allahabad	Pressure	4 and 6–9	*For* "29·827, ·107, 29·760, +0·34 and 30·036" *read* "29·830, ·110, 29·762, + ·036 and 30·038" respectively.
v	Ditto	B	Punjab	Rainfall	18 and 20	*For* "2·00 and +0·87" *read* "2·01 and +0·88" respectively.
vi	Ditto	"	Mergui	Pressure	4–7 and 9	*For* "29·952, + ·005, 29·948, 30·044 and 29·807" *read* "29·965, + ·018, 29·961, 30·057 and 29·820" respectively.
"	Ditto	"	Ditto	Temperature	12–18, 20 and 22	*For* "76·0, 88·5, +0·4, 69·8, +2·9, 79·2, +1·7, 91·9 and 64·7" *read* "75·4, 87·6, −0·5, 68·9, +2·0, 78·3, +0·8, 91·0 and 63·8" respectively.
"	Ditto	"	Rangpur	Ditto	23	*For* "7th" *read* "17th".
viii	Ditto	"	Jalpaiguri	Pressure	4–7 and 9	*For* "29·801, + ·011, 30·060, 29·948 and 29·698" *read* "29·810, + ·020, 30·069, 29·957 and 29·707" respectively.
x	Ditto	"	Patiala	Temperature	15, 17 and 19	*For* "49·1, 57·6 and 17·0" *read* "45·2‡, 56·4‡ and 20·9" respectively.
"	Ditto	"	Jaipur	Ditto	15—19	*For* "50·2, +2·2, 63·1, +1·8 and 25·8" *read* "50·1, +2·1, 63·0, +1·7 and 25·9" respectively.
"	Ditto	"	Kotah	Pressure	4–7 and 9	*For* "29·250, + ·012?, 30·072?, 29·371 and 29·057" *read* "29·259, + ·021, 30·081, 29·380 and 29·066" respectively.
					Footnote	*Insert* ‡ mean of 10 days.
xii	Ditto	"	Ahmadnagar	Ditto	4–7 and 9	*For* "27·920, + ·044, 30·057, 27·998, and 27·829" *read* "27·914, + ·038, 30·051, 27·992 and 27·823" respectively.
"	Ditto	"	Sutna	Temperature	12, 15–19, 22 and 24.	*For* "55·1, 49·3, + 1·7, 62·4, + 1·1, 26·2, 41·8 and 44·5" *read* "54·2, 48·7, + 1·1, 62·1, + 0·8, 26·8, 41·2 and 45·1" respectively.
"	Ditto	"	Akola	Ditto	15, 16, 17, 18, 19, 22 and 24.	*For* "53·9, +0·5, 71·2, + 1·9, 34·6, 46·1 and 48·1" *read* "54·3, + 0·9, 71·4, + 2·1, 34·2, 46·5 and 47·7" respectively.
xiv	Ditto	"	Coimbatore	Pressure	4–7 and 9	*For* "28·734, + ·044, 30·036, 28·820 and 28·679" *read* "28·745, + ·055, 30·047, 28·831 and 28·690" respectively.
"	Ditto	"	Cuddapah	Temperature	13, 14, 17–20 and 24.	*For* "89·7, + 1·3, 76·3, −0·1, 26·8, 94·2 and 41·6" *read* "89·0, + 0·6, 75·9, −0·5, 26·1, 93·5 and 40·9" respectively.
"	Ditto	"	Kurnool	Pressure	4–7 and 9	*For* "29·141, + ·023, 30·039, 29·221 and 29·047" *read* "29·153, + ·035, 30·051, 29·233 and 29·059" respectively.
"	Ditto	"	Ditto	Temperature	13, 14, 17–20 and 24.	*For* "90·4, + 1·7, 74·5, + 0·7, 31·9, 95·2 and 46·1" *read* "89·7, + 1·0, 74·1, + 0·4, 31·2, 94·5 and 45·4" respectively.
xv	Ditto	"	Bidar	Rainfall	48	*For* "1·10" *read* "0·10".
xviii	Ditto	"	Kabul	Temperature	15	*For* "2·18" *read* "21·8".
"	Ditto	"	Kerman	Ditto	24	*For* "58·3" *read* "58·8".
xix	Ditto	"	Gyantse	Wind Velocity	36	*For* "3·4" *read* "3·7".
xxiv	Ditto	C	Kirmanshah	Temperature	13	*For* "9·0" *read* "−9·0".
xxxi	February 1912	B	Central Provinces	Rainfall	18 and 20	*For* "1·86 and +1·52" *read* "1·77 and +1·43" respectively.
xxxiii	Ditto	"	Sibsagar	Ditto	52	*For* "+2·09" *read* "+1·09".

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TABLES A, B & C—*contd.*

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column No.	Correction.
xxxiv	February 1912	B	Jalpaiguri	Pressure	4–7 and 9	*For* "29·708, – ·018, 29·964, 29·855 and 29·464" *read* "29·717, –·009, 29·973, 29·864 and 29·473" respectively.
"	Ditto	"	Monghyr	Temperature	15, 17 and 19	*For* "58·7, 69·9 and 22·4" *read* "58·8, 70·0 and 22·3" respectively.
xxxvi	Ditto	"	Patiala	Pressure	4 and 6	*For* "29·135‡ and 29·972‡" *read* "29·128 and 29·963" respectively.
"	Ditto	"	Ditto	Temperature	12, 15, 17, 19 and 22–24.	*For* "55·0" *read* "54·9 and reject all the other readings."
"	Ditto	"	Kotah	Pressure	4–7 and 9	*For* "29·152, – ·034, 29·959?, 29·257 and 29·011" *read* "29·161, – ·025, 29·968, 29·266 and 29·020" respectively.
					Footnote	*Omit* "‡ mean of 26 days."
xxxviii	Ditto	"	Ahmadnagar	Ditto	4–7 and 9	*For* "27·833, – ·002?, 29·945, 27·917 and 27·772" *read* "27·827, –·008, 29·939, 27·911 and 27·766" respectively.
"	Ditto	"	Satna	Temperature	12, 15–19, 22 and 24.	*For* "64·6, 55·6, + 3·3, 69·1, + 3·1, 26·9, 48·8, and 42·5" *read* "63·7, 55·0, + 2·7, 68·7, + 2·8, 27·5, 48·2 and 43·1" respectively.
"	Ditto	"	Akola	Ditto	15 to 19, 22 and 24.	*For* "60·6, + 3·1, 76·4, + 2·3, 31·5, 52·1 and 46·6" *read* "61·0, +3·5, 76·6, + 2·5, 31·1, 52·5 and 46·2" respectively.
xl	Ditto	"	Coimbatore	Pressure	4–7 and 9	*For* "28·663, – ·007, 29·948, 28·739 and 28·577" *read* "28·674, + ·004, 29·959, 28·750 and 28·588" respectively.
"	Ditto	"	Cuddapah	Temperature	13, 14, 17–20 and 24.	*For* "96·0, + 0·9, 84·1, + 2·0, 23·8, 101·2 and 33·1" *read* "95·3, + 0·2, 83·7, +1·7, 23·1, 100·5 and 32·4" respectively.
"	Ditto	"	Kurnool	Pressure	4–7 and 9	*For* "29·046, – ·018, 29·921, 29·121 and 28·950" *read* 29·058, –·006, 29·933, 29·133 and 28·962" respectively.
"	Ditto	"	Ditto	Temperature	13, 14, 17–20 and 24.	*For* "94·9, + 0·4, 82·6, + 2·9, 24·6, 100·7 and 39·6" *read* "94·2, –0·3, 82·3, +2·6, 23·9, 100·0 and 38·9" respectively.
xlii	Ditto	"	Sarain	Pressure	4 and 6	*For* "23·157 and 23·119" *read* "23·158 and 23·120" respectively.
xliii	Ditto	"	Dras	Hygrometry	42	*Insert* "+2."
xliv	Ditto	"	Gyantse	Pressure	4 and 6	*For* "17·024 and 16·985" *read* "17·024‡ and 16·985‡" respectively.
"	Ditto	"	Kashgar	Temperature	12	*For* "27·4" *read* "27·2."
"	Ditto	"	Kabul	Pressure	4 and 6	*For* "24·292 and 24·261" *read* "24·297‡ and 24·266‡" respectively.
					Footnote	*Insert* "‡ mean of 28 days and ¶¶ mean of 25 days" respectively.
xlv	Ditto	"	Ditto	Rainfall	51	*For* "1·" *read* "1·57".
"	Ditto	"	Bahrein	Ditto	51	*For* "0·5" *read* "0·59".
l	Ditto	C	Kargil	Temperature	13	*For* "16·0" *read* "–16·0".
lv	March 1912	A	Bangalore	Rainfall	53 and 54	*For* "0·56 and 0·56" *read* "1·56 and 1·56" respectively.
lviii	Ditto	B	Victoria Point	Pressure	6	*For* "29·906" *read* "29·903".

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TABLES A, B & C—*contd.*

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column No.	Correction.
lx	March 1912	B	Jalpaiguri	Pressure	4—7 and 9	*For* " 29·629, + ·004, 29·882, 29·757 and 29·448 " *read* " 29·638, + ·013, 29·891, 29·766 and 29·457 " respectively.
"	Ditto	"	Monghyr	Temperature	15, 17 and 19	*For* " 62·8, 76·0 and 26·5 " *read* " 62·6, 75·9 and 26·7 " respectively.
lxii	Ditto	"	Kotah	Pressure	4—7 and 9	*For* " 29·095, —·008, 29·885?, 29·245 and 28·888 " *read* " 29·104, + ·001, 29·894, 29·254 and 28·897 " respectively.
lxiv	Ditto	"	Ahmadnagar	Ditto	4—7 and 9	*For* " 27·813, + ·022, 29·887, 27·880 and 27·738 " *read* " 27·807, + ·016, 29·881, 27·874 and 27·732 " respectively.
"	Ditto	"	Akola	Temperature	15—19, 22 and 24.	*For* " 65·4, —0·6, 83·1, +0·5, 35·4, 50·1 and 58·6 " *read* " 65·8, —0·2, 83·3, +0·7, 35·0, 50·5 and 58·2 " respectively.
lxvi	Ditto	"	Coimbatore	Pressure	4—7 and 9	*For* " 28·621, —·008, 29·896, 28·687 and 28·552 " *read* " 28·632, + ·003, 29·907, 28·698 and 28·563 " respectively.
"	Ditto	"	Cuddapah	Temperature	13, 14, 17—20 and 24.	*For* " 103·9, +2·2, 90·3, +1·9, 27·2, 109·2 and 43·1 " *read* " 103·2, +1·5, 89·9, +1·6, 26·5, 108·5 and 42·4 " respectively.
"	Ditto	"	Kurnool	Pressure	4—7 and 9	*For* " 29·002, + ·002, 29·865, 29·078 and 28·923 " *read* " 29·014, + ·014, 29·877, 29·090 and 28·935 " respectively.
"	Ditto	"	Ditto	Temperature	13, 14, 17—20 and 24.	*For* " 102·2, +1·3, 87·6, +1·4, 29·2, 106·7 and 40·6 " *read* " 101·5, +0·6, 87·3, +1·1, 28·5, 106·0 and 39·9 " respectively.
lxxi	Ditto	"	Singapore	Wind direction	25—30 and 34	*For* " 9, 5, 15, 1, 1 and N 39 E " *read* " blank, 9, 5, 15, 1, 1 and N 40° E " respectively.
"	Ditto	"	Ditto	Wind velocity and steadiness.	36 and 39	*For* " 6·4* and 61 " *read* " 4·7* and 62 " respectively.
"	Ditto	"	Penang	Ditto	36 and 39	*For* " 12·3* and 90 " *read* " 8·5* and 92 " respectively.
"	Ditto	"	Baghdad	Wind velocity	38	*For* " +2·9 " *read* " +2·8 ".
lxxxi	April 1912	A	Calcutta	Rainfall	53	*For* " 46 " *read* " 2·46 ".
lxxxiii	Ditto	B	Punjab	Ditto	18 and 20	*For* " 0·89 and " +0·47 " *read* " 0·90 and +0·48 " respectively.
lxxxiv	Ditto	"	Jalpaiguri	Pressure	4—7 and 9	*For* " 29·626, + ·077, 29·873, 29·790 and 29·502 " *read* " 29·635, + ·086, 29·882, 29·799 and 29·511 " respectively.
xc	Ditto	"	Ahmadnagar	Ditto	4—7 and 9	*For* " 27·788, + ·045, 29·811, 27·876 and 27·711 " *read* " 27·782, + ·039, 29·805, 27·870 and 27·705 " respectively.
"	Ditto	"	Akola	Temperature	15 to 19, 22 and 24.	*For* " 75·5, +0·7, 91·0, + 0·7, 31·1, 60·6 and 51·1 " *read* " 75·9, +1·1, 91·2, +0·9, 30·7, 61·0 and 50·7 " respectively.
xcii	Ditto	"	Coimbatore	Pressure	4—7 and 9	*For* " 28·596, + ·032, 29·857, 28·705 and 28·509 " *read* " 28·607, + ·043, 29·868, 28·716 and 28·520 " respectively.
"	Ditto	"	Cuddapah	Temperature	13, 14, 17—20 and 24.	*For* " 106·1, +0·9, 94·2, +1·2, 23·8, 109·2 and 33·1 " *read* " 105·4, + 0·2, 93·9, +0·9, 23·1, 108·5 and 32·4 " respectively.
"	Ditto	"	Kurnool	Pressure	4—7 and 9	*For* " 28·979, + ·037, 29·829, 29·073 and 28·865 " *read* " 28·991, + ·049, 29·841, 29·085 and 28·877 " respectively.

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TABLES A, B & C—*contd.*

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column No.	Correction.
xcii	April 1912	B	Kurnool	Temperature	13, 14, 17—20 and 24.	*For* "104·5, +0·9, 92·8, +1·9, 23·5, 107·2 and 34·1" *read* "103·8, +0·2, 92·4, +1·6, 22·8, 106·5 and 33·4" respectively.
xciv	Ditto	"	Singapore	Wind velocity	36	*For* "4·8†" *read* "3·5†".
"	Ditto	"	Penang	Ditto	36	*For* "10·2†" *read* "7·4 †".
xcvi	Ditto	"	Ispahan	Pressure	4	*For* "24·625" *read* "24·265".
xcvii	Ditto	"	Ditto	Wind steadiness	40	Insert "—17".
"	Ditto	"	Ditto	Hygrometry	42 and 44	Insert "—13 and —·099" respectively.
"	Ditto	"	Ditto	Cloud	46	Insert "—0·7".
"	Ditto	"	Tehran	Wind steadiness	40	Insert "+15".
"	Ditto	"	Ditto	Hygrometry	42 and 44	Insert "+9 and +·016" respectively.
"	Ditto	"	Ditto	Cloud	46	Insert "—1·3".
ci	Ditto	C	Rangpur	Rainfall	38	*For* "6" *read* "9".
"	Ditto	"	Raniganj	Ditto	41	*For* "0·9" *read* "0·98".
ciii	Ditto	"	Sonamarg	Station	48	*For* "Sonamaraug" *read* "Sonamarg".
cxi	May 1912	B	Punjab	Rainfall	18 and 20	*For* "0·29 and —0·31" *read* "0·30 and —0·30" respectively.
cxii	Ditto	"	Jalpaiguri	Pressure	4—7 and 9	*For* "29·515, +·034, 29·757, 29·668 and 29·320" *read* "29·524, +·043, 29·766, 29·677 and 29·329" respectively.
cxiv	Ditto	"	Monghyr	Temperature	13, 17 and 19	*For* "98·5†, 87·2† and 22·5" *read* "98·3, 87·1 and 22·3" respectively.
"	Ditto	"	Buxar	Station	2	*For* "Buxar" *read* "Buxar‡".
cxv	Ditto	"	Monghyr	Cloud	45	*For* "1·6 ‡" *read* "1·8".
"	Ditto	"	Puri	Hygrometry	43	*For* "·799" *read* "·999".
cxviii	Ditto	"	Ahmadnagar	Pressure	4—7 and 9	*For* "27·716, +·023, 29·735, 27·815 and 27·623" *read* "27·710, +·017, 29·729, 27·809 and 27·617" respectively.
cxix	Ditto	"	Hassan	Cloud	45	*For* "4" *read* "4·2".
cxx	Ditto	"	Coimbatore	Pressure	4—7 and 9	*For* "28·518, +·005, 29·778, 28·600 and 28·466" *read* "28·529, +·016, 29·789, 28·611 and 28·477" respectively.
"	Ditto	"	Cuddapah	Temperature	13, 14, 17—20 and 24.	*For* "108·1, +1·8, 96·7, +1·8, 22·8, 112·2 and 31·6" *read* "107·4, +1·1, 96·3, +1·5, 22·1, 111·5 and 30·9" respectively.
"	Ditto	"	Kurnool	Pressure	4—7 and 9	For "28·902, +·014, 29·748, 28·995 and 28·822" read "28·914, +·026, 29·760, 29·007 and 28·834" respectively.
"	Ditto	"	Ditto	Temperature	13, 14, 17—20 and 24	*For* "106·2, +1·4, 94·0 +1·1, 24·3, 110·7 and 36·6" *read* "105·5, +0·7, 93·7, +0·8, 23·6, 110·0 and 35·9" respectively.
cxxii	Ditto	"	Saraiu	Pressure	4 and 6	*For* "23·148 and 23·110" *read* "23·151 and 23·113" respectively.
"	Ditto	"	Kalabagh	Ditto	4, 6 and 9—11	*For* "20·144, 20·106, 20·061, 21st and ·177" *read* "20·148, 20·110, 20·062, 22nd and 176" respectively.
"	Ditto	"	Penang	Temperature	13 and 22	*For* "9·00 and 7·00" *read* "90·0 and 70·0" respectively.

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TABLES A, B & C—*contd.*

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column No.	Correction.
cxxiii	May 1912	B	Kodaikanal	Rainfall	50, 52, 53 and 55	*For* "5·94, + 0·08, 5·94 and + 0·08" *read* "5·95, + 0·09, 5·95 and + 0·09" respectively.
"	Ditto	"	Singapore	Ditto	50	*For* "82·8" *read* "8·28".
cxxiv	Ditto	"	Kabul*	Pressure	4, 6—8 and 11	*For* "24·243, 24·212, 24·322, 30th and ·178" *read* "24·255, 24·224, 24·336, 27th and ·192" respectively.
cxxv	Ditto	"	Meshed	Cloud	46	Insert "+1·9".
"	Ditto	"	Ispahan	Wind steadiness	40	Insert "−42".
"	Ditto	"	Ditto	Hygrometry	42 and 44	Insert "−22 and −·161" respectively.
"	Ditto	"	Ditto	Cloud	46	Insert "−0·2".
"	Ditto	"	Tehran	Wind steadiness	40	Insert "−10".
"	Ditto	"	Ditto	Hygrometry	42 and 44	Insert "+7 and +·009" respectively.
"	Ditto	"	Ditto	Cloud	46	Insert "−1·7".
"	Ditto	"	Baghdad	Wind steadiness	40	Insert "−19".
"	Ditto	"	Ditto	Hygrometry	42 and 44	Insert "−12 and −·111" respectively.
"	Ditto	"	Ditto	Cloud	46	Insert "+0·9".
cxxviii	Ditto	C	Seistan	Rainfall	38	*For* "10" *read* "0".
cxxxvi	June 1912	A	Jaipur	No. of subdivision	1	*For* "1" *read* "18".
cxxxix	Ditto	B	United Provinces	Rainfall	18 and 20	*For* "1·62 and −3·39" *read* "1·63 and − 3·38" respectively.
"	Ditto	"	Punjab	Ditto	11	*For* "0·56 and − 1·45" *read* "0·58 and − 1·43" respectively.
"	Ditto	"	Central Provinces	Ditto	11	*For* "2·32 and — 4·49" *read* "2·38 and −4·43" respectively.
cxl	Ditto	"	Jalpaiguri	Pressure	4—7 and 9	*For* "29·351, − ·018, 29·593, 29·540 and 29·163" *read* 29·360, −·009, 29·602, 29·549 and 29·172" respectively.
cxlvi	Ditto	"	Ahmadnagar	Ditto	4—7 and 9	*For* 27·600, +·007, 29·629, 27·712 and 27·481" *read* "27·594, +·001, 29·623, 27·706 and 27·475" respectively.
cxlvii	Ditto	"	Hassan	Rainfall	48	*For* "10·4" *read* "10·40".
cxlviii	Ditto	"	Trichinopoly	Temperature	15	*For* "73·7" *read* "78·7".
"	Ditto	"	Coimbatore	Pressure	4—7 and 9	*For* "28·465, − 017, 29·732, 28·524, and 28·397" *read* "28·476, —·006, 29·743, 28·535 and 28·408" respectively.
"	Ditto	"	Cuddapah	Temperature	13, 14, 17—20 and 24	*For* "104·3, + 4·0, 93·7, +3·3, 21·2, 110·7 and 35·6" *read* "103·6, + 3·3, 93·4, + 2·9, 20·5, 110·0 and 34·9" respectively.
"	Ditto	"	Kurnool	Pressure	4—7 and 9	*For* "28·819, −·013, 29·669, 28·914 and 28·749" *read* "28·831, −·001, 29·681, 28·926 and 28·761" respectively.
"	Ditto	"	Ditto	Temperature	13, 14, 17—20 and 24	*For* "101·3, + 4·6, 90·2, +3·4, 22·2, 108·7 and 36·6" *read* "100·6, +3·9, 89·9, +3·1, 21·5, 108·0 and 35·9" respectively.
cl	Ditto	"	Kalabagh	Pressure	4 and 6	*For* "20·074 and 20·036" *read* "20·076 and 20·038" respectively.
"	Ditto	"	Penang	Temperature	24	*For* "20·3" *read* "20·0."

Corrigenda in the India Monthly Weather Reviews for the year 1912.

TABLES A, B & C—*contd.*

Page.	Part.	Table.	Meteorological province or station.	Heading.	Column No.	Correction.
cl	June 1912	B	Kabul	Pressure	4, 6 and 9—11	*For* " 24·215, 24·184, 24·099, 25th and ·231 " *read* " 24·207, 24·176, 24·035, 24th and ·295 " respectively.
cli	Ditto	,,	Kodaikanal	Rainfall	53 and 55	*For* " 9·70 and −0·02 " *read* " 9·71 and −0·01 " respectively.
,,	Ditto	,,	Singapore	Wind velocity	36	*For* " 5·0 " *read* " 3·6".
,,	Ditto	,,	Penang	Ditto	36	*For* " 11·6 " *read* " 8·5".
,,	Ditto	,,	Meshed	Cloud	46	Insert " +0·1 ".
cliii	Ditto	,,	Ispahan	Wind steadiness	40	Insert " −24 ".
,,	Ditto	,,	Ditto	Hygrometry	42 and 44	Insert " −10 and −·110 ".
,,	Ditto	,,	Ditto	Cloud	46	Insert " +0·5 ".
,,	Ditto	,,	Tehran	Wind steadiness	40	*Insert* " +4".
,,	Ditto	,,	Ditto	Hygrometry	42 and 44	*Insert* " +8 and +·056 ".
,,	Ditto	,,	Ditto	Cloud	46	*Insert* " +0·4 ".
clvi	Ditto	C	Goalundo†	Temperature	4, 6, 8 and 10	*For* " 91·6, 74·9, 83·3 and 16·7 " *read* " 91·5, 76·0, 83·7 and 15·5 " respectively.
					Footnote	*Omit* " † observations of 25 days ".
clvii	Ditto	,,	Ditto	Hygrometry	32 and 34	*For* " 79· and ·943 " *read* " 80‡ and ·955‡ " respectively.
,,	Ditto	,,	Ditto	Rainfall	38, 41, 43, 44 and 46.	*For* " 12, 16·66, +4·63, 25·43 and +5·88 " *read* " 13, 19·92, +7·89, 28·69 and +9·14 " respectively.
					Footnote	*Insert* " ‡ mean of 29 days ".
clxiv	July 1912	A	Bombay	Pressure	4 and 5	*For* " 29·643 and 29·596 " *read* " 29·663 and 29·599 " respectively.
clxv	Ditto	,,	Dodabetta	Rainfall	53	*For* " 71·6 " *read* " 7·16."
clxvii	Ditto	B	Punjab	Ditto	18 and 20	*For* " 5·79 and —0·01 " *read* " 5·81 and +0·01 " respectively.
,,	Ditto	,,	Central Provinces	Ditto	18 and 20	*For* " 13·58 and +·083 " *read* " 13·59 and +0·84 " respectively.
clxviii	Ditto	,,	Gauhati	Pressure	9	*For* " 29·536 " *read* " 29·329 ".
,,	Ditto	,,	Saugor Island	Temperature	16	*For* " —0·1 " *read* " —1·0 ".
,,	Ditto	,,	Jalpaiguri	Pressure	4—7 and 9	*For* " 29·334, +·003, 29·572, 29·429 and 29·150 " *read* " 29·343, +·012, 29·581, 29·438 and 29·159 " respectively.
clxix	Ditto	,,	Barisal	Rainfall	51	*For* " 5·23 " *read* " 15·23 ".
,,	Ditto	,,	Mymensingh	Ditto	52	*For* " —6·47 " *read* " —6·57 ".
clxxi	Ditto	,,	Ranchi	Wind steadiness	40	*For* " + " *read* " +5 ".
clxxiv	Ditto	,,	Ahmadnagar	Pressure	4—7 and 9	*For* " 27·554, —·026, 29·602, 27·650 and 27·417 " *read* " 27·548, —·032, 29·596, 27·644 and 27·411 " respectively.
clxxvi	Ditto	,,	Coimbatore	Ditto	4—7 and 9	*For* " 28·459, —·039, 29·730, 28·534 and 28·394 " *read* " 28·470, —·028, 29·741, 28·545 and 28·405 " respectively.
,,	Ditto	,,	Cuddapah	Temperature	13, 14, 17—20 and 24.	*For* " 95·1, —0·2, 87·1, +0·5, 15·9, 101·2 and 26·6 " *read* " 94·4, —0·9, 86·8, +0·2, 15·2, 100·5 and 25·9 " respectively.

Corrigenda in the India Monthly Weather Reviews for the year 1912.

TABLES A, B & C—*contd.*

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column No.	Correction.
clxxvi	July 1912	B	Kurnool	Pressure	4—7 and 9	*For* "28·798, —·044, 29·657, 28·879 and 28·684" *read* "28·810, —·032, 29·669, 28·891 and 28·696" respectively.
"	Ditto	"	Ditto	Temperature	13, 14, 17—20 and 24.	*For* "91·0, −0·4, 83·1, +0·1, 15·8, 96·7 and 26·1" *read* "90·3, —1·1, 82·7, —0·3, 15·1, 96·0 and 25·4" respectively.
clxxix	Ditto	"	Cherrapunji	Rainfall	49	*For* "—1·80" *read* "—1·30."
"	Ditto	"	Kodaikanal	Ditto	53 and 55	*For* "12·99 and —1·74" *read* "13·00 and —1·73" respectively.
"	Ditto	"	Penang	Wind direction	33	*Insert* "4".
"	Ditto	"	Amini Divi	Hygrometry	42 and 44	*Insert* "—3 and —·017" respectively.
"	Ditto	"	Ditto	Cloud	46	*Insert* "+0·1".
clxxxi	Ditto	"	Meshed	Ditto	46	*Insert* "+0·5".
"	Ditto	"	Ispahan	Hygrometry	42 and 44	*Insert* "—7 and —·086" respectively.
"	Ditto	"	Ditto	Cloud	46	*Insert* "—0·5".
"	Ditto	"	Tehran	Hygrometry	42 and 44	*Insert* "+5 and +·046" respectively.
"	Ditto	"	Ditto	Cloud	46	*Insert* "—0·5".
clxxxiv	Ditto	C	Goalundo (*c*)	Temperature	3, 4, 6, 8 and 10	*For* "84·0, 88·5, 78·3, 83·4 and 10·2" *read* "83·9, 88·6, 78·1, 83·3, and 10·5" respectively.
					2 and footnote	*Omit* "(*c*) observations of 29 days."
"	Ditto	"	Ditto	Hygrometry	34	*For* "1·015" *read* "1·016".
"	Ditto	"	Ditto	Rainfall	38, 41, 43, 44, 46 and 47.	*For* "13, 5·32, —6·40, 30·75·E, —0·52 and 1·19" *read* "15, 8·04, —3·68, 36·73, +5·46 and 2·02" respectively.
					Footnote	*Omit* "E Rainfall 1st and 2nd July not included".
clxxxix	Ditto	"	Seistan	Wind velocity	27	*For* "16·11" *read* "16·1".
cxcvi	August 1912	B	Sibsagar	Temperature	21	*Insert* "8th".
cxcviii	Ditto	"	Jalpaiguri	Pressure	4—7 and 9	*For* "29·383, —·006, 29·622, 29·474 and 29·262" *read* "29·392, +·003, 29·631, 29·483 and 29·271" respectively.
ccii	Ditto	"	Ahmadnagar	Ditto	4—7 and 9	*For* "27·627, —·009, 29·691, 27·715 and 27·522" *read* "27·621, —·015, 29·685, 27·709 and 27·516" respectively.
cciv	Ditto	"	Coimbatore	Ditto	4—7 and 9	*For* "28·494, —·022?, 29·766?, 28·557 and 28·423" *read* "28·505, —·011, 29·777, 28·568 and 28·434" respectively.
"	Ditto	B	Cuddapah	Temperature	13, 14, 17—20 and 24.	*For* "95·6, +1·9, 86·8, +1·5, 17·6, 101·9 and 28·3" *read* "94·9, +1·2, 86·5, +1·2, 16·9, 101·2 and 27·6" respectively.
ccvi	Ditto	"	Kurnool	Pressure	4—7 and 9	*For* "28·854, —·024, 29·718, 28·955 and 28·757" *read* "28·866, —·012, 29·730, 28·967 and 28·769" respectively.
"	Ditto	"	Ditto	Temperature	13, 14, 17—20 and 24.	*For* "90·4, +0·6, 82·1, +0·4, 16·5, 94·7 and 23·1" *read* "89·7, —0·1, 81·8, +0·1, 15·8, 94·0 and 22·4" respectively.
ccvii	Ditto	"	Muzaffarabad	Wind velocity	36	Reject the figure "5·3."
ccxxi	September 1912	A	Ootacamund	Cloud	35	*For* "8·5" *read* "8·9."

Corrigenda in the India Monthly Weather Reviews for the year 1912.

TABLES A, B & C—*contd.*

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column No.	Correction.
ccxxiii	September 1912.	B	Central India .	Rainfall . .	18 and 20	*For* "3·57 and —2·59" *read* "4·76 and —1·40" respectively.
ccxxiv	Ditto .	"	Jalpaiguri . .	Pressure . .	4—7 and 9	*For* "29·503, +·009, 29·743, 29·659 and 29·328" *read* "29·512, +·018, 29·752, 29·668 and 29·337" respectively.
ccxxvi	Ditto .	"	Gorakhpur . .	Temperature .	18	*For* "—2·37" *read* "—2·3?"
ccxxix	Ditto .	"	Sialkot . .	Wind direction .	25	*For* "1" *read* "13".
"	Ditto .	"	Ditto . .	Cloud . . .	45	*For* "0·8" *read* "0·9".
ccxxx	Ditto .	"	Ahmadnagar .	Pressure . .	4—7 and 9	*For* "27·726, +·040,? 29·782, 27·811 and 27·577" *read* "27·720, +·034, 29·776, 27·805 and 27·571" respectively.
ccxxxi	Ditto .	"	Khandwa . .	Rainfall . .	50	*For* "8·74" *read* "2·74".
ccxxxii	Ditto .	"	Madras . .	Station . .	2	*For* "V—Madras" *read* "XV—Madras."
"	Ditto .	"	Pudukkottai . .	Pressure . .	6	*For* "29·308" *read* "29·808".
"	Ditto .	"	Coimbatore . .	Ditto . .	4—7 and 9	*For* "28·531, —·017, 29·806, 28·670 and 28·444" *read* "28·542, —·006, 29·817, 28·681 and 28·455" respectively.
"	Ditto .	"	Cuddapah . .	Temperature .	13, 14, 17—20 and 24.	*For* "94·6, +2·1, 85·1,* +1·3, 18·2, 100·2 and 29·4" *read* "93·9, +1·4, 84·8*, +1·0, 17·5, 99·5 and 28·7" respectively.
"	Ditto .	"	Kurnool . .	Pressure . .	4—7 and 9	*For* "28·921, +·001 29·784, 28·983 and 28·810" *read* "28·933, +·013, 29·796, 28·995 and 28·822" respectivly.
"	Ditto .	"	Ditto . .	Temperature .	13, 14, 17—20 and 24.	*For* "92·3, +3·1, 83·4, +2·3, 17·7 97·7 and 27·1" *read* "91·6, +2·4, 83·1, +2·0, 17·0, 97·0 and 26·4" respectively.
ccxxxiv	Ditto .	"	Pharijong . .	Ditto .	12	*For* "52·1" *read* "51·1".
"	Ditto .	"	Gangtok . .	Pressure . .	4 and 6	*For* "24·575‡ and 24·530‡" *read* "24·581‡ and 24·536‡" respectively.
ccxxxv	Ditto .	"	Pharijong . .	Hygrometry .	41 and 43	*For* "67 and ·263" *read* "71 and ·271" respectively.
"	Ditto .	"	Gangtok . .	Wind velocity .	36	*For* "1·2" *read* "0·6".
ccxli	Ditto .	C	Dam Dim . .	Rainfall . .	38, 40, 41, 43, 44, 46 and 47.	Insert "16, —2·7, 20·33, —0·46, 128·23, —11·70 and 7·05" respectively.
ccxliv	Ditto .	"	Chumbi . .	Temperature .	13	*For* "30·7" *read* "36·7".
ccxlv	Ditto .	"	Poo . . .	Rainfall . .	40	*For* "2·7" *read* "+2·7".
"	Ditto .	"	Kailang . .	Ditto . .	38, 40, 41, 43 and 47.	Insert "1, —1·7, 0·46, —1·47 and 0·39" respectively.
"	Ditto .	"	Chumbi . .	Rainfall . .	44	Insert "19·69".
ccli	October 1912 .	B	Sind . . .	Hygrometry .	13	*For* "—7" *read* "+7".
cclii	Ditto .	"	Jalpaiguri . .	Pressure . .	4—7 and 9	*For* "29·662, +·017, 29·908, 29·763 and 29·514" *read* "29·671, +·026, 29·917, 29·772 and 29·523" respectively.
ccliii	Ditto .	"	Silchar . .	Rainfall . .	56	Insert "7·33".
ccliv	Ditto .	"	Benares . .	Pressure . .	4—7 and 9	*For* 29·671, +·032, 29·895, 29·770 and 29·519" *read* "29·679, +·040, 29·903, 29·778 and 29·527" respectively.

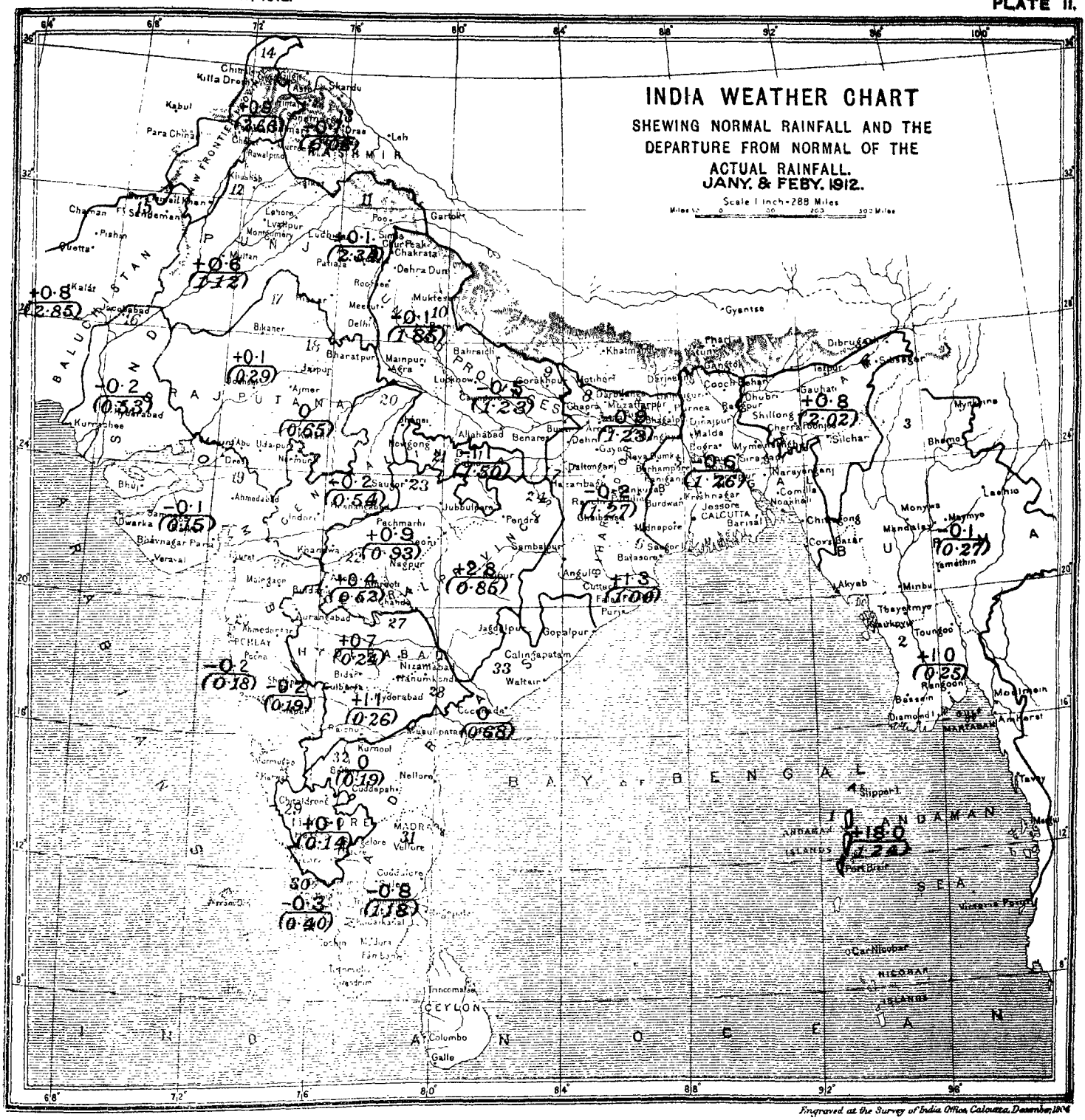
Corrigenda in the India Monthly Weather Reviews for the year 1912.

TABLES A, B & C—*concld.*

Page.	Part.	Table.	Meteorological Province or Station.	Heading.	Column No.	Correction.
ccliv	October 1912	B	Benares	Temperature	13, 14, 17—20 and 24.	*For* "93·6, +3·7, 79·7*d*, +·05, 27·9, 96·6 and 39·0" *read* "93·0, +3·1, 79·7, +0·3, 27·3, 96·0 and 38·4" respectively.
cclxv	Ditto	"	Meshed	Cloud	46	Insert "—0·7"
"	Ditto		Jask	Wind direction	33	*For* "80" *read* "8".
cclxix	Ditto	C	Dam Dim	Rainfall	38, 40, 41, 43, 44, 46 and 47.	Insert "9, +2·5, 6·54, +1·47, 134·77, —10·23 and 1·92" respectively.
"	Ditto	"	Kalchini	Ditto	41	*For* "6·6" *read* "6·66".
cclxx	Ditto	"	Ballia	Temperature	3	*For* "77" *read* "77·5".
cclxxiii	Ditto	"	Kailang	Rainfall	38, 40, 41, 43, and 47.	Insert "0, —1·2, 0, —0·52 and 0" respectively.
cclxxxi	November 1912	B	Mergui	Wind direction	28	Insert "2".
cclxxxii	Ditto	"	Jalpaiguri	Pressure	4—7 and 9	*For* "29·744, —·007, 29·999, 29·852 and 29·670" *read* "29·753, +·002, 30·008, 29·861 and 29·679" respectively.
cclxxxvi	Ditto	"	Ahmadnagar	Ditto	4—7 and 9	*For* "27·858, —·008, 29·964, 27·944 and 27·724" *read* "27·852, —·014, 29·958, 27·938 and 27·718" respectively.
cclxxxviii	Ditto	"	Negapatam	Ditto	11	*For* "·153" *read* "·163."
ccxcvii	Ditto	C	Dam Dim	Rainfall	38, 40, 41, 43, 44, 46 and 47.	*For* "2, +1·5, 0·72, +0·63, 108·62,** ? and 0·49" *read* "4, +3·5, 4·27, +4·18, 139·04, —6·05 and 3·45" respectively.
					Footnote	*Omit*** "Rainfall for September and October 1912 not included."
ccci	Ditto	"	Kailang	Ditto	38, 40, 41, 43, and 47.	Insert "2, +1·1, 0·50, +0·13 and 0·28" respectively.
cccvii	December 1912	B	Central Provinces	Ditto	18 and 20	*For* "0·04 and —0·26" *read* "0·05 and —0·25" respectively.
cccviii	Ditto	"	Jalpaiguri	Pressure	4—7 and 9	*For* "29·826, +·011, 30·081, 29·925 and 29·698" *read* 29·835, +·020, 30·090, 29·934 and 29·707" respectively.
cccxiv	Ditto	"	Ahmadnagar	Ditto	4—7 and 9	*For* "27·925, +·022, 30·067, 27·996 and 27·845" *read* "27·919, +·016, 30·061, 27·990 and 27·839" respectively.
cccxxvii	Ditto	C	Car Nicobar	Rainfall	38	*For* "19" *read* "9".

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.

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

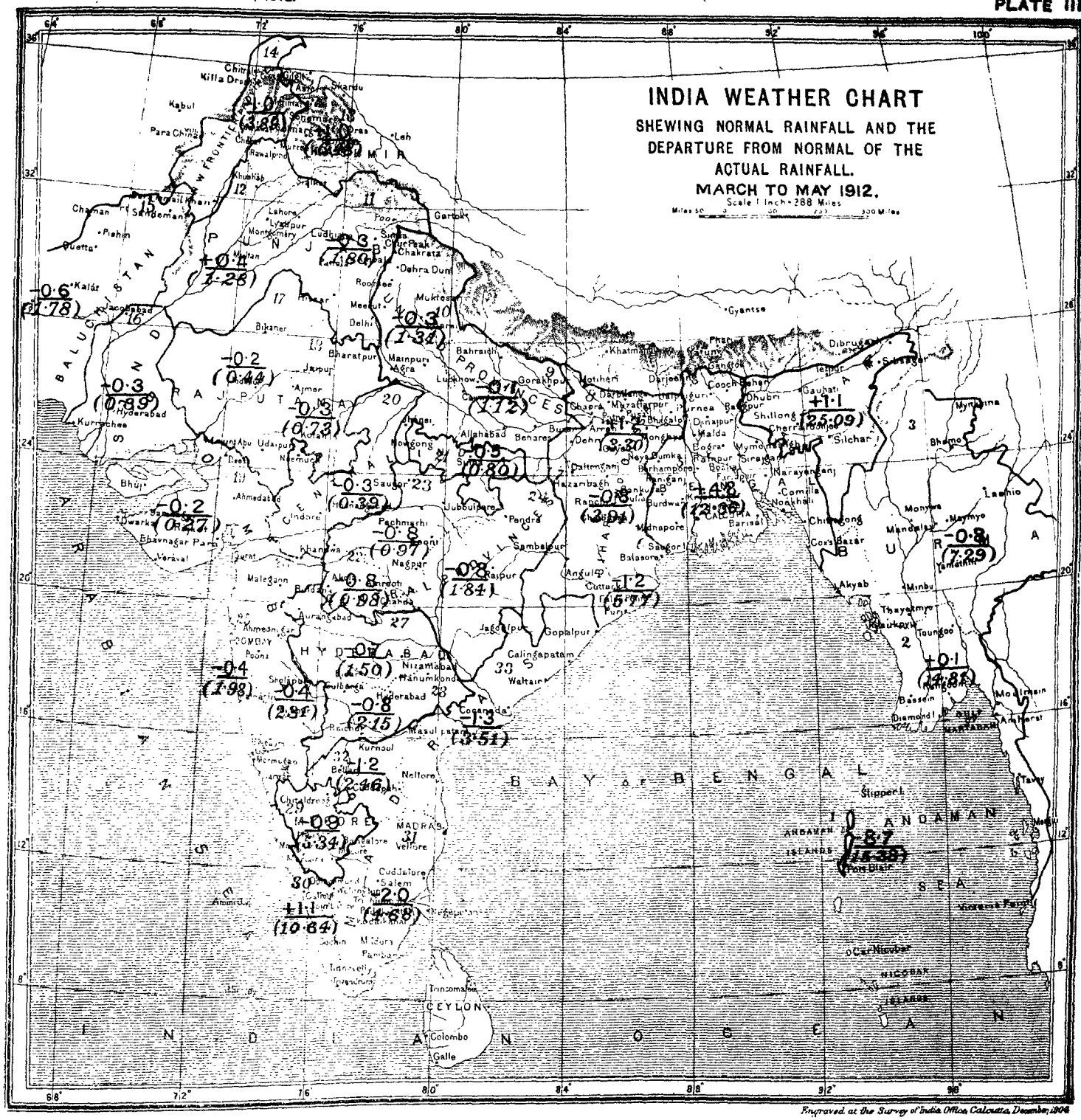


Engraved at the Survey of India Office, Calcutta, December, 1914

LITHO. BY S.B.M.

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



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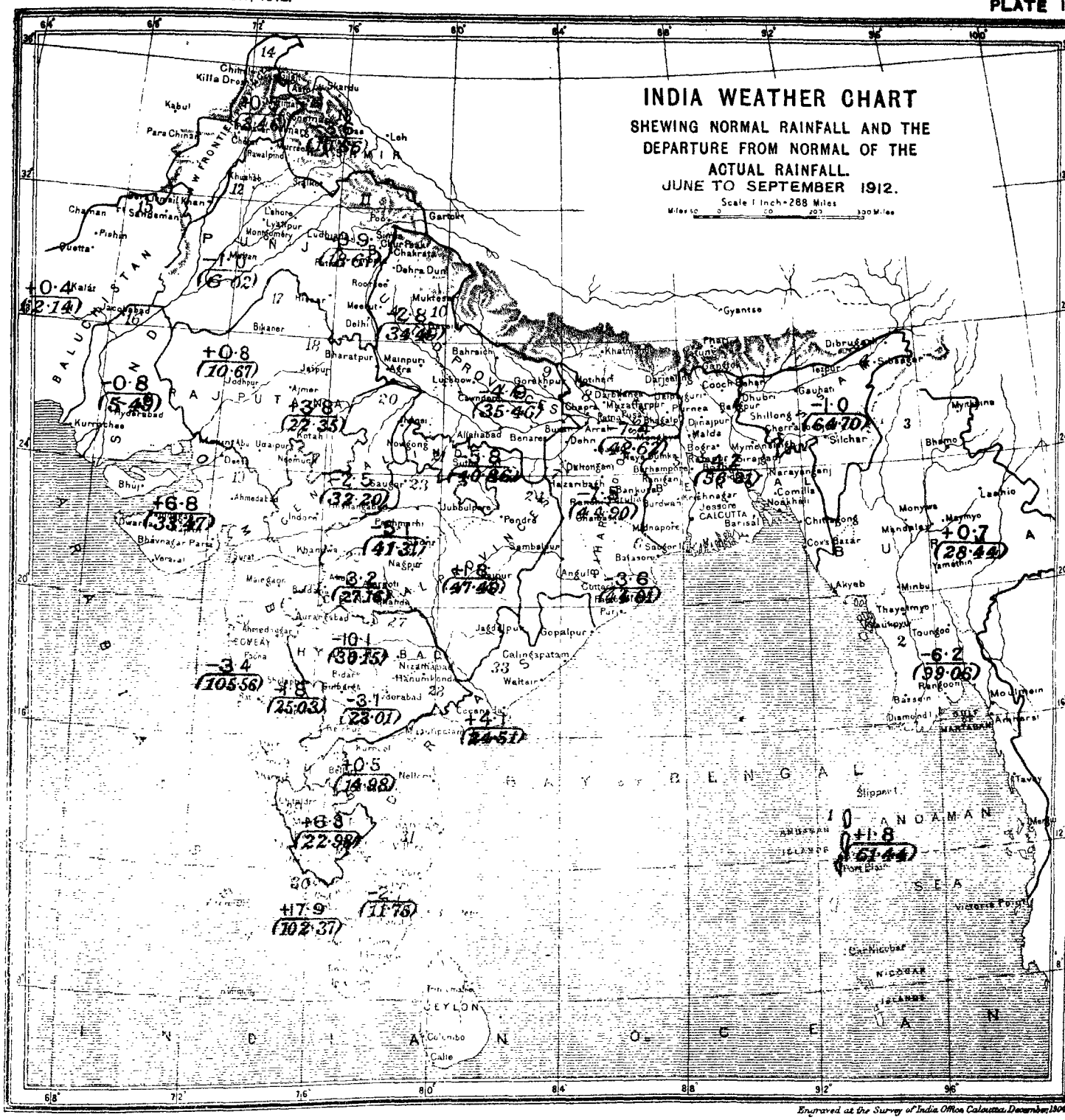
1. Bay Islands
2. Lower Burma
3. Upper Burma
4. Assam
5. Bengal
6. Orissa
7. Chota Nagpur
8. Bihar
9. United Provinces, East
10. United Provinces, West
11. Punjab, East and North
12. Do., Southwest
13. Kashmir
14. Northwest Frontier Province
15. Baluchistan
16. Sind
17. Rajputana, West
18. Rajputana, 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

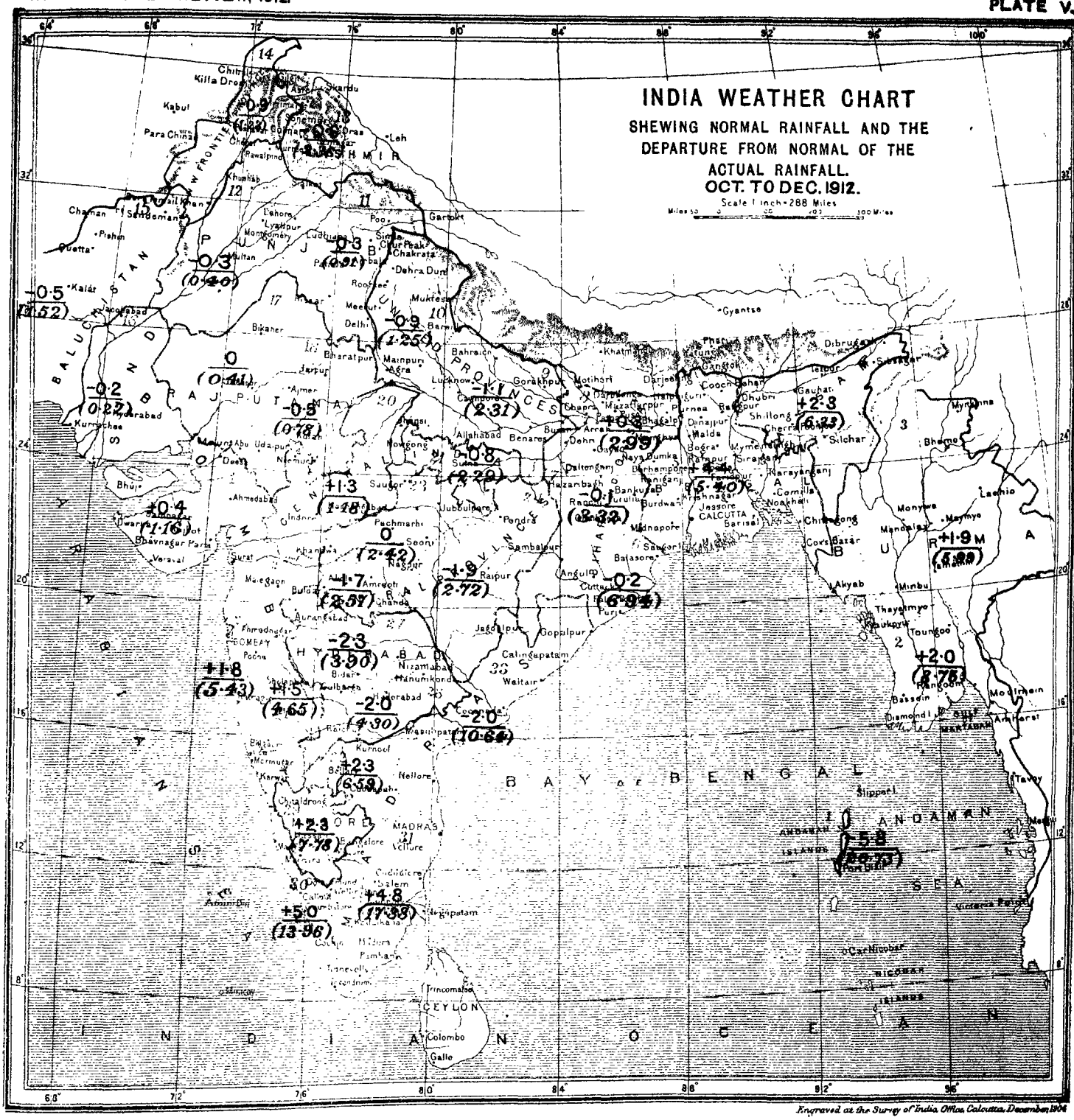


Engraved at the Survey of India Office Calcutta. December 1912.

LITHO. BY E.E.M.

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



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
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27. Hyderabad, North
28. Hyderabad, South
29. Mysore
30. Malabar
31. Madras, Southeast
32. Madras, Deccan
33. Madras Coast, North

Engraved at the Survey of India Office Calcutta, December 1912.

The further track of the storm of October in the Arabian Sea is defined by the following positions which lie outside the boundaries of the map:—

		Lat. N.	Long. E.
28th	October	15° - 45′	61° - 30′
29th	,,	15° - 30′	59° - 35′
30th	,,	14° - 10′	56° - 30′

(*This List of Publications is intended for Permanent Reference, and should be bound up with the Annual Summary*).

Publications of the India Meteorological Department.

(*Complete list, inclusive of those publications which are now out of print.*)

PUBLICATIONS OF THE INDIA METEOROLOGICAL DEPARTMENT.

The following is a list of the more important publications of the India Meteorological Department :—

The Indian Meteorologist's *Vade Mecum*, Part I, 2nd Edition. (1883). . . . . Price Rs. 3	Henry F. Blanford.
The Indian Meteorologist's *Vade Mecum*, Part II (1877) Price Rs. 5*	Ditto.
Instructions to Observers of the India Meteorological Department, 2nd Edition. (1902) . . . . . Price Rs. 3	Sir John Eliot.
Tables for the reduction of Meteorological Observations in India, 2nd Edition. (1889) . . . . . Price Rs. 2*	Henry F. Blanford.
Handbook of Cyclonic storms in the Bay of Bengal for the use of sailors, 2nd Edition. Vol. I—Text. (1900) . . Price Rs. 4	Sir John Eliot.
Handbook of Cyclonic storms in the Bay of Bengal for the use of sailors, 2nd Edition, Vol. II—Plates. (1901) . Price Rs. 1-8	Ditto.
Cyclone Memoirs, Part I—Bay of Bengal Cyclone of May 20th to 28th, 1887. (1888) . . . . . Price Re. 1*	Ditto.
Cyclone Memoirs, Part II—Bay of Bengal Cyclone of August 21st to 28th, 1888. (1890) . . . . . Price Rs. 3	Ditto.
Cyclone Memoirs, Part III—Bay of Bengal Cyclones of September 13th to 20th, and October 27th to 31st, 1888, and Arabian Sea Cyclone of November 6th to 9th, 1888. (1890) . Price Rs. 5	Ditto.
Cyclone Memoirs, Part IV—An enquiry into the nature and course of storms in the Arabian Sea and a catalogue and brief history of all recorded storms in the Arabian Sea from 1848—1889. (1891) . . . . . Price Rs. 3	W. L. Dallas.
Cyclone Memoirs, Part V—Account of three Cyclones in the Bay of Bengal and Arabian Sea during November, 1891. (1893) Price Rs. 3*	Sir John Eliot.
Report of the Midnapore and Burdwan Cyclone of the 15th and 16th of October, 1874. (1875) . . . . . Price Rs. 3*	W. G. Wilson.
Report of the Vizagapatam and Backergunge Cyclones of October, 1876. (1877) . . . . . Price Rs. 3*	Sir John Eliot.
Report on the Madras Cyclone of May, 1877 (1879) Price Rs. 3*	Ditto.
Monthly weather charts of the Bay of Bengal and adjacent sea north of the equator, showing mean pressure, winds and currents. (1886) . . . . . Price Rs. 5*	Henry F. Blanford.
Monthly weather charts of the Arabian Sea and the adjacent portion of the North Indian Ocean, showing mean pressure, winds and currents. (1888). . . . . Price Rs. 5	Sir John Eliot.
Charts of the Bay of Bengal and adjacent sea north of the equator, showing the specific gravity, temperature and currents of the sea surface. (1887) . . . . . Price Rs. 1-8	W. L. Dallas.
Climatological Atlas of India (1906). Price Rs. 27 or 36 shillings .	Sir John Eliot.
Meteorological Atlas of the Indian seas and the north Indian Ocean (1908) . . . . Price Rs. 13 or 17 shillings 6 pence	W. L. Dallas.
Daily weather reports and charts of the Indian monsoon area for the years 1893 to 1899 . . Price, each month, Re. 1 *	Departmental.
Normal weather or pilot charts of the Indian monsoon area for 8 A.M. for each month, November, 1900, to August 1908†. Price, each month, Annas 4.	Ditto.
Reports on the Meteorology of India for the years 1875—1890 (16 volumes)‡ . . . . . Price each Rs. 10	Ditto.

Indian Meteorological Memoirs, Vol. I, containing :—

Part I, comprising— On the winds of Calcutta—An analysis of ten years' hourly observations of the wind vane and four years' anemograms. The meteorology and climate of Yarkhand and Kashgar, being chiefly a discussion of registers kept by Dr. J. Scully in 1874-75. The diurnal variation of the barometer at Simla. Price Rs. 3*	Henry F. Blanford.
Part II, comprising— Storms in Bengal during the year 1876, accompanied with increased atmospheric pressure and the apparent reversal of the normal diurnal oscillation of the barometer . . .	Sir John Eliot.
On the rainfall of Benares considered in relation to the prevailing winds	S. A. Hill.
On the diurnal variation of the barometer at Indian stations, Part I; Calcutta and Hazaribagh . . . . . Price Rs. 3*	Henry F. Blanford.
Part III, comprising— Variation of rainfall in Northern India	S. A. Hill.
Meteorological and hypsometrical observations in Western Tibet, recorded by Dr. J. Scully, with a discussion . . . . Price Rs. 3	Henry F. Blanford.
Part IV, comprising— The winds of Kurrachee . . . . . Price Rs. 3	Fred. Chambers.
Part V, comprising— Some results of the meteorological observations taken at Allahabad during the ten years 1870—79	S. A. Hill.
The diurnal variation of the barometer at Indian stations, Part II, Goalpara, Patna and Leh . . . . . Price Rs. 3	Henry F. Blanford.
Part VI, comprising— The Meteorology of the North-West Himalaya . Price Re. 1	S. A. Hill.

Indian Meteorological Memoirs, Vol. II, containing :—

Part I, comprising— Account of the south-west monsoon storm of the 18th to the 24th of September, 1878, in the north of the Bay of Bengal . .	Sir John Eliot.
List of cyclones on the West Coast of India and in the Arabian Sea up to the end of year 1881 . . . . . Price Rs. 2.	Fred. Chambers.
Part II, comprising— Note on the foregoing list of cyclones and on the Gujarat land-cyclone of July 11th to 13th, 1881	Henry F. Blanford.
On the temperature of North-Western India . . . . Price Rs. 2	S. A. Hill.
Part III, comprising— Account of the south-west monsoon storms of the 8th to the 19th October, 1882, in the Bay of Bengal . . . Price Rs. 2	Sir John Eliot.
Part IV, comprising— Account of the south-west monsoon storms generated in the Bay of Bengal during the years 1877 to 1881 . . Price Rs. 2	Ditto.
Part V, comprising— Observations of temperature and humidity at a height of 40 feet above the ground at Alipore Observatory, Calcutta. Price Re. 1	S. A. Hill.

Indian Meteorological Memoirs, Vol. III, containing a full discussion of the rainfall of India and cognate subjects, complete in 4 parts. Price, each part, Rs. 2* — Henry F. Blanford.

Indian Meteorological Memoirs, Vol. IV, containing :—

Part I, comprising— Account of the south-west monsoon storm of the 12th to the 17th of May, 1884, in the Bay of Bengal and at Akyab . . .	Sir John Eliot.
On the diurnal variation of the rainfall at Calcutta . . .	Henry F. Blanford.
The meteorological features of the southern part of the Bay of Bengal . . . . . Price Rs. 3*	W. L. Dallas.
Part II, comprising— The False Point cyclone of September 22nd, 1885. Price Rs. 2*	Sir Alexander Pedler.
Part III, comprising— On the ground temperature observations made at the old observatory, Allahabad . . . . . Price Rs. 1-8*	S. A. Hill.
Part IV, comprising— List and brief account of the south-west monsoon storms generated in the Bay of Bengal during the years 1882 to 1886. Price Rs. 3*	Sir John Eliot.
Part V, comprising— The cyclonic storms of November and December, 1886, in the Bay of Bengal	Ditto.
The cyclone of the 25th May to the 2nd June, 1881, in the Arabian Sea . . . . . Price Rs. 3	Fred. Chambers
Part VI, comprising— On temperature and humidity observations made at Allahabad at various heights above the ground . . . Price Rs. 1-8*	S. A. Hill.
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On the Meteorology and Climatology of Northern Afghanistan Price Rs. 1-8*	W. L. Dallas.
Part VIII, comprising— An account of the more important cold weather storms in India during the years 1876 to 1891 . . . . Price Rs. 3*	Sir John Eliot.

* Copies of publications to the price of which an asterisk is appended are out of print.
† Copies for June, August and September, 1901, and January to October, 1902, and August and September, 1903, are out of print.
‡ Copies for the years 1876, 1878 to 1881, 1884, 1887 and 1890 are out of print.

Continued on page c of this list.

dian Meteorological Memoirs, Vol. V, containing :— e discussion of the hourly observations made at Sibsagar, Goalpara, Patna, Hazaribagh, Dhubri, Roorkee, Allahabad, Lucknow, Agra, Leh, Deesa, Kurrachee and Lahore and at Simla. Complete in 10 parts . . Price, each part, Re. 1*	Parts I—VII, Henry F. Blanford. Parts VIII—X, Sir John Eliot.
ndian Meteorological Memoirs, Vol. VI, containing :—	
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vestigation into the mean temperature, humidity and vapour tension conditions of the Arabian Sea and Persian Gulf. . Price Rs. 2*	Ditto.
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art III, comprising— he hot winds of Northern India	Ditto.
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art IV, comprising— hailstorms in India during the period 1883—1897 with a discussion on their distribution . . . . . Price Re. 1*	Sir John Eliot.
art V, comprising— discussion of the anemographic observations recorded at Simla during the period September, 1893, to August, 1896, and at Darjeeling during the period April, 1885, to December, 1896, and an investigation into the general features of the air movement in the Himalayan mountain area . . . . . Price Re. 1*	Ditto.
Part VI, comprising— A discussion of the anemographic observations recorded at Darjeeling during the period May, 1885, to May, 1896, and an investigation into the general features of the air movement in the Sikkim Himalayas . . . . . Price Re. 1*	Ditto.
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Indian Meteorological Memoirs, Vol. VIII, containing :— Part I, comprising— Hourly meteorological observations recorded at the Agustia observatory during the period from January, 1856, to September, 1858, and from June to December, 1864 . . . Price Rs. 2	Ditto.
Part II, comprising— Hourly comparative meteorological observations taken at Trivandrum, Vannatheertham (eastern station), Kalliad (western station) and Agustia for the periods 23rd March to 20th April, 1857, 20th January to 19th February, 1859, 9th September to 8th October, 1864, and 2nd to 28th January, 1865, also at Cape Comorin from 23rd September to 13th November, 1858, and at Charatha and Kamala from 20th January to 19th February, 1859 . . . . . Price Re. 1	Ditto.
Indian Meteorological Memoirs, Vol. IX, containing :— The diurnal variation of atmospheric conditions at Chittagong, Cuttack, Jubbulpore, Pachmarhi, Nagpur, Poona, Belgaum, Bellary, Trichinopoly, Rangoon, Aden, Alipore and Jaipur. Complete in 9 parts . . . . Price, each part, Rs. 1-8*	Part I, Henry F. Blanford. Parts II—VII, Sir John Eliot. Part VIII, Douglas Archibald. Part IX, Sir John Eliot.
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art II, comprising— The discussion of the hourly meteorological observations recorded at Agustia during the years 1856—1858 and 1864 . Price Rs. 2	Ditto.
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Part III, comprising— Discussion of the results of the hourly observations recorded at 29 stations in India given in Volumes V, IX and X of the Indian Meteorological Memoirs (Final chapter and plates) . Price Rs. 3	Ditto.
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Indian Meteorological Memoirs, Vol. XVII, containing :—	
Normal monthly and annual means of temperature, pressure, wind, humidity, cloud, rainfall and number of rainy days of stations in India, etc. . . . . Price Rs. 3	Ditto.

* Copies of publications to the price of which an asterisk is appended are out of print.

Continued on page d of this list.

Memoirs of the Indian Meteorological Department, Vol. XVIII, containing :—	
Part I, comprising—	
A discussion of the anemographic observations recorded at Rangoon from June, 1878, to October, 1901, and at Chittagong from June, 1879, to December, 1896 . Price Rs. 2.	Sir John Elliot
Part II, comprising—	
A discussion of the anemographic observations recorded at Saugor Island from March, 1880, to February, 1904, and at Alipore (Calcutta) from March, 1877, to February, 1904. Price Rs. 2.	Ditto
Part III, comprising—	
A discussion of the anemographic observations recorded at Allahabad from September, 1890, to August, 1904, and at Lucknow from July, 1878, to October 1892 . Price Rs. 2.	Ditto
Part IV, comprising—	
A discussion of the anemographic observations recorded at Roorkee from September, 1879, to August, 1904; at Lahore from June, 1889, to May, 1905; and at Mussooree from May to October, 1877-1888 . . . . . Price Rs. 2.	Ditto
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A discussion of the anemographic observations recorded at Pachmarhi from September, 1883, to April. 1887, and at Nagpur from January, 1882, to December, 1902 . . . Price Rs. 2.	Ditto
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India Weather Review-Annual Summaries for the years 1891-1911 (21 parts)‡. . . . . Price each Rs. 3	Ditto.
Monthly Weather Reviews for each month January, 1891, to May, 1913§ . . . . . Price each part Re. 1.	Ditto.
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Bengal Daily Weather Report, published in Calcutta, Monthly subscription Rs. 3 ‖	Ditto.
Bombay Daily Weather Report, published in Bombay, Monthly subscriptoin Rs. 2.‖	Ditto.
Madras Daily Weather Report, published in Madras, Monthly subscription Re. 1-8.‖	Ditto.

* Copies of publications to the price of which an asterisk is appended are out of print.

† Copies for 1901 to 1906 are out of print.

‡ Copies for 1891 to 1905 are out of print.

§ Published continuously about four months after date. Copies for 1891-97, January, 1898 and January 1899 to May 1902, January to November (June expected) 1903 and January and March 1904 are out of print.

‖ These prices include postage in India.