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MONTHLY WEATHER REPORT

VOLUME 7 NUMBER 1

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MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT

CAIRO

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PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties as the National Meteorological service for the U.A.R. the Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this, page.

Orders for publications should be adressed to :—

"The Director General, Meteorological Department, Kubri-el-Qubbeh—CAIRO".

THE DAILY WEATHER REPORT

This report is printed daily in the Meteorological Department. It contains surface and upper air observations carried by the relevant networks of the Republic and made at the four main synoptic hours of observations (00, 06, 12 and 18 U.T.); as well as ship observations over the Eastern Mediterranean and north Red Sea made at the same times.

It also contains two surface synoptic charts at 00 and 12 U.T. and two upper air charts for the standard isobaric surfaces 700 & 500 mbs. at both 00 and 12 U.T.

In compliance with resolution 8 (EC-XIII) of WMO, foreign upper air data included in Cairo Subregional Broadcast are also given in this report.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year .

CLIMATOLOGICAL NORMALS FOR EGYPT

The normals, long averages and statistical data are given in one edition for stations in Egypt from the date of opening of each station up to 1945, A new voluminous edition was issued in March 1968 which brings normals and mean values up till 1960.

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FOREWORD

Since 1909 the Meteorological Department of Egypt has been issuing regularly the Monthly Weather Report, giving a brief summary of the weather conditions prevailing over Egypt during the month. These reports used to include a table giving limited climatological data for some selected surface observations.

On January 1954, the Monthly Weather Report has been revised and the general summary of the weather conditions has been extended to give a more detailed description of the synoptic situations and the associated weather prevailing during the month.

On February 1955 a further extension took place, the general summary of the weather conditions has been classified into different items to give more comprehensive information. More detailed surface climatological tables for selected stations and table for miscellaneous weather phenomena have been added to the Report.

On January 1956, the climatological tables included in the Report have been extended to include upper air climatogical data to meet the increasing demand for this information.

In addition the full text of the monthly report of the standard observations taken at the Central Agro-Meteorological Station at Giza has been included in this Report instead of issuing it as a separate bulletin.

On January 1957, the Report has been completely revised, a new set of meteorological tables has been introduced to give, as far as possible, complete information for surface and upper air data from a more representative network of stations.

In addition a general review of the observations taken in the fields of the plant breeding farm at Giza is included in the Report. The review gives a brief summary of the characteristic features of the different meteorological and micrometeorological elements of the month, more weight is given in this review to those elements which are of interest to agriculturists.

Starting from the Report of January 1958, the Monthly Weather Report for the U.A.R. included a detailed description of the synoptic situations and the associated weather experienced all over the Republic during the month. The Report included a new set of tables giving more detailed surface and upper air climatological data for selected stations in the Republic. The review of the Agrometeorological station at Giza and the normal observations made at the field of the Station were also included in the Report.

As from January 1960, these tables have been totally revised and some new tables have been introduced to include more detailed climatological data.

In order to explain how the tables included in these Monthly Weather Reports have been compiled, detailed notes are included in the Report of January 1960 giving information about the instruments used and their exposure, the methods of observations and the methods of computing the means and frequencies.

As from January 1964, the Monthly Weather Report was again totally revised. The number of meteorological stations appearing in the Report have been concentrated in the main synoptic stations working mostly continuously 24 hours. In addition climatological data included in the Report will be confined to the montlly mean values, monthly totals, monthly frequencies and monthly absolute values. More specific climatological data have to be requested from the Meteorological Department.

Starting from the Report of January 1958, the monthly Weather Report of the U.A.R. carries serial reference in volume and number; each year carries a serial number in volume, Number I, being for January and 12 for December. The reference number of January 1958 is volume I, number I.

Cairo, 12-2-1970

M. F. TAHA

Under Secretary of State
Director General
Meteorological Department

INTRODUCTION AND EXPLANATION OF THE TABLES

For the purpose of this Monthly Weather Report, the United Arab Republic is divided into six climatic districts as follows:—

Number	District	Number	District
I	Mediterranean Area	IV	Upper Egypt
II	Lower Egypt	V	Western Desert
III	Cairo Area	VI	Red Sea Area

The data included in Tables A1, A2, A3, A4 & A5, are based on surface obseravtions made at a representative selection of the basic network of synoptic stations. The data included in Tables B1, B2 & B3 refer to Upper Air observations. The data included in Tables C1,C2, C3,C4 & C5, are based on observations taken at the Central Agro-Meteorological station at Giza and the Agro-Meteorological stations at Tahrir, El Kasr and Kharga. The observation field at Giza is divided into several plots, each of area about 400 to 600 square metres, three of these plots are used for standard observations running throughout the whole year, the first serves as a dry and bare field, the second as a wet and bare field and the third as a wet field covered with grass (libia). The observation fields at Tahrir, El Kasr and Kharga are considered for the moment as dry and bare fields. At Kharga Oasis, the observation field is of the size of about 4000 - 6000 square metres.

The soil characteristics of these fields are:

	EL KASR	TAHRIR	GIZA	KHARGA
Top soil type	not available at present	Pure sand	Permeable clay	Sandy loam granular non-compact
Top soil depth	,,	More than 3 metres.	More than 1.5 metres	20 cms.
Sub soil type	,,	Pure sand	Clay loam and loam	Platey clay non-compact
Slope of ground and its direction	,,	½ %towards East& North	Flat (0-0.3%)	Flat (0-0.3%)
Level of water table	,,	More than 5 metres	1.0–1.5 m. approximately.	More than 5 metres

Except for the wind speed which is expressed in knots, the metric units are used throughout this report and are as follows :—

- The atmospheric pressure is expressed in millibars (one millibear = 1000 dynes per square centimetre = the pressure due to 0.7501 millimetre of mercury at 0°C at latitude 45°),
- Air and soil temperatures in degrees celsius (°C),
- Relative humidity (%),
- Rainfall in millimetres,
- Snow depth in centimetres,
- Duration of bright sunshine in hours,
- Sky cover in oktas,
- Evaporation in millimetres,
- Altitude of pressure surface in geopotential metres,
- Mean wind speed of the whole day, and of the day — time and the night — time intervals in metres per second,
- (Solar + Sky) radiation in gram-calories per centimetre square,
- Vapour pressure in millimetres.

TABLE A1.— Monthly values of the Atmospheric Pressure, Air Temperature, Relative Humidity, Bright Sunshine Duration & Piche Evaporation

Atmospheric Pressure.

The monthly mean values of the daily atmospheric presure corrected to Mean Sea Level (M.S.L.) are the arithmetic means over the month of their corresponding daily hourly values or of the daily observations taken at the 8 synoptic hours (00,03, 06, 09, 12, 15, 18 & 21 UT). The atmospheric pressure is measured by mercury barometers installed indoors; The Mean Sea Level Pressure (M.S.L.) is the barometer reading corrected for the height of the barometer cistern above or (below) the Mean Sea Level at the station. Corrections for index, temperature and latitude have been applied to the barometer readings before reduction to M.S.L. Deviations from normals appear besides monthly mean values in a separate column.

Air Temperature.

The monthly mean values of the maximum (A) and of the minimum (B) air temperatures are computed from their corresponding daily routine values observed over the month. The maximum (mercury) and the minimum (alcohol) thermometers are freely exposed in the louvred screens with their bulbs at a height of 160 to 170 centimetres above the ground. Deviations from normals appear besides monthly mean values.

The monthly mean values of A +B/2 are computed from their corresponding daily calculated values over the month.

The monthly mean values of the dry and of the wet bulb air temperatures are the arithmetic means over the month of their corresponding daily hourly values or of their corresponding values at the 8 synoptic hours (00,03, 06, 09, 12, 15, 18 & 21 UT). The dry and wet bulb thermometers used are of the mercury type and are freely exposed in sloping double roofed louvred screens with th ir bulbs at a height of 140-150 centimetres above the ground. Deviations from normals appear besides monthly mean values in a separate column.

Relative Humidity

The monthly mean values of the relative humidity are the arithmetic means over the month of its corresponding daily hourly values or of its corresponding values at the 8 synoptic hours (00, 03,06, 09, 12, 15, 18 & 21 U.T). The relative humidity (%) is derived from the dry and wet bulb thermometer readings using Jellink's Psychrometer Tables (Liepzing 1911). No corrections for wind speeds or atmospheric pressure are applied. Deviations from normals appear besides monthly mean values in a separate column.

Bright Sunshine Duration

The actual duration of bright sunshine for the month is the sum of the actual daily bright sunshine durations. The total possible duration for the month is the sum of the daily calculated periods between sunrise and sunset. In calculating the possible duration of sunshine for a given day, the period of cut-off for that day caused by obstacles, such as mountains are eliminated from the possible duration with an ideal flat horizon. In case of stations where the record of day or more is or are missing, the total actual duration is given between brackets and a note is added at the end of the table giving the actual number of records (days) used in summing up this total actual. In such cases the corresponding total possible duration is also given in brackets and it is the sum of the possible duration of the days of the available records. The percentage of the actual to the possible duration appears besides the total possible values in a separate column. The duration of bright sunshine is measured by the campbell-Stokes sunshine recorders which are suitably exposed.

TABLE A5.— Number in Hours of Occurrences of Concurrent Surface Wind Speed and Direction Recorded Within Specified Ranges.

The elements used in preparing this table are the mean hourly values of the surface wind speed and the corresponding mean hourly values of direction taken from the daily records of the surface wind instruments intsalled at the station. These mean hourly values are extracted for every hour of each day of the month and they refer to a period of 60 minutes centred at the hour.

The number in hours of occurrences of the surface wind falling within the ranges of speed and direction indicated in the table is the number of cases when the mean hourly values of the surface wind, as defined have satisfied these ranges.

The number in hours of "variable" winds is the number of cases where the surface wind showed no definite direction over the period of the 60 minutes centred at the hour or when the wind vane was sticking over that period due to the lightness of the wind and not responding to the variation in wind direction; in such cases the mean wind speed over this period is normally less than 5 knots. The number in hours of "calm" winds is the number of cases where the surface wind has a mean speed of less than one knot over that period whatever the mean wind direction over the same period is. The number in hours during which the recording instrument failed to record over the whole month is given under a separate column.

The instruments used for recording the surface wind are of the Dines Pressure Tube Anemograph.

This table follows the general lines of Model B of chapter 12 part IV of the WMO Technical Regulations 1959. The ranges of wind speed are (1-10), (11-27), (28-47) knots and 48 knots or more; the ranges for wind direction are twelve ranges of 30° each, beginning with the range (345°-014°) as being the true north.

This table gives the following data

— The total number in hours of simultaneous occurrences of surface wind satisfying the specified ranges of speed and direction during the month,

— The total number in hours of occurrences of surface wind satisfying the specified ranges of speed during the month irrespective of their direction,

— The total number in hours of occurrences of surface wind blowing from the specified ranges of direction during the month irrespective of their speed.

TABLE B1.—Upper Air Climatologiacl Data

The routine upper air observations are taken at 0000 and 1200 U T , a separate table of this type is prepared for each hour. The number of cases the height of each of the pressure surfaces indicated in the table has been attained during the month, and the number of cases the temperatures and the dew points have been observed at each of these surfaces are given in the table against each element under column (N).

The monthly mean values of the altitude, temperature and dew piont at each of these pressure surfaces are the arithmetical means of the corresponding daily values over the number of cases (N) indicated against each element.

The instruments used are of the radiosonde modulating frequency recording type; the types of transmitters used do not need to apply any corrections for radiation.

This table follows the general lines recommended by the commission for climatology of the World Meteorological Organization Rec. 34 (CCL-1); it gives the following data for the hour of observation indicated at the top of the table :

— The number of cases the height of each of the pressure surfaces has been attained during the month and the number of cases the temperature and dew point at these surfaces have been observed,

— The monthly mean values of the atmospheric pressure corrected to the ground level of the station (H); the highest and lowest values of this pressure observed during the month,

— The monthly mean values of the air temperature and of the dew point at the surface; the highest and lowest values of the surface air temperature observed during the month,

— The monthly mean, the highest and the lowest values of the altitude for each of the pressure surfaces,

— The monthly mean, the highest and the lowest values of air temperature; and the mean dew point at each of the pressue surfaces.

TABLE B2.— Mean and Extreme Values of the Freezing Level and the Tropopause; The Highest Wind Speed in the Upper Air.

The routine upper air observations are taken at 0000 and 1200 UT ; a separate table of this type is prepared for each hour as indicated in the notes on table B1. The number of cases the altitude of the freezing level and of the first tropopause have attained during the month and the number of cases the pressures and the dew points or temperatures have been observed at these levels are given in the table against each element in the (N) box.

The monthly mean values of the altitudes of the freezing level and of the first tropopause and the monthly mean values of the pressures and of the dew points or temperatures at each of these levels are the arithmetical means of the corresponding daily values over the number of cases (N) indicated in the box of each element.

The first tropopause is determined in accordance with the definition adopted by the Executive Committee of the World Meteorological Organization Resolution 21 (Ec - IX).

This table is based on wind observations taken by the SCR — 658 or the Metox radiotheodolites working simultaneously with the radiosonde observations. The types of radiosonde instruments used are given in the notes on table BI.

This table gives the following data for each hour of observation indicated at the top of the table:

— The number of cases the freezing level has been attained during the month and the number of cases the pressure and dew point have been observed at this level.

— The number of cases the altitude of the first tropopause has been attained during the month and the number of cases the pressure and the temperature have been observed at this level,

— The monthly mean values of the altitude, pressure and dew point of the freezing level,

— The altitudes, pressures and dew points of the highest and lowest freezing level observed during the month,

— The monthly mean values of the altitudes, pressures and temperatures of the first tropopause,

— The altitudes, pressures and temperatures of the highest and lowest first tropopause observed during the month,

— The direction and speed of the highest wind speed observed during the month, the altitude at which this wind has been observed.

TABLE B3.—Number of Occurrences of Wind Direction Within Specified Ranges and the Mean Scalar Wind Speed at the Standard and Selected Pressure Surfaces

The routine upper air observations are taken at 0000 and 1200 U.T. A separate table of this type is used for each station.

The mean scalar wind speed "ffm" of winds blowing from each range of directions at a given pressure surface, is the arithmetical mean of the corresponding daily values of wind speed for the number of cases "N" during the month.

The term "Calm" is used in this table to denote wind speed of less than one knot.

This table is based on the wind observations taken at the station as indicated in the notes on table B2.

This table, as in the case of table BI, follows the general lines recommended by the commission for Climatology of the World Meteorological Organization REC. 34 (CCL-I) ; the ranges of wind direction used are twelve ranges of 30° each beginning with the range (345°—014°) as being the true north. This gives the following data for the hour of observation indicated :

— The number of cases (N) the wind has been observed from the specified ranges of direction at the surface of the station and at the different pressure surfaces during the month.

— The total number of cases (TN) the wind has been observed at the surface of the station and at the different pressure surfaces during the month irrespective of the wind direction,

— The mean scalar wind speeds (ffm) blowing from the ranges of direction specified at the surface of the station and at the different pressure surfaces,

— The number of cases of "calm" winds at the surface of the station and at the different pressure surfaces,

— The mean scalar wind speeds at the surface of the station and at the different pressure surfaces blowing from all directions.

AGRO-METEOROLOGICAL DATA

Reviews of Agro-Meteorological Stations at El Kasr, Tahrir, Giza, & Kharga.

The monthly review of all agro-meteorological elements that have been observed at each agro-meteorological station includes a general summary of pronounecd weather phenomena that prevailed during the month together with a comparison between the montly values of this year and last year of specified elements that are of great interest to agriculturists as well as to agrometeorologists. For some elements when observations are of a long time, departure from normal values appears also in the monthly review.

During winter, the monthly review includes normally the days of air temperature below 0°C at the height of five centimetres above the top of grass (Libia). The records of a mercury in steel recording thermometers are used for this purpose ; the sensitive part of the instrument is exposed in the open air and is mounted on a wooden support at the height indicated.

TABLE C1.—Air Temperature at 2 meters Above Ground.

The monthly mean values of the maximum, minimum , night time mean and day time mean, mean of day of air temperatures are the arithmetic means over the month of their corres ponding daily values. The mean air temperature of the day is the mean of the hourly values of the dry bulb temperatures during the day. The night—time mean air temperature of the day is obtained graphically to the nearest whole degree from the charts of recording thermometers for the period from sunset of the previous day to sunrise of that day ; the day-time mean temperature is similarly obtained for the period from sunrise to sunset of the same day. The duration of air temperatures above a specified limit of temperature is obtained graphically from the same charts, daily to the nearest half hour.

The maximum (mercury), the minimum (alcohol)and the dry bulb (mercury ventilated) thermometers are freely exposed in sloping double roofed louvred screens with their bulbs at a height of 210-220 centimetres above ground ; the recording thermometer used is of the bi-metallic type and is exposed in a similar screen ; the height of the bi-metallic piece is 210 centimetres approximately above the ground .

TABLE C2.—Extreme Values of Maximum & Minimum Air Temperatures at 2 meters above Ground, Absolute Minimum Air Temperature at 5 cms above Ground over Different Fields

The extreme values of maximum and minimum air temperatures at 2 metres above ground and of minimum air temperatures at 5cms above ground over dry and grass fields are extracted from their corresponding daily routine values. Dates of occurrences are included in separate columns beside the extreme value. Extreme values of maximum & minimum air temperature at 2 metres include the highest & lowest limits of the daily corresponding routine values during the month. The types and exposures of the minimum thermometers used over the different fields are as in the case of the grass minimum referred to in notes on the table A2.

TABLE C3.—(Solar+ Sky) Radiation, Duration of Bright Sunshine, Relative Humidity, Vapour Pressure at 2 metres above Ground, Evaporation & Rainfall.

The monthly total values of the (Solar + Sky) Radiation, Bright sunshine duration, Evaporation & Rainfall are the sums of their corresponding daily values for the month. The monthly mean values of the (Solar+Sky) Radiation, Relative Humidity, Vapour Pressure at 2 metres & Evaporation are the airthmetic means of their corresponding daily values for the month respectively.

The (Solar + Sky) radiation is obtained from the records of a Robitzsch Actinograph ; the Robitzch values at Giza and Tahrir are regularly compared with the records of an Eppley pyrheliometer. The sensitive elements of the Robitzsch Actinograph and of the Epply pyrheliometer are at 100 cms approximately above the ground.

The types of instruments used for the measurement of the duration of bright sunshine, their exposure and the evaluation of the durations are as given in the notes on table A 1.

The duration of the relative humidity above 90 % and above 80 % are given to the nearest hour and are obtained graphically from the records of a hair hygrograph exposed in a sloping double rooted louvred screen at a height of 210 centimetres approximately above ground.

The relative humidity is derived from the readings of ventilated dry and wet bulb mercury thermometers freely exposed in the same screen, using the Aspirations—Psychrometer-Taflen of the Deutschen Wetter Dienst 1955 ; the height of the bulbs is 210 centimetres approximately above the ground. The mean relative humidtity of the day is the mean of the hourly values observed during day.

The vapour pressure values are derived from the same Aspiration Psychrometer tables. The mean of the day of the vapour pressure is the mean of the hourly values computed during day.

Evaporation measurements are taken once daily at 0600 UT from a Piche tube and also a class "A" evaporation pan and give the evaporation for the previous 24 hours. The Piche tube is freely exposed in the open air at a height of 120 centimetres above dry soil ; the colour and effective area of the evaporation disc are as given in the notes on table AI. The class "A" evaporation pan is of the type recommended by the Commission of Instruments and methods of Observation of the World Meteorological Organization Rec. 42 (CIMO-56) ; it is of a cylindrical shape, 25.4 centimetres deep, 120-centimetres in diameter (inside dimensions). The pan is freely exposed in the open air in the wet field covered with grass (libia), its rim at a height of 41 centimetres above ground away from obstacles such as buildings or trees.

The types of instruments used for measuring the amount of rainfall, their exposure and the evaluation of these amounts are given in the notes on table A3.

TABLE C4.—Extreme Soil Temperatare at Different Depths in Different fields. (cms.)

The highest and lowest values of soil temperatures at the selected depths in dry & grass covered fields are extracted from their corresponding daily routine values.

The soil temperature readings are taken in the different fields at the specified depths ranging from 0.3 cm to 300 cms. in each field as indicated in the table. These readings are taken regularly according to the following schedule :

— Daily at 0000 U.T., 0200 U.T and every 2 hours for the 0.3, 1, 2 and 5 centimetres depths.

— Daily at 0000 U.T., 0300 U.T and every 3 hours for the 10 and 20 centimetres depths.

— Daily at 0000, U.T., 0600, U.T and every 6 hours for the 50 centimetres depth.

— Daily at 1000 U.T. for the 100 and 200 centimetres depths.

— Once every 5 days at 1000 U.T. for the 300 centimetres depth.

The thermometers used are of the Fuess or the Friedrich types.

TABLE C5.—Surface Wind

The monthy values, of the daily mean, the night time mean and of the day time mean of the surface wind speed is the arithmetic mean of their corresponding daily evaluated values for the month respectively. The mean wind speed of the day is computed for the period of 24 hours from 1600 UT of the previous day ; the night-time mean wind speed of the day is obtained from the total run of air during the period 1600 UT of the previous day to 0600 UT of that day ; the day-time mean is similarly computed for the period 0600 to 1600 UT of the same day. The type of the wind instrument used is of the run counter of the Lambrecht type ; the cups of which are at 2 metres above the ground.

The number of days with surface wind speed reaching or exceeding specified values of velocities ($\geq$ 10 knots, $\geq$ 15 knots, $\geq$ 20 knots, $\geq$ 25 knots, $\geq$ 30 knots, $\geq$ 35 knots and $\geq$ 40 knots) for at least 5 minutes at any time between 2200 & 2200 UT irrespective of its direction are extracted from the daily routine analysis of surface wind records during the whole month. The daily re;ords of the Dine Pressure Tube Anemograph are used, the highest gust refer to the highest excursive made by the velocity pen on the records during the month

... IN THE REPORT — SYNOPTIC AND CLIMATOLOGICAL STATIONS

District	Station	Index Number II iii	Latitude °N	Longitude °E	Elevation of the ground in metres (H or He)	Altitude of the Station in metres (Hp)	Altitude of the barometer Cistern in metres	Hight of Wind recording instruments (metres) above		Synoptic Observations								Hourly Observations (H) Half hourly obs. (h) (0000—2400)	Upper air observations P (Pilot Ballon) W (Radio wind) R (Radio Sonde)				Remarks
								above building	above ground	00	03	06	09	12	15	18	21		00	06	12	18	
Mediterranean	Sallum	62 300	31 32	25 11	4.0	6.0	5.2	—	—	×	×	×	×	×	×	×	×	H	P	P	P	P	
	Mersa Matruh (A)	306	31 20	27 13	28.3	30.0	30.0	8	15	×	×	×	×	×	×	×	×	H	RW	P	RW	P	
	Alexandria (A)	318	31 12	29 57	— 3.4	7.0	6.8	10	18	×	×	×	×	×	×	×	×	H	P	P	P	P	
	Port Said (A)	333	31 17	32 14	1.9	6.1	6.1	10	19	×	×	×	×	×	×	×	×	H	P	P	P	P	
	El Arish	336	31 07	33 45	15.0	17.1	17.1	10	15	×	×	×	×	×	×	×	×	H	P	P	P	P	
	Ghazza	338	31 30	34 27	9.7	15.7	15.7	10	18	×	×	×	×	×	×	×	×	H	P	P	P	P	
Lower Egypt	Tanta	348	30 47	31 00	14.0	14.8	15.4	10	14	—	—	×	×	×	×	×	—	H	—	—	—	—	
Cairo Area	Cairo (A)	366	30 08	31 34	94.7	74.5	74.0	14	18	×	×	×	×	×	×	×	×	h	—	—	—	—	
	Helwan	378	29 52	31 20	139.3	—	—	—	—	—	—	—	—	—	—	—	—	—	BW	W	RW	W	
Upper Egypt	Fayoum	381	29 18	30 51	22.0	23.3	23.2	10	14	—	—	×	×	×	×	×	—	H	—	—	—	—	
	Minya (A)	387	28 05	30 44	29.0	40.0	44.2	7	10	×	×	×	×	×	×	×	×	H	P	P	P	P	
	Assyout (A)	393	27 11	31 06	71.0	69.6	69.5	15	20	×	×	×	×	×	×	×	×	H	P	P	P	P	
	Luxor (A)	405	25 40	32 42	94.9	88.5	88.4	7	15	×	×	×	×	×	×	×	×	H	P	P	P	P	
	Aswan (A)	414	23 58	32 47	200.0	193.5	200.0	10	14	×	×	×	×	×	×	×	×	H	RW	W	RW	W	
Western Desert	Siwa	417	29 12	25 29	—15.0	—13.5	—13.3	10	17	×	×	×	×	×	×	×	×	H	P	P	P	P	
	Baharia	420	28 20	28 54	128.0	129.5	129.6	—	—	×	×	×	×	×	×	×	×	H	P	P	P	P	
	Farafra	423	27 03	27 58	90.0	91.8	92.1	—	—	×	×	×	×	×	×	×	×	H	P	P	P	P	
	Dakhla	432	25 29	29 00	110.0	111.5	111.5	10	15	×	×	×	×	×	×	×	×	H	P	P	P	P	
	Kharga	435	25 27	30 32	77.8	72.8	78.8	—	—	×	×	×	×	×	×	×	×	H	P	P	P	P	
Red Sea	Tor	459	28 14	33 37	2.2	4.2	2.2	—	—	×	×	×	×	×	×	×	×	H	P	P	P	P	
	Hurghada	462	27 17	33 46	1.0	2.8	2.8	8	12	×	×	×	×	×	×	×	×	H	P	P	P	P	
	Quseir	465	26 08	34 18	8.0	11.3	11.3	12	15	×	×	×	×	×	×	×	×	H	P	P	P	P	

GENERAL SUMMARY OF WEATHER CONDITIONS

JANUARY 1964

Generally cold, particularly intense during the third week, rainy in the north with scattered thunderstorms. Early morning mist over scattered localities in Delta, Canal and Cairo Areas. Occasional widespread rising sand round the end of the month.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather this month was cold in general and particularly during the period (18 - 21) when an intense cold wave prevailed. On the 18th the intense cold wave reached its peak causing a sudden fall of about 9°C in maximum temperature and dropping minimum temperature to 0 °C or less in scattered localities in Western Desert and Upper Egypt districts.

Rain fell heavily over the northern parts of the Republic most days of the month, its monthly values exceeded its normal values over scattered parts of the Mediterranean coastal strip. The daily rainfall attained a record at Ras El Hikma.

It is worth to mention that weather was almost dusty round the end of the month in scattered localities in the northern and middlle parts of the Republic particularly in the Western Desert district and the Mediterranean Coastal Strip. Early morning mist developed over the interior parts of Delta, Canal and Cairo areas many days during this month.

PRESSURE DISTRIBUTION

The prevailing outstanding pressure systems over the surface map this month can be summarized in the following:

— The subtropical high pressure belt extending from Central Atlantic and operating on West and South Europe, Mediterranean and North Africa Regions.

— The Siberian Anticyclonic sw ridge which operated over Black Sea and Asia Minor.

— The deep Polar low pressure system over north Atlantic and north Russia and their extension troughs over the Mediterranean and Middle East Regions.

— The Sudan Low and its northward elongation towards South East Mediterranean corner.

The Subtropical high pressure belt amalgamated with the south west ridge of the Siberian Anticyclone most days of the month with the exception of the short periods (2nd - 4th), (6th - 9th), (15th - 17th), (22nd - 25th) & (29 th - 31st) during which the amalgamation regime was interrupted and high pressure decayed appreciably over the Balkans and adjacent territories.

During the first four periods the deep polar low pressure system north of Russia showed a marked southward oscillation towards the Black and Caspian Seas regions causing a relative fall in the barometric

pressure over East Mediterranean, thus favouring the formation of Cyprus depression and the marked northward oscillation of the Sudan Low towards the Southeast Mediterranean.

During the last period, a deep low pressure system of the north Atlantic shooted rapidly eastwards, it traversed Northwest Europe on the 28th causing appreciable fall in the barometric pressure over west Europe and west Mediterranean Regions, and favouring formation of a rather deep secondary depression over Tunisia. This Secondary depression proceeded rapidly eastwards following the motion of the primary system, passed by Central Mediterranean on the 30th and reached east Mediterranean on the 31st.

It is worth to mention that cyclogensis in the middle latitudes, the Mediterranean Region and its vicinities was associated with the southward extension and relative deepening of the upper troughs of low pressure at the 700 & 500 mb levels.

The subtropical jet stream was evident during the whole month over the tropospheric maps round 210 mbs oscillating between latitude 25 & 35° north. The polar jet stream appeared in association with the deep upper cold low over East Mediterranean round the middle of the 2nd week at about 295 mb level, north of latitude 30° N.

The highest wind speeds recorded at Mersa Matruh, Helwan and Aswan were 162, 153 & 158 knots on the 12 th, 10th & 31ts respectively.

SURFACE WIND

The prevaling winds this month were generally light/moderate NWly. Winds veered to Ely and SEly far in advance of travelling secondary depressions and backed to Sly and SWly before their transits. Fresh / strong winds prevailed during and after secondary depression transits through the U.A.R, and mainly in the northern and middle parts. Calms were frequent most night and early morning intervals over most districts.

Gales were reported at- El kasr on the 31st; Ras El Teen on the 18th & 25th and at Port Said, Ghazza, Hurghada and Quseir on the 18th.

TEMPERATURE

Maximum temperature was generally subnormal with the exception of the period (29th — 31st) during which it exceeded its normal value. Its variability over the northern and middle parts of the Republic was slight during the Ist half of the month and rather large during the second half with a pronounced sharp drop round the 18th. Over the southern parts its variability was rather large in general.

The absolute maximum temperature for the Republic was 33.0 °C reported at Kom Ombo on the 31st.

Departure of minimum temperature from normal values was generally similar to departure of maximum temperature. Its variability was rather slight and round

normal over the western part of the Mediterranean coastal strip, moderate and subnormal elsewhere. As an exception minimum temperature rose rapidly above its normal between 29th & 31st and attained its higher monthly peak.

The absolute minimum temperature for the Republic was - 3.0°C reported at Dakhla on the Ist.

PRECIPITATION

This month was generally rainy over the northern parts of the Republic where a prolonged rainy period was marked between 8th and 25th. Rain decreased gradually in land and at Cairo Area it fell only on the days 8th, 14 th, 17th & 24th. The monthly rainfall exceeded its normal values over scattered localities in the northern parts. Rain was associated with scattered thunderstorms and lightning over the northern parts during the second week and on the 24th.

The absolute daily rainfall was 52.9 mms reported at Ras El Hikma on the 12th which is a record for January. The maximum monthly rainfall for the Republic was 173.9 mms reported at Sidi Barrani.

Cairo, 10-2-1970

M. F. TAHA

Under Secretary of State
Director General
Meteorological Department

TABLE A 1. — MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION.

JANUARY — 1964

STATION	Atmospheric Pressure (mbs) M.S.L		Air Temperature °C								Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evap. (mms) Mean
			Maximum		Minimum			Dry Bulb		Wet Bulb						
	Mean	D.F. Normal or Average	(A) Mean	D.F. Normal or Average	(B) Mean	D.F. Normal or Average	$\frac{A+B}{2}$	Mean	D.F. Normal or Average	Mean	D.F. Normal or Average	Mean	D.F. Normal or Average	Total Actual	Total Possible	%	
Sallum	1021.4	+3.9	17.6	—1.3	9.1	+0.2	13.4	13.1	—1.3	9.9	—0.1	64	+ 9	—	—	—	5.8
Mersa Matruh (A)	1021.8	+4.5	16.4	—1.7	8.9	+0.8	12.6	12.4	—0.4	9.4	—0.2	65	0	160.0	321.1	49.8	6.6
Alexandria (A)	1021.1	+3.6	17.9	—0.4	8.4	—0.9	13.2	12.8	—0.7	10.2	—0.6	70	— 1	161.8	322.3	50.2	3.9
Port Said (A)	1020.8	+3.4	17.2	—0.8	10.2	—1.1	13.7	13.4	—0.8	10.8	—1.0	71	— 2	181.1	322.2	56.2	5.7
El Arish	1021.2	+3.7	17.7	—1.6	7.6	—0.7	12.6	12.1	—2.0	9.7	—1.6	72	+ 2	220.7	322.4	68.8	3.3
Ghazza	1020.9	+2.5	16.3	—1.8	8.1	—1.3	12.2	12.0	—1.8	9.3	—2.0	68	— 5	190.9	321.1	59.1	3.7
Tanta	1020.8	—	18.3		6.4	—	12.4	11.6	—	9.4	—	74	—	204.3	323.4	63.1	2.8
Cairo (A)	1021.1	+3.1	17.9	—1.2	7.8	—0.8	12.8	12.7	—1.0	8.9	—1.1	57	— 2	—	—	—	7.4
Fayoum	1021.5	—	18.4	—	5.6	—	12.0	11.7	—	8.5	—	62	—	—	—	—	3.1
Minya (A)	1021.6	+3.0	18.7	—1.9	2.5	—1.5	10.6	10.2	—1.6	7.5	—0.5	66	+10	—	—	—	4.6
Assyout (A)	1021.3	+2.7	19.3	—1.5	5.8	—0.8	12.6	12.1	—1.5	7.4	—0.9	46	+ 3	—	—	—	6.8
Luxor (A)	1019.8	+2.7	21.2	—1.8	4.0	—1.4	12.6	12.5	—1.6	8.6	—0.9	56	+ 4	—	—	—	3.6
Aswan (A)	1019.5	+2.3	21.8	—2.4	6.3	—3.2	14.0	13.9	—2.2	7.7	—1.5	35	+ 1	—	—	—	11.2
Siwa	1021.8	+3.0	18.1	—1.6	4.5	+0.4	11.3	11.2	—0.6	7.3	—0.4	53	+ 1	—	—	—	5.4
Bahariya	1022.0	+3.3	18.9	—1.0	4.0	—0.7	11.4	11.6	—1.3	7.2	—1.5	48	— 4	—	—	—	4.3
Farafra	1022.6	—	18 5	—	2.3	—	10.4	9.7	—	5.6	—	48	—	—	—	—	6.2
Dakhla	1019.7	+2.0	20.2	—1.2	1.2	—3.2	10.7	10.6	—2.0	5.8	—1.3	42	+ 7	—	—	—	6.5
Kharga	1021.4	—	20.4	—	4.6	—	12.5	12.8	—	7.3	—	39	—	300.8	334.2	90.0	11.3
Tor	1019.6	+2.4	19.9	—1.4	7.9	—0.9	13.9	14.1	—1.8	9.1	—2.5	47	—11	—	—	—	5.6
Hurghada	1019.6	+3.0	19.8	—0.8	8.6	—1.0	14.2	14.3	—1.4	9.2	—1.9	47	— 7	—	—	—	12.5
Quseir	1019.1	+2.8	20.3	—2.4	12.5	—1.3	16.4	16.4	—2.4	11.2	—2.0	48	— 3	—	—	—	13.7

TABLE A2.— MAXIMUN AND MINIMUM AIR TEMPERATURES

JANUARY — 1964

Station	Maximum Temperature °C									Gras Min. Temp.		Minimum Temperature °C							
	Highest	Date	Lowest	Date	No. of Days with Max-Temp.					Mean	D. From Normal	Highest	Date	Lowest	Date	No. of Days with Min. Temp.			
					>25	>30	>35	>40	>45							<10	<5	<0	<-5
Sallum	20.3	30	11.6	19	0	0	0	0	0	9.0	—	13.6	30	7.4	6	21	0	0	0
Mersa Matruh (A)	20.8	31	11.6	18	0	0	0	0	0	—	—	13.7	30	1.4	7	22	1	0	0
Alexandria (A)	20.9	31	13.3	19	0	0	0	0	0	—	—	12.6	31	4.5	3.19	21	3	0	0
Port. Said (A)	23.4	31	11.7	18	0	0	0	0	0	9.0	—	14.6	31	6.9	20	12	0	0	0
El Arish	28.0	31	10.4	19	1	0	0	0	0	6.2	—	13.2	31	2.0	21	26	4	0	0
Ghazza	22.7	31	9.0	19	0	0	0	0	0	8.4	—	16.6	31	1.7	21	26	3	0	0
Tanta	24.3	31	12.2	18	0	0	0	0	0	—	—	11.8	31	1.6	19	28	7	0	0
Cairo (A)	28.8	31	12.0	19	2	0	0	0	0	—	—	14.5	31	3.0	19	26	5	0	0
Fayoum	26.6	30	12.8	18	1	0	0	0	0	3.3	—	13.3	31	1.4	19	29	13	0	0
Minya (A)	25.6	31	12.8	18	2	0	0	0	0	1.2	—	10.9	31	—0.6	27	30	27	2	0
Assyout (A)	32.0	31	15.3	19	2	1	0	0	0	4.4	—	12.2	31	1.0	19	30	12	0	0
Luxor (A)	32.0	31	17.4	19	2	1	0	0	0	—	—	10.8	31	0.0	21	30	20	0	0
Aswan (A)	32.6	31	18.3	20	3	2	0	0	0	—	—	12.9	31	3.3	1	29	4	0	0
Siwa	23.3	30	13.2	8	0	0	0	0	0	3.2	—	15.3	30	0.2	20.27	29	19	0	0
Bahariya	27.9	30	12.0	19	1	0	0	0	0	3.2	—	12.9	30	—1.2	19	29	20	1	0
Farafra	28.9	30	12.2	19	1	0	0	0	0	1.8	—	7.9	31	—1.9	13	31	24	4	0
Dakhla	32.1	31	15.5	19	3	2	0	0	0	—3.1	—	6.9	9	—3.0	1	31	26	12	0
Kharga	31.7	31	15.0	19	3	1	0	0	0	2.3	—	9.1	31	2.2	13	31	20	0	0
Tor	28.8	31	16.2	19	1	0	0	0	0	—	—	14.4	31	3.5	21	25	2	0	0
Hurghada	24.0	30	15.5	19	0	0	0	0	0	—	—	12.6	31	6.2	19	27	0	0	0
Quseir	25.6	3	15.2	19	1	0	0	0	0	—	—	16.0	31	9.9	25	1	0	0	0

TABLE A 3.—SKY COVER AND RAINFALL

JANURAY — 1964

Station	Mean Sky Cover Oct,					Rainfall mms.										
	00 U,T,	06 U,T,	12 U,T,	18 U,T,	Daily Mean	Total Amount	D. From Normal	Max, Fall in one day		Number of Days with Amount of Rain						
								Amount	Date	<0.1	≥0.1	>1.0	>5.0	>10	>25	>50
Sallum	4.8	4.7	6.0	4.7	4.9	67.5	+51.9	16.0	22	0	15	13	3	1	0	0
Mersa Matruh . . (A)	4.5	5.3	5.3	4.4	5.0	72.3	+45.2	20.1	9	5	17	12	5	2	0	0
Alexandria . . . . (A)	4.8	5.8	5.9	4.5	5.3	41.1	— 7.2	10.7	24	5	13	11	3	1	0	0
Port Said . . . . (A)	2.9	4.1	3.9	3.0	3.6	13.7	+ 2.5	5.3	16	5	9	5	1	0	0	0
El Arish	4.0	4.3	4.4	4.4	3.2	21.8	+ 7.3	7.0	25	1	9	7	1	0	0	0
Ghazza	4.0	4.6	4.7	3.6	4 2	106.3	+53.4	37.1	24	2	13	11	5	3	1	0
Tanta	—	2.6	3.7	1.6	—	5.6	+ 3.4	2.3	24	0	7	3	0	0	0	0
Cairo . . . . . (A)	2.4	3.5	4.2	2.6	2.4	10.4	+ 6.7	7.2	14	3	5	3	1	0	0	0
Fayoum	—	2.2	2.8	1.1	—	0.0	— 0.9	0.0	—	0	0	0	0	0	0	0
Minya . . . . . (A)	1.6	1.5	2.9	1.0	1.8	Trace	— 0.5	Trace	31	1	0	0	0	0	0	0
Assyout . . . . . (A)	0.6	1.6	1.6	0.8	1.1	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Luxor . . . . . (A)	0.6	1.3	1.4	1.0	1.0	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Aswan . . . . . (A)	0.4	1.3	1.5	1.1	1.0	0.0	— 0.1	0.0	—	0	0	0	0	0	0	0
Siwa	1.6	2.7	3.9	2.5	2.6	Trace	— 0.7	Trace	13,29,30	3	0	0	0	0	0	0
Bahariya	1.7	1.9	3.2	1.4	2.0	Trace	— 1.2	Trace	8	1	0	0	0	0	0	0
Farafra	0.8	1.7	2.3	1.5	1.3	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Dakhla	0.6	1.4	1.6	0.7	1.0	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Kharga	—	1.6	1.9	0.7	—	0.0	— 0.1	0.0	—	0	0	0	0	0	0	0
Tor	0.5	1.6	1.9	1.2	1.3	0.0	— 1.3	0.0	—	0	0	0	0	0	0	0
Hurghada	1.0	1.8	2.3	1.6	1.7	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Quseir	0.9	2.1	2.2	0.9	1.5	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0

TABLE A 4. — DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

JANUARY 1964

Station	Precipitation				Frost	Thunderstorm	Mist Vis ≥1000 metres	Fog Vis <1000 Metres	Haze Vis ≥1000 Metres	Thick Haze Vis <1000 Metres	Dust or Sandstorming Vis ≥1000 Metres	Dust or Sandstorm Vis <1000 Metres	Gale	Clear Sky	Cloudy Sky
	Rain	Snow	Ice, Pellets	Hail											
Sallum	15	0	0	0	—	0	0	0	0	0	2	1	0	3	10
Mersa Matruh (A)	18	0	0	0	—	2	0	0	0	0	4	2	0	0	9
Alexandria (A)	16	0	0	0	—	1	4	1	2	0	0	0	0	0	9
Port Said (A)	9	0	0	0	—	0	0	0	1	0	3	0	1	7	2
El Arish	9	0	0	0	—	0	3	0	3	0	4	0	0	8	6
Ghazza	15	0	0	1	—	1	0	0	0	0	0	0	1	7	11
Tanta	7	0	0	0	—	0	0	0	0	0	0	0	0	—	—
Cairo (A)	5	0	0	0	—	0	6	1	18	0	2	0	0	11	3
Fayoum	0	0	0	0	—	0	0	0	0	0	0	0	0	—	—
Minya (A)	0	0	0	0	—	0	22	1	12	0	0	0	0	19	1
Assyout (A)	0	0	0	0	—	0	0	0	8	0	1	0	0	24	0
Luxor (A)	0	0	0	0	—	0	0	0	4	0	4	0	0	26	0
Aswan (A)	0	0	0	0	—	0	0	0	0	0	2	0	0	25	0
Siwa	0	0	0	0	—	0	0	0	0	0	1	0	0	13	2
Bahariya	0	0	0	0	—	0	0	0	0	0	1	0	0	19	1
Farafra	0	0	0	0	—	0	0	0	0	0	0	0	0	—	—
Dakhla	0	0	0	0	—	0	0	0	0	0	1	0	0	24	0
Kharga	0	0	0	0	—	0	0	0	0	0	4	1	0	27	0
Tor	0	0	0	0	—	0	0	0	0	0	3	0	0	25	0
Hurghada	0	0	0	0	—	0	0	0	0	0	1	1	1	21	0
Quseir	0	0	0	0	—	0	0	0	0	0	2	2	1	22	2

TABLE A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

JANUARY.—1964

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Mersa Matruh . . (A)	1	0	1	1-10	28	45	11	11	19	24	41	48	73	67	29	32	428
				11-27	42	45	6	0	5	10	14	10	45	75	31	27	310
				28-47	0	2	0	0	0	1	1	0	0	0	0	0	4
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	70	92	17	11	24	35	56	58	118	142	60	59	742
Alexandria. . . . . (A)	41	0	0	1-10	5	19	29	48	61	65	36	72	52	27	35	94	543
				11-27	3	3	1	9	7	0	0	0	28	24	8	70	160
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	8	22	30	57	68	65	36	72	80	51	43	164	703
Port Said. . . . . (A)	0	2	3	1-10	12	14	34	30	24	41	41	31	73	82	21	41	404
				11-27	5	15	25	42	9	10	10	13	55	60	12	31	287
				28-47	0	0	0	0	0	0	0	0	0	0	0	8	8
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	17	29	59	72	33	51	51	44	128	142	33	80	739
El Arish	5	0	0	1-10	10	28	22	29	74	153	59	72	122	42	29	34	674
				11-27	0	4	0	5	3	1	1	0	9	23	11	8	65
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	10	32	22	34	77	154	60	72	131	65	40	42	739
Ghazza.	0	0	0	1-10	0	15	27	55	89	153	57	22	21	9	6	95	549
				11-27	0	0	1	4	13	66	12	16	39	10	7	21	189
				28 47	0	0	0	0	0	0	0	0	0	0	6	0	6
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All spees	0	15	28	59	102	219	69	38	60	19	19	116	744
Tanta	116	0	0	1-10	22	41	48	38	45	13	15	55	131	53	63	92	606
				11-27	0	0	0	1	0	0	0	0	3	6	1	11	22
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	22	41	48	39	45	13	15	55	134	59	64	93	628
Cairo. . . . . (A)	34	0	238	1-10	3	30	53	5	22	24	6	66	24	34	28	54	349
				11-27	1	8	24	1	4	26	6	9	13	6	11	14	123
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	4	38	77	6	26	50	12	75	37	40	39	68	472

TABLE A 5 (*contd.*)—NUMBER IN HOURS OF CCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

JANUARY—1964

Station	calm (hours)	variable (hours)	unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of direction indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	156 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Fayoum	127	0	0	1–10	31	54	16	0	7	73	16	66	37	64	54	183	601
				11–27	1	6	0	0	0	0	0	0	0	0	0	9	16
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	32	60	16	0	7	73	16	66	37	64	54	192	617
Minya . . . . . (A)	70	0	0	1–10	38	63	12	0	16	87	20	11	7	25	38	268	585
				11–27	11	41	1	0	0	4	0	0	0	2	1	29	89
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	49	104	13	0	16	91	20	11	7	27	39	297	674
Luxor . . . . . (A)	33	0	2	1–10	8	87	72	1	24	108	25	63	41	25	41	180	675
				11–27	0	1	0	0	0	4	1	0	1	0	1	26	34
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	8	88	72	1	24	112	26	63	42	25	42	206	709
Aswan . . . . . (A)	2	0	10	1–10	114	183	26	0	3	7	4	4	0	4	13	169	527
				11–27	38	54	1	0	2	0	0	0	0	0	12	98	205
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	152	237	27	0	5	7	4	4	0	4	25	267	732
Siwa.	163	0	0	1–10	4	15	35	31	64	41	18	17	39	126	68	56	514
				11–27	0	2	9	1	12	6	3	2	10	13	7	2	67
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	4	17	44	32	76	47	21	19	49	139	75	58	581
Dakhla.	40	0	0	1–10	25	84	65	2	28	38	7	28	30	90	114	184	695
				11–27	0	2	0	0	0	0	0	0	1	1	3	2	9
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	25	86	65	2	28	38	7	28	31	91	117	186	704
Hurghada.	6	0	0	1–10	30	18	2	1	10	8	2	2	16	113	42	34	278
				11–27	43	0	0	0	5	2	0	0	0	170	114	114	448
				28–47	0	0	0	0	0	0	0	0	0	0	7	5	12
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	73	18	2	1	15	10	2	2	16	283	163	153	738
Quseir.	0	0	0	1–10	118	23	2	0	3	4	2	0	6	215	71	31	475
				11–27	22	0	0	0	0	0	0	0	22	26	105	91	266
				28–47	0	0	0	0	0	0	0	0	0	0	0	3	3
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	140	23	2	0	3	4	2	0	28	241	176	125	744

TABLE B 1.—UPPER AIR CLIMATOLOGICAL DATA

JANUARY—1964

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 0000 UT			*	*	*						
	Surface	31	1018m.b.	1026m.b.	1006m.b.	31	11.4	15.0	7.7	31	7.0
	1000	31	194	260	96	31	11.3	15.6	7.1	31	6.5
	850	31	1533	1593	1496	31	2.8	15.6	— 3.8	30	— 1.9
	700	31	3084	3130	3025	31	— 4.9	2.1	—11.3	24	—11.0
	600	31	4280	4348	4197	31	— 12.5	— 6.6	—18 1	19	—21.6
	500	31	5648	5748	5539	31	—21.6	—16.9	—28.4	18	—26.2
	400	31	7249	7388	7111	31	—32.9	—27.9	—39.7	10	—36.3
	300	31	9224	9379	9030	31	—45.2	—39.0	—52.0	—	—
	200	29	11954	11980	11660	29	—56.9	—48 9	—63.6	—	—
	150	29	13683	13797	13492	29	—59.3	—55.5	—65.6	—	—
	100	23	16195	16292	16102	23	—64.8	—59.0	—70 5	—	—
	70	7	18357	18460	18300	7	—64.8	— 62.0	—67.2	—	—
	50	6	20412	20505	20354	6	—63.8	—59.4	—65.9	—	—
	30	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 UT			*	*	*						
	Surface	29	1004m.b.	1011m.b.	995m.b.	29	9.3	15.2	4.6	29	2.6
	1000	29	176	230	100	25	9.6	15.4	6.8	25	2.4
	850	29	1518	1559	1461	29	3.7	17.6	— 2.7	29	— 2.6
	700	29	3078	3146	3026	29	— 2.8	5.8	— 9.3	19	—13.1
	600	29	4290	4559	4201	29	—10 2	— 4.7	—17.5	8	—16.1
	500	29	5666	5775	5554	29	—18.6	—14.2	—25 0	7	—23 9
	400	29	7290	7417	7162	29	—30 1	—25 7	—38.3	7	—32 2
	300	29	9280	9425	9120	29	—43.5	—37 0	—48.3	—	—
	200	29	11933	12044	11743	29	—54.0	—46 9	—59.8	—	—
	150	28	13753	13847	13616	28	—59.7	—55.1	—65 2	—	—
	100	26	16247	16363	16146	26	—66.2	—61.0	—70.3	—	—
	70	23	18291	18490	18210	23	—65.5	—61.0	—71.3	—	—
	50	18	20466	20577	20330	18	—62.2	—59.6	—65 8	—	—
	30	7	23666	23836	23436	7	—55.0	— 48.7	—67.8	—	—
	20	6	26353	26521	26249	6	—46.5	—41.4	—50.8	—	—
	10	2	31092	31237	30948	2	—41.8	—39.8	—43.9	—	—
Aswan. 0000 UT			*	*	*						
	Surface	31	996m.b.	1000m.b.	988m.b.	31	9.3	19.0	6.5	31	-1.2
	1000	—	—	—	—	—	—	—	—	—	—
	850	31	1499	1527	1438	31	7.3	18.2	1.7	17	— 6.4
	700	31	3082	3146	3007	31	2.1	9.2	— 3.0	4	—13.6
	600	31	4312	4400	4225	31	— 4.8	1.5	— 9.4	7	—10.9
	500	31	5754	5824	5624	31	—13.4	— 8.2	—17.7	4	—20.1
	400	31	7387	7526	7291	31	—25.1	—18.4	—30.8	8	—35.7
	300	31	9420	9631	9289	31	— 39.1	—29.4	—45.4	3	—42.9
	200	31	12102	12416	11927	31	—55.0	—48.3	—60.6	—	—
	150	30	13995	14255	13694	30	—64.1	—52.9	—69.3	—	—
	100	25	16333	16749	16030	25	—75.4	—67.5	—81.4	—	—
	70	10	18399	18540	18260	10	—72.5	—67.6	—78.7	—	—
	50	10	20384	20517	20277	10	—65.4	—59.0	—70.8	—	—
	30	3	23498	23533	23474	3	— 60.4	—56.9	—67.2	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

TABLE B 1 (*contd.*).—UPPER AIR CLIMATOLOGICAL DATA

JANUARY—1964

Station	Pressure Surface Millibar	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 1200 U.T.	Surface	31	* 1017m.b.	* 1025m.b.	* 1005m.b.	31	15.4	18.6	9.8	31	8.1
	1000	31	189	254	88	31	14.0	19.3	8.2	31	6.9
	850	31	1536	1586	1449	31	3.4	14.1	— 4.1	31	— 2.3
	700	31	3085	3142	3020	31	— 3.7	2.5	—11.0	31	—11.4
	600	31	4285	4364	4195	31	—11.5	— 6.5	—18.1	18	—19.1
	500	31	5655	5766	5535	31	—21.3	—15.2	—27.5	10	—25.3
	400	31	7264	7411	7105	31	—31.9	—27.8	—39.0	8	—36.2
	300	31	9247	9383	9041	31	—44.9	—40.9	—49.3	—	—
	200	30	11794	12004	11712	30	—54.5	—49.1	—62.7	—	—
	150	28	13716	13829	13562	28	—57.4	—50.7	—63.4	—	—
	100	27	16239	16304	16103	27	—63.7	—59.3	—66.6	—	—
	70	17	18416	18490	18300	17	—63.8	—60.2	—67.8	—	—
	50	10	20517	20585	20405	10	—61.7	—55.5	—67.2	—	—
	30	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 1200 U.T.	Surface	31	* 1003m.b.	* 1011m.b.	* 991m.b.	31	16.7	28.0	10.4	31	3.4
	1000	31	171	232	68	26	15.4	21.8	9.6	26	3.2
	850	31	1520	1559	1452	31	3.9	17.9	— 4.0	31	— 4.5
	700	31	3077	3141	3011	31	— 3.1	4.0	— 9.3	17	—12.7
	600	31	4282	4377	4203	31	— 9.7	— 5.0	—15.1	9	—19.1
	500	31	5666	5785	5564	31	—18.8	—13.0	—24.6	10	—25.2
	400	31	7294	7437	7157	31	—29.8	—25.6	—37.5	8	—35.1
	300	31	9290	9448	9128	31	—42.7	—39.3	—49.2	—	—
	200	30	11949	12068	11813	30	—53.8	—48.2	—58.8	—	—
	150	30	13775	13888	13626	30	— 59.0	—53.6	—67.5	—	—
	100	28	16280	16432	16084	28	—65.5	—59.5	—70.3	—	—
	70	25	18439	18570	18240	25	—64.6	—60.7	—68.2	—	—
	50	19	20512	20600	20283	19	—61.6	—56.3	—66.5	—	—
	30	14	23767	23964	23579	14	—54.4	—48.6	—66.1	—	—
	20	7	26385	26560	26053	7	—49.7	—42.0	—64.3	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan 1200 U.T.	Surface	31	* 995m.b.	* 999m.b.	* 987m.b.	31	21.2	31.0	17.2	31	3.3
	1000	—	—	—	—	—	—	—	—	—	—
	850	31	1519	1555	1463	31	10.3	16.8	3.9	17	— 8.1
	700	31	3119	3191	3051	31	5.1	11.6	— 3.2	5	— 5.9
	600	31	4360	4462	4282	31	— 2.0	5.9	— 7.0	—	—
	500	31	5784	5930	5626	31	—11.2	— 1.2	—16.5	5	—13.8
	400	31	7464	7667	7305	31	—22.2	—13.4	—26.4	2	—31.8
	300	31	9521	9758	9358	31	—36.9	—27.5	—42.0	3	—20.0
	200	29	12227	12608	12047	29	—53.2	—41.5	—60.3	—	—
	150	28	14076	14520	13846	28	—62.9	—50.9	—68.7	—	—
	100	24	16459	16768	16280	24	—70.5	—67.3	—81.2	—	—
	70	11	18554	18700	18390	11	—70.8	—68.1	—76.3	—	—
	50	6	20570	20701	20430	6	—63.8	—61.1	—66.2	—	—
	30	2	23790	23903	23677	2	—53.6	—51.1	—56.0	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—		—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

TABLE B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE ; THE HIGHEST WIND SPEED IN THE UPPER AIR

JANUARY—1964

	Station	Freezing Level									First Tropopause									Highest wind speed			
		Mean			Highest			Lowest			Mean			Highest			Lowest						
		Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew Point (°C)	Altitude (g pm)	Pressure (mb.)	Dew Point (°C)	Altitude (gpm)	pressure (mb.)	Temperature (°C)	Altitude (g pm)	Pressure (mb.)	Temperature (°C)	Altitude (g pm)	Pressure (mb.)	Temperature (°C)	Altitude (g pm)	Pressure (mb.)	Direction (000—360)°	Speed in Knots
0000 U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	M. Matruh .	2035 (31)	801 (31)	-4.2 (30)	3370	678	-3.0	1060	904	-4.3	10806 (25)	241 (25)	-54.8 (25)	13940	145	-64.3	8170	345	-42.0	15500	110	260	137
	Helwan . . .	2271 (29)	777 (29)	-6.4 (25)	3800	644	-11.8	1130	897	-4.4	12008 (27)	207 (27)	-58.4 (27)	15780	108	-68.4	7680	370	-41.4	9900	268	270	153
	Aswan . . .	3449 (31)	671 (31)	-14.2 (7)	4600	583	-8.6	1900	805	-14.7	14453 (21)	149 (21)	-66.7 (21)	16466	100	-74.1	11730	208	-57.0	13300	168	240	156
1200 U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	M. Matruh. .	2096 (31)	763 (31)	-1.0 (31)	3430	674	-6.9	1450	862	-2.6	10380 (28)	244 (28)	-54.4 (28)	12470	182	-57.3	8270	339	-48.2	9900	272	250	162
	Helwan . . .	2181 (31)	784 (31)	-8.0 (31)	3700	653	-10.2	1100	896	-5.3	11778 (30)	210 (30)	-56.2 (30)	16342	100	-67.5	9050	305	-45.1	9100	308	240	152
	Aswan . . .	3099 (31)	626 (31)	-14.6 (5)	5540	526	—	2680	735	-13.2	13641 (17)	133 (17)	-64.8 (17)	16552	100	-72.8	11350	212	-51.7	13890	168	260	158

N = The number of cases the element has been observed during the month.

TABLE B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

MERSA MATRUH (A)—JANUARY 1964

Time	Pressure Surface Millibar	Wind between ranges of direction (000–360)°																						Number of calm wind	Total number of observations (TN)	Mean scalar wind speed (knots)
		345/014		015/044		075/074		075/104		105/134		135/164		165/194		195/224		225/254		255/284		285/314		315/344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	1	15	4	14	0	—	0	—	2	7	2	5	1	28	4	7	6	9	7	11	1	9	3	10	0	31	10
	1000	1	13	4	13	0	—	0	—	2	7	2	5	1	28	4	7	6	10	6	12	1	9	4	10	0	31	10
	850	3	12	3	17	0	—	0	—	0	—	1	3	2	12	2	24	5	9	3	15	7	13	4	18	1	31	13
	700	1	4	0	—	0	—	0	—	0	—	0	—	2	8	2	38	3	30	12	26	5	19	4	17	2	31	21
	600	2	4	0	—	0	—	0	—	0	—	0	—	0	—	3	54	5	23	13	34	6	28	2	22	0	31	31
	500	1	11	0	—	0	—	1	15	0	—	0	—	0	—	1	32	4	45	16	47	5	42	1	6	0	29	41
	400	1	10	0	—	0	—	0	—	0	—	1	12	1	65	0	—	3	41	18	54	2	53	0	—	0	26	49
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	62	10	54	1	36	0	—	0	15	55
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	58	7	86	0	—	0	—	0	8	82
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	89	0	—	0	—	0	4	89
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	4	11	2	10	1	2	2	12	2	6	1	20	1	1	3	10	3	10	5	19	2	17	5	9	0	31	11
	1000	4	11	2	10	0	—	2	12	2	6	2	14	1	1	3	10	3	10	5	19	2	17	5	9	0	31	12
	850	5	17	1	10	1	10	0	—	1	5	1	8	1	15	5	18	1	28	6	18	5	15	4	8	0	31	15
	700	1	12	0	—	0	—	1	8	0	—	0	—	1	21	1	11	6	28	6	27	10	17	4	25	0	30	22
	600	0	—	0	—	1	4	0	—	0	—	1	2	0	—	2	36	6	33	13	39	6	31	1	9	0	30	32
	500	1	8	0	—	0	—	0	—	0	—	0	—	0	—	2	19	4	42	13	54	7	39	2	12	0	29	42
	400	0	—	0	—	1	19	0	—	0	—	0	—	0	—	1	34	5	56	13	58	5	69	0	—	0	25	57
	300	0	—	1	18	0	—	0	—	0	—	0	—	0	—	0	—	4	77	9	65	1	114	0	—	0	15	68
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	64	4	66	0	—	0	—	0	7	65
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	97	2	61	0	—	0	—	0	3	73
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	40	0	—	0	—	0	2	40
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = The total number sf cases the wind has been obeserved for all directions during the month.

TABLE B 3 *(contd.)*—**NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.**

HELWAN—JANUARY 1964

Time	Pressure Surface (Millibar.)	Wind between ranges of direction (000—360)°																						Number of Calm winds	Total Number of Observations (TN)	Mean Scalar wind Speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	3	9	5	8	4	14	1	8	1	7	0	—	1	5	0	—	0	—	0	—	1	15	2	8	11	29	6
	1000	4	10	4	8	5	13	1	2	0	—	0	—	1	5	0	—	0	—	0	—	1	5	3	7	6	25	7
	850	8	15	4	11	2	18	0	—	0	—	0	—	1	10	3	17	0	—	5	13	3	13	3	10	0	29	13
	700	1	14	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	29	7	19	13	22	5	29	0	29	23
	600	1	21	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	34	12	32	11	40	1	46	0	29	35
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	52	17	49	9	58	1	27	0	29	52
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	80	21	77	6	62	0	—	0	28	74
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	126	0	—	12	101	5	69	0	—	0	18	94
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	94	0	—	0	—	0	4	94
	150	—	—	0	—	0	—	0	—	0	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	5	9	0	—	4	12	1	13	0	—	0	—	3	15	2	6	0	—	4	6	3	7	5	10	4	31	8
	1000	2	10	2	12	3	17	1	13	0	—	0	—	0	—	3	6	1	4	4	6	4	8	5	8	1	26	9
	850	6	12	4	14	1	6	1	19	0	—	0	—	2	34	1	8	2	9	4	14	7	12	3	21	0	31	15
	700	2	22	0	—	0	—	0	—	0	—	0	—	1	17	4	33	1	16	5	27	12	20	6	21	0	31	23
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	80	5	29	11	29	12	39	2	27	0	31	35
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	15	4	40	14	51	10	49	1	40	0	30	47
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	62	17	78	8	64	0	—	0	29	72
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	60	11	83	4	76	0	—	0	16	80
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	93	2	98	0	—	0	6	94
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	83	1	98	0	—	0	2	90
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for *all* directions during the month.

TABLE B 3 (*contd.*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A)—JANUARY 1964

Time	Pressure Surface (Millibar)	Wint between ranges of direction (000—360)																								Number of calm winds	Total number of observations (T N)	Mean Scalar wind Speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	22	13	4	14	2	10	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	14	2	31	12
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	5	12	6	8	1	7	1	18	1	12	1	3	0	—	1	14	2	8	2	11	4	12	7	12	0	31	11
	700	4	22	1	8	0	—	0	—	0	—	0	—	0	—	0	—	2	32	13	31	9	28	2	16	0	31	27
	600	1	13	0	—	0	—	0	—	0	—	0	—	0	—	1	20	4	56	18	38	5	39	2	41	0	31	40
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	52	18	50	8	47	0	—	0	28	49
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	60	21	65	2	35	0	—	0	27	62
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	84	18	68	1	36	0	—	0	21	68
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	102	5	98	1	88	0	—	0	7	98
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	146	2	98	0	—	0	—	0	3	114
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	71	0	—	0	—	0	2	71
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	21	12	1	10	0	—	2	12	0	—	0	—	0	—	0	—	0	—	3	8	1	20	1	8	2	31	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	10	14	3	12	1	2	1	11	2	10	0	—	1	11	0	—	1	12	3	12	3	15	6	14	0	31	13
	700	1	82	0	—	0	—	0	—	0	—	0	—	0	—	2	45	3	22	12	25	9	25	4	21	0	31	27
	600	1	30	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	34	15	38	10	35	1	34	0	30	36
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	40	5	42	16	58	7	49	1	45	0	30	52
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	66	21	64	2	65	0	—	0	29	65
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	74	17	68	1	78	0	—	0	19	69
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	96	4	106	0	—	0	—	0	5	104
	150	0	—	9	—	0	—	0	—	0	—	0	—	0	—	0	—	1	100	2	96	0	—	0	—	0	3	97
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	700	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N — The number of cases the element has been observed during the month.

REVIEW OF AGRO-METEOROLOGICAL STATION AT EL KASR

JANUARY 1964

Compared with the normal values of air temperature, relative humidity and Piche evaporation in the screen and also rainfall, the month was mild, rather humid and wet. It was characterized by successive cold waves in the first four weeks, during which the maximum air temperature was below normal in most of the days and a pronounced warm spell towards the end of the month .

The second cold wave in the month started on the 6th and gave the absolute minimum air temperature 1.4 °C (7.1 °C below normal) on the 7th when the range of variation of air temperature was maximum (15 °C) Also the lowest value of Piche evaporation was associated with this cold wave and occurred on the 9 th.

A remarkable cold wave continued for 10 days starting on the 18th, when the peak was experienced and gave the lowest maximum for the month 11.6 °C (6.1 °C below normal).

The warm spell began on the 29th, giving the highest minimum air temperature on the 30 th., 13.7 °C (4.7 °C above normal) and the absolute maximum temperature 20.8 °C (3.1 °C above normal) on the 31st, on which the maximum Piche evaporation was experienced, 15.7 mms. (9.3 mms above normal).

For the month as a whole, the mean air temperature, the relative humidity and the total amount of rainfall were all above normal by 0.3 °C, 11% and 21.4 mms respectively while the mean Piche evaporation was 1.0 mm. below normal.

REVIEW OF AGRO-METEOROLOGICAL STATION AT TAHRIR

JANUARY 1964

With respect to air temperature and relative humidity, this month was slightly colder and drier than January of the last year, although it was characterized by frequent rainy days and high percentage of cloud cover.

This month was distinguished by a remarkable cold wave starting on the 18th and lasting for a week. On that day a pronounced cold front passed Badre Centre in the early morning, when the lowest maximum temperature for the month occurred (12.6 °C), being 8.2 °C lower than that of the preceding day. It was surprising to find that the day time mean temperature of the 18th was lower than the night time mean temperature by 2.5°C. The absolute minimum air temperature and the lowest value of vapour pressure were recorded on the following day whereas the absolute minimum air emperature at 5 cms. above the dry soil happened on the 21st.

A warm spell prevailed towards the end of the month, giving the absolute maximum air temperature on the 31 st. and the lowest relative humidity on the 30th as well as the highest evaporation for one day.

The maximum soil temperatures for the dry field at the different depths were lower than those of January 1963, by varying amounts less than 5.8 °C, while the minimum soil temperatures were higher down to 5 cms. depth by less than 1.0°C, and lower for further depths by 1.4–0.9 °C.

The air temperature at 5 cms. above dry soil did not fall below 0.6 °C and it was above the freezing point for the whole month, whereas it reached –2.3 °C last year.

At 2 metres above ground level, the mean air temperature of the day, night time mean, day time mean and the mean relative humidity of the day were all lower than January 1963 by 1.6, 1.3 , 2.2 °C and 4% respectively; for the same level, the means of surface wind speed were also lower by 0.2 m/sec.

The actual duration of bright sunshine was about 65 % of the total possible duration, being less by 38.4 hours than last year.

Due to lower temperature and wind speed, the Piche and pan class A evaporations were lower than the values of 1963 by 2.3 and 1.62 mms. respectively.

Compared with traces of rain for January 1963, the total amount of rainfall was 9.0 mms, with the maximum in one day being 4.8 mms.

REVIEW OF AGRO-METEOROLOGICAL STATION AT GIZA

JANUARY 1964

Compared with the normal values for January of Giza, this month was slightly cooler and drier.

It was distinguished with a prolonged remarkable cold wave prevailing during the period from the 18 th. to the 28 th. with the peak on the 19 th. when the lowest maximum temperature 12.1 °C (8°C below normal) and the absolute minimum temperature 1.0° C (5.3° C below normal) were recorded. On the same day the absolute minimum for air temperature at 5 cms. above dry and wet soils were also observed as well as the absolute minimum for soil temperatures in the dry field at depths 2 and 5 cms. The effect of the cooling was noticed in soil temperatures in the wet and grass fields during the following three days when the absolute minimum of soil temperatures to depths down to 20 cms. were also recorded. Moreover the minimum air temperature at 5 cms. above grass field fell to below the freezing point on 6 days during this cold wave namely the 19th, 21st, 22nd,. 23rd., 24th. and 27th. On the 1st day of this cold wave, the smallest range of temperature as measured by the difference between the readings of the maximum and minimum thermometers in the screen was also observed.

A pronounced warm spell started on the 29th with the peak on the last day of the month giving the absolute maximum air temperature 28.2° C (7.7° C above normal) and also the highest minimum air temperature 15.4° C (9.5° C above normal). The effect of that warm spell extended to soil temperatures on the same day when the absolute maxima in the dry field took place at the depths 5, 10 & 20 cms; for the wet field at the depths 10& 20 cms; as well as the grass field for the depths 0.3, 2, 5 & 10 cms. Also the lowest relative humidity and maximum Piche evaporation in one day were associated with this warm spell and happened on the 30 th. being 26 % (48% below normal) and 9.2 mms. (5.9 mms, above normal) respectively.

Minor cold waves prevailed during the 1st half of the month. The means of air temperature, relative humidity and vapour pressure of the day were slightly below normal with amounts 0.8 °C, 2% and 0.8 mms. respectively.

The absolute minimum of air temperature at 5 cms. above the dry, wet and grass soils were generally higher than those of January 1963 by amounts 2.3, 1.8 & 2.5 °C respectively.

The means of the surface wind speed at 2 metres for the day, night time and day time were all higher than those of last year by 0.3, 0.4 and 0.1 m/ sec. respectively.

The extreme maximum soil temperatures at different depths were generally lower than those of January 1963 by variable amounts less than 2.7°C, wherease the extreme minima of soil temperatures were generally higher by variable amounts less than 2.6 °C.

The total actual duration of bright sunshine was 69% of the total possible duration or 32 hours less than those of last year. Also the mean Piche evaporation of the day, mean Pan class A evaporation, total potential evaporation and the total potential evapo-transpiration for grass were all lower than those of last year by 1.6, 0.53, 8.3 & 7.8 mms. respectively, although the mean Piche evaporation for the day was higher than normal by 2.9 mms.

REVIEW OF AGRO-METEOROLOGICAL STATION AT KHARGA

JANUARY 1964

This month was slightly colder and drier as compared with the normal values of air temperature and relative humidity at 2 metres above ground level in the screen at Kharga Qasis during January. It was also distinguished by lower values of maximum and minimum air temperature during most of the first four weeks which were subject to a series of minor cold waves as well as an intense warm spell towards the end of the month.

During the first cold wave the sunshine duration and the wind speeds at 50, 100 and 200 cms. above ground level were minimum on the 2nd and also the evaporation from Piche in the screen, 6.5 mms. (3.5 mms. below normal) and in the free air at heights 120, 60 and 1 cms above ground level. The lowest value of evaporation from Pan class A occurred on the 9th. associated with the 2nd. cold wave during which the absolute minimum air temperature happened on the 13th, 2.2 °C (4.0 °C below normal) and also the soil temperature at 1 and 2 cms. on the 16th.

The more pronounced cold wave started on the 18th with the peak on the 19 th. when the lowest maximum air temperature was observed., 15.0 °C (7.2 °C below normal). The lowest value of vapour pressure was noticed on the following day, whereas the absolute minimum air temperature at 5 cms. above dry soil and those at depths 3, 5, 10 and 20 cms were all recorded on the 21st.

The remarkable warm spell started on the 29th. with the peak on the last day of the month giving the absolute maximum air temperature 31.7 °C (8.6 °C above normal) and also the highest minimum air temperature in the screen, 9.1 °C (2.6 °C above normal) and at height 5 cms. above dry soil. On the same day the highest value of evaporation from Piche in the screen 23.5 mms. (14.0 mms. above normal) and in the free air at levels 120, 60 and 1 cms. above ground level were recorded as well as the maximum soil temperatures in the dry field down to 20 cms. depth and the lowest minimum soil temperatures at depths 200 and 300 cms.

The means of the maximum air temperature in the screen, the minimum and the mean of the day were all lower than the normal by 1.7, 1.4 and 0.4 °C respectively.

The mean relative humidity in the screen was 49 % (9% below normal) whereas the Piche evaporation in the screen was 11.3 mms. (1.8 mms. above normal).

The sunshine duration during the month was 300.8 hours which is 90.1 % from the possible duration.

TABLE C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

JANUARY—1964

STATION	Air Temperature (°C)					Mean Duration in hours of daily air temperature above the following values.										
	Mean Max.	Mean Min.	Mean of the day	Night time mean	Day time mean	-5°C	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C
El Kasr	17.1	8.6	12.7	11.3	14.6	24.0	24.0	23.7	17.8	5.3	0.1	0.0	0.0	0.0	0.0	0.0
Tahrir	18.9	6.9	12.1	10.3	14.5	24.0	24.0	23.5	15.5	6.2	0.7	0.0	0.0	0.0	0.0	0.0
Giza	18.9	5.8	11.8	9.1	14.4	24.0	24.0	22.8	15.0	6.2	0.6	0.1	0.0	0.0	0.0	0.0
Kharga	20.4	4.6	12.7	10.1	15.8	24.0	24.0	22.9	15.7	8.6	1.4	0.4	0.1	0.0	0.0	0.0

BLE C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS.

JANUARY—1964

STATION	Max. Temp. at 2 metres (°C)				Min. Temp. at 2 metres (°C)				Min. Temp. at 5 cms. above (°C)			
	Highest		Lowest		Highest		Lowest		Dry soil		Grass	
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date
El Kasr	21.6	5	11.8	18	13.3	30	2.7	7	—	—	—	—
Tahrir	24.9	31	12.6	18	12.4	31	2.8	19	+0.6	21	—	—
Giza	28.2	31	12.2	18	13.1	31	1.0	19	—2.1	19.21	-3.4	23
Kharga	31.7	31	15.0	19	9.1	31	2.2	13	0.0	21	—	—

BLE C 3.—(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL.

JANUARY—1964

	(Solar+Sky) Radiation gm. cal/cm²	Duration of Bright Sunshine (hours)			Relative Humidity. %					Vapour pressure (mms)						Evaporation(mms)		Rainfall (mms)		
		Total Actual monthly	Total Possible monthly	%	Duration in hours > 90%	Duration in hours > 80%	Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 UT	Highest	Date	Lowest	Date	Piche	Pan class A	Total Amount Monthly	Max. Fall in one day	Date
ser	203.2	—	321.0	—	—	—	74	59	31	31	7.8	8.0	11.2	13	4.1	7	—	3.88	62.4	16.5	12
	281.4	207.8	322.7	64	4.0	9.0	71	47	23	30	7.3	6.9	10.7	16	4.1	19	6.7	3.39	9.0	4.8	4
	278.7	222.1	323.7	69	3.6	7.7	69	46	26	30	6.9	6.9	11.0	31	3.8	19	6.2	3.07	3.3	1.4	17
a	342.8	300.8	333.8	90	0.0	0.1	49	33	18	29	5.1	6.4	10.3	20	3.6	20	13.8	6.21	0.0	0.0	—

TABLE C 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS IN DIFFERENT FIELDS

JANUARY—1964

STATION	Highest (H) Lowest (L)	Extreme soil temperature (°C) in dry field at different depths (cms.)										Extreme soil temperature (°C) in grass field at different depths (cms.)								
		0.3	1	2	5	10	20	50	100	200	300	0.3	1	2	5	10	20	50	100	200
El Kasr. . . .	H	28.8	24.8	23.8	21.8	18.4	16.4	17.6	19.2	21.0	—	—	—	—	—	—	—	—	—	—
	L	1.0	2.1	2.7	4.8	7.9	10.0	13.5	16.1	19.3	—	—	—	—	—	—	—	—	—	—
Tahrir	H	28.2	27.3	24.9	23.0	21.2	18.4	17.2	19.7	22.4	24.0	—	—	—	—	—	—	—	—	—
	L	1.9	1.8	2.2	4.3	6.1	10.0	13.7	17.0	20.0	21.9	—	—	—	—	—	—	—	—	—
Giza	H	37.0	33.3	32.0	22.2	19.6	18.3	19.9	22.6	25.6	26.4	17.4	17.3	16.8	15.6	15.0	14.7	16.7	18.7	21.8
	L	-0.3	1.0	1.8	6.2	10.9	14.6	17.2	20.0	23.3	25.2	6.3	7.0	7.4	8.8	10.4	12.0	14.4	16.4	20.1
Kharga. . . .	H	—	31.1	29.8	26.9	22.3	19.8	20.9	24.2	26.7	27.9	—	—	—	—	—	—	—	—	—
	L	—	6.7	6.7	4.7	11.0	14.5	18.1	21.1	24.8	26.7	—	—	—	—	—	—	—	—	—

TABLE C 5.—SURFACE WIND

JANUARY—1964

STATION	Wind Speed m/sec at 2 metres			Days with surface wind speed at 10 metres.							Max. Gust (knot at 10 metres	
	Mean of the day	Night time mean	Day time Mean	≥10 knots	≥15 knots	≥20 knots	≥25 knots	≥30 knots	≥35 knots	≥40 knots	value	Dat
El Kasr. . .	4.2	3.8	4.7	—	—	—	—	—	—	—	—	—
Tahrir. . . .	2.6	2.0	3.5	23	11	5	1	0	0	0	39	31
Giza	2.0	1.4	2.8	26	12	3	0	0	0	0	32	31
Kharga. . . .	3.2	2.3	4.1	—	—	—	—	—	—	—	—	—

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UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7 NUMBER 2

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MINISTRY OF SCIENTIFIC RESEARCH — METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties as the National Meteorological service for the U.A.R., the Meteorological Department issues several reports and publications on weather climate and agrometeorology. The principal publications are described on this, page.

Orders for publications should be adressed to :—

"The Director General, Meteorological Department, Kubri-el-Qubbeh—CAIRO".

THE DAILY WEATHER REPORT

This report is printed daily in the Meteorological Department. It contains surface and upper air observations carried by the relevant networks of the Republic and made at the four main synoptic hours of observations (00, 06, 12 and 18 U.T.); as well as ship observations over the Eastern Mediterranean and north Red Sea made at the same times.

It also contains two surface synoptic charts at 00 and 12 U.T. and two upper air charts for the standard isobaric surfaces 700 & 500 mbs. at both 00 and 12 U.T.

In compliance with resolution 8 (EC-XIII) of WMO, foreign upper air data included in Cairo Subregional Broadcast are also given in this report.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year .

CLIMATOLOGICAL NORMALS FOR EGYPT

The normals, long averages and statistical data are given in one edition for stations in Egypt from the date of opening of each station up to 1945, A new voluminous edition was issued in March 1968 which brings normals and mean values up till 1960.

UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7 NUMBER 2

FEBRUARY, 1964

U.D.C. 551. 506,1 (62)

MINISTRY OF SCIENTIFIC RESEARCH – METEOROLOGICAL DEPARTMENT
CAIRO

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GENERAL SUMMARY OF WEATHER CONDITIONS

FEBRUARY 1964

Generally cold, intervened with three warm spells of short durations. Abnormally high rainfall over the northern parts, associated sometimes with thunderstorms. Frontal sandrising or sandstorms in the extreme west.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather this month was old in general and six successive cold fronts ere experienced. Night temperatures ere minimum round the 7th falling to ound 0°C in scattered places in the central arts.

During the 2nd half of the month, the orthern parts enjoyed three short warm ells round the 16th, 21st and 27th.

Rain fell over the northern parts on many ays and the monthly rainfall exceeded its ormal over scattered localities.

Occasional rising sand occurred on few eparate days over scattered localities articularly the Western Desert district nd the Mediterranean Coastal strip.

PRESSURE DISTRIBUTION

During this month, the pressure distriution over the surface map was characerized by the following.

— A high pressure ridge over Western urope and North Africa Region.

— A high pressure ridge slightly north of he Caspian Sea Area.

— Transitory Mediterrenean secondary epressions along their west-east track.

— The Sudan trough of low pressure.

On the other hand, both the 700 and 500 mb upper air charts were characterized by the following upper systems.

— Two deep upper lows over north Russia and north Atlantic with a stationary block in between.

— A secondary well defined and relatively deep upper low over Southwest Russia.

— An upper high pressure belt south latitude 35°N.

This month started with two secondary depressions over East Mediterranean; they amalgamated and deepened appreciably on the 3rd but filled rapidly locally on the 4th and 5th.

On the 7th three secondary depressions developed over Tunisia, Greece and Asia Minor at the trailing polar front through Urasia, the whole system proceeded eastwards. The former secondary was the most active, it traversed Cyrenica by the 10th and East Mediterranean by the 11th. The latter two secondary depressions died rapidly as they reached Cyprus on the 8th and 9th respectively.

On the 15th and 19th two deep secondary depressions developed over West Mediterranean, following the same course through Mediterranean, they passed by Central Mediterranean round the 16th and 20th

respectively and traversed East Mediterranean round the 17th and 21st respectively.

On the 23rd the last travelling secondary depression during this month appeared over Tunisia. It proceeded eastwards, traversed Central Mediterranean round the 26th and attained East Mediterranean on the 27th where it remained stationary till the 28th, then it continued its eastward course on the 29th.

It is worth to mention that the subtropical high pressure belt operated over North Africa and Mediterranean Regions for short periods at the rear of the transitory Mediterranean depressions.

The polar jet stream at about 310 mb level appeared over the extreme north of the country round the end of the 3rd week, while the subtropical jet stream oscillated between latitudes 25 and 35° north at about 240 mbs most days of the month.

The highest wind speeeds recorded were 145,140 and 166 knots at Mersa Matruh, Helwan and Aswan on the 9th, 18th and 5th respectively.

SURFACE WIND

During most of the month prevailing winds were light/moderate NWly. As an exception winds were fresh/strong for short durations during transit of Mediterranean depressions through U.A.R. when they backed at first to S/SW in their advance and veered rapidly to NWly in their rear. Fresh/strong NW winds were outstanding on the western part of the Mediterranean Coastal strip and Red Sea district.

Gales were reported at : Dabaa on the 3rd and 4th ; Ras El Teen and Rosetta on the3rd; Abu Sueir on the 4th and at Fayed on the 3rd and 4th.

TEMPERATURE

Maximum temperature was of pronounced variability and was generally subnormal excluding few days of abnormally high maximum temperature in the north.

The absolute maximum temperature for the Republic was 30.6°C reported at Kom Ombo on the 21st.

Minimum temperature was of moderate variability and was generally subnormal excluding few days of abnormally high minimum temperature.

The absolute minimum temperature for the Republic was—2.2°C reported at Farafra on the 9th.

PRECIPITATION

Daily rain was light in general and confined to the northern parts, though it was heavy in scattered localities of the Mediterranean district particularly on the 3rd.

The weather in the northern parts was almost rainy during the periods (1st—4th), (8th—14th), (21st—24th) and (28th—29th), and rain penetrated in land southwards as far as Cairo during 1st rainy period. The monthly rain exceeded its normal value in many localities of the northern parts, elsewhere it was subnormal.

The absolute daily rainfall was 34.0 mms reported at Tolombat El-Boseili on the 3rd. The absolute monthly rainfall for the Republic was 66.0 mms reported also at Tolombat El-Boseili (Lower Egypt district).

Cairo, 19 / 4 / 1970

M. F. TAHA
Under Secretary of State
Director General
Meteorological Department

TABLE A 1. — MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION.

FEBRUARY — 1964

STATION	Atmospheric Pressure (mbs) M.S.L		Air Temperature °C									Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evap. (mms) Mean
			Maximum		Minimum			Dry Bulb		Wet Bulb							
	Mean	D.F. Normal or Average	(A) Mean	D.F. Normal or Average	(B) Mean	D.F. Normal or Average	$\frac{A+B}{2}$	Mean	D.F. Normal or Average	Mean	D.F. Normal or Average	Mean	D.F. Normal or Average	Total Actual	Total Possible	%	
Sallum	1015.9	—2.1	19.1	—1.7	10.0	—0.9	14.6	14.4	—0.5	10.5	—0.1	58	+ 7	—	—	—	6.3
Mersa Matruh (A)	1016.6	—0.8	18.1	—0.8	8.7	+0.3	13.4	13.1	—0.3	10.0	—0.5	65	+ 1	235.1	321.4	73.1	8.4
Alexandria (A)	1016.4	—1.1	19.1	—0.1	9.0	—0.7	14.0	13.7	—0.3	10.8	—0.4	68	— 2	227.7	322.0	70.7	4.3
Port Said (A)	1016.3	—0.7	18.9	+0.2	10.7	—1.4	14.8	13.9	—0.9	11.2	—1.0	70	— 1	226.8	322.0	70.4	4.1
El Arish	1016.4	—0.8	18.9	—1.2	8.9	—0.1	13.9	13.5	—0.3	10.9	+0.1	71	+ 4	230.8	322.3	71.6	3.7
Ghazza	1015.9	—0.7	16.7	—1.2	9.6	—0.5	13.2	13.2	—0.8	11.2	—0.5	77	+ 2	187.8	321.4	58.4	3.4
Tanta	1016.0	—	19.8	—	6.8	—	13.3	12.5	—	9.7	—	68	—	237 9	322.4	73.8	3.3
Cairo (A)	1016.6	—1.1	20.1	—0.6	9.4	+0.3	14.8	14 3	—0.6	9.6	—1.1	50	— 6	—	—	—	10 0
Fayoum	1016.8	—	21.3	—	7.2	—	14.2	13.9	—	9.6	—	54	—	—	—	—	4.6
Minya (A)	1017.5	—0.3	21.6	—0.9	3.5	—1.9	12.6	12.2	—1.2	8.5	—0.4	57	+ 6	—	—	—	5.1
Assyout (A)	1017.3	+0.1	21.5	—1.3	7.2	—0.3	14.4	14.1	—1.3	8.4	—1.1	40	0	—	—	—	10.0
Luxor (A)	1016.0	—0.1	23.3	—2.1	6.5	—0.3	14.9	15 0	—1.0	9.6	—0.5	45	+ 3	—	—	—	5.7
Aswan (A)	1016.1	+0.4	23.0	—3.5	8.2	—2.4	15.6	16.2	—1.1	8.4	— 0.5	26	+ 2	—	—	—	13.1
Siwa	1017.2	—0.7	20.9	—0.9	5.8	+0.1	13.4	13.4	—0.8	8.4	—0.3	46	+ 2	—	—	—	7.7
Bahariya	1017.8	—1.5	21.1	+0.4	5.8	+0.3	13.4	13.5	+0.2	8.0	—0.5	41	— 7	—	—	—	6.0
Farafra	1019.1	—	20 7	—	4.4	—	12.6	12.9	—	7.0	—	35	—	—	—	—	9.0
Dakhla	1016.7	0.0	22.5	—1.2	3.3	—2.7	12.9	13.0	—0.5	6.9	—1.0	34	+ 2	—	—	—	7.0
Kharga	1017.7	—	23.1	—	6.4	—	14.8	15.1	—	8.4	—	33	—	291.4	330.0	88.3	14.1
Tor	1015.5	—1.8	20.9	—1.2	10.4	+0.7	15.6	16.3	+0.6	10.9	—0.3	47	— 8	—	—	—	6.7
Hurghada	1015.4	—0.2	21.3	+0.4	9.9	0.0	15.6	15.8	—0.7	10.1	—1.5	43	— 9	—	—	—	14.4
Quseir	1015.2	— 0.7	21.7	—2.3	13.6	—0.7	17.6	17.8	—0 6	11.7	— 0.7	43	— 3	—	—	—	15.3

TABLE A2.— MAXIMUN AND MINIMUM AIR TEMPERATURES

FEBRUARY — 1964

Station	Maximum Temperature °C									Grass Min. Temp.		Minimum Temperature °C							
	Highest	Date	Lowest	Date	No. of Days with Max-Temp.					Mean	D. From Normal	Highest	Date	Lowest	Date	No. of Days with Min. Temp.			
					>25	>30	>35	>40	>45							<10	<5	<0	<-5
Sallum	28.5	26	15.4	12	2	0	0	0	0	9.7	—	14.2	20	6.5	2	14	0	0	0
Mersa Matruh (A)	24.6	26	13.7	4	0	0	0	0	0	—	—	13.5	27	6.1	7	24	0	0	0
Alexandria (A)	25.2	27	15.3	3	1	0	0	0	0	—	—	11.8	12,18,23	5.8	26	20	0	0	0
Port Said (A)	21.3	11	14.2	4	0	0	0	0	0	9.8	—	14.4	20	7.5	5	9	0	0	0
El Arish	25.0	27	15.5	4	0	0	0	0	0	7.4	—	13.0	28	5.5	7	18	0	0	0
Ghazza	22.7	16	14.0	13	0	0	0	0	0	8.6	—	12.6	28	5.3	8	16	0	0	0
Tanta	23.7	21	14.5	4	0	0	0	0	0	—	—	9.8	10,29	2.6	7	29	3	0	0
Cairo (A)	28.6	27	16.5	13	1	0	0	0	0	—	—	13.0	11	4.6	8	17	1	0	0
Fayoum	29.0	27	18.1	4,13	3	0	0	0	0	3.8	—	10.6	28	4.4	13	27	5	0	0
Minya (A)	28.0	27	17.3	6	2	0	0	0	0	1.6	—	6.3	29	—0.3	8	29	17	1	0
Assyout (A)	27.3	27	16.8	13	5	0	0	0	0	5.7	—	10.2	28	3.7	7	28	2	0	0
Luxor (A)	28.6	21	19.0	5,13	10	0	0	0	0	—	—	13.8	1	2.0	7	26	7	0	0
Aswan (A)	29.4	1	18.8	6	10	0	0	0	0	—	—	13.0	1	4.8	7	23	1	0	0
Siwa	30.2	26	17.0	2,11	3	1	0	0	0	4.1	—	14.0	27	0.9	8	26	13	0	0
Bahariya	28 0	27	17.2	5	3	0	0	0	0	4.9	—	11.5	27	1.0	8	26	12	0	0
Farafra	30.0	27	16.0	7	4	0	0	0	0	3 2	—	11.6	28	—2.2	9	25	16	4	0
Dakhla	29 6	27	17.4	12	5	0	0	0	0	--	—	9.7	29	—1.5	9	29	24	4	0
Kharga	29.8	27	18.7	6	9	0	0	0	0	4.1	—	12.2	28	2.1	9	26	10	0	0
Tor	27.2	22	17.4	13	1	0	0	0	0	—	—	17.6	1	5.0	8	16	0	0	0
Hurghada	26.0	22	18.2	13	1	0	0	0	0	—	—	13.1	29	7.6	3,8	21	0	0	0
Quseir	28.2	28	18.5	8	1	0	0	0	0	—	—	16.2	26	10.0	9	0	0	0	0

TABLE A 3.—SKY COVER AND RAINFALL

FEBRUARY — 1964

Station	Mean Sky Cover Oct.					Rainfall mms.										
	00 U.T.	06 U.T.	12 U.T.	18 U.T.	Daily Mean	Total Amount	D. From Normal	Max. Fall in one day		Number of Days with Amount of Rain						
								Amount	Date	<0.1	≥0.1	≥1.0	≥5.0	≥10	≥25	≥50
Sollum	2.5	2.2	4.4	2.3	2.9	36.8	+29.7	15.7	11	0	5	4	3	2	0	0
Mersa Matruh (A)	2.5	3.8	4.1	3.1	3.1	28.7	+12.3	16.5	3	0	10	5	1	1	0	0
Alexandria (A)	3.9	4.8	4.6	3.1	4.1	58.4	+30.0	28.0	3	1	12	6	4	2	1	0
Port Said (A)	1.8	3.1	3.3	2.1	2.7	23.2	+11.4	7.2	4	0	9	7	2	0	0	0
El Arish	3.5	3.9	3.8	3.4	3.6	25.3	+ 9.3	9.8	12	0	9	5	2	0	0	0
Ghazza	3.3	4.8	4.2	2.6	3.7	115.8	+58.9	25.0	28	1	17	13	6	5	1	0
Tanta	—	1.9	3.8	0.7	—	6.2	— 1.3	4.2	4	0	8	1	0	0	0	0
Cairo (A)	1.1	2.9	4.0	1.6	2.5	0.7	— 3.5	0.3	3	0	3	0	0	0	0	0
Fayoum	—	1.4	2.0	0.7	—	0.0	— 1.6	0.0	—	0	0	0	0	0	0	0
Minya (A)	0.1	1.1	2.4	0.9	0.5	0.0	— 1.4	0.0	—	0	0	0	0	0	0	0
Assyout (A)	0.0	0.9	1.9	0.4	0.7	0.0	— 0.4	0.0	—	0	0	0	0	0	0	0
Luxor (A)	0.4	1.8	1.6	1.1	1.7	0.0	— 0.2	0.0	—	0	0	0	0	0	0	0
Aswan (A)	0.1	1.6	2.1	1.1	1.0	0.0	—Tr.	0.0	—	0	0	0	0	0	0	0
Siwa	0.5	1.2	2.5	1.2	2.3	Tr.	— 2.7	Tr.	11	1	0	0	0	0	0	0
Bahariya	0.5	1.5	2.1	0.4	1.1	0.0	— 1.2	0.0	—	0	0	0	0	0	0	0
Farafra	0.1	1.7	1.4	0.4	0.9	0.0	— 0.8	0.0	—	0	0	0	0	0	0	0
Dakhla	0.3	1.4	1.8	0.6	1.0	0.0	— 0.4	0.0	—	0	0	0	0	0	0	0
Kharga	—	1.6	2.1	0.7	—	0.0	— 0.4	0.0	—	0	0	0	0	0	0	0
Tor	1.0	1.2	1.7	0.9	1.0	0.0	— 1.3	0.0	—	0	0	0	0	0	0	0
Hurghada	0.4	1.6	1.3	0.9	1.0	0.0	—Tr.	0.0	—	0	0	0	0	0	0	0
Qusoir	0.4	2.2	2.2	0.8	1.4	0.0	—Tr.	0.0	—	0	0	0	0	0	0	0

TABLE A 4. — DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

FEBRUARY 1964

Station	Precipitation				Frost	Thunderstorm,	Mist Vis ≥ 1000 metres	Fog Vis <1000 Metres	Haze Vis ≥1000 Metres	Thick Haze Vis <1000 Metres	Dust or Sanderising Vis ≥1000 Metres	Dust or Sandstorm Vis <1000 Metres	Gale	Clear Sky	Cloudy Sky
	Rain	Snow	Ice, Pellets	Hail											
Sallum	5	0	0	0	0	1	0	0	0	0	2	1	0	8	0
Mersa Matruh (A)	7	0	0	0	0	1	0	0	0	0	7	2	0	9	1
Alexandria (A)	11	0	0	1	0	4	3	1	1	0	1	0	0	3	5
Port Said (A)	9	0	0	0	0	0	0	0	1	0	2	0	0	11	2
El Arish	10	0	0	0	0	0	3	0	2	0	4	0	0	7	1
Ghazza	17	0	0	0	0	1	0	1	1	0	3	0	0	9	5
Tanta	8	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Cairo (A)	3	0	0	0	0	0	3	0	12	0	6	1	0	10	0
Fayoum	0	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Minya (A)	0	0	0	0	0	0	10	1	2	0	1	0	0	20	0
Assyout (A)	0	0	0	0	0	0	0	0	2	0	0	0	0	27	0
Luxor (A)	0	0	0	0	0	0	0	0	7	0	1	0	0	20	0
Aswan (A)	0	0	0	0	0	0	0	0	2	0	3	0	0	23	0
Siwa	0	0	0	0	0	0	0	0	0	0	3	0	0	19	0
Bahariya	0	0	0	0	0	0	0	0	0	0	4	0	0	24	0
Farafra	0	0	0	0	0	0	0	0	0	0	4	0	0	25	0
Dakhla	0	0	0	0	0	0	0	0	0	0	1	0	0	24	0
Kharga	0	0	0	0	0	0	0	0	0	0	2	0	0	—	—
Tor	0	0	0	0	0	0	0	0	2	0	4	0	0	23	0
Hurghada	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0
Qusir	0	0	0	0	0	0	0	0	2	0	6	0	0	21	0

TABLE A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

FEBRUARY — 1964

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	All directions
Mersa Matruh . . (A)	14	0	0	1-10	29	19	10	10	10	13	14	15	57	71	24	23	300
				11-27	19	15	0	7	9	10	29	31	46	78	60	72	376
				28-47	0	0	0	0	0	0	2	3	0	1	0	0	6
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**48**	**34**	**10**	**17**	**19**	**28**	**45**	**49**	**103**	**150**	**84**	**95**	**682**
Alexandria. . . . . (A)	10	0	0	1-10	21	10	11	13	54	34	40	32	22	48	48	67	455
				11-27	1	0	0	0	0	0	4	26	30	68	39	33	231
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**22**	**10**	**11**	**18**	**54**	**34**	**44**	**108**	**52**	**116**	**117**	**100**	**686**
Port Said. . . . . (A)	1	0	0	1-10	30	25	36	21	19	12	6	19	39	44	17	36	304
				11-27	6	5	7	14	15	3	3	9	88	137	61	41	389
				28-47	0	0	0	0	0	0	0	0	1	1	0	0	2
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**36**	**30**	**43**	**35**	**34**	**15**	**9**	**28**	**128**	**182**	**78**	**77**	**695**
El Arish	5	9	1	1-10	25	24	5	9	26	84	62	57	142	31	83	29	577
				11-27	0	0	0	0	0	0	0	3	51	34	15	1	104
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**25**	**24**	**5**	**9**	**26**	**84**	**62**	**60**	**193**	**65**	**98**	**30**	**681**
Ghazza.	0	35	0	1-10	13	17	13	15	33	119	63	33	19	43	40	18	426
				11-27	1	0	0	0	0	34	17	48	51	56	21	0	228
				28-47	0	0	0	0	0	0	0	0	7	0	0	0	7
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**14**	**17**	**13**	**15**	**33**	**153**	**80**	**81**	**77**	**99**	**61**	**18**	**661**
Tanta	97	10	0	1-10	19	17	51	0	47	10	19	90	106	88	59	38	544
				11-27	0	0	1	0	0	1	0	9	20	6	7	1	45
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**19**	**17**	**52**	**0**	**47**	**11**	**19**	**99**	**126**	**94**	**66**	**39**	**589**
Cairo. . . . . (A)	16	8	113	1-10	22	41	29	31	23	6	13	53	44	45	41	25	376
				11-27	1	3	9	1	6	5	13	34	33	32	38	8	183
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**23**	**44**	**38**	**35**	**29**	**11**	**26**	**87**	**77**	**77**	**79**	**33**	**559**
Fayoum	77	0	0	1-10	118	34	11	12	5	16	45	96	45	64	66	92	604
				11-27	0	0	0	0	0	0	0	7	6	1	0	1	15
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**118**	**34**	**11**	**12**	**5**	**16**	**45**	**103**	**51**	**65**	**66**	**93**	**619**

TABLE A 5 (*contd.*) — NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

FEBRUARY — 1964

Station	calm (hours)	variable (hours)	unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of direction indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	156 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Minya (A)	34	10	295	1-10	32	32	2	1	3	20	21	18	25	24	43	86	307
				11-27	4	9	1	0	0	1	0	2	1	5	14	13	50
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**36**	**41**	**3**	**1**	**3**	**21**	**21**	**20**	**26**	**29**	**57**	**99**	**357**
Assyout	5	0	410	1-10	5	5	4	1	2	2	0	2	2	13	36	51	123
				11-27	9	0	0	0	0	0	2	4	22	17	38	66	158
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**14**	**5**	**4**	**1**	**2**	**2**	**2**	**6**	**24**	**30**	**74**	**117**	**281**
Luxor (A)	34	0	17	1-10	32	43	23	11	16	46	67	54	38	29	65	158	582
				11-27	3	5	0	0	0	2	3	0	1	0	5	44	63
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**35**	**48**	**23**	**11**	**16**	**48**	**70**	**54**	**39**	**29**	**70**	**202**	**645**
Aswan (A)	0	0	17	1-10	246	70	4	2	0	3	2	2	2	11	38	136	516
				11-27	91	15	2	0	0	0	0	0	0	2	19	34	163
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**337**	**85**	**6**	**2**	**0**	**3**	**2**	**2**	**2**	**13**	**57**	**170**	**679**
Siwa	89	0	0	1-10	5	2	3	32	37	40	34	21	45	140	119	37	515
				11-27	0	0	0	0	2	1	16	4	2	25	38	3	91
				28-47	0	0	0	0	0	0	0	0	0	0	1	0	1
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**5**	**2**	**3**	**32**	**39**	**41**	**50**	**25**	**47**	**165**	**158**	**40**	**607**
Dakhla	34	1	0	1-10	37	55	18	25	24	14	20	20	33	111	151	143	651
				11-27	0	0	0	0	0	0	0	0	0	0	6	4	10
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**37**	**55**	**18**	**25**	**24**	**14**	**20**	**20**	**33**	**111**	**157**	**147**	**661**
Hurghada	0	3	2	1-10	17	11	9	1	4	8	7	7	21	92	51	21	249
				11-27	19	1	0	0	0	2	0	0	0	125	129	163	439
				28-47	0	0	0	0	0	0	0	0	0	0	0	3	3
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**36**	**12**	**9**	**1**	**4**	**10**	**7**	**7**	**21**	**217**	**180**	**187**	**691**
Quseir	16	0	0	1-10	59	18	2	2	3	2	8	11	51	145	108	49	458
				11-27	22	0	0	0	0	0	0	0	6	8	85	101	222
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**81**	**18**	**2**	**2**	**3**	**2**	**8**	**11**	**57**	**153**	**193**	**150**	**680**

TABLE B 1.—UPPER AIR CLIMATOLOGICAL DATA

FEBRUARY — 1964

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 0000 UT	Surface	29	* 1012m.b.	* 1020m.b.	* 1006m.b.	29	11.9	19.0	8.5	29	7.3
	1000	29	147	209	95	29	12.0	20.0	8.1	29	6.7
	850	29	1465	1549	1431	29	5.7	14.1	— 0.1	28	1.7
	700	29	3052	3128	2969	29	— 4.2	2.3	—16.7	14	—12.6
	600	29	4299	4338	4147	29	— 10.3	— 5.4	—16.9	11	—18.9
	500	29	5631	5738	5497	29	—22.3	—15.3	—27.1	10	—29.0
	400	29	7148	7378	7067	29	—33.7	—26.8	—39.0	5	—37.2
	300	29	9211	9378	9054	29	—45.1	—37.9	—48.7	—	—
	200	29	11804	12046	11677	29	—52.6	—43 2	—63.0	—	—
	150	27	13702	13892	13596	27	—55.5	—49·1	—61.5	—	—
	100	26	16236	16430	16084	26	—64.8	—59.5	—69.7	—	—
	70	14	18447	18670	18260	14	—64.8	—59.4	—71.6	—	—
	50	10	20508	20774	20335	10	—61.7	—56.9	—69.3	—	—
	30	7	23767	24042	23577	7	—53.3	—50.8	—56.4	—	—
	20	5	26418	26677	26175	5	—50.1	—49.7	—51.5	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 UT	Surface	29	* 1000m.b.	* 1007m.b.	* 994m.b.	29	10.6	15.3	7.5	29	3 3
	1000	29	142	198	92	16	10.4	13.9	7.6	16	2.6
	850	29	1489	1538	1429	29	4.8	12.1	— 1.2	27	— 3.0
	700	29	3051	3128	2970	29	2.2	3.2	— 9.2	14	—13.6
	600	29	4260	4358	4146	29	— 8.9	— 2.4	—15.6	7	—21.1
	500	29	5647	5763	5515	29	—17.9	—14.0	—24.8	3	—29.4
	400	29	7277	7419	7099	29	—30.7	—26.4	—36.8	3	—37.2
	300	29	9263	9429	9076	29	—43.8	—33.8	—48.8	—	—
	200	28	11940	12067	11732	28	—52.2	—45.0	—60.1	—	—
	150	28	13772	13937	13560	28	—59.1	—54.0	—64.5	—	—
	100	26	16281	16422	16166	26	—65.7	—55.4	—70.9	—	—
	70	23	18457	18540	18350	23	—64.6	—60.6	—68.4	—	—
	50	20	20517	20612	20380	20	—60.1	—57.0	—64.8	—	—
	30	13	23747	23842	23607	13	—53.8	—49.5	—57.8	—	—
	20	6	26373	26480	26234	6	—48.9	—46.8	—51.5	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan. 0000 UT	Surface	29	* 992m.b.	* 997 m.b.	* 986m.b.	29	11 4	19.6	6.7	29	— 3.1
	1000	—	—	—	—	—	—	—	—	—	—
	850	29	1475	1506	1420	29	7.4	18.5	0.3	21	— 7.6
	700	29	3056	3123	2996	29	1.7	11.2	— 4.6	3	—13.2
	600	29	4282	4390	4205	29	— 5.1	3.2	—11.9	4	—16.2
	500	29	5689	5840	5593	29	—13.9	— 7.5	—20.6	4	—25.5
	400	29	7345	7536	7233	29	—24.7	—18.5	—31.1	4	—34.8
	300	29	9387	9643	9259	29	— 37.4	—29.3	—42.0	—	—
	200	29	12221	12415	11911	29	—53.2	—49.5	—63.0	—	—
	150	28	13859	14250	13643	28	—67.4	—58.9	—74.8	—	—
	100	25	16268	16717	16063	25	—74.6	—66.7	—80.0	—	—
	70	10	18320	18480	18217	10	—71.9	—69.7	—78.1	—	—
	50	10	20330	20496	20222	10	—66.9	—61.5	—69.3	—	—
	30	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

TABLE B 1 (*contd.*).—UPPER AIR CLIMATOLOGICAL DATA

FEBRUARY — 1964

Station	Pressure Surface Millibar	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 1200 U.T.	Surface	29	1013m.b.*	1020m.b.*	1004m.b.*	29	16.6	22.8	13.5	29	8.1
	1000	29	151	211	79	29	15.5	21.7	11.8	29	7.1
	850	29	1501	1550	1470	29	4.5	11.4	— 1.0	29	— 4.2
	700	29	3059	3124	2969	29	— 3.4	2.1	—10.5	16	—14.0
	600	29	4262	4340	4144	29	— 9.7	— 2.6	—18.5	10	—18.9
	500	29	5640	5735	5481	29	—20.2	—14.5	—27.3	6	—28.6
	400	29	7256	7385	7055	29	—31.7	—25.3	—41.4	4	—32.6
	300	29	9231	9395	9014	29	— 44.7	—33.0	—48.0	—	—
	200	29	11885	12119	11708	29	— 52.5	—45.0	— 57.8	—	—
	150	28	13848	13964	13545	28	—56.7	—50.0	—66.2	—	—
	100	25	16268	16477	16127	25	—63.5	—57.0	—70.5	—	—
	70	13	18461	18640	18300	13	—64.4	—56.6	—71.9	—	—
	50	5	20576	20722	20388	5	—57.7	—55.1	—58.8	—	—
	30	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 1200 U.T.	Surface	29	997m.b.*	1005m.b.*	994m.b.*	29	18.5	26.0	13.6	29	2.6
	1000	29	134	183	92	14	17.4	21.4	13.3	14	2.5
	850	29	1485	1541	1417	29	5.5	15.0	— 0.6	25	— 4.4
	700	29	3051	3111	2980	29	— 2.6	4.8	—10.2	15	—17.2
	600	29	4260	4343	4168	29	— 8.9	— 4.5	—15.8	5	—20.3
	500	29	5647	5753	5514	29	—17.9	—12.6	—26.6	7	—26.8
	400	28	7284	7405	7137	28	—29.5	—23.3	—38.3	3	—34.1
	300	28	9279	9448	9088	28	—42.9	—31.2	—47.2	—	—
	200	28	11950	12109	11720	28	—52.8	—44.7	—60.8	—	—
	150	28	13797	13949	13554	28	— 58.0	—54.0	—63.5	—	—
	100	25	16322	16466	16105	25	—65.1	—58.3	—71.0	—	—
	70	22	18506	18760	18280	22	—64.3	—57.1	—69 0	—	—
	50	18	20594	20819	20406	18	—59.8	—55.7	—64.5	—	—
	30	5	23849	23915	23800	5	—50.9	—44.0	—54.0	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan 1200 U.T.	Surface	29	991m.b.*	997m.b.*	986m.b.*	29	22.8	28.0	17.7	29	0.1
	1000	—	—	—	—	—	—	—	—	—	—
	850	29	1495	1527	1439	29	10.5	14.9	3.4	17	— 9.7
	700	29	3093	3177	3026	29	4.3	8.8	— 3.0	3	—11.4
	600	29	4332	4387	4254	29	— 2.6	1.6	— 8.1	4	—17.6
	500	29	5755	5828	5651	29	—11.3	— 3.7	—16.7	2	—23.8
	400	29	7433	7548	7311	29	—21.7	—12.4	—27.0	4	—32.0
	300	29	9498	9707	9341	29	—34.8	—23.0	—40.3	3	— 40.5
	200	26	12221	12580	12018	26	—53.2	—39.0	—58.7	—	—
	150	23	14005	14128	13804	23	—65.0	—57.9	—70.4	—	—
	100	20	16448	16552	16277	20	—71.9	—62.6	—84.2	—	—
	70	7	18535	18680	18410	7	—71.2	—67.5	—79.8	—	—
	50	2	20638	20746	20530	2	—63.6	—60.2	—67.0	—	—
	30	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

TABLE B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE ; THE HIGHEST WIND SPEED IN THE UPPER AIR

FEBRUARY—1964

	Station	Freezing Level									First Tropopause									Highest wind speed			
		Mean			Highest			Lowest			Mean			Highest			Lowest						
		Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew Point (°C)	Altitude (g pm)	Pressure (mb.)	Dew Point (°C)	Altitude (gpm)	pressure (mb.)	Temperature (°C)	Altitude (g pm)	Pressure (mb.)	Temperature (°C)	Altitude (g pm)	Pressure (mb.)	Temperature (°C)	Altitude (g pm)	Pressure (mb.)	Direction (000—360)°	Speed in Knots
0000 U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	M. Matruh .	2193 (29)	788 (29)	-4.7 (24)	3450	672	—	1490	852	-6 5	10499 (28)	242 (28)	-59.5 (28)	13700	154	-70.4	8480	336	-41.2	10600	244	290	130
	Helwan . .	2535 (29)	749 (29)	-6.1 (17)	3600	657	—	1400	865	-3.3	11255 (27)	236 (27)	-52.8 (27)	16340	100	-69.1	8300	343	-38 0	9900	272	280	140
	Aswan . . .	3136 (29)	686 (29)	-14.2 (8)	4780	570	-12.6	1410	854	-9 7	13997 (22)	146 (22)	-68.6 (22)	15580	110	-74.0	12200	192	-64.7	7200	404	240	166
1200 U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	M. Matruh. .	2288 (29)	773 (29)	-5.0 (25)	3650	653	—	1400	862	-5.8	10442 (29)	242 (29)	-52.7 (29)	15080	122	-66.8	8210	337	-46.7	9300	293	260	145
	Helwan . . .	2474 (29)	754 (29)	-8.1 (15)	3770	645	—	1410	860	-4.3	11163 (27)	234 (27)	-54.0 (27)	16383	100	-68.4	7252	400	-32.4	7400	393	260	140
	Aswan . . .	3881 (29)	640 (29)	-16.1 (5)	5670	576	—	1800	818	—	14849 (18)	132 (18)	-67.9 (18)	16580	96	-69.9	12480	183	-59.7	11800	223	250	160

N = The number of cases the element has been observed during the month

TABLE B 8.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

MERSA MATRUH (A)—FEBRUARY 1964

Time	Pressure Surface Millibar	Wind between ranges of direction (000–360)°																								Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (knots)
		345/014		015/044		045/074		075/104		105/134		135/164		165/194		195/224		225/254		255/284		285/314		315/344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	0	—	0	—	0	—	0	—	0	—	4	17	3	11	2	6	5	17	9	13	3	17	2	20	1	29	14
	1000	0	—	0	—	0	—	0	—	0	—	4	17	3	11	2	6	5	17	9	13	3	17	3	14	0	29	14
	850	0	—	0	—	0	—	0	—	0	—	0	—	2	13	1	23	4	16	10	26	9	21	3	17	0	29	21
	700	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	8	28	15	28	6	34	0	—	0	29	29
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	16	9	41	12	35	5	28	0	—	0	27	35
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	39	8	53	12	49	5	37	0	—	0	26	45
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	64	10	49	5	53	0	—	0	21	54
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	76	6	68	4	55	1	31	0	13	62
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	62	3	80	1	30	0	—	0	5	66
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	80	0	—	0	—	0	—	0	2	80
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	1	5	1	6	0	—	1	13	0	—	0	—	0	—	3	25	1	24	9	13	6	18	7	14	0	29	15
	1000	0	—	1	6	0	—	1	13	0	—	0	—	0	—	3	25	1	24	9	12	7	18	7	14	0	29	15
	850	0	—	0	—	0	—	0	—	0	—	0	—	1	5	4	22	6	21	7	16	11	21	0	—	0	29	20
	700	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	16	7	31	10	26	11	33	0	—	0	29	30
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	32	7	34	12	32	8	46	0	—	0	29	37
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	34	6	57	15	42	5	66	0	—	0	27	49
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	62	10	54	3	53	1	16	0	19	54
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	45	8	79	3	69	0	—	0	14	70
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	87	1	58	0	—	0	4	82
	150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = *The number of cases the element has been observed* during the month.

TN = The total number sf cases the wind has been obeserved for all directions during the month.

TABLE B 3 *(contd.)*—**NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.**

HELWAN—FEBRUARY 1964

Time	Pressure Surface (Millibar.)	Wind between ranges of direction (000—360)°																						Number of Calm winds	Total Number of Observations (TN)	Mean Scalar wind Speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	2	8	6	8	3	10	3	11	0	—	1	7	0	—	1	8	1	13	2	8	0	—	1	5	3	29	6
	1000	4	6	2	11	4	9	1	12	0	—	1	1	0	—	1	8	0	—	0	—	2	4	0	—	1	16	7
	850	2	10	0	—	0	—	1	3	0	—	1	5	2	12	4	15	2	12	6	23	7	19	5	18	0	29	17
	700	1	11	0	—	0	—	0	—	0	—	1	5	0	—	0	—	7	25	8	28	9	25	3	18	0	29	24
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	14	3	45	14	34	8	34	2	22	0	29	33
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	8	4	50	15	43	7	45	2	39	0	29	42
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	68	16	61	6	51	3	31	0	27	56
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	18	15	73	3	47	2	54	0	21	65
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	111	6	82	2	107	0	—	0	9	91
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	90	2	86	0	—	0	6	88
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	108	0	—	0	—	0	3	108
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	4	8	2	10	0	—	0	—	0	—	0	—	0	—	3	8	4	9	8	10	4	12	1	9	3	29	9
	1000	4	12	3	8	0	—	0	—	0	—	0	—	0	—	0	—	1	5	2	14	2	10	1	9	1	14	10
	850	6	12	2	8	1	8	0	—	1	5	0	—	2	12	2	20	1	19	10	14	1	16	2	14	1	29	13
	700	2	37	0	—	0	—	0	—	0	—	0	—	2	11	2	26	5	22	7	39	7	26	4	23	0	29	26
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	36	7	36	6	54	12	31	2	54	0	29	39
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	26	8	68	9	53	8	33	1	46	0	28	49
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	68	13	62	5	45	1	128	0	23	63
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	34	1	18	9	68	2	68	1	67	0	14	62
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	108	5	92	1	86	0	—	0	8	96
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	110	0	—	1	80	0	—	0	2	95
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (*contd.*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A)—FEBRUARY 1964

Time	Pressure Surface (Millibar)	Wint between ranges of direction (000—360)																								Number of calm winds	Total number of observations (TN)	Mean Scalar wind Speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	20	13	0	—	2	8	1	12	0	—	0	—	0	—	0	—	0	—	1	9	0	—	4	9	1	29	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	4	16	2	13	0	—	2	13	0	—	0	—	1	3	0	—	3	9	4	9	8	17	5	14	0	29	13
	700	3	22	1	9	1	3	0	—	0	—	0	—	0	—	0	—	8	26	11	26	4	28	1	17	0	29	24
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	35	6	46	15	39	3	24	4	34	0	29	38
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	8	51	15	59	6	44	0	—	0	29	54
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	69	17	69	2	94	0	—	0	26	71
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	68	17	77	1	110	0	—	0	21	77
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	75	6	87	0	—	0	—	0	11	82
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	79	4	88	0	—	0	—	0	7	85
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	64	0	—	0	—	0	3	64
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	20	12	2	12	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	13	2	16	2	13	2	29	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	4	14	3	10	2	12	0	—	1	7	1	6	0	—	0	—	1	16	4	19	7	14	6	19	0	29	15
	700	1	24	1	11	0	—	0	—	0	—	0	—	0	—	1	63	4	23	16	24	1	9	5	23	0	29	24
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	12	46	10	34	6	42	1	17	0	29	40
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	49	18	53	2	34	1	30	0	28	50
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	84	18	65	2	30	0	—	0	25	66
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	105	10	85	3	83	0	—	0	18	90
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	123	3	92	1	110	0	—	0	9	112
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	88	1	63	0	—	0	—	0	2	76
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATION AT EL-KASR

FEBRUARY 1964

This month was mild but rather humid and wet. It was characterized by successive cold waves which prevailed during the first two weeks with the peaks on the 4th. and 9th, when the lowest maximum air temperaturee was recorded (3.6 °C below normal) with the highest value of relative humidity on the first day (32 % above normal) and the lowest Piche evaporation on the second (5.9 mms. below normal).

The absolute minimum air temperature was associated with this system and occurred on the 11th (3.5 °C below normal) as well as the minima of soil temperatures at depths 0.3, 1 and 2 cms. The minima for depths 5, 10 and 20 cms. were observed on the 7 th and 9th.

A pronounced warm spell though of short duration was remarked towards the end of the month, with the peak on the 26 th, when the absolute maximum of air temperature was recorded (5.7 °C above normal) and also the highest value of Piche evaporation (11.1 mms. above normal) as well as evaporation from pan class A, being 16.23 mms. On the next day, the highest minimum air temperature (4.1 °C above normal) and the maximum soil temperatures for depths 10 and 20 cms. took place, while those at depths 0.3, 1,2 and 5 cms. occurred on the 29th.

The means of maximum air temperature, minimum and mean of day were all about normal, while the mean relative humidity was 9% above normal and the mean Piche evaporation was 2.0 mms. below normal. The total amount of rainfall was 39.1 mms. (20.5 mms. above normal).

REVIEW OF AGRO-METEOROLOGICAL STATION AT TAHRIR

FEBRUARY 1964

This month—compared with Fehruary 1963—was colder and drier, besides having much less rainfall.

It was distinguished by a cold wave prevailing during the first ten days of the month, giving the lowest maximum temperature on the 4th. and the absolute minima of air temperatures both at 2 metres and 5 cms. above dry soil on the 8th.

A warm spell of short duration started on the 16 th when the lowest value of relative humidity was observed (19%) and that of the vapour pressure on the next day. Also the absolute maximum air temperature was recorded on the 21st.

The mean air temperature, vapour pressure, relative humidity, mean Piche and pan A evaporation were less than their corresponding values of last year by 1.7 °C, 0.7 mms., 5%, 1.2 mm. and 0.42 mm. respectively. Rainfall was 2.8 mms. which is 12.0 mms. less than last February.

On the other hand, the mean wind speed at 2 metres was only 0.1 m/sec. more than last year, and there was practically no difference between actual sunshine durations in both years.

Maximum soil temperatures recorded this month, between the surface and 1 metre depth, were higher in the first 2 cms. by no more than 2.3 °C, deeper they were less by 0.7 to 1.6 °C except at 10 cms. depth, where the maxima were identical. The minima were less in the whole series by 0.7 to 2.3 °C.

REVIEW OF AGRO—METEOROLOGICAL STATION AT GIZA

FEBRUARY 1964

This month was rather cold and dry as compared with the normal values for air temperature, relative humidity, piche evaporation and total amount of rainfall at Giza.

The month was characterized by one prolonged cold wave, two other minor cold waves; and two minor warm spells.

The first cold wave was experienced between the 1st and 10th, giving the lowest maximum air temperature of the month : 17.0 °C on the4 th. (3.4 °C below normal) when the minimum range of temperature (the difference between maximum and minimum air temperatures) attained 8.6 °C. Moreover this wave was associated with, the absolute minimum air temperature at 2 metres (3.4 °C on the 7th i.e. 2.7 °C below normal), the absolute minimum air temperature at 5 cms above wet soil together with the absolute minima of the soil temperatures for the surface layer down to 10 cms. depth through the dry and wet fields. During this wave, the air temperature at 5 cms. above the grass field fell below 0 °C on the 7th, 8th 9th, and 10th for two hours during the first three and for one hour in the fourth day when the temperatures were —1.2, —1.4, —1.2 and —0.6 °C respectively.

The second cold wave was of short duration and lasted between 12th and 15th During this wave, the absolute minima for soil temperatures for the grass field at depths 1, 2, 5 and 10 cms. were recorded, also the absolute minimum air temperatures at 5 cms. above dry and grass fields were recorded on the 15th being —1.0 and —2.4 °C respectively.

Above the grass field, the minimum air temperature fell below 0 °C on the 14th (—0.3 °C) and 15th (—2.4 °C being the absolute minimum for the whole month) with duration below the freezing point for 0.5 and 2.5 hours respectively, while the minima for soil temperatures at depths 1 to 5 cms. showed their absolute values on the 15th.

The warm spell was of short duration (26th — 28th) giving the absolute maximum of air temperature at two metres above the ground : 27.9 °C (5.6 °C above normal) on the 27th. Also the absolute maximum for soil temperatures over the dry and wet fields at most of the depths occurred during this spell.

A diffused warm spell prevailed during the 16th and 17th giving the largest range of air temperature at 2 metres for the month being 19.7 °C, as well as the lowest relative humidity : 20 % (47 % below normal) and the maximum Piche evaporation in the screen : 9.9 mms. (5.7 mms. above normal).

The mean air temperature at 2 metres above ground was below normal (—1.0 °C), the mean relative humidity was below normal (—7%) and the total amont of rainfall for the whole month was traces against 4 mms. for the normal value.

Compared with February 1963, the absolute minimum air temperatures at 5 cms. over the dry and wet soils and above grass were all slightly less by 0.5, 1.3 and 0.6 °C respectively. Also the minimum soil temperatures at the different depths were generally lower for the three fields, where the means for the surface wind speeds at 2 metres were slightly higher. The total actual duration of bright sunshine was more by 11.4 hours and amounts to 72% of the total possible duration. The mean evaporation of the day (pan class A), total potential evaporation and total potential evapotranspiration were all higher by 0.22, 14.9 and 10.3 mms. respectively.

REVIEW OF AGRO-METEOROLOGICAL STATION AT KHARGA

FEBRUARY 1964

The month was slightly colder and drier as compared with the normal values of air temperature and relative humidity at 2 metres above ground level.

Minor successive cold waves prevailed during the first two weeks during which the maxima and minima of air temperature were below normal for most of the days.

The first cold wave was the most pronounced, while the lowest maximum air temperature was recorded on the 6th (5.2 °C below normal). The absolute minima of soi temperatures at depths 1, 2, 3 and 5 cms. in the dry field occurred on the 8th and also the lowest values of vapour pressure at 1200 U.T. and the Piche evaporation in the screen (1.3 mms. below normal) and in the free air at one cm. above ground level as well as evaporation from pan class A. On the next day, the absolute minima of air temperatures at 2 metres above ground level (5 °C below normal) and at 5 cms. took place as well as those for the soil at depths 10, 20 and 50 cms. The highest minimum air temperature at 2 metres above ground level (5.0 °C above normal) and at 5 cms. took place on the 12th at the end of this cold wave.

This month was also characterized by a warm spell starting on the 25th with the peak on the 27th when the absolute maximum (5.4 °C above normal) and the maxima of soil temperatures at depths 1, 2, 3 and 5 cms. in the dry field were recorded as well as the lowest value of the relative humidity at 1200 U.T. (11% below normal). On the next day, the maximum soil temperature at 10 cms. depth, the lowest daily mean relative humidity for the month and the highest value of evaporation from pan class A were observed while those of Piche in the in the screen (11.0 mms. above normal) and in the free air at levels 120, 60 and 1 cms. occurred on the 25th, The highest values of soil temperatures at depths 20, 50 and 100 cms. and vapour pressure at 1200 U.T. were recorded on the last day of the month.

* Total for 28 days.

TABLE C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

FEBRUARY — 1964

STATION	Air Temperature (°C)					Mean Duration in hours of daily air temperature above the following values.										
	Mean Max.	Mean Min.	Mean of the day	Night time mean	Day time mean	-5°C	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C
El Kasr	18.5	5.8	13.3	11.4	15.5	24.0	24.0	24.0	18.5	6.9	0.7	0.0	0.0	0.0	0.0	0.0
Tahrir	20.5	7.4	13.3	11.0	15.9	24.0	24.0	23.8	17.6	8.3	1.6	0.0	0.0	0.0	0.0	0.0
Giza	20.6	6.5	13.4	11.2	16.0	24.0	24.0	23.7	17.8	9.2	1.9	0.2	0.0	0.0	0.0	0.0
Kharga	23.1	6.6	15.1	12.3	18.2	24.0	24.0	22.9	18.5	12.4	5.3	0.7	0.0	0.0	0.0	0.0

TABLE C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS.

FEBRUARY — 1964

STATION	Max. Temp. at 2 metres (°C)				Min. Temp. at 2 metres (°C)				Min. Temp. at 5 cms. above (°C)			
	Highest		Lowest		Highest		Lowest		Dry soil		Grass	
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date
El Kasr	24.8	26	14.8	4	13.5	27	5.2	11	—	—	—	—
Tahrir	24.2	21	14.7	4	10.1	29	3.4	8	0.6	8	—	—
Giza	27.9	27	17.0	4	10.0	29	3.4	7·15	—1.0	15	—2.4	15
Kharga	29.8	27	18 7		12.7	12	2.1	9	—1.0	9	—	—

TABLE C 3.—(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL.

FEBRUARY — 1964

STATION	(Solar+Sky) Radiation gm. cal/cm²	Duration of Bright Sunshine (hours)			Relative Humidity. %						Vapour pressure (mms)						Evaporation(mms)		Rainfall (mms)		
		Total Actual monthly	Total Possible monthly	%	Duration in hours > 90%	Duration in hours < 80%	Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 UT	Highest	Date	Lowest	Date	Piche	Pan class A	Total Amount Monthly	Max. Fall in one day	Date
El Kasr	319.8	—	320.9	—	—	—	77	56	24	16	8.2	8.4	14.1	15	4.6	2	—	5.30	39.1	16.3	3
Tahrir	385.2	*226.7	*310.9	73	2.1	7.1	65	41	19	16	7.1	6.6	10.4	22·27	3.1	17	9.2	5.09	2.8	1.4	4
Giza	364.1	232.2	322.4	72	2.2	5.3	60	39	20	16	6.7	6.4	10.5	21	3.7	1	8.7	4.42	Tr.	Tr.	3,4,5, 28
Kharga	417.9	287 2	327.9	88	0	0	41	27	15	11	5.0	5.2	7.6	29	2.5	11	16.4	7.47	0.0	—	—

* Total for 28 days.

TABLE C 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS IN DIFFERENT FIELDS

FEBRUARY — 1964

STATION	Highest (H) Lowest (L)	Extreme soil temperature (°C) in dry field at different depths (cms.)										Extreme soil temperature (°C) in grass field at different depths (cms.)									
		0.3	1	2	5	10	20	50	100	200	300	0.3	1	2	5	10	20	50	100	200	300
El Kasr. . . .	H	30.0	26.8	26.8	24.0	21.2	18.3	16.7	16.8	19.3	—	—	—	—	—	—	—	—	—	—	—
	L	3.6	4.3	4 7	5.7	7.5	9.7	13.1	15.5	18.4	—	—	—	—	—	—	—	—	—	—	—
Tahrir	H	36.0	34.5	30.9	27.1	24 3	19.8	17.6	18.4	20.0	21.9	—	—	—	—	—	—	—	—	—	—
	L	3.0	3.1	3.0	5.8	7.6	11.1	14.5	17.2	19.4	20.9	—	—	—	—	—	—	—	—	—	—
Giza	H	47.0	43.6	40.0	26.2	21.5	19.7	19.4	20.2	23.3	25.2	22.4	20.0	18.6	17.4	16.9	16.0	15.9	16.6	20.1	—
	L	0.3	1 9	3.0	8.6	12.6	15.9	17.8	19.8	22.2	24.0	7.4	8.1	8.4	9.9	11.4	12.9	14.8	16.2	19.0	—
Kharga. . . .	H	—	36 8	34.2	30.2	25.0	22.2	21.5	21.7	24.7	26.7	—	—	—	—	—	—	—	—	—	—
	L	—	6.2	6.6	7.2	11.8	15.4	18.7	21.1	23.8	25.8	—	—	—	—	—	—	—	—	—	—

TABLE C 5.—SURFACE WIND

FEBRUARY — 1964

STATION	Wind Speed m/sec at 2 metres			Days with surface wind speed at 10 metres.							Max. Gust (knots) at 10 metres	
	Mean of the day	Night time mean	Day time Mean	≥10 knots	≥15 knots	≥20 knot	≥25 knots	≥30 knots	≥35 knots	≥40 knots	value (knots)	Date
El Kasr. . .	4.8	4.2	5.6	—	—	—	—	—	—	—	—	—
Tahrir. . . .	3.1	2.2	4.2	24	17	8	2	1	0	0	40	4
Giza	2.3	1.6	3.3	26	10	3	1	0	0	0	35	11
Kharga.. . .	3.2	2.1	4.2	—	—	—	—	—	—	—	—	—

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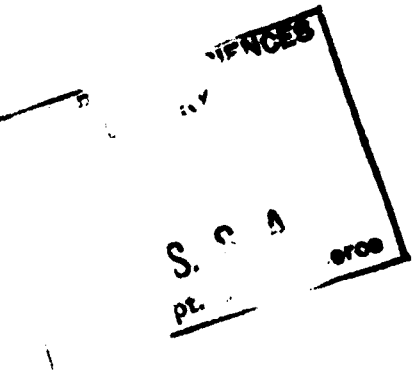

MARCH, 1964

U.D.C. 551. 506.1 (62)

MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties as the National Meteorological service for the U.A.R., the Meteorological Department issues several reports and publications on weather climate and agrometeorology. The principal publications are described on this, page.

Orders for publications should be adressed to :—

"The Director General, Meteorological Department, Kubri-el-Qubbeh—CAIRO".

THE DAILY WEATHER REPORT

This report is printed daily in the Meteorological Department. It contains surface and upper air observations carried by the relevant networks of the Republic and made at the four main synoptic hours of observations (00, 06, 12 and 18 U.T.); as well as ship observations over the Eastern Mediterranean and north Red Sea made at the same times.

It also contains two surface synoptic charts at 00 and 12 U.T. and two upper air charts for the standard isobaric surfaces 700 & 500 mbs. at both 00 and 12 U.T.

In compliance with resolution 8 (EC-XIII) of WMO, foreign upper air data included in Cairo Subregional Broadcast are also given in this report.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year .

CLIMATOLOGICAL NORMALS FOR EGYPT

The normals, long averages and statistical data are given in one edition for stations in Egypt from the date of opening of each station up to 1945, A new voluminous edition was issued in March 1968 which brings normals and mean values up till 1960.

UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

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GENERAL SUMMARY OF WEATHER CONDITIONS

MARCH 1964

Changeable and rather warm, intervened with seven khamsin waves. Dusty in general the 1st & 4th weeks, foggy in the early morning over Lower Egypt and light rainy over the Mediterranean district.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather this month was changeable, rather warm and seven varient khamsin waves of short durations have been experienced during which air temperature departures above normal values ranged between 3°C and 10°C. The prevailing warm spells were separated by rather cold spells during which air temperature departures below normal values ranged between 2°C & 8°C.

Sandy weather accompanied transits of travelling cold fronts in general particularly during the 1st & 4th weeks.

Rain was light in general and confined to Mediterranean, Lower Egypt & Cairo area districts, but it was locally heavy on the 17th & 18th. For the month as a whole the monthly rainfall was subnormal.

It is worth to mention that early morning mist or fog developed over scattered localities in Delta, Canal and Cairo area more than 10 days during this month.

PRESSURE DISTRIBUTION

The charateristic pressure systems of the surface map this month can be summarized in :

— The amalgamated high pressure over Urasia north of latitude 45°N.

— The subtropical high pressure belt extension over North Africa.

— The transitory Mediterranean low pressure systems that develop over West Mediterranean with well marked secondaries over North Africa their preferred track.

— The northward elongation of the Sudan trough towards East Mediterranean.

On the other hand the upper pressure patterns at 700 & 500 mb levels were confined to the deep polar low pressure system over North Russia with its extended south and southwest upper troughs towards the Black Sea or Balkans, together with the high pressure belt south of latitude 35°N.

Seven transitory and rather deep secondary depressions traversed East Mediterranean this month, the first of which started its motion from Central Mediterranean by the end of last February, overrun Asia Minor on the 1st of March, passed by Iraq on the 2nd and proceeded rapidly eastwards on the 3rd.

The rest six secondary depressions started as minor secondaries over North Africa at the foot of the rather deep and active low pressure systems of West Mediterranean round the 3rd, 8th, 12th, 16th, 20th & 27th respectively. They traversed the Mediterranean rather rapidly from the west to the east following North Africa their preferred coastal track with the exception of the sixth secondary depression which changed its course from Cyrenica north – eastwards. Transits of these secondary depressions through East Mediterranean were round

the 5th, 11th, 14th, 18th, 25th & 29th respectively. The last three transits were associated with a pronounced northward elongation of the Sudan trough of low pressure which extented as far as Cyprus or Asia Minor.

Due to above abnormal large number of transitory secondary depressions through East Mediterranean this month, the pressure field over the U.A.R. was oscillatory and mostly subnormal, if we exclude the short consecutive intervals during which a local anticyclone established over Western Desert.

It is worth to mention that an amalgamated well established anticyclone extended from Russia westwards over Europe north latitude 45°N between the 1st & 8th, while the subtropical high pressure belt extended from Spain southeastwards over North Africa most of the period between the 13th and 24th.

In the upper troposphere, the subtropical jet stream was evident most of the month over the U.A.R. at above 210 mb level, while the polar jet stream appeared only in association with the travelling depressions north of latitude 30°N at about 310 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan and Aswan were 150, 136 & 145 knots on the 28th, 26th 24th respectively.

SURFACE WIND

During this month, moderate/fresh winds blew in general but fresh/strong winds blew in the rear of the travelling cold fronts. The prevailing winds were generally northwesterly but they changed to E/SE, then to SWly & Sly far in advance and in advance of travelling secondary depressions.

Gales were reported at Balteam on the 25th; Tahrir on the 17th; Abu Sueir on the 5th & 18th; Zaher & Kabrit on the 5th and at Hurghada on the 11th & 18th.

TEMPERATURE

Maximum temperature was changeable and of large variability. Seven warm spells of rather short durations were enjoyed and were separated by rather cold spells.

The absolute maximum temperature for the Republic was 38.3 °C and was reported at both Kom Ombo & Quseir on the 11th.

Minimum temperature was similarly changeable, but of rather moderate variability.

The absolute minimum temperature for the Republic was 2.8 °C reported at Dakhla on the 27th.

PRECIPITATION

During this month rain was light and confined to the northern parts during the 2nd ten days of the month. It extended southwards inland on the 18th as far as Cairo area. The monthly rainfall was generally subnormal apart from very few localities in the Mediterranean & Lower Egypt districts where it exceeded slightly its normal.

The absolute daily rainfall was 14.0 mms reported at El Kasr on the 17th. The absolute monthly rainfall for the Republic was 19.3 mms reported at Borollos L.H. (Mediterranean district).

Cairo 4 / 4 / 1970

M. F. TAHA
Under Secretary of State
Director General
Meteorological Department

Table A 1.—MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION

MARCH — 1964

STATION	Atmospheric Pressure (mbs) M.S.L		Air Temperature °C									Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evaporation mms.
			Maximum		Minimum			Dry Bulb		Wet Bulb							
	Mean	D.F. Normal or Average	(A) Mean	D.F. Normal or Average	(B) Mean	D.F. Normal or Average	$\frac{A+B}{2}$	Mean	D.F Normal or Average	Mean	D.F Normal or Average	Mean	D.F Normal or Average	Total Actual	Total Possible	%	Mean
Sallum	1013.4	—1.3	22.9	+1.3	12.5	+0.9	17.7	17.0	+0.8	13.2	+1.6	63	+ 9	—	—	—	7.8
Mersa Matruh (A)	1014.2	—1.3	21.7	+1.4	11.2	+1.5	16.4	15.6	+0.7	12.6	—1.2	68	+ 5	241.8	371.6	65.1	10.1
Alexandria (A)	1013.8	—1.8	22.1	+1.1	11.8	+0.6	17.0	16.5	+0.9	13.6	+1.4	70	+ 3	270.2	371.6	72.7	4.7
Port Said (A)	1013.7	—1.5	21.1	—0.9	13.9	+0.4	17.5	16.4	0.0	14.0	+0.7	75	— 6	253.2	371.6	68.1	5.6
El Arish	1013.9	—1.5	22.0	+0.8	11.9	+1.2	17.0	16.8	+0.9	14.0	+1.4	72	+ 6	271.0	373.0	72.7	4.5
Ghazza	1013.5	—1.3	20.1	+0.1	12.6	+1.0	16.4	16.4	+0.5	14.3	+0.9	78	+ 4	221.4	371.8	59.5	3.7
Tanta	1013.5	—	24.4	—	9.8	—	17.1	16.3	—	12.9	—	65	—	283.1	371.8	76.1	3.9
Cairo (A)	1013.7	—1.5	25.4	+1.7	12.4	+1.1	18.9	18.2	+0.9	12.6	+0.3	48	— 4	—	—	—	12.7
Fayoum	1013.7	—	26.2	—	11.2	—	18.7	18.4	—	13.0	—	50	—	—	—	—	6.3
Minya (A)	1014.1	—1.4	27.0	+1.4	8.3	+0.5	17.6	17.3	+0.7	12.4	+1.5	53	+ 6	—	—	—	6.8
Assyout (A)	1013.6	—1.1	28.1	+1.7	11.7	+1.2	19.9	19.8	+1.3	11.8	+0.9	32	0	—	—	—	13.4
Luxor (A)	1012.6	—0.7	30.2	+1.2	11.1	+0.4	20.6	21.0	+1.0	12.8	+0.6	33	— 1	—	—	—	8.4
Aswan (A)	1012.7	—0.2	31.3	+0.6	13.5	—0.7	22.4	22.5	+0.5	11.2	+0.3	15	0	—	—	—	18.7
Siwa	1013.9	—1.6	26.8	+1.8	10.1	+1.9	18.4	18.4	+1.4	11.5	+1.1	38	0	—	—	—	11.3
Bahariya	1014.1	—1.2	27.3	+1.0	9.8	+1.1	18.6	18.8	+0.9	11.3	+0.8	33	— 1	—	—	—	7.6
Farafra	1015.5	—	28.3	—	9.9	—	19.1	19.1	—	11.1	—	31	—	—	—	—	12.8
Dakhla	1012.7	—0.7	30.0	+2.4	7.3	—2.2	18.6	18.4	—0.2	10.4	+0.8	30	+ 6	—	—	—	10.9
Kharga	1014.3	—	30.2	—	11.0	—	20.6	20.9	—	10.7	—	21	—	328.2	372.4	88.1	18.6
Tor	1012.7	—1.0	25.3	+1.3	13.3	+0.6	19.3	19.8	+0.9	14.1	+0.7	50	0	—	—	—	6.9
Hurghada	1012.5	+0.7	25.5	+2.5	12.7	+0.4	19.1	19.1	+0.5	13.9	+0.5	51	— 1	—	—	—	14.5
Quseir	1012.6	—1.0	25.5	+0.8	16.5	0.0	20.8	21.2	+0.6	14.8	+0.6	46	0	—	—	—	14.0

Table A 2. MAXIMUN AND MINIMUM AIR TEMPERATURES

MARCH — 1964

Station	Maximum Temperature °C									Grass Min. Temp.		Minimum Temperature °C							
	Highest	Date	Lowest	Date	No. of Days with Max-Temp.					Mean	Dev. From Normal	Highest	Date	Lowest	Date	No. of Days with Min. Temp.			
					>25	>30	>35	>40	>45							<10	<5	<0	<-5
Sallum	33.9	9	18.5	27	9	1	0	0	0	12.2	—	17.5	9	9.6	2	2	0	0	0
Mersa Matruh . . . (A)	29.8	1,9	18.2	18	4	0	0	0	0	—	—	15.0	29	6.7	27	7	0	0	0
Alexandria . . . . (A)	28.3	1	17.6	11	3	0	0	0	0	—	—	15.8	10	7.0	1,4	8	0	0	0
Port Said . . . . . (A)	26.0	14	18.3	4,11	3	0	0	0	0	13.2	—	16.9	29	11.4	12	0	0	0	0
El Arish	31.2	5	19.2	12	4	1	0	0	0	10.4	—	14.8	18	7.8	9	4	0	0	0
Ghazza	28.5	29	16.8	12	4	0	0	0	0	12.0	—	16.0	27	9.2	4	3	0	0	0
Tanta	29.2	9	20.3	11	11	0	0	0	0	—	—	14.6	10	6.2	1	14	0	0	0
Cairo . . . . . (A)	30.5	10	18.9	18	14	2	0	0	0	—	—	17.0	10	9.2	9	1	0	0	0
Fayoum	31.8	28	21.7	18	15	6	0	0	0	7.7	—	14.9	29	8.8	1	6	0	0	0
Minya . . . . . (A)	32.0	29	22.9	18	20	6	0	0	0	5.5	—	13.0	29,30	4.1	4	24	3	0	0
Assyout . . . . . (A)	33.7	24	22.6	12,18	24	9	0	0	0	10.3	—	18.4	29	8.9	5	4	0	0	0
Luxor . . . . . (A)	36.0	30	24.0	12,18	29	15	1	0	0	—	—	16.2	25	8.2	5	12	0	0	0
Aswan . . . . . (A)	36.7	28	27.3	18	31	19	5	0	0	—	—	17.1	30	10.6	4	0	0	0	0
Siwa	36.6	10	22.0	2	17	8	1	0	0	8.4	—	15.1	31	5.4	3	18	0	0	0
Bahariya	35.1	10	21.8	18	21	8	1	0	0	8.8	—	15.7	29	5.6	3	18	0	0	0
Farafra	34.8	29	22.5	18	24	10	0	0	0	8.8	—	15.5	30	5.1	13	19	0	0	0
Dakhla	35.4	17	23.6	12	29	16	3	0	0	2.0	—	13.7	31	2.8	27	23	5	0	0
Kharga	35.0	31	25.2	12	31	14	0	0	0	8.4	—	18.2	31	6.0	5	11	0	0	0
Tor	30.8	31	22.2	7	15	1	0	0	0	—	—	18.0	11	9.0	4	1	0	0	0
Hurghada	34.3	11	22.0	12	14	2	0	0	0	—	—	15.9	25	8.8	5	3	0	0	0
Quseir	38.3	11	22.3	4	12	1	1	0	0	—	—	18.4	10	12.7	5	0	0	0	0

Table A 3.—SKY COVER AND RAINFALL

MARCH — 1964

Station	Mean Sky Cover Oct					Rainfall mms										
	00 U.T.	06 U.T.	12 U.T.	18 U.T.	Daily Mean	Total Amount	Dev. From Normal	Max. Fall in one day		Number of Days With Amount of Rain						
								Amount	Date	< 0.1	≥ 0.1	≥ 1.0	≥ 5.0	≥ 10	≥ 25	≥ 50
Sallum	2.5	3.5	4.7	2.4	3.2	3.7	— 9.9	3.7	17	0	1	1	0	0	0	0
Mersa Matruh (A)	2.5	3.9	4.4	2.7	3.2	12.1	— 1.6	12.0	17	1	2	1	1	1	0	0
Alexandria (A)	2.6	4.8	4.5	3.1	3.7	7.3	— 6.7	5.8	17	1	4	2	1	0	0	0
Port Said (A)	0.9	2.7	3.4	0.2	2.2	0.4	— 8.2	0.2	15	0	3	0	0	0	0	0
El Arish	3.8	4.2	3.7	3.3	3.7	1.0	—11.9	1.0	11	2	1	1	0	0	0	0
Ghazza	4.4	4.9	4.2	3.2	4.0	20.7	— 7.7	6.8	25	1	8	5	1	0	0	0
Tanta	—	1.9	3.3	0.7	—	4.9	+ 0.7	4.0	18	0	3	1	0	0	0	0
Cairo (A)	1.2	3.2	3.9	1.8	2.6	1.1	— 1.2	1.1	18	2	1	1	0	0	0	0
Fayoum	—	1.5	2.3	0.9	—	tr.	— 1.7	tr.	14	1	0	0	0	0	0	0
Minya (A)	0.4	1.6	1.7	1.0	1.2	0.0	— 0.4	0.0	—	0	0	0	0	0	0	0
Assyout (A)	0.4	1.1	0.8	0.9	0.8	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Luxur (A)	0.3	0.8	1.3	1.0	1.3	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Aswan (A)	0.3	0.8	1.4	0.8	0.8	0.0	— 0.1	0.0	—	0	0	0	0	0	0	0
Siwa	1.5	2.7	2.7	1.5	2.0	0.0	— 0.3	0.0	—	0	0	0	0	0	0	0
Bahariya	0.8	1.0	2.0	0.8	1.3	tr.	+ tr.	tr.	17	1	0	0	0	0	0	0
Farafra	0.8	1.2	1.3	1.3	0.8	0.0	— 0.2	0.0	—	0	0	0	0	0	0	0
Dakhla	0.5	1.1	1.2	0.8	0.9	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Kharga	—	1.1	1.4	1.2	—	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Tor	0.5	1.4	1.4	0.7	1.1	0.0	— 1.3	0.0	—	0	0	0	0	0	0	0
Hurghada	0 6	0.9	1.0	0.7	0.9	0.0	— 0.5	0.0	—	0	0	0	0	0	0	0
Quseir	0.5	1.4	1.4	1.1	1.1	0.0	— 0.3	0.0	—	0	0	0	0	0	0	0

Table A 4. DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

MARCH — 1964

Station	Precipitation				Frost	Thunderstorm	Mist Vis ≥ 1000 metres	Fog Vis <1000 Metres	Haze Vis ≥1000 Metres	Thick Haze Vis <1000 Metres	Dust or Sandrising Vis ≥1000 Metres	Dust or Sandstorm Vis <1000 Metres	Gale	Clear Sky	Cloudy Sky
	Rain	Snow	Ice, Pellets	Hail											
Sallum	1	0	0	0	0	0	0	0	2	0	6	1	0	7	2
Mersa Matruh (A)	2	0	0	0	0	0	1	0	0	0	7	3	0	8	0
Alexandria (A)	4	0	0	0	0	0	2	6	0	0	2	1	0	4	2
Port Said (A)	3	0	0	0	0	0	2	0	0	0	4	0	0	13	0
El Arish	1	0	0	0	0	0	7	0	3	0	9	0	0	4	2
Ghazza	8	0	0	0	0	0	0	0	3	0	4	0	0	5	4
Tanta	3	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Cairo (A)	1	0	0	0	0	0	11	1	13	0	11	1	0	13	0
Fayoum	0	0	0	0	0	0	0	0	0	0	2	0	0	—	—
Minya (A)	0	0	0	0	0	0	8	0	2	0	3	0	0	25	0
Assyout (A)	0	0	0	0	0	0	0	0	8	0	3	1	0	26	0
Luxor (A)	0	0	0	0	0	0	0	0	12	0	2	0	0	26	0
Aswan (A)	0	0	0	0	0	0	0	0	3	0	4	0	0	25	1
Siwa	0	0	0	0	0	0	0	0	0	0	5	0	0	17	1
Bahariya	0	0	0	0	0	0	0	0	0	0	2	0	0	24	0
Farafra	0	0	0	0	0	0	2	0	5	0	4	1	0	22	0
Dakhla	0	0	0	0	0	0	0	0	4	0	3	1	0	25	0
Kharga	0	0	0	0	0	0	0	0	1		8	0	0	—	—
Tor	0	0	0	0	0	0	0	0	2	0	5	0	0	35	0
Hurghada	0	0	0	0	0	0	0	0	0	0	7	1	2	26	0
Quseir	0	0	0	0	0	0	0	0	0	0	8	0	0	26	0

Table A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

MARCH — 1964

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	All directions
				1—10	55	14	19	24	46	37	21	30	10	51	21	26	354
				11—27	11	5	7	22	34	13	15	28	17	40	58	103	353
ra Matruh (A)	16	0	2	28—47	0	0	0	0	0	0	0	2	2	2	11	2	19
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**66**	**19**	**26**	**46**	**80**	**50**	**36**	**60**	**29**	**93**	**90**	**131**	**726**
				1—10	48	40	52	38	64	30	23	18	5	29	87	51	485
				11—27	7	11	5	5	8	2	1	7	19	72	103	11	251
xandria . . (A)	8	0	0	28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**55**	**51**	**57**	**43**	**72**	**32**	**24**	**25**	**24**	**101**	**190**	**62**	**736**
				1—10	53	38	36	37	5	8	6	10	11	19	11	18	252
				11—27	31	28	57	47	12	4	15	11	12	129	63	57	466
t Said . . (A)	0	3	0	28—47	0	0	0	0	0	0	0	1	10	9	2	1	23
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**84**	**66**	**93**	**84**	**17**	**12**	**21**	**22**	**33**	**157**	**76**	**76**	**741**
				1—10	44	67	37	25	34	99	37	29	82	23	55	29	561
				11—27	2	4	0	0	0	0	5	1	53	42	56	2	165
Arish	4	14	0	28—47	—	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	—	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**46**	**71**	**37**	**25**	**34**	**99**	**42**	**30**	**135**	**65**	**111**	**31**	**726**
				1—10	19	29	37	29	44	95	26	17	19	27	37	39	418
				11—27	19	17	0	0	1	23	6	34	92	70	11	5	278
ska	0	47	0	28—47	0	0	0	0	0	0	0	0	1	0	9	0	1
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**38**	**46**	**37**	**29**	**45**	**118**	**32**	**51**	**112**	**97**	**48**	**44**	**697**
				1—10	27	65	73	55	33	7	27	37	105	77	74	37	617
				11—27	1	0	2	5	0	0	0	3	18	16	12	1	58
ta	65	4	0	28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**28**	**65**	**7**	**60**	**33**	**7**	**27**	**40**	**123**	**93**	**86**	**38**	**675**
				1—10	24	34	51	37	8	7	9	21	34	38	28	39	330
				11—27	5	23	44	33	6	7	20	27	30	41	55	13	304
o . . . . (A)	18	0	92	28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**29**	**57**	**95**	**70**	**14**	**14**	**29**	**48**	**64**	**79**	**83**	**52**	**634**

Table A 5. *(contd.)*—**NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES**

MARCH — 1964

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Fayoum	69	0	0	1—10	198	68	18	10	3	31	66	32	49	59	54	60	648
				11—27	0	0	0	0	0	0	2	3	15	0	3	4	27
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**198**	**68**	**18**	**10**	**3**	**31**	**68**	**35**	**64**	**59**	**57**	**64**	**575**
Minya . . . . (A)	65	3	0	1—10	133	64	8	3	23	72	26	8	3	38	52	132	562
				11—27	20	13	0	0	0	0	9	2	8	16	20	26	114
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**153**	**77**	**8**	**3**	**23**	**72**	**35**	**10**	**11**	**54**	**72**	**158**	**676**
Luxor . . . . (A)	16	2	0	1—10	42	65	45	36	28	35	81	40	38	36	57	158	661
				11—27	2	3	2	0	0	0	1	0	2	1	13	41	65
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				>48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**44**	**68**	**47**	**36**	**28**	**35**	**82**	**40**	**40**	**37**	**70**	**199**	**726**
Aswan . . . . (A)	9	0	23	1—10	257	133	5	1	0	8	18	4	5	30	21	80	562
				11—27	82	21	0	0	0	0	0	0	2	5	9	31	150
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**339**	**154**	**5**	**1**	**0**	**8**	**18**	**4**	**7**	**35**	**30**	**111**	**712**
Siwa.	50	0	2	1—10	15	13	30	69	77	54	32	20	27	57	58	36	488
				11—27	17	8	2	4	19	15	9	8	5	20	75	22	204
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**32**	**21**	**32**	**73**	**96**	**69**	**41**	**28**	**32**	**77**	**133**	**58**	**692**
Dakhla	48	2	0	1—10	34	85	30	43	47	33	31	43	37	53	119	118	673
				11—27	1	0	0	0	0	0	2	0	1	0	7	10	21
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**35**	**85**	**30**	**43**	**47**	**33**	**33**	**43**	**38**	**53**	**126**	**128**	**694**
Hurghada	5	15	0	1—10	14	30	26	10	39	20	13	7	11	70	90	15	345
				11—27	44	2	0	0	7	15	1	0	1	49	122	124	365
				28—47	0	0	0	0	0	0	0	0	0	0	1	13	14
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**58**	**32**	**26**	**10**	**46**	**35**	**14**	**7**	**12**	**119**	**213**	**152**	**724**
Quseir	24	0	4	1—10	41	41	15	19	24	40	23	16	40	98	94	67	518
				11—27	64	4	0	0	3	0	0	1	2	13	39	72	198
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**105**	**45**	**15**	**19**	**27**	**40**	**23**	**17**	**42**	**111**	**133**	**139**	**716**

Table B 1.—UPPER AIR CLIMATOLOGICAL DATA

MARCH—1964

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 0000 UT			*	*	*						
	Surface	30	1011m.b.	1017m.b.	1002m.b.	30	14.0	17.4	10.2	30	10.4
	1000	30	135	188	62	30	14.3	18.0	11.1	30	10.1
	850	30	1498	1550	1407	30	9.4	17.5	3.8	26	— 1.4
	700	30	3086	3163	2965	30	1.7	8.8	— 5.4	14	—11.4
	600	30	4310	4420	4165	30	— 6.1	1.4	—14.2	6	—18.8
	500	30	5710	5854	5531	30	—16.4	—11.1	—23.3	7	—24.3
	400	30	7351	7520	7127	30	—28.1	—23.5	—36.5	4	—32.8
	300	30	9348	9537	9082	30	—43.6	—38.8	—49.3	—	—
	200	30	11995	12184	11800	30	—55.2	—46.5	—62.1	—	—
	150	29	13814	14015	13663	29	—60.9	—53.0	—68.0	—	—
	100	24	16286	16508	16142	24	—66.8	—61.8	—72.2	—	—
	70	10	18414	18550	18310	10	—66.8	—60.0	—73.0	—	—
	50	7	20477	20657	20370	7	—63.1	—56.8	—65.6	—	—
	30	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 UT			*	*	*						
	Surface	29	997m.b.	1003m.b.	992m.b.	29	14.1	20.4	9.5	29	7.1
	1000	29	116	165	20	11	12.7	14.7	11.0	11	7.9
	850	29	1485	1525	1417	29	11.1	18.9	4.5	16	— 0.9
	700	29	3082	3154	2991	29	2.8	7.9	— 3.9	8	—11.6
	600	29	4311	4414	4194	29	— 5.1	1.8	—12.1	6	—16.3
	500	29	5719	5835	5562	29	—14.5	— 6.8	—23.0	2	—21.7
	400	29	7371	7506	7162	29	—27.3	—20.7	—35.1	3	—29.7
	300	29	9378	9607	9310	29	—42.3	—36.7	—46.9	—	—
	200	29	12039	12295	11842	29	— 54.7	—50.0	—62.1	—	—
	150	29	13855	14098	13720	29	—60.6	—53.4	—68.7	—	—
	100	29	16318	16587	16209	29	—68.7	—64.8	—71.7	—	—
	70	23	18496	18950	18350	23	—67.4	—59.7	—73.2	—	—
	50	19	20527	20846	20424	19	—62.4	—54.7	—67.8	—	—
	30	12	23754	23885	23640	12	—53.8	—48.0	—57.7	—	—
	20	10	26409	26860	26252	10	—46.7	—37.0	—52.5	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan 0000 UT			*	*	*						
	Surface	31	989m.b.	994m.b.	982m.b.	31	16.7	21.2	12.0	31	— 2.9
	1000	—	—	—	—	—	—	—	—	—	—
	850	31	1478	1514	1420	31	13.6	20.5	7.6	13	— 5.8
	700	31	3090	3166	3044	31	5.7	11.9	— 1.0	—	—
	600	31	4332	4436	4260	31	— 2.2	3.7	—11.4	2	—21.4
	500	31	5755	5886	5634	31	—11.8	— 7.0	—20.6	2	—23.6
	400	31	7422	7580	7261	31	—24.6	—21.5	—29.2	—	—
	300	31	9451	9659	9264	31	—39.7	—30.5	—44.0	—	—
	200	30	12121	12422	11892	30	—56.8	—50.7	—64.5	—	—
	150	28	13912	14237	13642	28	—65.4	—59.6	—70.0	—	—
	100	23	16307	16415	16016	23	—75.4	—71.8	—79.1	—	—
	70	18	18381	18480	18080	18	—72.6	—63.6	—78.3	—	—
	50	16	20380	20547	20081	16	—65.8	—60.8	—69.6	—	—
	30	7	23603	23684	23453	7	—54.9	—50.1	—57.5	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = Number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

Table B 1 (*contd.*)—UPPER AIR CLIMATOLOGICAL DATA

MARCH — 1964

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 1200 UT			*	*	*						
	Surface	31	1010m.b.	1015m.b.	1002m.b.	31	19.4	28.0	16.5	31	10.8
	1000	31	130	175	62	31	18.4	27.5	14.3	31	10.0
	850	31	1500	1553	1430	31	9.8	18.0	3.4	26	— 2.9
	700	31	3092	3172	2998	31	1.9	7.4	— 5.1	15	—10.9
	600	31	4319	4424	4200	31	— 4.5	0.9	—12.6	11	—16.6
	500	31	5725	5924	5568	31	—15.9	—10.4	—22.3	8	—26.0
	400	31	7361	7533	7195	31	—28.1	—22.8	—32.7	4	—34.2
	300	31	9364	9580	9183	31	—42.9	—38.5	—47.3	—	—
	200	31	12009	12163	11832	31	—54.9	—46.5	—63.5	—	—
	150	30	13837	14002	13697	30	—59.7	—53.5	—68.4	—	—
	100	26	16335	16462	16235	26	—66.8	—58.8	—72.3	—	—
	70	13	18484	18660	18400	13	—67.4	—63.0	—72.9	—	—
	50	9	20534	20642	20428	9	—62.7	—58.0	—67.0	—	—
	30	3	23794	23929	23600	3	—50.7	—43.0	—56.8	—	—
	20	2	26412	26566	26259	2	—37.8	—37.8	—37.8	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 1200 UT			*	*	*						
	Surface	30	996m.b.	1001m.b.	990m.b.	30	24.2	29.2	17.6	30	3.2
	1000	30	110	149	60	8	22.3	25.8	20.6	8	4.8
	850	30	1492	1538	1421	30	11.1	19.6	5.0	23	— 4.1
	700	30	3087	3170	2987	30	2.7	9.3	— 4.2	10	—12.9
	600	30	4319	4422	4214	30	— 4.8	0.7	—10.0	11	—18.2
	500	30	5727	5859	5575	30	—14.5	—10.2	—19.2	7	—24.8
	400	30	7381	7560	7206	30	—27.0	—23.4	—31.8	5	—33.9
	300	30	9392	9596	9278	30	—42.0	—37.0	—48.3	—	—
	200	30	12052	12274	11895	30	—54.5	—48.8	—63.9	—	—
	150	30	13873	14041	13737	30	—60.0	—56.3	—66.4	—	—
	100	29	16359	16487	16245	29	—67.5	—60.6	—72.9	—	
	70	25	18499	18670	18380	25	—67.9	—63.2	—75.9	—	—
	50	18	20553	20660	20421	18	—62.4	—59.0	—66.7	—	—
	30	6	23789	23868	23713	6	—52.2	—47.2	—60.0	—	—
	20	2	26427	26582	26272	2	—49.0	—42.8	—55.1	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan 1200 UT			*	*	*						
	Surface	30	989m.b.	993m.b.	982m.b.	30	30.2	35.2	25.0	30	3.2
	1000	—	—	—	—	—	—	—	—	—	—
	850	30	1506	1549	1473	30	17.0	23.8	10.5	8	— 5.8
	700	30	3133	3193	3095	30	8.7	14.2	3.7	—	—
	600	30	4387	4473	4356	30	0.6	5.7	— 2.0	—	—
	500	30	5826	5911	5768	30	— 8.9	— 3.6	—12.2	2	—24.5
	400	30	7513	7635	7438	30	—21.5	—16.6	—26.0	2	—30.6
	300	30	9568	9666	9466	30	—38.6	—32.2	—42.0	2	—41.0
	200	29	12270	12428	12128	29	—54.1	—49.6	—59.4	—	—
	150	28	14073	14222	13940	28	—63.3	—59.8	—69.3	—	—
	100	23	16504	16647	16401	23	—72.7	—69.0	—77.7	—	—
	70	16	18560	18710	18100	16	—71.5	—68.0	—73.8	—	—
	50	10	20592	20698	20464	10	—62.8	—59.0	—68.2	—	—
	30	3	23775	23911	23665	3	—52.4	—51.6	—53.3	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—		—	—	—	—	—

N = Number of observations of specified pressure surface.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

Table B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE ; THE HIGHEST WIND SPEED IN THE UPPER AIR

MARCH — 1964

	Station	Freezing Level									First Tropopause									Highest wind speed			
		Mean			Highest			Lowest			Mean			Highest			Lowest						
		Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Direction (000—360)°	Speed in Knots
0000 UT		(N)	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh(A)	3295 (30)	683 (30)	—10.8 (13)	4600	588	—	2060	782	—	11082 (26)	232 (26)	—56.7 (26)	13130	172	—63.1	8140	348	— 431	10100	270	270	122
	Helwan	3483 (29)	667 (29)	—11.2 (10)	4403	600	—	1400	855	— 3.9	11167 (29)	236 (29)	—53.5 (29)	15450	118	—69.6	9090	314	—41.6	13020	172	280	136
	Aswan . . (A)	4003 (31)	626 (31)	—22.6 (2)	4960	562	—	2920	712	—	15561 (22)	118 (22)	—75.6 (22)	17040	089	—76.8	10300	263	—49.1	12800	—	250	145
1200 UT		(N)	(N)	(N)							(N)	(N)	(N)										
	MersaMatruh (A)	3367 (31)	677 (31)	—10.8 (16)	4890	560	—17.7	1870	808	— 2.4	11417 (31)	222 (31)	—55.9 (31)	14260	137	—57.2	8970	308	—44.5	4300	592	280	150
	Helwan	3343 (30)	671 (30)	—11.7 (14)	4540	591	—	2130	785	— 4.6	11290 (30)	230 (30)	—53.7 (30)	14520	133	—63.4	9190	309	—40.2	11360	228	300	133
	Aswan . . .(A)	4485 (30)	591 (30)	—22.0 (2)	5280	540	—	3140	615	—	15689 (19)	133 (19)	—67.9 (19)	17420	086	—73.3	9860	282	—45.0	15400	121	270	124

N = The number of cases the element has been observed during the month.

Table B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

MERSA MATRUH (A)—MARCH 1964

Time	Pressure Surface Millibar	Wind between specified ranges of direction (000—360)°																								Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0600 U.T.	Surface	1	17	0	—	0	—	1	3	5	7	0	—	3	11	2	6	1	8	6	10	7	13	3	13	1	30	10
	1000	1	17	0	—	0	—	0	—	4	6	0	—	3	11	2	6	1	8	6	12	8	13	3	13	2	30	10
	850	1	8	1	4	0	—	1	13	0	—	0	—	1	15	1	50	6	17	7	23	10	25	2	16	0	30	21
	700	0	—	0	—	0	—	0	—	0	—	1	7	1	21	2	35	6	31	11	31	9	28	0	—	0	30	29
	600	0	—	0	—	0	—	0	—	0	—	0	—	1	11	3	43	4	38	14	40	8	40	0	—	0	30	39
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	35	3	33	12	53	10	49	0	—	0	27	48
	400	1	32	0	—	0	—	0	—	0	—	0	—	0	—	2	45	1	28	12	63	6	50	0	—	0	22	55
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	64	1	24	7	66	2	84	2	72	0	14	66
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	100	0	—	2	66	2	78	0	—	0	5	77
	150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	5	9	2	10	1	12	4	10	1	17	0	—	1	9	3	15	1	9	1	14	6	22	6	20	0	31	15
	1000	5	9	1	9	2	10	4	10	1	20	0	—	0	—	4	14	1	9	1	14	7	22	5	20	0	31	15
	850	0	—	0	—	1	8	0	—	1	11	1	12	4	18	4	21	2	14	7	22	10	25	1	5	0	31	19
	700	0	—	0	—	0	—	0	—	1	7	0	—	1	27	3	9	7	33	8	37	10	28	1	14	0	31	28
	600	0	—	0	—	0	—	0	—	0	—	0	—	2	34	2	13	6	37	11	52	8	34	1	35	0	30	40
	500	0	—	0	—	0	—	0	—	0	—	0	—	1	58	1	20	7	45	13	55	7	55	1	33	0	30	51
	400	0	—	0	—	0	—	0	—	0	—	0	—	1	60	2	30	6	64	12	65	6	55	0	—	0	27	60
	300	0	—	0	—	0	—	0	—	0	—	0	—	1	64	1	66	6	69	4	114	6	58	0	—	0	18	75
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	93	4	88	0	—	0	—	0	8	90
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	110	1	61	0	—	0	—	0	2	86
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the wind has been observed from the range of direction during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

Table B 3 *(contd.)*.—**NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES**

HELWAN—MARCH 1964

Time	Pressure Surface Millibar	Wind between specified ranges of direction (000–360)°																						Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	1	5	5	8	4	13	3	8	0	—	0	—	2	7	0	—	0	—	3	9	0	—	0	—	11	29	6
	1000	2	6	2	12	3	12	0	—	0	—	0	—	1	4	0	—	0	—	0	—	0	—	0	—	3	11	7
	850	2	14	0	—	1	10	0	—	0	—	0	—	1	21	2	18	2	30	8	19	11	19	2	20	0	29	19
	700	1	19	0	—	0	—	0	—	0	—	0	—	0	—	3	11	3	30	5	32	14	24	3	31	0	29	25
	700	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	20	1	36	13	38	9	41	4	22	0	29	35
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	28	4	47	12	48	7	65	4	39	0	29	49
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	59	3	36	9	74	5	59	5	51	0	24	60
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	65	6	59	5	62	2	62	0	16	62
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	75	3	64	4	105	0	—	0	11	83
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	108	3	82	1	125	0	—	0	6	98
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	76	1	36	0	—	0	—	0	2	56
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	1	8	5	11	3	11	0	—	0	—	0	—	2	11	3	13	3	10	9	11	1	19	3	14	0	30	11
	1000	1	9	2	14	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	7	0	—	2	9	0	8	10
	850	2	12	2	9	2	12	0	—	2	12	0	—	1	6	3	18	6	17	5	20	6	19	1	20	0	30	16
	700	3	15	0	—	0		0	—	0	—	1	7	0	—	3	15	4	34	7	40	9	28	3	19	0	30	27
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	16	7	37	11	35	5	33	5	39	0	29	35
	500	1	20	0	—	0	—	0	—	0	—	0	—	0	—	3	28	3	52	9	52	8	47	4	57	0	28	48
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	36	1	28	11	64	6	65	2	52	0	22	59
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	42	2	42	5	65	7	74	1	77	0	17	64
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	92	6	70	5	95	0	—	0	12	82
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	102	5	72	2	86	0	—	0	8	79
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	57	0	—	0	—	0	2	57
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the wind has been observed from the range of direction during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

Table B 3 (*contd.*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A) — MARCH 1964

Time	Pressure Surface Millibar	Wind between specified ranges of direction (000—360)°																						Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	18	12	5	11	1	9	1	9	0	—	0	—	0	—	0	—	0	—	2	9	1	9	0	—	3	31	10
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	7	12	5	9	1	12	0	—	1	11	0	—	2	6	0	—	2	10	3	11	5	16	5	21	0	31	13
	700	2	10	2	9	0	—	1	8	0	—	0	—	0	—	0	—	5	24	7	26	11	19	3	17	0	31	20
	600	1	17	0	—	0	—	0	—	0	—	0	—	0	—	1	8	4	34	13	34	9	25	3	25	0	31	29
	500	1	27	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	31	14	43	9	37	2	28	0	31	38
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	49	18	45	6	54	2	32	0	30	46
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	56	18	54	7	68	0	—	0	29	57
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	100	15	68	2	56	0	—	0	20	72
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	11	75	1	55	1	46	0	13	72
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	60	1	68	0	—	0	5	62
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T	Surface	18	9	2	8	0	—	1	6	0	—	0	—	0	—	1	5	1	12	1	20	2	11	2	8	2	30	9
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	8	15	0	—	2	8	3	7	2	9	0	—	1	10	0	—	1	17	2	22	6	18	5	12	0	30	14
	700	0	—	0	—	1	16	1	4	0	—	0	—	1	10	0	—	3	19	6	27	10	17	6	16	2	30	17
	600	1	12	1	8	0	—	0	—	0	—	0	—	0	—	2	14	5	23	11	30	8	25	2	24	0	30	25
	500	1	11	0	—	0	—	0	—	0	—	0	—	0	—	1	24	3	25	20	40	3	34	2	32	0	30	36
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	45	16	54	6	42	1	38	1	29	43
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	81	14	51	7	59	1	59	0	24	56
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	61	13	71	3	71	0	—	0	19	70
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	10	70	2	60	0	—	0	12	68
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	70	0	—	0	—	0	4	70
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N. = The number of cases the wind has been observed from the range of direction during the month.

T.N. = The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATION AT EL KASR

MARCH 1964

The month was mainly unsettled, with successive cold and warm spells of short duration, though slightly warmer and more humid than normal.

The month started with a minor cold wave giving the lowest soil temperatures at depths 0.3, 2, 5, 10 & 20 cms. on the 4th and for the depths 50, 100 & 200 cms. on the 1st. Also the lowest value of evaporation from pan class A occurred on the 3rd.

The most pronounced warm spell started on the 7th with the peak on the 9th when the absolute maximum air temperature (10.5°C above normal), the highest values of evaporation from pan class A and Piche in the screen (8.9 mms. above normal), the water vapour pressure and the water vapour pressure deficit occurred as well as the lowest values of the relative humidity (47% below normal).

A distinguished minor cold wave started on the 24th and gave rise to the absolute minima of air temperature at 2 metres and 5 cms. above ground level on the 27th and also those of soil temperatures at depths 0.3 & 1 cm.

A warm spell prevailed towards the end of the month when the absolute maxima of soil temperatures at depths 0.3, 2, 50 & 100 cms. were observed on the 30th, whereas the highest minima at depths 2, 5, 10, 20 & 200 cms. took place on the 29th.

Cold air invaded Matruh area at the beginning of the 3rd week giving showers and the highest wind speed at 50, 100, 200 & 300 cms. above ground level on the 18th. The lowest value of Piche evaporation (5.0 mms. below normal) was observed on the 21st. associated with the minor cold wave.

The mean air temperature, relative humidity at 2 metres and total rainfall were generally above normal by amounts 1.2°C, 12% and 7.9 mms. respectively.

REVIEW OF AGRO-METEOROLOGICAL STATION AT TAHRIR

MARCH 1964

This month was unsettled with khamsin conditions prevailing during the first two weeks with occasional rising sand.

The month started with a cold wave giving the absolute minimum temperature of the air at 2 metres and 5 cms. above ground on the 1st as well as those of the soil down to 1 metre deep.

A minor warm spell started on the 4th with the lowest value of vapour pressure and the highest values of evaporation from pan class A and Piche in the screen and in the free air occurring on the 5th.

The pronounced warm spell prevailed during the period from 7th to 10th giving the absolute maximum air temperature in the screen on the 9th and those of soil temperatures for the depths 0.3, 1 and 2 cms. on the 10th and also the highest minimum air temperature in the screen.

This warm spell was followed by an intense cold wave, though of short duration with the lowest maximum air temperature and the shortest duration of sunshine on the 11th.

Khamsin conditions started on the 15th with the peak on the 17th when sand storms occurred with the maximum wind speed of 43 knots. A moderate cold front passed on the following day giving light showers and once more the shortest duration of sunshine as well as the lowest values of evaporation for pan class A and Piche.

A warm spell prevailed towards the end of the month with the absolute maxima of soil temperatures for the layer from 5 to 100 cms. on the 31st.

Comparing this month with March 1963, we find that the means of evaporation and vapour pressure were higher by 1.3°C and 0.9 mms. respectively while the mean relative humidity was less by 3%. The mean of Piche evaporation was the same as last year while pan A evaporation was less by 0.37 mms. The mean wind speed at 2 metres was more by 0.2 m/sec. and sunshine duration was more by 16.2 hours. The total rainfall was 0.6 mms. against 4.4 mms. for last year.

As for extreme soil temperatures the maxima were less by 3.3 to 0.3°C for the surface layer down to the depth of 20 cms. except that at 5 cms. where it was more by 0.8°C. From 0.5 to 2 metres they were more by 0.1 to 0.2°C, becoming less again in the subsequent layer.

Without taking into account the first centimetre where the absolute minima were less by 1.0°C, the first half metre yielded higher minima by 0.3 to 2.4°C, while no change was observed for further depths,

REVIEW OF AGRO-METEOROLOGICAL STATION AT GIZA

MARCH 1964

This month was unsettled with successive cold and warm spells of short duration, though mild and rather dry compared with the normal values.

The month started with a cold night when the minimum air temperature was about normal, whereas the soil temperatures in the dry, wet and grass fields showed their absolute minimum values for the month in the early morning of the 1st. day for the surface layer down to 200 cms. depth and also the absolute minima of air temperature at 5 cms. above ground, although these values were higher than those of March 1963 by variable amounts not exceeding 3°C.

The first warm spell started on the 3rd. and gave rise to the highest values of Piche evaporation in the free air at 120, 60 and 1 cms. above ground level on the 5th as well as the lowest vapour pressure in the screen.

A pronounced warm spell started on the 7th with the peak on the 10th when the absolute value of maximum air temperature was attained (6.3°C above normal), whereas the absolute maxima of soil temperatures at depths 0.3 cm. in the wet and grass fields and that at 1 cm. depth in the wet field took place on the previous day; in the dry field, the absolute maxima for soil temperatures at depths 0.3, 1 & 2 cms. occurred on the 17th associated with the peak of a minor warm spell.

The lowest values of maximum air temperature were associated with the peak of a cold wave on the 18th (5°C below normal) when the smallest range of air temperature was observed and also the lowest values of Piche evaporation in the free air and in the screen (1.4 mms. below normal).

The absolute minimum of air temperature at 2 metres above ground level occurred with the peak of a cold wave on the 27th (2.4°C below normal).

A remarkable warm spell started on the 28th giving rise to the highest minimum air temperature in the screen (4°C above normal) on the 30th, when the highest values of vapour pressure and soil temperatures in the wet field at depths 2, 5, 10 & 20 cms. were recorded. On the last day of the month, the absolute maxima of soil temperatures for the layer 10 to 200 cms. in the dry and grass fields were observed and also the highest value of Piche evaporation in the screen (6.4 mms. above normal).

Compared with March 1963, the means of air temperature at 2 metres for the day, night time and day time were generally higher by amounts 1.6, 1.7 & 1.7°C respectively. The means of the surface wind speed at 2 metres were also higher by 0.8, 0.9 & 0.5 m/sec. for the day, night time and day time respectively. The total actual duration of bright sunshine was more by 1.2 hours and amounted to 72% out of the total possible duration. The mean pan class A evaporation of the day was higher by 1.23 mms. probably for the increase of mean wind speed at 2 metres. No material differences were observed in the total potential evaporation and evapo-transpiration for grass (Libia).

REVIEW OF AGRO-METEOROLOGICAL STATION AT KHARGA

MARCH 1964

This month was mainly unsettled with successive cold and warm spells, though slightly warmer and drier compared with the normal values.

It started with a cold wave giving the absolute minima of air temperature on the 5th both at 2 metres above ground level (5.6°C below normal) and at 5 cms. as well as for soil temperatures down to 10 cms. deep. For further depths, such minima took place on the 1st day when the highest humidity (29% above normal) and the lowest values of evaporation from pan class A and Piche in the screen (7.9 mms. below normal) and in the free air at the different levels occurred.

Another cold wave started on the 11th when the highest values of vapour pressure and wind speed at 50, 100, 200 & 300 cms. happened with the lowest maximum of air temperature on the 12th (2.8°C below normal).

A pronounced warm spell prevailed towards the end of the month, giving the absolute maxima of temperature for the air at 2 metres and for the soil down to the depth of 1 metre on the 31st, as well as the highest minima of air temperature at 2 metres (5°C above normal) and at 5 cms. The highest values of evaporation from pan class A and Piche in the screen and in the free air occurred on the same day when the lowest values of the relative humidity and vapour pressure also occurred. It is of interest to find that much medium and high clouds prevailed on the 29th causing sunshine duration 5.6 hours only on that day while the possible duration is more than 12 hours.

The mean temperature of the day and the Piche evaporation in the screen were higher than the normal values by 1.8°C and 2.3 mms. respectively, whereas the mean relative humidity was lower by 19%.

Table C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

MARCH — 1964

STATION	Air Temperature (°C)					Mean Duration in hours of daily air temperature above the following values										
	Mean Max.	Mean Min.	Mean of the day	Night time mean	Day time mean	-5°C	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C
El Kasr	22.0	10.8	16.0	13.8	18.3	24.0	24.0	24.0	22.4	14.4	2.8	0.5	0.0	0.0	0.0	0.0
Tahrir	24.8	10.2	16.8	14.0	19.6	24.0	24.0	24.0	22.9	13.9	7.0	1.5	0.0	0.0	0.0	0.0
Giza	25.0	10.2	17.5	15.0	19.7	24.0	24.0	24.0	23.0	15.4	7.5	2.1	0.0	0.0	0.0	0.0
Kharga	30.2	10.9	21.0	17.6	24.1	24.0	24.0	24.0	23.4	19.1	13.0	7.2	2.1	0.0	0.0	0.0

Table C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS

MARCH — 1964

STATION	Max. Temp. at 2 metres				Min. Temp. at 2 metres				Min. Temp. at 5 cms. above			
	Highest		Lowest		Highest		Lowest		Dry Soil		Grass	
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date
El Kasr	30.3	9	18.4	3	15.0	30	6.4	27	4.7	27	—	—
Tahrir	30.1	9	18.7	11	15.2	10	6.9	1	4.3	1	—	—
Giza	30.7	10	19.7	11, 18	13.4	30	6.9	27	2.3	1	0.8	1
Kharga	35.0	31	25.2	12	18.2	31	6.0	5	4.3	5	—	—

Table C 3.—(SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY & VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVPORATION & RAINFALL

MARCH — 1964

	Solar+Sky Radiation gm. cal/cm²	Duration of Bright Sunshine (hours)			Relative Humidity %					Vapour Pressure (mms)						Evaporation(mms)		Rainfall (mms)		
		Total Actual	Total Possible monthly	%	Duration in hours > 90%	Duration in hours > 80%	Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 UT	Highest	Date	Lowest	Date	Piche	Pan class (A)	Total Amount monthly	Max. fall in one day	Date
Kasr.	420.1	275.6	371.9	74	—	—	77	60	18	9	10.1	10.4	13.5	29	5.6	9	—	6.34	14.0	14.0	17
Tahrir .	471.7	273.8	372.0	74	4.2	8.2	66	38	17	17	9.0	8.0	13.2	29	3.9	5	11.7	7.03	0.6	0 6	18
Giza . .	500.1	267.2	372.0	72	2.4	5.6	62	37	17	14	8.7	7.9	12.5	30	4.7	5,14	11.3	7.20	0.3	0.3	18
Kharga .	497.6	327.5	372.6	88	0	0	27	18	8	30	4.8	4.9	9.2	11	0.4	30	24.9	11.25	0.0	—	—

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MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties as the National Meteorological service for the U.A.R., the Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be adressed to :—

"The Director General, Meteorological Department, Kubri-el-Qubbeh—CAIRO".

THE DAILY WEATHER REPORT

This report is printed daily in the Meteorological Department. It contains surface and upper air observations carried by the relevant networks of the Republic and made at the four main synoptic hours of observations (00, 06, 12 and 18 U.T.); as well as ship observations over the Eastern Mediterranean and north Red Sea made at the same times.

It also contains two surface synoptic charts at 00 and 12 U.T. and two upper air charts for the standard isobaric surfaces 700 & 500 mbs. at both 00 and 12 U.T.

In compliance with resolution 8 (EC-XIII) of WMO, foreign upper air data included in Cairo Subregional Broadcast are also given in this report.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year .

CLIMATOLOGICAL NORMALS FOR EGYPT

The normals, long averages and statistical data are given in one edition for stations in Egypt from the date of opening of each station up to 1945, A new voluminous edition was issued in March 1968 which brings normals and mean values up till 1960.

UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

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GENERAL SUMMARY OF WEATHER CONDITIONS

APRIL 1964

Generally mild, but warm the 1st week in the northern and middle parts; alternatively very hot the 1st half, rather warm the 2nd half in the southern parts. Local heavy rain over Delta Area and East Mediterranean coast on the 20th.

GENERAL DESCRIPTION OF WEATHER

Four consecutive khamsin disturbances raversed the country round the 4th, 6th, 2th and 26th, the first two of which revailed most of the 1st week and were xcessive. Mild periods separated the prevail-ng khamsin waves. Transitory cold fronts vere preceded with widespread sandstorms r sandrising. Occasional rain and isolated hundery cells were reported over scattered ocalities in the northern and middle parts f the Republic during the third week. Rain was locally heavy in particular over ower Egypt and East Mediterranean coast n the 20th when 22.8 mms, 42.3 mms, & 3.4 mms of rain fell over Port Said, El Arish, & Tanta respectively which exceeded ppreciably the corresponding normal mon-hly totals. Elsewhere rain was light and ts monthly total was rather subnormal.

PRESSURE DISTRIBUTION

The normal pressure distribution over the Mediterranean and North Afri a vici-nities was disturbed this month five times, either due to the transitory secondary depressions along their preferred North Africa track or due to the deep northward elongation of the Sudan trough.

This month started with a complex low pressure system of pronounced vertical structure as far as the 300 mb level over West Mediterranean. It deepened rapidly while enlarging its warm sector and moving northeastwards, attached khamsin secondaries at its foot over North Africa showed rapid displacements along more or less an eastward track. On the 4th the first khamsin disturbance traversed East Mediterranean, and by the 6th a second khamsin disturbance followed, when the main primary traversed the Black sea northeastwards.

On the 9th a third secondary depression developed over Algiers at the lee side of Atlas mountains. It followed a coastal track and traversed rapidly the U.A.R. on the 12th as a coastal khamsin. On the 13th it shooted NE-wards towards Iraq. During its life history it was reflected upwards as far as the 500 mb level.

The 4th and last khamsin disturbance during this month developed on the 22nd over the Libyan Desert. It proceeded eastwards while deepening slightly; traversed western parts of U.A.R. on the 25th and southeast Mediterranean corner on the 26th where it amalgamated with extension of the northern arm of the Sudan trough.

It is worth to mention that high pressure operated over the Mediterranean and North Africa regions otherwise, with the exception of the 18th and 19th when the Sudan trough showed a marked northward oscillation towards southeast Mediterranean corner, where the barometric pressure fell slightly below its normal.

The subtropical jet stream was evident most of the month in the upper troposphere over the U.A.R. at about 200 mb level.

The polar jet stream was evident north of latitude 30° N, only in association with the travelling Mediterranean depressions at about 300 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan and Aswan were 160, 150, 120 knots on the 6th, 12th and 16th respeetively.

SURFACE WIND

The prevailing winds were light/moderate, generally Nly and NWly. Moderate/fresh Sly and SW ly winds blew in advance of transitory khamsin disturbances, while fresh /strong W/NW winds blew in their associations and at their rears. In particular over the western Mediterranean coastal strip and over Red Sea district fresh/strong winds were frequent most days of the month.

Gales were reported at : Sallum on the 25th; El-Kasr on the 4th; Balteam on the 12th; Port Said on the 20th; Abu Sueir on the 6th and 12th; Zaher on the 6th; Fayed on the 6th, 12th, 16th and 20th; Kabrit on the 6th; Mostafa Helmi and Asyout on the 12th and at Hurghada on the 16th and 21st.

TEMPERATURE

Maximum air temperature was subnormal in general over the northern and middle parts of the Republic, apart from the periods (1 st– 6 th), 12 th, (24th–26th) during which it exceeded variably its normal in khamsin disturbances. In the southern part maximum air temperature was above norma during the first half of the month and th period (24th – 26th) and was subnorma otherwise.

The absolute maximum temperature for the Republic was 44.5°C reported a Dakhla on the 6th.

Variability in minimum temperature was generally similar to variability i maximum temperature.

The absolute minimum temperature for the Republic was 5.6°C reported a Dakhla on the 22nd.

PRECIPITATION

This month was almost rainless, apar from the third week which was characteri zed with few widespread rainy days in the northern parts of the Republic, in particula the 16th and 20th during which rain wa associated with occasional thunderstorms. On the 20th rain was heavy over scattered localities in the East Mediterranean coastal strip and Delta. It is worth to mention that rainfall on the 20th exceeded appre ciably the total monthly fall of April in several stations as Port Said, El Arish & Tanta.

The absolute daily rainfall for the Repu blic was 42.3 mms reported at El Arish on the 20th, which was also the absolute monthly rainfall for the Republic.

Cairo 25 / 6 / 1970

M. F. TAHA
Under Secretary of State
Director General
Meteorological Department

Table A 1.– MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION

APRIL — 1964

STATION	Atmospheric Pressure (mbs) M.S.L		Air Temperature °C									Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evaporation mms. Mean
			Maximum		Minimum		$\frac{A+B}{2}$	Dry Bulb		Wet Bulb							
	Mean	D.F. Normal or Average	(A) Mean	D.F. Normal or Average	(B) Mean	D.F. Normal or Average		Mean	D.F Normal or Average	Mean	D.F Normal or Average	Mean	D.F Normal or Average	Total Actual	Total Possible	%	
Sallum	1014.9	+1.4	22.8	—1.0	14.2	0.0	18.5	18.1	—0.5	14.1	+0.3	62	+ 7	—	—	—	8.3
Mersa Matruh (A)	1015.4	+0.8	23.0	—0.7	12.5	+0.7	17.2	17.0	—0.4	13.4	—0.1	64	0	269.2	388.8	69.2	8.8
Alexandria (A)	1014.6	+0.2	23.4	—0.2	13.1	—0.4	18.2	17.8	—0.5	13.9	—0.7	62	— 6	286.7	388.2	73.8	5.9
Port Said (A)	1014.3	+0.2	21.6	—1.0	15.1	—1.0	18.4	18.1	—0.7	14.9	+1.2	69	— 3	276.1	388.2	71.1	5.1
El Arish	1013.9	+1.4	23.5	—0.1	13.4	+0.2	18.4	18.2	—0.5	14.9	—0.5	68	— 1	279.8	388.2	72.1	5.2
Ghazza	1013.7	+1.1	20.3	—1.4	13.3	—0.5	16.8	17.7	—0.4	14.8	—0.6	71	— 2	238.4	388.8	61.3	5.3
Tanta	1013.5	—	26.5	—	10.9	—	18.7	17.8	—	13.6	—	60	—	285.7	387.8	73.7	5.3
Cairo (A)	1014.0	+0.3	27.6	—0.6	13.5	—0.4	20.6	19.9	—1.0	13.4	—1.3	43	— 5	—	—	—	14.5
Fayoum	1013.8	—	28.8	—	13.0	—	20.9	20.3	—	13.8	—	44	—	—	—	—	8.7
Minya (A)	1013.2	+0.1	29.6	—1.0	11.4	—0.4	20.5	20.4	—0.8	13.8	—0.1	44	+ 3	—	—	—	8.7
Assyout (A)	1012.9	+0.8	30.7	—1.2	15.0	—0.2	22.8	23.3	—0.6	13.0	—0.5	24	0	—	—	—	5.8
Luxor (A)	1010.9	+0.3	34.9	+0.1	16.6	+0.9	25.8	26.2	+0.3	14.8	—0.3	22	— 4	—	—	—	12.0
Aswan (A)	1010.7	+1.3	36.0	+0.3	18.3	—0.3	27.2	27.5	+0.3	13.6	+0.2	11	— 1	—	—	—	22.3
Siwa	1014.1	+0.4	29.4	—0.5	13.9	+1.8	21.6	21.8	+0.1	12.8	—0.4	29	— 4	—	—	—	16.6
Bahariya	1013.9	+1.2	29.9	—0.8	13.4	0.0	21.6	21.9	—0.7	12.8	—0.8	28	— 2	—	—	—	9.7
Farafra	1014.5	—	30.9	—	13.6	—	22.2	22.3	—	12.6	—	25	—	—	—	—	17.4
Dakhla	1011.5	+1.3	33.4	+0.7	12.9	—1.4	23.2	23.5	—0.3	12.5	0.0	19	+ 1	—	—	—	16.6
Kharga	1012.8	—	33.9	—	16.9	—	25.4	25.5	—	12.9	—	14	—	328.1	382.0	85.9	31.2
Tor	1011.6	+0.7	27.2	—0.8	16.7	+0.4	22.0	22.0	—0.4	16.3	—0.6	52	— 2	—	—	—	9.1
Hurghada	1011.6	+0.7	27.2	+1.2	16.1	0.0	21 8	22.2	0.0	15.2	—0.8	43	— 6	—	—	—	19.8
Qusair	1011.6	+1.5	26.1	—1.2	19.7	+0.3	22.9	23.2	—0.6	16.4	—0.5	46	0	—	—	—	18.4

Table A 2.— MAXIMUM AND MINIMUM AIR TEMPERATURES

APRIL — 1964

Station	Maximum Temperature °C									Grass Min. Temp.		Minimum Temperature °C							
	Highest	Date	Lowest	Date	No. of Days with Max-Temp.					Mean	Dev. From Normal	Highest	Date	Lowest	Date	No. of Days with Min. Temp.			
					>25	>30	>35	>40	>45							<10	<5	<0	<-5
Sallum	35.4	4	18.5	11	6	2	1	0	0	14.0	—	19.8	4	12.3	20,21	0	0	0	0
Mersa Matruh . . . (A)	35.7	4	18.8	10	5	1	1	0	0	—	—	15.8	6	8.1	3	3	0	0	0
Alexandria . . . . (A)	35.4	4	19.7	10	7	2	1	0	0	—	—	16.2	28	8.8	23	4	0	0	0
Port Said . . . . . (A)	29.4	6	19.6	21	1	0	0	0	0	14.5	—	17.9	5	9.1	20,21	2	0	0	0
El Arish	40.5	6	20.6	11·13·14	6	3	1	1	0	12.3	—	17.4	27	10.0	2	0	0	0	0
Ghazza	36.0	6	18.6	13	4	2	1	0	0	12.9	—	17.6	27	9.1	4	1	0	0	0
Tanta	34.8	6	21.6	20	16	4	0	0	0	—	—	14.4	5	8.0	1	8	0	0	0
Cairo . . . . . (A)	36.2	4	22.3	16	22	7	4	0	0	—	—	19.4	6	10.1	20,21	0	0	0	0
Fayoum	40.1	6	23.5	21	26	10	3	1	0	9.5	—	18.3	5	10.3	11,19	0	0	0	0
Minya . . . . . (A)	43.0	6	24.0	21	27	10	3	1	0	8.8	—	15.5	29	7.0	22	11	0	0	0
Assyout . . . . . (A)	43.6	6	24.7	21	29	21	6	2	0	13.5	—	20.0	5	11.3	17·19	0	0	0	0
Luxor . . . . . (A)	42.3	6	26.0	21	30	23	19	4	0	—	—	23.4	13	11.2	22	0	0	0	0
Aswan . . . . . (A)	43.5	6	24.8	21	29	25	21	6	0	—	—	23.6	7	11.5	22	0	0	0	0
Siwa	39.5	4	23.8	20	28	11	1	0	0	12.8	—	19.2	6	9.2	17	4	0	0	0
Bahariya	40.3	6	23.4	16	26	12	2	1	0	12.5	—	21.8	6	7.9	22	4	0	0	0
Farafra	42.1	6	24.9	16	29	16	4	1	0	12.6	—	20.6	26	7.8	22	2	0	0	0
Dakhla	44.5	6	25.0	21	29	22	11	4	0	8.0	—	23.9	7	5.6	22	10	0	0	0
Kharga	43.4	6	25.4	21	30	23	12	3	0	14.9	—	25.3	7	8.5	22	2	0	0	0
Tor	32.8	4	23.0	21	21	7	0	0	0	—	—	21.2	7	11.0	22	0	0	0	0
Hurghada	31.0	7	23.6	17	24	2	0	0	0	—	—	21.9	7	11.3	22	0	0	0	0
Quseir	30.3	4,26	23.1	11	24	2	0	0	0	—	—	21.9	7,28	16.9	17	0	0	0	0

Table A 3.—SKY COVER AND RAINFALL

APRIL — 1964

Station	Mean Sky Cover Oct					Rainfall mms										
	00 U.T.	06 U.T.	12 U.T.	18 U.T.	Daily Mean	Total Amount	Dev. From Normal	Max. Fall in one day		Number of Days With Amount of Rain						
								Amount	Date	< 0.1	≥ 0.1	≥ 1.0	≥ 5.0	≥10	≥25	≥50
Sallum	2.8	3.7	4.4	3.0	3.4	1.5	+ 0.9	1.0	19	0	2	1	0	0	0	0
Mersa Matruh (A)	1.9	4.4	4.2	2.4	3.3	8.4	+ 6.1	6.4	15	1	3	2	1	0	0	0
Alexandria (A)	2.7	3.9	4.2	2.9	3.6	Tr.	— 2.7	Tr.	16.20	2	0	0	0	0	0	0
Port Said (A)	1.8	1.9	2.8	2.3	2.7	22.8	+20.9	22.8	20	0	1	1	1	1	0	0
El Arish	4.5	4.6	4.1	4.2	3.3	42.3	+38.0	42.3	20	0	1	1	1	1	1	0
Ghazza	4.5	4.4	3.8	3.5	4.2	5.0	— 2.5	4.9	20	1	2	1	0	0	0	0
Tanta	—	1.5	3.2	1.1	—	13.7	+11.8	13.4	20	0	2	1	1	1	0	0
Cairo (A)	2.1	3.6	4.1	2.3	3.1	0.5	— 0.1	0.3	16	0	2	0	0	0	0	0
Fayoum	—	1.4	2.2	1.3	—	Tr.	— 0.7	Tr.	20	1	0	0	0	0	0	0
Minya (A)	1.0	2.0	2.7	2.1	2.2	Tr.	— 0.5	Tr.	16	1	0	0	0	0	0	0
Assyout (A)	0.6	1.6	2.2	1.2	1.2	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0
Luxur (A)	0.3	0.6	1.0	1.2	1.6	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0
Aswan (A)	0.7	0.8	0.6	0.5	0.6	0.0	— 0.3	0.0	—	0	0	0	0	0	0	0
Siwa	1.9	3.3	3.2	2.8	2.7	Tr.	— 1.1	Tr.	29	1	0	0	0	0	0	0
Bahariya	0.7	1.9	3.3	2.1	2.0	0.0	— 0.6	0.0	—	0	0	0	0	0	0	0
Farafra	0.7	2.2	2.2	1.5	1.5	0.0	— 0.1	0.0	—	0	0	0	0	0	0	0
Dakhla	0.3	1.0	1.4	0.1	0.9	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0
Kharga	0.6	0.6	1.3	0.7	0.8	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0
Tor	0.9	1.1	2.1	1.5	1.4	Tr.	— 0.2	Tr.	15	1	0	0	0	0	0	0
Hurghada	1 5	1.1	1.5	2.3	1.6	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0
Quseir	0.7	0.8	1.2	0.1	0.9	0.0	— 0.1	0.0	—	0	0	0	0	0	0	0

Table A 4.—DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

APRIL — 1964

Station	Precipitation				Frost	Thunderstorm	Mist Vis ≥ 1000 metres	Fog Vis <1000 Metres	Haze Vis ≥1000 Metres	Thick Haze Vis <1000 Metres	Dust or Sandrising Vis ≥1000 Metres	Dust or Sandstorm Vis <1000 Metres	Gale	Clear Sky	Cloudy Sky
	Rain	Snow	Ice, Pellets	Hail											
Sallum	2	0	0	0	0	0	0	0	4	0	4	2	1	8	3
Mersa Matruh (A)	3	0	0	0	0	2	0	0	0	0	5	2	0	8	1
Alexandria (A)	0	0	0	0	0	0	2	6	0	1	2	1	0	5	0
Port Said (A)	2	1	0	0	0	2	1	0	0	0	4	1	1	14	0
El Arish	2	0	0	0	0	1	1	3	6	0	7	1	0	2	3
Ghazza	2	0	0	0	0	2	2	2	1	0	1	0	0	1	5
Tanta	2	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Cairo (A)	2	0	0	0	0	0	4	3	10	0	7	4	0	9	1
Fayoum	0	0	0	0	0	0	0	0	0	0	2	0	0	—	—
Minya (A)	0	0	0	0	0	0	4	0	10	0	4	1	0	16	1
Assyout (A)	0	0	0	0	0	0	0	0	12	0	7	1	1	21	0
Luxor (A)	0	0	0	0	0	0	0	0	16	2	5	0	0	24	0
Aswan (A)	0	0	0	0	0	0	0	0	4	0	14	4	0	28	0
Siwa	0	0	0	0	0	0	0	0	5	0	6	1	0	8	0
Bahariya	0	0	0	0	0	0	0	0	2	0	4	0	0	15	1
Farafra	0	0	0	0	0	0	0	0	6	0	6	0	0	21	0
Dakhla	0	0	0	0	0	0	0	0	2	0	3	0	0	23	0
Kharga	0	0	0	0	0	0	0	0	0	0	13	1	0	24	0
Tor	0	0	0	0	0	0	0	0	4	0	12	1	0	20	0
Hurghada	0	0	0	0	0	0	1	1	0	0	5	0	2	21	1
Quseir	0	0	0	0	0	0	2	0	7	1	14	0	0	25	0

TABLE A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

APRIL — 1964

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Mersa Matruh . . (A)	9	2	0	1–10	49	35	18	16	33	23	0	1	4	39	54	42	314
				11–27	83	26	11	33	56	15	2	1	0	5	37	115	384
				28–47	1	0	0	0	0	2	6	1	0	1	1	0	11
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**133**	**61**	**29**	**49**	**89**	**40**	**8**	**3**	**4**	**44**	**92**	**157**	**709**
Alexandria. . . . . (A)	26	0	0	1–10	67	53	55	24	42	21	7	2	0	23	130	116	540
				11–27	6	10	6	6	6	1	2	0	3	19	59	36	154
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**73**	**63**	**61**	**30**	**48**	**22**	**9**	**2**	**3**	**42**	**189**	**152**	**694**
Port Said. . . . . (A)	0	1	0	1–10	45	51	46	13	10	7	3	0	2	16	24	22	239
				11–27	95	31	66	36	7	1	5	1	1	54	61	115	473
				28–47	2	0	0	3	1	0	0	0	0	0	0	1	7
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**142**	**82**	**112**	**52**	**18**	**8**	**8**	**1**	**3**	**70**	**85**	**138**	**719**
El Arish	5	10	0	1–10	62	42	38	16	30	63	23	28	71	39	109	59	580
				11–27	1	3	6	0	0	0	0	1	7	30	63	14	125
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**63**	**45**	**44**	**16**	**30**	**63**	**23**	**29**	**78**	**69**	**172**	**73**	**705**
Ghazza.	0	34	0	1–10	20	29	30	32	30	59	29	12	8	49	45	20	363
				11–27	30	25	5	1	1	24	3	10	28	119	51	26	323
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**50**	**54**	**35**	**33**	**31**	**83**	**32**	**22**	**36**	**168**	**96**	**46**	**686**
Tanta	44	10	0	1–10	23	55	81	39	20	9	6	10	73	74	115	116	621
				11–27	0	1	4	8	0	0	0	0	1	5	15	11	45
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**23**	**56**	**85**	**47**	**20**	**9**	**6**	**10**	**74**	**79**	**130**	**127**	**666**
Cairo. . . . . (A)	7	0	95	1–10	44	52	48	28	2	3	0	9	12	19	54	78	349
				11–27	26	27	46	38	14	0	7	10	9	7	35	48	267
				28–47	0	0	0	0	0	0	0	2	0	0	0	0	2
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**70**	**79**	**94**	**66**	**16**	**3**	**7**	**21**	**21**	**26**	**89**	**126**	**618**
Fayoum	63	0	0	1–10	321	74	16	4	2	6	24	7	3	14	26	144	641
				11–27	5	0	0	0	0	0	0	1	2	1	1	6	16
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**326**	**74**	**16**	**4**	**2**	**6**	**24**	**8**	**5**	**15**	**27**	**150**	**657**

TABLE A 5 (*contd.*)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

APRIL — 1964

Station	calm (hours)	variable (hours)	unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of direction indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Minya . . . . . (A)	26	4	0	1-10	117	33	1	3	4	12	10	4	3	15	55	168	425
				11-27	52	50	0	0	0	0	7	1	6	20	10	119	265
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**169**	**83**	**1**	**3**	**4**	**12**	**17**	**5**	**9**	**35**	**65**	**287**	**690**
Asayout	3	0	0	1-10	13	19	10	8	11	15	5	7	39	129	123	126	505
				11-27	4	2	0	0	2	5	7	11	2	5	44	121	203
				28-47	0	0	0	0	0	0	0	2	0	4	0	0	6
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**17**	**21**	**10**	**8**	**13**	**20**	**12**	**23**	**41**	**138**	**167**	**247**	**717**
Luxor . . . . . (A)	17	0	7	1-10	42	70	34	30	24	29	52	43	19	25	31	191	590
				11-27	1	3	0	0	1	2	0	4	2	3	12	78	106
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**43**	**73**	**34**	**30**	**25**	**31**	**52**	**47**	**21**	**28**	**43**	**269**	**696**
Aswan . . . . . (A)	0	0	0	1-10	141	118	13	12	13	10	17	5	8	3	22	59	421
				11-27	140	92	0	0	0	0	1	1	1	4	7	53	299
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**281**	**210**	**13**	**12**	**13**	**10**	**18**	**6**	**9**	**7**	**29**	**112**	**720**
Siwa.	20	0	3	1-10	47	51	83	98	55	17	8	6	10	18	30	29	452
				11-27	16	32	28	22	50	18	3	3	0	5	27	39	243
				28-47	0	0	0	0	0	0	0	1	0	0	0	1	2
				>48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**63**	**83**	**111**	**120**	**105**	**35**	**11**	**10**	**10**	**23**	**57**	**69**	**697**
Dakhla.	12	8	0	1-10	55	117	91	64	41	31	24	41	26	24	48	103	665
				11-27	6	9	0	0	0	0	0	0	1	2	6	11	35
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**61**	**126**	**91**	**64**	**41**	**31**	**24**	**41**	**27**	**26**	**54**	**114**	**700**
Hurghada.	2	4	4	1-10	11	9	8	12	37	12	0	0	2	27	69	20	207
				11-27	35	9	2	1	10	8	0	0	0	32	165	178	440
				28-47	0	0	0	0	0	0	0	0	0	0	5	58	63
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**46**	**18**	**10**	**13**	**47**	**20**	**0**	**0**	**2**	**59**	**239**	**256**	**710**
Quseir	0	0	1	1-10	43	21	10	8	24	34	9	6	11	36	81	76	359
				11-27	114	4	3	0	7	3	0	0	0	6	41	182	360
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**157**	**25**	**13**	**8**	**31**	**37**	**9**	**6**	**11**	**42**	**122**	**258**	**719**

Table B 1.—UPPER AIR CLIMATOLOGICAL DATA

APRIL—1964

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 0000 UT			*	*	*						
	Surface	30	1011m.b.	1018m.b.	1003m.b.	30	15.1	17.3	12.7	30	11.8
	1000	30	134	196	70	30	15.0	18.0	12.8	30	10.9
	850	30	1504	1555	1450	30	11.5	20.7	3.5	19	— 4.4
	700	30	3102	3166	3019	30	2.9	10.8	— 6.5	16	— 8.6
	600	30	4331	4400	4219	30	— 5.6	1.0	—11.2	14	—14.3
	500	30	5736	5825	5591	30	—15.3	— 7.5	—23.4	13	—21.1
	400	29	7385	7515	7225	29	—26.7	—14.5	—33.5	11	—30.2
	300	29	9399	9588	9202	29	—40.5	—22.7	—47.5	2	—41.4
	200	29	11987	12306	11859	29	—55.0	—47.4	—62.1	—	—
	150	28	13856	14048	13704	28	—63.6	—55.0	—68.9	—	—
	100	21	16321	16482	16223	21	—66.2	—60.6	—75.0	—	—
	70	12	18468	18530	18400	12	—65.6	—59.4	—71.4	—	—
	50	6	20539	20604	20428	6	—58.8	—56.0	—66.6	—	—
	30	2	23672	23765	23578	2	—55.6	—53.9	57.4	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 UT			*	*	*						
	Surface	30	997m.b.	1004m.b.	988m.b.	30	16.0	29.0	11.2	30	6.1
	1000	30	118	174	44	10	14.4	15.8	13.1	10	9.0
	850	30	1492	1532	1435	30	13.0	27.2	4.0	15	— 6.9
	700	30	3098	3159	2990	30	4.6	12.9	— 8.3	12	— 9.4
	600	30	4335	4424	4170	30	— 4.2	3.2	—17.0	15	—12.8
	500	30	5747	5870	5518	30	—13.8	— 6.0	—26.0	15	—20.6
	400	30	7403	7573	7110	30	—25.6	—20.0	—34.6	10	—30.8
	300	30	9430	9636	9120	30	—39.8	—35.3	—46.2	4	—40.3
	200	30	12102	12308	11859	29	— 54.1	—45.2	—61.1	—	—
	150	29	13918	14099	13691	29	—61.9	—54.8	—70.3	—	—
	100	28	16375	16529	16200	28	—68.8	—61.3	—77.5	—	—
	70	25	18506	18600	18340	25	—68.1	—58.6	—77.5	—	—
	50	19	20550	20676	20387	19	—62.7	—58.0	—69.8	—	—
	30	13	23775	23921	23604	13	—54.4	—49.1	—60.3	—	—
	20	11	26410	26586	26173	11	—49.3	—47.0	—54.7	—	—
	10	3	30897	30960	30960	3	—40.9	—34.5	—44.6	—	—
Aswan 0000 UT			*	*	*						
	Surface	30	988m.b.	994m.b.	982m.b.	30	21.4	28.8	15.0	30	— 1.8
	1000	—	—	—	—	—	—	—	—	—	—
	850	30	1491	1535	1454	30	18.0	26.4	6.1	15	— 3.6
	700	30	3121	3196	3030	30	7.8	13.6	— 0.3	10	— 9.3
	600	36	4371	4466	4249	30	— 1.1	2.6	— 6.7	6	—14.0
	500	30	5800	5926	5661	30	—10.3	— 5.5	—15.9	1	—33.4
	400	30	7480	7634	7335	30	—23.0	—17.6	—28.7	1	—23.2
	300	30	9529	9706	9339	30	—36.5	—26.4	—42.8	2	—45.0
	200	30	12234	12435	12029	30	—54.4	—51.0	—57.2	—	—
	150	24	14049	14255	13819	24	—66.2	—63.3	—70.3	—	—
	100	20	16450	16702	16230	20	—77.9	—73.4	—85.2	—	—
	70	11	18552	18760	18380	11	—75.3	—66.2	—80.5	—	—
	50	8	20553	20724	20352	8	—63.5	—59.5	—67.7	—	—
	30	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = Number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

Table B 1 (*contd.*)—UPPER AIR CLIMATOLOGICAL DATA

APRIL — 1964

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Me
Mersa Matruh 1200 UT			*	*	*						
	Surface	30	1011m.b.	1017m.b.	1000m.b.	30	19.5	25.6	16.0	30	1
	1000	30	136	195	45	30	18.4	25.1	14.1	30	1
	850	30	1511	1550	1426	30	11.8	21.0	3.8	16	—
	700	30	3110	3154	3010	30	3.3	12.0	— 6.2	13	—
	600	30	4342	4408	4203	30	— 4.7	2.0	—13.2	10	—1
	500	30	5749	5832	5563	30	—14.8	— 7.5	—25.0	12	—2
	400	30	7405	7522	7307	30	—26.1	—20.9	—32.2	9	—3
	300	30	9224	9586	9196	30	—40.8	—35.4	—48.8	3	—4
	200	30	12095	12289	11871	30	—54.3	—46 3	—62.0	—	—
	150	29	13907	14130	13717	29	—60.7	—54.3	—68.6	—	—
	100	28	16400	16587	16258	28	—66.9	—58.9	—74.8	—	—
	70	12	18559	18670	18450	12	—62.4	—58.9	—70.6	—	—
	50	9	20674	20782	20586	9	—55.8	—51.3	—58.4	—	—
	30	2	24027	24088	23966	2	—48.4	—47.0	—49.7	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 1200 UT			*	*	*						
	Surface	30	997m.b.	1004m.b.	984m.b.	30	25.6	33.8	13.9	30	3
	1000	30	111	175	24	9	24.4	29.0	21.8	9	5
	850	30	1503	1543	1425	30	13.1	21.6	2.8	20	— 3
	700	30	3109	3172	2980	30	4.2	12.4	— 4.8	13	— 9
	600	30	4345	4442	4172	30	— 3.0	3.0	—14.7	14	—12
	500	30	5759	5882	5526	30	—13.4	— 7.6	—24.6	13	—21
	400	30	7416	7582	7141	30	—25.5	—18.3	—32.8	12	—28
	300	30	9444	9576	9153	30	—39.1	—30.3	—45.8	3	—41
	200	29	12124	12284	11839	29	—54.2	—46.5	—62.1	—	—
	150	27	13933	14162	13701	27	—61.2	—54.5	—69.8	—	—
	100	27	16403	16594	16224	27	—68.0	—61.0	—77.4	—	
	70	25	18537	18630	18400	25	—67.1	—61.4	—76.7	—	—
	50	22	20602	20736	20460	22	—59.9	—52.7	—72.7	—	—
	30	13	23843	24024	23618	13	—51.6	—47.9	—55.0	—	—
	20	6	26523	26677	26307	6	—44.1	—38.3	—48.3	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan 1200 UT			*	*	*						
	Surface	30	987m.b.	991m.b.	983m.b.	30	35.3	42.1	24.8	3	0
	1000	—	—	—	—	—	—	—	—	—	—
	850	30	1511	1587	1466	30	21.2	27.4	11.2	7	— 5
	700	30	3151	3212	3067	30	9.6	15.8	3.8	7	—12
	600	30	4408	4516	4319	30	0.7	5.8	— 3.6	7	—16
	500	30	5846	5975	5745	30	— 8.8	— 2.8	—14.0	—	—
	400	30	7538	7704	7416	30	—21.1	—18.1	—25.3	—	—
	300	29	9597	9818	9426	29	—34.5	—23.7	—40.4	—	—
	200	27	12326	12592	12109	27	—52.0	—36.3	—55.5	—	—
	150	25	14148	14420	13907	25	—64.2	—45.0	—68.8	—	—
	100	20	16542	16854	16271	20	—75.2	—70.9	—84.8	—	—
	70	5	18708	18880	18610	5	—72.8	—72.1	—74.2	—	—
	50	2	20618	20672	20564	2	—72.4	—71.1	—73.7	—	—
	30	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—

N — Number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevtion of the radiosonde station.

Table B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE; THE HIGHEST WIND SPEED IN THE UPPER AIR

APRIL — 1964

	Station	Freezing Level									First Tropopause									Highest wind speed			
		Mean			Highest			Lowest			Mean			Highest			Lowest						
		Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Direction (000—360)°	Speed in Knots
		(N)	(N)	(N)							(N)	(N)	(N)										
0000 UT	Mersa Matruh(A)	3476 (30)	654 (30)	— 8.5 (16)	4500	590	—10.6	2230	778	— 3.0	11973 (19)	207 (19)	—60.5 (19)	14840	130	—73.0	9570	288	—48.0	6400	464	240	160
	Helwan	3732 (30)	648 (30)	— 9.7 (15)	5100	551	—	1820	813	— 6.8	12723 (26)	189 (26)	—58.6 (26)	16130	106	—74.6	9490	293	—43.1	11550	217	290	150
	Aswan . . (A)	4207 (30)	591 (30)	—14.1 (8)	5280	543	—	2970	705	—	15055 (13)	102 (13)	—77.0 (13)	18400	73	—81.8	14200	144	—67.4	11360	—	290	120
		(N)	(N)	(N)							(N)	(N)	(N)										
1200 UT	MersaMatruh (A)	3549 (30)	661 (30)	— 9.8 (12)	4630	578	—	2070	688	— 0.8	12465 (22)	192 (22)	—61.9 (22)	16010	106	—66.4	10600	247	—49.5	4600	575	270	150
	Helwan	3664 (30)	656 (30)	— 9.7 (16)	4725	575	—	1980	792	— 1.2	14295 (25)	231 (25)	—64.0 (25)	17950	78	—78.2	9660	278	—55.6	8800	330	290	150
	Aswan . . .(A)	4498 (30)	594 (30)	—17.6 (5)	5260	544	—	4000	629	—	14439 (11)	125 (11)	—71.2 (11)	18810	68	—79.7	10520	260	—38.0	19700	—	230	107

N = The number of cases the element has been observed during the month.

Table B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

MERSA MATRUH (A)— APRIL 1964

Time	Pressure Surface Millibar	Wind between specified ranges of direction (000—360)°																						Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	4	10	1	8	0	—	0	—	6	13	2	10	1	13	0	—	0	—	7	7	6	10	1	15	2	30	9
	1000	3	11	1	8	0	—	0	—	6	13	2	10	1	13	0	—	1	10	5	7	7	10	2	14	2	30	10
	850	2	17	1	30	0	—	1	4	0	—	1	11	3	17	1	8	1	17	5	15	7	26	8	10	0	30	20
	700	3	26	1	3	0	—	0	—	0	—	0	—	0	—	2	26	2	42	9	39	11	36	2	20	0	30	34
	600	1	77	0	—	0	—	0	—	0	—	0	—	0	—	3	57	3	50	10	56	9	43	4	29	0	30	49
	500	1	89	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	62	6	45	7	53	4	44	0	21	52
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	59	7	61	2	47	0	15	58
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	32	6	73	2	54	0	11	64
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	58	4	96	0	—	0	7	79
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	68	2	74	0	—	0	4	71
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	57	0	—	0	—	0	2	57
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	4	15	4	12	4	17	3	16	1	18	0	—	0	—	0	—	1	5	0	—	1	26	12	16	0	30	16
	1000	5	14	4	10	4	17	2	16	2	13	0	—	0	—	0	—	0	—	0	—	1	26	12	16	0	30	15
	850	1	28	1	12	0	—	0	—	1	7	2	20	1	10	1	35	1	50	5	17	13	24	4	18	0	30	22
	700	2	24	0	—	0	—	0	—	0	—	0	—	2	14	0	—	2	62	8	42	12	31	4	25	0	30	33
	600	1	50	0	—	0	—	0	—	0	—	0	—	0	—	1	22	4	66	10	58	9	45	4	34	1	30	48
	500	1	65	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	69	11	68	5	45	4	38	1	25	56
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	48	5	56	2	69	0	14	54
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	47	4	64	1	53	0	11	54
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	69	0	—	1	96	0	7	73
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	60	0	—	0	—	0	3	60
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the wind has been observed from the range of direction during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (*contd.*).—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

HELWAN—APRIL 1964

Time	Pressure Surface Millibar	Wind between specified ranges of direction (000—360)°																						Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	7	7	6	6	5	16	2	12	1	5	0	—	0	—	0	—	0	—	0	—	0	—	3	9	6	30	7
	1000	6	8	2	6	1	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	6	0	10	9
	850	2	18	5	9	0	—	1	17	0	—	1	11	0	—	1	23	4	18	0	—	11	18	5	16	0	30	16
	700	3	24	0	—	0	—	0	—	0	—	0	—	0	—	1	14	5	30	8	36	8	36	5	23	0	30	31
	700	1	5	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	34	12	45	10	39	4	26	0	30	38
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	81	15	45	11	55	2	23	0	29	45
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	10	59	13	52	2	12	0	25	52
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	83	6	74	11	64	2	49	0	21	67
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	65	4	86	2	90	0	11	77
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	82	3	91	0	—	0	8	85
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	77	1	58	0	—	0	—	0	2	68
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	1	12	6	12	1	15	0	—	0	—	0	—	1	12	1	4	3	9	3	11	8	12	5	11	1	30	11
	1000	0	—	1	8	1	15	0	—	0	—	0	—	0	—	0	—	0	—	1	14	1	12	4	10	1	9	10
	850	3	12	5	10	1	12	0	—	0	—	1	9	1	6	1	24	2	28	3	22	5	21	8	12	0	30	15
	700	3	13	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	24	8	31	6	34	8	30	0	30	28
	600	1	44	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	37	12	35	9	40	4	26	0	29	36
	500	1	3	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	72	10	44	14	39	1	39	0	28	44
	400	1	18	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	52	12	66	9	56	0	—	0	24	59
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	93	0	—	8	74	5	46	2	67	0	16	65
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	57	5	72	1	69	1	129	0	8	77
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	66	1	70	1	125	0	7	75
	100	—	—	—	—	0	—	0	—	0	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the wind has been observed from the range of direction during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

Table B 3 (*contd.*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A) — APRIL 1964

Time	Pressure Surface Millibar	Wind between specified ranges of direction (000—360)°																								Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	17	15	2	12	2	7	2	6	1	7	1	12	0	—	0	—	0	—	0	—	0	—	3	15	2	30	12
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	6	11	9	10	4	12	3	7	1	3	1	32	0	—	0	—	0	—	0	—	3	13	3	19	0	30	12
	700	0	—	1	7	1	10	4	20	2	6	0	—	2	6	0	—	4	13	3	19	10	16	3	19	0	30	15
	600	0	—	1	18	2	46	2	6	0	—	0	—	1	2	1	3	5	26	4	22	10	18	4	20	0	30	20
	500	0	—	2	52	1	110	0	—	0	—	0	—	0	—	0	—	4	32	13	31	7	20	3	13	0	30	31
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	16	5	35	13	38	6	36	3	19	0	28	34
	300	0	—	1	24	0	—	0	—	0	—	0	—	0	—	0	—	3	31	12	61	6	43	3	32	0	25	48
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	89	5	62	5	42	4	66	0	16	60
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	29	1	55	1	70	0	7	60
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T	Surface	17	14	1	12	0	—	3	14	0	—	2	6	1	13	0	—	0	—	0	—	2	8	2	10	2	30	12
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	5	14	7	9	2	6	2	12	3	15	0	—	1	9	0	—	0	—	0	—	3	10	7	14	0	30	12
	700	3	9	2	11	4	26	1	12	2	16	1	3	0	—	2	16	0	—	2	16	6	14	7	19	0	30	16
	600	1	14	0	—	5	37	3	18	0	—	0	—	0	—	1	22	4	30	4	12	8	14	4	16	0	30	21
	500	1	11	2	14	0	—	1	86	0	—	0	—	0	—	0	—	6	22	13	27	2	11	3	17	0	28	24
	400	1	11	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	37	8	37	6	20	3	27	0	27	31
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	62	11	48	6	46	3	46	0	22	48
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	72	7	64	6	58	2	58	0	17	63
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	68	3	77	2	54	0	—	0	8	68
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N. = The number of cases the wind has been observed from the range of direction during the month.
T.N. = The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATION AT EL KASR

APRIL 1964

Frequent sandstorms and unusual showers of rain with a remarkable heat wave in the first week and a prolonged cold wave prevailing during the second and third weeks.

The month started with a very minor cold spell, giving the highest values of the relative humidity and vapour pressure for the month on the 1 st., and the lowest values of evaporation from pan class A and Piche in the screen (5.6 mms. below normal) on the 2. nd .due to the small range of temperature and the lightest surface wind speeds at 2 and3 metres above ground level, on that day. That had also led to the occurrence of the absolute minima of air temperature on the next morning for both 5 and 200 cms.(4.7°C below normal) as well as the lowest night time mean.

The distinguished heat wave started on the 3rd. and continued for the following four days with the main peak on the 4th. and a secondary one on the 6 th. During the first day, sandstorms prevailed causing the lowest value of sunshine duration (3.6 hours) and giving the absolute maxima of air temperature (14.0°C above normal) and soil temperature for the surface layers down to 10 cms. depth and also the highest values of the daily mean of air temperature (10°C above normal), water vapour pressure deficit (40.0 mms.), evaporation from pan class A and Piche in the screen (9.7 mms. above normal), the day time means of wind speeds at 50, 100, 200 and 300 cms. above ground and the lowest values of the relative humidity and vapour pressure at 1200 U.T.

Sand was suspended in the air on the next day and gave rise to the lowest value of total radiation.

The highest minima of air temperature at 5 and 200 cms.(4°C above normal) and also the night time mean were associated with the second peak on the 6 th,. with sandstorms.

The prolonged cold wave began on the 7th. with successive cold fronts passing on the 12th. 16th. and 20th. and giving rain showers on these days, while rising sand preceded the first cold front only.

The lowest value of the maximum air temperature (3.3°C below normal) was observed on the 10th., while that of the daily mean (2.0°C below normal) occurred on the 22nd., when the absolute minima of soil temperatures for the surface layers down to 50 cms. depth and the lowest means of wind speeds at 50, 100, 200 and 300 cms. were recorded.

Another heat wave started on the 23rd and lasted for the next three days, with rising sand prevalling during the 25th and 26th and with the lowest duration of sunshine also on the 25th, and was followed by a cold wave which prevailed till the end of the month.

The mean maximum air temperature and the daily mean were about normal, while that of minimum temperature was slightly above (0.9°C). Also the mean relative humidity was 4% above normal and the Piche evaporation in the screen was 0.3 mm. below The actual sunshine duration was 279.5 hours (72% of the possible duration). The total amount of rainfall was 13.5 mms. being more than four times the normal rainfall in April.

REVIEW OF AGRO-METEOROLOGICAL STATION AT TAHRIR

APRIL 1964

Mainly unsettled with frequent khamsin conditions.

A minor heat wave started on the 3rd., and continued for the next four days with two peaks on the 4 th. and the 6th.

On the first day, the lowest value of the relative humidity at 1200 U.T. (7%) occurred as well as the highest values of Piche evaporation in the free air at 120 cms. above ground level and the daily mean of air temperautre, which led to the occurrence of the highest values of night time means of air temperature and wind speed at 2 metres, and the minima of air temperature at 200 and 5 cms. on the 5th.

Khamsin conditions prevailed violently during the second peak; strong winds were blowing giving rise to severe sandstorms, causing 0.6 hour of sunshine duration. The mean air temperature for the day time was the highest with the absolute maximum for the month (37.3°C). Also the vapour pressure deficit was maximum leading to the highest vaules of evaporation from pan class A and Piche in the screen and in the free air at 1 cm. above ground.

That heat wave was followed by a minor cold spell with the absolute minima of air temperature at 200 and 5 cms. on the 11 th. when the lowest values of mean wind speed for the day and night time also occurred.

The most marked cold spell prevailed during the period (14 th. to 22 nd.), giving rain showers on the 16 th. and 20th. On the last day, the lowest values of maximum air temperature, the means of the day and night time, the evaporation from pan class A and Piche in the screen and in the free air, were all recorded, and also the highest values of the mean relative humidity and that at 1200 U.T.

The absolute minima of soil temperature for the surface layers down to 50 cms. depth, were observed on the following day.

A pronounced heat wave started on the 23 rd. and continued for the next four days, giving the absolute maxima of soil temperatures for the above mentioned layers on the 26 th., when strong winds and sandstorms were prevailing; while maxima for further depths took place during the last three days of the month.

As compared with April of last year, the means of air temperature for the day, night time and day time were all lower by 1.1, 0.9 and 0.1°C respectively. Also the means of the day of relative humidity and vapour pressure were less by 4% and 0.8 mm. No material change was found in the means of evaporation and wind speed at 2 metres.

The total sunshine duration and global radiation were less by 17 hours and 600 gm. cal/cm² approximately, while the total amount of rainfall was more by 3.1 mms.

As regards the extreme soil temperatures, the values were less by amounts not exceeding 4.6°C for most depths except, for maximum temperatures at 5 and 10 cms. where they were more by less than 1.4 °C.

REVIEW OF AGRO-METEOROLOGICAL STATION AT GIZA

APRIL 1964

With respect to air temperature and relative humidity, this month was about normal with one severe duststorm on the 20 th.

A warm spell prevailed during the 1st. week with the peak on the 4 th. when the maximum air temperature was 7.8°C above normal. On that day the highest values of evaporation from pan class A and Piche both in the open air at levels 120, 60 and 1 cms. and in the screen (10.3 mms. above normal) were all recorded, probably due to the largest range of air temperature experienced on that day. Also the highest minimum air temperature (8°C above normal) was associated with that warm spell and took place on the next day.

The most pronounced cold wave during the month started on the 13 th. and continued for the next 11 days with an active cold front passing on the 20th, giving rise to a severe dust storm followed by moderate showers in the afternoon. The absolute minima of air temperature at 2 metres (4.1°C below normal) occurred in the early mornings of the 19 th. and 22 nd. when those at 5 cms. above dry and wet soils also took place.

A minor warm spell of short duration began on the 25 th. with the peak on the 26th, when the absolute maxima of air temperature (5.2°C above normal) and soil temperatures in the three fields down to 10 cms. depth were also recorded. At 20 cms. depth, the maxima of soil temperatures for the dry and wet fields were noticed on the next day.

A distinguished cold wave started on the 27 th. and was continuing when the month ended.

Compared with April 1963, the night time mean air temperature was the same, while the day time mean was less by 4°C.

The mean relative humidity and mean vapour pressure were less by 3% and 0.7 mms. respectively.

With respect to the absolute minimum air temperature at 5 cms., the values were about the same above dry and wet soils, while above the grass it was less by 0.6°C.

The extreme soil temperatures at different depths in the dry field were generally lower by less than 1.3°C, except for the maximum soil temperatures at depths 0.3, 1 and 2 cms. where they were more.

With regard to the wet field, the differences were variable within 3°C. The maxima of soil temperatures in the grass field at the different depths were generally lower by less than 3.3 °C, whereas the minima were about the same.

The means of the surface wind speed at 2 metres for the day, night time and day time were generally more by 0.4, 0.6 and 0.2 m/sec. respectively.

The total actual duration of bright sunshine was 71% of the total possible duration, being 11.8 hours less than April 1963.

The mean Piche evaporation of the day as well as the total potential evaporation, and evapo-transpiration for grass were generally less by 1.5, 2.1 and 1.5 mms. respectively; whereas the mean pan class A evaporation was about the same.

REVIEW OF AGRO-METEOROLOGICAL STATION AT KHARGA

APRIL 1964

Slightly warm and dry with a remarkable heat wave during the first two weeks and a distinguished cold spell prevailing in the third week followed by a minor warm spell.

The first heat wave was characterized by two pronounced peaks on the 6 th. and 12 th. On the 1 st. day, the absolute maximum of air temperature (11.5°C above normal), the highest daily mean and the day time mean temperature were reported as well as the highset values of soil temperatures of the surface layers down to 20 cms. of depth, and the lowest relative humidity of the month (5%).

The highest values of minimum air temperature at 200 cms. (11.5°C above normal), 20 and 5 cms. and of daily means of wind speed at 50, 100 and 200 cms. above dry soil and the lowest relative humidity (21% below normal) occurred on the following day; whereas the highest values of evaporation from Piche both in the screen (35.6 mms. above normal) and in the free air at levels 160 and 120 cms. above ground, and also that from pan class A, were all associated with the second peak together with the lowest values of mean vapour pressure and the relative humidity (7%) and also the highest vapour pressure deficit (59.5 mms.)

The remarkable cold spell started on the 15 th. when the lowest values of the total radiation and sunshine duration were observed and continued for the next ten days with a peak on the 17 th. and another distinguished one on the 21 st.

On the latter day, the lowest values of maximum air temperature, daily and day time means, Piche evaporation both in the screen and in the free air and the highest value of the total radiation occurred.

The aboslute minima of air temperature at 2 metres (6.9°C below normal) and at 5 and 20 cms. above bare soil as well as those of soil temperature for the surface layers down to 10 cms .of depth were recorded on the following day and also the highest duration of sunshine.

The minor warm spell started on the 25 th., when the lowest values of relative humidity and vapour pressure at 1200 U.T. and pan class A evaporation occurred and also the daily means of wind speed at 50, 100 and 200 cms. above the ground.

The daily means of air temperature and Piche evaporation in the screen were higher than normal by 1.4°C and 15.3 mms. respectively while the mean relative humidity was less by 13 %.

Table C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

APRIL — 1964

STATION	Air Temperature (°C)					Mean Duration in hours of daily air temperature above the following values									
	Mean Max.	Mean Min.	Mean of the day	Night time mean	Day time mean	-5°C	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C
El Kasr	22.2	11.8	17.1	14.9	19.0	24.0	24.0	24.0	23.6	17.6	2.8	0.6	0.2	0.1	0.0	0.0
Tahrir	27.0	10.1	18.6	15.6	21.2	24.0	24.0	24.0	23.8	16.7	9.0	2.8	0.6	0.2	0.0	0.0
Giza	27.5	11.9	19.4	16.7	21.7	24.0	24.0	24.0	23.4	17.1	10.0	3.3	0.7	0.0	0.0	0.0
Kharga	33.9	17.0	25.5	22.5	28.2	24.0	24.0	24.0	23.9	23.1	19.7	12.5	6.1	1.6	0.4	0.0

Table C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS

APRIL — 1964

STATION	Max. Temp. at 2 metres				Min. Temp. at 2 metres				Min. Temp. at 5 cms. above			
	Highest		Lowest		Highest		Lowest		Dry Soil		Grass	
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date
El Kasr	36.2	4	19.0	10	15.9	6	7.9	3	5.6	3	—	—
Tahrir	37.3	6	21.3	20	16.4	5	8.7	11	6.2	11	—	—
Giza	35.3	26	22.7	16	18.6	5	8.4	19	4.8	22	2.5	20
Kharga	43.4	6	25.4	21	25.3	7	8.5	22	7.3	22	—	—

Table C 3.—(SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY & VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVPORATION & RAINFALL

APRIL — 1964

STATION	Solar+Sky Radiation gm. cal/cm²	Duration of Bright Sunshine (hours)			Relative Humidity %						Vapour Pressure (mms)						Evaporation(mms)		Rainfall (mms)		
		Total Actual	Total Possible monthly	%	Duration in hours ⩾ 90%	Duration in hours ⩾ 80%	Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 UT	Highest	Date	Lowest	Date	Piche	Pan class (A)	Total Amount monthly	Max. fall in one day	Date
Kasr.	508.0	279.5	388.2	72	—	—	72	62	11	4	10.6	10.9	14.0	1	4.0	4	—	6.80	13.5	8.3	15
hrir .	560.0	280.6	387.6	73	2.3	6.1	61	35	7	4	9.0	7.9	13.8	2	2.5	4	14.6	9.90	5.5	3.5	16
a . .	555.7	274.7	387.0	71	0.9	3.7	55	32	11	12	8.6	7.5	12.6	26	4.2	12	14.6	8.77	1.4	1.4	20
arga .	563.7	328.1	382.0	86	0.0	0.0	22	13	5	6	5.0	4.6	9.3	27	2.1	12	37.3	18.73	0.0	—	—

Table C 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS IN DIFFERENT FIELDS (cms)

APRIL — 1964

STATION	Highest (H) Lowest (L)	Extreme soil temperature (°C) in dry field at different depths (cms.)										Extreme soil temperature (°C) in grass field at different depths (cms.)									
		0.3	1	2	5	10	20	50	100	200	300	0.3	1	2	5	10	20	50	100	200	3(
El Kasr . . .	H	40.8	35.0	33.2	29.8	26.4	22.7	20.8	20.2	20.0	—	—	—	—	—	—	—	—	—	—	
	L	7.8	8.2	8.4	10.2	13.2	16.3	19.1	18.9	19.3	—	—	—	—	—	—	—	—	—	—	
Tahrir . . .	H	48.6	46.0	42.4	39.3	34.7	28.2	23.9	22.8	22.1	22.1	—	—	—	—	—	—	—	—	—	
	L	8.6	8.6	8.6	9.8	12.4	16.5	20.2	20.9	20.8	21.2	—	—	—	—	—	—	—	—	—	
Giza	H	60.0	56.8	55.0	37.4	31.0	26.4	25.0	23.9	23.2	23.4	28.2	25.6	24.0	23.4	22.1	20.8	20.1	19.4	19.8	
	L	7.0	8.0	9.0	14.6	19.1	22.2	22.7	22.0	22.3	23.2	13.2	13.7	14.0	15.2	16.6	18.0	18.3	18.1	19.2	
Kharga . . .	H	57.0	48.8	46.1	40.6	34.8	30.2	28.2	26.6	25.7	25.7	—	—	—	—	—	—	—	—	—	
	L	11.3	12.8	13.6	16.8	21.0	24.3	25.3	24.3	24.4	25.4	—	—	—	—	—	—	—	—	—	

Table C 5.—SURFACE WIND

APRIL — 1964

STATION	Wind Speed m/sec at 2 metres			Days with surface wind speed at 10 metres							Max. Gust (knot at 10 metres	
	Mean of the day	Night time mean	Day time mean	≥10 knots	≥15 knots	≥20 knots	≥25 knots	≥30 knots	≥35 knots	≥40 knots	Value knots	Dat
El Kasr . . .	4.4	3.5	5.5	—	—	—	—	—	—	—	—	—
Tahrir	3.4	2.8	4.4	29	23	8	4	2	2	0	43	6
Giza	2.9	2.4	3.6	30	23	7	2	0	0	0	35	20
Kharga . . .	5.0	4.2	5.8	—	—	—	—	—	—	—	—	—

UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7 NUMBER

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MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties as the National Meteorological service for the U.A.R., the Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be adressed to :—

"The Director General, Meteorological Department, Kubri-el-Qubbeh—CAIRO".

THE DAILY WEATHER REPORT

This report is printed daily in the Meteorological Department. It contains surface and upper air observations carried by the relevant networks of the Republic and made at the four main synoptic hours of observations (00, 06, 12 and 18 U.T.); as well as ship observations over the Eastern Mediterranean and north Red Sea made at the same times.

It also contains two surface synoptic charts at 00 and 12 U.T. and two upper air charts for the standard isobaric surfaces 700 & 500 mbs. at both 00 and 12 U.T.

In compliance with resolution 8 (EC-XIII) of WMO, foreign upper air data included in Cairo Subregional Broadcast are also given in this report.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year .

CLIMATOLOGICAL NORMALS FOR EGYPT

The normals, long averages and statistical data are given in one edition for stations in Egypt from the date of opening of each station up to 1945, A new voluminous edition was issued in March 1968 which brings normals and mean values up till 1960.

UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7 NUMBER 5

MAY, 1964

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MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT
CAIRO

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GENERAL SUMMARY OF WEATHER CONDITIONS

MAY 1964

Abnormally mild in the northern and middle parts, rather hot in the southern parts during the 1st two thirds of the month, excessively hot in general the last third. Local heavy rain over Mediterranean coastal strip east of Alexandria on the 9th.

GENERAL DESCRIPTION OF WEATHER

During the first two thirds the prevailing weather was mild in general in the northern and middle parts, and rather hot in the southern parts. A weak heat wave occurred on the 19th & 20th. Since the 25th and up till the end of the month an excessive heat wave prevailed and maximum temperature exceeded apperciably its normal and attained its climax round the 29th.

Light rain fell over scattered localities in the northern parts during periods (7th–10th) & (19th & 20th) and was occasionally associated with few thunderstorms.

Rising sand occurred during several days, mainly in association with the travelling secondary depressions over scattered parts; its frequency was highest in the Western Desert and Red Sea districts. Early morning mist developed during several days over Delta, Canal and Cairo areas.

PRESSURE DISTRIBUTION

During this month, the subtropical high pressure belt established over West Mediterranean and Southern Europe. It showed occasional marked elongations southeastwards over North Africa, and eastwards towards the Black Sea vicinities.

Southward oscillations in the deep upper troughs either over north Atlantic or north Russia, and the associated deepening in the transitory low pressure systems through northern Europe along their preferred northeast tracks, were responsible for the pronounced northwest elongation in the Iraq monsoon trough and the northward elongation in either the Sudan trough of low pressure or the Central Africa low pressure System.

Between the 5th & 7th, the Iraq monsoon trough showed a marked northwest elongation through Asia Minor, while the Sudan trough showed a marked northward elongation and the barometric pressure over the Middle East and northern vicinities experienced a rapid and deep fall.

On the 9th & 10th, the Iraq monsoon trough showed a slight westward oscillation which hardly extended to East Mediterranean where it caused a slight fall in the pressure field.

Between the 11th & 13th, a shallow secondary depression developed over the Gulf of Serte. It proceeded rapidly eastwards while slightly deepening and traversed the northern parts of the Republic on the 13th.

On the 16th, the second north Africa secondary depression appeared over Tunisia, it proceeded eastwards, passed by Gulf of Serte on the 18th, overrun the Western Desert and north of Nile valley by the 20th and continued rapidly its eastward transit through the Red Sea by the 21*st*.

On the 22nd, the third and last north Africa secondary depression during this month developed over Algiers. It followed

its coastal track passing by Tunisia round the 24th, Cyrenica by the 26th, then it reached northern parts of U.A.R. on the 29th and amalgamated with the northern extension of the Sudan trough.

The barometric pressure over the country exceeded generally its normal apart from the days 7th, 20th and between 27th & 31st during which it was subnormal.

During the whole month, the subtropical jet stream was evident in the upper troposphere round 190 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan & Aswan were 175, 150, 135 knots respectively on the 1*st* day of the month.

SURFACE WIND

During this month, the prevailing winds were light/moderate northerly and northeasterly in general, with the exception of few days during which fresh/strong winds blew either from the south and southwest in advance of travelling depressions or from the north and northwest in their rears.

No gales were reported druing this month.

TEMPERATURE

Maximum & Minimum air temperatures were subnormal in general, with the exception of the two heat waves particularly the excessive wave during which both temperatures were abnormally high.

The absolute maximum air temperature for the Republic was 48.3°C reported at Kom Ombo on the 31st.

The absolute minimum air temperature for the Republic was 6.2°C reported at Mansoura on the 1st.

PRECIPITATION

This month was characterized with two light rainy periods. The first was between the 7th & 10th during which light showers fell in general over the Mediterranean coastal strip between Alexandria & Ghazza. Precipitation was locally heavy in particular between Rosetta and Balteam. The second light rainy period was between the 19th & 20th during which light showers fell over the Mediterranean coastal strip west of Dabaa.

The absolute daily rainfall for the Republic was 8.8 mms reported at Rosetta on the 9th. The absolute monthly rainfall was 10.3 mms reported at Rosetta L.H.

Cairo 19 / 8 / 1970

M.F. TAHA
Under Secretary of State
Director General
Meteorological Department

TABLE A 1. — MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION.

MAY — 1964

STATION	Atmospheric Pressure (mbs) M.S.L		Air Temperature °C								Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evap-(mms) Mean
			Maximum		Minimum			Dry Bulb		Wet Bulb						
	Mean	D.F. Normal or Average	(A) Mean	D.F. Normal or Average	(B) Mean	D.F. Normal or Average	$\frac{A+B}{2}$	Mean	D.F. Normal or Average	Mean	D.F. Normal or Average	Mean	D.F. Normal or Average	Total Actual	Total Possible	%	
Sallum	1014.6	+0.2	24.8	—1.0	17.0	+0.1	20.9	20.5	—0.5	16.6	+0.2	65	+ 4	—	--	—	7.6
Mersa Matruh (A)	1015.1	+1.6	24.6	—0.9	14.4	—0.1	19.5	19.5	—0.7	15.6	—1.0	64	— 3	322.4	426.5	75.6	7.7
Alexandria (A)	1014.5	+1.6	26.4	—0.1	14.8	—1.9	20.6	20.5	—0.9	16.1	—1.6	61	— 9	359.1	425.6	84.4	7.3
Port Said (A)	1014.1	+1.2	24 0	—1.8	17.7	—1.7	20.8	20.6	—1.6	17 0	—2.0	68	— 3	341.5	425.6	80.2	3.3
El Arish	1014.2	+2.7	25:7	—1.3	15.6	—0.5	20.6	20.5	—1.5	17.1	—1.0	70	+ 3	370.3	426.2	86.9	5.2
Ghazza	1013.9	+1.7	22.8	—2.2	15.0	—1.6	18.9	19.5	—1.6	16.6	—1.4	73	+ 1	363.2	426.6	85.1	5.1
Tanta	1013.3	—	30.8	—	13 2	—	22.0	21.7	—	15.7	—	50	—	358.4	424.5	84.4	8.1
Cairo (A)	1013.5	+1.3	31.3	—1.1	17.8	+0.4	24 6	23 6	—1.2	15 6	—1.7	38	— 6	—	—	—	20.2
Fayoum	1013.2	—	32.3	—	16.2	—	24.2	24.2	—	15.7	—	35	—	—	—	—	11.5
Minya (A)	1012.9	+2.0	32.8	—3.6	14.4	—2.2	23.6	24.2	—1.7	15.9	—0.9	37	+ 1	—	—	—	11.8
Assyout (A)	1012.2	+1.7	34.2	—2.2	17.8	—1.6	26.0	26.3	—1.6	14.8	—1.3	22	— 1	—	—	—	21.4
Luxor (A)	1010.5	+1.9	35.7	—3.6	18.1	—2.6	26.9	28 0	—1.4	16.0	—1.7	22	0	—	—	—	13.9
Aswan (A)	1010.4	+2.0	37.1	—3.2	20.1	—3.4	28.6	28 9	—1.3	14.7	—1.3	13	+ 1	—	—	—	22.1
Siwa	1013.8	+0.8	33.1	—1.3	16 0	—0.8	24.6	25.0	—0.9	15.0	—0.7	28	— 1	—	—	—	15.6
Bahariya	1013.2	+1.3	33 0	—1.1	16.3	—0.3	24.6	25.2	—0.7	15.0	—0.9	27	— 3	—	—	—	10.7
Farafra	1014.4	—	33 2	—	15.1	—	24.2	24.4	--	13.3	--	20	—	—	—	—	18.7
Dakhla	1010.9	+1.4	34.7	—2.4	15.8	—4.2	25.2	26.0	—1.3	14.5	—0.3	21	+ 3	—	—	—	17.0
Kharga	1012.1	—	35.4	—	19.4	—	27.5	27.9	—	14.7	—	16	—	384.3	414.0	92.8	30.2
Tor	1010.9	+1.9	30.1	—1.5	19.8	—0.8	25.0	24.4	—0.7	17.9	—1.5	50	— 6	—	—	—	10.0
Hurghada	1010.9	+1.8	29.8	+0.2	18.5	—2.2	24.6	24.7	—1.0	16.6	—1.9	39	— 7	—	—	—	20.3
Quseir	1011.1	+2.7	28.3	—2.1	21.3	—1.6	24.8	25.2	—1 5	17.4	—1.7	42	— 3	—	—	—	20.2

TABLE A2.— MAXIMUN AND MINIMUM AIR TEMPERATURES

MAY — 1964

Station	Maximum Temperature °C									Grass Min. Temp.		Minimum Temperature °C							
	Highest	Date	Lowest	Date	No. of Days with Max-Temp.					Mean	D. From Normal	Highest	Date	Lowest	Date	No. of Days with Min. Temp.			
					>25	>30	>35	>40	>45							<10	<5	<0	<-5
Sallum	35.5	29	19.7	1	11	4	1	0	0	16.7	—	22.4	29	12.6	1	0	0	0	0
Mersa Matruh . (A)	40.0	29	20.2	1,5	9	3	3	0	0	—	—	19.9	27	10.7	2	0	0	0	0
Alexandria . . . (A)	42.2	29	21.0	9	13	5	4	1	0	—	—	23.6	31	10.8	2	0	0	0	0
Port Said . . . (A)	32.7	28	20.4	1	9	1	0	0	0	17.0	—	23.6	30	13.4	10	0	0	0	0
El Arish	36.8	30	21.6	1	12	4	1	0	0	13.8	—	20.6	29	12.0	6	0	0	0	0
Ghazza	28.8	29	20.1	2	6	0	0	0	0	14.2	—	21.8	29,30	11.5	2	0	0	0	0
Tanta	42.4	29	23.2	9	29	15	5	4	0	—	—	20.4	31	9.0	1	2	0	0	0
Cairo . . . . . (A)	43.7	30	25.3	8	30	15	6	4	0	—	—	28.6	29	12.6	1,2	0	0	0	0
Fayoum	43.2	29	24.5	9	30	19	6	4	0	12.2	—	24.0	30	10.6	1	0	0	0	0
Minya . . . . . (A)	43.9	30	25.8	9	31	22	7	5	0	11.5	—	22.2	29	9.0	10	1	0	0	0
Assyout. . . . . (A)	44.6	31	27.0	10	31	26	10	5	0	15.8	—	25.2	29	11.6	1	0	0	0	0
Luxor . . . . . (A)	46.2	31	29.6	10	31	29	17	5	2	—	—	26.5	31	13.7	10	0	0	0	0
Aswan . . . . . (A)	45.8	30	29.8	10	31	30	21	5	2	—	—	31.5	31	15.0	10	0	0	0	0
Siwa	43.9	29	25.3	9	31	22	11	4	0	14.6	—	23.4	30	9·2	10	1	0	0	0
Bahariya	45.2	30	25.8	9	31	23	8	4	1	14.5	—	26.2	31	9.9	10	1	0	0	0
Farafra	44.0	30	26.8	9	31	26	8	4	0	14.3	—	24.0	31	8.0	11	3	0	0	0
Dakhla	45.3	30	28.0	9,10	31	27	10	5	1	11.1	—	24.0	28	7.0	11	1	0	0	0
Kharga	46.2	31	29.2	9,10	31	29	13	5	2	17.0	—	25.9	28	13.8	10	0	0	0	0
Tor	40.2	30	24.0	1	29	14	2	1	0	—	—	23.8	30	13.2	2	0	0	0	0
Hurghada	39.4	29	25.1	1	31	7	4	0	0	17.0	—	22.4	29,31	14.5	2	0	0	0	0
Quseir	35.2	14	25.1	10	31	6	1	0	0	17.9	—	25.0	28,29	18.0	11	0	0	0	0

TABLE A 3.—SKY COVER AND RAINFALL

MAY — 1964

Station	Mean Sky Cover Oct.					Rainfall mms.										
	00 U.T.	06 U.T.	12 U.T.	18 U.T.	Daily Mean	Total Amount	D. From Normal	Max. Fall in one day		Number of Days with Amount of Rain						
								Amount	Date	<0.1	≥0.1	≥1.0	≥5.0	≥10	≥25	≥50
Sallum	2.7	3.3	3.4	3.3	3.1	1.4	— 2.9	1.4	19	1	1	1	0	0	0	0
Mersa Matruh (A)	1.5	3.3	2.5	2.3	2.3	0.5	— 2.7	0.3	20	1	2	0	0	0	0	0
Alexandria (A)	1.8	2.8	1.9	2.2	2.1	2.6	+ 1.1	2.6	9	0	1	1	0	0	0	0
Port Said (A)	0.9	1.5	0.9	0.6	1.0	0.6	— 2.9	0.4	10	0	2	0	0	0	0	0
El Arish	3.4	2.7	1.9	1.9	2.2	0.5	— 3.2	0.5	10	1	1	0	0	0	0	0
Ghazza	3.9	2.0	0.9	2.0	2 2	2.3	— 1.1	2.0	9	0	3	1	0	0	0	0
Tanta	—	0.8	1.4	0.5	—	0.2	— 4.0	0.2	10	0	1	0	0	0	0	0
Cairo (A)	0.2	1.2	1.9	1.3	1.4	0.0	— 0.5	0.0	—	0	0	0	0	0	0	0
Fayoum	—	0.2	0.9	0.2	—	0.0	— 1.5	0.0	—	0	0	0	0	0	0	0
Minya (A)	0.1	0.8	1.3	0.7	0.6	0.0	— 0.7	0.0	—	0	0	0	0	0	0	0
Asyout (A)	0.1	0.1	0.5	0.2	0.3	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0
Luxor (A)	0.2	0.5	0.3	0.1	0.3	0.0	— 0.5	0.0	—	0	0	0	0	0	0	0
Aswan (A)	1.0	0.5	0.5	0.7	0.5	Tr.	— 0.6	Tr.	30	1	0	0	0	0	0	0
Siwa	0.7	1.6	2.2	2.0	2.6	0.0	— 2.1	0.0	—	0	0	0	0	0	0	0
Bahariya	0.2	0.6	1.5	1.0	1.5	0.0	— 0.1	0.0	—	0	0	0	0	0	0	0
Farafra	0.3	0.6	1.2	0.7	0.6	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0
Dakhla	0.0	0.4	0.1	0.4	0.5	0.0	— 0.2	0.0	—	0	0	0	0	0	0	0
Kharga	0.1	0.3	0.3	0.2	0,2	0.0	— 0.3	0.0	—	0	0	0	0	0	0	0
Tor	1.0	0.3	0.4	0.5	0.4	0.0	— 0.2	0.0	—	0	0	0	0	0	0	0
Hurghada	0.3	0.3	0.5	0.8	0.4	0.0	— 0.5	0.0	—	0	0	0	0	0	0	0
Quesir	0.2	0.5	0.4	0.4	0.4	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0

TABLE A 4. — DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

MAY 1964

Station	Precipitation				Frost	Thunderstorm	Mist Vis ≥1000 metres	Fog Vis <1000 Metres	Haze Vis ≥1000 Metres	Thick Haze Vis <1000 Metres	Dust or Sanderising Vis ≥1000 Metres	Dust or Sandstorm Vis <1000 Metres	Gale	Clear Sky	Cloudy Sky
	Rain	Snow	Ice, Pellets	Hail											
Sallum	2	0	0	0	0	1	1	0	0	0	0	0	0	11	5
Mersa Matruh (A)	1	0	0	0	0	0	2	2	0	0	3	0	0	16	2
Alexandria (A)	2	0	0	1	0	1	4	4	0	0	0	1	0	16	1
Port Said (A)	2	0	0	0	0	0	0	0	0	0	0	0	0	25	0
El Arish	1	0	0	0	0	0	6	1	0	0	3	0	0	15	0
Ghazza	2	0	0	0	0	0	2	1	0	0	1	0	0	13	0
Tanta	1	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Cairo (A)	0	0	0	0	0	0	1	1	13	0	6	1	0	24	0
Fayoum	0	0	0	0	0	0	0	0	0	0	1	0	0	—	—
Minya (A)	0	0	0	0	0	0	0	0	0	0	3	0	0	30	0
Assyout (A)	0	0	0	0	0	0	0	0	1	1	4	0	0	31	0
Luxor (A)	0	0	0	0	0	0	0	0	6	0	5	0	0	31	0
Aswan (A)	0	0	0	0	0	0	0	0	1	0	2	0	0	29	0
Siwa	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
Bahariya	0	0	0	0	0	0	0	0	0	0	2	0	0	26	0
Farafra	0	0	0	0	0	0	6	0	0	0	5	0	0	29	0
Dakhla	0	0	0	0	0	0	0	0	2	0	3	0	0	31	0
Kharga	0	0	0	0	0	0	0	0	0	0	8	1	0	31	0
Tor	0	0	0	0	0	0	1	0	0	0	4	0	0	29	0
Hurghada	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0
Quseir	0	0	0	0	0	0	0	0	6	0	11	0	0	31	0

Table A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

MAY — 1964

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	All directions
ersa Matruh (A)	85	1	16	1—10	68	46	15	32	26	10	2	3	3	16	49	41	311
				11—27	70	25	19	55	30	1	4	6	2	12	9	98	331
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**138**	**71**	**34**	**87**	**56**	**11**	**6**	**9**	**5**	**28**	**58**	**139**	**642**
lexandria . . (A)	69	0	0	1—10	89	51	51	48	50	18	10	18	8	8	77	160	588
				11—27	18	17	3	2	1	0	0	1	7	7	15	16	87
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**107**	**68**	**54**	**50**	**51**	**18**	**10**	**19**	**15**	**15**	**92**	**176**	**675**
ort Said . . (A)	0	1	0	1—10	103	78	64	56	22	8	4	11	12	7	13	49	427
				11—27	111	55	43	23	0	0	0	19	9	6	6	43	315
				28—47	1	0	0	0	0	0	0	0	0	0	0	0	1
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**215**	**133**	**107**	**79**	**22**	**8**	**4**	**30**	**21**	**13**	**19**	**92**	**743**
l Arish	2	11	0	1—10	111	75	24	14	26	108	23	56	20	14	56	146	673
				11—27	10	3	1	0	0	0	0	1	7	7	14	15	58
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**121**	**78**	**25**	**14**	**26**	**108**	**23**	**57**	**27**	**21**	**70**	**161**	**731**
hazza	0	41	0	1—10	48	36	38	16	32	122	19	7	15	37	64	86	520
				11—27	47	23	1	0	0	2	0	2	6	23	27	52	183
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**95**	**59**	**39**	**16**	**32**	**124**	**19**	**9**	**21**	**60**	**91**	**138**	**703**
anta	80	11	8	1—10	68	53	63	55	49	2	2	17	25	36	72	130	572
				11—27	11	19	6	5	0	0	0	0	3	8	4	17	73
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**79**	**72**	**69**	**60**	**49**	**2**	**2**	**17**	**28**	**44**	**76**	**147**	**645**
airo . . . . (A)	5	0	85	1—10	42	78	77	40	6	1	2	1	0	0	10	42	299
				11—27	56	55	89	43	25	16	5	12	6	8	10	30	355
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**98**	**133**	**166**	**83**	**31**	**17**	**7**	**13**	**6**	**8**	**20**	**72**	**654**
ayoum	2	28	0	1—10	355	125	17	7	3	3	10	22	8	15	32	93	690
				11—27	5	4	0	0	0	0	0	3	2	0	0	10	24
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**360**	**129**	**17**	**7**	**3**	**3**	**10**	**25**	**10**	**15**	**32**	**103**	**714**

Table A 5. (*contd.*)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

MAY — 1964

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Minya . . . . (A)	16	3	0	1—10	38	21	6	7	10	4	2	7	7	23	87	178	390
				11—27	10	4	0	0	1	4	1	8	16	5	25	261	335
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**48**	**25**	**6**	**7**	**11**	**8**	**3**	**15**	**23**	**28**	**112**	**439**	**725**
Assyout . . . . (A)	3	0	0	1—10	13	24	19	85	12	12	1	51	59	73	53	85	487
				11—27	6	23	7	4	0	1	0	18	10	10	14	159	252
				28—47	1	0	0	0	0	0	0	0	0	1	0	0	2
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**20**	**47**	**26**	**89**	**12**	**13**	**1**	**69**	**69**	**84**	**67**	**244**	**741**
Luxor . . . . (A)	10	0	0	1—10	49	62	32	24	31	35	44	40	18	44	90	199	668
				11—27	1	2	1	0	0	0	0	0	0	0	22	40	66
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**50**	**64**	**33**	**24**	**31**	**35**	**44**	**40**	**18**	**44**	**112**	**239**	**734**
Aswan . . . . (A)	1	0	0	1—10	168	181	17	8	4	4	6	5	5	24	34	105	561
				11—27	76	52	0	1	1	0	0	2	5	10	16	19	182
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**244**	**233**	**17**	**9**	**5**	**4**	**6**	**7**	**10**	**34**	**50**	**124**	**743**
Siwa	61	0	0	1—10	25	46	46	87	52	36	31	33	16	45	58	24	499
				11—27	15	29	14	5	8	17	9	9	6	3	26	43	184
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**40**	**75**	**60**	**92**	**60**	**53**	**40**	**42**	**22**	**48**	**84**	**67**	**683**
Dakhla	3	38	0	1—10	90	112	49	37	30	21	18	36	34	43	86	114	670
				11—27	1	13	3	0	0	0	0	0	1	0	14	1	33
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**91**	**125**	**52**	**37**	**30**	**21**	**18**	**36**	**35**	**43**	**100**	**115**	**703**
Hurghada	0	4	10	1—10	43	23	11	7	14	25	2	3	2	3	52	15	200
				11—27	79	9	0	1	0	2	0	1	0	24	188	217	521
				28—47	0	0	0	0	0	0	0	0	0	0	2	7	9
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**122**	**32**	**11**	**8**	**14**	**27**	**2**	**4**	**2**	**27**	**242**	**239**	**730**
Quseir	80	0	16	1—10	42	26	11	3	9	14	8	7	8	18	72	76	294
				11—27	149	6	0	0	0	1	0	0	0	6	17	171	350
				28—47	0	0	0	0	0	0	0	0	0	0	0	4	4
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**191**	**32**	**11**	**3**	**9**	**15**	**8**	**7**	**8**	**24**	**89**	**251**	**648**

TABLE B 1.—UPPER AIR CLIMATOLOGICAL DATA

MAY — 1964

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 0000 UT	Surface	31	* 1012m.b.	* 1017m.b.	* 1006m.b.	31	17.4	23.0	13.2	31	14.6
	1000	31	151	189	98	31	17.5	26.0	14.1	31	13.3
	850	31	1537	1577	1496	31	13.6	23.6	3.6	29	1.6
	700	31	3139	3196	3070	31	2.2	9.0	— 5.0	24	— 4.9
	600	31	4367	4447	4266	31	— 5.7	— 1.8	—11.3	23	—13.7
	500	31	5771	5866	5642	31	—15.7	—12.0	—21.7	17	—23.4
	400	31	7416	7516	7290	31	— 27.9	—25.1	—32.5	15	—34.5
	300	30	9415	9531	9225	30	—43.2	—38.3	—48.0	—	—
	200	29	12055	12202	11891	29	—55.7	—41 3	—62.0	—	—
	150	29	13873	14146	13746	29	—58 5	—43·4	—63.7	—	—
	100	28	16398	16862	16280	28	—61.5	— 44.9	—68.4	—	—
	70	10	18633	19210	18490	10	—59.0	—46.0	—67.5	—	—
	50	6	20675	21496	20603	6	—57.5	—44.5	—59.7	—	—
	30	2	23994	24015	23973	2	—51.3	—50.7	—51.7	—	—
	20	2	26632	26684	26580	2	—46.4	—45.9	—46.8	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 UT	Surface	31	* 997m.b.	* 1003m.b.	* 990m.b.	31	18.5	30.0	11.2	31	8.5
	1000	31	111	165	60	7	15.9	18.0	12.4	7	8.5
	850	31	1492	1526	1462	31	14.6	29.9	6.8	27	— 2.4
	700	31	3109	3166	3035	31	4.1	11.6	— 4.7	17	—10.9
	600	31	4344	4416	4238	31	— 4 0	0.7	—11.1	16	—16.9
	500	31	5758	5844	5611	31	—13.9	— 8.6	—21.1	7	—24.6
	400	31	7415	7528	7218	31	—26.4	—22.1	—35.0	6	—32.7
	300	31	9433	9575	9210	31	—41.0	—36.7	—44.7	—	—
	200	31	12091	12264	11912	31	—55.8	—49.0	—63.1	—	—
	150	31	13911	14069	13763	31	—59.0	—54.8	—65.3	—	—
	100	29	16417	16546	16305	29	—64.5	—58.8	—68.1	—	—
	70	25	18600	18770	18480	25	—63.5	—57.9	—70.5	—	—
	50	20	20689	20790	20615	20	—59.0	—56.1	—65.0	—	—
	30	15	23957	24073	23860	15	—51.6	—47.2	—55.6	—	—
	20	6	26564	26658	26476	6	—49.5	—45.6	—52.7	—	—
	10	1	31266	—	—	1	—37.8	—	—	—	—
Aswan. 0000 UT	Surface	29	* 987m.b.	* 992 m.b.	* 982m.b.	29	22 8	34.0	17.5	29	— 1.0
	1000	—	—	—	—	—	—	—	—	—	—
	850	29	1491	1524	1451	29	19.2	28.4	12.5	21	— 2.9
	700	29	3125	3169	3064	29	8.1	12.9	3.6	13	— 8.9
	600	29	4378	4430	4306	29	— 4.1	3.7	— 3.2	12	—11.4
	500	29	5809	5867	5724	29	—10.9	— 6.7	—15.1	8	—19.8
	400	29	7489	7587	7398	29	—22.2	—15.7	—28.0	5	—34.6
	300	29	9543	9704	9395	29	— 36.3	—28.2	—40.3	—	—
	200	26	12250	12483	12087	26	—54.0	—49.9	—57.6	—	—
	150	23	14106	14325	13883	23	—64.7	—59.2	—70.0	—	—
	100	11	16518	16781	16414	11	—72.8	—66.0	—77.0	—	—
	70	3	18647	18860	18500	3	—70.4	—70.0	—70.7	—	—
	50	2	20689	20820	20559	2	—64.6	—59.5	—69.8	—	—
	30	1	23935	—	—	1	—57.7	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

TABLE B 1 (*contd.*).—UPPER AIR CLIMATOLOGICAL DATA

MAY — 1964

Station	Pressure Surface Millibar	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 1200 U.T.	Surface	31	* 1012m.b.	* 1017m.b.	* 1006m.b.	31	22.3	36.6	18.7	31	14.7
	1000	31	152	190	97	31	21.2	35.0	17.6	31	12.3
	850	31	1543	1594	1483	31	13.5	25.2	5.9	29	7.0
	700	31	3146	3216	3080	31	2.8	10.4	— 3.9	24	— 8.2
	600	31	4375	4459	4290	30	— 5.7	0.8	—11.8	20	—11.7
	500	31	5783	5886	5658	31	—15.3	—11.2	—22.1	17	—23.9
	400	31	7426	7556	7259	31	—27.7	—23.4	—34.8	6	—29.4
	300	31	9427	9573	9270	31	—42.8	—39.3	—48.2	—	—
	200	31	12069	12227	11927	31	—56.4	—46.8	—64.0	—	—
	150	30	13886	14050	13768	30	—57.6	—52.0	—64.2	—	—
	100	29	16421	16621	16288	29	—61.5	—56.8	—66.5	—	—
	70	9	18592	18740	18050	9	—60.6	—57.0	—61.9	—	—
	50	5	20798	20871	20681	5	—55.6	—54.1	—57.5	—	—
	30	1	24188	—	—	1	—47.0	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 1200 U.T.	Surface	31	* 996m.b.	* 1002m.b.	* 989m.b.	31	29.6	41.5	20.1	31	3.5
	1000	31	113	158	52	7	26.3	29.4	23.8	7	4.6
	850	31	1518	1557	1464	31	15.5	28.2	6.5	31	— 2.1
	700	31	3129	3184	3067	31	4.9	12.3	— 5.6	24	—10.8
	600	31	4366	4437	4267	31	— 4.1	0.5	—11.8	14	—16.4
	500	31	5782	5867	5644	31	—11.4	—10.4	—21.0	12	—24.8
	400	31	7442	7543	7264	31	—25.5	—21.3	—30.1	9	—32.9
	300	31	9464	9593	9282	31	—40.6	—34.9	—43.7	—	—
	200	31	12123	12264	11958	31	—55.6	—50.6	—59.7	—	—
	150	31	13919	14089	13781	31	—58.7	—54.2	—66.4	—	—
	100	28	16461	16633	16317	28	—64.6	—60.8	—70.2	—	—
	70	26	18648	18800	18500	26	—60.7	—56.7	—69.8	—	—
	50	22	20746	20925	20610	22	—56.4	—52.2	—62.2	—	—
	30	13	24040	24270	23888	13	—51.0	—48.0	—59.0	—	—
	20	8	26665	26843	26543	8	—46.8	—41.6	—50.4	—	—
	10	1	31357	—	—	1	—38.8	—	—	—	—
Aswan 1200 U.T.	Surface	30	* 988m.b.	* 993m.b.	* 982m.b.	30	35.1	45.3	20.4	30	8.7
	1000	—	—	—	—	—	—	—	—	—	—
	850	29	1520	1551	1492	29	20.9	31.0	13.3	18	— 4.7
	700	30	3163	3204	3103	30	9.4	14.2	3.7	10	— 9.7
	600	30	4422	4473	4351	30	1.3	6.6	— 2.7	9	—12.3
	500	30	5859	5962	5764	30	—10.0	— 4.4	—12.9	8	—22.0
	400	30	7477	7689	7178	30	—21.2	—15.2	—26.6	2	—35.4
	300	30	9614	9806	9444	30	—34.4	—27.2	—39.0	1	—40.8
	200	27	12342	12503	12177	27	—52.5	—48.7	—55.3	—	—
	150	26	14324	14394	13958	26	—61.8	—53.6	—67.7	—	—
	100	14	16616	16801	16351	14	—69.4	—65.5	—71.2	—	—
	70	4	18793	18890	18730	4	—67.0	—63.5	—75.1	—	—
	50	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

TABLE B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE ; THE HIGHEST WIND SPEED IN THE UPPER AIR

MAY — 1964

	Station	Freezing Level									First Tropopause									Highest wind speed			
		Mean			Highest			Lowest			Mean			Highest			Lowest						
		Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew Point (°C)	Altitude (g pm)	Pressure (mb.)	Dew Point (°C)	Altitude (gpm)	pressure (mb.)	Temperature (°C)	Altitude (g pm)	Pressure (mb.)	Temperature (°C)	Altitude (g pm)	Pressure (mb.)	Temperature (°C)	Altitude (g pm)	Pressure (mb.)	Direction (000—360)°	Speed in Knots
0000 U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	M. Matruh .	3437 (31)	676 (31)	-7.8 (24)	4140	622	-8.2	2100	794	-4.6	11940 (29)	189 (29)	-56.4 (29)	14950	127	-66.3	9600	284	-47.3	14900	127	230	135
	Helwan . .	3677 (31)	656 (31)	-12.3 (20)	4515	590	—	2270	771	-4.4	12630 (30)	188 (30)	-59.2 (30)	16477	100	-65.1	10570	246	-53.9	14510	135	270	155
	Aswan . . .	4316 (29)	605 (29)	-12.6 (12)	4830	569	—	3490	664	-16.7	16058 (5)	109 (5)	-72.1 (5)	17250	92	-75.2	14650	134	-63.5	13270	169	270	128
1200 U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	M. Matruh. .	3394 (31)	666 (31)	-9.6 (24)	4370	606	-6.8	2390	764	-11.0	11930 (29)	200 (29)	-57.5 (29)	14230	143	-64.8	8700	324	-43.0	12230	197	280	175
	Helwan . . .	3751 (31)	650 (31)	-11.6 (20)	4490	596	-11.6	2330	767	-3.5	12039 (31)	192 (31)	-58.7 (31)	15430	117	-63.8	10520	258	-49.3	11610	216	280	150
	Aswan . . .	4607 (30)	577 (30)	-14.3 (10)	5500	528	-21.6	4080	622	—	15766 (9)	119 (9)	-67.2 (9)	18147	80	-68.6	12050	206	-54.7	12200	205	210	125

N = The number of cases the element has been observed during the month.

TABLE B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

MERSA MATRUH (A)—MAY 1964

Time	Pressure Surface Millibar	Wind between ranges of direction (000–360)°																								Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	2	4	0	—	0	—	3	5	2	2	3	9	1	17	0	—	0	—	2	4	5	9	5	10	8	31	6
	1000	3	7	0	—	0	—	5	8	1	3	3	12	0	—	0	—	1	3	1	7	6	9	5	11	6	31	7
	850	0	—	0	—	0	—	0	—	2	28	0	—	2	12	4	15	2	18	2	12	9	20	10	24	0	31	20
	700	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	25	2	20	8	24	11	25	6	22	0	31	24
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	40	4	24	7	30	14	29	5	32	0	31	29
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	25	4	34	10	41	9	32	7	37	0	31	37
	400	1	25	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	51	12	42	7	46	5	45	0	29	46
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	30	3	58	11	62	6	41	5	45	0	26	53
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	36	7	53	2	72	3	45	0	14	56
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	32	7	66	3	76	1	62	0	14	65
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	39	1	135	2	28	0	—	0	4	62
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	6	14	7	11	3	16	4	11	1	15	0	—	0	—	0	—	0	—	0	—	2	21	8	14	0	31	14
	1000	4	14	7	11	3	16	2	14	2	11	1	12	0	—	0	—	0	—	0	—	3	19	9	15	0	31	14
	850	1	22	1	19	1	11	0	—	0	—	2	6	1	23	1	24	3	18	6	14	9	19	6	19	0	31	17
	700	1	25	0	—	1	23	0	—	0	—	1	8	0	—	4	22	3	21	6	23	9	26	6	21	0	31	23
	600	0	—	0	—	0	—	1	17	0	—	0	—	0	—	2	26	4	22	9	23	12	29	3	28	0	31	26
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	32	4	34	11	31	10	36	3	30	0	30	33
	400	1	40	0	—	0	—	0	—	0	—	0	—	0	—	1	36	8	39	9	42	7	43	2	38	0	28	41
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	50	12	50	8	47	1	45	0	26	49
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	46	5	78	9	61	1	44	0	22	60
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	54	7	58	5	55	0	—	0	14	57
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	50	0	—	0	—	0	2	50
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been obeserved for all directions during the month.

TABLE B 3 (*contd.*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

HELWAN—MAY 1964

Time	Pressure Surface (Millibar.)	Wind between ranges of direction (000—360)°																						Number of Calm winds	Total Number of Observations (TN)	Mean Scalar wind Speed (Knots)
		345/014		015/044		045/074		075/104		105/134		135/164		165/194		195/224		225/254		255/284		285/314		315/344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	4	8	6	12	17	12	2	8	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	31	10
	1000	1	8	1	5	4	10	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	7	8
	850	8	18	3	15	2	4	2	10	0	—	0	—	0	—	1	9	0	—	0	—	8	18	7	17	0	31	16
	700	5	16	0	—	0	—	1	11	0	—	0	—	0	—	0	—	1	31	6	23	11	18	7	22	0	31	20
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	18	11	28	10	19	6	22	0	31	23
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	32	17	29	5	20	2	18	0	31	27
	400	1	12	0	—	0	—	0	—	0	—	0	—	1	3	0	—	8	45	14	44	4	40	3	33	0	31	40
	300	0	—	0	—	0	—	1	3	0	—	0	—	0	—	1	28	7	74	19	54	0	—	2	44	0	30	55
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	52	13	81	1	54	1	87	0	24	69
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	54	6	59	1	62	1	99	0	13	61
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	31	3	49	0	—	0	—	0	6	40
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	11	10	2	10	2	19	0	—	1	15	0	—	0	—	2	13	2	13	2	16	4	13	4	9	1	31	12
	1000	2	11	0	—	1	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	13	2	9	0	7	12
	850	8	14	7	15	0	—	0	—	1	10	0	—	0	—	1	21	2	15	3	17	2	12	6	14	1	31	14
	700	3	29	2	14	2	14	0	—	0	—	0	—	2	14	1	29	2	18	5	9	13	17	1	10	0	31	16
	600	4	13	1	14	1	10	0	—	0	—	0	—	0	—	3	27	8	26	8	19	5	27	1	12	0	31	22
	500	1	12	0	—	0	—	0	—	0	—	0	—	0	—	2	15	12	30	8	30	7	24	1	16	0	31	27
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	44	11	46	11	37	7	27	1	24	0	31	38
	300	0	—	0	—	0	—	0	—	0	—	0	—	1	18	0	—	10	77	17	53	3	54	0	—	0	31	60
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	30	7	61	9	74	3	44	1	36	0	21	62
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	87	8	49	2	46	0	—	0	14	60
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	40	3	44	2	49	0	—	0	7	44
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (*contd.*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A)— MAY 1964

Time	Pressure Surface (Millibar)	Wint between ranges of direction (000—360)																						Number of calm winds	Total number of observations (T N)	Mean Scalar wind Speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	17	13	0	—	0	—	4	9	0	—	0	—	0	—	0	—	0	—	1	10	0	—	4	12	3	29	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	0	—	6	12	2	12	2	12	0	—	1	26	0	—	1	9	0	—	2	11	3	6	12	16	0	29	13
	700	0	—	0	—	0	—	1	10	0	—	0	—	1	10	5	10	9	11	3	16	7	24	3	11	0	29	15
	600	1	25	0	—	1	26	0	—	0	—	0	—	0	—	2	22	12	20	9	23	4	22	0	—	0	29	22
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	24	14	30	8	26	2	14	1	10	0	29	27
	400	0	—	0	—	0	—	0	—	0	—	0	—	1	29	6	30	10	40	9	36	3	15	0	—	0	29	34
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	30	13	50	6	49	2	46	0	—	0	22	48
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	65	4	68	2	78	0	—	0	—	0	7	70
	150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	16	11	0	—	0	—	1	5	1	4	0	—	1	5	2	12	0	—	2	9	2	14	4	13	1	30	10
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	5	7	0	—	3	7	0	—	1	8	1	5	1	3	2	12	0	—	6	16	1	8	10	13	0	30	11
	700	0	—	0	—	1	5	0	—	0	—	1	8	1	10	6	12	5	12	6	27	5	14	5	16	0	30	15
	600	0	—	0	—	0	—	0	—	0	—	0	—	1	20	6	14	8	26	6	23	5	20	0	—	3	29	19
	500	1	14	0	—	0	—	0	—	0	—	1	5	0	—	6	23	15	27	6	35	0	—	0	—	0	29	26
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	27	15	34	6	39	1	35	1	32	0	29	33
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	39	17	56	4	44	1	36	0	—	0	25	51
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	87	6	77	3	62	1	49	0	—	0	13	74
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	75	0	—	0	—	0	—	0	2	75
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATION AT EL KASR

MAY 1964

Successive cold spells predominating. Extensive heat wave during most of the last week.

The first day of the month was a peak of a cold spell, when the lowest maximum air temperature in the screen (3.3 °C below normal) and means of the day (4.1 °C below normal), day-time and night-time occurred. On the following day, the absolute minima of air temperature at 2 metres (5.2°C below normal) and 5 cms above ground level, were recorded as well as those of soil temperature for the surface layers down to 200 cms of depth. The lowest values of evaporation from pan class A and Piche in the screen (3.6 mms below normal) were observed on the 3rd. Another lowest Piche evaporation and also the lowest vapour pressure deficit were reported on the 11 th.

The remarkable heat wave started on the 25th. and continued for the next four days with two peaks on the 27th. and 29th. The absolute maximum air temperature (13.5°C above normal), the highest values of the daily mean (7.0°C above normal), day time mean and those of soil temperatures for the surface layers down to 20 cms deep were associated with the first peak, together with the lowest relative humidity (53% below normal) and the highest water vapour deficit, whereas that of evaporation from pan class A and Piche happened on the previous day and the highest minimum air temperature at 5 cms was observed on the following day.

The second peak was characterized by the highest values of minimum air temperature (2.5°C above normal), and night time mean, as well as the lowest vapour pressure. An active cold front passed El Kasr late in the afternoon of that day giving rise to the highest daily mean of relative humidity (27% above normal) and vapour pressure in the evening and also a drop of 12.5°C in the maximum air temperature on the next day.

The daily means of air temperature and Piche evaporation were slightly below normal by 0.7°C and 0.9 mm, while that of relative humidity was above by 1%.

The actual duration of bright sunshine was 324.6 hours or 77% of the possible duration and the total amount of rainfall was less than normal by 3.5 mms.

REVIEW OF AGRO-METEOROLOGICAL STATION AT TAHRIR

MAY 1964

Cool and steady with extreme air temperatures below the average for most of the days. Khamsin conditions with an extensive heat wave prevailed during the last week.

The month started with a peak of a cold spell, associated with the lowest values of the daily mean of air temperature in the screen, the absolute minima of the air at 5 cms above the ground and soil temperatures for depths 2 to 200cms, whereas those of the surface layer were observed on the 2 nd. together with the absolute minimum and the lowest night time mean of air temperature at 2 metres. The lowest values of evaporation from pan class A and Piche in the screen and in the free air at 1, 60 and 120 cms. above ground level occurred on the next day. and also the highest relative humidity at 1200 U.T.

Another cold spell began on the 8 th. and gave rise on the following day to the lowest values of maximum and day time mean of air temperature together with the daily mean and 1200 U.T. vapour pressure.

The intense heat wave had its peak with the absolute maximum of air temperature on the 28th. and 29th. (42.9°C), when the highest values of soil temperatures for the surface layers down to 20 cms of depth were observed. On the first day the lowest values of mean relative humidity and that at 1200 U.T. were reported, whereas the highest values of the daily and day time means happened on the second day. No material change in the maximum air temperature took place on the following day, but the highest values of the minimum and night time mean occurred as well as those of evaporation.

The maximum air temperature fell 2°C on the last day of the month when the vapour pressure attained its highest value.

The daily means of air temperature, relative humidity, wind speed at 2 metres, vapour pressure and evaporation from pan class A and Piche were all less than those of last year by amounts 0.9 °C, 3 %, 0.3m/sec, 0.6, 0.11 and 1.8 mms respectively.

On the other hand the actual sunshine duration and total radiation were more by 56 hours and 1700 langleys. With regard to the extreme soil temperature, the maximum was higher by 6.9°C at 1 cm, decreasing gradually by increasing depth and vanished at about 1 metre, whereas the minimum was lower by 3.1 °C at 1 cm and became 0.7°C at 50 cms.

REVIEW OF AGRO-METEOROLOGICAL STATION AT GIZA

MAY 1964

Mainly mild with successive cold spells. Very hot during the last week.

A peak of a cold spell took place on the first day of the month giving the absolute minima of air temperature at 5 and 200 cms above the ground (4°C below normal) together with those of soil temperature for the surface layer down to 20 cms of depth in the dry, wet and grass fields and also the lowest vapour pressure deficit. The cooling extended to 50 cms of depth in the three fields on the following day and gave rise to the lowest Piche evaporation in the free air at 120 cms above ground level while the lowest values of soil temperatures at 100 cms in the dry and wet fields and of Piche evaporation in the screen (1.2 mms below normal) and in the free air at 60 cms occurred on the 3 rd. For the grass field and Piche at 1 cm, the lowest values were observed on the next day.

The peak of the second cold spell was on the 8 th., when the lowest maximum air temperature (6.2°C below normal) was reported while the lowest values of the daily mean (6.5 below normal) and day time mean as well as that of pan class A evaporation were observed on the following day. Another absolute minimum of air temperature was reported on the 10 th. and also the lowest night time mean.

The highest daily mean of relative humidity (10% above normal) was associated with the third cold spell and happened on the 14th.

The intense heat wave started on the 26 th., with the peak (43.7°C, 10.°C above normal) on the 30 th., when the highest values of Piche evaporation in the free air and screen (13.1 mms above normal) and soil temperatures for the surface layers down to 20 cms of depth in the grass field and the layer of thickness 5 to 10 cms in the dry field

were recorded as well as the lowest relative humidity (42% below normal) and the daily mean (26% below normal) and also vapour pressure. The highest values of pan class A evaporation, soil temperature for the first two cms in the dry field and the surface layers to 20 cms of depth in the wet field and vapour pressure defiict occurred on the previous day, whereas for soil temperature at 50 cms of depth in the three fields took place on the last day of the month.

Compared with the normal values, the daily means of air temperature and relative humidity were lower by 1.1°C and 1% respectively, while that for Piche evaporation in the screen was higher by 3.0 mms.

The highest values of soil temperatures in the three fields were generally higher than last year by about 4 to 5 °C in the surface layer decreasing gradually with increasing depth and vanishing at about 1 metre. With respect to the lowest values, they were less by variable amounts not exceeding 3°C.

REVIEW OF AGRO-METEOROLOGICAL STATION AT KHARGA

MAY 1964

Mainly mild and dry with successive cold spells causing the dropping of temperature to below normal in most of the days, but extremely hot and dry during the last four days.

The first day of the month was a peak of a cold wave, when the lowest vapour pressure and the absolute soil temperatures for the depths 20 and 200 cms. were observed, whereas those for the depths 10, 50, and 100 cms, the highest relative humidity (20% above normal) and the lowest vapour pressure deficit occurred on the following day. Also the lowest values of evaporation from pan class A and Piche in the free air at levels 1, 60 and 120 cms. above ground level and in the screen were reported on the 5th.

The most pronounced cold spell started on the 7th with the peak on the 10th, when the lowest maximum air temperature (7.5°C below normal), the absolute minima at 5, 20 and 200 cms. (6. 4°C below normal), the lowest means of the day (6.5°C below normal), night time and day time and the absolute minima of soil temperature for the surface layer down to 5 cms. of depth were recorded.

The extensive heat wave started on the 26th, when the highest values of evaporation from pan class A and Piche in the free air and the screen (29.4 mms. above normal) were observed with gradual rise in temperature to the last day of the month, when the absolute maximum air temperature (7.9°C above normal) and the highest values of the means for the day (6.4°C above normal), day time and night time occurred as well as the absoulte maxima of soil temperatures for the surface layers down to 1 metre of depth and the highest water vapour deficit (68.4 mms.).

During the last three days of the month, the lowest relative humidity 7% (26% below normal) was reported, while the highest minima of air temperature at 5, 20 and 200 cms. (3.9°C above normal) were recorded on the 28th.

Compared with the normal values of mean air temperature and relative humidity this month was below normal by 1.2°C and 9% restpectively while the mean Piche evaporation in the screen was 10.5 mms. above.

The sunshine duration was 385.3 hours (93.1% from the possible duration).

TABLE C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

MAY — 1964

STATION	Air Temperature (°C)					Mean Duration in hours of daily air temperature above the following values.										
	Mean Max.	Mean Min.	Mean of the day	Night time mean	Day time mean	-5°C	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45
El Kasr	24.4	13.4	19.3	16.9	21.3	24.0	24.0	24.0	24.0	20.0	9.7	1.9	0.4	0.1	0.0	0
Tahrir	31.2	14.4	22.2	18.2	25.2	24.0	24.0	24.0	24.0	21.0	13.7	7.7	2.8	1.3	0.4	0
Giza	31.5	14.8	23.3	19.9	25.6	24.0	24.0	24.0	24.0	21.2	14.7	8.3	3.1	1.4	0.4	0
Kharga	35.4	19.4	27.9	24.6	30 4	24.0	24.0	24.0	24.0	24.0	22.3	15.8	8.5	2.5	0.9	0

TABLE C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS.

MAY — 1964

STATION	Max. Temp. at 2 metres (°C)				Min. Temp. at 2 metres (°C)				Min. Temp. at 5 cms. above (°			
	Highest		Lowest		Highest		Lowest		Dry soil		Grass	
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Dat
El Kasr	39.1	27	20.3	1	19.3	29	9.1	2	6.7	2	—	—
Tahrir	42.9	28.29	24.6	9	21.6	30	10.0	2	7.4	1	—	—
Giza	43.7	30	25.3	8	21.6	31	9.6	1·10	5.4	1	3.3	1
Kharga	46.2	31	29.2	9·10	25.9	28	13.8	10	10.8	10	—	—

TABLE C 3.—(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL.

MAY — 1964

STATION	(Solar+Sky) Radiation gm. cal/cm²	Duration of Bright Sunshine (hours)			Relative Humidity. %						Vapour pressure (mms)						Evaporation(mms)		Rainfall (mm	
		Total Actual monthly	Total Possible monthly	%	Duration in hours		Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 UT	Highest	Date	Lowest	Date	Piche	Pan class A	Total Amount Monthly	Max. Fall in one day
					>90%	>80%														
El Kasr	565.4	324.6	426.1	76	—	—	72	63	18	27	12.4	13.0	16.6	31	7.8	24	—	6.46	0.1	0.1
Tahrir	655.9	373.0	424.7	88	1.2	4.7	55	28	8	29	9.9	8.4	16.6	31	5.1	29	18.6	11.85	0.0	—
Giza	645.1	363.4	423.7	86	0.1	2.6	49	26	8	30	9.3	7.8	15.8	31	4.7	30	19.1	11 52	0.0	—
Kharga	612.1	384 3	414.0	93	0	0	23	15	7	29·30·31	6.0	5.8	9.8	21	3.4	1	35.4	19.26	0.0	—

TABLE C 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS IN DIFFERENT FIELDS

MAY — 1964

STATION	Highest (H) Lowest (L)	Extreme soil temperature (°C) in dry field at different depths (cms.)										Extreme soil temperature (°C) in grass field at different depths (cms.)									
		0.3	1	2	5	10	20	50	100	200	300	0.3	1	2	5	10	20	50	100	200	300
El Kasr . . .	H	51.2	45.8	43.5	37.3	32.2	28.4	25.1	23.1	21.2	—	—	—	—	—	—	—	—	—	—	—
	L	9.8	10.2	10.7	12.6	15.6	18.0	20.4	20.3	20.1	—	—	—	—	—	—	—	—	—	—	—
Tahrir	H	60.6	59.3	53.5	49.7	43.0	35.6	30.4	26.8	24.0	23.2	—	—	—	—	—	—	—	—	—	—
	L	10.4	10.5	11.1	14.3	16.8	21.0	23.0	22.8	22.1	22.1	—	—	—	—	—	—	—	—	—	—
Giza	H	71.0	68.5	64.4	46.2	38.5	32.8	29.8	26.6	24.4	23.6	34.3	33 3	29.5	29.9	26.8	25.2	23.6	21.4	20.6	—
	L	9.0	10.1	10.5	17.5	21.7	24.4	24.9	24.0	23.2	23.4	14.5	14.3	15.6	17.2	18.3	19.0	20.0	19.5	19.8	—
Kharga. . . .	H	67.0	60.2	56.8	51.1	42.2	35.8	31.8	28.8	26.7	26.3	—	—	—	—	—	—	—	—	—	—
	L	15.0	17.2	18.0	20.6	24.2	26.6	27.4	26.6	25.6	25.5	—	—	—	—	—	—	—	—	—	—

TABLE C 5.—SURFACE WIND

MAY — 1964

STATION	Wind Speed m/sec at 2 metres			Days with surface wind speed at 10 metres.							Max. Gust (knots) at 10 metres	
	Mean of the day	Night time mean	Day time Mean	≥10 knots	≥15 knots	≥20 knot	≥25 knots	≥30 knots	≥35 knots	≥40 knots	value (knots)	Date
El Kasr. . .	3.8	2.8	5.0	—	—	—	—	—	—	—	—	—
Tahrir. . . .	3.3	2.5	4.4	31	25	8	2	0	0	0	38	10
Giza	2.8	2.1	4.1	30	17	3	0	0	0	0	32	7
Kharga.. . .	4.5	3.7	5.6	—	—	—	—	—	—	—	—	—

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MONTHLY WEATHER REPORT

VOLUME 7 NUMBER 6

JUNE, 1964

U.D.C. 551, 506,1 (62)

MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties as the National Meteorological service for the U.A.R., the Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be adressed to :

"The Director General, Meteorological Department, Kubri-el-Qubbeh—CAIRO".

THE DAILY WEATHER REPORT

This report is printed daily in the Meteorological Department. It contains surface and upper air observations carried by the relevant networks of the Republic and made at the four main synoptic hours of observations (00, 06, 12 and 18 U.T.); as well as ship observations over the Eastern Mediterranean and north Red Sea made at the same times.

It also contains two surface synoptic charts at 00 and 12 U.T. and two upper air charts for the standard isobaric surfaces 700 & 500 mbs. at both 00 and 12 U.T.

In compliance with resolution 8 (EC-XIII) of WMO, foreign upper air data included in Cairo Subregional Broadcast are also given in this report.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year .

CLIMATOLOGICAL NORMALS FOR EGYPT

The normals, long averages and statistical data are given in one edition for stations in Egypt from the date of opening of each station up to 1945, A new voluminous edition was issued in March 1968 which brings normals and mean values up till 1960.

UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

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MINISTRY OF SCIENTIFIC RESEARCH—METEOROLOGICAL DEPARTMENT
CAIRO

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GENERAL SUMMARY OF WEATHER CONDITIONS

JUNE 1964

Generally mild and humid in the northern parts, hot and rather humid in the middle parts, excessively hot and dry in the southern parts. A prevailing excessive heat wave during the 2nd week.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather was generally of the common summer type, mild and humid in the northern parts, hot in the middle parts and excessively hot in the southern parts. Excessive temperatures have been experienced between the 9th & 12th, due to the prevalence of a pronounced heat wave.

Light showers fell over few scattered parts of the Mediterranean district during the second week. Early morning mist developed, in few occasions over scattered parts of Lower Egypt and in large occasions over western parts of Cairo area district. Rising sand occurred during few days over scattered parts.

PRESSURE DISTRIBUTION

The prevailing pressure distributions over the surface map this month can be summarized in the following pressure systems.

- Anticyclonic ridge over SW Russia (Caspian & Black Sea areas).
- Anticyclonic ridge extending from the Azores through west Mediterranean and Europe.
- Complex monsoon low pressure system over Iraq, Arabia & Sudan.
- Thermal low over Great Sahara of Africa.
- The travelling deep low pressure system of north Atlantic.

On the other hand both the 700 & 500 mb charts were characterized by a high pressure belt extending south of latitude 35°N and two deep upper troughs to its north, one stretched over West Europe and the other stretched over West Russia.

The complex monsoon over Iraq, Arabia and Sudan showed a marked gradual NW displacement on the 5th by the approach of a deep Atlantic low pressure system from Central Europe. On the 8th its western arm penetrated Greece and thermal shallow lows developed accordingly over Western Desert and Cyrenica Mediterranean coastal strip.

On the 12th a second Atlantic depression penetrated Spain and accordingly the complex monsoon of the Middle East showed an additional northwest elongation.

On the 19th, a third Atlantic depression aproached Central Europe and the Mediterranean was a loose pressure gradient area. As a result the complex monsoon of Iraq, Arabia and Sudan showed a marked gradual NW displacement through East Mediterranean up till the 23rd.

On the 29th, a deep northern trough of low pressure penetrated north of the Black Sea. Accordingly the complex monsoon over Iraq, Arabia & Sudan showed a marked north-west elongation towards East Mediterranean and northern vicinities, where thermal cells developed on the 30th.

Apart from these four NW elongations, the normal pressure distribution over the surface map predominated.

The subtropical jet stream oscillated over the U.A.R. during this month at about 180 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan & Aswan were 150, 148 & 135 knots on the 19th, 8th & 2nd respectively.

SURFACE WIND

The prevailing surface winds were light/moderate Nly in general. Fresh/strong winds blew during daytime intervals in few days over scattered localities in the Republic.

Gales were reported at: Fayed on the 12th.

TEMPERATURE

Four heat waves of short durations were experienced, one of which with its peak round the 12th was excessive.

Maximum air temperature was remarkably above normal during the excessive heat wave, slightly to moderately above normal during the other heat waves and slightly below normal the rest of the month.

The absolute maximum temperature for the Republic was 46.9°C reported at Kom Ombo on the 13th.

Minimum air temperature fluctuations were irregular. In general, it oscillated round normal in the northern parts, above normal in the middle parts and below normal in the southern parts, its departures from normal were slight to moderate.

The absolute minimum temperature for the Republic was 12.3°C reported at El Kasr on the 2nd.

PRECIPITATION

This month was almost rainless with the exception of light showers over few scattered localities in the Mediterranean distrcit between the 9th & 12th.

The absolute daily rainfall was 0.4 mm. reported at Sidi Barrani on the 10th, which was also the absolute monthly rainfall for this month.

Cairo, 19 / 8 / 1970

M. F. TAHA
Under Secretary of State
Director General
Meteorological Depar tment

TABLE A 1.—MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION

JUNE — 1964

STATION	Atmospheric Pressure (mbs) M.S.L		Air Temperature °C									Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evaporation mms. Mean
			Maximum		Minimum			Dry Bulb		Wet Bulb							
	Mean	D.F Normal or Average	(A) Mean	D.F Normal or Average	(B) Mean	D.F Normal or Average	$\frac{A+B}{2}$	Mean	D.F Normal or Average	Mean	D.F Normal or Average	Mean	D.F Normal or Average	Total Actual	Total Possible	%	
Sallum	1010.8	—2.5	28.7	—0.6	20.9	+0.5	24.8	24.8	+0.6	19.8	+0.2	61	0	—	—	—	10. 1
Mersa Matruh (A)	1011.1	—1.7	27.8	0.0	18.1	—0.1	23.0	23.1	—0.1	19.3	—0.4	68	— 2	369.5	425.4	86.9	8. 6
Alexandria (A)	1010.2	—1.5	29.5	+1.3	20.1	—0.1	24.8	24.2	0.0	20.2	—0.3	68	— 4	366.5	424.1	86.4	6. 7
Port Said (A)	1009.4	—1.7	28.3	—0.2	21.8	—0.6	25.0	24.8	—0.1	20.9	—0.5	69	— 3	348.0	424.1	82.0	5. 3
El Arish	1009.5	—1.4	29.2	+0.4	19.6	+0.9	24.4	24.4	—0.3	21.1	0.0	73	+ 2	375.1	424.2	88.4	5. 5
Ghazza	1009.2	—1.3	26.7	—0.4	19.7	+0.3	22.3	23.5	—0.4	20.4	—0.7	74	— 2	336.4	425.4	79.1	4. 9
Tanta	1008.9	—	34.0	—	18.7	—	26.4	25.8	—	20.2	—	58	—	364.9	422.4	86.4	8. 4
Cairo (A)	1009.3	—1.7	34.6	+0.1	20.7	+0.8	27.6	27.1	+0.1	19.3	—0.4	45	— 3	—	—	—	18.8
Fayoum	1008.7	—	35.7	—	20.1	—	27.9	27.8	—	19.6	—	42	—	—	—	—	12.2
Minya (A)	1008.5	—1.4	36.1	+0.5	19.3	+0.5	27.7	27.9	+0.4	19.3	+0.4	41	0	—	—	—	12.4
Assyout (A)	1008.2	—0.8	37.1	—0.3	21.8	+0.5	29.4	29.8	+0.3	18.0	—0.1	26	— 1	—	—	—	23.5
Luxor (A)	1006.1	—0.7	40.0	—0.7	22.6	0.0	31.3	31.9	—0.5	19.1	—0.1	25	+ 3	—	—	—	15.3
Aswan (A)	1006.1	+0.1	40.6	—1.6	23.9	—1.2	32.2	32.7	—1.2	17.2	—0.2	13	+ 1	—	—	—	23.2
Siwa	1010.2	—2.1	37.3	+0.2	20.3	+1.1	28.8	29.3	—0.5	18.1	—1.3	28	— 5	—	—	—	18.6
Bahariya	1009.4	—1.3	36.7	—0.2	20.2	+0.6	28.4	29.0	0.0	18.0	—0.5	29	— 3	—	—	—	11.8
Farafra	1010.7	—	37.1	—	19.1	—	28.1	28.6	—	16.7	—	24	—	—	—	—	24.8
Dakhla	1007.6	—0.3	38.3	+0.1	20.1	—2.4	29.2	30.4	—0.8	17.0	—0.4	19	0	—	—	—	22.8
Kharga	1007.9	—	38.7	—	22.9	—	30.8	31.4	—	17.1	—	17	—	383.0	409.7	93.5	33.8
Tor	1006.0	—1.1	33.6	+0.2	24.5	+1.3	29.0	27.9	+0.5	21.2	—0.4	53	— 5	—	—	—	11.1
Hurghada	1006.1	—0.5	33.1	+1.7	23.4	—0.1	28.2	28.7	+0.4	19.9	—0.6	41	— 5	—	—	—	23.9
Quseir	1006.6	—0.4	31.4	—1.0	25.1	—0.3	28.2	28.7	—0.7	20.4	—0.6	44	— 1	—	—	—	20.4

TABLE A 2. MAXIMUM AND MINIMUM AIR TEMPERATURES

JUNE 1964

STATION	Maximum Temperature °C									Grass Min. Temps.		Minimum Temperature °C							
	Highest	Date	Lowest	Date	No. of Days with Max-Temp.					Mean	D. From Normal	Highest	Date	Lowest	Date	No. of Days with Min. Temp.			
					>25	>30	>35	>40	>45							<10	< 5	< 0	<— 5
Sallum	35.4	19	25.5	14	30	13	1	0	0	20·1	—	24.6	11	16.8	1	0	0	0	0
Mersa Matruh (A)	35.6	30	24.2	1	27	5	0	0	0	—	—	22.3	20	14.2	1	0	0	0	0
Alexandria (A)	41.0	12	25.4	1	30	7	2	1	0	—	—	22.8	22	15.8	2	0	0	0	0
Port Said (A)	31.8	6	25.2	3	30	7	0	0	0	21.4	—	23.6	12	19.1	2	0	0	0	0
El Ariah	35.2	12	26.4	3	30	7	1	0	0	18.3	—	21.8	13	16.5	5	0	0	0	0
Ghazza	28.8	12	24.5	2	28	0	0	0	0	17.8	—	21.5	13	16.3	4	0	0	0	0
Tanta	43.2	12	31.3	27	30	30	9	1	0	—	—	21.3	23	14.8	12	0	0	0	0
Cairo (A)	43.8	12	30.9	17	30	30	10	1	0	—	—	23.8	12	18.3	8	0	0	0	0
Fayoum	44.0	12	33.0	16	30	30	12	3	0	17.7	—	22.4	12	18.0	4	0	0	0	0
Minya (A)	44.9	12	32.9	8	30	30	21	2	0	16.8	—	23.5	13	16.0	2	0	0	0	0
Assyout (A)	44.7	12	33.5	8	30	30	23	4	0	20.1	—	25.6	12	19.8	2,19	0	0	0	0
Luxor (A)	44.2	12	37.0	15	30	30	30	14	0	—	—	25·5	13	20.0	10	0	0	0	0
Aswan (A)	45.0	1	37.4	17	30	30	30	18	0	—	—	27.4	13	22.2	10	0	0	0	0
Siwa	43.5	11	33.7	13	30	30	24	6	0	18.8	—	25.2	11	15.7	1	0	0	0	0
Bahariya	42.1	11	33.1	16	30	30	23	5	0	18.9	—	23.4	12	17.7	4	0	0	0	0
Farafra	43.4	11	33.4	8	30	30	24	4	0	18.3	—	22.9	12	15.0	2	0	0	0	0
Dakhla	46.4	12	35.2	4	30	30	30	6	1	15.9	—	26.8	20	15.6	10	0	0	0	0
Kharga	45.6	12	36.2	16	30	30	30	7	1	21.3	—	28.7	21	17.4	9	0	0	0	0
Tor	40.0	7	29.1	16	30	28	3	0	0	—	—	25.6	14,15	20.2	6	0	0	0	0
Hurghada	38.4	12	30.3	28	30	30	3	0	0	—	—	26.7	14	20.6	6	0	0	0	0
Quseir	35.8	21	28.6	4	30	25	3	0	0	—	—	29.0	13	22.4	10	0	0	0	0

TABLE A 3.—SKY COVER AND RAINFALL

JUNE — 1964

Station	Mean Sky Cover (Oct)					Rainfall (mms)										
	00 U.T.	06 U.T.	12 U.T.	18 U.T.	Daily Mean	Total Amount	Dev. From Normal	Max. Fall in one day		Number of days with Amount of Rain						
								Amount	Date	<0.1	≥0.1	≥1.0	≥5.0	≥10	≥25	≥50
Sallum (A)	0.6	1.5	1.5	1.2	1.1	Tr.	+Tr.	Tr.	10·19	2	0	0	0	0	0	0
Mersa Matruh (A)	0.3	1.6	0.6	1.1	0.9	Tr.	0.0	Tr.	10	1	0	0	0	0	0	0
Alexandria (A)	2.8	2.0	1.0	1.0	1.6	0.0	—Tr.	0.0	—	0	0	0	0	0	0	0
Port Said (A)	1.2	2.0	0.1	0.6	1.0	0.0	—Tr.	0.0	—	0	0	0	0	0	0	0
El Arish	1.8	2.3	0.6	1.0	1.1	0.0	—Tr.	0.0	—	0	0	0	0	0	0	0
Ghazza	2.8	2.7	0.7	1.9	2.3	0.0	— 0.2	0.0	—	0	0	0	0	0	0	0
Tanta	—	1.4	0.9	0.0	—	0.0	—Tr.	0.0	—	0	0	0	0	0	0	0
Cairo (A)	1.3	3.0	0.5	0.1	1.0	0.0	— 0.3	0.0	—	0	0	0	0	0	0	0
Fayoum	—	0.1	0.1	0.2	—	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Minya (A)	0.1	0.1	0.0	0.0	0.0	0.0	—Tr.	0.0	—	0	0	0	0	0	0	0
Assyout (A)	0.0	0.1	0.1	0.0	0.1	0.0	—Tr.	0.0	—	0	0	0	0	0	0	0
Luxor (A)	0.0	0.3	0.2	0.2	0.1	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Aswan (A)	0.0	0.3	0.6	0.6	0.3	0.0	—Tr.	0.0	—	0	0	0	0	0	0	0
Siwa	0.1	0.2	0.3	0.6	0.3	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Bahariya	0.1	0.1	0.2	0.1	0.1	0.0	— 0.2	0.0	—	0	0	0	0	0	0	0
Farafra	0.2	0.1	0.0	0.0	0.5	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Dakhla	0.1	0.3	0.3	0.2	0.2	0.0	—Tr.	0.0	—	0	0	0	0	0	0	0
Kharga	0.2	0.5	0.2	0.2	0.3	0.0	—Tr.	0.0	—	0	0	0	0	0	0	0
Tor	0.3	0.5	0.2	0.2	0.2	0.0	—Tr.	0.0	—	0	0	0	0	0	0	0
Hurghada	0.1	0.4	0.2	0.2	0.8	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Quseir	0.0	0.4	0.3	0.2	0.2	0.0	0.0	0.0	—	0	0	0	0	0	0	0

TABLE A 4— DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

JUNE 1964

Station	Precipiation				Frost	Thunderstorm	Mist Vis ≥1000 metres	Fog Vis <1000 Metres	Haze Vis ≥1000 Metres	Thick Haze Vis <1000 Metres	Dust or Sandrising Vis ≥1000 Metres	Dust or Sandstorm Vis <1000 Metres	Gale	Clear Sky	Cloudy Sky
	Rain	Snow	Ice Pellets	Hail											
Sallum	0	0	0	0	0	0	2	0	0	0	2	1	0	23	1
Mersa Matruh (A)	0	0	0	0	0	0	1	0	0	0	2	1	0	26	0
Alexandria (A)	0	0	0	0	0	0	0	0	0	0	1	0	0	20	0
Port Said (A)	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0
El Arish	0	0	0	0	0	0	5	0	0	0	2	0	0	19	0
Ghazza	0	0	0	0	0	0	0	1	0	0	0	0	0	15	0
Tanta	0	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Cairo	0	0	0	0	0	0	6	2	17	0	8	0	0	26	0
Fayoum	0	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Minya (A)	0	0	0	0	0	0	1	0	0	0	2	0	0	30	0
Assyout (A)	0	0	0	0	0	0	0	0	2	0	1	0	0	30	0
Luxor (A)	0	0	0	0	0	0	0	0	4	0	1	0	0	30	0
Aswan (A)	0	0	0	0	0	0	0	0	1	0	2	0	0	30	0
Siwa	0	0	0	0	0	0	0	0	0	0	1	0	0	29	0
Bahariya	0	0	0	0	0	0	0	0	0	0	1	0	0	30	0
Farafra	0	0	0	0	0	0	0	0	0	0	4	0	0	30	0
Dakhla	0	0	0	0	0	0	0	0	1	0	2	0	0	30	0
Kharga	0	0	0	0	0	0	0	0	0	0	9	0	0	29	0
Tor	0	0	0	0	0	0	0	0	0	0	3	0	0	28	0
Hurghada	0	0	0	0	0	0	0	0	0	0	2	0	0	28	0
Quseir	0	0	0	0	0	0	0	0	2	0	1	0	0	30	0

TABLE A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

JUNE — 1964

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Mersa Matruh (A)	64	1	17	1—10	73	20	12	12	20	6	3	0	0	26	78	63	313
				11—27	54	11	8	16	14	2	1	3	2	14	36	161	322
				28—47	0	0	0	0	0	0	0	0	0	0	3	0	3
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	127	31	20	28	34	8	4	3	2	40	117	224	638
Alexandria (A)	7	0	0	1—10	56	23	23	15	15	7	7	12	4	43	191	166	562
				11—27	1	6	15	4	0	0	0	1	0	15	67	42	151
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	57	29	38	19	15	7	7	13	4	58	258	208	713
Port Said . . (A)	0	2	1	1—10	112	23	11	11	7	4	1	12	37	79	36	82	415
				11—27	43	20	29	15	4	0	0	0	0	20	51	120	302
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	155	43	40	26	11	4	1	12	37	99	87	202	717
Ghazza	0	31	0	1—10	33	21	18	19	22	137	48	14	35	75	106	94	622
				11—27	18	14	0	0	0	0	0	0	2	9	14	10	67
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	51	35	18	19	22	137	48	14	37	84	120	104	689
Tanta.	41	4	0	1—10	60	33	23	25	23	4	4	15	55	64	163	177	646
				11—27	8	0	8	1	0	0	0	0	0	0	8	4	29
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	68	33	31	26	23	4	4	15	55	64	171	181	675
Cairo . . . (A)	13	1	7	1—10	56	63	53	16	3	1	0	1	4	26	75	118	416
				11—27	40	42	41	21	7	4	1	1	6	3	34	83	283
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	96	105	94	37	10	5	1	2	10	29	109	201	699
Fayoum	63	0	0	1—10	390	39	7	6	1	1	10	9	1	13	36	136	649
				11—27	2	0	0	0	0	0	0	0	0	0	0	6	8
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	392	39	7	6	1	1	10	9	1	13	36	142	657

TABLE A 5. (*contd.*)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

JUNE — 1964

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Minya . . (A)	12	10	0	1—10	55	11	3	6	11	11	1	3	4	8	44	245	402
				11—27	18	1	0	0	0	3	0	0	0	1	3	270	296
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**73**	**12**	**3**	**6**	**11**	**14**	**1**	**3**	**4**	**9**	**47**	**515**	**698**
Assyout . . (A)	6	0	0	1—10	9	0	3	10	15	12	3	5	30	178	143	103	511
				11—27	3	20	1	0	0	0	0	0	0	4	64	111	203
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**12**	**20**	**4**	**10**	**15**	**12**	**3**	**5**	**30**	**182**	**207**	**214**	**714**
Luxor . . (A)	6	5	27	1—10	19	34	6	11	20	29	50	59	35	39	80	205	587
				11—27	2	0	0	0	1	0	0	0	0	0	14	78	95
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**21**	**34**	**6**	**11**	**21**	**29**	**50**	**59**	**35**	**39**	**94**	**283**	**682**
Aswan . . (A)	0	0	85	1—10	131	93	6	0	0	0	2	0	0	7	54	129	422
				11—27	76	29	0	0	0	0	0	0	0	3	24	81	213
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**207**	**122**	**6**	**0**	**0**	**0**	**2**	**0**	**0**	**10**	**78**	**210**	**635**
Siwa	47	4	0	1—10	62	61	83	61	37	18	11	5	17	43	47	51	496
				11—27	25	26	13	9	3	5	7	6	0	6	37	36	173
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**87**	**87**	**96**	**70**	**40**	**23**	**18**	**11**	**17**	**49**	**84**	**87**	**669**
Dakhla	4	2	128	1—10	88	117	26	10	14	14	11	18	16	16	48	157	535
				11—27	15	28	5	0	0	0	0	0	0	0	0	3	51
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**103**	**145**	**31**	**10**	**14**	**14**	**11**	**18**	**16**	**16**	**48**	**160**	**586**
Hurghada . . .	2	2	2	1—10	18	16	2	2	1	4	1	2	0	10	39	26	121
				11—27	157	4	0	0	0	1	0	0	0	25	155	240	582
				28—47	0	0	0	0	0	0	0	0	0	0	1	10	11
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	00
				All speeds	**175**	**20**	**2**	**2**	**1**	**5**	**1**	**2**	**0**	**35**	**195**	**276**	**714**
Quseir	3	0	19	1—10	79	4	3	2	1	2	2	5	11	18	63	130	320
				11—27	181	1	0	0	0	0	0	0	0	7	9	180	378
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**260**	**5**	**3**	**2**	**1**	**2**	**2**	**5**	**11**	**25**	**72**	**310**	**698**

TABLE B 1. — UPPER AIR CLIMATOLOGICAL DATA

JUNE — 1964

Station	Pressure Surface Millibar	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 0000 U.T.	Surface	30	*1010mb	*1014mb	*1005mb	30	21.3	25.0	18.3	30	18.6
	1000	30	128	165	89	30	21.3	26.8	18.4	30	17.5
	850	30	1532	1571	1501	30	17.3	23.0	13.2	27	1.7
	700	30	3159	3219	3120	30	6.9	10.8	2.4	20	— 6.3
	600	30	4408	4471	4356	30	— 0.9	2.8	— 5.7	10	—12.0
	500	30	5837	5900	5760	30	—10.9	— 6.8	—15.6	3	—17.5
	400	30	7512	7593	7410	30	—23.6	—19.8	—29.0	2	—30.7
	300	30	9555	9662	9400	30	—37.3	—27.5	—44.1	—	—
	200	30	12203	12439	12047	30	—53.1	—48.6	—62.5	—	—
	150	30	14079	14273	13888	30	—60.4	—54.0	—65.9	—	—
	100	25	16560	16683	16419	25	—66.9	—57.4	—77.8	—	—
	70	6	18710	18800	18600	6	—65.2	—63.8	—67.9	—	—
	50	5	20804	20877	20691	5	—57.2	—56.2	—58.5	—	—
	30	4	24053	24154	23947	4	—52.2	—51.0	—54.3	—	—
	20	4	26697	26763	26579	4	—48.6	—46.9	—51.4	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 U.T.	Surface	30	*993mb	*997mb	*990mb	30	22.1	28.2	18.6	30	14.8
	1000	30	84	116	60	—	—	—	—	—	—
	850	30	1484	1514	1448	30	18.1	23.3	15.0	28	— 1.4
	700	30	3117	3160	3080	30	8.9	11.6	06.1	11	— 8.5
	600	30	4374	4417	4326	30	1.2	3.8	— 1.8	5	—13.4
	500	30	5816	5864	5744	30	— 8.5	— 4.7	—13.2	4	—20.2
	400	30	7507	7589	7399	30	—20.7	—13.6	—26.5	3	—33.7
	300	30	9577	9686	9416	30	—34.8	—26.6	—46.3	—	—
	200	30	12301	12477	12101	30	—52.3	—48.0	—59.1	—	—
	150	29	14125	14310	13917	29	—61.2	—53.8	—66.2	—	—
	100	29	16578	16731	16411	29	—70.7	—63.2	—78.0	—	—
	70	25	18705	18840	18570	25	—67.0	—62.0	—70.8	—	—
	50	21	20784	20888	20642	21	—58.3	—52.0	—61.7	—	—
	30	13	24030	24143	23911	13	—52.3	—50.2	—53.3	—	—
	20	5	26670	26805	26567	5	—46.5	—45.2	—47.7	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan 0000 U.T.	Surface	30	*984mb	*986mb	*981mb	30	26.6	30.6	24.1	30	2.2
	1000	—	—	—	—	—	—	—	—	—	—
	850	30	1476	1502	1448	30	23.2	29.4	17.8	17	0.9
	700	30	3133	3176	3104	30	12.2	14.8	8.8	10	—6.5
	600	30	4402	4450	4359	30	2.7	6.0	—0.7	10	—11.3
	500	30	5851	5914	5786	30	— 6.4	—1.8	—11.6	6	—19.8
	400	30	7561	7632	7457	30	—18.1	—12.6	—23.4	1	—32.0
	300	30	9649	9748	9505	30	—33.0	—26.5	—39.7	—	—
	200	30	12355	12540	12221	30	—52.4	—49.8	—55.9	—	—
	150	26	14200	14364	14009	26	—65.5	—63.0	—67.7	—	—
	100	23	16542	16750	16431	23	—76.4	—70.5	—81.6	—	—
	70	14	18679	18820	18510	14	—70.0	—65.7	—74.5	—	—
	50	12	20739	20866	20532	12	—59.9	—57.3	—63.0	—	—
	30	10	23998	24137	23856	10	—51.5	—49.0	—54.0	—	—
	20	6	26678	26802	26526	6	—45.6	—44.5	—49.8	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = Number of observations of specified pressure surface.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

TABLE B 1 (*contd.*)—UPPER AIR CLIMATOLOGICAL DATA

JUNE — 1964

Station	Pressure Surface Millibar	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 1200 U.T.	Surface	30	*1010mb	*1015mb	*1005mb	30	25.5	29.7	21.7	30	18.9
	1000	30	129	175	89	30	24.8	29.8	20.9	30	16.6
	850	30	1537	1585	1510	30	17.7	23.6	13.4	28	1.6
	700	30	3167	3231	3123	30	7.4	10.7	4.2	18	— 6.6
	600	30	4421	4476	4361	30	— 0.1	3.6	— 4.3	7	— 9.0
	500	30	5852	5924	5797	30	— 9.9	— 5.0	—14.0	4	—19.9
	400	30	7552	7620	7447	30	—21.1	—17.8	—28.4	2	—28.3
	300	30	9550	9721	9446	30	—36.6	—26.3	—43.2	1	—42.4
	200	30	12294	12533	12084	30	—53.0	—46.9	—58.3	—	—
	150	29	14118	14374	13940	29	—59.9	—53.8	—63.8	—	—
	100	27	16611	16819	16482	27	—67.4	—60.0	—74.8	—	—
	70	15	18768	18980	18660	15	—65.9	—59.7	—75.1	—	—
	50	S	[illegible]	[illegible]	[illegible]	S	—57.0	—55.0	—62.0	—	—
	30	1	24096	—	—	1	—55.9	—	—	—	—
	20	1	26694	—	—	1	—53.0	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 1200 U.T.	Surface	30	*993mb	*996mb	*990mb	30	33.0	41.6	28.5	30	9.1
	1000	30	82	116	60	—	—	—	—	—	—
	850	30	1501	1536	1473	29	19.0	26.5	14.0	28	1.0
	700	30	3137	3188	3102	30	9.2	13.3	4.2	12	—10.5
	600	30	4397	4456	4355	30	1.8	6.4	— 1.8	4	—12.8
	500	30	5837	5923	5784	30	— 8.2	— 4.0	—13.0	2	—22.1
	400	30	7531	7639	7450	30	—20.0	—12.3	—26.1	1	—33.0
	300	30	9610	9751	9473	30	—34.1	—26.6	—41.6	—	—
	200	30	12349	12603	12129	30	—51.1	—46.3	—57.5	—	—
	150	29	14183	14440	13981	29	—60.6	—53.8	—64.1	—	—
	100	28	16647	16910	16482	28	—71.1	—64.2	—77.7	—	—
	70	25	18768	19000	18500	25	—65.7	—61.0	—75.2	—	—
	50	17	20942	21952	20760	17	—56.1	—50.0	—59.7	—	—
	30	7	24199	24356	24068	7	—49.4	—47.6	—50.7	—	—
	20	4	26886	27020	26749	4	—44.4	—41.0	—46.4	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan 1200 U.T.	Surface	30	*984mb	*986mb	*980mb	30	39.2	44.6	36.2	30	5.1
	1000	—	—	—	—	—	—	—	—	—	—
	850	30	1498	1529	1458	30	24.3	29.7	20.1	23	— 0.9
	700	30	3157	3206	3109	30	12.8	15.6	10.3	12	— 7.3
	600	30	4430	4488	4376	30	3.5	6.2	— 0.1	14	—13.2
	500	30	5882	5938	5815	30	— 6.3	— 1.6	—10.2	5	—21.7
	400	30	7595	7647	7514	30	—17.4	—12.0	—23.7	1	—33.6
	300	30	9694	9785	9557	30	—31.7	—26.2	—38.6	—	—
	200	30	12445	12576	12240	30	—51.0	—46.5	—53.7	—	—
	150	29	14268	14410	13996	29	—64.0	—59.0	—66.4	—	—
	100	20	16662	16818	16461	20	—76.7	—72.2	—83.6	—	—
	70	8	18758	18840	18674	8	—70.6	—66.0	—76.4	—	—
	50	7	20844	20896	20813	7	—55.7	—52.3	—58.4	—	—
	30	1	24097	—	—	1	—52.0	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = Number of observations of specified pressure surface.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

TABLE B 2. MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE; THE HIGHEST WIND SPEED IN THE UPPER AIR

JUNE — 1964

	Station	Freezing Level									First Tropopause									Highest wind speed			
		Mean			Highest			Lowest			Mean			Highest			Lowest						
		Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Direction (000—360)°	Speed in Knots
		(N)	(N)	(N)							(N)	(N)	(N)										
0000 U.T.	M. Matruh. A	4261 (30)	611 (30)	-9.7 (13)	4890	566	—	3600	660	-8.3	13506 (20)	171 (20)	-61.9 (20)	17500	87	-78.0	10160	267	-49.5	13200	174	280	134
	Helwan . . .	4567 (30)	587 (30)	-10.9 (5)	4950	559	—	4030	622	—	14675 (27)	143 (27)	-66.6 (27)	17500	85	-67.1	10330	261	-47.5	14040	148	240	146
	Aswan . . A	4797 (30)	570 (30)	-12.2 (10)	5340	535	—	4330	602	—	15141 (22)	102 (22)	-72.4 (22)	17220	92	-77.1	13030	176	-61.6	12800	154	240	135
		(N)	(N)	(N)							(N)	(N)	(N)										
1200 U.T.	M. Matruh. A	4404 (30)	601 (30)	-7.6 (6)	4900	565	—	3770	648	-8.3	14053 (22)	160 (22)	-61.2 (22)	17820	84	-71.4	11100	272	-45.5	10800	252	270	150
	Helwan . . .	4662 (30)	581 (30)	-11.8 (5)	5380	535	—	3500	669	—	14945 (25)	173 (25)	-62.8 (25)	17770	83	-76.9	11300	228	-53.3	13200	175	250	148
	Aswan . . A	4936 (30)	563 (30)	-14.4 (10)	5700	514	—	4380	601	-16.8	16234 (12)	109 (12)	-75.3 (12)	17850	82	-79.5	14100	148	-66.5	8500	353	230	90

N = The number of cases the element has been observed during the month.

TABLE B 3.— NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

MERSA MATRUH (A) — JUNE 1964

Time	Pressure Surface Millibar	Wind between ranges of direction (000—360)°																								Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	1	10	0	—	1	3	0	—	0	—	1	21	1	11	0	—	0	—	4	9	10	10	5	6	7	30	7
	1000	1	10	0	—	1	3	0	—	0	—	1	21	0	—	1	11	0	—	2	14	12	10	6	8	6	30	8
	850	9	17	2	28	1	13	0	—	0	—	0	—	2	16	0	—	0	—	1	31	8	23	7	24	0	30	21
	700	2	24	2	30	0	—	0	—	0	—	0	—	0	—	2	18	1	19	3	33	10	28	10	25	0	30	26
	600	0	—	1	24	0	—	0	—	0	—	0	—	0	—	1	34	3	16	4	35	12	27	9	24	0	30	26
	500	1	34	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	28	10	34	11	37	5	28	0	30	33
	400	2	28	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	30	11	38	7	36	4	33	0	27	35
	300	1	45	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	51	9	47	8	50	2	16	0	24	46
	200	1	65	0	—	0	—	0	—	0	—	0	—	0	—	1	59	8	66	8	61	2	50	0	—	0	20	62
	150	1	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	58	5	58	0	—	1	72	0	14	62
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	42	3	64	1	76	0	—	0	6	59
	70	0	—	0	—	0	—	0	—	0	—	1	22	0	—	0	—	0	—	0	—	0	—	0	—	0	1	22
	60	0	—	0	—	0	—	1	46	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	46
	50	0	—	0	—	0	—	0	—	1	25	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	25
	40	0	—	0	—	0	—	1	46	0	—	0	—	0	—	0	—	0	—	0	—	9	—	0	—	0	1	46
	30	0	—	0	—	0	—	0	—	1	30	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	30
	20	0	—	0	—	0	—	1	52	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	52
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—
1200 U.T.	Surface	7	12	2	12	2	16	2	20	0	—	0	—	0	—	0	—	0	—	1	15	1	18	15	15	0	30	15
	1000	7	11	1	12	1	12	3	19	0	—	0	—	0	—	0	—	0	—	1	17	3	20	14	16	0	30	15
	850	5	21	2	11	0	—	0	—	0	—	1	34	0	—	3	18	1	35	2	30	11	17	5	22	0	30	20
	700	2	26	1	25	0	—	0	—	0	—	0	—	0	—	1	63	2	33	4	29	11	23	9	25	0	30	27
	600	3	19	1	18	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	31	11	24	7	22	0	29	24
	500	3	23	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	20	10	39	14	29	1	17	0	29	31
	400	2	26	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	44	17	41	7	36	1	38	0	28	39
	300	2	16	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	62	16	47	2	70	1	30	0	26	48
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	71	10	70	3	82	0	—	0	20	65
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	54	6	66	7	51	1	40	0	—	0	15	56
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	23	3	60	0	—	0	—	0	7	39
	70	0	—	0	—	0	—	0	—	0	—	—	—	—	—	1	37	0	—	1	8	0	—	0	—	0	2	22
	60	0	—	0	—	0	—	0	—	0	—	0	—	—	—	0	—	1	20	0	—	0	—	0	—	0	1	20
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (contd.)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

HELWAN — JUNE 1964

Time	Pressure Surface Millibar	Wind between ranges of direction (000—360)°																						Number of calm winds	Total number of observations (TN)	*Mean scalar wind speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	7	6	4	8	6	11	1	15	0	—	0	—	0	—	0	—	0	—	0	—	1	13	7	8	4	30	8
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	5	16	4	18	1	6	1	5	0	—	1	13	0	—	1	22	1	6	2	18	7	18	7	17	0	30	16
	700	3	24	3	17	0	—	0	—	0	—	0	—	0	—	1	24	2	23	4	20	13	19	4	15	0	30	20
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	36	4	28	11	25	7	17	6	16	0	30	22
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	30	8	26	13	25	6	19	2	21	0	30	24
	400	1	12	1	14	0	—	0	—	0	—	0	—	0	—	2	35	10	30	12	41	4	24	0	—	0	30	33
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	50	16	58	7	61	5	23	0	—	0	29	52
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	78	16	67	7	52	0	—	0	—	0	25	63
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	68	16	62	2	56	0	—	0	—	0	20	62
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	22	6	29	1	30	0	—	0	—	1	9	25
	70	0	—	0	—	0	—	0	—	0	—	0	—	1	8	0	—	0	—	0	—	0	—	0	—	0	1	8
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	6	12	3	15	1	21	0	—	0	—	0	—	0	—	0	—	2	10	5	9	9	11	4	10	0	30	12
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	8	9	5	19	1	17	0	—	0	—	0	—	0	—	1	14	1	15	1	18	5	15	8	10	0	30	13
	700	2	25	4	9	0	—	0	—	0	—	0	—	0	—	2	13	2	14	5	25	8	14	7	14	0	30	16
	600	2	12	1	8	0	—	0	—	0	—	0	—	0	—	0	—	4	25	11	22	6	18	6	14	0	30	19
	500	0	—	1	17	0	—	0	—	0	—	0	—	0	—	0	—	6	21	18	24	4	23	1	12	0	30	22
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	10	42	17	31	2	12	1	10	0	30	33
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	54	14	56	14	45	0	—	1	59	0	30	51
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	74	18	61	6	67	0	—	0	—	0	28	64
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	54	12	60	2	28	0	—	0	—	0	20	55
	100	0	—	0	—	0	—	0	—	0	—	0	—	1	62	0	—	3	83	0	—	0	—	0	—	0	4	78
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (*contd.*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A) — JUNE 1964

Time	Pressure Surface Millibar	Wind between ranges of direction (000—360)°																						Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surfgoe	25	13	1	10	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	10	1	30	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	12	13	3	12	2	11	1	4	1	2	0	—	0	—	0	—	1	3	0	—	4	14	6	11	0	30	12
	700	3	12	0	—	0	—	0	—	1	3	1	12	0	—	2	21	7	17	6	12	4	9	6	16	0	30	14
	600	1	10	0	—	2	41	0	—	2	13	0	—	0	—	6	23	8	22	3	17	5	13	3	18	0	30	18
	500	2	8	1	4	0	—	1	6	0	—	1	12	0	—	2	19	9	23	8	17	4	17	2	9	0	30	17
	400	2	8	2	5	1	10	0	—	0	—	1	3	3	7	4	13	6	29	10	21	1	25	0	—	0	30	17
	300	0	—	0	—	1	8	1	10	1	6	3	8	1	15	5	23	10	24	5	35	1	38	0	—	0	28	23
	200	0	—	0	—	0	—	1	10	0	—	2	23	3	18	3	31	4	31	3	39	0	—	0	—	1	17	26
	150	0	—	0	—	0	—	0	—	0	—	1	13	0	—	0	—	3	26	0	—	0	—	0	—	0	4	22
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	21	11	1	12	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	12	5	15	1	30	12
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	6	10	2	16	1	1	0	—	1	16	0	—	0	—	0	—	0	—	1	3	5	14	14	13	0	30	12
	700	1	17	0	—	0	—	0	—	0	—	1	1	0	—	5	25	9	20	7	17	4	20	3	20	0	30	19
	600	2	9	0	—	0	—	0	—	0	—	0	—	1	19	7	30	9	26	5	8	4	14	2	18	0	30	20
	500	1	11	3	7	0	—	1	7	0	—	0	—	2	12	7	21	7	27	5	20	4	8	0	—	0	30	18
	400	0	—	2	8	2	10	0	—	1	7	2	10	0	—	4	24	9	22	8	24	0	—	1	14	1	30	19
	300	0	—	0	—	1	7	2	10	2	17	1	4	3	18	1	3	7	37	9	31	1	26	0	—	1	28	24
	200	0	—	0	—	0	—	0	—	1	41	3	17	7	17	1	29	5	50	4	49	1	34	0	—	0	22	33
	150	0	—	0	—	0	—	0	—	0	—	1	40	6	36	0	—	1	12	1	50	0	—	0	—	0	9	36
	100	0	—	0	—	0	—	0	—	0	—	0	—	3	22	0	—	0	—	0	—	0	—	0	—	0	3	22
	70	0	—	0	—	0	—	1	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	20
	60	0	—	0	—	0	—	0	—	1	21	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	21
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATION AT EL KASR

JUNE 1964

With respect to air temperature and relative humidity, this month was about normal.

The month started with a cool spell giving on the 1st, the lowest values of maximum air temperature (2.4°C below normal), mean of the day (3.3°C below normal),day time mean and vapour pressure deficit and the highest relative humidity (24% above normal), while the absolute minima of air temperature at 5 and 200 cms. (4.4°C below normal) and those of the soil for the different depths were recorded on the following day and the lowest Piche evaporation in the screen (5.0 mms. below normal) on the 3rd.

A distinguished heat wave started on the 10th when the highest soil temperature at 0.3 cm. occurred whereas the absolute maximum air temperature (5.3°C above normal), the highest values of minimum air temperature at 5 and 200 cms. (6.0°C above normal) vapour pressure deficit, and the lowest relative humidity (45% below normal) all occurred with the peak of the wave on the 12*th*, while the highest evaporation from pan class A and Piche in the screen (9.3 mms. above normal) was reported on the previous day.

A minor heat wave had its peak on the 19th, with the highest values of soil temperatures for the layer 1 to 20 cms. of depth.

The total duration of bright sunshine was 90% of the total possible duration.

Compared with the normal values, the mean daily temperature and the mean Piche evaporation were more by 0.1°C and 0.7 mm. respectively whereas the mean relative humidity was less by 1%.

REVIEW OF AGRO-METEOROLOGICAL STATION AT TAHRIR

JUNE 1964

Successive heat waves and cool spells prevailing.

The most remarkable heat wave started on the 10th with the peak on the 12th when the absolute maximum air temperature (44.8°C) and the highest means for the day, night and day time were recorded together with the lowest values of relative humidity (10%) and vapour pressure and aslo the highest values of water vapour pressure deficit and evaporation from pan class A and Piche in the screen whereas those in the free air at levels, 1, 60 and 120 cms. above the ground were reported on the previous day.

Another pronounced heat wave had its peak on the 20th with the highest values of soil temperatures for the surface layers down to 20 cms. of depth occurring on that day, while those of the minimum air temperature in the screen and at 5 cms. above ground level were observed on the 24th.

A distinguished cool spell began on the 7th with the peak on the 9th, when the absolute minimum air temperature and the lowest value of water vapour pressure deficit were recorded, whereas the lowest values of soil temperature at depths 0.3 and 1 cm. were observed on the day before.

Anoher value of the absolute minimum air temperature was associated with the peak of another cool spell on the 2*nd* together with the absolute minimum air temperature at 5 cms. above the ground and the lowest values of soil temperature at depths 2, 5 and 10 cms.

A cool spell started on the 13th and gave the lowest values of Piche and pan class A evaporation on the 15th and the lowest maximum air temperature on the 17th.

Compared with June of last year, the means of air temperature at 2 metres for the day, night time and day time were higher by 0.5, 2.5 and 0.4°C respectively, while the means for relative humidity and vapour pressure were lower by 4% and 0.1 mm. No material change was observed in the values of mean evaporation or wind speed at 2 metres but the total actual duration of bright sunshine and the mean of the total radiation were higher by 28.1 hours and 25 calories per square centimetre respectively.

The soil temperature maxima at the different depths were lower, while the minima were higher in general by no more than 1.3°C, except for the first centimetre where the extreme soil temperatures were lower by variable amounts.

REVIEW OF AGRO-METEOROLOGICAL STATION AT GIZA

JUNE 1964

This month was about normal with respect to air temperature and relative humidity.

A cold front passed Giza in the early afternoon on the 1st. giving rise to the highest night time mean of wind speed at 0.5, 1.2 and 3 metres above ground level.

On the 2nd, the absolute minima of air temperature at 2 metres (1°C below normal) and 5 cms. above the dry, wet and grass fields were recorded as well as those of soil temperatures in the three fields for the surface layer down to 10 cms. of depth.

Another value of the absolute minimum air temperature in the screen was associated with the peak of a cold spell on the 8th together with the lowest values of the daily mean and night time mean.

A heat wave started on the 9th and continued for the next three days with the peak on the 12th when the absolute maximum air temperature (8.2°C above normal) and those of soil temperature in the dry field for the surface layer down to 10 cms. and the lowest relative humidity (24% below normal) were reported, whereas the highest values of evaporation from pan class A and Piche both in the free air at levels 1, 60 and 120 cms. above the ground and in the screen (2.0 mms. above normal) were recorded on the previous day. This heat wave was followed by a cold spell during which the lowest values of day time mean air temperature and Piche evaporation in the screen and at 1 cm. in the free air were observed on the 16th and the lowest maximum air temperature on the next day.

A prolonged cold spell started on the 21st and continued to the end of the month with peak on the 23rd when the highest daily means of relative humidity (12% above normal) and vapour pressure occurred as well as the lowest value of Piche evaporation at 60 cms. above ground, while the lowest values of Piche evaporation at 120 cms. and pan class A were noticed on the 28th.

The extreme soil temperatures at different depths in the three fields varied from those of last year by variable amounts not exceeding 4.1°C, whereas the absolute minima for air temperature at 5 cms. above the ground were lower by about 2°C in she three fields.

The means of the surface wind, at 2 metres above the gound level, of the day and night time were lower than those of June 1963 by 0.2 and 0.5 m/sec. respectively, while no material change was observed in the day time mean.

Compared with last year, the total radiation, mean evaporation of the day for both Piche and pan class A and total potential evaporation were less by 34 gm, cal./cm², 2.4, 1.98 and 7.5 mms. respectivaly, while the total actual duration of bright sunshine was more by 8.3 hours, and the total potential evapotranspiration for grass (Libia) more by 6.4 mms.

No material deviation from normal with regard to air temperature and relative humidity, but the mean evaporation from Piche in the screen was 2.0 mms. above normal.

REVIEW OF AGRO-METEOROLOGICAL STATION AT KHARGA

JUNE 1964

Compared with the normal values, this month was slightly warmer and markedly drier with frequent successive cool spells and heat waves.

A cool spell started on the 8th with the peak on the 9th when the absolute minima of air temperature at 5, 20 and 200 cms. (5.2°C below normal),and the lowest values of means of the day (1°C below normal), night time and day time, as well as those of soil temperatures for the surface layers down to 20 cms. of depth were recorded, while those of evaporation from pan class A and Piche both in the free air at levels 1, 60 and 120 cms. above the ground and in the screen (1.0 mm. above normal), occurred on the next day.

That cool spell was followed by a distinguished heat wave, which gave the absolute maximum air temperature (6.9°C above normal) and the highest values of the daily mean (4.7°C above normal), soil temperatures for the surface layers down to 20 cms. of depth and water vapour pressure dificit on the 12th as well as the lowest values of relative humidity 7% (25% below normal), the daily mean (17% below normal) and vapour pressure. The highest minima of air temperature at 5 and 20 cms. were reported on the next day, while that in the screen was associated with the peak of another heat wave on the 27th.

The lowest values of maximum air temperature (2.7°C below normal) happened with the peak of a cool spell on the 16th and that of vapour pressure deficit on the previous day, while the highest values of relative humidity (12% above normal), the daily mean (about normal) and vapour pressure were observed on the 18th.

A heat wave followed and had the peak on the 20*th* with the highest values of evaporation from pan class A and Piche in the free air and in the screen (29.4 mms. above normal).

The actual duration of bright sunshine was 93.5% of the possible duration.

The means of the maximum and minimum air temperatures were lower than normal by 0.2°C and 0.3°C respectively, while the daily mean was more by 1.4°C.

The daily mean relative humidity was 9% lower than normal, whereas the mean of Piche evaporation in the screen was higher by 12.5 mms.

TABLE C. 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND
JUNE — 1964

STATION	Air Temperature (°C)					Mean Duration in hours of daily air temperature above the following values										
	Mean Max.	Mean Min.	Mean of the day	Night time maan	Day time mean	—5°C	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C
El Kasr	27.5	17.1	22.9	20.3	24.7	24.0	24.0	24.0	24.0	23.7	18.4	7.8	0.1	0.0	0.0	0.0
Tahrir	34.5	19.1	26.0	22.3	28.6	24.0	24.0	24.0	24.0	24.0	21.4	12.3	6.4	1.0	0.1	0.0
Giza	34.2	19.6	26.8	24.0	28.8	24.0	24.0	24.0	24.0	24.0	22.4	13.1	6.6	1.1	0.2	0.0
Kharga	38.7	23.0	31.4	28.4	33.8	24.0	24.0	24.0	24.0	24.0	23.8	21.4	13.5	7.2	8.6	0.1

TABLE C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS
JUNE — 1964

STATION	Max. Temp. at 2 metres (°C)				Min. Temp. at 2 metres (°C)				Min. Temp. at 5 cms. above (°C)			
	Highest		Lowest		Highest		Lowest		Dry soil		Grass	
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date
El Kasr	32.1	12	23.9	1	23.6	12	12.3	2	9.9	2	—	—
Tahrir	43.8	12	31.5	17	21.7	24	16.4	9	14.5	2	—	—
Giza	42.4	12	31.3	17	21.8	24	16.2	2,8	11.9	2	9.6	2
Kharga	45.6	12	36.2	16	28.7	21	17.4	9	15.6	9	—	—

TABLE C 3.—(SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL
JUNE — 1964

STATION	(Solar+Sky) Radiation gm. cal/cm²	Duration of Bright Sunshine (hours)			Relative Humidity %					Vapour pressure (mms)						Evaporation(mms)		Rainfall (mms)		
		Total Actual monthly	Total Possible monthly	%	Duration in hours > 90%	Duration in hours > 80%	Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 UT	Highest	Date	Lowest	Date	Piche	Pan class A	Total Amount Monthly	Max. Fall in one day	Date
El Kasr.	607.1	380.5	425.1	90	—	—	73	66	29	12	16.3	17.1	20.0	26	8.7	6	—	9.94	Tr.	Tr.	1
Tahrir .	671.9	370.6	422.3	88	1.6	5.7	59	30	10	12	13.7	11.2	18.6	29	6.1	12	17.7	13.00	0.0	—	-
Giza . .	657.7	357.2	421.7	85	0.2	2.8	53	31	11	12	13.0	11.1	18.4	23	6.7	10	18.2	11.87	Tr.	Tr.	1
Kharga .	613.9	383.0	409.7	93	0	0	23	15	7	11,12	7.6	7.4	14.0	18	4.0	2,8,11	40.8	21.32	0.0	—	-

TABLE C. 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS IN DIFFERENT FIELDS (cms)

JUNE — 1964

STATION	Highest (H) Lowest (L)	Extreme soil temperature (°C) in dry field at different depths (cms.)										Extreme soil temperature (°C) in grass field at different depths (cms.)									
		0.3	1	2	5	10	20	50	100	200	300	0.3	1	2	5	10	20	50	100	200	300
El Kasr	H	48.4	42.8	43.6	38.6	33.2	29.4	26.9	25.3	22.8	—	—	—	—	—	—	—	—	—	—	—
	L	13.7	15.3	15.1	16.7	20.1	22.4	24.2	23.1	21.2	—	—	—	—	—	—	—	—	—	—	—
Tahrir	H	59.0	57.8	53.4	49.0	43.0	36.0	31.3	29.2	26.8	25.3	—	—	—	—	—	—	—	—	—	—
	L	16.7	17.0	18.6	21.3	24.4	28.3	29.1	27.0	24.2	23-3	—	—	—	—	—	—	—	—	—	—
Giza	H	68.8	68.0	63.5	45.2	38.7	35.8	31.9	29.7	26.3	24.6	37.9	31.4	30.6	29.7	28.2	27.4	25.6	23.8	22.1	—
	L	15.9	16.7	17.0	24.7	28.6	30.4	30.0	26.8	24.4	23.8	20.0	20.6	20.7	21.9	23.0	24.0	23.6	21.5	20.6	—
Kharga	H	63.2	58.4	56.2	48.4	41.8	35.9	33.3	31.2	28.6	27.2	—	—	—	—	—	—	—	—	—	—
	L	20.0	21.0	22.0	25.2	28.9	31.5	31.9	29.0	26.8	26.3	—	—	—	—	—	—	—	—	—	—

TABLE C 5. SURFACE WIND

JUNE — 1964

STATION	Wind Speed m/sec at 2 metres			Days with surface wind speed at 10 metres							Max. Gust (knots) at 10 metres	
	Mean of the day	Night time mean	Day time mean	≥10 knots	≥15 knots	≥20 knots	≥25 knots	≥30 knots	≥35 knots	≥40 knots	value	Date
El Kasr . . .	4.0	3.0	5.5	—	—	—	—	—	—	—	—	—
Tahrir	3.4	2.8	4.3	30	22	4	0	0	0	0	30	2
Giza	2.8	2.1	3.8	27	9	0	0	0	0	0	24	2,3,11,26
Kharga	4.6	3.7	5.8	—	—	—	—	—	—	—	—	—

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METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties, the U.A.R. Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be adressed to :
"The Director General, Meteorological Department, Kubri-el-Qubbeh — CAIRO".

THE DAILY WEATHER REPORT

This report is issued daily by the Meteorological Department since the year 1901. It includes surface and upper air observations carried out by the relevant networks of the Republic at the principal hours of observations.

As from January 1968 this report was revised to include a condensed representative selection of surface and upper air observations besides the 1200 U.T. surface & 500 mb charts.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

As from January 1964, the Monthly Weather Report was pressed to give climatological data for a representative selection of synoptic stations.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year.

CLIMATOLOGICAL NORMALS FOR EGYPT

A voluminous edition was issued in march 1968 which brings normals and mean values up till 1960.

METEOROLOGICAL RESEARCH BULLETIN

First issued in January 1969 on a bi-annual basis. It includes research works carried out by members of staff of "The Meteorological Institute for Research and Training" and the Operational Divisions of Meteorological Department.

TECHNICAL NOTES

As from October 1970, the Meteorological Department started to issue a new series of publications in the form of Technical Notes (non periodical) on subjects related to studies and applications of meteorology in different fields for the benefit of personnel working in these fields.

The first Technical Note I was issued in October 1970 on : Sandstorms & Duststorms in the U.A.R.

GENERAL SUMMARY OF WEATHER CONDITIONS

JULY 1964

Generally mild and humid in the northern parts, hot in the middle parts, excessively hot in the southern parts. Early morning mist over few localities of Lower Egypt and Cairo area districts.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather was generally mild and rather humid in the northern parts, hot in the middle parts, excessively hot and dry in the southern parts. Early morning mist developed over few scattered localities of the Delta and Canal areas in several days and over the western vicinities of Cairo area most days of the month.

PRESSURE DISTRIBUTION

The prevailing pressure distributions over the surface map this month can be summarized in the following pressure systems.

— The Complex monsoon low pressure system over Iraq, Arabia and Sudan.

— The monsoon low over the great Sahara of Africa.

— The Anticyclonic ridge over Europe and west Mediterranean.

— The travelling northern deep depressions through north Urasia from west to east.

On the other hand the prevailing upper pressure systems at the 700 and 500 mb levels were confined in the two deep upper lows over north Atlantic and north Russia, together with a high pressure belt at the subtropical latitudes.

The penetration of the deep travelling low pressure systems through Urasia north of latitude 45°N and the approach of their secondaries into the Black Sea western vicinities was accompanied by a north west oscillation of the complex monsoon low over Iraq, Arabia & Sudan. During this month four of these secondary depressions reached west of the Black Sea round the 8th, 13th , 22nd & 27th. Accordingly the complex monsoon low over the Middle East showed four gradual NW oscillations and operated over east Mediterranean round the 8th, 16th, 25th & 31st respectively.

It is worth to mention that the anticyclonic ridge extending from the Azores over west Europe, west and central Mediterranean regions showed minor southward displacements during the penetration of the Atlantie travelling depressions through Europe.

In the upper troposphere, the subtropical jet stream appeared over the U.A.R during the whole month at about 160 mb level.

The highest wind speeds recorded in Mersa Matruh, Helwan & Aswan were 115, 80 & 91 Knots reported on the 1st, 13th & 8th respectively.

SURFACE WIND

The prevailing winds were light /moderate Nly in general. Fresh / strong winds blew most of day time intervals over seattered localities in the western sector of the Mediterranean and in the Red Sea districts.

No gales were reported during this month.

TEMPERATURE

Both maximum and minimum air temperature showed small variability and oscillated slightly round normal in general over all districts of the Republic.

The absolute maximum temperature for the Republic was 45.4°C reported at Kom Ombo & Aswan on the 23rd.

The absolute minimum temperature for the Republic was 15.1°C reported at El Kasr on the 5th.

PRECIPITATION

As usual, no precipitation was reported during this month.

Cairo, August 1971

M. F. TAHA
Under Secretary of State
Director General
Meteorological Department

SURFACE DATA

Table A 1.– MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION

JULY — 1964

STATION	Atmospheric Pressure (mbs) M.S.L.		Air Temperature °C								Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evaporation mms.
			Maximum		Minimum			Dry Bulb		Wet Bulb						
	Mean	D.F. Normal or Average	(A) Mean	D.F. Normal or Average	(B) Mean	D.F. Normal or Average	$\frac{A+B}{2}$	Mean	D.F. Normal or Average	Mean	D.F. Normal or Average	Mean	D.F. Normal or Average	Total Actual	Total Possible	%	Mean
Sallum	1010.3	+0.1	30.0	- 0.7	22.1	+0.3	26.0	25.7	−0.3	21.8	+0.6	70	+ 7	—	—	—	8.6
Mersa Matruh. (A)	1010.2	+0.5	28.4	−0.8	20.3	-0.1	24.4	24.6	−0.4	21.4	−0.1	74	+ 1	357.1	433.6	82.4	7.6
Alexandria (A)	1008.7	+0.3	29.7	+0.1	22.4	−0.3	26.0	25.5	−0.6	21.2	−1.3	74	+ 1	386.2	432.3	89.3	6.5
Port Said. (A)	1007.7	0.0	29.5	−0.9	23.2	−0.9	26.4	25.8	−0.9	22.2	−1.0	72	— 2	369.2	432.3	85.4	5.9
El Arish.	1007.7	+0.4	29.8	—0.8	21.1	0.0	25.4	25.6	−0.8	22.3	—0.7	74	0	376.7	431.4	87.3	5.5
Ghazza.	1007.3	0 0	28.0	−0.7	20.9	−0 6	24.4	25 0	−0.8	22.3	—0.7	78	0	367.0	433.6	84.6	4.5
Tanta.	1007.7		33.0	—	19.3	- -	26.2	25.7	—	20.9	—	63	—	376.2	431.0	87.3	6.4
Cairo. (A)	1008.0	0.0	33.6	−1.8	21.2	−0.3	27.4	26.8	—1.3	20.7	—0.3	56	+ 4	—	—	—	14.7
Fayoum.	1007.4	—	35.7	—	20.7	—	28.2	27 8	—	20.3	-	47	—	—	—	—	11.7
Minya. (A)	1007.3	+0.4	35.5	−1.4	19.9	−0.3	27.7	27.8	—0.8	20.6	0 4	49	+ 5	—	—	—	11.5
Assyout. (A)	1007.1	+0.5	34.5	—2.4	21.5	- 0.8	28.0	28.8	—1 1	19.3	0.0	37	+ 5	—	—	—	19.9
Luxor. (A)	1004.7	0.0	39.3	—1.4	23.9	+0.3	31.6	32.1	—0 9	20.2	+0.4	29	+ 5	—	—	—	14.2
Aswan. (A)	1004.9	+0.4	41.1	−0.8	25.0	−1.1	33.0	33.2	- 0 4	18.1	0.0	16	+ 1	—	—	—	22.5
Siwa	1009.8	+0.2	36.2	−1.8	21.0	—0.3	28.6	28.9	+0 9	19 8	+0.4	39	+ 6	—	—	—	15.4
Bahariya.	1008.1	+0.1	36.3	—0.7	20.7	+0.1	28.5	28.9	—0.4	19.1	— 0 3	36	+ 1	—	—	—	10.1
Farafra.	1009.5	—	35.1	—	20.1	—	27.6	28.6	—	17.8	—	29	—	—	—	—	22.7
Dakhla.	1006.0	+0.2	36.5	—2.1	22.1	—1.0	29.3	30.2	—0.6	17.9	+0.2	24	+ 3	—	—	—	23.9
Kharga.	1006.7	—	38.4	—	23.0	—	30.7	31.5	—	18.1	—	26	—	390.1	418.8	93.1	33.6
Tor.	1004.6	+0.4	32.7	—2.2	24.6	+0.2	28.6	28.2	—0.8	22.4	−0.5	58	— 1	—	—	—	9.7
Hurghada.	1004.6	+0.4	33.0	+0.4	24.9	+0.1	29.0	29.2	—0.3	21.0	—1.0	45	— 4	—	—	—	22 7
Quseir	1005.3	+0.7	31.6	—1.7	25.8	−0.5	28.7	30.0	0.0	22.4	+0.1	49	0	—	—	—	18 9

TABLE A2.— MAXIMUM AND MINIMUM AIR TEMPERATURE

JULY — 1964

Station	Maximum Temperature °C									Grass Min. Temp.		Minimum Temperature °C							
	Highest	Date	Lowest	Date	No. of Days with Max-Temp.					Mean	D. From Normal	Highest	Date	Lowest	Date	No. of Days with Min. Temp.			
					>25	>30	>35	>40	>45							<10	<5	<0	<-5
Sallum	33.5	8	26.0	4	31	18	0	0	0	21.6	—	23.8	26	19.4	5	0	0	0	0
Mersa Matruh . (A)	30.4	8	27.0	4.11	31	1	0	0	0	—	—	22.5	1	16.2	12	0	0	0	0
Alexandria . . . (A)	31.7	29	28.0	4	31	11	0	0	0	—	—	24.8	30	17.2	11	0	0	0	0
Port Said . . . (A)	33.5	8	27.4	5.12	31	10	0	0	0	22.8	—	25.2	23	21.3	5	0	0	0	0
El Arish	32.1	9	28.3	5	31	14	0	0	0	19.9	—	24.0	30	18.8	5	0	0	0	0
Ghazza	29.5	1.31	26.5	5	31	0	0	0	0	20.0	—	24 0	28	18.2	6	0	0	0	0
Tanta	35.9	22	30 7	5	31	31	3	0	0	—	—	21 6	21.23	17.2	7.11	0	0	0	0
Cairo . . . . . (A)	37.4	1	31.2	5	31	31	5	0	0	—	—	24.5	1	18.8	5	0	0	0	0
Fayoum	38.2	1.8	32.6	3	31	31	21	0	0	18 4	—	22.6	22	17.4	4	0	0	0	0
Minya . . . . . A)	38.5	10	32.5	5	31	31	19	0	0	15.0	—	22.9	22	17.0	8	0	0	0	0
Assyout. . . . . A)	39.3	10	32.2	5	31	31	20	0	0	19.6	—	23.5	18	19.5	6	0	0	0	0
Luxor . . . . . A)	43.5	22	37.2	5	31	31	31	14	0	—	—	25.6	23,27,28*	21.0	15	0	0	0	0
Aswan . . . . . A)	45.4	23	37.4	5	31	31	31	24	1	—	—	27.0	18	21.7	6	0	0	0	0
Siwa	38.5	8	33.3	11	31	31	25	0	0	20.2	—	22.8	31	18.4	11	0	0	0	0
Bahariya	38.7	22	33.0	5	31	31	27	0	0	24.9	—	23.0	22.23	19.0	7.14	0	0	0	0
Farafra	38.7	10	33.3	14	31	31	26	0	0	19.3	—	22.6	22	17.9	11.16	0	0	0	0
Dakhla	41.0	10	34.7	5	31	31	30	3	0	17.2	—	26.8	23	18.2	16	0	0	0	0
Kharga	41.8	10	35.7	4.5	31	31	31	3	0	22 0	—	27.4	23	19.8	16	0	0	0	0
Tor	39.3	10	29.3	5.14	31	28	3	0	0	—	—	26.0	17.18	20.8	1.9	0	0	0	0
Hurghada	37.0	1	30.6	6	31	31	5	0	0	23.4	—	27.8	17	21.5	1	0	0	0	0
Quseir	35.0	1	29·1	6	31	30	0	0	0	20.0	—	27 7	18	22.8	6	0	0	0	0

TABLE A 3.—SKY COVER AND RAINFALL

JULY — 1964

Station	Mean Sky Cover Oct.					Rainfall mms.										
	00 U.T.	06 U.T.	12 U.T.	18 U.T.	Daily Mean	Total Amount	D. From Normal	Max. Fall in one day		Number of Days with Amount of Rain						
								Amount	Date	<0.1	≥0.1	≥1.0	≥5.0	≥10	≥25	≥50
Sallum	0.6	1.1	0.7	0.4	0.6	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Mersa Matruh (A)	1.1	2.4	0.9	1.4	1.4	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Alexandria (A)	1.3	2.3	0.8	1.0	1.2	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0
Port Said (A)	1.1	2.0	0.2	0.7	1.0	0.0	0.0	0.0	—	0	0	0	0	0	0	0
El Arish	3.1	3.5	0.4	2.9	1.8	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Ghazza	3.6	4.2	1.0	2.0	2.6	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Tanta	—	1.2	0.7	0.2	—	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0
Cairo (A)	1.5	2.8	0.4	0.5	1.0	0.0	— 0.0	0.0	—	0	0	0	0	0	0	0
Fayoum	—	0.8	0.1	0.1	—	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Minya (A)	0.0	0.6	0.3	0.2	0.2	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Asyout (A)	0.1	0.2	0.1	0.1	0.1	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Luxor (A)	0.2	0.8	0.6	0.4	0.7	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Aswan (A)	0.3	1.0	1.0	0.8	0.7	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Siwa	0.0	1.0	0.1	0.8	0.2	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Bahariya	0.0	0.6	0.2	0.3	0.2	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0
Farafra	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Dakhla	0.1	0.6	0.5	0.4	0.4	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Kharga	0.0	0.7	0.8	0.7	0.5	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Tor	0.2	0.2	0.5	0.2	0.2	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Hurghada	0.4	0.4	0.3	0.3	0.3	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Quseir	0.0	0.4	0.3	0.2	0.3	0.0	0.0	0.0	—	0	0	0	0	0	0	0

Table A 4. — DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

JULY — 1964

Station	Precipitation				Frost	Thunderstorm	Mist Vis ≥1000 metres	Fog Vis <1000 Metres	Haze Vis ≥1000 Metres	Thick Haze Vis <1000 Metres	Dust or Sandrising Vis ≥1000 Metres	Dust or Sandstorm Vis <1000 Metres	Gale	Clear Sky	Cloudy Sky
	Rain	Snow	Ice Pellets	Hail											
Sallum	0	0	0	0	0	0	0	0	0	0	1	0	0	30	0
Mersa Matruh (A)	0	0	0	0	0	0	3	0	1	0	0	0	0	22	0
Alexandria (A)	0	0	0	0	0	0	1	0	0	0	0	0	0	24	0
Port Said (A)	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0
El Arish	0	0	0	0	0	0	7	1	0	0	1	0	0	14	0
Ghaza	0	0	0	0	0	0	2	0	0	0	0	0	0	9	0
Tanta	0	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Cairo (A)	0	0	0	0	0	0	18	1	13	0	0	0	0	28	0
Fayoum	0	0	0	0	0	0	0	0	0	0	0	0	0	—	0
Minya (A)	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0
Assyout (A)	0	0	0	0	0	0	0	0	4	0	1	0	0	31	0
Luxor (A)	0	0	0	0	0	0	0	0	7	0	0	0	0	31	0
Aswan (A)	0	0	0	0	0	0	0	0	0	0	3	0	0	28	0
Siwa	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0
Bahariya	0	0	0	0	0	0	0	0	0	0	2	0	0	31	0
Farafra	0	0	0	0	0	0	0	0	0	0	2	0	0	31	0
Dakhla	0	0	0	0	0	0	0	0	1	0	3	0	0	30	0
Kharga	0	0	0	0	0	0	0	0	1	0	6	0	0	29	0
Tor	0	0	0	0	0	0	0	0	0	0	2	0	0	31	0
Hurghada	0	0	0	0	0	0	0	0	0	0	4	0	0	31	0
Quseir	0	0	0	0	0	0	0	0	1	0	0	0	0	31	0

TABLE A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

JULY — 1964

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
				1—10	63	15	0	0	0	0	0	0	0	29	106	88	301
				11—27	91	1	0	0	0	0	0	0	0	8	71	262	433
ersa Matruh (A)	10	0	0	28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**154**	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**37**	**177**	**350**	**734**
				1—10	61	5	3	0	0	0	4	9	2	26	64	125	299
				11—27	50	5	0	0	0	0	0	0	0	9	147	231	442
lexandria . . (A)	3	0	0	28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**111**	**10**	**3**	**0**	**0**	**0**	**4**	**9**	**2**	**35**	**211**	**356**	**741**
				1—10	88	8	5	1	3	3	1	1	27	107	59	133	436
				11—27	37	2	0	0	0	0	0	1	8	22	48	188	306
ort Said . . (A)	0	2	0	28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**125**	**10**	**5**	**1**	**3**	**3**	**1**	**2**	**35**	**129**	**107**	**321**	**742**
				1—10	26	9	5	4	16	169	51	14	34	92	122	92	634
				11—27	3	8	0	0	0	1	0	2	6	16	31	16	83
hazza	0	27	0	28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**29**	**17**	**5**	**4**	**16**	**170**	**51**	**16**	**40**	**108**	**153**	**108**	**717**
				1—10	69	32	4	1	2	0	0	1	95	75	181	261	721
				11—27	1	1	0	0	0	0	0	0	0	0	1	0	3
anta	17	3	0	28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**70**	**33**	**4**	**1**	**2**	**0**	**0**	**1**	**95**	**75**	**182**	**261**	**724**
				1—10	82	78	26	5	5	1	0	0	5	45	79	137	463
				11—27	77	36	4	2	2	1	0	0	0	2	19	110	253
airo . . . (A)	12	5	11	28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**159**	**114**	**30**	**7**	**7**	**2**	**0**	**0**	**5**	**47**	**98**	**247**	**716**
				1—10	443	13	0	0	0	0	10	0	12	19	34	201	722
				11—27	0	0	0	0	0	0	0	0	0	0	0	6	6
ayoum	16	0	0	28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**443**	**13**	**0**	**0**	**0**	**0**	**10**	**0**	**12**	**19**	**34**	**207**	**728**
				1—10	67	3	3	3	2	7	2	5	5	2	53	303	455
linya . . . . (A)	9	8	0	11—27	10	0	0	0	0	0	0	1	0	0	0	261	272
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**77**	**3**	**3**	**3**	**2**	**7**	**2**	**6**	**5**	**2**	**53**	**364**	**727**
				1—10	20	4	1	3	3	1	2	3	13	166	242	140	598
				11—27	4	0	0	0	0	0	1	1	2	5	81	51	145
suyot . . . (A)	0	0	1	28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**24**	**4**	**1**	**3**	**3**	**1**	**3**	**3**	**15**	**171**	**323**	**191**	**743**

Table A 5. (*contd.*)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

JULY — 1964

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Luxor	6	0	9	1—10	15	11	4	4	8	35	116	76	36	71	98	220	694
				11—27	1	0	0	0	0	0	0	2	4	2	4	22	35
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**16**	**11**	**4**	**4**	**8**	**35**	**116**	**78**	**40**	**73**	**102**	**242**	**729**
Aswan	0	0	45	1—10	141	55	3	4	0	6	2	2	15	50	84	177	539
				11—27	70	7	0	0	0	0	0	0	0	4	30	49	160
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**211**	**62**	**3**	**4**	**0**	**6**	**2**	**2**	**15**	**54**	**114**	**226**	**699**
Siwa	18	1	0	1—10	201	121	70	35	6	3	3	0	0	11	45	118	613
				11—27	30	33	2	0	0	0	0	0	0	0	9	38	112
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**231**	**154**	**72**	**35**	**6**	**3**	**3**	**0**	**0**	**11**	**54**	**156**	**725**
Dakhla	0	3	1	1—10	76	131	12	2	4	4	4	15	9	57	142	260	716
				11—27	8	10	0	0	0	0	0	0	0	0	0	6	24
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**84**	**141**	**12**	**2**	**4**	**4**	**4**	**15**	**9**	**57**	**142**	**266**	**740**
Hurghada	4	4	0	1—10	17	15	5	10	10	24	3	5	2	9	69	23	192
				11—27	82	4	0	0	1	0	0	0	0	11	92	348	538
				28—47	0	0	0	0	0	0	0	0	0	0	0	6	6
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**99**	**19**	**5**	**10**	**11**	**24**	**3**	**5**	**2**	**20**	**161**	**377**	**736**
Quseir	12	5	60	1—10	88	18	8	2	2	5	4	0	4	22	58	151	364
				11—27	123	3	0	0	0	0	0	0	3	1	4	171	305
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**211**	**21**	**8**	**2**	**2**	**5**	**4**	**0**	**7**	**23**	**62**	**322**	**669**

UPPER AIR CLIMATOLOGICAL DATA

Table B 1.—MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER & LOWER VALUES OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

JULY — 1964

Station

Pressure Surface Millibar	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
	N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
		*	*	*						
Surface	27	1009mb	1013mb	1006mb	27	22.8	24.5	19.2	27	19.9
1000	27	121	157	98	27	22.4	24.1	19.0	27	19.4
850	27	1525	1570	1493	27	17.8	22.2	13.4	22	1.8
700	27	3162	3213	3108	27	10.8	15.2	7.1	6	— 6.5
600	27	4430	4483	4353	27	4.1	8.0	— 1.7	—	—
500	27	5673	5963	5793	27	— 4.4	0.6	— 9.5	—	—
400	27	7608	7710	7496	27	—15.1	—11.7	—21.1	—	—
300	25	9735	9844	9639	25	—28.4	—25.8	—32.6	—	—
200	19	12512	12599	12352	19	—49.0	—45.6	—52.8	—	—
150	14	14309	14432	14162	14	—63.8	—60.0	—64.8	—	—
100	9	16746	16859	16658	9	—73.9	—70.7	—77.0	—	—
70	5	18846	18900	18800	5	—68.5	—64.5	—72.0	—	—
50	3	20893	20918	20861	3	—58.8	—57.6	—60.9	—	—
30	2	24192	24196	24188	2	—50.6	—50.5	—50.5	—	—
20	1	26871	—	—	1	—45.2	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—
		*	*	*						
Surface	31	992mb	995mb	987mb	31	22.5	28.6	20.4	31	17.0
1000	31	74	100	37	—	—	—	—	—	—
850	31	1478	1498	1463	31	19.5	23.3	15.9	25	— 3.8
700	31	3126	3172	3107	31	13.0	16.2	8.2	—	—
600	31	4404	4461	4356	31	5.9	8.8	1.0	—	—
500	31	5870	5920	5803	31	— 3.2	1.0	— 9.3	2	—21.3
400	31	7605	7650	7526	31	—13.2	— 9.7	—17.2	2	—27.6
300	31	9731	9788	9660	31	—28.0	—24.5	—31.2	—	—
200	31	12520	12601	12451	31	—49.2	—45.7	—52.3	—	—
150	31	14349	14461	14275	31	—62.6	—58.9	—65.3	—	—
100	31	16768	16887	16690	31	—75.1	—64.6	—78.5	—	—
70	22	18850	18960	18700	23	—70.7	—65.1	—75.7	—	—
50	20	20897	20985	20841	20	—59.3	—53.8	—63.1	—	—
30	12	24198	24211	24062	12	—52.7	—47.2	—55.2	—	—
20	9	26772	26854	26709	9	47.9	—45.1	—50.0	—	—
10	3	31424	31505	31384	3	—39.0	—37.3	—40.7	—	—
		*	*	*						
Surface	30	982mb	984mb	978mb	30	27.1	30.0	24.0	30	6.5
1000	—	—	—	—	—	—	—	—	—	—
850	30	1472	1497	1448	30	24.7	31.2	19.2	23	2.2
700	30	3137	3169	3097	30	13.0	17.1	7.5	19	— 2.1
600	30	4412	4454	4355	30	4.4	7.0	0.3	16	— 6.1
500	30	5872	5915	5811	30	— 5.7	0.1	— 9.8	18	—15.3
400	30	7593	7641	7542	30	—14.5	—11.7	—20.4	9	—26.8
300	30	9711	9786	9652	30	—29.4	—24.4	—33.8	1	—38.0
200	29	12482	12587	12404	29	—51.0	—47.3	—53.7	—	—
150	29	14306	14429	14201	29	—64.5	—58.7	—67.7	—	—
100	28	16693	16884	16591	28	—77.1	—72.5	—79.4	—	—
70	21	18774	18930	18650	21	—71.1	—66.1	—79.0	—	—
50	17	20835	20988	20680	17	—60.7	—57.7	—66.6	—	—
30	15	24076	24291	23882	15	—53.4	—47.2	—58.0	—	—
20	9	26736	26822	26528	9	—48.4	—45.6	—57.5	—	—
10	2	31283	31466	31100	2	—42.2	—37.3	—47.2	—	—

N = The number of cases the element has been observed during the month

* The atmospheric pressure corrected to the elevation of the radiosonde stations

UPPER AIR CLIMATOLOGICAL DATA

TABLE B 1 (*contd.*).—MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER & LOWER VALUES OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

JULY — 1964

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Meras Ma'ruh 1200 U.T.	Surface	26	*1009mb	*1013md	*1007mb	26	26.5	27.8	25.0	26	20.9
	1000	26	123	158	107	26	25.7	27.7	24.0	26	19.8
	850	26	1533	1562	1501	26	17.9	20.6	13.8	26	2.4
	700	26	3167	3209	3119	26	11.7	18.0	7.2	2	−12.2
	600	26	4441	4486	4370	26	4.9	9.1	0.6	—	—
	500	26	5903	5953	5811	26	— 3.8	0.6	— 9.7	—	—
	400	25	7629	7701	7499	25	- 14.4	—12.0	—20.0	—	—
	300	22	9746	9843	9610	22	—28.8	—25.4	—36.2	—	—
	200	19	12541	12707	12419	19	—48.6	—46.5	—51.2	—	—
	150	11	14385	14479	14306	11	— 61.5	—59.3	—63.0	—	—
	100	7	16822	16917	16750	7	—74.0	—72.1	—77.8	—	—
	70	3	18893	18940	18840	3	—67.7	—67.0	—77.8	—	—
	50	1	21030	—	—	1	—55.0	—	—68.2	—	—
	30	1	24350	—	—	1	—48.3	—	—	—	—
	20	1	27053	—	—	1	—43.0	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 1200 U.T	Surface	31	*991mb	*995mb	*988mb	31	32.9	38 2	29 5	31	12.4
	1000	—	—	—	—	—	—	—	—	—	—
	850	31	1490	1520	1471	31	19.5	23.2	16.7	26	1.7
	700	31	3138	3188	3111	31	13.1	18.6	8.9	1	— 6.0
	600	31	4416	4482	4375	31	6.0	9.4	1.5	—	—
	500	31	5886	5950	5825	31	— 2.8	1.3	— 6.8	—	—
	400	31	7623	7698	7542	31	—12.8	— 9.6	—17.3	—	—
	300	30	9753	9839	9682	30	—27.1	—23.3	—30.0	—	—
	200	30	12556	12683	12478	30	—47.9	—42.8	—51.0	—	—
	150	28	14398	14596	14288	28	—61.1	—54.0	—64.2	—	—
	100	26	16829	17073	16698	26	—75.1	—69.3	—77.5	—	—
	70	19	18917	19150	18830	19	—71.1	—63.7	—76.3	—	—
	50	14	20962	21115	20883	14	—59.1	—55.6	—71.2	—	—
	30	9	24214	24317	24102	9	—52.1	—50.0	—57.5	—	—
	20	6	26883	26991	26819	6	—47.7	—45.0	—55.2	—	—
	10	3	31501	31670	31308	3	—42.4	—37.4	—50.6	—	—
Aswan 1200 U.T.	Surface	31	*983mb	*985mb	*979mb	31	39.6	43.0	36.2	31	13.1
	1000	—	—	—	—	—	—	—	—	—	—
	850	31	1490	1515	1471	21	25.6	32.6	20.1	29	— 0.2
	700	31	3160	3186	3107	31	13.8	19.9	8.2	22	— 4.2
	600	31	4438	4481	4370	31	5.5	8.1	1.4	17	— 7.2
	500	31	5899	5964	5826	31	— 5.0	0.7	— 9.1	18	—16.2
	400	31	7626	7685	7557	31	—14.0	— 9.6	—18.6	10	—28.2
	300	31	9752	9842	9677	31	—28.4	—24.2	—30.8	—	—
	200	31	12528	12685	12443	31	—49.4	—44.8	—51.4	—	—
	150	31	14364	14553	14252	31	—63.2	—59.0	—65.7	—	—
	100	30	16761	17000	16639	30	—75.3	—68.5	—80.4	—	—
	70	23	18879	19120	18710	23	—70.1	—65.7	—80.8	—	—
	50	16	20930	21778	20736	16	—58.5	—56.2	—61.5	—	—
	30	12	24224	24484	24016	12	—49.8	—46.5	—52.8	—	—
	20	8	26927	27188	26689	8	—44.5	—40.3	—49.8	—	—
	10	2	31770	31902	31639	2	—38.9	—37.7	—40.1	—	—

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde stations.

TABLE B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE ; THE HIGHEST WIND SPEED IN THE UPPER AIR

JULY — 1964

	Station	Freezing Level									First Tropopause									Highest wind speed			
		Mean			Highest			Lowest			Mean			Highest			Lowest						
		Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew Point (°C)	Altitude (gpm)	Pressure (mb.)	Dew Point (°C)	Altitude (gpm)	pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Direction (000—360)°	Speed in Knots
		(N)	(N)	(N)							(N)	(N)	(N)										
0000 U.T.	M. Matruh	5119 (27)	555 (27)	— —	6050	494	—	4050	622	—	16521 (5)	104 (5)	-73.7 (5)	17550	87	-79.2	15200	128	-69.0	9800	294	280	113
	Helwan	5383 (31)	532 (30)	-19.1 (1)	6010	493	—	4590	584	—	17011 (24)	96 (24)	-74.0 (24)	18350	77	-83.3	15500	122	-75.6	11400	—	220	70
	Aswan	5067 (30)	555 (30)	-10.0 (17)	5900	498	—	4450	695	-13.0	16488 (26)	105 (26)	-77.0 (26)	18230	79	-77.3	14600	141	-68.2	15570	121	110	80
		(N)	(N)	(N)							(N)	(N)	(N)										
1200 U.T.	M. Matruh	5321 (26)	536 (26)	— —	6000	495	—	4580	584	—	16596 (3)	103 (3)	-72.5 (3)	16825	100	-72.1	16210	110	-72.3	13100	—	240	115
	Helwan	5371 (31)	542 (31)	— —	6160	486	—	4610	584	—	17365 (19)	86 (19)	-77.4 (19)	19500	66	-76.9	15270	110	-73.4	15720	117	190	80
	Aswan	5184 (31)	547 (31)	-10.5 (18)	6010	493	—	4600	585	—	15928 (26)	104 (26)	-73.2 (26)	17900	84	-77.1	15240	126	-70.4	16600	104	130	91

N = The number of cases the element has been observed during the month .

TABLE B 8.— NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

MERSA MATRUH (A) – JULY 1964

Time	Pressure Surface Millibar	Wind between ranges of direction (000—360)°																						Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	3	9	1	14	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	9	8	8	9	11	3	27	9
	1000	3	13	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	11	15	12	7	11	1	27	11
	850	8	16	1	3	1	8	0	—	0	—	0	—	0	—	0	—	0	—	4	14	3	14	10	14	0	27	14
	700	4	15	1	2	0	—	0	—	0	—	0	—	0	—	1	11	4	17	2	4	11	14	4	12	0	27	13
	600	1	21	2	13	0	—	0	—	0	—	0	—	0	—	1	11	3	20	9	16	7	12	4	15	0	27	15
	500	2	8	2	16	0	—	0	—	0	—	0	—	0	—	3	13	5	20	7	20	5	21	3	18	0	27	18
	400	1	11	1	8	0	—	0	—	1	8	0	—	2	8	5	21	7	24	8	31	2	26	0	—	0	27	23
	300	0	—	0	—	1	9	0	—	1	9	0	—	2	30	7	25	8	32	4	62	1	16	0	—	0	24	32
	200	0	—	0	—	0	—	0	—	1	21	0	—	1	27	5	28	5	46	1	65	0	—	0	—	0	13	37
	150	0	—	0	—	0	—	0	-	0	—	1	15	1	35	4	29	2	92	0	—	0	—	0	—	0	8	44
	100	0	—	0	—	0	—	0	—	0	—	0	—	1	14	2	34	0	—	0	—	0	—	0	—	0	3	30
	70	0	—	0	—	0	—	0	—	1	10	0	—	1	6	0	—	0	—	0	—	0	—	0	—	0	2	8
	60	0	—	0	—	0	—	1	16	0	—	1	12	0	—	0	—	0	—	0	—	0	—	0	—	0	2	14
	50	0	—	0	—	0	—	1	30	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	30
	40	0	—	0	—	0	—	1	29	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	29
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	7	14	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	16	15	17	0	26	16
	1000	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	18	21	17	0	26	17
	850	1	12	1	14	0	—	0	—	1	4	0	—	0	—	0	—	0	—	4	10	12	12	7	14	0	26	12
	700	4	15	1	17	0	—	0	—	0	—	0	—	0	—	1	18	2	11	6	11	10	10	2	18	0	26	12
	600	1	16	2	9	0	—	0	—	0	—	0	—	1	34	1	15	6	16	8	14	4	10	3	12	0	26	14
	500	1	17	2	18	1	8	0	—	0	—	0	—	0	—	4	12	13	16	4	18	1	21	0	—	0	26	16
	400	1	7	0	—	0	—	0	—	1	8	0	—	1	10	6	25	10	19	5	28	0	—	0	—	0	24	21
	300	0	—	0	—	0	—	0	—	1	7	1	5	4	21	3	23	10	27	2	57	0	—	0	—	0	21	26
	200	0	—	0	—	0	—	0	—	2	14	1	24	4	34	3	17	1	47	1	22	0	—	0	—	0	12	26
	150	0	—	0	—	0	—	0	—	1	37	4	26	2	44	1	15	1	90	0	—	0	—	0	—	0	9	37
	100	0	—	0	—	0	—	0	—	0	—	2	28	0	—	1	26	1	51*	0	—	0	—	0	—	0	4	33
	70	0	—	0	—	0	—	0	—	1	44	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	44
	60	0	—	0	—	0	—	0	—	1	32	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	32
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N — The number of cases the element has been observed during the month.

TN — The total number of cases the wind has been observed for all directions during the month

TABLE B 3 (*contd.*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

HELWAN—JULY 1964

Time	Pressure Surface (Millibar.)	Wind between ranges of direction (000—360)°																						Number of Calm winds	Total Number of Observations (TN)	Mean Scalar wind Speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	9	9	5	10	0	8	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	3	6	8	3	31	8
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
	850	8	12	3	15	2	15	0	—	2	13	0	—	0	—	1	5	1	12	3	12	4	10	7	12	0	31	12
	700	6	11	1	8	1	4	0	—	0	—	0	—	1	4	4	11	5	17	7	11	7	8	3	14	0	31	10
	600	0	—	4	11	2	12	0	—	0	—	0	—	3	7	0	—	7	18	10	11	5	8	2	5	0	31	11
	500	1	7	2	10	2	14	1	14	1	7	1	7	0	—	2	9	10	18	10	14	2	10	1	7	1	31	13
	400	0	—	1	5	1	9	2	10	1	9	2	8	3	7	5	16	8	26	5	14	0	—	1	9	0	31	16
	300	0	—	0	—	0	—	2	6	3	7	3	14	5	17	6	18	1	28	2	14	0	—	1	5	1	31	17
	200	0	—	0	—	0	—	0	—	2	25	4	18	12	16	7	32	1	14	1	15	1	6	0	—	0	31	21
	150	0	—	0	—	1	14	0	—	1	6	14	28	8	31	5	26	0	8	0	—	0	—	0	—	0	30	27
	100	0	—	0	—	0	—	0	—	7	24	8	28	5	35	2	14	0	—	0	—	0	—	0	—	0	21	28
	70	0	—	0	—	1	9	6	20	1	21	2	21	0	—	1	—	0	—	1	16	0	—	0	—	1	12	18
	60	0	—	0	—	1	37	6	22	3	24	0	—	0	—	0	—	0	—	1	25	0	—	0	—	0	11	24
	50	0	—	0	—	1	32	5	22	4	33	0	—	0	—	0	—	0	—	1	23	0	—	0	—	0	11	27
	40	0	—	0	—	2	44	3	27	1	30	0	—	0	—	0	—	0	—	1	32	1	22	0	—	0	8	32
	30	0	—	0	—	1	42	4	37	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	5	38
	20	0	—	0	—	0	—	2	38	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	2	38
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	8	11	1	11	0	—	0	—	0	—	0	—	0	—	2	11	1	5	6	10	9	12	4	12	0	31	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	12	10	4	15	0	—	0	—	1	10	0	—	0	—	1	16	3	8	2	12	3	11	5	13	0	31	11
	700	5	9	2	18	0	—	0	—	1	8	0	—	1	18	3	12	2	13	7	14	10	8	0	—	0	31	12
	600	1	9	3	10	0	—	0	—	2	6	1	7	1	12	6	15	6	15	7	12	4	16	0	—	0	31	13
	500	1	6	3	12	0	—	0	—	0	—	1	7	1	17	1	13	12	16	6	20	3	13	3	5	0	31	15
	400	0	—	0	—	2	10	1	3	3	10	1	7	4	7	7	15	6	27	5	16	1	24	1	5	0	31	15
	300	0	—	0	—	1	6	1	15	2	16	3	13	5	14	5	19	10	24	2	10	1	4	0	—	0	30	17
	200	0	—	0	—	0	—	0	—	3	24	9	17	4	12	9	31	2	10	1	10	0	—	0	—	1	29	20
	150	0	—	0	—	0	—	1	25	3	29	11	23	5	22	5	28	1	17	0	—	0	—	0	—	0	26	24
	100	0	—	0	—	0	—	1	26	7	33	5	39	6	29	0	—	1	30	0	—	0	—	0	—	0	20	32
	70	0	—	0	—	0	—	4	30	3	34	4	33	1	30	0	—	0	—	0	—	0	—	0	—	0	12	32
	60	0	—	0	—	0	—	4	28	5	32	1	25	0	—	0	—	0	—	0	—	0	—	0	—	0	10	30
	50	0	—	0	—	0	—	8	36	4	27	1	27	0	—	0	—	0	—	0	—	0	—	0	—	0	8	30
	40	0	—	0	—	0	—	4	35	3	18	1	43	0	—	0	—	0	—	0	—	0	—	0	—	0	8	30
	30	0	—	0	—	0	—	5	26	0	—	1	27	0	—	0	—	0	—	0	—	0	—	0	—	0	6	26
	20	0	—	0	—	0	—	3	39	1	56	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	4	23
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

TABLE B 3 (*contd.*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A)— JULY 1964

Time	Pressure Surface (Millibar)	Wint between ranges of direction (000—360)°																						Number of calm winds	Total number of observations (TN)	Mean Scalar wind Speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	20	13		10	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	10	6	12	2	30	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	3	9	4	11	0	—	1	10	0	—	0	—	0	—	0	—	3	5	1	17	7	7	11	8	0	30	8
	700	1	3	0	—	0	—	1	3	0	—	3	5	4	8	7	9	5	11	6	5	2	6	1	5	0	30	7
	600	0	—	2	2	1	5	0	—	2	5	5	11	3	9	2	14	9	10	2	6	2	9	2	5	0	30	9
	500	0	—	2	6	5	6	2	10	1	3	5	9	5	13	2	8	2	6	3	8	1	4	0	—	2	30	8
	400	0	—	2	6	0	—	10	10	9	10	6	13	1	12	1	11	0	—	0	—	0	—	0	—	1	30	10
	300	0	—	1	12	0	—	11	19	6	14	5	19	3	9	1	8	0	—	1	7	0	—	0	—	1	29	15
	200	0	—	0	—	1	20	9	24	11	33	6	27	0	—	1	1	0	—	0	—	0	—	0	—	0	28	27
	150	0	—	0	—	0	—	7	34	12	33	5	37	0	—	0	—	0	—	0	—	0	—	0	—	0	24	34
	100	0	—	0	—	0	—	4	36	8	53	1	40	0	—	0	—	0	—	0	—	0	—	0	—	0	13	47
	70	0	—	0	—	0	—	1	22	2	26	1	19	0	—	0	—	0	—	0	—	0	—	0	—	0	4	24
	60	0	—	0	—	0	—	2	20	1	55	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	3	32
	50	0	—	0	—	1	24	1	31	1	22	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	3	26
	40	0	—	0	—	0	—	2	39	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	2	39
	30	0	—	0	—	0	—	1	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	40
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	15	12	1	8	0	—	0	—	0	—	0	—	0	—	0	—	1	5	2	10	4	14	7	12	1	31	12
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	4	9	1	6	0	—	0	—	0	—	0	—	1	9	0	—	2	10	6	11	8	14	9	10	0	31	11
	700	0	—	2	8	0	—	0	—	1	2	1	14	5	5	6	8	5	13	5	18	4	6	2	6	0	31	9
	600	0	—	3	8	0	—	0	—	1	3	3	12	7	12	2	8	8	9	4	6	3	6	0	—	0	31	9
	500	1	9	1	3	2	5	2	8	3	7	5	10	8	15	4	16	2	6	1	3	0	—	1	4	1	31	10
	400	0	—	0	—	2	12	14	11	3	8	4	9	2	4	1	17	1	8	1	2	0	—	1	9	2	31	9
	300	0	—	1	9	2	12	8	24	11	20	5	21	1	9	0	—	0	—	0	—	0	—	0	—	3	31	18
	200	1	4	1	24	0	—	6	34	18	28	3	31	0	—	1	7	0	—	0	—	0	—	0	—	1	31	27
	150	0	—	0	—	0	—	7	41	15	36	6	35	0	—	0	—	0	—	0	—	0	—	0	—	0	28	37
	100	0	—	0	—	0	—	4	42	14	51	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	18	49
	70	0	—	0	—	0	—	1	60	3	48	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	4	51
	60	0	—	0	—	0	—	0	—	3	37	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	3	37
	50	0	—	0	—	0	—	0	—	2	46	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	2	46
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N — The number of cases the element has been observed during the month.

TN—total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATIONS

EL-KASR – JULY 1964

Normal summer conditions prevailing.

The month started with a minor warm spell giving the highest minimum of air temperatures at 5 and 200 cms (1.4°C above normal) on the 1st.

A cold spell followed with the peak on the 5th., when the absolute minimum air temperature at 5 and 200 cms (5.7°C below normal) and the lowest values of maximum air temperature (1.1°C below normal), the daily mean (2.2.°C below normal), night time mean and vapour pressure were recorded as well as the lowest soil temperatures for the layer 5 to 20 cms of depth, whereas the lowest mean of day time temperature was observed on the previous day.

Another minor warm spell started on the 7th. with the highest values of the daily mean and night time mean for wind speed at 2 metres occuring on that day and of vapour pressure deficit on the 10th. together with the lowest values of relative humidity (31% below normal) and the daily mean (14 % below normal).

A cold spell had its peak on the 12th. when the lowest soil temperature of the surface layers down to 2 cms of depth occurred.

The highest values of evaporation from pan class A and Piche in the free air at 1, 60 and 120 cms above the ground and also in the screen (5.3 mms. above normal) were reported on the 13th. whereas the lowest values were recorded on the 21 st. together with the highest daily mean of relative humidity (5 % above normal); while the highest values of soil temperatures for the surface layers down to 20 cms of depth were reported on the following day.

A prolonged minor warm spell prevailed during the last week with the absolute maximum air temperature (1.6°C above normal) on two peaks, 27th. and 30th. and the highest values of the means of air temperature, for the day, night time and day time on the 28th.

The total actual duration of bright sunshine was 389.5 hours or 90 % of the total possible duration.

Compared with the normal values, the means of air temperature, relative humidity and Piche evaporation in the screen were less by 0.2°C, 2% and 0.1 mm. respectively.

TAHRIR – JULY 1964

Mainly mild with the usual stable summer weather.

A cool spell started on the first with the highest mean wind speed at 2 metres and gave the lowest maximum air temperature on the 3rd., 4th, and 5th. when the lowest soil temperature at depth 0.3 cm occurred, while those for the layer 1 to 50 cms of depth were recorded on the 7th. together with the absolute minima of air temperature at 200 and 5 cms.

A heat wave followed with the peak on the 8th giving the absolute maximum air temperature on that day as well as the highest values of soil temperature at depth 0.3 cm and also the water vapour pressure deficit, whereas the lowest values of the relative

humidity (22%), vapour pressure, mean wind speed at 2 metres were reported on the 11th. when a cool spell began, during which the lowest values of Piche evaporation in the screen and in the free air were observed on the 15 th., but that of pan class A on the 17th.

That day was a peak of a minor heat wave with the occurrence of the highest values of soil temperature for the surface layer to 10 cms. Another heat wave started on the 20th. and gave the highest values of minimum air temperature at 200 and 5 cms on the next day.

The highest values of the relative humidity and vapour pressure were associated with a minor cool spell on the 22nd. but the lowest vapour pressure deficit happened on the following day.

A heat wave began on the 28th. and continued to the last day of the month, when the highest values of evaporation from pan class A and Piche in the screen and in the open air at 1, 60 and 120 cms above the ground were recorded.

The month was slightly cooler and drier than the corresponding values of the last year. The daily means of air temperature, relative humidity and Piche evaporation were less by 1.4°C, 4% and 1.4 mms. Also the extreme soil temperatures at the different depths were lower by no more than 2.5°C, while the total radiation and the total actual duration of bright sunshine were more by 939 gm cal/cm² and 4.8 hours respectively.

GIZA — JULY 1964

Mild and humid with maxiumm temperature and relative humidity below normal for most days of the month.

The first day of the month was a peak of a heat wave which was associated with the occurrence of the absolute maximum air temperature (2°C above normal), the highest values of the daily mean (1°C above normal), day time and night time means, daily range and also those of the evaporation from pan class A and Piche both in the free air at levels 1, 60 & 120 cms above the ground and in the screen (2,3 mms above normal) as well as water vapour pressure deficit together with the lowest values of vapour pressure.

Then the most pronounced cool spell in the month followed and had its peak on the 5th, when the absolute minima of air temperature at 2 metres above ground (1.5°C below normal) and at 5 cms above dry, wet and grass fields and also the absolute minima of soil temperatures in the three fields for the surface layers down to 50 cms depth were recorded, as well as the lowest values of the maximum air temperature (4.7°C below normal) and the daily mean (2.9°C below normal).

The maximum air temperature rose slightly above normal on the 8th. and gave the highest values of soil temperature for the surface layer down to 5 cms depth in the dry field on that day, whereas that at 10 cms occured on the following day when the highest values of soil temperature for the same layer in the wet field were observed.

Again the maximum air temperature rose to about normal on the 22nd. with the occurrence of the highest value of minimum air temperature and the lowest value of relative humidity (30 % below normal), while the lowest values of the water vapour deficit and the highest values of soil temperatures in the grass field for the surface layer down to 20 cms of depth were observed on the next day.

A cool spell started on the 23rd. and continued to the end of the month with its peak on the 27th. when the highest daily mean of relative humidity (12% above normal) and the lowest values of Piche evaporation in the open air and in the screen (1.7 mms below normal) were recorded, while that of pan class A was reported on the previous day.

Compared with the normal values, the daily mean of air temperature was slightly below (1.2°C), the relative humidity and Piche evaporation were more by 4% and 0.3 mm respectively.

The maxima of soil temperature at the different dephts were lower than those of last year by variable amounts not exceeding. 1.9°C with respect to the dry field, 2.4°C for wet field and 1.3°C for the grass field. Also the minima of soil temperature were less within 3.9 and 3.2 °C for the dry and wet fields respectively while those of the grass field were slightly more.

The absolute minima of air temperature at 5 cms above the ground were also less by 1.7, 1.6 & 1.8°C above the dry, wet and grass fields respectively.

No material change was observed in the daily mean of wind speed at 2 metres and the total actual duration of bright sunshine, With regard to the mean evaporation of the day from Piche in the open air at 120 cms above ground and pan class A, the values of July 1964 were lower than those of last year by 2.6 and 0.82 mms respectively, and also the total potential evapotranspiration from grass (Libia) by 14.8 mms, while the total potential evaporation from the wet soil was more by 4.3 mms.

KHARGA — JULY 1964

Mainly dry with normal temperature prevailing.

A minor cool spell started on the 2nd. and gave rise to the lowest values of maximum air temperature (3.7°C below normal) on the 4th. and 5th., the daily mean on the latter day, means of day time and night time and also the vapour pressure deficit on the 6th. and vapour pressure on the next day.

That cool spell was followed by a heat wave on the 9th. when the lowest relative humidity 11% (22% below normal) was recorded, while the absolute maximum air temperature (2.4°C above normal) and the highest vapour pressure deficit (49.3 mms) occurred with the peak on the 10th., when the highest means for the day (2.5 above normal) and day time were reported as well as the lowest daily mean of the relative humidity (11 % bellw normal), whereas the highest values of the soil temperatures of the layer 1 to 20 cms occurred on the following day.

The most pronounced cool spell had its peak on the 14th. with the absolute minima of air temperature at 5 and 20 cms above ground level occurring on the next day together with the highest relative humidity (22% above normal) and the lowest values of evaporation from pan class A and Piche in the open air and in the screen (3.8 mms above normal), while the absolute minimum air temperature in the screen (3.6°C below normal) and the lowest values of soil temperature for the surface layer down to 10 cms of depth, were reported on the 16th.

A minor heat wave started on the 21st. and was associated with the highest values of evaporation from pan class A and Piche in the free air at levels 1, 60 and 120 cms above the ground and in the screen (23.9 mms above normal) and also that of vapour pressure on the following day and those of the minimum air temperature at 5, 20 and 200 cms (4.0°C above normal) and night time mean as well as wind speeds at 50, 100 and 200 cms, occurring on the 23rd.

With respect to normal values, the mean of maximum air temperature was less by 1.0°C, those of the minimum and the daily mean were more by 0.2°C while the mean relative humidity was lower by 6%.

Table C1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

JULY — 1964

STATION	Air Temperature (°C)					Mean Duration in hours of daily air temperature above the following values									
	Mean Max.	Mean Min.	Mean of the day	Night time mean	Day time mean	—5°C	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°
El Kasr	28.9	19.2	24.8	22.4	26.2	24.0	24.0	24.0	24.0	24.0	22.1	11.7	0.0	0.0	0.0	0.
Tahrir	33.6	19.8	26.1	22.8	28.4	24.0	24.0	24.0	24.0	24.0	22.6	12.7	5.8	0.1	0.0	0.
Giza , , ...	33.3	20.2	26.3	23.7	28.3	24.0	24.0	24.0	24.0	24.0	23.3	13.5	6.0	0.06	0.0	0.
Kharga	38.0	23.6	31.5	28.6	33.7	24.0	24.0	24.0	24.0	24.0	24.0	22.0	14.2	6.8	0.2	0.

Table C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS.

JULY — 1964

STATION	Max. Temp. at 2 metres (°C)				Min. Temp. at 2 metres (°C)				Min. Temp. at 5 cms. above (°C)			
	Highest		Lowest		Highest		Lowest		Dry soil		Grass	
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date
El Kasr	29.9	27	27.2	5	22.2	1	15.1	5	12.5	5	—	—
Tahrir	36.7	8	30.9	3,4,5	22.8	21	17.7	7	16 0	11	—	—
Giza , , ...	37.0	1	30.5	5	22.4	22	18.2	5	15.2	5	12.6	5
Kharga.	41.8	10	35.7	4,5	27.4	23	19.8	16	17.2	16	—	—

Table C 3.—(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL

JULY — 1964

STATION	(Solar+Sky) Radiation gm. cal/cm²	Duration of Bright Sunshine (hours)			Relative Humidity %					Vapour pressure (mms)						Evaporation(mm³)		Rainfall (mm		
		Total Actual monthly	Total Possible monthly	%	Duration in hours ⩾ 90 %	Duration in hours ⩾ 80 %	Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 U.T.	Highest	Date	Lowest	Date	Piche	Pan class A	Total Amount Monthly	Max. Fall in one day	Date
El Kasr . . .	595.9	389.5	433.0	90	—	—	76	66	42	10	18.3	18.6	24.0	30	10.6	5	10.7	10.11	0.0	—	
Tahrir	679.9	389.7	430.9	90	2.4	7.5	65	37	22	11	15.7	13.7	20.8	21	8.2	11	15.3	11.99	0.0	—	
Giza	677.6	369.6	429.5	86	0.9	6.3	63	41	29	22	15.5	14.4	20.2	30	10.1	1	14.1	11.30	0.0	—	
Kharga. . . .	603.2	390.1	418.8	93	0	0	27	18	11	9	8.9	8.8	10.6	2,28	5.0	7	40.6	20.46	0.0	—	

TABLE C 4 —EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS IN DIFFERENT FIELDS

JULY — 1964

STATION	Highest (H) Lowest (L)	Extreme soil temperature (°C) in dry field at different depths (cms.)										Extreme soil temperature (°C) in grass field at different depths (cms.)									
		0.3	1	2	5	10	20	50	100	200	300	0.3	1	2	5	10	20	50	100	200	300
El Kasr . . .	H	49.5	42.5	43.4	39.5	34.3	30.5	28.2	26.5	24.1	—	—	—	—	—	—	—	—	—	—	—
	L	16.3	17.1	17.4	19.2	22 6	25.4	26.6	26.2	22.8	—	—	—	—	—	—	—	—	—	—	—
Tahrir	H	55.4	54.5	51 5	47.6	42.2	36.3	32.2	30.2	28.0	26.5	—	—	—	—	—	—	—	—	—	—
	L	18.2	18.4	19.7	22.0	25.2	29.0	30.2	29.2	26.8	25.3	—	—	—	—	—	—	—	—	—	—
Giza	H	65.0	64.5	61.0	45 0	38 6	34.0	32.9	31.0	28.0	25.8	36.0	33.0	32.4	30.3	29.2	28.2	27.0	25.9	23.4	—
	L	18.0	19.0	20.0	25.8	29.5	31.4	31.6	29.7	26.4	24.7	22.5	22.6	22.1	24.0	24.3	26.0	25.4	23.7	22.0	—
Kharga. . . .	H	59.9	57,2	54.8	47.6	41.6	36.5	34.0	32.1	29.7	28.2	—	—	—	—	—	—	—	—	—	—
	L	20.2	22,0	23.2	26.7	30.1	32.2	32.5	31.2	28.9	27.2	—	—	—	—	—	—	—	—	—	—

TABLE C 5.—SURFACE WIND

JULY— 1964

STATION	Wind Speed m/sec (2 metres)			Days with surface wind speed at 10 metres.							Max. Gust (knots) at 10 metres	
	Mean of the day	Night time mean	Day time mean	≥10 knots	≥15 knots	≥20 knots	≥25 knots	≥30 knots	≥35 knots	≥40 knots	value (knots)	Date
El Kasr	4,7	3,6	6,1	—	—	—	—	—	—	—	—	—
Tahrir	3,5	2,7	4,6	31	19	2	0	0	0	0	28	25
Giza	2,6	2,2	3.1	31	18	0	0	0	0	0	24	9,23
Kharga	4,6	3,7	6,0	—	—	—	—	—	—	—	—	—

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UNITED ARAB REPUBLIC

MONTHLY WEATHER REPORT

VOLUME 7 NUMBER 8

AUGUST, 1964

U.D.C. 551. 506.1 (62)

METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties, the U.A.R. Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be adressed to :
"The Director General, Meteorological Department, Kubri-el-Qubbeh — CAIRO".

THE DAILY WEATHER REPORT

This report is issued daily by the Meteorological Department since the year 1901. It includes surface and upper air observations carried out by the relevant networks of the Republic at the principal hours of observations.

As from January 1968 this report was revised to include a condensed representative selection of surface and upper air observations besides the 1200 U.T. surface & 500 mb charts.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

As from January 1964, the Monthly Weather Report was pressed to give climatological data for a representative selection of synoptic stations.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year.

CLIMATOLOGICAL NORMALS FOR EGYPT

A voluminous edition was issued in march 1968 which brings normals and mean values up till 1960.

METEOROLOGICAL RESEARCH BULLETIN

First issued in January 1969 on a bi-annual basis. It includes research works carried out by members of staff of "The Meteorological Institute for Research and Training" and the Operational Divisions of Meteorological Department.

TECHNICAL NOTES

As from October 1970, the Meteorological Department started to issue a new series of publications in the form of Technical Notes (non periodical) on subjects related to studies and applications of meteorology in different fields for the benefit of personnel working in these fields.

The first Technical Note I was issued in October 1970 on : Sandstorms & Duststorms in the U.A.R.

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METEOROLOGICAL DEPARTMENT
CAIRO

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GENERAL SUMMARY OF WEATHER CONDITIONS

AUGUST 1964

Generally mild and humid in the northern parts, hot in the middle parts, and excessively hot in the southern parts. Early morning mist over scattered localities of Delta, Canal and Cairo areas.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather was mild and humid in the northern parts, hot in the middle parts and excessively hot in the extreme southern parts. Early morning mist developed for several days over scattered localities of Delta & Canal areas, and most days of the month over the western parts of Cairo.

PRESSURE DISTRIBUTION

The prevailing pressure distributions over he surface map this month can be summaized in the following pressure systems.

- The complex monsoon low pressure system over Iraq, Arabia & Sudan.
- The monsoon low over the great Sahara of Africa.
- The Anticyclonic ridge extending from the Azores over Europe, western & central Mediterranean.
- The deep northern travelling low pressure system north of latitude 45°N through Urasia.

On the other hand the prevailing upper essure systems at the 700 & 500 mb levels ere confined in the two deep upper low sover rth Atlantic and north Russia, their per trough extensions towards west Europe d Black Sea vicinity, and an anticyclonic gh pressure belt south of latitude 40°N.

During this month four transitory rather ep depressions traversed Urasia, their attached southern secondaries approached west vicinity of the Black Sea round the 5th, 9th, 16th & 23rd. Accordingly the complex monsoon over Iraq, Arabia & Sudan showed a gradual northwest elongation and operated over east Mediterranean up to Crete round the 8th, 11th, 18th & 25th respectively.

High pressure occupying central, west Mediterranean and Europe showed minor southward oscillations while weakening by the rapid transits of the deep northern lows through Urasia but rapidly reestablished again at their rears.

It is worth to mention that the barometric pressure over the U.A.R. in particular and east Mediterranean in general experienced four oscillations of small to moderate amplitudes.

Over the U.A.R., the subtropical jet stream was evident in the upper troposphere most of the month round 140 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan & Aswan were 96, 63 & 78 knots on the 29th, 29th & 13th respectively

SURFACE WIND

The prevailing winds were light/moderate Nly in general. Fresh/strong winds blew during several days over scattered localities of the Republic particularly the Mediterranean (Western part) and Red Sea districts.

No gales were reported during this month.

TEMPERATURE

Both maximum and minimum air temperature showed small variability during this month.

The absolute maximum temperature for the Republic was 45.9°C reported at Kom Ombo on the 16th.

The absolute minimum temperature the Republic was 16.0 reported at El Kasr Shandaweel on the 31st & 10th respective

PRECIPITATION

As usual, this month was rainless allo the Republic.

Cairo, August 1971

M. F. TAHA
Under Secretary of Stat
Director General
Meteorological Departmer

SURFACE DATA

Table A 1. — MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION.

AUGUST — 1964

STATION	Atmospheric Pressure (mbs) M.S.L		Air Temperature °C								Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evaporation mms.
			Maximum		Minimum			Dry Bulb		Wet Bulb						
	Mean	D.F Normal or Average	(A) Mean	D.F Normal or Average	(B) Mean	D.F Normal or Average	$\frac{A+B}{2}$	Mean	D.F Normal or Average	Mean	D.F Normal or Average	Mean	D.F Normal or Average	Total Actual	Total Possible	%	Mean
Sallum	1010.4	+ 0.1	30.3	— 0.7	22.7	+ 0.5	26.5	26.2	— 0.1	22.0	+ 0.3	67	+ 2	—	—	—	7.9
Mersa Matruh (A)	1010.0	— 0.1	29 5	— 0.4	21.4	+ 0.4	25.4	25.4	— 0.2	21.4	— 0.4	69	— 3	367.7	412.0	89.2	8.8
Alexandria (A)	1008.7	— 0.1	30.9	+ 0.5	22.5	— 0.4	26.7	26.2	— 0.6	21.8	— 1 2	66	— 7	364.1	411.1	88.6	6.2
Port Said (A)	1007.9	— 0.4	30.4	— 0.5	24.2	— 0.7	27.3	26.8	— 0.6	22.9	— 0 8	70	— 3	353.8	411.1	86.1	6.1
El Arish	1008.0	+ 0.4	30.7	— 0.3	21.6	— 0.2	26.2	26.5	— 0.6	23.1	— 0.7	74	— 1	367.1	408.9	89.8	6.1
Ghazza	1007.5	+ 0.1	28.8	— 0.8	21.3	— 1.1	25 0	25.6	— 1.0	22.5	— 1.3	75	— 3	350.3	412.0	84.5	5.1
Tanta	1007.7	—	33.9	—	20.2	—	27.0	26 2	—	21.5	—	64	—	316.8	410.6	84.5	5.1
Cairo (A)	1008.1	— 0.4	33 6	— 1.2	21.6	0.0	27 6	27.3	— 0.6	21.3	— 0.5	56	0	—	—	—	14 5
Fayoum	1007.6	—	36.2	—	21.6	—	28.9	28.4	—	21.1	—	50	—	—	—	—	10.5
Minya (A)	1007.5	+ 0.1	35.1	— 1 1	20.5	+ 0.1	27.8	27.6	— 0.8	21.4	— 0.7	55	+ 6	—	—	—	9.4
Assyout (A)	1007.2	+ 0.4	36.1	— 0.9	22.4	0.0	29.2	29.3	— 0.4	19.6	— 0.1	36	+ 1	—	—	—	18.1
Luxor (A)	1005.5	+ 0.5	40.2	— 0.8	23.3	— 0.2	31.8	32.1	— 0.8	19.8	— 0 2	27	+ 1	—	—	—	14.0
Aswan (A)	1005.8	+ 0.8	41.0	— 1.0	25.1	— 1.3	33.0	33.2	— 0.5	18.3	0.0	17	+ 1		—	—	21.7
Siwa	1009.6	— 0.2	27.1	— 0.7	20.3	— 0.4	28.7	29.2	— 0.7	19.8	0.0	38	+ 2	—	—	—	14.9
Bahariya	1008.3	0.0	36.7	— 0.6	21.3	+ 0.3	29 0	29.2	— 0.4	19.7	— 0.1	37	+ 1	—	—	—	10.1
Farafra	1009.1	—	37.2	—	20.7	—	29.0	29.1	—	18.3	—	30	—	—	—	—	19 6
Dakhla	1005.5	— 0.3	38.5	0.0	21.0	— 1.9	29.8	30.3	— 0.4	18.0	— 0.2	24	+ 2	—	—	—	20.0
Kharga	1007.0	—	39.5	—	22.6	—	31.0	31.8	—	18.3	—	21	—	380.6	400.0	95.1	24.6
Tor	1005.2	+ 0.8	34.5	— 0.4	25.0	0.0	29.8	29.1	— 0.2	23.1	— 0.5	58	— 2	—	—	—	9.6
Hurghada	1005.3	+ 1.0	34.0	+ 1.0	24.6	— 0.4	29.3	29.6	— 0.4	21.5	— 0.9	46	— 4	—	—	—	19.9
Quseir	1005.9	+ 1.3	32.3	— 1 5	26.1	— 0.8	29.2	29.6	— 0.1	20.2	— 0.4	49	+ 3	—	—	—	16 8

Table A 2.—MAXIMUM AND MINIMUM AIR TEMPERATURES

AUGUST — 1964

Station	Maximum Temperature °C									Grass Min. Temp.		Minimum Temperature °C							
	Highest	Date	Lowest	Date	No. of Days with Max-Temp.					Mean	Dev. From Normal	Highest	Date	Lowest	Date	No. of Days with Min. Temp.			
					>25	>30	>35	>40	>45							<10	<5	<0	<-5
Sollum	39.4	11	27.2	30	31	15	1	0	0	21.7	—	25.4	26	20.2	31	0	0	0	0
Mersa Matruh (A)	38.6	11	27.4	31	31	2	1	0	0	—	—	24.3	25	17.8	31	0	0	0	0
Alexandria (A)	34.4	11	29.0	31	31	25	0	0	0	—	—	24.6	23	18.8	16	0	0	0	0
Port Said (A)	32.6	25	28.5	15	31	18	0	0	0	23.1	—	26.2	27	22.8	3	0	0	0	0
El Arish	31.9	27	29.1	7	31	25	0	0	0	20.4	—	22.8	4,18,27	19.5	15	0	0	0	0
Ghazza	29.7	26,27	28.0	7.9.5	31	0	0	0	0	20.3	—	22.5	24	19.5	15	0	0	0	0
Tanta	36.0	25.26	31.3	14	31	31	4	0	0	—	—	22.9	23	16.7	31	0	0	0	0
Cairo (A)	36.8	17	30.7	14	31	31	7	0	0	—	—	24.2	18	19.5	17	0	0	0	0
Fayoum	40.8	12	32.6	30	31	31	25	1	0	19.2	—	23.8	21	19.4	31	0	0	0	0
Minya (A)	40.3	12	31.3	31	31	31	17	1	0	16.6	—	23.4	27	18.0	8	0	0	0	0
Assyout (A)	39.6	12	32.3	30	31	31	24	0	0	20.2	—	24.0	5	19.5	31	0	0	0	0
Luxor (A)	44.0	16	37.2	31	31	31	31	15	0	—	—	26.0	17	20.0	10.12	0	0	0	0
Aswan (A)	43.0	15	37.8	31	31	31	31	25	0	—	—	28.0	16	22.2	31	0	0	0	0
Siwa	40.5	4,11	32.3	30	31	31	28	2	0	19.5	—	24.2	5,12	17.9	29.31	0	0	0	0
Bahariya	40.5	12	32.6	30	31	31	26	1	0	20.2	—	23.9	5	18.6	31	0	0	0	0
Farafra	43.0	12	32.6	29	31	31	24	3	0	20.0	—	23.0	5	17.9	31	0	0	0	0
Dakhla	43.2	5	34.0	30	31	31	28	6	0	15.3	—	25.0	14	17.2	26	0	0	0	0
Kharga	42.0	5,20	35.4	31	31	31	31	13	0	20.9	—	27.8	6	18.2	9	0	0	0	0
Tor	40.4	20	30.0	14	31	30	10	1	0	—	—	27.0	23	20.7	10	0	0	0	0
Hurghada	36.8	16	31.6	14	31	31	6	0	0	23.0	—	26.8	20	21.8	10	0	0	0	0
Qusair	34.2	16.17	30.6	14	31	31	0	0	0	22.6	—	28.3	21	23.5	8.9	0	0	0	0

Table A 3.—SKY COVER AND RAINFALL

AUGUST — 1964

Station	Mean Sky Cover Oct					Rainfall mms										
	00 U.T.	06 U.T.	12 U.T.	18 U.T.	Daily Mean	Total Amount	Dev. From Normal	Max. Fall in one day		Number of Days With Amount of Rain						
								Amount	Date	< 0.1	≥ 0.1	≥ 1.0	≥ 5.0	≥ 10	≥ 25	≥ 50
Sallum	0.6	1.1	0.7	1.0	0.8	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Mersa Matruh (A)	0.5	2.2	1.2	1.3	1.2	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Alexandria (A)	2.6	3.2	1.9	2.1	2.2	6.0	— 0.5	0.0	—	0	0	0	0	0	0	0
Port Said (A)	0.7	2.2	0.2	0.4	0.8	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
El Arish	3.1	2.5	0.6	1.0	1.4	0.0	— 0.3	0.0	—	0	0	0	0	0	0	0
Ghazza	4.3	2.8	0.5	1.7	2.3	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Tanta	—	1.8	0.8	0.0	—	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Cairo (A)	1.4	3.5	0.4	0.1	1.3	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Fayoum	—	0.6	0.1	0.2	—	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Minya (A)	0.0	1.0	0.1	0.3	0.3	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Assyout (A)	0.0	0.6	0.1	0.0	0.1	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Luxor (A)	0.1	0.4	0.5	0.4	0.5	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Aswan (A)	0.0	0.9	0.9	0.7	0.6	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Siwa	0.0	0.4	0.6	0.2	0.2	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Bahariya	0.0	1.3	0.4	0.2	0.4	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Farafra	0.0	0.2	0.2	0.0	0.5	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Dakhla	0.0	0.4	0.2	0.0	0.1	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Kharga	0.1	0.4	0.3	0.5	0.4	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Tor	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Hurghada	0.1	0.2	0.0	0.3	0.1	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Quseir	0.0	0.2	0.2	0.3	0.2	0.0	0.0	0.0	—	0	0	0	0	0	0	0

Table A 4.—DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA

AUGUST — 1964

Station	Precipitation				Frost	Thunderstorm	Mist Vis ≥ 1000 metres	Fog Vis <1000 Metres	Haze Vis ≥1000 Metres	Thick Haze Vis <1000 Metres	Dust or Sandrising Vis ≥1000 Metres	Dust or Sandstorm Vis <1000 Metres	Gale	Clear Sky	Cloudy Sky
	Rain	Snow	Ice. Pellets	Hail											
Sallum.	0	0	0	0	0	0	1	0	0	0	1	0	0	26	0
Mersa Matruh. .(A)	0	0	0	0	0	0	0	0	0	0	0	0	0	23	0
Alexandria. . . .(A)	0	0	0	0	0	0	1	2	0	0	0	0	0	14	0
Port Said. . . .(A)	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0
El Arish.	0	0	0	0	0	0	10	0	0	0	0	0	0	16	0
Ghazza.	0	0	0	0	0	0	1	0	0	0	0	0	0	14	0
Tanta.	0	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Cairo. . . . . .(A)	0	0	0	0	0	0	17	4	7	0	0	0	0	25	0
Fayoum.	0	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Minya. . . . . .(A)	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0
Assyout. . . . .(A)	0	0	0	0	0	0	0	0	8	0	0	0	0	31	0
Luxor. . . . . .(A)	0	0	0	0	0	0	0	0	0	0	2	0	0	30	0
Aswan. . . . . .(A)	0	0	0	0	0	0	0	0	0	0	5	0	0	30	0
Siwa.	0	0	0	0	0	0	0	0	0	0	3	0	0	31	0
Bahariya.	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0
Farafra.	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0
Dakhla.	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0
Kharga.	0	0	0	0	0	0	0	0	0	0	2	0	0	29	0
Tor.	0	0	0	0	0	0	2	0	0	0	1	0	0	31	0
Hurghada.	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0
Quseir	0	0	0	0	0	0	0	0	0	0	1	0	0	30	0

Table A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

AUGUST — 1964

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
sa Matruh. (A)	10	0	78	1—10	65	12	0	0	0	0	0	0	0	15	48	74	214
				11— 27	252	4	0	0	0	0	0	1	3	8	14	160	242
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	317	16	0	0	0	0	0	1	3	23	62	234	656
xandria . . (A)	7	0	0	1—10	83	12	2	2	2	2	4	14	5	26	58	219	429
				11—27	60	0	0	0	0	0	0	0	0	0	52	196	308
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	143	12	2	2	2	2	4	14	5	26	110	415	737
t Said. . . (A)	2	4	0	1—10	161	38	3	0	7	2	4	6	44	11b	49	169	598
				11—27	47	0	0	0	0	0	0	0	3	2	3	85	140
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All Speeds	208	38	3	0	7	2	4	6	47	117	52	254	738
azza. . . . (A)	0	35	1	1—10	46	7	8	10	24	180	36	15	25	57	90	108	606
				11—27	16	1	0	0	0	2	0	1	2	10	32	38	102
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	62	8	8	10	24	182	36	16	27	67	122	146	708
nta	37	11	0	1—10	95	32	6	3	4	2	2	30	86	104	154	178	696
				11—27	0	0	0	0	0	0	0	0	0	0	0	0	0
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	95	32	6	3	4	2	2	30	86	104	154	178	696
iro . . . . . (A)	20	1	6	1—10	127	120	50	12	7	5	1	3	3	6	71	168	573
				11—27	59	41	8	0	0	2	0	0	0	0	5	29	144
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	186	161	58	12	7	7	1	3	3	6	76	197	717
youm	7	0	7	1—10	453	47	4	3	0	1	7	6	1	17	40	150	729
				11—27	1	0	0	0	0	0	0	0	0	0	0	0	1
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	454	47	4	3	0	1	7	6	1	17	40	150	730
inya . . . . (A)	32	8	4	1—10	144	8	0	0	4	8	2	0	6	10	59	413	654
				11—27	0	0	0	0	0	0	0	0	0	0	0	46	46
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	144	8	0	0	4	8	2	0	6	10	59	459	700

Table A 5. (*contd.*)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

AUGUST — 1964

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indication												
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Assyout . . . . . (A)	16	0	0	1—10	4	11	2	0	7	2	2	1	15	204	233	198	6
				11—27	0	0	0	0	0	0	0	0	0	0	18	31	
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	
				All speeds	4	11	2	0	7	2	2	1	15	204	251	229	7
Luxor . . . . . (A)	18	0	2	1—10	16	18	17	7	8	33	96	63	69	66	120	176	6
				11—27	0	0	0	0	0	0	0	0	0	1	9	25	
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	
				All speeds	16	18	17	7	8	33	96	63	69	67	129	201	7
Aswan . . . . . (A)	9	0	168	1—10	99	138	94	21	1	1	4	5	13	13	35	72	4
				11—27	8	17	16	1	0	0	0	0	0	3	12	14	
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	
				All speeds	107	155	110	22	1	1	4	5	13	16	47	86	5
Siwa	77	29	0	1—10	90	124	85	37	12	6	1	1	3	24	73	88	5
				11—27	18	49	6	0	0	0	0	1	0	0	4	16	
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	
				All speeds	108	173	91	37	12	6	1	2	3	24	77	104	6
Dakhla	7	9	0	1—10	115	77	13	4	13	6	12	28	38	73	117	232	7
				11—27	0	0	0	0	0	0	0	0	0	0	0	0	
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	
				All speeds	115	77	13	4	13	6	12	28	38	73	117	232	7
Hurghada. . . . (A)	10	6	1	1—10	13	12	9	2	1	7	3	3	1	15	77	36	1
				11—27	161	17	0	0	0	0	0	0	0	19	141	210	5
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	
				All speeds	174	29	9	2	1	7	3	3	1	34	218	246	7
Quseir	32	13	33	1—10	124	58	7	8	3	14	7	10	20	53	95	120	5
				11—27	96	3	0	0	0	0	0	0	0	1	2	45	1
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	
				All speeds	220	61	7	8	3	14	7	10	20	54	97	165	6

UPPER AIR CLIMATOLOGICAL DATA

Table B 1. (*contd.*)—MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER & LOWER VALUES OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND ELECTED PRESSURE SURFACES

AUGUST — 1964

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh (A) 0000 UT	Surface	30	*1010m.b.	*1013m.b.	*1006m.b.	30	23.0	25.0	19.3	30	19.8
	1000	30	116	140	81	30	22.8	26.0	19.9	30	18.8
	850	30	1519	1544	1497	30	18.2	24.4	11.8	26	2.7
	700	30	3162	3202	3113	30	10.2	13.8	4.4	8	— 6.5
	600	30	4428	4480	4365	30	3.8	6.9	— 1.4	—	—
	500	30	5882	5947	5801	30	— 5.5	— 1.5	—10.3	—	—
	400	30	7590	7657	7478	30	—17.3	—12.0	—22.5	—	—
	300	28	9701	9818	9546	28	—30.0	—27.2	—33.2	—	—
	250	—	—	—	—	—	—	—	—	—	—
	200	24	12472	12599	12298	24	—50.0	—45.0	—52.0	—	—
	150	20	14296	14436	14118	20	—63.0	—60.0	—64.7	—	—
	100	15	16726	16866	16556	15	—73.7	—68.6	—77.6	—	—
	70	10	18822	18920	18700	10	—67.9	—95.0	—71.6	—	—
	60	—	—	—	—	—	—	—	—	—	—
	50	8	20852	20948	20568	8	—58.5	—55.0	—60.4	—	—
	40	—	—	—	—	—	—	—	—	—	—
	30	5	24144	24238	24058	5	—52.5	—51.3	—54.4	—	—
	20	2	26766	26841	16690	2	—49.1	—47.7	—50.5	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 UT	Surface	31	*992m.b.	*995m.b.	*988m.b.	31	23.1	26.3	20.2	31	19 0
	1000	31	74	100	44	—	—	—	—	—	—
	850	31	1478	1508	1452	31	50.1	24.7	13.2	24	2.3
	700	31	3127	3163	3095	31	12.2	16.1	7.2	3	—10.0
	600	31	4401	4447	4350	31	5.7	8.4	2.2	—	—
	500	31	5868	5925	5802	31	— 3.0	0.4	— 7.6	—	—
	400	31	7600	7681	7508	31	—13.9	—10.5	—18.6	—	—
	300	31	9712	9812	9556	31	—28.8	—26.3	—32.7	—	—
	250	—	—	—	—	—	—	—	—	—	—
	200	31	12497	12599	12331	31	—49.8	—47.0	—52.7	—	—
	150	28	14328	14440	14130	28	—63.5	—60.7	—66.2	—	—
	100	22	16727	16828	16513	22	—74.2	—68.4	—79.2	—	—
	70	19	18814	18940	18620	19	—69.1	—64.7	—79.6	—	—
	60	17	19746	19820	19567	17	—64.2	—61.6	—61.6	—	—
	50	17	20875	20953	20704	17	—59.8	—52.8	—67.0	—	—
	40	14	22299	22363	22198	14	—55.7	—52.4	—54.7	—	—
	30	14	24144	24197	24050	14	—52.4	—51.0	—58.8	—	—
	20	9	26785	26869	26698	9	—48.6	—45.8	—56.6	—	—
	10	4	31417	31512	31364	4	—40.8	—38.0	—43.6	—	—
Aswan (A) 0000 UT	Surface	31	*984m.b.	*987m.b.	*978m.b.	31	28.0	38.8	22.0	31	7.2
	1000	—	—	—	—	—	—	—	—	—	—
	850	31	1434	1519	1422	31	23.3	25.8	21.0	30	4.9
	700	31	3141	3177	3103	31	11.8	14.8	7.8	22	— 1.5
	600	31	4410	4463	4338	31	4.0	7.6	1.1	20	— 6.8
	500	31	5867	5926	5821	31	— 4.5	— 1.0	— 8.4	12	—15.8
	400	31	7597	7660	7537	31	—14.2	—11.6	—18.5	2	—24.9
	300	31	9717	9828	9637	31	—27.1	—27.2	—32.3	—	—
	250	—	—	—	—	—	—	—	—	—	—
	200	31	12486	12644	12396	31	—50.9	—47.0	—53.5	—	—
	150	31	14377	15429	14200	31	—64.8	—62.2	—67.4	—	—
	100	29	16688	16892	16570	29	—78.2	—72.4	—82.0	—	—
	70	21	18743	18850	18559	21	—69.4	—65.0	—78.7	—	—
	60	—	—	—	—	—	—	—	—	—	—
	50	14	20813	20882	20746	14	—62.2	—56.8	—72.3	—	—
	40	—	—	—	—	—	—	—	—	—	—
	30	9	24035	24117	23957	9	—54.3	—51.0	—55.8	—	—
	20	9	26662	26765	26578	9	—48.3	—41.3	—53.9	—	—
	10	5	31250	31360	31160	5	—47.0	—45.5	—48.3	—	—

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

UPPER AIR CLIMATOLOGICAL DATA

Table B 1.—MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER & LOWER VALEUS OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

AUGUST — 1964

Station	Presure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh (A) 1200 UT	Surface	30	*1010m.b.	*1014m.b.	*1006m.b.	30	26.5	32.0	23.0	30	20.7
	1000	30	121	149	90	30	25.2	31.7	21.7	30	19.4
	850	30	1531	1554	1498	30	18.6	24.1	10.6	30	1.4
	700	30	3167	3210	3121	30	10.4	14.6	4.6	6	— 7.2
	600	30	4435	4478	4364	30	3.4	6.9	— 0.9	1	—15.1
	500	30	5890	5932	5798	30	— 5.6	— 0.7	—10.0	—	—
	400	30	7603	7673	7482	30	—16.6	—12.7	—21.4	—	—
	300	28	9673	9790	9557	28	—30.1	—26.5	—33.0	—	—
	250	—	—	—	—	—	—	—	—	—	—
	200	25	12483	12597	12297	25	—48.8	—41.0	—52.6	—	—
	150	23	14299	14440	14112	23	—63.2	—60.7	—65.3	—	—
	100	20	16714	16863	16554	20	—71.1	—68.2	—80.5	—	—
	70	12	18828	18937	18700	12	—66.1	—62.6	—70.7	—	—
	60	—	—	—	—	—	—	—	—	—	—
	50	9	20949	21026	20824	9	—56.3	—51.6	—59.5	—	—
	40	—	—	—	—	—	—	—	—	—	—
	30	8	24243	24333	24112	8	—49.3	—44.9	—51.4	—	—
	20	5	26865	26997	26773	5	—47.6	—44.6	—51.3	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 1200 UT	Surface	31	*992m.b.	*996m.b.	*988m.b.	31	36.3	38.3	26.0	31	12.3
	1000	31	72	108	44	—	—	—	—	—	—
	850	31	1494	1522	1466	31	20.1	24.4	14.8	27	3.0
	700	31	3140	3173	3103	31	12.0	15.4	6.8	6	— 9.6
	600	31	4413	4457	4369	31	5.3	8.1	2.4	—	—
	500	31	5878	5932	5816	31	— 3.8	— 0.2	— 7.0	—	—
	400	31	7610	7683	7532	31	—13.8	—10.5	—17.5	—	—
	300	30	9733	9825	9641	30	—28.5	—25.6	—31.2	—	—
	250	—	—	—	—	—	—	—	—	—	—
	200	29	12519	12631	12403	29	—49.3	—45.5	—51.9	—	—
	150	29	14349	14477	14223	29	—62.9	—60.5	—65.4	—	—
	100	29	16763	16898	16652	29	—75.0	—70.4	—78.9	—	—
	70	25	18867	19000	19728	25	—68.0	—62.4	—72.0	—	—
	60	23	19808	19912	18700	23	—61.2	—58.2	—64.1	—	—
	50	20	20951	21050	20868	20	—57.2	—53.8	—59.7	—	—
	40	19	22372	22475	22278	19	—54.1	—51.0	—58.1	—	—
	30	18	24230	24355	24129	18	—50.8	—49.3	—53.0	—	—
	20	16	26892	27024	26782	16	—47.4	—43.4	—53.3	—	—
	10	1	31572	—	—	1	—45.1	—	—	—	—
Aswan 1200 UT	Surface	31	*984m.b.	*988m.b.	*980m.b.	31	38.4	42.0	36.4	31	9.6
	1000	—	—	—	—	—	—	—	—	—	—
	850	31	1501	1544	1432	31	24.3	29.4	21.7	31	11.1
	700	31	3163	3220	3122	31	11.9	18.9	7.0	23	— 5.2
	600	31	4437	4514	4368	31	4.7	7.8	1.6	18	— 9.0
	500	31	5884	5987	5836	31	— 4.4	1.4	— 8.6	12	—15.6
	400	31	7627	7734	7571	31	—13.8	—10.5	—17.4	2	—26.7
	300	31	9751	9888	9661	31	—29.2	—25.8	—33.4	2	—28.4
	250	—	12532	12696	12406	31	—48.8	—46.3	—53.7	—	—
	200	31	—	—	—	—	—	—	—	—	—
	150	31	14355	14540	14208	31	—63.7	—60.6	—66.8	—	—
	100	30	16753	16965	16596	30	—76.6	—71.5	—82.2	—	—
	70	20	18349	19120	18010	20	—67.9	—63.4	—74.4	—	—
	60	—	—	—	—	—	—	—	—	—	—
	50	16	20932	21163	20753	16	—57.2	—52.6	—61.3	—	—
	40	—	—	—	—	—	—	—	—	—	—
	30	11	24192	24514	24026	11	—49.8	—43.6	—54.3	—	—
	20	9	26920	27283	26683	9	—47.4	—38.5	—47.5	—	—
	10	3	31561	31998	31299	3	—37.5	—29.5	—44.3	—	—

N = The number of cases the element has been observed during the month.

Table B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE; THE HIGHEST WIND SPEED IN THE UPPER AIR

AUGUST — 1964

	Station	Freezing Level									First Tropopause									Highest wind speed			
		Mean			Highest			Lowest			Mean			Highest			Lowest						
		Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Direction (000—360)°	Speed in Knots
0000 U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh (A)	4859 (30)	553 (30)	— —	5650	516	—	4100	620	—	16585 (11)	107 (11)	—73.7 (11)	16838	100	—77.9	15880	124	—69.2	10840	252	238	95
	Helwan	5392 (31)	531 (31)	— —	6000	459	—	4800	570	—	16533 (21)	104 (21)	—75.7 (21)	17600	86	—80.8	14950	135	—69.5	12220	203	260	70
	Aswan . . . (A)	5021 (31)	539 (31)	—1.9 (19)	5670	514	—	4540	591	—7.7	16559 (22)	105 (22)	—77.6 (22)	19650	69	—80.8	14880	136	—70.0	20250	54	80	69
1800 U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh (A)	5034 (30)	557 (30)	— —	5750	510	—	4200	616	—	16134 (15)	107 (15)	—64.0 (15)	18370	77	—77.3	15290	128	—70.3	10900	252	270	77
	Helwan	5369 (31)	536 (31)	— —	5880	502	—	4760	572	—	16546 (28)	104 (28)	—75.3 (28)	17560	88	—77.0	14920	134	—70.9	10800	255	270	65
	Aswan . . . (A)	5126 (31)	550 (31)	—11.4 (16)	5820	506	—	4680	556	—	16630 (19)	113 (19)	—79.1 (19)	17200	94	—80.1	15040	132	—70.8	15500	123	110	78

N — The number of cases the element has been observed during the month.

Table B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN CALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

MERSA MATRUH (A) — AUGUST 1964

Time	Pressure Surface Millibar	Wind between specified ranges of direction (000—360)°																						Number of calm winds	Total number of observations (TN)	Mean scalar wind
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0300 U.T.	Surface	6	15	2	10	0	—	0	—	0	—	0	—	0	—	1	6	0	—	4	11	4	7	12	10	1	30	10
	1000	6	16	2	12	0	—	0	—	0	—	0	—	0	—	0	–	1	8	3	7	6	10	11	12	1	30	11
	850	6	22	9	21	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	16	6	18	6	16	0	29	19
	700	2	22	8	16	2	16	0	—	0	—	0	—	0	—	0	—	1	20	3	19	6	13	7	17	0	29	16
	600	4	14	4	18	2	18	0	—	0	—	0	—	0	—	1	17	0	—	6	20	8	18	4	16	0	29	18
	500	3	11	3	12	3	22	0	—	0	—	0	—	0	—	0	—	2	24	9	21	5	26	4	13	0	29	19
	400	3	8	1	35	1	10	1	16	0	—	0	—	0	—	1	7	6	26	9	29	5	20	2	14	0	29	22
	300	0	—	1	6	1	12	0	—	0	—	0	—	0	—	1	47	11	30	9	26	3	46	0	—	0	26	30
	200	0	—	0	—	0	—	0	—	0	—	0	—	1	17	1	10	9	23	6	36	0	—	0	—	0	17	27
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	16	4	28	1	32	1	20	0	—	0	10	23
	100	0	—	0	—	0	—	0	—	0	—	1	18	1	22	2	8	4	11	0	—	0	—	0	—	0	8	12
	70	0	—	0	—	0	—	2	9	1	1	1	10	0	—	1	4	0	—	1	7	0	—	0	—	0	6	7
	60	0	—	0	—	2	16	3	14	0	—	0	—	0	—	0	—	0	—	1	4	0	—	0	—	0	6	13
	50	0	—	0	—	2	17	2	16	2	8	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	6	14
	40	0	—	0	—	0	—	3	25	1	6	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	4	20
	30	0	—	0	—	1	30	2	30	1	9	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	4	25
	20	0	—	0	—	0	—	1	23	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	23
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1800 U.T.	Surface	7	15	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	10	0	—	1	17	21	15	0	30	15
	1000	9	16	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	16	19	15	0	30	16
	850	9	16	2	11	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	14	11	14	6	17	0	30	15
	700	2	14	4	18	3	16	0	—	0	—	0	—	0	—	0	—	0	—	4	20	14	13	3	17	0	30	15
	600	4	8	5	17	1	14	0	—	0	—	0	—	0	—	0	—	0	—	11	16	6	15	3	13	0	30	15
	500	4	15	1	9	5	12	0	—	0	—	0	—	0	—	0	—	5	10	6	21	6	21	3	11	0	30	15
	400	2	12	1	15	2	16	1	8	0	—	1	5	0	—	0	—	8	20	13	27	0	—	2	13	0	30	21
	300	1	4	0	—	0	—	0	—	0	—	0	—	0	—	1	2	13	27	7	33	5	17	0	—	0	27	25
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	19	12	26	9	38	1	27	0	—	0	25	29
	150	0	—	0	—	0	—	0	—	0	—	0	—	1	20	5	25	10	29	4	36	1	33	0	—	0	21	29
	100	0	—	0	—	0	—	0	—	1	14	2	8	4	21	1	30	3	32	5	16	0	—	0	—	0	16	20
	70	0	—	0	—	1	13	3	13	4	19	1	17	0	—	0	—	1	7	0	—	0	—	0	—	0	10	15
	60	0	—	0	—	0	—	3	9	3	18	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	6	14
	50	0	—	0	—	0	—	4	16	2	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	6	18
	40	0	—	0	—	1	23	1	28	1	32	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	3	28
	30	0	—	0	—	0	—	3	22	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	3	22
	20	0	—	0	—	0	—	1	11	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	11
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N — The number of cases the wind has been observed from the range of direction during the month.

TN — The total number of cases the wind has been observed for all directions during themonth.

Table B 3 (contd.).—**NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES**

HELWAN—AUGUST 1964

Time	Pressure Surface Millibar	Wind between specified ranges of direction (000—360)°																						Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	7	8	12	8	4	7	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	7	5	6	1	31	7
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	8	9	3	16	4	12	1	5	0	—	0	—	0	—	0	—	1	8	2	11	4	14	8	13	0	31	12
	700	6	9	4	7	2	6	0	—	0	—	2	8	3	9	1	8	2	6	1	16	7	13	3	9	0	31	10
	600	6	12	3	8	4	8	1	6	1	3	1	7	0	—	0	—	3	18	4	9	6	12	2	11	0	31	11
	500	1	5	2	7	1	7	1	6	0	—	1	6	1	6	2	13	4	19	13	11	2	17	3	7	0	31	11
	400	1	11	0	—	0	—	0	—	0	—	0	—	2	12	5	15	10	14	9	22	3	12	0	—	1	31	16
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	13	12	21	10	22	0	—	0	—	3	31	18
	200	0	—	0	—	0	—	0	—	0	—	0	—	4	14	11	24	8	21	2	28	1	13	0	—	3	29	19
	150	0	—	1	24	0	—	0	—	0	—	0	—	8	22	10	20	2	32	3	22	0	—	0	—	2	26	20
	100	0	—	0	—	0	—	1	6	1	27	2	20	8	19	2	22	3	17	0	—	1	12	0	—	0	18	19
	70	0	—	1	3	2	16	7	15	1	29	2	14	0	—	0	—	0	—	0	—	1	17	0	—	0	14	15
	60	0	—	1	4	1	21	7	20	1	16	1	14	0	—	0	—	0	—	0	—	0	—	0	—	0	11	18
	50	0	—	0	—	3	24	5	24	1	30	1	14	0	—	0	—	0	—	0	—	0	—	0	—	0	10	23
	40	0	—	0	—	0	—	5	28	4	28	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	9	28
	30	0	—	0	—	0	—	5	34	1	33	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	6	34
	20	0	—	0	—	0	—	1	29	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	29
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	4	12	3	10	0	—	0	—	0	—	0	—	0	—	0	—	1	7	5	10	11	11	7	12	0	31	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	9	8	5	7	1	4	1	9	0	—	0	—	1	3	1	3	0	—	4	13	4	8	5	10	0	31	8
	700	3	11	2	15	0	—	1	4	0	—	0	—	2	4	2	5	1	16	9	11	5	13	6	9	0	31	10
	600	5	8	2	16	1	4	0	—	2	10	0	—	0	—	2	4	5	10	9	14	1	20	4	10	0	31	11
	500	4	10	2	9	1	4	1	2	2	4	0	—	2	12	1	4	6	12	9	20	1	6	2	10	0	31	12
	400	0	—	0	—	0	—	0	—	0	—	0	—	1	16	6	16	13	17	9	18	1	15	0	—	1	31	17
	300	0	—	0	—	0	—	0	—	0	—	0	—	2	3	3	21	13	21	8	21	2	16	0	—	1	29	15
	200	0	—	0	—	0	—	0	—	1	14	0	—	4	12	7	26	10	23	5	24	1	15	0	—	1	29	21
	150	0	—	0	—	0	—	1	2	1	18	0	—	11	22	8	24	4	25	3	21	1	16	0	—	0	29	22
	100	0	—	0	—	0	—	0	—	3	20	4	19	11	24	4	28	2	14	0	—	1	15	1	9	0	26	21
	70	0	—	0	—	0	—	1	27	9	23	11	17	1	15	0	—	0	—	0	—	6	—	0	—	—	23	19
	60	0	—	0	—	0	—	4	16	13	22	3	25	0	—	0	—	0	—	0	—	0	—	0	—	0	20	21
	50	0	—	0	—	1	20	8	24	9	24	1	15	0	—	0	—	0	—	0	—	0	—	0	—	0	19	23
	40	0	—	0	—	0	—	8	33	8	22	1	20	0	—	0	—	0	—	0	—	0	—	0	—	0	17	27
	30	0	—	0	—	1	19	10	30	3	37	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	15	28
	20	0	—	0	—	1	41	6	35	2	24	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	10	30
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—

N — The number of cases the winds has been observed from the range of direction during the month.

TN — The total number of cases the wind has been observed for all directions during the month.

Table B 3 (*contd.*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

ASWAN — AUGUST 1964

Time	Pressure Surface Millibar	Wind between ranges of direction (000--360)°																						Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	15	11	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	13	4	9	8	7	3	31	9
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	5	10	1	17	0	—	0	—	1	8	0	—	1	5	1	5	2	11	5	8	5	13	10	12	0	31	11
	700	1	4	1	10	0	—	0	—	2	8	1	12	3	19	4	18	8	17	7	15	2	12	2	12	0	31	15
	600	1	5	1	6	1	9	0	—	1	7	0	—	0	—	8	14	10	18	6	15	2	14	1	3	0	31	14
	500	3	10	2	12	5	7	2	12	2	5	2	6	1	2	3	14	6	12	2	8	1	5	2	10	0	31	10
	400	4	6	3	5	8	16	4	12	0	—	3	8	3	5	2	12	0	—	1	5	3	5	0	—	0	31	9
	300	0	—	1	4	2	18	7	13	6	16	3	5	3	9	3	6	1	6	0	—	1	5	1	11	3	31	10
	200	0	—	0	—	1	17	8	20	12	13	8	20	0	—	0	—	0	—	0	—	0	—	0	—	1	30	17
	150	0	—	1	37	1	20	5	30	17	24	2	20	1	10	0	—	0	—	0	—	0	—	0	—	2	29	22
	100	0	—	0	—	0	—	6	29	8	31	1	29	0	—	0	—	0	—	0	—	0	—	0	—	0	15	30
	70	0	—	0	—	0	—	4	23	2	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	6	22
	60	0	—	0	—	1	30	1	37	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	2	34
	50	0	—	0	—	1	26	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	26
	40	0	—	0	—	0	—	1	25	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	25
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	3	12	1	7	0	—	0	—	0	—	0	—	0	—	0	—	1	10	12	15	8	12	4	13	2	31	12
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	1	10	1	15	1	7	0	—	0	—	0	—	1	2	1	11	1	18	9	11	11	11	5	11	0	31	11
	700	0	—	0	—	0	—	0	—	0	—	0	—	1	13	1	11	15	18	8	14	4	22	2	27	0	31	18
	600	1	14	0	—	0	—	1	6	0	—	0	—	4	17	11	18	6	19	2	18	4	10	1	16	1	31	16
	500	1	12	2	16	3	14	1	19	2	10	1	11	7	14	7	11	6	11	1	7	0	—	0	—	0	31	12
	400	0	—	6	9	3	18	7	14	4	15	1	7	3	15	2	14	1	14	0	—	2	3	2	6	0	31	12
	300	2	3	1	7	6	14	11	17	3	12	6	20	1	7	0	—	0	—	1	4	0	—	0	—	0	31	14
	200	1	10	0	—	0	—	15	18	9	22	3	14	0	—	0	—	0	—	0	—	0	—	0	—	2	30	17
	150	0	—	0	—	3	21	6	27	15	25	1	13	0	—	0	—	0	—	0	—	0	—	0	—	2	27	23
	100	0	—	0	—	0	—	6	32	10	38	1	16	0	—	0	—	0	—	0	—	0	—	0	—	0	17	34
	70	0	—	0	—	0	—	6	31	2	42	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	8	34
	60	0	—	0	—	0	—	2	38	2	34	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	5	29
	50	0	—	0	—	0	—	1	30	1	34	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	4	33
	40	0	—	0	—	0	—	1	44	3	26	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	2	35
	30	0	—	0	—	0	—	1	40	1	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	40
	20	0	—	0	—	1	48	0	—	—	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	48
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N — The number of cases the element has been observed during the month.

TN — The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO—METEOROLOGICAL STATION

EL KASR —AUGUST 1964

Mainly mild but slightly drier than normal, with the maximum temperature about normal during most of the days of the month.

A pronounced heat wave started on the 10 th. with the peak on the next day, when the absolute maximum of air temperature (9.7°C above normal) and the highest values of the daily mean (1.5°C above normal), daytime mean, vapour pressure deficit (40.5 mms) were recorded together with those of evaporation from pan class A and Piche both in the free air at 1, 60 and 120 cms above the ground and in the screen (7.4 mms above normal), soil temperature for the surface layers down to 10 cms of depth as well as the lowest values of vapour pressure, relative humidity (58 % below normal) and the daily mean (21 % below normal).

A minor cool spell had its peak on the 20 th. with the lowest evaporation from pan class A and Piche in the free air and in the Screen (3.1 mms below normal).

The highest values of the minimum air temperature at 5 and 200 cms (2.6°C above normal) and the daily mean of vapour pressure occurred on the 25 th. associated with a minor heat wave.

From the 28th. to the end of the month, the air temperature was below normal with the lowest values of sunshine duration and (solar + sky) radiation occurring on that day while the absolute minima of air temperature at 5 and 200 cms (5.3°C below normal) a record which has not been known since 1931, where reported on the last day of the) month together with the lowest values of maximum air temperature (1.8°C below normaln the daily mean, daytime mean and also the soil temperature for the surface layer dow to 50 cms of depth.

The daily mean air temperature for the month was about normal but the relative humidity was 5 % below whereas the Piche evaporation in the screen was 1.5 mms above normal.

TAHRIR —AUGUST 1964

Mainly mild with consecutive cool spells and heat waves.

A heat wave started on the 10 th. with the peak on the next day, when the highest values of the daily mean of air temperature, daytime mean, evaporation from pan class A and Piche both in the screen and in the free air and soil temperature for the surface layer down to 10 cms of depth were recorded as well as the lowest values of relative humidity (20 %) and the daily mean.

A cool spell followed and gave the lowest maximum air temperature on the 14 th., then a pronounced heat wave started with the absolute maximum air temperature on its peak on the 17th.

Another cool spell was observed during which the lowest values of Piche and pan class A evaporation were reported on the 19th.

A prolonged heat wave had its peak on the 26th., where the highest values of vapour pressure, the daily mean were observed while that of the minimum air temperature occurred on the following day.

Towards the end of the month a distinguished cool spell started with frequent fogs and gave the absolute minima of air temperature at 200 and 5 cms above the ground on the last day together with the lowest values of the daily mean, daytime and night time means, the daily mean of vapour pressure and also the soil temperatures for the surface layers down to 10 cms of depth.

In comparison with last year this month was cooler and drier. The daily mean of air temperature, daytime and night time means and also the daily means of relative humidity, vapour pressure, Piche and pan class A evaporation were all lower by 1.1, 1.3, 0.8°C, 6 %, 0.8, 1.9 and 1.03 mms respectively, while the mean (solar +sky) radiation and the total actual duration of sunshine were slightly more by 12 gm. cal/Cm² and 0.3 hour. No material change was noticed in the mean wind speed at 2 metres. Also the extreme soil temperatures at different depths were generally lower by variable amounts not exceeding 2.5°C.

GIZA –AUGUST 1964

With respect to air temperature and relative humidity this month was about normal.

A prolonged cool spell prevailed during the first ten days and gave the absolute minima of air temperature at 2 metres (2.2°C below normal) and at 5 cms above the dry, wet and grass fields on the 9th. as well as those of the soil for the surface layers down to 50 cms of depth in the three fields.

A heat wave of short duration followed with the peak on the 12th, when the absolute maximum of air temperature (2.6°C above normal) and the highest values of the daily mean (0.9°C above normal) soil temperature in the dry field down to 20 cms of depth and water vapour deficit, occurred and also those of Piche evaporation both in the screen (3.1 mms. above normal) and in the free air at levels 1, 60 and 120 cms above the ground while that of pan class A was reported on the next day. The most pronounced cool spell started on the 13th. and gave the lowest maximum of air temperature (3.7°C below normal) on the following day. Consecutive peaks of minor heat wave and cool spell were observed on the 17th. and the 18th. respectively giving the lowest value of relative humidity (40 % below normal), daily mean (10 % below normal) and vapour pressure on the first day and the highest daily mean relative humidity (34 % above normal) on the second day, but the lowest values of evaporation from Piche in the screen and in the open air were recorded on the 19th, and from pan class A on the 23rd. together with the highest minimum air temperature (3.3°C above normal) associated with a prolonged heat wave.

Compared with the normal values the mean air temperature was below by 0.8°C, while the mean relative humidity and Piche evaporation in the screen were above by 1% and 1.3 mms.

The mean of air temperature for the day, night time and day time and also the means of relative humidity, vapour pressure and Piche evaporation for the day were less than the values of last August by 1.0, 2.8, 1.1°C, 3 %, 0.2 and 1.5 mms respectively where the means of pan class A evaporation and surface wind speed at 2 metres for the day, night time and day time were more by 0.95 mm, 0.4, 0.5 and 0.3 m/sec respectively.

The extreme soil temperatures at the different depths were generally less by variable amounts not exceeding 2.2°C for the three fields except for the surface layer of 2 cms thickness in the dry field where the maxima were higher by no more than 2.2°C. The total actual duration of bright sunshine and potential evapotranspiration for grass were less by 2.1 hours and 24.3 mms respectively where the total potential evaporation was more by 10 mms.

KHARGA — AUGUST 1964

Compared with the normal values, this month was very slightly warmer and remarkably drier.

The first heat wave started on the 4th. with the peak on the following day when the absolute maximum air temperature (3.0°C above normal) and the highest values of the daily mean and the soil temperature at 5 cms of depth were recorded together with the lowest values of relative humidity and the daily mean (22% and 12 % below normal) respectively.

The highest values of minimum air temperature at 5. 20 and 200 cms (4.9°C above normal), the means of night time and the day (3.1°C above normal). Piche evaporation in the free air at levels 1, 60 and 120 cms above the ground and the soil temperature at 10 cms of depth were all reported on the 6th.

A minor cool spell followed and gave the absolute minimum air temperature at 2 metres (4.6°C below normal) on the 9th. as well as the lowest values of night time mean, soil temperature at 1 cm and vapour pressure.

The highest values of evaporation from pan class A and Piche in the screen (14.8 mms above normal) occurred on the 14 th. probably due to the highest values of the total radiation and the daily mean of wind speed at 2 metres which were observed on that day. On the 17 th. the lowest values of mean wind speed on that level and Piche evaporation in the free and vapour pressure deficit were reported.

A heat wave started on the 18 th. and gave another value of the absolute maximum air temperature on the 20 th. together with the highest values of vapour pressure deficit and the soil temperature at 20 cms of depth, where that at 50 cms happened on the next day.

A cool spell took place afterwards and gave the lowest values of total (Solar + sky) radiation and pan class A evaporation on the 26 th. while that of Piche in the screen (0.2 mm above normal) was observed on the 28th.

Towards the end of the month the cool spell has intensified and lead to the occurrence of the lowest maximum air temperature (3.7 below normal), absolute minima at 5 and 20 cms above the ground on the last day of the month and also those of soil temperature for the layer 2 to 20 cms of depth.

The means of the maximum air temperature, the daily mean and Piche evaporation in the screen were higher than normal by 0.4, 0.6°C and 5.9 mms respectively, where that of the relative humidity was lower by 7%.

Table C 1.—AIR TMPERATURE AT 2 METRES ABOVE GROUND

AUGUST — 1964

STATION	Air Temperature (°C)					Mean Duration in hours of daily air temperature above the following values										
	Mean Max.	Mean Min.	Mean of the day	Night time mean	Day time mean	-5°C	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C
El Kasr	29.7	20.7	25.6	23.8	27.1	24.0	24.0	24 0	24.0	24.0	23.4	13.6	0.2	0.1	0.0	0.0
Tahrir	34.6	20.7	26.7	23 6	29.1	24.0	24.0	24.0	24.0	24.0	23.5	13.5	6.7	0.3	0.0	0.0
Giza	33.9	20.7	26.9	24.4	28 9	24 0	24.0	24.0	24.0	24.0	23.7	14.4	6.7	0.2	0.0	0.0
Kharga	39 2	22 6	31.8	28.8	34.4	24.0	24.0	24.0	24.0	24.0	24.0	21.0	14.6	8.1	0.0	0.0

Table C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS

AUGUST — 1964

STATION	Max. Temp. at 2 metres				Min. Temp. at 2 metres				Min. Temp. at 5 cms. above			
	Highest		Lowest		Highest		Lowest		Dry Soil		Grass	
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date
El Kasr	39.2	11	27.7	31	23.9	25	16.0	31	14.7	31	—	—
Tahrir	38.5	17	31.2	14	22.6	27	18.0	9	15.7	31	—	—
Giza	37.4	12	30.8	14	23.1	23	18.0	9	14.2	9	11.8	9
Kharga	42.0	5-20	35.5	31	27.8	6	18.2	31	17.0	31	—	—

Table C 3.—(SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY & VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL

AUGUST — 1964

STATION	Solar+Sky Radiation gm. cal/cm²	Duration of Bright Sunshine (hours)			Relative Humidity %				Vapour Pressure (mms)						Evaporation(mms)		Rainfall (mms)		
		Total Actual	Total Possible monthly	%	Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 UT	Highest	Date	Lowest	Date	Piche	Pan class (A)	Total Amount monthly	Max. fall in one day	Date
El Kasr	544.8	371.1	411.3	90	—	—	72	63	19	11	18.0	18.5	21.5	16	8.3	11	13.4	18.35	0.0
Tahrir	687.3	359.2	410.4	87	3.0	8.6	67	38	20	11	16.8	14.3	22.6	26	8.7	6	13.3	10.73	0.0
Giza	585.2	345.0	409.2	84	2.0	6.4	67	39	23	17	16.4	14.4	20.8	27	10.3	17	13.3	10.70	0.0
Kharga	567.0	380.8	402.3	95	0	0	27	18	12	5,8, 9*	9.2	9.3	17.1	13	5.0	12	31.6	18.35	0.0

* More than 3 days.

Table C. 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS (cms) IN DIFFERENT FIELDS

AUGUST 1964

STATION	Highest (H) Lowest (L)	Extreme soil temperature (°C) in dry field at different depths (cms.)										Extreme soil temperature (°C) in grass field at different depths (cms.)									
		0.3	1	2	5	10	20	50	100	200	300	0.3	1	2	5	10	20	50	100	200	300
El Kasr	H	51.1	45.1	45.5	40.7	34.9	30.7	28.5	27.0	24.9	—	—	—	—	—	—	—	—	—	—	—
	L	16.0	16.7	17.3	20.2	23.4	25.8	27.5	26.5	24.1	—	—	—	—	—	—	—	—	—	-	—
Tahrir	H	56.2	53.6	50.8	47.5	42.4	36.2	32.5	30.9	28 9	27.5	—	—	—	—	—	—	—	—	—	—
	L	18.4	18.5	19.6	22.4	25.6	29.6	31.0	30.1	28.1	26.6	—	—	—	—	—	—	—	—	—	—
Giza	H	63.0	61.0	60.0	44.7	38.5	34.5	33.6	31.7	29.1	26.6	35.7	34.1	31.4	30.6	29.4	29.0	27.3	25.8	24.3	—
	L	18.0	19.0	20.0	26.0	29.9	32.2	32.7	31.0	28.0	26.0	22.0	22.0	22.6	24.2	25.3	26.2	26.6	25.3	23.3	—
Kharga	H	63.5	57.2	54.6	47.6	41.7	37.1	35.0	33.0	30.8	29.0	—	—	—	—	—	—	—	—	—	—
	L	20.7	22.0	23.0	26.6	30.0	32.8	33.4	32.0	29.7	28.3	—	—	—	—	—	—	—	—	—	—

Table C 5.—SURFACE WIND

AUGUST 1964

STATION	Wind Speed m/sec at 1½ metres			Days with surface wind speed at 10 metres							Max. Gust (knots) at 10 metres	
	Mean of the day	Night time mean	Day time mean	≥10 knots	≥15 knots	≥20 knots	≥25 knots	≥30 knots	≥35 knots	≥40 knots	value	Date
El Kasr . . .	4.7	3.9	5.8	—	—	—	—	—	—	—	—	—
Tahrir	3.0	2.4	3.8	30	10	0	0	0	0	0	21	28
Giza	2.3	2.0	2.8	28	2	0	0	0	0	0	24	29
Kharga	3.4	2.6	4.5	—	—	—	—	—	—	—	—	—

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VOLUME 7 NUMBER 9

SEPTEMBER, 1964

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METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE UNITED ARAB REPUBLIC—CAIRO

In fulfilment of its duties, the U.A.R. Meteorological Department issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be adressed to :
"The Director General, Meteorological Department, Kubri-el-Qubbeh — CAIRO".

THE DAILY WEATHER REPORT

This report is issued daily by the Meteorological Department since the year 1901. It includes surface and upper air observations carried out by the relevant networks of the Republic at the principal hours of observations.

As from January 1968 this report was revised to include a condensed representative selection of surface and upper air observations besides the 1200 U.T. surface & 500 mb charts.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for U.A.R.

As from January 1964, the Monthly Weather Report was pressed to give climatological data for a representative selection of synoptic stations.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of the U.A.R. as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year.

CLIMATOLOGICAL NORMALS FOR EGYPT

A voluminous edition was issued in march 1968 which brings normals and mean values up till 1960.

METEOROLOGICAL RESEARCH BULLETIN

First issued in January 1969 on a bi-annual basis. It includes research works carried out by members of staff of "The Meteorological Institute for Research and Training" and the Operational Divisions of Meteorological Department.

TECHNICAL NOTES

As from October 1970, the Meteorological Department started to issue a new series of publications in the form of Technical Notes (non periodical) on subjects related to studies and applications of meteorology in different fields for the benefit of personnel working in these fields.

The first Technical Note I was issued in October 1970 on : Sandstorms & Duststorms in the U.A.R.

UNITED ARAB REPUBLIC

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METEOROLOGICAL DEPARTMENT
CAIRO

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Note : For [illegible] to Volume 7 Number 1 (January 1964).

GENERAL SUMMARY OF WEATHER CONDITIONS

SEPTEMBER 1964

Generally mild in the northern and middle parts, and hot in the southern parts particularly between the 14th & 18th. Frequent early morning mist over scattered localities of Delta, Canal and Cairo Areas.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather was generally mild over the northern & middle parts but hot & dry over the southern parts with an excessive heat wave between thy 14th & 18th Light showers fell over few scattered localities of the western parts of the Mediterranean coast in few days. Early morning mist developed over scattered localities of the Delta, Canal & Cairo Areas in more than 10 days.

PRESSURE DISTRIBUTION

The prevailing pressure distribution over the surface map this month can be summarized in the following pressure systems.

- The Complex monsoon low pressure system over Iarq, Arabia and Sudan.
- The monsoon low over the great Sahara of Africa.
- The Anticyclonic ridge over Europe & west Mediterranean.
- The Anticyclonic ridge over southwest Russia, (caspian) & Black Sea vicinities.
- The transitory deep northern Atlantic depressions through Urasia.

On the other hand the prevailing upper pressure systems at the 700 & 500 mb levels were confined in the two deep upper lows over north Atlantic and north Russia, their attached upper troughs showed prevalence over west Europe and west Russia together with a high pressure belt south latitude 40°N.

During this month five transitory Atlantic deep low pressure systems traversed Europe eastwards, their secondaries approached western vicinities of the Black Sea round the 1st 8th 17th 21st & 28th Accordingly the monsoon low over Iraq, Arabia & Sudan showed gradual northwest elongation and operated over east & central Mediterranean regions round the 3rd 9th 18th 24th & 28th respectively.

It is worthy to mention that the monthly pressure trend over east Mediterranean in general and U.A.R. in particular was mostly above normal in spite of its practical oscillations.

The subtropical jet stream was evident over the country during the whole month in the upper troposphere at about 140 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan & Aswan were 130, 93 & 82 on the 17th 27th & 1st trespectively.

SURFACE WIND

The prevailing winds were light/moderate Nly in general. Fesh/strong winds blew over scattered localities of the Republic particularly during several days over the Mediterranean (western parts) & Red Sea districts.

No gales were reported during this month.

TEMPERATURE

Maximum air temperature was rather normal in general and showed slight variability in the northern parts and moderate variability over the middle & southern parts.

The absolute maximum temperature for the Republic was 44.1°C reported at Kom Ombo on the 16th.

Minimum air temperature oscillated round normal in the northern & middle parts and below normal in the southern parts.

The absolute minimum temperature for the Republic was 12.3°C reported at Dakhla on the 28th

PRECIPITATION

This month was almost rainless apart from light showers over scattered localities in the Mediterranean district round the 12th & 23rd.

The absolute daily rainfall was 4.9 mm. reported at Borollos L.H. on the 12th which was also the absolute monthly rainfall for the month.

Cairo, August 1971

M. F. TAHA

Under Secretary of State
Director General
Meteorological Department

TABLE A 1.—MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION

SEPTEMBER — 1964

STATION	Atmospheric Pressure (mbs) M.S.L		Air Temperature °C								Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evaporation mms.
			Maximum		Minimum			Dry Bulb		Wet Bulb						
	Mean	D.F Normal or Average	(A) Mean	D.F Normal or Average	(B) Mean	D.F Normal or Average	$\frac{A+B}{2}$	Mean	D.F Normal or Average	Mean	D.F Normal or Average	Mean	D.F Normal or Average	Total Actual	Total Possible	%	Mean
Sallum	1014.8	+0.9	28.9	—0.3	19.5	—1.6	24.2	23.9	—1.2	19.2	—0.9	62	0	—	—	—	8.4
Mersa Matruh (A)	1014.6	+0.9	27.7	—1.0	19.4	—0.3	23.6	23.4	—1.0	19.3	—0.8	66	— 1	322.9	371.1	87.0	8.5
Alexandria (A)	1013.4	+0.8	28.7	—0.7	20.2	—1.1	24.4	24.2	—1.1	26.1	—1.1	67	— 2	327.7	370.8	88.4	6.4
Port Said (A)	1012.5	+0.3	27.5	—1.7	23.1	—0.8	25.3	25.5	—0.7	21.1	—1.1	66	— 4	325.8	370.8	87.8	5.9
El Arish	1012.4	+1.2	29.7	—0.1	20.6	+0.3	25.2	25.1	—0.4	21.6	—0.3	72	+ 2	325.4	368.7	88.3	6.7
Ghazza	1011.9	+0.6	27.3	—1.1	19.9	—0.7	23.6	24.5	—0.7	20.8	—1.0	70	— 3	287.0	371.1	77.3	5.9
Tanta	1012.4	—	31.6	—	17.8	—	24.2	23.9	—	19.0	—	61	—	318.0	370.3	5.9	5.5
Cairo (A)	1012.6	+0.4	31.5	—0.8	19.3	—0.6	25.4	24.8	—1.0	19.1	—1.2	56	— 2	—	—	—	15.1
Fayoum	1012.0	—	33.8	—	18.9	—	26.4	25.1	—	18.7	—	52	—	—	—	—	9.9
Minya (A)	1012.1	+1.0	32.0	—1.4	17.4	—1.2	24.7	24.4	—1.4	19.0	—0.7	57	+ 2	—	—		8.5
Assyout (A)	1011.3	+1.0	33.1	—2.0	18.9	—1.2	26.0	26.0	—1.8	17.5	—1.3	39	+ 1	—	—	—	18.9
Luxor (A)	1008.9	+0.7	36.7	—1.8	19.9	—1.4	28.3	27.4	—2.7	18.6	—0.8	39	+ 7	—	—	—	10.7
Aswan (A)	1008.9	+1.0	37.8	—2.2	20.7	—3.3	29.2	29.4	—1.4	16.8	—0.4	21	+ 2	—	—	—	20.3
Siwa	1014.4	+1.0	32.3	—2.3	17.5	—0.8	24.9	25.2	—2.0	17.4	—1.4	42	+ 1	—	—	—	11.7
Bahariya	1012.7	+0.7	31.7	—1.8	18.2	—0.1	25.0	25.7	—0.6	17.8	—0.6	43	— 1	—	—	—	8.7
Farafra	1014.4	—	32.3	—	17.2	—	24.8	24.9	—	16.7	—	39	—	—	—	—	16.4
Dakhla	1010.4	+1.0	33.6	—2.1	18.4	—2.2	26.0	26.1	—1.3	16.5	—0.2	33	+ 5	—	—	—	19.8
Kharga	1011.3	—	34.6	—	20.0	—	27.3	27.6	—	16.8	—	28	—	345.3	368.6	93.9	27.2
Tor	1008.5	+0.8	30.0	—2.0	22.2	+0.3	26.1	26.8	—0.5	21.2	—0.5	59	0	—	—	—	10.8
Hurghada	1008.8	+1.0	31.2	+0.6	22.3	—0.9	26.8	27.0	—0.8	20.0	—1.4	49	— 5	—	—	—	22.3
Quesir	1009.3	+1.6	30.4	—1.6	23.9	—1.4	27.5	27.4	—0.7	20.6	—0.8	51	— 2	—	—	—	17.5

Table A 2.— MAXIMUM AND MINIMUM AIR TEMPERATURES

SEPTEMBER — 1964

Station	Maximum Temperature °C									Grass Min. Temp.		Minimum Temperature °C							
	Highest	Date	Lowest	Date	No. of Days with Max-Temp.					Mean	Dev. From Normal	Highest	Date	Lowest	Date	No. of Days with Min. Temp.			
					>	>30	>35	>40	>45							<10	<5	<0	<-5
Sallum (A)	31.8	22	26.8	23	30	6	0	0	0	17.8	—	22.6	3,9	15.4	13	0	0	0	0
Mersa Matruh (A)	29.7	27	25.5	28	30	0	0	0	0	—	—	23.0	4·5	15.6	24	0	0	0	0
Alexandria (A)	30.6	2	26.4	24,29	30	2	0	0	0	—	—	23.5	7	15.0	27	0	0	0	0
Port Said (A)	30.1	7	26.3	29,30	30	1	0	0	0	22.4	—	25.4	2	21.2	29	0	0	0	0
El Arish	30.9	23	27.0	30	30	10	0	0	0	18.9	—	25.0	3	17.0	28	0	0	0	0
Ghazza	29.0	8	25.5	30	30	0	0	0	0	19.3	—	22.5	5	17.8	29	0	0	0	0
Tanta	34.6	7	28.2	24	30	23	0	0	0	—	—	21.1	10	14.3	27	0	0	0	0
Cairo (A)	34.8	16	28.4	24	30	24	0	0	0	—	—	22.0	10.23	15.9	27	0	0	0	0
Fayoum	35.3	7,8	29.7	24	30	27	2	0	0	16.4	—	16.3	29	16.1	21	0	0	0	0
Minya (A)	35.0	16	28.6	30	30	25	0	0	0	14.8	—	20.9	8	13.5	28	0	0	0	0
Assyout (A)	37.3	21	30.2	30	30	30	5	0	0	15.7	—	21.6	9	16.6	26	0	0	0	0
Luxor (A)	41.0	16	33.0	12	30	30	24	1	0	—	—	23.0	17	16.8	28	0	0	0	0
Aswan (A)	42.2	16,17	34.2	12	30	30	28	3	0	—	—	24.2	17	17.5	26	0	0	0	0
Siwa	35.3	16	28.6	28	30	25	1	0	0	15.9	—	20.6	23	13.8	26	0	0	0	0
Bahariya	35.8	22	29.5	30	30	27	2	0	0	16.8	—	21.0	7	14.7	25	0	0	0	0
Farafra	35.1	22	29.1	24	30	26	1	0	0	16.5	—	19.7	23	13.9	26	0	0	0	0
Dakhla	36.6	21	30.2	12	30	30	8	0	0	13.4	—	21.7	1	12.3	28	0	0	0	0
Kharga	38.2	16	31.2	30	30	30	10	0	0	18.7	—	23.6	22	16.2	20	0	0	0	0
Tor	33.4	23	27.4	25	30	17	0	0	0	—	—	25.6	2	18.1	30	0	0	0	0
Hurghada	33.5	9	28.5	30	30	26	0	0	0	21.3	—	25.0	2	18.4	30	0	0	0	0
Quseir	32.2	8	28.6	26,27	30	18	0	0	0	20.2	—	26.0	1	22.1	30	0	0	0	0

Table A 3.—SKY COVER AND RAINFALL

SEPTEMBER — 1964

Station	Mean Sky Cover Oct					Rainfall mms										
	00 U.T.	06 U.T.	12 U.T.	18 U.T.	Daily Mean	Total Amount	Dev. From Normal	Max. Fall in one day		Number of Days With Amount of Rain						
								Amount	Date	< 0.1	≥ 0.1	≥ 1.0	≥ 5.0	≥10	≥25	≥50
Sallum	1.0	1.8	2.1	1.3	1.4	0.0	— 0.9	0.0	—	0	0	0	0	0	0	0
Mersa Matruh (A)	1.2	2.6	2.2	1.4	1.8	2.5	+ 1.9	2.5	24	0	1	1	0	0	0	0
Alexandria (A)	2.4	3.0	2.0	1.9	2.3	1.3	+ 0.9	1.0	11	0	2	1	0	0	0	0
Port Said (A)	0.9	1.8	0.9	0.7	1.0	0.0	— 0.1	0.0	—	0	0	0	0	0	0	0
El Arish	3.0	3.1	1.4	2.8	2.6	0.0	— 0.7	0.0	—	0	0	0	0	0	0	0
Ghazza	3.7	2.3	0.8	1.9	2.5	0.0	— 0.2	0.0	—	0	0	0	0	0	0	0
Tanta	—	1.2	1.4	0.1	—	0.0	— 0.2	0.0	—	0	0	0	0	0	0	0
Cairo (A)	1.6	2.3	1.5	0.5	1.7	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0
Fayoum	—	0.5	0.4	0.0	—	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Minya (A)	0.0	1.2	0.2	0.0	0.3	0.0	— 0.1	0.0	—	0	0	0	0	0	0	0
Assyout (A)	0.0	0.7	0.0	0.0	0.1	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Luxor (A)	0.1	0.2	0.2	0.2	0.4	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Aswan (A)	0.2	0.6	0.4	0.5	0.3	0.0	—Tr.	0,0	—	0	0	0	0	0	0	0
Siwa	0.1	1.3	1.0	1.0	0.5	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Bahariya	0.0	1.6	0.3	0.0	0.4	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0
Farafra	0.0	0.1	0.3	0.0	0.3	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Dakhla	0.0	0.3	0.1	0.1	0.1	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Kharga	0.0	0.2	0.3	0.1	0.2	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Tor	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Hurghada	0 0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Quseir	0.0	0.0	0.0	0.0	0.0	0.0	—Tr.	0.0	—	0	0	0	0	0	0	0

Table A 4.—DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

SEPTEMBER — 1964

Station	Precipitation				Frost	Thunderstorm	Mist Vis ≥1000 metres	Fog Vis <1000 Metres	Haze Vis ≥1000 Metres	Thick Haze Vis <1000 Metres	Dust or Sandrising Vis ≥1000 Metres	Dust or Sandstorm Vis <1000 Metres	Gale	Clear Sky	Cloudy Sky
	Rain	Snow	Ice, Pellets	Hail											
Sallum	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0
Mersa Matruh (A)	1	0	0	0	0	0	0	0	0	0	2	0	0	17	0
Alexandria (A)	2	0	0	0	0	0	2	1	0	0	0	0	0	12	0
Port Said (A)	0	0	0	0	0	0	1	0	0	0	0	0	0	27	0
El Arish	0	0	0	0	0	0	5	0	2	0	1	0	0	9	0
Ghazza	0	0	0	0	0	0	1	1	0	0	0	0	0	12	0
Tanta	0	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Cairo (A)	0	0	0	0	0	0	14	4	5	0	0	0	0	19	0
Fayoum	0	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Minya (A)	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0
Assyout (A)	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0
Luxor (A)	0	0	0	0	0	0	0	0	1	0	0	0	0	30	0
Aswan (A)	0	0	0	0	0	0	0	0	0	0	2	0	0	30	0
Siwa	0	0	0	0	0	0	2	0	0	0	0	0	0	30	0
Bahariya	0	0	0	0	0	0	0	0	0	0	0	0	0	29	0
Farafra	0	0	0	0	0	0	0	0	0	0	1	0	0	30	0
Dakhla	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0
Kharga	0	0	0	0	0	0	0	0	0	0	1	0	0	30	0
Tor	0	0	0	0	0	0	0	0	0	0	1	0	0	30	0
Hurghada	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0
Quseir	0	0	0	0	0	0	0	0	0	0	2	0	0	30	0

Table A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

SEPTEMBER — 1964

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Sallum	2	2	0	1–10	39	88	41	13	4	1	3	10	11	31	95	121	457
				11–27	37	56	1	0	0	0	0	0	4	13	73	75	259
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	76	144	42	13	4	1	3	10	15	44	168	196	716
Mersa Matruh (A)	21	1	10	1–10	78	22	7	5	1	4	7	20	34	66	18	41	303
				11–27	155	16	0	0	0	0	1	3	3	7	16	184	385
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	233	38	7	5	1	4	8	23	37	73	34	225	688
Alexandria (A)	7	0	0	1–10	135	29	8	10	3	7	13	26	6	6	44	151	438
				11–27	74	5	0	0	0	0	0	0	2	0	36	158	275
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	209	34	8	10	3	7	13	26	8	6	80	309	713
Port Said	0	1	0	1–10	174	15	2	2	4	7	2	4	31	46	36	216	539
				11–27	47	0	0	0	0	0	0	0	5	16	21	91	180
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	221	15	2	2	4	7	2	4	36	62	57	307	719
Ghazza	0	36	3	1–10	39	4	11	23	17	168	16	4	18	37	88	117	542
				11–27	51	5	0	0	0	0	0	2	6	6	0	54	139
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	90	9	11	23	17	168	16	6	24	43	88	171	681
Tanta	47	17	0	1–10	132	47	10	8	3	0	0	10	48	112	118	168	656
				11–27	0	0	0	0	0	0	0	0	0	0	0	0	0
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	132	47	10	8	3	0	0	10	48	112	118	168	656
Cairo	0	6	62	1–10	112	92	65	20	8	1	0	2	3	12	22	51	388
				11–27	111	80	31	4	5	4	0	0	0	0	14	15	264
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	223	172	96	24	13	5	0	2	3	12	36	66	652
Fayoum (A)	7	0	0	1–10	466	47	1	5	0	0	0	1	1	7	20	159	707
				11–27	4	1	0	0	0	0	0	0	0	0	0	1	6
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	470	48	1	5	0	0	0	1	1	7	20	160	713

Table A 5 (*contd.*) – NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

SEPTEMBER — 1964

Station	calm (hours)	variable (hours)	unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of direction indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Minya	11	0	11	1–10	34	7	0	0	0	1	1	0	0	3	44	295	385
				11–27	8	0	0	0	0	0	0	0	0	0	3	302	313
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	42	7	0	0	0	1	1	0	0	3	47	597	698
Assyut (A)	0	0	0	1–10	8	1	0	0	0	0	0	0	9	168	138	92	416
				11–27	6	9	0	0	0	0	0	0	0	7	53	229	304
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	14	10	0	0	0	0	0	0	9	175	191	321	720
Luxor (A)	11	0	0	1–10	13	26	4	7	8	23	135	98	44	49	83	170	660
				11–27	5	0	0	0	0	0	0	0	1	0	3	40	49
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	18	26	4	7	8	23	135	98	45	49	86	210	709
Aswan (A)	1	5	30	1–10	71	259	150	9	0	0	0	0	0	0	0	12	501
				11–27	57	84	34	0	0	0	0	0	0	0	0	6	183
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	128	343	184	9	0	0	0	0	0	0	0	18	684
Siwa	103	34	5	1–10	90	79	59	28	14	9	7	4	3	19	76	114	502
				11–27	7	15	3	0	0	0	0	0	0	3	4	44	76
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	97	94	62	28	14	9	7	4	3	22	80	158	578
Dakhla	0	10	2	1–10	197	76	5	2	3	1	5	12	20	54	102	224	701
				11–27	6	0	0	0	0	0	0	0	0	0	0	1	7
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	203	76	5	2	3	1	5	12	20	54	102	225	708
Hurghada	0	0	0	1–10	3	3	0	0	0	0	0	0	0	3	30	7	46
				11–27	118	5	0	0	0	0	0	0	0	25	165	299	612
				28–47	1	0	0	0	0	0	0	0	0	0	0	61	62
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	122	8	0	0	0	0	0	0	0	28	195	367	720
Quseir	2	8	0	1–10	60	10	3	0	0	0	0	0	0	18	142	153	386
				11–27	181	2	0	0	0	0	0	0	0	0	2	138	323
				28–47	0	0	0	0	0	0	0	0	0	0	0	1	1
				≥ 48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	241	12	3	0	0	0	0	0	0	18	144	292	710

UPPER AIR CLIMATOLOGICAL DATA

Table B 1. — MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER AND LOWER VALUES OF ALTITUDE, AIR TEMPERATURE AND DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

SEPTEMBER — 1964

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 0000 UT	Surface	30	*1015m.b.	*1021m.b.	*1012m.b.	30	21.5	23.8	17.8	30	17.9
	1000	30	154	208	122	30	21.0	23.0	17.1	30	17.2
	850	30	1548	1589	1509	30	14.2	19.4	7.6	24	2.4
	700	30	3165	3220	3124	30	7.5	12.2	1.5	4	— 5.5
	600	30	4419	4479	4362	30	0.9	6.2	— 5.0	1	—14.3
	500	30	5823	5925	5770	30	— 8.8	— 4.8	—13.9	—	—
	400	30	7550	7616	7435	30	—20.5	—14.8	—24.9	—	—
	300	30	9619	9717	9492	30	—34.7	—29.6	—40.0	—	—
	250	—	—	—	—	—	—	—	—	—	—
	200	29	12359	12484	12198	29	—53.2	—50.0	—58.8	—	—
	150	28	14155	14284	13997	28	—64.2	—61.4	—66.9	—	—
	100	25	16596	16737	16453	25	—70.1	—63.7	—74.7	—	—
	70	22	18742	18820	18620	22	—65.2	—59.9	—70.6	—	—
	60	—	—	—	—	—	—	—	—	—	—
	50	21	20828	20912	20708	21	—58.2	—52.2	—61.6	—	—
	40	—	—	—	—	—	—	—	—	—	—
	30	14	24094	24174	23936	14	—53.2	—51.5	—54.9	—	—
	20	8	26724	26794	26580	8	—47.7	—46.1	—50.4	—	—
	10	2	31408	31425	31390	2	—40.0	—39.8	—40.3	—	—
Helwan 0000 UT	Surface	30	*996m.b.	*1003m.b.	*992m.b.	30	21.0	22.8	18.8	30	16.1
	1000	30	111	165	84	4	19.3	19.9	18.6	4	11.7
	850	30	1506	1544	1477	30	16.7	21.9	11.1	22	1.3
	700	30	3140	3192	3098	30	11.2	14.7	6.5	1	— 8.6
	600	30	4407	4467	4348	30	4.0	8.3	0.0	—	—
	500	30	5863	5915	5776	30	— 5.8	— 2.2	—11.5	—	—
	400	30	7572	7627	7535	30	—11.1	—13.6	—21.1	—	—
	300	30	9663	9739	9549	30	—31.3	—29.0	—35.0	—	—
	250	—	—	—	—	—	—	—	—	—	—
	200	30	12406	12514	12302	30	— 51.3	—49.6	—55.3	—	—
	150	30	14217	14339	14107	30	—64.5	—62.4	— 66.8	—	—
	100	29	16628	16734	16505	29	—73.7	—68.6	—76.7	—	—
	70	26	18752	18880	18640	26	—67.3	—65.0	—74.8	—	—
	60	21	19678	19750	19565	21	—63.1	—60.2	—67.0	—	—
	50	20	20811	20879	20695	20	—59.1	—56.1	—61.2	—	—
	40	15	22223	22295	22105	15	—55.9	—54.0	—57.5	—	—
	30	15	24064	24150	23958	15	—53.3	—50.2	—56.5	—	—
	20	9	26709	26815	26624	9	—48.5	—45.3	—51.2	—	—
	10	2	31276	31337	31215	2	—44.5	—43.3	—45.2	—	—
Aswan 0000 UT	Surface	30	*980m.b.	*992m.b.	*982m.b.	30	24.1	26.6	20.0	30	6.3
	1000	30	71	123	36	—	—	—	—	—	—
	850	30	1492	1544	1454	30	22.8	27.9	16.8	21	— 0.1
	700	30	3150	3193	3104	30	11.8	15.5	8.1	20	— 6.9
	600	30	4416	4467	4370	30	2.8	5.7	— 1.5	17	—10.8
	500	30	5869	5927	5817	30	— 5.8	— 1.9	— 8.8	5	—22.9
	400	30	7580	7623	7517	30	—17.0	—14.9	—21.6	1	—27.8
	300	30	9679	9763	9600	30	—32.2	—29.4	—35.2	—	—
	250	—	—	—	—	—	—	—	—	—	—
	200	29	12422	12531	12321	29	—52.8	—46.4	—55.2	—	—
	150	29	14224	14351	14115	29	—65.8	—52.6	—70.0	—	—
	100	24	16601	16768	16524	24	—77.2	—74.6	—80.3	—	—
	70	18	18667	18800	18440	18	—68.9	—65.4	—73.0	—	—
	60	—	—	—	—	—	—	—	—	—	—
	50	14	20741	20855	20664	14	—62.1	—57.5	—67.9	—	—
	40	—	—	—	—	—	—	—	—	—	—
	30	11	23964	24066	23864	11	—54.1	—52.4	—55.6	—	—
	20	8	26552	26712	26478	8	—48.4	—44.1	—51.2	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = Number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

UPPER AIR CLIMATOLOGICAL DATA

Table B1 (*contd.*)—MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER & LOWER VALUES OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES.

SEPTEMBER — 1964

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 1200 UT	Surface	30	*1015m.b.	*1021m.b.	*1012m.b.	30	25.3	27.0	23.5	30	18.4
	1000	30	158	217	133	30	24.1	25.7	21.0	30	17.2
	850	30	1555	1602	1531	30	15.0	20.4	9.3	22	2.3
	700	30	3176	3228	3133	30	8.1	12.2	1.5	2	— 8.6
	600	30	4432	4486	4379	30	1.5	6.2	— 3.2	—	—
	500	30	5874	5926	5803	30	— 8.1	— 3.5	—12.0	—	—
	400	30	7571	7655	7473	30	—19.7	—14.2	—23.7	—	—
	300	30	9647	9772	9527	30	—33.6	—28.9	—38.6	—	—
	250	—	—	—	—	—	—	—	—	—	—
	200	28	12386	12552	12235	28	—51.9	—49.3	—54.4	—	—
	150	28	14202	14384	14046	28	—62.7	—61.1	—65.1	—	—
	100	23	16352	16816	16505	23	—70.0	—67.0	—77.5	—	—
	70	19	18803	18970	18670	19	—63.7	—56.3	—68.2	—	—
	60	—	—	—	—	—	—	—	—	—	—
	50	18	20919	21072	20780	18	—55.7	—52.0	—59.5	—	—
	40	—	—	—	—	—	—	—	—	—	—
	30	13	24238	24415	24098	13	—48.5	—44.6	—53.1	—	—
	20	5	26917	27039	26826	5	—44.6	—41.9	—48.4	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 1200 UT	Surface	30	*995m.b.	*1002m.b.	*992m.b.	30	30.4	34.6	27.2	30	11.9
	1000	30	103	157	76	5	27.9	28.9	27.2	5	10.0
	850	30	1513	1554	1486	30	16.7	24.2	11.6	27	4.7
	700	30	3146	3215	3119	30	10.3	15.8	6.9	1	— 9.3
	600	30	4413	4497	4375	30	3.8	9.6	— 1.9	—	—
	500	30	5860	5924	5822	30	— 5.5	— 1.8	— 9.8	—	—
	400	30	7582	7672	7522	30	—17.7	—12.8	—21.0	—	—
	300	30	9669	9776	9591	30	—32.1	—27.6	—35.2	—	—
	250	—	—	—	—	—	—	—	—	—	—
	200	30	12418	12548	12298	30	—51.7	—49.0	—56.0	—	—
	150	30	14226	14378	14082	30	—64.2	—61.1	—66.9	—	—
	100	28	16632	16710	16489	28	—74.0	—69.2	—78.4	—	—
	70	26	18760	18910	18620	26	—66.0	—62.7	—74.0	—	—
	60	25	19705	19844	19553	25	—61.6	—58.9	—65.4	—	—
	50	25	20839	20991	20699	25	—57.2	—55.4	—61.1	—	—
	40	20	22276	22411	22135	20	—54.1	—51.4	—59.2	—	—
	30	17	24147	24277	24030	17	—50.2	—41.4	—55.7	—	—
	20	10	26800	26928	26689	10	—47.9	—46.2	—52.3	—	—
	10	1	31429	—	—	1	—42.8	—	—	—	—
Aswan 1300 UT	Surface	30	*986m.b.	*992m.b.	*982m.b.	30	36.5	40.4	33.0	30	7.
	1000	30	68	121	30	—	—	—	—	—	—
	850	30	1510	1560	1479	30	23.2	31.9	18.2	28	0.8
	700	30	3172	3226	3124	30	12.8	16.8	8.7	24	— 5.
	600	30	4443	4476	4387	30	3.4	9.6	— 1.8	16	—12.
	500	30	5899	5998	5836	30	— 4.8	—17.6	—23.8	6	—20.
	400	30	7620	7742	7533	30	—15.7	—11.3	—18.8	1	—38.
	300	30	9729	9885	9624	30	—31.9	—29.0	—34.0	1	—29.
	250	—	—	—	—	—	—	—	—	—	—
	200	29	12490	12674	12360	29	—51.4	—46.7	—54.2	—	—
	150	28	14303	14516	14153	28	—64.3	—53.9	—67.2	—	—
	100	28	16703	16926	16522	28	—75.0	—71.0	—78.2	—	—
	70	26	18800	19050	18470	26	—67.2	—57.1	—73.5	—	—
	60	—	—	—	—	—	—	—	—	—	—
	50	18	20885	21121	20689	18	—57.2	—50.0	—60.8	—	—
	40	—	—	—	—	—	—	—	—	—	—
	30	12	24225	24450	24023	12	—48.8	—41.0	—51.6	—	—
	20	11	26934	27262	26674	11	—42.7	—32.0	—47.5	—	—
	10	5	31790	32135	31445	2	—31.6	—22.7	—40.4	—	—

N = Number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

Table B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE; THE HIGHEST WIND SPEED IN THE UPPER AIR

SEPTEMBER — 1964

	Station	Freezing Level									First Tropopause									Highest wind speed			
		Mean			Highest			Lowest			Mean			Highest			Lowest						
		Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Direction (000—360)°	Speed in Knots
0000 UT		(N)	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh(A)	4488 (30)	592 (30)	0.0 (1)	5080	554	—	2570	754	— 1.0	15601 (24)	119 (24)	—71.6 (24)	16706	100	—73.1	13690	158	—65.2	8535	344	240	105
	Helwan	5017 (30)	557 (30)	— —	5530	524	—	4348	600	—	15908 (27)	113 (27)	—72.9 (27)	17430	88	—77.0	14950	133	—70.1	13270	175	230	108
	Aswan . . A)	4886 (30)	566 (30)	—12.1 (14)	5500	525	—	4160	621	—14.7	16085 (20)	110 (20)	—77.3 (20)	16717	100	—78.6	14910	132	—73.8	15300	121	210	84
1200 UT		(N)	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh(A)	4634 (30)	585 (30)	—13.4 (1)	5300	540	—	3360	682	—13.4	15786 (22)	112 (22)	—69.9 (22)	17230	92	—80.5	14730	138	—67.4	9835	285	270	114
	Helwan	5013 (30)	555 (30)	— —	5670	516	—	4397	600	—	16192 (27)	108 (27)	—74.0 (27)	17080	92	—76.1	14710	136	—69.0	15520	119	240	100
	Aswan . . .(A)	4999 (30)	560 (30)	—13.4 (13)	5740	517	—	4130	622	—11.3	16046 (28)	112 (28)	—74.9 (28)	16926	100	—76.3	15290	127	—70.7	15030	132	130	67

N = The number of cases the element has been observed during the month.

Table B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

MERSA MATRUH (A)— SEPTEMBER 1964

Time	Pressure Surface Millibar	Wind between specified ranges of direction (000—360)°																				Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	8	10	1	4	1	3	0	—	1	8	0	—	0	—	0	—	1	8	4	6	2	10	8	12	4	30	8
	1000	8	11	1	4	1	4	0	—	1	10	0	—	0	—	0	—	1	8	3	8	6	12	6	10	2	29	9
	850	7	15	3	15	2	14	0	—	0	—	0	—	0	—	0	—	2	12	2	12	6	22	6	14	1	29	15
	700	5	15	1	6	0	—	2	12	0	—	0	—	0	—	0	—	1	21	8	26	6	13	6	13	0	29	17
	600	4	14	0	—	0	—	0	—	0	—	0	—	0	—	4	19	2	34	8	21	8	10	3	12	0	29	17
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	19	5	35	17	25	3	20	2	14	0	29	25
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	30	11	34	13	35	1	30	1	40	0	29	34
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	30	15	38	9	37	2	30	0	—	0	29	34
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	35	9	46	13	49	0	—	0	—	0	25	46
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	39	9	44	9	41	1	13	0	—	0	22	41
	100	0	—	0	—	0	—	0	—	0	—	0	—	1	4	2	20	9	20	5	16	0	—	0	—	0	17	18
	70	0	—	0	—	1	5	2	5	1	5	1	15	0	—	2	7	3	8	3	9	0	—	0	—	0	13	8
	60	0	—	0	—	1	8	5	9	1	7	0	—	0	—	2	10	1	5	0	—	0	—	0	—	3	13	7
	50	0	—	0	—	4	13	7	11	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	13	10
	40	0	—	0	—	4	11	4	19	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	8	15
	30	0	—	0	—	3	27	3	8	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	6	18
	20	0	—	1	15	1	25	2	28	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	4	24
	10	0	—	0	—	0	—	1	11	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	11
1200 U.T.	Surface	7	11	2	11	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	15	16	16	0	30	14
	1000	5	11	2	12	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	17	17	17	0	30	15
	850	1	13	3	11	0	—	0	—	0	—	0	—	0	—	0	—	2	14	5	13	9	14	10	12	0	30	13
	700	1	12	2	8	1	5	1	5	0	—	0	—	0	—	0	—	3	24	7	20	9	12	6	11	0	30	14
	600	0	—	2	14	0	—	0	—	0	—	1	5	1	8	1	11	6	27	10	17	6	14	3	14	0	30	17
	500	1	23	1	22	0	—	0	—	0	—	0	—	0	—	2	14	12	28	9	26	3	19	2	22	0	30	25
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	29	11	41	13	33	1	28	2	38	0	30	36
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	30	17	46	8	53	1	59	2	38	0	30	47
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	40	12	52	8	50	1	43	1	38	0	25	49
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	48	11	41	4	39	2	44	0	—	0	21	42
	100	0	—	0	—	0	—	1	8	1	17	1	16	1	7	3	24	8	33	3	25	1	25	0	—	0	19	26
	70	0	—	0	—	2	11	5	11	4	10	2	6	0	—	0	—	1	2	0	—	0	—	0	—	0	14	9
	60	0	—	0	—	1	15	8	7	1	10	0	—	0	—	1	3	0	—	0	—	0	—	0	—	0	11	8
	50	0	—	1	21	0	—	6	13	2	12	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	9	14
	40	0	—	0	—	1	8	3	11	2	14	1	11	0	—	0	—	1	9	0	—	0	—	0	—	0	8	11
	30	0	—	0	—	1	13	2	6	2	18	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	5	12
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the wind has been observed from the range of direction during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

Table. B 3 *(contd.)*—**NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIE RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES**

HELWAN—SEPTEMBER 1964

Time	Pressure Surface Millibar	Wind between specified ranges of direction (000—360)°																						Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	7	8	15	11	3	13	0	—	0	—	0	—	0	—	0	—	0	—	1	3	0	—	3	8	1	30	9
	1000	0	—	3	11	1	36	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	4	17
	850	10	15	5	13	3	11	3	12	0	—	0	—	0	—	0	—	0	—	1	19	1	17	7	15	0	30	14
	700	1	14	1	10	1	5	0	—	2	5	0	—	0	—	1	11	3	6	6	13	10	10	5	7	0	30	9
	600	-	3	1	5	0	—	0	—	0	—	2	8	0	—	1	9	12	15	6	17	6	9	1	16	0	30	13
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	28	11	17	11	18	1	15	3	21	0	30	19
	400	0	—	0	—	0	—	0	—	0	—	0	—	1	12	4	28	10	40	12	28	2	11	1	34	0	30	30
	300	1	3	0	—	0	—	0	—	0	—	0	—	3	17	3	52	18	38	3	36	2	22	0	—	0	30	35
	200	0	—	0	—	0	—	0	—	0	—	0	—	4	22	7	27	15	45	4	36	0	—	0	—	0	30	37
	150	0	—	0	—	0	—	0	—	0	—	2	30	2	50	8	32	12	47	4	40	0	—	0	—	0	28	41
	100	0	—	0	—	0	—	0	—	1	6	4	27	6	31	4	26	4	39	3	29	1	10	0	—	0	23	29
	70	0	—	0	—	3	19	3	53	0	—	4	14	2	18	0	—	1	12	3	14	0	—	0	—	2	18	20
	60	0	—	0	—	3	20	4	13	1	3	0	—	1	14	0	—	2	22	1	11	0	—	0	—	0	12	15
	50	0	—	1	14	0	—	6	13	2	20	0	—	0	—	1	18	0	—	0	—	1	12	0	—	0	11	15
	40	0	—	0	—	1	3	3	9	1	20	1	18	0	—	0	—	0	—	0	—	0	—	0	—	0	6	12
	30	0	—	0	—	0	—	2	20	1	36	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	3	25
	20	0	—	0	—	0	—	1	25	0	—	0	—	1	16	0	—	0	—	0	—	0	—	0	—	0	2	22
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	11	13	5	18	0	—	0	—	0	—	0	—	0	—	1	5	0	—	2	10	4	10	7	10	0	30	12
	1000	4	14	1	14	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	5	14
	850	8	14	10	13	3	12	0	—	1	6	0	—	0	—	0	—	0	—	1	17	4	12	3	10	0	30	13
	700	4	9	0	—	0	—	2	4	1	15	0	—	1	3	2	6	7	16	8	11	0	—	5	9	0	30	10
	600	1	20	0	—	0	—	0	—	0	—	1	28	2	12	5	15	15	16	4	20	1	6	1	10	0	30	16
	500	0	—	0	—	0	—	0	—	0	—	1	4	1	11	2	30	16	19	8	22	0	—	2	16	0	30	20
	400	0	—	0	—	0	—	0	—	0	—	0	—	2	8	2	14	16	35	8	29	2	25	0	—	0	30	29
	300	0	—	0	—	0	—	0	—	0	—	0	—	2	8	3	40	18	39	5	38	1	6	0	—	1	30	34
	200	0	—	0	—	0	—	0	—	0	—	0	—	4	30	4	34	19	42	3	44	0	—	0	—	0	30	40
	150	0	—	0	—	0	—	0	—	0	—	1	50	6	29	9	36	12	43	2	35	0	—	0	—	0	30	38
	100	0	—	0	—	1	88	0	—	3	28	4	22	4	22	2	19	5	22	3	19	1	23	0	—	0	23	25
	70	0	—	0	—	1	21	4	15	4	20	5	19	3	15	1	45	0	—	0	—	0	—	0	—	1	19	18
	60	0	—	0	—	1	19	4	16	4	18	4	20	2	22	1	21	1	51	0	—	0	—	0	—	1	18	20
	50	0	—	0	—	1	4	5	19	4	20	2	24	1	25	0	—	0	—	0	—	0	—	0	—	0	13	19
	40	0	—	0	—	0	—	2	22	7	20	2	16	0	—	0	—	0	—	0	—	0	—	0	—	0	11	20
	30	0	—	0	—	0	—	4	16	2	18	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	6	17
	20	0	—	1	30	0	—	0	—	1	28	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	2	29
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the wind has been observed from the range of direction during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

Table B 3 (*contd.*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A) — SEPTEMBER 1964

Time	Pressure Surface Millibar	Wind between specified ranges of direction (000—360)°																						Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	20	13	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	5	9	13	0	30	13
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	5	10	2	12	2	10	1	9	2	5	5	5	0	—	0	—	3	5	8	3	1	12	1	3	0	30	8
	700	0	—	0	—	0	—	1	5	0	—	0	—	3	12	7	13	11	14	7	12	1	6	0	—	0	30	13
	600	0	—	0	—	1	5	1	2	0	—	2	14	2	14	8	18	10	14	3	17	2	6	0	—	1	30	12
	500	3	4	0	—	1	28	2	8	3	9	3	6	4	10	4	7	4	8	2	7	1	8	2	7	1	30	8
	400	2	8	0	—	4	13	4	5	1	6	1	4	3	6	3	15	5	8	1	6	1	7	4	7	1	30	8
	300	0	—	0	—	4	8	2	5	3	13	4	13	1	6	6	14	5	11	3	6	0	—	0	—	2	30	10
	200	0	—	0	—	0	—	3	15	4	24	7	14	7	17	7	21	0	—	0	—	0	—	0	—	1	29	17
	150	0	—	0	—	0	—	1	19	8	31	4	17	9	21	3	20	1	16	0	—	0	—	0	—	0	26	24
	100	0	—	0	—	0	—	1	15	7	27	5	21	1	15	0	—	0	—	0	—	0	—	0	—	0	14	23
	70	0	—	0	—	2	22	1	14	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	3	19
	60	0	—	0	—	0	—	1	24	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	24
	50	0	—	0	—	0	—	1	13	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	13
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T	Surface	23	11	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	8	5	13	0	30	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	1	10	1	8	0	—	0	—	0	—	0	—	0	—	0	—	3	6	4	11	14	11	7	11	0	30	10
	700	0	—	0	—	0	—	0	—	0	—	0	—	1	13	13	17	11	19	3	18	1	13	1	3	0	30	17
	600	1	1	0	—	0	—	0	—	0	—	3	10	4	16	14	11	5	15	1	7	1	6	0	—	1	30	11
	500	0	—	0	—	1	10	4	8	3	8	0	—	9	14	4	14	4	8	2	4	2	8	0	—	1	30	10
	400	4	5	0	—	3	9	2	7	5	6	2	13	6	14	1	7	1	9	2	12	1	7	2	4	1	30	8
	300	0	—	0	—	3	13	2	8	4	12	4	8	6	13	6	13	4	9	0	—	0	—	0	—	1	30	11
	200	0	—	0	—	1	12	2	22	4	16	7	17	8	15	4	18	2	8	0	—	0	—	0	—	0	28	16
	150	0	—	0	—	1	12	1	11	7	31	8	21	8	19	2	11	0	—	0	—	0	—	0	—	0	27	22
	100	0	—	0	—	0	—	5	32	9	30	4	26	5	14	0	—	0	—	0	—	0	—	0	—	0	23	26
	70	0	—	0	—	3	29	4	10	2	22	1	38	0	—	0	—	0	—	0	—	0	—	0	—	0	10	21
	60	0	—	0	—	0	—	4	20	1	26	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	5	21
	50	0	—	0	—	0	—	2	32	2	29	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	4	31
	40	0	—	0	—	1	9	0	—	1	22	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	2	16
	30	0	—	0	—	0	—	1	26	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	26
	20	0	—	0	—	0	—	1	36	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	36
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N. — The number of cases the wind has been observed from the range of direction during the month.

T.N. — The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATIONS

EL-KASR — SEPTEMBER 1964

Rather cool and dry

A minor heat wave started on the 3 rd. gave the highest values of the daily mean o air temperature (1.8°C above normal) and the night-time mean on that day while those of the minimum air temperature at 5 cms and 2 metres (2°C above normal), above the ground surface occurred on the following day and that of the total and sky radiation on the 5 th.

The highest values of the vapour pressure, daytime mean of air temperature and value of the daily mean were associated with a very minor heat wave on the 9 th., while those of evaporation from Pan class A and Piche in the free air at 1, 60 and 120 cms above the ground and in the screen (2.0 mms above normal) were recorded on the 11 th. together with the highest daytime mean of wind speed at 2 metres.

A cold spell followed with the peak on the 14 th. when the absolute minimum air temperature at 2 metres (6.0°C below normal) and the lowest daily means of wind speed at the levels 0.5, 1, 2 and 3 metres were recorded.

Another cold spell started on the 19 th. and gave the highest relative humidity (22% above normal) and the lowest vapour pressure deficit on the following day whereas the lowest values of evaporation from Pan class A and Piche in the free air and in the screen (3.6 mms below normal) and of night-time mean of wind speed, were reported on the next day.

The absolute minimum air temperature at 5 cms above the ground surface, another value for that at 2 metres and the lowest night-time mean, were absolute observed on the 26 th. together with the lowest soil temperature for the surface layers down to 10 cms of depth.

The most pronounced heat wave had its peak on the 27 th., when the absolute maximum air temperature (2.5 °C above normal) and the highest water vapour pressure deficit occurred.

Towards the end of the month, a cool spell prevailed and gave the lowest means of air temperature for the day (2.2°C below normal) and daytime on the 23 rd. while the lowest values of the maximum air temperature (1.7°C below normal) and soil temperature for the layer 50 to 200 cms were recorded.

The mean air temperature and the relative humidity were less than the normal by 0.9°C and 3% while the Piche evaporation in the screen was more by 2.0 mms.

TAHRIR — SEPTEMBER 1964

Generally mild, foggy the second half of the month

This month was generally mild, rather foggy or misty most of its second part. One case of sandrising on the 11 th. No remarkable frontal passage occurred ; the biggest temperature change being a drop in the daily maximum of five degrees between the 22nd. and the 23rd.

Comparing with last September, this month is cooler and drier ; the differences in mean air temperatures, relative humidity and vapour pressure being - 1.7°C,-5%, -1.9

mms respectively, with no rain occurring in both. Mean wind speed at 2 metres was the same in both months ; Piche evaporation was less by 0.6 mm in the mean, while both global radiation and actual sunshine duration were more by 46 langleys (in the mean) and 16.0 hours (in total) respectively.

Maximum and minimum soil temperature extremes down to 1 mm were exclusively less than last year by 0.3 to 1.9°C for the maxima, and 1.4 to 3.4°C for the minima.

GIZA — SEPTEMBER 1964

Normal relative humidity successive minor cool spells and heat waves.

The month started with a cool spell having the peak on the 6 th., when the lowest values of Piche evaporation in the free air at levels 1, 60 and 120 cms above the ground and in the screen (1.1 mms above normal) were recorded together with the lowest range of temperature and sunshine duration.

A minor heat wave followed and gave on the 7 th. the absolute maximum air temperature (1.8°C above normal) and the highest values of, the daily mean, daytime mean vapour pressure mean. vapour pressure deficit and the soil temperature for the layer 2 to 20 cms in the dry field and 1 to 2 cms in the wet field. On the following day, the highest values of minimum air temperature at 2 metres (3.2°C above normal) and at 5 cms above the wet and grass fields and also that of night-time were reported as well as the soil temperatures for the layers 1, to 20 cms in the dry field, 2 - 20 cms in the wet field, 03 to 10 cms in the grass field.

Another minor heat wave started on the 15 th. with the lowest relative humidity (36 % below normal) occurring on that day, and the highest values of, Piche evaporation in the free air and in the screen (5.1 mms above normal) and vapour pressure deficit on the next day whereas those of the daily mean relative humidity (5% above normal) and the minimum air temperature at 5 cms above dry soil were observed on the 17 th.

A prolonged cool spell prevailed during the last week and gave the lowest daily mean relative humidity (10% below normal) on the 24 th., the lowest vapour pressure and the absolute minimum air temperature at 2 metres (3.8°C below normal) on the next day while those at 3 cms above the dry, wet and grass soils took place on the 27 th. On the last day of the month, the lowest values of maximum air temperature (3.9°C below normal), the daily mean (3.2°C below normal) the daytime mean, the night-time mean, water vap. deficit and the total sun and sky radiation, were all recorded.

Compared with last year, the absolute minimum air temperature at 5 cms were lower by 0.1 and 0.5°C above the dry and wet fields respectively where that above the grass field was higher by 0.4°C.

The extreme soil temperatures at the different depths were generally lower by variable amounts in the free fields not more than 4.9°C.

The means of the surface wind speed at 2 metres were higher by 0.4, 0.5 and 0.3 m/sec. for the day, night-time and daytime respectively. Also the total (solar and sky radiation,) the total actual duration of bright sunshine, the mean Pan Class A evaporation of the day and the total potential evaporation were more by 851 gm.cal/cm^2, 10.1 hours, 0.18 and 13.2 mms while the daily mean of Piche evaporation in the screen and the total potential evapotranspiration for grass (Libia) were lower by 0.8 and 3.3 mms. respectively.

The daily mean of air temperature was 0.6°C below normal and that of Piche evaporation in the screen was higher by 7.1 mms. while the daily mean relative humidity was about normal.

KHARGA — SEPTEMBER 1964

Rather cool and dry

The month started with a cool spell, having the peak on the 6 th., when the highest values of the relative humidity (25% above normal) and the daily mean were recorded, while that of water vapour pressure was observed on the next day as well as the lowest values of vapour pressure deficit, evaporation from Pan class A and Piche both in the free air at levels 1, 60 and 120 cms above the ground surface and the screen (0.1 mm below normal), and surface wind speeds at the levels 50, 100 and 200 cms.

A minor heat wave statred on the 15 th. and gave the absolute maximum air temperature (1.6°C above normal) on the following day together with the highest values of water vapour pressure deficit (39.4 mms) and the soil temperature at 2 cms of depth.

A cold spell then followed, giving in the 20 th., the absolute minimum air temperature at 5, 20 and 200 cms (5.1°C below normal) above the ground as well as the lowest night-time mean and also those of soil temperature for the surface layer down to 2 cms of depth.

Another minor heat wave had the peak on the 21 st. when the highest values of Pan class A and Piche evaporation in the free air and the screen (17.0 mms above normal) were reported as well as the lowest relative humidity (24% below normal) and the daily mean while the highest values of minimum air temperature at 5, 20 and 200 cms (2.4 above normal) occurred on the next day together with those of the day, night-time and daytime.

A cool spell prevailed during the last week of the month and gave the highest values of mean surface wind speeds at the different levels on the 25 th. and the lowest values of vapour pressure on the 29 th., of maximum air temperature (5.4°C below normal) and daytime mean in the last day of the month.

With respect to air temperature, the maximum, minimum and daily mean were lower than the normal by 2.0, 1.2 and 1.0°C respectively. Also the daily mean of the relative humidity was 7% below normal while the Piche evaporation in the screen was higher by 9.0 mms.

Table C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

SEPTEMBER — 1964

STATION	Air Temperature (°C)					Mean Duration in hours of daily air temperature above the following values										
	Mean Max.	Mean Min.	Mean of the day	Night time mean	Day time mean	-5°C	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C
El Kasr	27.9	18.7	23.6	22.0	25.2	24.0	24.0	24.0	24.0	24.0	20.5	8.0	0.2	0.0	0.0	0.0
Tahrir	31.6	18.1	24.1	21.2	26.9	24.0	24.0	24.0	24.0	24.0	18.9	10.0	3.1	0.0	0.0	0.0
Giza	31.7	18.3	24.6	22.1	26.9	24.0	24.0	24.0	24.0	24.0	20.4	10.8	3.0	0.0	0.0	0.0
Kharga	34.6	20.0	27.6	25.6	30.0	24.0	24.0	24.0	24.0	24.0	23.3	15.8	8.4	1.1	0.0	0.0

Table C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS

SEPTEMBER — 1964

STATION	Max. Temp. at 2 metres				Min. Temp. at 2 metres				Min. Temp. at 5 cms. above			
	Highest		Lowest		Highest		Lowest		Dry Soil		Grass	
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date
El Kasr	30.8	27	25.6	30	22.4	4	14.4	14	12.4	26	—	—
Tahrir	34.5	16	27.9	30	21.7	7	14.3	27	11.7	27	—	—
Giza	34.2	7	34.5	30	21.6	8	14.6	25	9.5	27	8.7	8.7
Kharga	38.2	16	31.2	30	23.6	22	16.2	20	14.4	20	—	

Table C 3.—(SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY & VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVPORATION & RAINFALL

SEPTEMBER — 1964

STATION	Solar+Sky Radiation gm. cal/cm²	Duration of Bright Sunshine (hours)			Relative Humidity %						Vapour Pressure (mms)						Evaporation(mms)		Rainfall (mms)		
		Total Actual	Total Possible monthly	%	Duration in hours		Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 UT	Highest	Date	Lowest	Date	Piche	Pan class (A)	Total Amount monthly	Max. fall in one day	Dat
					⩾ 90 %	⩾ 80 %															
El Kasr.	463.6	332.8	370.6	90	—	—	71	61	29	27	15.6	15.7		9	9.3	23	13.6	9.56	Tr.	Tr.	23
Tahrir .	614.3	324.7	370.2	88	3.5	8.1	67	37	24	16	14.4	12.3		7	9.5	28	12.9	9.36	0.0	—	—
Giza . .	508.9	315.7	370.2	85	1.8	6.2	63	39	27	15	14.0	12.8		7	8.8	25	13.1	9.17	0.0	—	—
Kharga .	539.9	345.3	368.6	94	0	0	34	22	15	21	9.0	8.5		7	5.5	29	33.7	17.61	0.0	0.0	—

Table C 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS (cms) IN DIFFERENT FIELDS

SEPTEMBER — 1964

STATION	Highest (H) Lowest (L)	Extreme soil temperature (°C) in dry field at different depths (cms.)										Extreme soil temperature (°C) in grass field at different depths (cms.)									
		0.3	1	2	5	10	20	50	100	200	300	0.3	1	2	5	10	20	50	100	200	300
El Kasr . . .	H	44.0	38.9	39.5	37.0	32.7	29.1	27.8	26.8	24.8	—	—	—	—	—	—	—	—	—	—	—
	L	13.6	14.4	15.2	17.4	20.7	23.5	25.3	25.5	24.7	—	—	—	—	—	—	—	—	—	—	—
Tahrir . . .	H	51.1	50.1	46.6	44.0	39.2	34.3	31.7	30.8	29.0	27.8	—	—	—	—	—	—	—	—	—	—
	L	14.3	14.2	15.5	18.6	21.3	25.5	27.6	28.5	28.4	27.5	—	—	—	—	—		—	—	—	—
Giza	H	55.6	53.8	52.0	40.2	36.0	32.8	33.1	31.7	29.4	27.4	33.0	29.8	29.1	28.2	27.4	27.0	27.0	25.8	24.5	—
	L	14.0	14.9	15.6	22.2	25.9	28.7	30.1	30.4	29.0	26.7	18.0	19.2	19.4	20.7	22.0	23.4	24.5	24.8	24.2	—
Kharga . . .	H	55.0	54.0	45.6	39.8	36.2	34.1	34.0	33.0	30.8	29.5	—	—	—	—	—	—	—	—	—	—
	L	17.0	18.6	19.8	23.0	26.3	28.8	30.6	31.2	30.6	28.9	—	—	—	—	—	—	—	—	—	—

Table C 5.—SURFACE WIND

SEPTEMBER — 1964

STATION	Wind Speed m/sec at 1½ metres			Days with surface wind speed at 10 metres							Max. Gust (knots) at 10 metres	
	Mean of the day	Night time mean	Day time mean	≥10 knots	≥15 knots	≥20 knots	≥25 knots	≥30 knots	≥35 knots	≥40 knots	Value knots	Date
El Kasr . . .	4.5	3.5	5.6	—	—	—	—	—	—	—	—	—
Tahrir	3.0	2.1	4.2	30	14	1	0	0	0	0	25	3
Giza	2.4	2.0	3.1	23	2	0	0	0	0	0	24	3,15
Kharga . . .	4.8	3.3	6.7	—	—	—	—	—	—	—	—	—

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MONTHLY WEATHER REPORT

VOLUME 7 NUMBER 10

OCTOBER, 1964

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CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE ARAB REPUBLIC OF EGYPT -- CAIRO

In fulfilment of its duties, the Meteorological Department of Egypt issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be adressed to :
"The Director General, Meteorological Department, Kubri-el-Qubbeh — CAIRO".

THE DAILY WEATHER REPORT

This report is issued daily by the Meteorological Department since the year 1901. It includes surface and upper air observations carried out by the relevant networks of the Republic at the principal hours of observations.

As from January 1968 this report was revised to include a condensed representative selection of surface and upper air observations besides the 1200 U.T. surface & 500 mb charts.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for Egypt.

As from January 1964, the Monthly Weather Report was pressed to give climatological data for a representative selection of synoptic stations.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of Egypt as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year.

CLIMATOLOGICAL NORMALS FOR EGYPT

A voluminous edition was issued in march 1968 which brings normals and mean values up till 1960.

METEOROLOGICAL RESEARCH BULLETIN

First issued in January 1969 on a bi-annual basis. It includes research works carried out by members of staff of "The Meteorological Institute for Research and Training" and the Operational Divisions of Meteorological Department.

TECHNICAL NOTES

As from October 1970, the Meteorological Department started to issue a new series of publications in the form of Technical Notes (non periodical) on subjects related to studies and applications of meteorology in different fields for the benefit of personnel working in these fields.

The first Technical Note I was issued in October 1970 on : Sandstorms & Duststorms in Egypt.

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METEOROLOGICAL DEPARTMENT
CAIRO

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GENERAL SUMMARY OF WEATHER CONDITIONS

OCTOBER 1964

Rather mild and rainless in general in the northern and middle parts, hot and dry in the southern parts. Frequent early morning mist over Delta, Canal and Cairo areas.

GENERAL DESCRIPTION OF WEATHER

The prevailing weather was generally rather mild and almost rainless in the northern and middle parts, humid in particular in the Mediterranean coastal strip most of the month. Over the southern parts weather was generally hot & dry particularly between the 7th & 25th.

Light local showers fell over Alexandria area on the 3rd Frequent early morning mist & fog developed over scattered parts of the Delta, Canal & Cairo areas during the last two thirds of the month.

PRESSURE DISTRIBUTION

The prevailing pressure distribution over the surface map this month can be summarized in the following pressure systems.

— Two Anticyclones over southwest Russia and western Europe respectively.

— The travelling Atlantic depressions through Europe and Russia along their preferred eastward and northeastward tracks.

— The secondary depressions over the Mediterranean and its northern vicinities.

— Troughs of low pressure over the Arabian Gulf and the great Sahara of Africa.

On the other hand the upper pressure systems at the 700 & 500 mb levels were confined in the two deep upper lows over north Atlantic and north Russia, their extended truoghs through northern vicinities of the Mediterranean, together with the subtropical high pressure belt skirting latitude 35°N.

During this month secondary depressions over the Mediterranean and northern vicinities followed rather northeastward tracks through Central Mediterranean and Asia Minor. Two of these depressions developed over western Mediterranean on the 11th & 23rd and traversed Asia Minor round the 15th, 27th respectively. The other two depressions developed over Italy and Central Mediterranean round the 17th & 21st and traversed Asia Minor round the 21st, 23rd respectively.

Accordingly the barometric pressure over Egypt in particular and East Mediterranean in general experienced four oscillations but was above normal in general.

In the upper tropospheric charts the Subtropical jet stream was evident over Egypt during the month round 170 mb level.

The highest wind speeds recorded at Mersa Matruh, Helwan & Aswan were 149, 116 & 80 Knots on the 2nd, 24th & 28th respectively.

SURFACE WIND

The prevailing winds were light/moderate Nly in general, but became fresh/strong occasionally over scattered localities, particularly over Red Sea district.

No gales were reported during this month.

TEMPERATURE

Maximum air temperature was slightly subnormal the first week, and abnormally high and oscillatory otherwise.

The absolute maximum air temperature for the Republic was 39.8°C reported at Kharga on the 17th.

Minimum air temperature oscillated round normal in the northern and middle parts and was subnormal in the southern parts

The absolute minimum temperature of the Republic was 8.2°C reported at Dakhla on the 30th.

PRECIPITATION

This month was abnormally rainless apart from light showers over Alexandria area on the 3rd.

The absolute daily rainfall was 1.2 mms reported at Dekheila on the 3rd, which was at the same time the absolute monthly rainfall for the month.

Cairo, August 1971

M. F. TAHA
Under Secretary of State
Director General
Meteorological Department

Table A 1. — MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION.

OCTOBER — 1964

STATION	Atmospheric Pressure (mbs) M.S.L.		Air Temperature °C								Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evaporation (mms)
			Maximum		Minimum			Dry Bulb		Wet Bulb						
	Mean	D.F. Normal or Average	(A) Mean	D.F. Normal or Average	(B) Mean	D.F. Normal or Average	$\frac{A+B}{2}$	Mean	D.F. Normal or Average	Mean	D.F. Normal or Average	Mean	D.F. Normal or Average	Total Actual	Total Possible	%	Mean
Sallum	1017.7	+ 1.7	28.9	+ 1.3	19.2	+ 0.6	24.0	23.5	+ 0.9	18.4	+ 0.3	59	— 4	—	—	—	8.4
Mersa Matruh . (A)	1017.9	+ 1.5	27.6	+ 0.6	16.5	— 0.3	22.0	21.7	— 0.1	17.7	— 0.2	66	0	290.3	353.6	82.1	7.3
Alexandria . . (A)	1017.1	+ 1.2	28.4	+ 0.7	15.9	— 1.9	22.2	22.0	— 0.8	18.6	— 0.2	71	+ 3	303.4	354.2	85.7	5.8
Port Said . . . (A)	1016.4	+ 1.3	26.6	— 0.8	21.9	+ 0.1	24.2	24.0	— 0.2	20.7	+ 0.5	73	+ 4	312.3	354.2	88.2	5.3
El Arish	1016.3	+ 1.3	27.6	— 1.0	16.6	— 1.3	22.1	22.4	— 0.9	19.6	— 0.5	76	+ 3	297.1	352.7	84.2	4.8
Ghazza	1015.9	+ 1.0	25.8	— 1.1	16.1	— 1.8	21.0	21.8	— 1.0	19.1	— 0.9	76	— 1	287.1	353.6	81.2	5.2
Tanta . . . . (A)	1016.1	—	30.5	—	15.3	—	22.9	21.8	—	17.8	—	66	—	294.8	354.5	83.2	4.7
Cairo . . . . . (A)	1016.0	+ 0.7	31.0	+ 1.2	17.2	— 0.6	24.1	23.5	0.0	17.9	— 0.4	55	— 3	—	—	—	15.1
Fayoum	1015.1	—	33.0	—	17.2	—	25.1	24.2	—	17.6	—	49	—	—	—	—	8.7
Minya . . . . (A)	1014.5	+ 0.1	32.8	+ 1.6	14.8	— 0.8	23.8	23.0	— 0.1	17.3	— 0.3	54	— 2	—	—	—	8.0
Assyout . . . (A)	1014.0	+ 0.5	31.9	+ 1.0	16.7	— 1.3	24.3	24.0	— 0.4	16.0	— 1.5	39	— 8	—	—	—	14.7
Luxor . . . . (A)	1013.5	+ 0.7	35.2	+ 0.1	14.8	— 3.0	25.0	24.6	0.0	15.7	— 2.3	34	— 5	—	—	—	8.3
Aswan . . . . (A)	1012.2	+ 1.2	36.2	— 1.3	17.6	— 3.1	26.9	26.9	— 1.7	14.5	— 1.4	13	— 1	—	—	—	16.7
Siwa	1016.7	+ 0.5	32.2	+ 0.5	14.1	— 0.8	23.2	23.1	— 0.1	15.2	— 0.9	38	— 7	—	—	—	11.1
Bahariya	1014.8	— 0.3	32.8	+ 1.7	16.1	— 0.2	24.4	23.8	+ 0.1	16.4	— 0.2	45	— 1	—	—	—	8.7
Farafra	1016.6	—	32.2	—	14.9	—	23.6	23.2	—	14.6	—	34	—	—	—	—	15.4
Dakhla	1012.5	+ 0.7	34.6	+ 1.4	13.6	— 3.8	24.1	23.9	— 1.3	13.9	— 1.0	26	— 1	—	—	—	16.6
Kharga	1013.7	—	35.2	—	16.7	—	25.0	26.4	—	14.6	—	21	—	338.2	358.6	94.3	21.2
Tor	1013.2	+ 1.0	28.8	— 1.1	16.3	— 2.3	22.6	23.2	— 1.0	18.7	— 0.7	63	+ 2	—	—	—	5.9
Hurghada . . .	1013.3	+ 1.3	30.0	+ 1.5	17.1	— 2.6	23.6	23.6	— 1.3	17.1	— 2.4	49	— 9	—	—	—	14.6
Quseir	1013.6	+ 1.7	29.2	— 1.1	20.2	— 2.8	24.7	25.1	— 1.0	18.1	— 1.8	48	— 6	—	—	—	16.1

Table A2. — MAXIMUM AND MINIMUM AIR TEMPERATURES

OCTOBER — 1964

Station	Maximum Temperature °C									Grass Min. Temp.		Minimum Temperature °C							
	Highest	Date	Lowest	Date	No. of Days with Max-Temp.					Mean	D. From Normal	Highest	Date	Lowest	Date	No. of Days with Min. Temp.			
					>25	>30	>35	>40	>45							<10	<5	<0	<-5
Sallum	36.8	10	24.5	29	27	10	2	0	0	17.4	—	22.8	10	16.1	4	0	0	0	0
Mersa Natruh (A)	34.2	10	24.4	7	27	6	0	0	0	—	—	20.8	10	14.0	18	0	0	0	0
Alexandria (A)	33.4	10	25.0	6	30	7	0	0	0	—	—	20.5	4	13.5	24	0	0	0	0
Port Said (A)	28.5	11	24.9	7	30	0	0	0	0	20.7	—	23.3	25	19.5	10	0	0	0	0
El Arish	30.6	11	26.0	14	31	2	0	0	0	15.7	—	22.6	4	13.4	28.31	0	0	0	0
Ghazza	27.5	25	24.7	10	26	0	0	0	0	15.5	—	20.0	5	13.4	29	0	0	0	0
Tanta	33.3	11	27.8	31	31	21	0	0	0	—	—	18.2	16	13.7	29	0	0	0	0
Cairo (A)	34.1	20	28.3	4,5	31	20	0	0	0	—	—	21.0	16	12.3	27	0	0	0	0
Fayoum	37.3	22	29.4	5,6	31	26	8	0	0	14.1	—	19.0	22	15.0	25	0	0	0	0
Minya (A)	38.1	21	28.0	5	31	25	9	0	0	11.6	—	18.4	18	10.5	25	0	0	0	0
Assyout (A)	39.0	11	28.4	5	31	22	4	0	0	13.7	—	19.7	21	13.3	31	0	0	0	0
Luxor (A)	37.5	16	31.8	5	31	31	17	0	0	—	—	18.2	8	9.8	28	1	0	0	0
Aswan (A)	39.6	16	32.8	5	31	31	20	0	0	—	—	20.5	9	14.5	29	0	0	0	0
Siwa	37.5	11	27.7	31	31	24	6	0	0	12.3	—	17.6	2	9.5	28	1	0	0	0
Bahariya	37.6	20	28.7	6	31	24	9	0	0	14.7	—	21.4	21	13.7	9	0	0	0	0
Farafra	36.5	21	27.3	31	31	22	6	0	0	14.2	—	18.8	11	10.1	27	0	0	0	0
Dakhla	39.6	17	28.2	5	31	28	16	0	0	8.8	—	24.9	12	8.2	30	5	0	0	0
Kharga	39.8	17	29.4	5	31	30	17	0	0	14.7	—	23.0	11	11.2	31	0	0	0	0
Tor	32.2	24	27.2	1,31	31	5	0	0	0	—	—	18.7	3.10	12.7	26	0	0	0	0
Hurghada	32.7	11	27.9	5	31	13	0	0	0	15.6	—	20.5	7	13.8	28	0	0	0	0
Quseir	31.9	20	27.0	31	31	1	0	0	0	15.1	—	22.8	11	17.5	31	0	0	0	0

Table A 3.—SKY COVER AND RAINFALL

OCTOBER — 1964

Station	Mean Sky Cover Oct.					Rainfall mms.									
	00 U.T.	06 U.T.	12 U.T.	18 U.T.	Daily Mean	Total Amount	D. From Normal	Max. Fall in one day		Number of Days with Amount of Rain					
								Amount	Date	<0.1	≥0.1	≥1.0	≥5.0	≥10	≥25	≥50
Sallum (A)	1.6	2.9	2.0	1.5	2.0	0.0	—17.5	0.0	—	0	0	0	0	0	0	0
Mersa Matruh (A)	0.4	1.6	1.5	1.2	1.2	0.0	—15.4	0.0	—	0	0	0	0	0	0	0
Alexandria (A)	1.4	2.9	1.3	1.3	1.8	0.4	— 7.5	0.4	3	0	1	0	0	0	0	0
Port Said (A)	0.6	1.5	0.7	0.9	0.9	0.0	— 2.4	0.0	—	0	0	0	0	0	0	0
El Arish	2.4	3.4	0.6	2.3	1.7	0.0	— 5.3	0.0	—	0	0	0	0	0	0	0
Ghazza	3.0	2.5	0.4	0.8	1.3	tr.	—13.2	tr.	2	1	0	0	0	0	0	0
Tanta	—	0.8	0.7	0.1	—	0.0	— 4.2	0.0	—	0	0	0	0	0	0	0
Cairo (A)	2.3	2.7	1.0	0.2	1.4	0.0	— 0.1	0.0	—	0	0	0	0	0	0	0
Fayoum	—	0.1	0.4	0.2	—	0.0	— 1.0	0.0	—	0	0	0	0	0	0	0
Minya (A)	0.1	0.6	0.3	0.1	0.2	0.0	— 0.7	0.0	—	0	0	0	0	0	0	0
Assyout (A)	0.0	0.0	0.1	0.0	0.1	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Luxor (A)	0.1	0.0	0.3	0.2	0.3	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Aswan (A)	0.1	0.1	0.2	0.3	0.2	0.0	— 0.2	0.0	—	0	0	0	0	0	0	0
Siwa	0.1	0.8	0.8	0.5	1.0	0.0	— 0.4	0.0	—	0	0	0	0	0	0	0
Bahariya	0.0	1.7	0.4	0.1	0.5	0.0	— 0.2	0.0	—	0	0	0	0	0	0	0
Farafra	0.1	0.6	0.2	0.0	0.8	0.0	— 0.8	0.0	—	0	0	0	0	0	0	0
Dakhla	0.0	0.1	0.2	0.0	0.1	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Kharga	0.0	0.2	0.3	0.1	0.1	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Tor	0.0	0.1	0.1	0.0	0.1	0.0	— 1.1	0.0	—	0	0	0	0	0	0	0
Hurghada	0.1	0.2	0.2	0.0	0.0	0.0	— tr.	0.0	—	0	0	0	0	0	0	0
Quseir	0.2	0.1	0.1	0.1	0.2	0.0	— 0.6	0.0	—	0	0	0	0	0	0	0

Table A 4.— DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

OCTOBER — 1964

Station	Precipitation				Frost	Thunderstorm	Mist Vis ≥ 1000 metres	Fog Vis <1000 Metres	Haze Vis ≥1000 Metres	Thick Haze Vis <1000 Metres	Dust or Sandrising Vis >1000 Metres	Dust or Sandstorm Vis <1000 Metres	Gale	Clear Sky	Cloudy Sky
	Rain	Snow	Ice. Pellets	Hail											
Sallum	0	0	0	0	0	0	0	2	0	0	0	0	0	15	0
Mersa Matruh (A)	0	0	0	0	0	0	4	4	0	0	0	0	0	21	0
Alexandria (A)	1	0	0	0	0	0	3	14	1	0	0	0	0	18	0
Port Said (A)	0	0	0	0	0	0	0	0	0	0	0	0	0	28	0
Al Arish	0	0		0	0	0	8	4	0	0	0	0	0	14	0
Ghazza	0	0	0	0	0	0	1	5	0	0	0	0	0	16	0
Tanta	0	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Cairo (A)	0	0	0	0	0	0	11	7	4	0	0	0	0	11	
Fayoum	0	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Minya (A)	0	0	0	0	0	0	10	0	0	0	0	0	0	31	0
Assyout (A)	0	0	0	0	0	0	0	0	4	0	1	0	0	31	0
Luxor (A)	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0
Aswan (A)	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0
Siwa	0	0	0	0	0	0	0	0	1	0	0	0	0	29	0
Bahariya	0	0	0	0	0	0	1	1	0	0	0	0	0	30	0
Farafra	0	0	0	0	0	0	0	0	0	0	2	0	0	30	0
Dakhla	0	0	0	0	0	0	0	0	0	0	3	0	0	31	0
Kharga	0	0	0	0	0	0	0	0	0	0	2	0	0	31	0
Tor	0	0	0	0	0	0	2	0	0	0	0	0	0	31	0
Hurghada	0	0	0	0	0	0	0	0	0	0	1	0	0	30	
Qusair	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0

Table A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

OCTOBER — 1964

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Sallum	42	7	0	1–10	22	73	119	102	23	16	10	20	11	35	75	52	558
				11–27	5	26	37	3	0	1	0	9	32	11	7	6	137
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	27	99	156	105	23	17	10	29	43	46	82	58	695
Mersa Matruh (A)	33	0	18	1–10	119	67	41	44	26	23	17	21	25	47	14	19	463
				11–27	103	30	15	16	21	6	6	27	2	1	0	3	230
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				All ≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				l speeds	222	97	56	60	47	29	23	48	27	48	14	22	693
Alexandria (A)	53	0	1	1–10	179	156	87	39	34	21	16	11	6	3	7	45	604
				11–27	30	40	3	0	0	0	0	0	0	0	0	13	86
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	209	196	90	39	34	21	16	11	6	3	7	58	690
Port Said (A)	0	2	0	1–10	185	222	50	6	3	12	8	0	6	10	8	25	535
				11–27	121	60	7	0	0	0	0	0	0	0	0	19	207
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				speeds	306	282	57	6	3	12	8	0	6	10	8	44	742
Ghazza	0	46	12	1–10	58	27	61	37	61	174	7	6	11	15	39	89	585
				11–27	37	19	0	0	0	6	0	0	0	1	5	31	99
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	95	46	61	37	61	180	7	6	11	16	44	120	684
Tanta	58	27	0	1–10	141	222	88	49	11	1	1	1	10	16	39	78	657
				11–27	0	2	0	0	0	0	0	0	0	0	0	0	2
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	141	224	88	49	11	1	1	1	10	16	39	78	659
Cairo (A)	5	0	34	1–10	23	105	170	93	20	0	0	0	0	0	1	5	417
				11–27	9	117	102	43	16	0	0	0	0	0	0	1	288
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	32	222	272	136	36	0	0	0	0	0	1	6	705
Fayoum	7	0	46	1–10	450	139	9	5	2	1	1	0	1	0	2	75	685
				11–27	3	0	2	0	0	0	0	0	0	0	0	1	6
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	453	139	11	5	2	1	1	0	1	0	2	76	691

Table A 5 (*contd.*)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

OCTOBER — 1964

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed n knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Minya . . . . . (A)	5	12	137	1–10	28	10	1	0	1	1	0	0	1	0	51	310	403
				11–27	14	0	0	0	0	0	0	0	0	0	3	170	187
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**42**	**10**	**1**	**0**	**1**	**1**	**0**	**0**	**1**	**0**	**54**	**480**	**590**
Asyout . . . . . (A)	3	0	0	1–10	1	9	4	5	4	5	1	0	101	95	311	77	613
				11–27	1	9	0	0	0	0	0	0	3	3	50	62	128
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**2**	**18**	**4**	**5**	**4**	**5**	**1**	**0**	**104**	**98**	**360**	**139**	**741**
Luxor . . . . . (A)	43	0	2	1–10	78	57	47	58	31	39	60	49	9	25	69	172	694
				11–27	0	1	1	0	1	0	0	0	0	0	0	2	5
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**78**	**58**	**48**	**58**	**32**	**39**	**60**	**49**	**9**	**25**	**69**	**174**	**699**
Aswan	2	0	0	1–10	396	118	12	12	1	2	3	0	0	1	14	115	614
				11–27	38	17	0	2	0	0	0	0	0	0	2	9	128
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**434**	**135**	**12**	**14**	**1**	**2**	**3**	**0**	**0**	**1**	**16**	**124**	**742**
Siwa	135	44	0	1–10	26	56	110	94	93	44	9	11	13	33	28	16	533
				11–27	1	18	10	1	0	1	0	0	0	0	0	1	32
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**27**	**74**	**120**	**95**	**93**	**45**	**9**	**11**	**13**	**33**	**28**	**17**	**565**
Dakhla	1	39	1	1–10	90	88	42	12	7	10	17	42	62	72	95	153	690
				11–27	0	3	10	0	0	0	0	0	0	0	0	0	13
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**90**	**91**	**52**	**12**	**7**	**10**	**17**	**42**	**62**	**72**	**95**	**153**	**703**
Hurghada	13	0	1	1–10	48	32	2	0	3	1	4	1	6	13	154	51	315
				11–27	95	3	0	0	0	0	0	0	0	4	140	171	413
				28–47	0	0	0	0	0	0	0	0	0	0	0	2	2
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**143**	**35**	**2**	**0**	**3**	**1**	**4**	**1**	**6**	**17**	**294**	**224**	**730**
Quseir	6	5	9	1–10	96	7	0	0	0	0	0	3	2	35	221	107	471
				11–27	181	2	0	0	0	0	0	0	0	4	13	53	253
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**277**	**9**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**39**	**234**	**160**	**724**

Table B 1.—UPPER AIR CLIMATOLOGICAL DATA

OCTOBER — 1964

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 0000 U.T.	Surface	31	*1018m.b.	*1020m.b.	*1013 m.b.	31	19.1	23.4	16.2	31	14.9
	1000	31	184	207	165	31	20.3	27.0	15.0	31	14.8
	850	31	1579	1605	1554	31	15.1	20.2	8.8	21	— 9.0
	700	31	3188	3228	3162	31	4.4	8.2	1.9	12	— 9.4
	600	31	4428	4495	4398	31	— 3.2	3.1	—14.9	4	—15.7
	500	31	5876	5933	5787	31	—12.6	— 5.1	—17.8	3	—27.9
	400	31	7516	7689	7443	31	—25.1	—18.0	—30.2	1	—37.6
	300	31	9534	9696	9400	31	—40.4	—34.0	—46.0	—	—
	200	29	12230	12400	12030	29	—55.4	—49.5	—61.9	—	—
	150	26	14001	14202	13816	26	—62.6	—58.5	—66.0	—	—
	100	24	16462	16592	16259	24	—69.3	—64.2	—76.8	—	—
	70	19	18068	18700	18400	19	—65.0	—62.0	—68.9	—	—
	50	13	20654	20769	20485	13	—59.0	—57.1	—63.4	—	—
	30	10	23928	24058	23798	10	—53.8	—51.9	—56.7	—	—
	20	8	26579	26704	26422	8	—49.3	—48.0	—51.5	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 U.T.	Surface	31	*999 m.b.	*1002m.b.	*996m.b.	31	20.4	25.0	18.1	61	12.5
	1000	31	135	158	108	16	20.6	25.0	18.1	16	12.1
	850	31	1536	1570	1506	31	16.9	21.7	8.4	23	— 4.5
	700	31	3158	3197	3115	31	6.7	10.0	2.3	8	—11.5
	600	31	4406	4458	4358	31	— 0.2	5.2	— 4.1	—	—
	500	31	5838	5908	5774	31	—10.2	— 4.0	—15.3	1	—27.8
	400	31	7517	7608	7422	31	—22.8	—16.6	—27.5	1	—30.2
	300	31	9563	9686	9439	31	—37.5	—32.4	—42.3	—	—
	200	31	12256	12402	12093	31	—54.8	—50.7	—60.3	—	—
	150	31	14056	14207	13891	31	—63.9	—60.4	—66.7	—	—
	100	28	16493	16624	16337	28	—71.9	—67.3	—78.5	—	—
	70	24	18606	18740	18500	24	—68.6	—64.5	—73.2	—	—
	60	20	19530	19660	19423	20	—64.8	—62.0	—67.1	—	—
	50	19	20661	20786	20558	19	—60.8	—58.1	—65.7	—	—
	40	18	22057	22190	21944	18	—58.4	—54.6	—61.1	—	—
	30	17	23874	24026	23756	17	—54.5	—52.2	—56.5	—	—
	20	13	26507	26650	26388	13	—50.1	—46.1	—52.4	—	—
	10	1	31075	31132	31008	6	—43.4	—37.7	—48.0	—	—
Aswan 0000 U.T.	Surface	31	*989m.b.	*991m.b.	*988m.b.	31	20.5	23.8	17.6	31	2.7
	1000	31	98	115	58	—	—	—	—	—	—
	850	31	1512	1527	1479	31	20.1	24.9	16.0	20	— 1.3
	700	31	3144	3198	3087	31	7.0	11.0	2.8	17	— 8.4
	600	31	4399	4462	4330	31	1.8	6.2	— 1.2	—	—
	500	31	5844	5914	5726	31	— 7.5	— 4.7	—12.0	—	—
	400	31	7543	7617	7443	31	—19.4	—16.7	—21.7	—	—
	300	31	9616	9720	9510	31	—35.2	—32.0	—38.5	1	—42.0
	200	31	12328	12450	12192	31	—54.8	—53.5	—55.7	—	—
	150	31	14118	14240	13969	31	—66.7	—64.2	—69.3	—	—
	100	26	16504	16617	16363	26	—76.7	—70.7	—83.8	—	—
	70	17	18555	18706	18180	17	—70.0	—66.2	—73.1	—	—
	50	13	20626	20792	20477	13	—60.3	—44.2	—63.7	—	—
	30	7	23826	23942	23701	7	—53.2	—52.0	—54.8	—	—
	20	5	26454	26573	26329	5	—49.1	—46.4	—50.6	—	—
	10	1	30974	—	—	1	—47.0	—	—	—	—

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elevation of the radiosonde station.

Table B 1 (*contd.*).—UPPER AIR CLIMATOLOGICAL DATA

OCTOBER — 1964

Station	Pressure Surface Millibar	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh (A) 1200 U.T.	Surface	31	*1018m.b.	*1021m.b.	*1015m.b.	31	24.2	32.0	22.0	31	17.8
	1000	31	182	202	158	31	23.3	30.4	19.0	31	13.8
	850	31	1579	1614	1542	31	14.5	18.8	10.0	20	— 2.4
	700	31	3097	3225	3139	31	4.2	7.8	1.0	11	—10.6
	600	31	4429	4477	4359	31	— 2.8	— 1.0	— 8.9	4	—15.9
	500	31	5846	5932	5769	31	—12.5	— 4.5	—20.1	2	—28.0
	400	31	7512	7636	7397	31	—24.6	—18.0	—29.3	—	—
	300	33	9541	9683	9325	31	—39.9	—34.0	—44.0	—	—
	200	29	12225	12422	12000	29	—54.9	—50.1	—61.0	—	—
	150	26	14012	14182	13808	26	—62.0	—56.9	—65.3	—	—
	100	25	16480	16626	16303	25	—68.3	—63.5	—74.9	—	—
	70	21	18626	18800	18440	21	—64.2	—61.6	—69.4	—	—
	50	16	20722	20904	20467	16	—58.3	—54.6	—62.2	—	—
	30	12	23979	24137	23757	12	—47.6	—43.6	—56.0	—	—
	20	10	26627	26825	26306	1	—46.8	—41.0	—51.9	—	—
	10	1	31371	—	—	—	—41.7	—	—	—	—
Helwan 1200 U.T.	Surface	31	*998m.b.	*1001m.b.	*995m.b.	31	30.6	34.4	26.8	31	6.7
	1000	31	127	149	100	6	31.5	33.7	27.9	6	3.8
	850	31	1540	1573	1501	31	17.0	21.8	12.3	22	1.1
	700	31	3161	3207	3110	31	6.5	9.7	3.0	8	—14.3
	600	31	4408	4469	4356	31	— 0.4	5.1	— 4.1	—	—
	500	31	5839	5921	5772	31	—10.0	— 4.1	—15.2	—	—
	400	31	7517	7611	7415	31	—22.7	—18.0	—28.5	2	—37.4
	300	31	9564	9686	9420	31	—37.2	—32.0	—42.6	—	—
	200	31	12260	12435	12082	31	—54.4	—48.4	—61.1	—	—
	150	31	14065	14200	13865	31	—63.3	—59.4	—67.6	—	—
	100	30	16502	16666	16310	30	—71.2	—66.7	—75.8	—	—
	70	27	18625	18780	18460	27	—69.5	—63.3	—70.8	—	—
	60	26	19568	19727	19380	26	—63.3	—58.6	—66.7	—	—
	50	25	20701	20861	20504	25	—59.2	—52.1	—63.3	—	—
	40	21	22117	22307	21970	21	—55.4	—51.3	—58.1	—	—
	30	20	23966	24179	23801	20	—51.9	—49.0	—54.8	—	—
	20	12	26625	26826	26524	12	—47.5	—53.4	—51.1	—	—
	10	3	31234	31365	31140	3	—42.7	—37.9	—47.3	—	—
Aswan 1200 U.T.	Surfaec	29	*988m.b.	*990m.b.	*986m.b.	29	35.1	38.5	29.5	29	3.0
	1000	29	88	105	66	—	—	—	—	—	—
	850	29	1522	1550	1463	29	12.3	26.1	17.4	15	— 1.7
	700	29	3180	3200	3079	29	7.9	11.5	4.5	15	—12.0
	600	29	4417	4473	4331	29	1.8	4.4	— 0.2	2	—12.8
	500	29	5861	5936	5773	29	— 7.1	— 4.4	— 9.8	—	—
	400	29	7565	7646	7473	29	—15.3	—15.0	—23.0	2	—29.2
	300	29	9613	9736	9549	29	—34.4	—31.0	—37.8	1	—42.9
	200	29	12371	12463	12241	29	—54.1	—51.1	—57.1	—	—
	150	29	14159	14279	14029	29	—65.3	—62.2	—68.9	—	—
	100	27	16561	16708	16442	27	—75.2	—70.7	—80.4	—	—
	70	15	18646	18776	18530	15	—68.9	—67.2	—72.4	—	—
	50	11	20690	20760	20602	11	—59.3	—56.1	—62.4	—	—
	30	8	23954	24033	23871	8	—50.8	—47.8	—55.6	—	—
	20	5	26621	26751	26527	5	—45.5	—42.3	—48.5	—	—
	10	2	31274	31321	31228	2	—37.4	—36.2	—38.7	—	—

N = The number of cases the element has been observed during the month.

* The atmospheric pressure corrected to the elev ation of the radiosonde stations.

Table B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE. THE HIGHEST WIND SPEED IN THE UPPER AIR

OCTOBER — 1964

	Station	Freezing Level									First Tropopause									Highest wind speed			
		Mean			Highest			Lowest			Mean			Highest			Lowest						
		Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Direction (000—360)	Speed in Knots
0000 U.T.	Mersa Matruh (A)	3950 (31)	637 (31)	- 9 (8.	5290	540	—	3380	684	-11.2	13099 (23)	168 (23)	-64.6 (23)	16561	100	-71.8	10410	258	-48.5	2235	199	238	130
	Helwan	4442 (31)	608 (31)	-15.8 (5)	5360	534	—	3460	674	-15.4	15691 (25)	116 (25)	-71.0 (25)	17200	88	-74.0	12600	185	-63.0	11910	208	250	116
	Aswan . . . (A)	4623 (31)	581 (31)	-10.1 (3)	5320	538	—	3630	658	-10.2	16030 (19)	111 (19)	-75.3 (19)	17000	102	-74.2	14097	150	-68.4	12800	190	270	17
1200 U.T.	Mersa Matruh (A)	3962 (31)	634 (31)	-13.3 (19)	5200	548	—	3210	693	-14.0	12372 (25)	162 (25)	-63.3 (25)	16554	100	-74.0	10170	273	-45.8	13125	173	278	149
	Helwan	4271 (31)	611 (31)	-18.9 (2)	5210	543	—	2600	750	—	15917 (29)	112 (29)	-70.7 (29)	18520	70	-68.2	12020	202	-61.0	10745	253	240	110
	Aswan . . . (A)	4701 (29)	582 (29)	-21.3 (4)	5230	545	—	3530	665	-12.2	15780 (20)	115 (20)	-73·1 (20)	17130	91	-74.1	13360	016	7.1	11030	246	210	80

Table B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

MERSA MATRUH (A) OCTOBER — 1964

Time	Pressure Surface (Millibar.)	Wind between specified ranges of direction (000–360)°																						Number of Calm winds	Total Number of Observations (T N)	Mean Scalar wind Speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	6	12	2	6	3	5	4	7	1	11	2	7	1	14	2	13	1	10	1	5	1	6	2	10	5	31	8
	1000	9	10	3	10	2	6	3	12	3	19	0	—	0	—	2	16	0	—	0	—	1	9	2	24	3	28	11
	850	3	20	8	18	3	16	2	17	1	10	1	16	1	10	0	—	2	3	0	—	2	22	3	10	1	27	15
	700	3	10	6	8	3	18	3	11	3	11	0	—	0	—	0	—	4	17	1	9	3	14	4	11	0	30	15
	600	0	—	3	7	1	11	4	10	2	10	0	—	2	10	1	14	4	21	4	12	5	16	4	14	0	30	13
	500	1	9	1	8	0	—	0	—	1	15	2	10	2	32	1	37	7	19	8	14	6	13	0	—	1	30	16
	400	1	21	0	—	0	—	0	—	1	17	0	—	0	—	1	80	12	30	10	24	3	22	2	19	0	30	25
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	47	16	38	10	32	2	38	0	—	0	29	36
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	36	12	66	7	38	2	66	6	—	0	22	55
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	54	7	48	7	48	1	12	0	—	0	16	46
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	62	5	48	3	27	1	47	0	—	0	10	43
	70	1	1	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	8	2	5	1	2	0	—	0	6	5
	60	0	—	1	17	2	1	1	9	0	—	0	—	0	—	0	—	1	12	1	11	0	—	0	—	0	6	8
	50	0	—	0	—	0	—	2	8	0	—	0	—	0	—	1	10	0	—	2	6	0	—	0	—	0	5	9
	40	0	—	0	—	1	20	1	9	0	—	0	—	0	—	0	—	1	5	0	—	2	2	0	—	0	5	7
	30	0	—	0	—	0	—	1	6	1	21	0	—	0	—	0	—	0	—	1	8	0	—	0	—	0	3	12
	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	80	0	—	0	—	0	1	80
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Sufrace	8	10	10	12	3	13	3	13	0	—	0	—	0	—	1	8	0	—	0	—	0	—	5	14	1	31	12
	1000	8	12	6	10	1	8	3	14	1	14	1	14	0	—	1	9	2	9	0	—	0	—	7	14	0	30	12
	850	6	16	6	17	3	12	3	18	2	14	2	19	0	—	0	—	1	14	3	9	1	9	3	13	1	31	14
	700	4	13	5	13	5	13	4	9	1	5	1	—	1	5	2	4	3	15	2	16	2	7	2	15	0	31	11
	600	3	8	2	10	0	—	5	6	3	10	0	—	1	20	4	18	5	12	6	14	1	9	1	18	0	31	12
	500	3	13	0	—	1	8	0	—	1	10	0	—	2	10	5	20	6	19	9	13	2	14	2	12	0	31	16
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	28	9	30	7	31	8	20	2	26	0	31	27
	300	0	—	0	—	0	—	1	4	0	—	0	—	0	—	4	37	9	40	12	44	4	32	1	35	0	31	39
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	46	9	54	14	49	2	44	0	—	0	29	50
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	64	10	45	11	46	1	50	0	—	0	24	48
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	25	10	23	8	27	1	17	0	—	1	21	23
	70	0	—	1	3	0	—	1	13	1	10	0	—	2	6	1	28	2	8	2	8	1	6	0	—	0	11	9
	60	0	—	0	—	0	—	2	10	2	8	0	—	0	—	2	9	2	8	1	9	1	6	0	—	0	10	8
	50	0	—	0	—	0	—	2	11	1	3	0	—	0	—	1	7	1	9	2	6	0	—	0	—	1	8	7
	40	0	—	0	—	0	—	1	14	0	—	0	—	0	—	1	7	0	—	2	11	1	21	1	10	0	6	12
	30	0	—	0	—	0	—	0	—	1	10	0	—	0	—	0	—	2	7	2	13	1	11	0	—	0	6	10
	20	0	—	0	—	0	—	1	10	0	—	0	—	0	—	0	—	0	—	3	31	0	—	0	—	0	4	26
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—

N — The number of cases the elemnet has been observed during the month.

TN — The total number of cases the wind has been observed for all directions during the month.

Table B 3.(*contd.*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

HELWAN — OCTOBER 1964

Time	Pressure Surface (Millibar)	Wind between specified ranges of direction (000–360)°																						Number of Calm winds	Total Number of Observations (TN)	Mean Scalar wind Speed (knots)
		345/014		015/044		045/074		075/104		105/134		135/164		165/194		195/224		225/254		255/284		285/314		315/344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	2	6	11	10	15	14	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	8	1	5	1	31	11
	1000	2	6	7	12	5	19	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	16	0	—	1	16	13
	850	3	16	8	9	6	13	8	10	1	4	0	—	1	8	0	—	0	—	2	4	1	10	1	8	0	31	10
	700	4	7	2	10	3	10	1	7	2	6	3	6	4	10	3	15	2	12	4	7	3	13	0	—	0	31	9
	600	5	11	1	8	2	17	1	6	1	12	0	—	2	12	3	16	7	12	6	14	1	8	2	13	0	31	12
	500	3	14	0	—	0	—	1	13	0	—	1	22	1	6	4	16	7	22	7	21	2	13	5	14	0	31	17
	400	1	20	0	—	0	—	1	7	0	—	1	24	0	—	2	30	11	31	6	32	4	36	5	18	0	31	29
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	26	12	53	9	45	8	31	1	30	0	31	43
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	57	11	54	13	56	6	48	0	—	0	31	54
	150	0	—	0	—	0	—	0	—	0	—	0	—	1	30	1	24	10	50	15	46	2	12	0	—	0	29	44
	100	1	7	0	—	0	—	0	—	0	—	0	—	3	21	2	24	7	30	5	23	4	42	0	—	0	22	28
	70	1	19	0	—	2	14	0	—	1	6	0	—	1	17	1	19	1	6	3	22	0	—	2	9	0	12	15
	60	3	7	2	10	1	24	1	17	0	—	0	—	0	—	3	12	0	—	1	10	0	—	0	—	0	11	12
	50	1	10	1	4	1	24	2	8	0	—	2	12	1	11	0	—	0	—	2	10	0	—	0	—	0	10	11
	40	0	—	0	—	2	7	3	17	0	—	0	—	0	—	0	—	0	—	1	11	0	—	0	—	0	6	13
	30	0	—	0	—	1	16	1	14	0	—	1	9	0	—	0	—	0	—	0	—	0	—	0	—	0	3	13
	20	0	—	0	—	0	—	1	11	0	—	1	15	0	—	0	—	0	—	0	—	0	—	0	—	0	2	13
	10	0	—	0	—	0	—	1	34	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	34
1200 U.T.	Surface	6	12	17	13	4	15	0	—	0	—	0	—	0	—	0	—	1	5	0	—	1	12	2	12	0	31	13
	1000	0	—	5	15	1	17	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	6	15
	850	4	9	5	12	8	12	4	6	1	4	2	4	5	8	0	—	0	—	1	7	1	2	0	—	0	31	9
	700	1	4	4	8	4	10	1	3	1	10	2	8	1	13	4	15	5	9	3	6	5	10	0	—	0	31	10
	600	4	8	2	6	3	8	4	7	1	13	0	—	2	8	6	11	4	14	1	10	3	12	0	—	1	31	9
	500	2	17	1	21	0	—	2	8	1	12	0	—	2	16	3	14	9	20	4	24	5	14	2	15	0	31	17
	400	2	21	1	8	0	—	0	—	0	—	1	2	0	—	3	28	9	37	6	34	6	18	3	18	0	31	27
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	34	14	49	7	41	8	30	1	16	0	31	40
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	14	56	11	55	5	30	0	—	0	30	52
	150	0	—	0	—	0	—	0	—	0	—	0	—	1	20	1	48	14	47	8	30	4	30	2	40	0	30	39
	100	0	—	1	4	1	6	0	—	0	—	2	16	0	—	6	26	8	26	4	38	3	14	1	9	0	26	23
	70	0	—	0	—	2	21	3	11	1	14	0	—	1	14	4	19	1	32	2	20	0	—	0	—	1	15	17
	60	1	9	0	—	2	8	1	10	1	7	1	19	1	9	3	15	1	17	2	10	0	—	0	—	0	13	13
	50	1	4	0	—	0	—	5	19	2	48	2	16	1	12	1	16	0	—	0	—	0	—	0	—	0	12	21
	40	0	—	2	15	2	20	1	22	3	21	0	—	1	8	0	—	0	—	1	22	0	—	0	—	0	10	18
	30	0	—	1	11	0	—	0	—	2	20	1	25	0	—	0	—	1	11	0	—	0	—	0	—	2	7	12
	20	0	—	0	—	0	—	2	21	0	—	0	—	1	6	0	—	0	—	1	11	0	—	0	—	0	4	15
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—

N — The number of cases the wind has been observed during the month.

TN — The total number of cases the wind has been observed for all directions during the month.

Table B 3.(*contd*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A) — OCTOBER 1964

Time	Pressure Surface (Millibar.)	Wind between specified ranges of direction (000–360)°																						Number of Calm winds	Total Number of Observations (T N)	Mean Scalar wind Speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	15	12	5	11	2	10	5	10	0	—	0	—	0	—	0	—	1	17	0	—	0	—	1	10	2	31	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	3	4	1	15	6	12	9	12	5	16	2	11	1	5	0	—	3	12	0	—	0	—	1	8	0	31	12
	700	1	4	4	13	3	13	5	13	4	12	2	10	0	—	1	14	8	13	1	7	1	8	0	—	1	31	12
	600	0	—	0	—	2	8	2	6	5	7	4	8	1	11	1	8	3	10	4	16	6	8	3	8	0	31	9
	500	0	—	2	20	2	10	3	8	1	3	1	6	3	8	3	9	2	7	8	13	4	14	2	22	0	31	12
	400	1	10	4	15	2	18	1	5	0	—	0	—	0	—	2	15	6	12	11	20	2	34	2	12	0	31	17
	300	4	13	3	10	1	12	0	—	0	—	0	—	1	13	4	29	6	28	6	34	3	42	3	28	0	31	26
	200	1	9	1	3	0	—	1	5	0	—	0	—	4	22	1	6	6	27	9	45	4	44	4	15	0	31	29
	150	2	10	0	—	0	—	0	—	0	—	2	18	2	30	4	33	8	33	6	31	1	28	4	12	0	29	28
	100	0	—	0	—	0	—	0	—	0	—	0	—	3	26	1	9	2	20	4	10	1	16	0	—	0	11	17
	70	0	—	3	—	1	25	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	25
	60	0	—	0	—	0	—	0	—	1	18	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	18
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	17	10	1	12	1	15	1	8	0	—	0	—	0	—	0	—	0	—	0	—	1	12	4	6	4	29	8
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	3	10	5	7	5	8	1	7	0	—	3	4	2	8	1	12	0	—	1	14	3	6	5	12	0	29	8
	700	1	5	2	6	4	10	1	19	6	11	4	13	2	14	3	9	4	20	0	—	1	17	0	—	1	29	12
	600	2	4	3	7	3	9	4	12	2	15	3	11	0	—	2	16	5	13	2	8	2	8	0	—	1	29	10
	500	1	5	4	12	3	17	0	—	1	22	3	12	1	6	4	13	3	16	6	19	2	10	1	15	0	29	14
	400	1	8	5	21	0	—	1	27	0	—	0	—	1	21	2	14	7	21	5	24	3	29	3	16	1	29	20
	300	3	16	1	19	0	—	0	—	0	—	0	—	0	—	4	30	4	39	10	32	3	26	2	16	1	28	28
	200	0	—	1	18	0	—	0	—	1	50	1	37	1	32	6	36	2	43	9	42	4	40	3	14	0	28	26
	150	1	19	2	24	0	—	0	—	0	—	0	—	3	24	7	30	3	31	8	38	2	16	1	14	0	27	29
	100	0	—	0	—	0	—	3	25	0	—	0	—	0	—	2	20	0	—	2	12	1	20	1	18	0	9	20
	70	0	—	0	—	0	—	1	23	0	—	1	19	1	28	0	—	0	—	0	—	0	—	0	—	0	3	23
	60	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATIONS

EL-KASR — OCTOBER 1964

This month was dry during the first 10 days of the month, and rather humid for the rest of the month. Mist and fog occurred on some days.

The daily mean air temperature at 2 m. above ground was 21.6 C (0.5 °C below normal); the mean daily relative humidity was 4% above normal.

A marked warm spell started on 8th. and continued until the 10th. when it reached its peak (maximum air temperature was 35.4°C) . During this warm spell the highest values of evaporation from Pan class A and Piche both in the open air at levels 120, 60, 1 cms. occurred, also the highest maximum of soil temperature in dry field at depths 0.3, 1, 2, 3 cms took place on the 9 th., and for depths 5, 10. 20 cms on the 10 th

The 2 nd. heat wave was less marked than the l st. one. It prevailed between the 19 th. & 26 th. and reached its peak (31.9°C) on the 22 nd.

The most pronounced cold wave during the month started on the 11 th. with the peak on the 15 th. when the absolute minima of air temperature at 2 ms (13.2°C) and 5 cms (7.8°C) above ground level were observed ; also the absolute minima of soil temperature in dry field at depths 0.3, 1, 2, 3, 5 cms occurred on 15 th., but for depths 10, 20, 50 cms were observed on 28 th. For soil temperature at depths 100, 200 cms the absolute maximum occurred on the 1 st. and absolute minimum on 30 th. and 31 st.

The total actual duration of bright sunshine was 87% of the total possible duration with maximum on the 1 st. (11.0 hours) and minimum on the 29 th. (5.2 hours). The total rainfall was zero (-11.9 mms below normal).

TAHRIR — OCTOBER 1964

This month had the usual autumn weather, with frequent mist and fog at night and in the morning. Two distirct heat waves occurred, with their peaks on the 11 th. and 25th., and no rainfall occurred.

This month was relatively cool and dry when compared with the previous October. Mean relative humidity and vapour pressure were also less by 4% and 1.1 mms respectively. Total global radiation and total sunshine duration were more than those of last October by 1400 cal./cm^2 and 23.3 hours or about 7% of the possible sunshine duration repsectively. On the other hand mean wind speed at 2 m. was less by 0.4 m per second.

The effect of lower mean air temperature and wind speed on evaporation outweighed that of higher radiation values, resulting in diminishing the value of mean evaporation for the Piche by 2.3 mms, and for Pan A by 1.70 mms.

The relation between extreme soil temperatures down to 1 m. of the two months reflect the relation of the extreme air temperatures. Thus the extreme maxima were less at all depths by amonts ranging from 3.9 to 1.4°C, while the minima were higher by 1.9 to 0.3 °C down to 50 cms. At the depths of one metre the extreme minimum became less than that of last October by 0.1 °C.

GIZA — OCTOBER 1964

The month was normal with regard to air temperature and relative humidity.

The mean daily values of air temperature and relative humidity at 2 metres above ground were the normal values for October, while total rainfall was 3 mms below normal. The month started with a cold spell which continued till the 8th. This spell was followed by a prolonged moderate heat wave which continued till the end of the moth and reached its peak on the 22 nd. when the absolute maximum temperature for the month (34.7°C) and the lowest relative humidity (15%) were reported.

The extreme maximum soil temperature at all depths in the different fields were lowe than the corresponding values of October 1963. In the dry field the deviation was in the range 4.2°C at 0.3 cm depth and 0.3°C at 2 cms depth. The extreme minimum soil temperatures at depths down to 20 cms in the different fields were higher than the corresponding values of last October while at 50 and 100 cms depths the values were generally lower than the corresponding values of October 1963. In the dry field the deviation was in the range +2.3°C at 0.3 cm depth and -0.6°C at 100 cms depth.

The daily mean wind speed at 2 metres above ground was higher by 0.6 m/sec than the corresponding value of last October. The daily mean values of Piche evaporation, class A pan evaporation and potential evapotranspiration were lower than the corresponding values of October 1963 by 1.1, 0.29 and 0.7 mms respectively ; while the mean values of potential evaporation was 0.5 mm higher than the corresponding value of last October. The total actual duration of bright sunshine was 14.7 hours higher than the corresponding value of October 1963.

KHARGA — OCTOBER 1964

Compared with the normal values of October, this month is rather normal, with respect to air temperature but sharply drier.

It began with a cold spell with the peak on the 5th. when the lowest value of maximum air temperature was recorded 29.4°C (-5.3°C below normal) which led to the lowest day time mean temperature, the highest daily mean relative humidity and the lowest evaporation from Pan class A, Piche in free air at different heights and in the screen.

The month was characterized by a prolonged warm spell which was experienced between the 9th and the end of the month and reached its peak on the 17th, when the absolute maximum value of air temperature at 200 cms 39.8°C (6.6°C above normal) was recorded which led to the maximum value of soil temperature up to 10 cms on the same day. The maximum value of soil temperture at depth 20 cms was recorded on the 18th, while that for 50 cms was recorded on the 1st, 20th and 21 st, for larger depths, the maximum values were recorded on the begining of the month. On the 22 nd. and 23rd, both the lowest values of mean surface wind speed at 50 and 100 cms and relative humidity 7% were recorded. Lowest values of mean surface wind speed at 200 and 300 cms height were recorded on the 28th.

On the 31 st. the absolute minimum of air temperature at 5 cms, 20 cms above ground surface and 200 cms in the screen (11.2°C) and the absolute minimum values of soil temperature at different depths were all recorded.

The absolute minimum values of soil temperatures at 0.3 and 1 cm were recorded on the 26th.

The actual duration of bright sunshine was 94.3% of the possible duration.

The means of the maximum, minimum and daily mean eir temperatures were different from normal by 1.2°C, - 1.8°C and 0, 5°C respectively.

The daily mean relative humidity was 16 % lower than normal.

Table C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

OCTOBER — 1964

STATION	Air Temperature (°C)					Mean Duration in hours of daily air temperature above the following values									
	Mean Max.	Mean Min.	Mean of the day	Night time mean	Day time mean	—5°C	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C
El Kasr	27.4	16.3	21.6	19.4	24.1	24.0	24.0	24.0	24.0	23.0	16.7	4.5	0.4	0.0	0.0	0.0
Tahrir	30.7	15.7	22.2	19.2	25.4	24.0	24.0	24.0	24.0	23.6	13.6	7.8	1.7	0.0	0.0	0.0
Giza	31.3	16.7	23.3	21.1	25.7	24.0	24.0	24.0	24.0	23.8	15.7	8.9	2.3	0.0	0.0	0.0
Kharga	35.2	16.8	26.4	23.3	30.6	24.0	24.0	24.0	24.0	23.5	20.4	13.8	7.0	2.4	0.0	0.0

Table C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS.

OCTOBER — 1964

STATION	Max. Temp. at 2 metres (°C)				Min. Temp. at 2 metres (°C)				Min. Temp. at 5 cms. above (°C)			
	Highest		Lowest		Highest		Lowest		Dry soil		Grass	
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date
El Kasr	35.4	10	24.4	7	21.1	10	13.2	15	7.8	15	—	—
Tahrir	34.0	11	28.1	2,31	18.6	16	13.2	19	11.1	9	—	—
Giza	34.7	22	28.5	1	20.4	16-17	13.1	31	8.0	23	5.0	23
Kharga	39.8	17	29.4	5	23.0	11	11.2	31	8.8	31	—	—

Table C 3. —(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL

OCTOBER — 1964

STATION	(Solar+Sky) Radiation gm. cal/cm²	Duration of Bright Sunshine (hours)			Relative Humidity					Vapour pressure (mms)						Evaporation (mms)		Rainfall (mms)		
		Total Actual monthly	Total Possible monthly	%	Duration in hours		Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 U.T.	Highest	Date	Lowest	Date	Piche	Pan class A	Total Amount Monthly	Max. Fall in one day	Date
					90	80															
El Kasr.	366.0	309.3	353.7	87	—	—	75	63	20	22	14.6	15.7	20.0	13	6.2	22	9.8	6.98	0.0	—	—
Tahrir .	475.4	290.0	354.3	82	7.2	11.0	72	37	19	25	13.6	11.7	18.2	21	7.0	25	10.3	6.42	0.0	—	—
Giza . .	404.8	299.1	354.6	84	3.6	8.0	65	36	15	22-23	13.2	11.3	18.1	21	5.2	23	12.2	7.24	0.0	—	—
Kharga	472.7	338.2	358.6	94	0	0	28	16	7	22-23	6.7	6.3	12.6	7	2.5	24	28.9	13.67	0.0	—	—

TABLE C 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS (cms) IN DIFFERENT FIELDS

OCTOBER — 1964

STATION	Highest (H) Lowest (L)	Extreme soil tempetature (°C) in dry field at different depths (cms.)										Extreme soil temperature (°C) in grass field at different depths (cms,)									
		0,3	1	2	5	10	20	50	100	200	300	0,3	1	2	5	10	20	50	100	200	300
El Kasr	H	43.2	39.9	39.5	35.2	30.6	27.0	25.7	25.5	24.7	—	—	—	—	—	—	—	—	—	—	—
	L	8.8	9.2	10.1	13.6	17.4	20.7	23.0	23.7	24.0	—	—	—	—	—	—	—	—	—	—	—
Tahrir	H	45.0	43.9	40.6	38.5	34.1	29.5	27.9	28.4	28.3	27.7	—	—	—	—	—	—	—	—	—	—
	L	13.2	13.3	14.4	16.8	19.2	22.8	25.3	26.6	27.0	26.9	—	—	—	—	—	—	—	—	—	—
Giza , ...	H	49.3	48.1	48.0	37.5	31.6	29.4	30.2	30.4	29.3	27.5	27.2	26.2	23.4	25.0	24.3	24.0	24.6	24.7	24.4	—
	L	12.0	11.9	12.8	19.2	23.1	26.1	27.6	28.6	28.5	27.4	17.1	18.1	18.2	19.6	20.9	22.1	23.2	23.6	24.0	—
Kharga. . . .	H	51.3	45.7	42.6	38.9	33.6	31.2	30.6	31.1	30.6	29.5	—	—	—	—	—	—	—	—	—	—
	L	11.6	13.8	15.6	19.8	22.6	25.9	28.4	29.8	30.0	29.3	—	—	—	—	—	—	—	—	—	—

TABLE C 5.—SURFACE WIND

OCTOBER — 1964

STATION	Wind Speed m/sec at 2 metres			Days with surface wind speed at 10 metres.							Max. Gust (knots) at 10 metres	
	Mean of the day	Night time mean	Day time mean	≥ 10 knots	≥ 15 knots	≥ 20 knots	≥ 25 knots	≥ 30 knots	≥ 35 knots	≥ 40 knots	Value (knots)	Date
El Kasr . . .	3.3	2.7	4.2	—	—	—	—	—	—	—	—	—
Tahrir	3.6	1.8	3.7	29	16	1	0	0	0	0	25	4
Giza	3.7	2.3	3.2	31	11	0	0	0	0	0	26	11
Kharga . . .	3.6	2.9	4.7	—	—	—	—	—	—	—	—	—

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TECHNICAL NOTES

As from October 1970, the Meteorological Department started to issue a new series of publications in the form of Technical Notes (non periodical) on subjects related to studies and applications of meteorology in different fields for the benefit of personnel working in these fields.

The first Technical Note I was issued in October 1970 on : Sandstorms & Duststorms in Egypt.

THE ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

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Note : For explanatory notes on the tables please refer to Volume 7, Number 1 (January 1964).

GENERAL SUMMARY OF WEATHER CONDITIONS

NOVEMBER 1964

Mild in the northern parts, hot elsewhere during the 1st l alf of the month; cold in general during the 2nd half; rainy and occasionally thundery between 16th and 27th. Frequent early morning mist over Delta, Canal and Cairo areas

GENERAL DESCRIPTION OF WEATHER

The prevailing weather was generally mild in the northern parts, and markedly hot elsewhere most of the 1*st* half of the month. The second half was generally cold, rainy and occasionally thundery in the northern parts between the 16*th* & 27*th*. Daily rain was light/moderate in general but heavy over scattered localities where the monthly rain accordingly exceeded its normal. On the 16*th* rain penetrated southwards through middle and southern parts.

Widespread rising sand & sandstorms associated the active cold front on the 20*th*. Frequent early morning mist & fog developed over scattered localities of Delta, Canal & Cairo areas.

PRESSURE DISTRIBUTION

The prevailing pressure distribution over the surface map this month can be summarized in the following pressure systems.

— The anticyclonic ridge over the Black & Caspian seas vicinities.

— The anticyclonic ridge over west Europe & Northwest Africa.

— Shallow troughs of low pressure over Sudan and the great Sahara of Africa.

— The deep Atlantic transitory low pressure systems through Europe & Russia and their attached secodaries.

On the other hand the prevailing upper pressure systems at the 700 & 500 mb levels were confined in the two deep upper lows over north Atlantic and north Russia, their extended upper troughs southwards towards Mediterranean vicinities and the high pressure belt prevailing between latitudes 35°N & 10°N.

Secondary Mediterranean depressions were few this month, and were confined in a central Mediterranean shallow secondary on the 1*st*, and a rather deep west Mediterranean secondary depression on the 5*th*.

The first Mediterranean secondary depression proceeded rapidly eastwards and reached east Mediterranean on the 4*th* where it filled up.

The second Mediterranean secondary depression deepened rapidly while was stationary till the 7*th*, then proceeded eastwards while slightly filling. On the 12*th* it passed Central Mediterranean, and by the 14*th* it reached Cyprus. On the 15*th* it moved eastwards, but east Mediterranean and northern vicinities were area of loose pressure gradient as a result of a marked approach of a deep transitory northern low pressure system from Black Sea. By the 19*th* the attached active (polar) cold front traversed Asia Minor, and accordingly Cyprus depression reformed on the 20*th*, then started filling gradually at the rear of the cold front while was stationary. On the 24*th* it proceeded eastward by the approach of a second deep northern low pressure system from the Black Sea vicinities.

High pressure on the other hand operated over Asia Minor & east Mediterranean rond periods (1*st* - 3*rd*), (5*th* - 12*th*) & (27*th* - 30*th*).

It is worth to mention that the barometric pressure over Egypt experienced three oscillations with its minima on the 4*th*, 14*th*, 20*th*; the minimum on the 20*th* was the most pronounced.

Round 180 mb level the subtropical jet stream was evident over Egypt most of the days of the month, while the polar jet stream was evident north of latitude 32°N round 260 mb level in association with the travelling Mediterranean depressions.

The highest wind speeds recorded at Mersa Matruh, Helwan & Aswan were 130, 140 & 150 knots round the 20*th*, 23*rd* & 28*th* respectively.

SURFACE WIND

The prevailing winds were Nly and NEly, light/moderate in general, but occassionally fresh over few scattered localities. As an exception Wly winds blew during the period (16*th* - 26*th*) and were moderate/fresh in general but occasionally strong particularly over the northern parts.

Gales were reported at : Sidi Barrani on the 19*th* & 20*th*; Dekheila on the 19*th* and at Mersa Matruh, Dabaa, Ras El Teen, Alexandria, Balteam, Ghazza, Abu Sueir & Fayed on the 20*th*.

TEMPERATURE

Maximum temperature was rather abnormal most of the first half particularly during the second week, when it was markedly above normal. During the second half of the month maximum temperature was appreciably subnormal.

The absolute maximum temperature for the Republic was 38.3°C reported at Aswan on the 2*nd*.

Minimum temperature oscillated slightly round normal over the northern & middle parts. Over the southern parts it was mostly subnormal.

The absolute minimum temperature for the Republic was 2.8°C reported at Dakhla on the 23*rd*.

PRECIPITATION

Rain fell over scattered localities of the northern parts between the 16*th* & 27*th*. It penetrated inland on the 16*th* through the middle & southern parts. Daily rain was light/moderate in general, but heavy over scattered localities where the monthly rain accordingly exceeded its normal.

The absolute daily rainfall was 77.5 mms reported at Rosetta L.H. on the 19*th*. The absolute monthly rainfall for the Republic was 122.5 mms reported also at Rosetta L.H.

Cairo, September 1971

M. F. TAHA
Under Secretary of State
Director General
Meteorological Department

SURFACE DATA

Table A 1.– MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION

NOVEMBER — 1964

STATION	Atmospheric Pressure (mbs) M.S.L		Air Temperature °C								Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evaporation mms. Mean
			Maximum		Minimum			Dry Bulb		Wet Bulb						
	Mean	D.F. Normal or Average	(A) Mean	D.F. Normal or Average	(B) Mean	D.F. Normal or Average	$\frac{A+B}{2}$	Mean	D.F Normal or Average	Mean	D.F Normal or Average	Mean	D.F Normal or Average	Total Actual	Total Possible	%	
Sallum	1017.7	+0.5	24.3	+0.2	15.1	—0.8	19.7	19.2	—0.7	14.7	—0.7	59	— 1	—	—	—	6 7
Mersa Matruh (A)	1017.9	+0.5	23.2	—0.2	13.3	0.0	18.2	17.7	—0.5	14.5	—0.2	68	+ 2	233.3	317.2	73.5	7 2
Alexandria (A)	1017.3	+0.4	24.2	—0.2	13.3	—1.5	18.8	18.4	—0.9	15.3	—0.8	70	— 2	256.8	318.0	80.8	4.9
Port Said (A)	1016.8	+0.4	23.7	—0.4	17.5	—0.9	20.6	20.1	—0.8	16.7	—0.9	69	— 3	244·1	318.0	73.6	5.6
El Arish	1017.1	0.0	24.1	—1.1	14.1	—0.2	19.1	18.5	—1.2	15.8	—0·8	74	+ 4	233.9	317.2	73.7	5.4
Ghazza	1016.5	—0.2	22.9	—1.3	14.1	—0.7	18.5	18.4	—1.2	15.4	—0·4	71	+ 1	209.1	317.2	65.9	5.0
Tanta	1016.7	—	24.6	—	12.7	—	18.6	17.8	—	14.4	—	67	—	—	—	—	3.4
Cairo (A)	1017.0	+0.1	24.9	—0.2	14.0	+0.1	19.4	19.0	—0.3	14.3	0.7	57	— 4	—	—	—	10.9
Fayoum	1017.1	—	26.2	—	12.4	—	19.3	18.5	—	14.2	—	60	—	—	—	—	5.3
Minya (A)	1017.5	+1.1	26.9	+0.1	9.4	—2.2	18.2	18.0	—0.4	13.7	—0.3	59	0	—	—	—	6.1
Assyout (A)	1017.3	+1.1	25.8	—0.8	12.3	—0.6	19.0	18.6	—0.8	12.7	—0.8	46	— 2	—	—	—	9.8
Luxor (A)	1015.9	+1.5	30.3	+0.7	11.1	—1.2	20.7	20.0	+0.7	13.4	—1.6	43	— 4	—	—	—	6.7
Aswan (A)	1015.8	+1.6	29.8	—1.6	14.2	—2.3	22.0	21.6	+1.1	12.9	—0.7	30	0	—	—	—	12.1
Siwa	1018.2	+0.4	24.9	—1.4	9.7	+0.4	17.3	17.2	—1.0	12.3	—0.4	53	+ 3	—	—	—	6.7
Bahariya	1017.1	+0.3	26.5	—0.3	11.1	—0.6	18.8	18.6	+0.5	12.5	—1.3	45	— 6	—	—	—	6.6
Farafra	1019.4	—	25.8	—	9.2	—	17.5	17.2	—	11.1	—	42	—	—	—	—	9.2
Dakhla	1016.1	+1.1	27.2	—0.5	8.6	—3.2	17.9	17.8	—1.4	11.1	—0.9	38	+ 1	—	—	—	10.9
Kharga	1017.2	—	28.3	—	12.4	—	20.4	20.5	—	12.4	—	32	—	310.7	328.4	94.6	14.4
Tor	1016.1	+1.5	25.6	—1.1	13.8	—0.8	19.7	20.0	—1.0	15.1	—0.8	56	+ 0	—	—	—	6.4
Hurghada	1016.0	+1.5	26.1	+0.4	13.8	—1.7	20·0	20.1	—0.7	14.4	—1.4	50	— 6	—	—	—	12.5
Quseir	1016.2	+2.1	26.0	—1.4	17.9	—1.6	22.0	21.9	—1.6	16.2	—1.4	52	— 1	—	—	—	12.6

TABLE A 2.—MAXIMUM AND MINIMUM AIR TEMPERATURES

NOVEMBER — 1964

STATION	Maximum Temperature °C									Grass Min. Temp.		Minimum Temperature °C							
	Highest	Date	Lowest	Date	No. of Days with Max-Temp.					Mean	D. From Normal	Highest	Date	Lowest	Date	No. of Days with Min. Temp.			
					>25	>30	>35	>40	>45							<10	< 5	< 0	<— 5
Sallum	34.0	12	18.3	20	11	1	0	0	0	10.4	—	20.6	1	11.6	22	0	0	0	0
Mersa Matruh (A)	32.4	12	18.0	21,22,24	8	1	0	0	0	—	—	19.4	1	10.0	21	0	0	0	0
Alexandria (A)	32.0	13	17.0	20	15	1	0	0	0	—	—	17.5	1	10.2	29	0	0	0	0
Port Said (A)	30.6	12	15.6	21	11	1	0	0	0	11.2	—	22.2	10	12.1	21	0	0	0	0
El Arish	34.3	12	17.7	21	14	2	0	0	0	12.2	—	21.6	15	10.2	29	0	0	0	0
Ghazza	31.7	14	18.0	22	2	2	0	0	0	13.6	—	18.0	16	10.3	30	0	0	0	0
Tanta	32.7	13	13.6	21	16	2	0	0	0	—	—	16.2	11	8.5	28	3	0	0	0
Cairo (A)	34.7	12	17.3	22	14	4	0	0	0	—	—	17.4	15	10.8	30	0	0	0	0
Fayoum	32.4	12	20.3	20	17	5	0	0	0	10.1	—	15.5	4	8.0	21	6	0	0	0
Minya (A)	35.2	12	20.5	21	17	7	1	0	0	7.4	—	15.0	1	6.3	21	8	0	0	0
Assyout (A)	34.0	12	19.2	21	16	4	0	0	0	9.5	—	16.5	4	8.0	23	7	0	0	0
Luxor (A)	36.0	11	21.4	21	22	16	3	0	0	—	—	17.8	5	5.2	23	12	0	0	0
Aswan (A)	38.3	2	21.0	23	20	16	8	0	0	—	—	18.8	4	7.0	22	9	0	0	0
Siwa	33.3	12	19.2	20	13	2	0	0	0	8.0	—	15.7	2	5.0	22	16	0	0	0
Bahariya	36.5	12	19.8	21	16	5	3	0	0	9.7	—	15.8	9	5.9	22	6	0	0	0
Farafra	34.9	13	19.5	21	15	5	0	0	0	8.7	—	13.6	2	5.3	22	19	0	0	0
Dakhla	37.2	11	20.4	21	16	7	3	0	0	4.2	—	15.7	4	2.8	23	18	4	0	0
Kharga	36.5	11	19.0	24	19	11	4	0	0	10.6	—	20.4	10	5.8	22,23	12	0	0	0
Tor	30.0	4	20.8	22	19	0	0	0	0	—	—	17.1	5	10.1	30	0	0	0	0
Hurghada	30.9	13	21.6	25	19	1	0	0	0	12.8	—	17.8	5	9.2	23	2	0	0	0
Quseir	29.2	10	22.0	22	18	0	0	0	0	15.5	—	21.0	5	13.5	22	0	0	0	0

TABLE A 3.—SKY COVER AND RAINFALL

NOVEMBER — 1964

Station	Mean Sky Cover (Oct)					Rainfall (mms)										
	00 U.T.	06 U.T.	12 U.T.	18 U T	Daily Mean	Total Amount	Dev. From Normal	Max. Fall in one day		Number of days with Amount of Rain						
								Amount	Date	<0.1	≥0.1	≥1.0	≥5.0	≥10	≥25	≥50
Sallum (A)	2.9	3.7	4.4	3.5	3.4	3.8	—35.9	1.5	17	0	5	2	0	0	0	0
Mersa Matruh (A)	2.6	3.8	3.9	2.1	2.9	28.8	+ 2.1	10.9	23	1	9	5	3	1	0	0
Alexandria (A)	3.4	4.2	3.8	3.2	3.6	60.4	+28.0	18.5	19	1	8	7	5	2	0	0
Port Said (A)	2.2	2.9	2.8	1.6	2.2	15.5	+ 6.4	8.1	18	0	6	4	1	0	0	0
El Arish	4.1	4.1	3.8	3.3	3.0	11.7	— 6.6	5.2	17	0	5	4	1	0	0	0
Ghazza	2.3	3.8	3.9	2.3	2.5	75.4	+40.0	27.7	17	1	10	8	5	3	1	0
Tanta	—	2.3	2.6	0.9	—	7.8	+ 3.2	3.5	16	0	6	3	0	0	0	0
Cairo (A)	2.3	3.2	3.4	2.2	2.8	2.0	— 1.5	1.0	16,19	3	2	2	0	0	0	0
Fayoum	—	1.0	1.6	1.0	—	Tr.	— 0.6	Tr.	16	1	0	0	0	0	0	0
Minya (A)	0.8	0.9	1.8	0.9	0.8	Tr.	— 0.2	Tr.	16	1	0	0	0	0	0	0
Assyout (A)	0.4	0.9	1.1	0.5	0.7	0.0	0.0	0.0	—	0	0	0	0	0	0	0
Luxor (A)	0.3	0.5	0.7	0.3	0.6	1.0	+ 0.9	1.0	17	0	1	1	0	0	0	0
Aswan (A)	0.4	0.9	1.0	0.9	0.8	Tr.	— 0.1	Tr.	16	1	0	0	0	0	0	0
Siwa	0.8	1.0	2.0	1.4	1.5	0.0	— 0.2	0.0	—	0	0	0	0	0	0	0
Bahariya	1.0	1.2	1.8	0.9	1.2	0.1	— 0.6	0.1	16	0	1	0	0	0	0	0
Farafra	0.4	0.9	1.7	0.9	1.1	0.6	+ 0.6	0.6	16	0	1	0	0	0	0	0
Dakhla	0.1	0.1	0.7	0.3	0.4	0.0	— Tr.	0.0	—	0	0	0	0	0	0	0
Kharga	0.5	0.6	0.9	0.5	0.2	2.1	+ 2.0	2.1	16	0	1	1	0	0	0	0
Tor	1.2	1.3	1.2	0.7	1.1	Tr.	— 0.8	Tr.	3	1	0	0	0	0	0	0
Hurghada	0.1	1.0	1.0	0.2	0.6	0.0	— 0.2	0.0	—	0	0	0	0	0	0	0
Quseir	0.4	1.0	1.0	0.5	0.8	Tr.	— 2.2	Tr.	16	1	0	0	0	0	0	0

TABLE A 4—DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

NOVEMBER—1964

Station	Precipiation				Frost	Thunderstorm	Mist Vis ≥1000 metres	Fog Vis < 1000 Metres	Haze Vis ≥1000 Metres	Thick Haze Vis < 1000 Metres	Dust or Sandrising Vis ≥1000 Metres	Dust or Sandstorm Vis <1000 Metres	Gale	Clear Sky	Cloudy Sky
	Rain	Snow	Ice Pellets	Hail											
Sallum	5	0	0	0	0	0	0	2	0	0	2	2	0	8	1
Mersa Matruh (A)	9	0	0	0	0	2	2	1	0	0	3	3	1	9	0
Alexandria (A)	8	0	0	1	0	3	6	6	0	0	1	0	1	6	7
Port Said (A)	6	0	0	0	0	0	0	1	0	0	0	0	0	13	2
El Arish	5	0	0	0	0	1	6	2	2	0	0	0	0	6	5
Ghazza	10	0	0	0	0	2	1	2	0	0	1	0	1	11	5
Tanta	6	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Cairo	2	0	0	0	0	0	6	3	17	0	3	1	0	14	3
Fayoum	0	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Minya (A)	0	0	0	0	0	1	4	0	1	0	0	0	0	22	0
Assyout (A)	0	0	0	0	0	0	0	0	2	0	1	0	0	27	1
Luxor (A)	1	0	0	0	0	1	0	0	2	0	2	1	0	29	0
Aswan (A)	0	0	0	0	0	1	0	0	0	0	1	1	0	23	0
Siwa	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
Bahariya	1	0	0	0	0	0	0	0	0	0	1	0	0	21	0
Farafra	1	0	0	0	0	0	0	0	0	0	1	0	0	24	0
Dakhla	0	0	0	0	0	0	0	0	0	0	1	0	0	29	0
Kharga	1	0	0	0	0	1	0	0	0	0	1	0	0	27	0
Tor	0	0	0	0	0	0	0	0	1	0	1	0	0	22	0
Hurghada	0	0	0	0	0	0	0	0	0	0	1	0	0	27	0
Quseir	0	0	0	0	0	0	0	0	0	0	2	0	0	26	0

TABLE A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

NOVEMBER — 1964

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Sallum	12	1	0	1—10	7	40	69	40	21	16	24	8	18	73	48	26	390
				11—27	0	0	6	1	0	2	4	7	16	164	100	17	317
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	7	40	75	41	21	18	28	15	34	237	148	43	707
Mersa Matruh (A)	11	0	1	1—10	34	53	16	35	27	47	22	43	64	41	25	21	428
				11—27	8	10	0	14	7	2	1	10	48	103	32	30	265
				28—47	0	0	0	0	0	0	0	0	0	1	11	3	15
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	42	63	16	49	34	49	23	53	112	145	68	54	708
Alexandria (A)	33	0	2	1—10	39	84	71	30	22	23	16	45	20	15	23	57	445
				11—27	3	11	11	2	1	0	3	38	24	19	79	31	222
				28—47	0	0	0	0	0	0	0	4	8	1	5	0	18
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	42	95	82	32	23	23	19	87	52	35	107	88	685
Ghazza	1	28	2	1—10	27	18	29	41	37	161	44	22	13	24	30	41	487
				11—27	17	5	0	0	1	76	24	39	46	19	18	4	189
				28—47	0	0	0	0	0	0	0	2	10	1	0	0	13
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	44	23	29	41	38	177	68	63	69	44	48	45	689
Tanta	68	18	0	1—10	61	75	75	31	12	1	9	64	129	44	40	49	590
				11—27	0	4	0	0	0	0	0	7	25	6	0	2	44
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	61	79	75	31	12	1	9	71	154	50	40	51	634
Cairo (A)	9	0	39	1—10	20	33	64	83	18	9	6	42	36	18	23	33	385
				11—27	3	34	64	16	4	3	16	52	34	33	15	10	284
				28—47	0	0	0	0	0	0	0	1	0	2	0	0	3
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	23	67	128	99	28	12	22	95	70	53	38	43	673
Fayoum	41	0	92	1—10	204	36	3	6	3	2	42	79	49	43	31	86	584
				11—27	0	0	0	0	0	0	0	0	3	0	0	0	3
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	204	36	3	6	3	2	42	79	52	43	31	86	587
Minya (A)	13	46	60	1—10	40	9	4	3	8	45	25	10	23	32	67	258	524
				11—27	6	1	0	1	0	0	0	3	4	13	11	38	77
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	46	10	4	4	8	45	25	13	27	45	78	296	601
Assyout	5	0	0	1—10	1	6	3	6	2	13	8	11	99	252	134	50	585
				11—27	2	0	0	0	25	0	1	7	11	17	49	18	130
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	3	6	3	6	27	13	9	18	110	269	183	68	711

TABLE A 5. (*contd.*)—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

NOVEMBER — 1964

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Luxor	28	0	3	1—10	59	91	34	26	32	33	108	53	27	25	33	124	645
				11—27	3	0	4	2	0	0	0	0	0	7	3	25	44
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	62	91	38	28	32	33	108	53	27	32	36	149	689
Aswan	0	0	0	1—10	342	143	26	24	5	1	5	0	1	5	26	69	647
				11—27	51	15	3	1	1	0	0	0	0	0	0	2	73
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	393	158	29	25	6	1	5	0	1	5	26	71	720
Siwa	184	26	0	1—10	16	5	32	27	40	38	19	4	21	116	119	21	459
				11—27	0	0	3	0	1	0	0	0	0	16	18	3	51
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	16	5	35	27	41	38	19	4	21	133	137	24	510
Hurghada	5	4	14	1—10	30	17	9	9	6	8	2	6	12	39	96	18	252
				11—27	49	0	0	1	1	0	0	0	1	107	165	120	444
				28—47	0	0	0	0	0	0	0	0	0	0	1	0	1
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	79	17	9	10	7	8	2	6	13	146	262	138	697
Quseir	0	2	29	1—10	36	49	10	12	7	4	0	4	2	55	231	47	457
				11—27	96	16	0	0	0	0	0	0	0	24	36	60	232
				28—47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	132	65	10	12	7	4	0	4	2	79	267	107	689

UPPER AIR CLIMATOLOGICAL DATA

Table B 1. - MONTHLY MEANS, ABSOLUTE HIGHER AND LOWER VALUES OF ALTITUDE, AIR TEMPERATURE AND DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

NOVEMBER — 1964

Station	Pressure Surface Millibar	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 0000 U.T.	Surface	30	*1018mb	*1024mb	*1008mb	30	15.6	20.7	12.0	30	2.3
	1000	30	182	228	95	30	16.6	22.0	12.0	30	12 3
	850	30	1551	1591	1437	30	9.3	15.9	2.3	24	1.9
	700	30	3133	3218	2971	30	— 0.2	7.8	— 9.7	16	—10.4
	600	30	4344	4464	4164	30	— 6.9	— 0.3	—14.0	6	—17.4
	500	30	5749	5880	5557	30	—16.6	—11.4	—22.4	5	—26.6
	400	30	7385	7557	7191	30	—29.0	—24.0	—33.8	4	—34.0
	300	27	9387	9584	9166	27	—40.2	—40.0	—50.0	—	—
	200	24	12009	12209	11728	24	—57.9	—51.5	—62.2	—	—
	150	22	13798	13965	13662	22	—58.1	—57.2	—69.0	—	—
	100	21	16291	16381	16037	21	—66.1	—62.4	—71.9	—	—
	70	12	18428	18510	18260	12	—64.7	—60.6	—62.6	—	—
	50	9	20536	20592	20421	9	—61.8	—58.2	—67.6	—	—
	30	4	23775	23832	23739	4	—54.0	—52.6	—55.4	—	—
	20	1	26386	—	—	1	—50.6	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 U.T.	Surface	29	*1000mb	*1006mb	*995mb	29	15.9	22.6	9.3	29	9.9
	1000	29	146	190	100	18	16.6	21.8	12.1	18	11.5
	850	29	1522	1564	1444	29	11.3	20.6	2.2	26	— 2.3
	700	29	3114	3185	2997	29	2.3	7.0	— 5.5	15	—12.5
	600	29	4343	4437	4217	29	— 4.6	1.4	— 9.0	5	—18.1
	500	29	5732	5877	5609	29	—14.1	— 8.1	—19.4	3	—23.9
	400	29	7406	7573	7233	29	—26.5	—21.0	—34.0	3	—35.1
	300	29	9419	9618	9226	29	—42.0	—39.0	—48.4	—	—
	200	29	12063	12283	11853	29	—56.7	—49.4	- 62 6	—	—
	150	28	13843	14004	13661	28	—61.1	—57.6	- 69 8	—	—
	100	27	16230	16425	16148	27	—67.3	—61.9	—72.5	—	—
	70	21	18464	18560	18310	21	—66.2	—60.0	—72.6	—	—
	60	19	19399	19499	19265	19	—63.5	—57.2	—68.7	—	—
	40	18	20466	20619	20409	18	—60.8	—55.6	—66.0	—	—
	50	13	21925	22013	21814	13	—57.4	—53.9	—59.3	—	—
	30	11	23747	23844	23644	11	—54.0	—51.6	—56.0	—	—
	20	9	26381	26479	26254	9	—50.6	— 49.1	—51.9	—	—
	10	1	31074	—	—	1	—43.3	—	—	—	—
Aswan 0000 U.T.	Surface	23	*992mb	*997mb	*989mb	23	16.1	23.0	10.8	23	4.9
	1000	23	127	168	97	—	—	—	—	—	—
	850	23	1509	1587	1472	23	13.1	21.3	4.4	21	— 0.2
	700	23	3119	3175	3058	23	5.0	6.9	1.7	8	— 9.2
	600	23	4362	4428	4287	23	— 1.9	1.5	— 1.3	5	—16.6
	500	23	5791	5863	5712	23	—11.1	— 8.4	—14.4	4	—22.4
	400	23	7463	7543	7319	23	—23.3	—21.3	—31.1	2	—30.4
	300	23	9544	9603	9303	23	—38.5	—29.7	—43.2	1	—48.9
	200	23	12173	12304	12093	23	—57.6	—53.6	—60.0	—	—
	150	23	13948	14085	13723	23	—65.9	—61.9	—69.3	—	—
	100	19	16373	16542	16048	19	—73.8	—70.3	—77.8	—	—
	70	14	18362	18900	18180	14	—70.7	—65.8	—80.4	—	—
	50	11	20496	20619	20212	11	—63.5	—60.6	—66.9	—	—
	30	8	23669	23858	23402	8	— 55.0	—51.8	—58.2	—	—
	20	8	26284	26509	25989	8	—50.8	—48.0	—53.4	—	—
	10	2	30798	30853	30743	2	—47.1	—45.7	—48.8	—	—

N = Number of observations of specified pressure surface.

* The atmospheric pressure corrected to the elevation of the radiosonde s

UPPER AIR CLIMATOLOGICAL DATA

Table B 1. (*contd.*)—MONTHLY MEANS, ABSOLUTE HIGHER AND LOWER VALUES OF ALTITUDE, AIR TEMPERATURE AND DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

NOVEMBER — 1964

Station	Pressure Surface Millibar	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 1200 U.T.	Surface	30	*1017mb	*1023mb	*1010mb	30	21.4	26.5	14.5	30	13.8
	1000	30	174	209	113	30	19.7	26.3	13.1	30	12.3
	850	30	1551	1595	1455	30	9.4	18.4	2.7	25	0.3
	700	30	3135	3218	3010	30	0.7	7.5	— 6.7	15	—11.9
	600	30	4357	4468	4208	30	— 5.4	— 0.2	—10.1	7	—17.5
	500	30	5759	5876	5586	30	—16.2	—10.6	—21.1	4	—26.1
	400	30	7395	7572	7206	30	—28.3	—22.5	—33.6	1	—35.2
	300	30	9400	9608	9191	29	—44.4	—39.0	—48.0	—	—
	200	30	12044	12264	11824	30	—56.8	—51.6	—61.3	—	—
	150	29	13844	14026	13634	29	—62.0	—56.2	—68.8	—	—
	100	26	16355	16526	16124	26	—65.4	—61.0	—70.0	—	—
	70	14	18486	18600	18260	14	—62.2	—56.5	—67.8	—	—
	50	12	20604	20700	20492	12	—57.7	—49.2	—62.8	—	—
	30	10	23853	23980	23745	10	—57.8	—49.1	—57.1	—	—
	20	7	26458	26573	26360	7	—47.8	—45.7	—50.9	—	—
	10	2	31033	31082	30984	2	—40.0	—39.6	—40.3	—	—
Helwan 1200 U.T.	Surface	29	*1000mb	*1005mb	*933mb	29	24.0	33.6	16.8	29	6.7
	1000	29	139	182	84	16	23.0	33.6	16.8	16	11.9
	850	29	1523	1568	1438	29	11.0	20.2	4.0	23	— 2.0
	700	29	3115	3202	2984	29	2.3	8.7	— 6.5	11	—12.7
	600	29	4344	4458	4204	29	— 4.8	1.5	—11.7	4	—19.8
	500	29	5755	5895	5602	29	—13.9	— 7.0	—21.0	5	—26.7
	400	29	7409	7588	7235	29	—26.4	—20.1	—32.9	3	—34.7
	300	29	9425	9648	9197	29	—41.5	—37.0	—47.5	—	—
	200	29	12077	12325	11847	29	—57.3	—52.8	—61.1	—	—
	150	28	13869	14096	13672	28	—63.2	—55.5	—68.8	—	—
	100	26	16346	16530	16178	26	—66.7	—61.2	—72.3	—	—
	70	22	18517	18680	18400	22	—65.3	—59.5	—71.3	—	—
	50	19	20581	20736	20465	19	—59.6	—53.1	—63.3	—	—
	30	13	23834	23947	23717	13	—53.2	—49.4	—57.2	—	—
	20	5	26500	26642	26394	5	—48.1	—45.0	—51.4	—	—
	10	1	30974	—	—	1	—49.0	—	—	—	—
Aswan 1200 U.T.	Surface	22	*992mb	*996mb	*988mb	22	27.4	37.2	20.0	22	7.0
	000	22	121	159	86	--	—	—	—	—	—
	850	22	1522	1580	1472	22	14.4	22.1	6.3	19	— 0.6
	700	22	3137	3191	3073	22	6.0	8.6	2.6	8	— 8.2
	600	22	4384	4442	4311	22	— 1.4	2.3	— 5.8	1	—14.7
	500	22	5814	5886	5731	22	—10.1	— 7.0	—14.8	2	—20.4
	400	22	7496	7576	7405	22	—22.3	—19.5	—27.7	3	—29.7
	300	22	9544	9645	9415	22	—37.8	—35.0	—41.5	—	—
	200	22	12230	12350	12067	22	—56.0	—52.6	—59.8	—	—
	150	22	14019	14155	13680	22	—64.4	—61.0	—69.5	—	—
	100	19	16460	16652	16350	19	—73.1	—65.8	—79.5	—	—
	70	13	18472	18680	18450	13	—70.4	—66.1	—74.2	—	—
	50	7	20615	20726	20511	7	—59.4	—54.7	—61.3	—	—
	30	6	23854	23981	23768	6	—51.8	—50.4	—53.1	—	—
	20	4	26510	26330	26416	4	—46.8	—45.4	—48.0	—	—
	10	1	31318	—	—	1	—35.4	—	—	—	—

N = Number of observations of specified pressure surface.

TABLE B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE; THE HIGHEST WIND SPEED IN THE UPPER AIR

NOVEMBER 1964

	Station	Freezing level									First Tropopause									Highest wind speed			
		Mean			Highest			Lowest			Mean			Highest			Lowest						
		Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Direction (000—360)°	Speed in Knots
		(N)	(N)	(N)							(N)	(N)	(N)										
0000 UT	M. Matruh (A)	3065 (30)	660 (30)	- 6.5 (15)	4390	604	-15.0	1730	820	- 2.4	11911 (21)	174 (21)	-54.2 (21)	14400	134	-68.3	10360	253	-54.3	7050	307	302	130
	Helwan . . .	3364 (29)	681 (29)	- 7.9 (12)	4670	582	—	1760	818	- -	13301 (26)	167 (26)	-63.8 (26)	17570	80	-73.2	9820	278	-51.9	15750	109	270	140
	Aswan . .(A)	4068 (23)	623 (23)	-15.1 (5)	4610	586	—	3380	672	—	15855 (15)	112 (15)	-71.4 (15)	17300	86	-75.8	12620	187	-63.4	13290	166	250	150
		(N)	(N)	(N)							(N)	(N)	(N)										
1200 U.T.	M. Matruh (A)	3186 (30)	698 (30)	- 7.8 (15)	4400	602	—	1820	816	- 5.3	12246 (27)	195 (27)	-57.6 (27)	13780	155	-68.7	9850	271	-52.5	13525	157	226	114
	Helwan . . .	3355 (29)	666 (29)	- 6.5 (13)	4700	586	—	1920	796	- 8.2	13298 (27)	168 (27)	-63.2 (27)	15700	114	-69.7	9550	284	-48.5	8210	351	280	134
	Aswan . .(A)	4250 (22)	598 (22)	-14.8 (2)	4780	575	—	3440	648	-11.0	15304 (16)	110 (16)	-71.7 (16)	16900	95	-77.0	14030	151	-69.5	12700	186	270	122

N — The number of cases the element has been observed during the month.

TABLE B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

MERSA MATRUH (A)— NOVEMBER 1964

Time	Pressure Surface Millibar	Wind between ranges of direction (000–360)°																						Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	1	12	2	8	2	2	3	7	2	5	2	8	0	—	4	11	4	9	7	11	0	—	3	18	0	30	10
	1000	0	—	4	11	0	—	3	12	2	4	2	10	0	—	2	9	2	20	3	18	6	16	3	18	2	29	13
	850	1	3	2	7	2	16	2	8	0	—	2	12	1	4	3	12	0	—	2	19	7	22	6	17	0	28	15
	700	2	8	1	3	1	20	0	—	2	12	0	—	1	13	1	11	2	20	4	21	4	23	6	22	1	25	17
	600	0	—	1	14	0	—	0	—	2	8	1	4	0	—	1	43	3	19	8	17	6	36	3	16	0	25	31
	500	1	17	1	11	0	—	0	—	0	—	0	—	1	18	0	—	4	31	9	26	8	37	1	35	0	25	30
	400	1	10	0	—	0	—	0	—	0	—	0	—	0	—	1	55	5	29	7	38	6	56	4	36	0	24	40
	300	1	8	1	6	0	—	0	—	0	—	0	—	0	—	1	101	2	62	11	50	7	49	0	—	0	23	49
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	60	1	90	10	62	5	46	1	33	0	18	58
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	51	1	70	10	55	4	36	0	—	0	16	51
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	31	1	42	6	40	1	49	0	—	0	9	40
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	14	1	33	0	—	0	3	20
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	15	1	18	0	—	0	2	16
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	18	0	—	0	—	0	1	18
	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	11	0	—	—	—	0	1	11
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	3	8	4	11	1	8	3	14	1	10	0	—	0	—	0	—	4	13	4	19	4	17	6	13	0	30	14
	1000	3	7	2	13	1	7	4	14	1	15	0	—	0	—	0	—	3	9	6	19	5	18	4	14	0	29	14
	850	0	—	2	10	0	—	1	7	5	12	1	12	0	—	3	12	3	17	5	18	7	18	3	17	0	30	15
	700	0	—	2	6	1	16	2	10	1	5	2	12	1	17	4	16	3	27	4	16	4	22	6	22	0	30	17
	600	1	12	2	8	0	—	1	4	0	—	0	—	1	7	5	15	5	26	5	23	7	36	3	20	0	30	22
	500	1	10	1	20	0	—	0	—	0	—	1	9	0	—	2	26	8	36	7	25	9	33	1	14	0	30	29
	400	0	—	1	18	0	—	0	—	0	—	0	—	0	—	3	31	6	56	10	42	8	45	1	18	0	29	43
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	28	7	51	10	53	7	62	2	18	0	28	50
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	59	12	64	5	63	1	14	0	25	61
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	27	3	48	11	53	6	48	0	—	0	21	50
	100	0	—	0	—	0	—	0	—	0	—	2	—	0	—	1	32	3	33	8	29	3	27	0	—	0	15	30
	70	0	—	0	—	0	—	0	—	0	—	1	—	0	—	1	15	2	8	2	33	1	10	0	—	0	6	18
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	17	1	13	4	20	0	—	0	—	0	6	18
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	4	1	3	3	16	0	—	0	—	0	5	11
	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	22	0	—	1	8	0	—	0	—	0	3	17
	30	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	—	—	2	10	0	—	0	—	0	2	10
	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	—	—	—	—	1	11	—	—	—	—	—	1	11
	10	0	—	0	—	0	—	0	—	0	—	0	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been obeserved for all directions during the month.

Table B 3.(*contd*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

HELWAN — NOVEMER 1964

Tiem	Pressure Surface (Millibar)	Wind between ranges of direction (000–360)°																						Number of Calm winds	Total Number of Observations (T N)	Mean Scalar wind Speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	0	—	4	8	8	12	1	4	2	4	1	2	0	—	1	15	1	7	0	—	0	—	1	5	10	29	6
	1000	0	—	8	15	3	21	2	8	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	5	2	18	12
	850	2	11	1	13	2	18	1	3	0	—	0	—	1	6	4	6	4	9	5	23	7	20	0	—	2	29	14
	700	0	—	2	4	2	15	0	—	0	—	1	7	1	17	3	23	4	14	9	26	7	16	0	—	0	29	19
	600	2	10	2	11	0	—	0	—	0	—	0	—	1	11	4	29	3	17	7	38	7	15	1	22	2	29	21
	500	0	—	1	19	0	—	0	—	0	—	0	—	1	27	4	31	3	32	10	32	6	26	3	8	0	28	27
	400	0	—	0	—	0	—	0	—	0	—	0	—	1	29	1	57	8	40	8	44	7	31	3	18	0	28	27
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	62	7	53	8	52	7	35	2	26	0	26	27
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	26	7	76	12	61	3	39	2	36	0	25	29
	150	0	—	6	—	0	—	0	—	0	—	0	—	0	—	0	—	2	86	13	61	3	51	0	—	0	18	29
	100	0	—	6	—	0	—	0	—	0	—	0	—	0	—	0	—	2	94	7	63	5	32	0	—	0	14	27
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	40	2	22	0	—	0	7	35
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	13	2	24	0	—	0	3	20
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	30	0	—	0	—	0	1	30
	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	8	0	—	0	—	0	1	8
	30	0	—	0	—	1	13	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	13
	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	8	0	—	0	—	0	1	8
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	3	12	4	14	2	19	0	—	0	—	0	—	1	6	6	7	4	14	1	8	4	9	2	11	2	29	01
	1000	1	17	5	17	1	27	0	—	0	—	0	—	0	—	2	6	1	4	1	5	3	10	1	9	1	16	12
	850	3	13	3	11	3	18	2	10	1	5	1	6	0	—	2	14	5	16	3	16	4	11	2	4	0	29	13
	700	1	10	1	10	3	8	0	—	0	—	1	9	2	26	4	10	1	12	7	24	4	23	5	10	0	29	16
	600	2	3	2	8	0	—	0	—	0	—	1	12	1	15	3	27	3	16	7	29	6	23	3	15	1	29	20
	500	1	8	0	—	1	6	0	—	0	—	0	—	1	24	2	36	7	32	8	36	8	22	1	10	0	29	28
	400	0	—	0	—	0	—	0	—	0	—	0	—	1	58	2	50	3	34	13	46	9	23	0	—	0	28	38
	300	0	—	1	48	0	—	0	—	0	—	0	—	0	—	2	62	4	74	14	26	6	34	1	21	0	28	53
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	101	2	90	10	62	7	42	1	46	0	21	59
	150	1	53	0	—	0	—	0	—	0	—	0	—	0	—	1	85	0	—	14	60	3	37	0	—	0	19	57
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	43	6	49	2	47	1	22	0	13	45
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	10	0	—	3	18	3	22	0	—	0	7	19
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	18	1	17	1	—	0	3	18
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	19	0	—	0	—	0	3	19
	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	22	1	23	0	—	0	3	22
	30	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	13	1	39	1	21	0	—	0	—	0	3	21
	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	—	—	0	—	2	26	0	—	0	—	0	2	26
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element thas been observed during the month.

TN 3= The total number of cases the wind has beeu observed for all directions during the month.

TABLE B 3 (*contd.*)—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

ASWAN (A) — NOVEMBER 1964

Time	Pressure Surface Millibar	Wind between ranges of direction (000—360)°																						Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	17	11	2	12	1	13	1	8	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	10	0	23	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	2	13	4	10	2	10	2	7	3	8	0	—	0	—	0	—	0	—	3	5	5	8	2	10	0	23	9
	700	0	—	0	—	0	—	0	—	2	18	0	—	2	8	2	11	4	21	6	15	4	14	3	13	0	23	15
	600	0	—	0	—	0	—	1	4	2	8	0	—	0	—	1	8	4	44	7	24	5	23	1	24	2	23	20
	500	1	10	2	20	0	—	0	—	0	—	0	—	0	—	0	—	4	31	9	38	6	31	0	—	1	23	30
	400	1	8	0	—	0	—	0	—	6	—	0	—	0	—	0	—	4	31	14	32	2	38	2	12	0	23	34
	300	1	17	0	—	1	13	0	—	0	—	0	—	0	—	0		3	51	15	51	3	50	0	—	0	23	48
	200	1	8	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	90	15	62	2	42	0	—	0	22	62
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	106	10	56	1	45	0	—	0	12	59
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	112	6	56	0	—	0	—	0	7	64
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	14	12	4	12	0	—	1	8	0	—	0	—	0	—	0	—	0	—	1	8	0	—	1	15	1	22	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	3	14	1	10	1	6	4	6	3	5	1	9	0	—	0	—	0	—	3	8	1	9	5	16	0	22	10
	700	1	14	0	—	0	—	0	—	2	10	0	—	0	—	0	—	4	18	9	17	2	20	3	10	1	22	15
	600	0	—	0	—	3	12	0	—	0	—	0	—	0	—	0	—	2	16	9	28	2	22	1	23	1	22	21
	500	0	—	0	—	1	10	0	—	0	—	0	—	0	—	1	12	6	26	9	33	1	47	2	24	2	22	30
	400	0	—	1	17	1	11	0	—	0	—	0	—	0	—	0	—	6	57	10	35	2	57	1	11	0	21	40
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	96	10	48	6	49	1	20	0	19	49
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	75	11	62	3	36	0	—	0	16	59
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	58	3	40	0	—	0	12	54
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	22	3	49	1	42	0	—	0	5	42
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N — The number of cases the element has been observed during the month.
TN — The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO—METEOROLOGICAL STATIONS

EL KASR—NOVEMBER 1964

Compared with the normal values, this month was slightly colder and more humid.

A warm spell started on the 11th. with the peak on the 12th. when the absolute maximum of air temperature at 2 metres above ground (7.1°C above normal), and the highest values of daytime mean (5.4 °C above normal), as well as those of soil temperatures for the surface layers down to 10 cms. depth in dry field, were observed ; also lowest relative humidity (43% below normal) occurred on that day.

A cold spell began on the 19th., with the peak on the 21st. when the absolute minima of air temperature at 5,200 cms. above ground, and those of soil temperatures for the surface layers down to 5 cms. of depth occurred.

The absolute maximum of soil temperatures at 20 cms. depth occurred on the 2nd. while that for 50,100 and 200 cms. depths. occurred on the 1st. and 2nd. The absolut, minima for depths 10 and 20 cms. occurred on the 23 rd. for 50 cms. on the 25 th. and 26 th. and for 100 and 200 cms. on the 30th.

The highest values of evaporation from pan class A and Piche in the screen and in the free air occurred on the 19th., and the lowest values on the 29 th.

The daily mean of relative humidity was 5% above normal with maximum 99% on the 11th. and minimum 28% on the 12th.

The maximum wind speed at different levels occurred on the 20 th., and the minimum on the 7th.

The actual duration of bright sunshine was 69% of the possible duration with maximum 10.6 hours on the 7 th. and minimum 2.3 hours on the 16th.

TAHRIR — NOVEMBER 1964

During the first week, a moderately cool weather prevailed. This was followed by a warm spell with marked peak (34.0°C) on the 12 th. A marked drop in temperature occurred at the beginning of the 3 rd. week and a rather cold weather prevailed until the end of the month. This cold spell was associated with rain in the period between the 16th. and 21st.

The month was slightly cooler (-0.4°C) than last November, and apart from the slight excess in rainfall (2.6 mms. against 0.2 mm. last year), it was drier. The deviations of mean relative humidity and vapour pressure were(-8%and -0.5 mm.) respectivetly.

The deviations in mean wind speed at 2 metres, the mean Piche and pan A evaporations were (+0.1) m/sec., 0.0 mm. and (-0.45) mm. respectively. In spite of these irrelevant deviations, these elements reached on the 20th. the highest values for November since the station was established. Thus the day mean of wind speed at 2 metres above ground reached 9 m/sec. (about 18 knots), Pan A evaporation exceeded 10 mms. on that day; a value which is usually found in mid-summer.

Concerning certain wind speeds to be reached or exceeded for at least 5 continuous minutes : 35 knots was reported in one day; 20 knots was reported in six days; whereas this last case was not reached last year.

The extreme maximum soil temperatures were higher than those of last November by 1.2 to 2.6°C down to 20 cms. depth, the difference vanishing at 50 cms. depth and reversing sign in deeper layers. The extreme minima were less by 0.1 to 1.8°C between the surface and one metre depth.

GIZA — NOVEMBER 1964

The month was cooler and drier than normal ; the daily mean of air temperature at 2 metres above ground , the daily mean of relative humidity and the total amount of rainfall were below their normal values by 1.3°C, 4% and 1.9 mms. respectively.

A heat wave provailed during the 2nd. week and attained a peak of 33.9°C on the 13th. (7.3°C above normal) which was the absolute maximum air temperature for the whole month. A prolonged cold wave followed the heat wave and lasted until the end of the month, yielding a peak of 18.1°C on the 22nd. (7.1°C below normal).

The extreme maxima of soil temperatures in the dry field at depths 0.3, 1 & 2 cms. were higher than the corresponding values of last November ; for 10 cms. and deeper layers, the values were lower, the maximum differences were +1.2°C at 0.3 cm. and -1·0°C at 100 cms. depth. The extreme minimum soil temperatures at 10 cms. depth and upper layers of dry field were higher than the corresponding values of last year, at deeper layers the values were lower, the maximum differences were +1.7°C at 0.3 cm. and -1.1°C at 50 cms. depth.

The mean wind speed at 2 metres above ground was higher than the corresponding values of last November by 0.7/m/sec.

The total actual duration of bright sunshine duration was lower than that of last year by 31 hours. The daily mean Piche evaporation, pan class A evaporation, potential evaporation and potential evapotranspiration for grass (Libia) were all higher than those of last year by 1.2, 0.07, 0.6 and 0.3 mms. respectively.

KHARGA — NOVEMBER 1964

This month was mild and rather dry as compared with the normal values of air temperature and relative humidity at 2 metres above ground level and also with respect to total rainfall.

During the period (8th. - 15th.) a warm spell prevailed. The maximum value of minimum air temperature at 5, 20 and 200 cms. above ground was 20.4°C (+ 6.2°C above normal). It was recorded on the 10th. which yielded the maximum daily, night and day time means of temperatures. The highest value of evaporation from pan class A and Piche in free air at different heights and in the screen was 26.4 mms. (+16.0 mms. above normal) and occurred also on the same day. The absolute value of air temperature at 2 metres was 36.5°C (+6.9 °C above normal) and was recorded on the 11th. as well as minimum values of water vapour pressure and relative humidity at 2 metres

(5% i.e. 45% below normal), which yielded the minimum daily mean relative humidity; also the maximum value of water vapour deficit was recorded on the same day. The maximum value of soil temperatures from 0.3 cm. up to 5 cms. were all recorded on the 13th., while that for 10 cms depth was recorded on the 11th. while for more depths, they were recorded at the beginning of the month.

A pronounced cold front passed on the 16th. when the maximum values of surface wind speed at heights 50, 100, 200, and 300 cms. were recorded and rain fell during night. On the 17th. the maximum value of water vapour pressure was recorded at 1300 U.T. The maximum value of relative humidity was 89% (+39% above normal) and was recorded on the 18th. at 1400 U.T. and water vapour deficit was minimum then.

The cold wave attained its peak round the 22nd. and the absolute minimum air temperature at heights 5, 20 and 200 cms. (5.8°C i.e. 6.0°C below normal) was recorded, which yielded the minimum value of daily, day and night time means of temperature on the 22nd; also both of surface wind speed and evaporation form pan class A and Piche in the screen and in the free air were all minimum on the 23rd. The minimum values of soil temperature from 0.3 cm. up to 5 cms. took place on the 22nd., while those for 10 and 20cms. were recorded on the 23rd ; for more depths, they were recorded at the end of the month. The minimum value of maximum air temperature (19.0°C i.e 8.4°C below normal), was recorded on the 24th.

The actual duration of bright sunshine was 94.6% of the possible duration .

The means of maximum, minimum and daily mean temperatures deviated from normal by -0.6°C, 0.5°C and 0.3 °C respectively.

The daily mean relative humidity was 9% below normal, though the mean of Piche evaporation in the screen was higher by 4.0 mms.

TABLE C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

OVEMBER — 1964

STATION	Air Temperature (°C)					Mean Duration in hours of daily air temperature above the following values										
	Mean Max.	Mean Min.	Mean of the day	Night time maan	Day time mean	—5°C	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C
El Kasr	23.3	13.3	18.0	16.3	20.3	24.0	24.0	24.0	24.0	16.3	7.2	0.3	0.0	0.0	0.0	0.0
Tahrir	25.1	12.9	18.2	16.0	20.7	24.0	24.0	24.0	24.0	17·0	7.7	2.1	0.2	0.0	0.0	0.0
Giza	25.5	12.2	18.3	16.5	20.7	24.0	24.0	24.0	23.9	17.4	8.0	2.2	0.3	0.0	0.0	0.0
Kharga	28.1	12.6	20.5	18.0	24.0	24.0	24.0	24.0	22.7	19.4	12.9	5.4	2.1	0.3	0.0	0.0

TABLE C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS

NOVEMBER — 1964

STATION	Max. Temp. at 2 metres (°C)				Min. Temp. at 2 metres (°C)				Min. Temp. at 5 cms. above (°C)			
	Highest		Lowest		Highest		Lowest		Dry soil		Grass	
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date
El Kasr	30.6	12	17.4	20	19.7	1	9.8	21	8.6	21	—	—
Tahrir	34.0	12	17.3	21	17.6	11	9.6	30	6.0	30	—	—
Giza	33.9	13	18.1	22	15.7	9	8.4	30	4.8	22	2.4	2.2
Kharga	36.5	11	19.0	24	20.4	10	5.8	22.23	3.8	22.23	—	—

TABLE C 3.—(SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 2 METRES, EVAPORATION & RAINFALL

NOVEMBER — 1964

STATION	(Soar+Sky) Radiation gm. cal/cm²	Duration of Bright Sunshine (hours)			Relative Humidity %					Vapour pressure (mms)						Evaporation(mms)		Rainfall (mms)		
		Total Actual monthly	Total Possible monthly	%	Duration in hours > 90%	Duration in hours > 80%	Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 UT	Highest	Date	Lowest	Date	Piche	Pan class A	Total Amount Monthly	Max. Fall in one day	Date
El Kasr	257.3	219.0	317·5	69	—	—	76	59	28	12	11.5	11.9	18.1	12	5.8	16	9.0	5.49	18.6	11.0	23
Tahrir	329.9	277.7	318.8	71	5.2	9.7	72	48	23	12	11.1	10.5	17.4	10	5.6	20	7.8	4.61	2.6	0.8	21
Giza.	295.0	235.0	319.7	73	2.5	6.8	67	44	14	13	10.4	9.7	15.7	9	5.1	13	8.9	4.42	0.6	0.4	16
Kharga	398.5	310.7	328.4	95	0	0	41	26	5	11	6.8	6.8	11.7	17	3.3	11	19.9	9.88	2.1	2.1	16

Table C 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS (cms) IN DIFFERENT FIELDS

NOVEMBER — 1964

STATION	Highest (H) Lowest (L)	Extreme soil temperature (°C) in dry field at different depths (cms.)										Extreme soil temperature (°C) in grass field at different depths (cms.)									
		0.3	1	2	5	10	20	50	100	200	300	0.3	1	2	5	10	20	50	100	200	30
El Kasr	H	35.6	31.5	32.1	29.8	26 3	24.0	23.5	23.7	23.9	—	—	—	—	—	—	—	—	—	—	-
	L	7.7	8.0	8.2	9.2	12.3	15.0	18.2	20.3	22.6	—	—	—	—	—	—	—	—	—	—	-
Tahrir	H	39.1	37.9	35.3	33.6	30.1	26.1	25.6	26.5	27.0	26.9	—	—	—	—	—	—	—	—	—	-
	L	7.6	7.2	7.3	9.8	12.1	15.8	19.5	22.3	24 7	25.6	—	—	—	—	—	—	—	—	—	-
Giza	H	43.5	42.5	42.0	31.4	27.8	26.6	27.7	28.7	28.5	27.4	26.1	24.5	23.4	22.7	21.9	22.3	23.2	23.6	24.0	-
	L	7.5	7.9	8.4	14.0	17.2	20.3	22.6	25.1	27.2	27.1	12.2	13.2	13.4	14.8	15.9	17.4	19.3	21.0	23.2	-
Kharga	H	44.0	39.6	37.0	32.4	29.8	28.8	28.5	29.7	30.1	29.4	—	—	—	—	—	—	—	—	—	-
	L	6.0	7.0	8.9	12.2	17.1	20.6	23.7	26.7	28.8	29.2	—	—	—	—	—	—	—	—	—	-

Table C 5.—SURFACE WIND

NOVEMBER — 1964

STATION	Wind Speed m/sec at 2 metres			Days with surface wind speed at 10 metres							Max. Gust (kno at 10 metres)	
	Mean of the day	Night time mean	Day time mean	>10 knots	≥15 knots	≥20 konts	≥25 knots	≥30 knots	≥35 knots	≥40 knots	value	Date
El Kasr . . .	4.3	3.8	4.8	—	—	—	—	—	—	—	—	—
Tahrir	2.8	2.2	3.7	27	13	6	1	1	1	0	42	20
Giza	2.4	1.9	2.7	25	7	1	1	0	0	0	33	20
Kharga	3.4	2.6	4.5	—	—	—	—	—	—	—	—	—

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THE ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 7 NUMBER 12

DECEMBER, 1964

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METEOROLOGICAL DEPARTMENT
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL DEPARTMENT OF THE ARAB REPUBLIC OF EGYPT — CAIRO

In fulfilment of its duties, the Meteorological Department of Egypt issues several reports and publications on weather, climate and agrometeorology. The principal publications are described on this page.

Orders for publications should be adressed to :
"The Director General, Meteorological Department, Kubri-el-Qubbeh — CAIRO".

THE DAILY WEATHER REPORT

This report is issued daily by the Meteorological Department since the year 1901. It includes surface and upper air observations carried out by the relevant networks of the Republic at the principal hours of observations.

As from January 1968 this report was revised to include a condensed representative selection of surface and upper air observations besides the 1200 U.T. surface & 500 mb charts.

THE MONTHLY WEATHER REPORT

First issued in 1909, the Monthly Weather Report served to give a brief summary of the weather conditions that prevailed over Egypt during the month, with a table showing the mean values for few meteorological elements and their deviations from the normal values. From 1954 to 1957 this report was in a rapid state of development and extension resulting into a voluminous report on January 1958 giving surface, upper air, and agro-meteorological data for Egypt.

As from January 1964, the Monthly Weather Report was pressed to give climatological data for a representative selection of synoptic stations.

THE AGRO-METEOROLOGICAL ABRIDGED MONTHLY REPORT

Gives a review of weather experienced in the agro-meteorological stations of Egypt as well as monthly values of certain elements.

THE ANNUAL REPORT

This report gives annual values and statistics for the various meteorological elements, together with a summary of the weather conditions that prevailed during all months of the year.

CLIMATOLOGICAL NORMALS FOR EGYPT

A voluminous edition was issued in march 1958 which brings normals and mean values up till 1960.

METEOROLOGICAL RESEARCH BULLETIN

First issued in January 1969 on a bi-annual basis. It includes research works carried out by members of staff of "The Meteorological Institute for Research and Training" and the Operational Divisions of Meteorological Department.

TECHNICAL NOTES

As from October 1970, the Meteorological Department started to issue a new series of publications in the form of Technical Notes (non periodical) on subjects related to studies and applications of meteorology in different fields for the benefit of personnel working in these fields.

The first Technical Note I was issued in October 1970 on : Sandstorms & Duststorms in Egypt.

THE ARAB REPUBLIC OF EGYPT

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METEOROLOGICAL DEPARTMENT
CAIRO

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GENERAL SUMMARY OF WEATHER CONDITIONS

DECEMBER 1964

Generally cold wit an intense cold and rainy spell during t e 2nd week. Occasional thunderstorms and destructive floods in scattered localities of the northern parts. Early morning mist and fog over scattered localities of Delta, Canal and Cairo areas.

GENERAL DESCRIPTION OF WEATHER

During this month, the prevailing weather was generally cold though interve..ed with short warm spells, Weather was markedly cold and rainy during the second week over the northern and middle parts of the Republic, where destructive floods overrun scattered localities in Mediterranean (Ras El Hikma) and Lower Egypt (Beheira province) districts and the monthly rainfall exceeded highly its normal. Rain was associated with occasional thunderstorms and hail over scattered places.

Early morning mist and fog developed frequently during the 1st week and 2nd half of the month over Delta, Canal and Cairo areas, and extended southwards through the northern parts of Upper Egypt district (Minya).

PRESSURE DISTRIBUTION

The prevailing pressure distributions over the surface map this month can be summarized in the following pressure systems.

— The Siberian anticyclonic ridge over Southwest Russia.

— The Azores anticyclonic ridge over western parts of Europe and Africa.

— The deep northern Atlantic low pressure systems through Europe and Russia.

— The Mediterranean transitory secondary depressions.

During most of this month, the Siberian anticyclonic ridge over southwest Russia was rather stationary and operated over east Mediterranean and Asia Minor. As an exception four Mediterranean minor secondary depressions penetrated eastwards through east Mediterranean round the 5th, 14th, 23rd and 29th respectively.

The first minor secondary depression started on the 2nd from west Mediterranean, reached central Mediterranean on the 3rd, then shooted NE wards through Balkans on the 4th, while a minor shallow secondary formed over Mediterranean Egyptian coast and traversed east Mediterranean on the *5th.*

The second minor secondary depression developed over Greece on the 5th, preceeded slowly eastwards and reached Cyprus on the 8th where it was stationary till the 14th.

The third minor secondary depression developed over central Mediterranean on the 21st and overrun east Mediterranean by the 23rd following an eastward track.

The fourth and last minor secondary depression during this month developed over Libya on the 25th and was attached to a rather deep central Mediterranean depression The Mediterranean deep depression followed a NE track through Balkans and Russia while the shallow minor secondary proceeded eastwards, traversed Cyrenica by the 27th Egypt by 28th and east Mediterranean by the 29th.

According to the transit of the above mentioned secondary depressions the barometric pressure over Egypt experienced four pronounced oscillations.

The polar jet stream was evident in association with travelling Mediterranean depressions in the upper troposphere round 295 mb level north of latitude 30°N, while the subtropical jet stream appeared most of the month over the country at about 195 mb level.

The higest wind speeds recorded at Mersa Matruh, Helwan & Aswan were 172, 158 & 141 Knots on the 31st, 31st, & 10th respectively.

SURFACE WIND

The prevailing winds were light/moderate NWly & NEly in general but became fresh/strong occasionally during the 1st half of the month. Winds backed to SEly, SWly far in advance and just before secondary depressions transits over the Republic.

Gales were reported at Sidi Barrani, Mersa Matruh & Alexandria on the 9th; Ras El Teen on the 8th & 9th and at Fayed, on the 4th & 10th.

TEMPERATURE

Maximum air temperature was subnormal during the second and third weeks, particularly during the second week when it was appreciably below normal. During rest of the month, maximum air temperature showed slight to moderate departures above normal.

The absolute maximum temperature for the Republic was 32.2°C reported at Dakhla on the 4th.

Minimum air temperature was slightly subnormal in general.

The absolute minimum temperature for the Republic was - 0.3°C reported at Dahkla on the 21st.

PRECIPITATION

This month was characterized by a heavy rainy period of long duration between 4th & 16th and a light rainy period of short duration between the 22nd & 24th. During both periods rain was confined to the northern and middle parts north of Beni Suef's latitude. During the 1st rainy period rain was abnormally heavy and associated with thunderstorms and hail over scattered places. The daily rainfall was appreciably large and exceeded 10 mms in many localities for many days of this period. The monthly rain exceeded highly its normal over the Mediterranean & Lower Egypt districts.

The absolute daily rainfall was 72.4 mms. reported at Ras El Hikma on the 10th.

The absolute monthly rain for the Republic was 171.0 mms reported at Kafr El Dawar.

M. F. TAHA
Under Secretary of State
Director General
Meteorological Department

Cairo, September 1971

Table A 1. — MONTHLY VALUES OF THE ATMOSPHERIC PRESSURE, AIR TEMPERATURE, RELATIVE HUMIDITY, BRIGHT SUNSHINE DURATION & PICHE EVAPORATION.

DECEMBER — 1964

STATION	Atmospheric Pressure (mbs) M.S.L		Air Temperature °C									Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evap. (mms) Mean
			Maximum		Minimum			Dry Bulb		Wet Bulb							
	Mean	D.F. Normal or Average	(A) Mean	D.F. Normal or Average	(B) Mean	D.F. Normal or Average	$\frac{A+B}{2}$	Mean	D.F. Normal or Average	Mean	D.F. Normal or Average	Mean	D.F. Normal or Average	Total Actual	Total Possible	%	
Sallum	1017.8	+0.4	20.7	+0.1	12.7	+1.1	16.7	16.1	+0.4	12.1	+0.3	59	— 1	—	—	—	6.1
Mersa Matruh (A)	1018.2	+0.4	19.8	+0.1	10.4	+0.4	15.1	14.6	+0.2	11.7	+0.2	69	+ 1	197.0	313.7	62.8	5.5
Alexandria (A)	1017.7	+0.1	20.3	—0.1	10.1	—1.1	15.2	15.0	—0.2	12.6	—0.1	74	0	190.9	315.6	60.5	3.3
Port Said (A)	1017.5	0.0	19.9	0.0	12.9	—0.8	16.4	16.1	—0.3	13.7	0.0	75	+ 1	221.0	315.6	70.0	3.7
El Arish	1017.8	+0.6	20.7	—0.7	10.4	+0.3	15.6	14.9	—0.9	12.1	—0.4	70	+ 4	215.0	315.5	68.1	4.9
Ghazza	1017.6	+0.6	19.4	—0.9	10.8	—1.2	15.1	15.0	—0.8	11.8	—0.9	66	— 2	206.3	313.7	65.8	4.9
Tanta	1017.4	—	20.9	—	8.6	—	14.8	14.0	—	11.2	—	69	—	198.1	316.8	62.5	2.1
Cairo (A)	1017.8	—0.3	20.6	—0.1	10.3	—0.1	15.4	15.3	0.0	11.2	—0.6	58	— 6	—	—	—	7.6
Fayoum	1017.8	—	21.4	—	8.5	—	15.0	14.0	—	10.9	—	66	—	—	—	—	3.6
Minya (A)	1018.7	+0.5	21.5	—0.5	6.9	—0.2	14.2	14.1	+0.3	10.8	+0.6	64	+ 3	—	—	—	4.3
Assyout (A)	1018.2	+0.3	22.5	+0.1	8.9	0.0	15.7	15.1	—0.4	10.3	—0.3	51	+ 1	—	—	—	8.2
Luxor (A)	1017.2	+0.4	25.0	+0.2	7.8	+0.1	16.4	16.0	+1.2	11.2	—0.2	52	— 1	—	—	—	4.8
Aswan (A)	1017.3	+1.1	25.2	—1.3	9.6	—3.6	17.4	17.3	—0.9	11.0	—0.1	41	+ 5	—	—	—	8.9
Siwa	1018.3	—0.4	21.6	+0.3	8.1	+2.1	14.8	14.2	+0.6	9.5	+0.2	50	— 7	—	—	—	7.4
Bahariya	1018.4	+1.1	22.9	+0.2	7.6	+0.1	15.2	14.7	—0.3	8.9	—0.6	51	0	—	—	—	2.9
Farafra	1019.9	—	22.8	—	6.6	—	14.7	14.1	—	7.9	—	35	—	—	—	—	7.3
Dakhla	1016.9	+0.3	24.7	—2.4	4.3	—2.3	14.5	13.7	—0.7	8.4	—0.6	43	0	—	—	—	7.4
Kharga	1018.4	—	24.6	—	8.3	—	16.4	16.4	—	9.6	—	35	—	301.9	329.5	91.9	10.4
Tor	1017.4	+1.3	22.5	—0.6	11.3	+0.7	16.9	16.8	—0.9	12.4	—0.7	57	+ 1	—	—	—	5.8
Hurghada	1017.2	+0.9	22.8	+0.4	10.7	—1.2	16.8	16.7	—0.8	11.9	—1.2	53	— 4	—	—	—	10.0
Quseir	1017.4	+1.6	23.2	—0.9	14.8	—1.1	19.0	19.0	—1.3	13.9	—2.0	53	0	—	—	—	11.0

Table A2.— MAXIMUM AND MINIMUM AIR TEMPERATURES

DECEMBER — 1964

Station	Maximum Temperature °C									Grass Min. Temp.		Minimum Temperature °C							
	Highest	Date	Lowest	Date	No. of Days with Max-Temp.					Mean	D. From Normal	Highest	Date	Lowest	Date	No. of Days with Min. Temp.			
					>25	>30	>35	>40	>45							<10	<5	<0	<-5
Sallum	26.2	27	16.2	8-9	2	0	0	0	0	11.6	—	16.4	27	9.2	6	4	0	0	0
Mersa Maitruh (A)	26.0	4	14.2	9	1	0	0	0	0	—	—	13.2	29	9.6	8	1	0	0	0
Alexandra (A)	24.8	28	14.6	9	0	0	0	0	0	—	—	14.2	23	7.5	6	18	0	0	0
Port Said (A)	24.1	4	14.3	9	0	0	0	0	0	11.3	—	16.3	26-30	8.5	9	2	0	0	0
El Arish	28.0	29	16.2	10	3	0	0	0	0	8.8	—	15.0	4	6.5	20	12	0	0	0
Ghazza	28.4	4	15.2	10	2	0	0	0	0	10.2	—	18.8	4	7.7	20	11	0	0	0
Tanta	25.3	28	13.9	9	1	0	0	0	0	—	—	11.8	23	5.8	27	24	0	0	0
Cairo (A)	26.8	28	15.2	9-11	2	0	0	0	0	—	—	15.6	29	7.2	20	16	0	0	0
Fayoum	25.6	28	15.6	9	1	0	0	0	0	5.2	—	12.3	30	5.6	20	25	0	0	0
Minya (A)	28.0	2	17.1	9	8	0	0	0	0	3.7	—	12.5	4	4.0	6	27	6	0	0
Assyout (A)	29.5	3	16.8	9	9	0	0	0	0	6.3	—	13.0	30	5.4	20	23	0	0	0
Luxor (A)	31.0	3	18.4	9	17	1	0	0	0	7.3	—	12.0	7	5.0	20	24	0	0	0
Aswan (A)	31.3	4	18.2	10	14	4	0	0	0	—	—	15.2	7	5.5	10	17	0	0	0
Siwa	28.1	28	16.7	9	3	0	0	0	0	—	—	15.3	29	0.8	6	24	4	0	0
Bahariya	32.0	29	15.1	9	8	2	0	0	0	—	—	14.5	4	2.8	6	24	6	0	0
Farafra	31.2	29	15.8	9	10	3	0	0	0	—	—	14.2	4	1.9	20	29	9	0	0
Dakhla	32.2	4	17.0	9	15	5	0	0	0	—	—	10.9	5	—0.3	21	30	19	1	0
Kharga	30.9	3	17.5	9	14	4	0	0	0	—	—	15.0	3	3.8	10	22	4	0	0
Tor	26.6	1-3	17.9	9	5	0	0	0	0	—	—	18.2	31	8.0	20	10	0	0	0
Hurg hada	26.6	3	19.7	10	7	0	0	0	0	—	—	13.8	6	7.9	21	14	0	0	0
Qusetr	26.2	4	20.3	15	5	0	0	0	0	—	—	18.1	6	10.1	11	0	0	0	0

Table A 3.—SKY COVER AND RAINFALL

DECEMBER — 1964

Station	Mean Sky Cover Oct.					Raintall mms.										
	00 U.T.	06 U.T.	12 U.T.	18 U.T	Daily Mean	Total Amount	D. From Normal	Max. Fall in one day		Numher of Days with Amount of Rain						
								Amount	Date	<0.1	≥0.1	≥1.0	≥5.0	≥10	≥25	≥50
Sallum . . . . . (A)	4.1	5.2	5.6	3.9	4.6	22.7	+ 2.3	12.2	10	2	10	4	1	1	0	0
Mersa Matruh . . . . . (A)	3.1	4.2	4.7	3.5	4.0	63.4	+24.7	17.3	11	1	10	9	5	3	0	0
Alexandria . . . . . (A)	3.9	4.8	5.0	4.2	4.4	120.5	+74.3	22.9	8	1	11	9	7	6	0	0
Port Said . . . . . (A)	2.6	3.1	3.1	2.6	2.6	10.8	— 6.9	5.9	31	1	8	3	1	0	0	0
El Arish	4.0	4.2	3.6	4.4	3.0	26.1	+ 5.3	17.4	15	1	9	3	2	1	0	0
Ghazza	2.9	3.7	4.3	2.9	2.4	78.2	+ 6.7	35.4	13	2	9	8	4	2	1	0
Tanta	—	2.5	3.9	4.1	—	25.5	+15.8	7.7	9	0	9	7	2	0	0	0
Cairo . . . . . (A)	1.7	3.6	4.4	2.2	3.0	5.4	— 3.2	2.1	9	1	4	3	0	0	0	0
Fayoum	—	1.5	2.6	1.4	—	tr.	— 5.1	tr.	*	5	0	0	0	0	0	0
Minya . . . . . (A)	1.1	2.4	2.7	1.2	1.8	tr.	— 0.8	ta.	12,29	2	0	0	0	0	0	0
Assyout . . . . . (A)	1.0	1.6	2.8	1.6	1.6	tr.	— 0.0	tr.	11	1	0	0	0	0	0	0
Luxor . . . . . (A)	0.8	0.9	2.0	1.4	1.9	0.0	— 0.1	0.0	—	0	0	0	0	0	0	0
Aswan	0.9	1.2	1.7	0.7	1.2	0.0	— Tr.	0.0	—	0	0	0	0	0	0	9
Siwa	2.0	3.5	3.5	2.0	2.3	tr.	— 2.4	tr.	4,22,28	3	0	0	0	0	0	0
Bahariya	1.3	2.2	3.2	2.1	2.1	0.0	— 1.3	0.0	—	0	0	0	0	0	0	0
Farafra	1.0	1.6	2.9	1.3	1.9	0.6	+ 0.6	0.6	24	1	1	0	0	0	0	0
Dakhla	0.7	1.4	1.6	0.9	0.7	0.0	— 0.1	0.0	—	0	0	0	0	0	0	0
Khargs	0.8	1.5	2.1	1.1	1.3	0.0	— 0.4	0.0	—	0	0	0	0	0	0	0
Tor	1.6	2.2	2.5	1.9	2.1	5.5	+ 2.3	5.3	11	0	2	1	1	0	0	0
Hurghada	1.0	1.3	2.1	1.4	1.3	0.	— 2.8	0.0	—	0	0	0	0	0	0	0
Quseir	0.8	1.4	2	1.4	1.4	0	— 0.2	0.0	—	0	0	0	0	0	0	0

* More than 3 days

Table A 4. — DAYS OF OCCURRENCE OF MISCELLANEOUS WEATHER PHENOMENA.

DECEMBER — 1964

Station	Precipitation				Frost	Thunderstorm	Mist Vis ≥1000 metres	Fog Vis <1000 Metres	Haze Vis ≥1000 Metres	Thick Haze Vis <1000 Metres	Dust or Sandorising Vis ≥1000 Metres	Dust or Sandstorm Vis <1000 Metres	Gale	Clear Sky	Cloudy Sky
	Rain	Snow	Ice, Pellets	Hail											
Sallum	10	0	0	0	0	1	0	0	0	0	4	0	0	3	10
Mersa Matruh (A)	10	0	0	0	0	4	0	0	0	0	3	1	1	5	5
Alexandria (A)	11	0	0	1	0	6	2	9	2	0	0	0	1	5	9
Port Said (A)	8	0	0	0	0	0	0	0	0	0	1	0	0	10	1
El Arish	9	0	0	0	0	0	10	0	5	0	7	0	0	5	7
Ghazza	9	0	0	0	0	4	1	0	4	0	0	0	0	11	5
Tanta	9	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Cairo (A)	4	0	0	0	0	0	12	1	16	0	5	1	0	10	0
Fayoum	0	0	0	0	0	0	0	0	0	0	0	0	0	—	—
Minya (A)	0	0	0	0	0	0	13	2	6	0	2	0	0	19	0
Assyout (A)	0	0	0	0	0	0	1	0	7	0	4	0	0	18	0
Luxor (A)	0	0	0	0	0	0	0	0	13	0	1	0	0	22	0
Aswan A)	0	0	0	0	0	0	0	0	3	0	3	0	0	24	0
Siwa	0	0	0	0	0	0	0	0	0	0	2	0	0	11	0
Bahariya	0	0	0	0	0	0	0	0	0	0	2	2	0	17	2
Farafra	1	0	0	0	0	0	0	0	1	0	3	0	0	13	1
Dakhla	0	0	0	0	0	0	0	0	1	0	0	0	0	23	0
Kharga	0	0	0	0	0	0	0	0	1	0	0	0	0	20	0
Tor	2	0	0	0	0	0	0	0	0	0	1	0	0	10	1
Hurghada	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0
Quseir	0	0	0	0	0	0	1	0	3	0	2	0	0	21	1

Table A 5.—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

DECEMBER — 1964

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	All directions
Sallum	62	0	0	1-10	15	36	15	36	31	46	35	8	15	62	52	48	399
				11-27	4	0	0	0	0	6	13	23	19	74	123	20	282
				28-47	0	0	0	0	0	0	0	0	0	0	1	0	1
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**19**	**36**	**15**	**36**	**31**	**52**	**48**	**31**	**34**	**136**	**176**	**68**	**682**
Meras Matruh (A)	12	0	4	1-10	30	20	26	19	51	64	47	41	55	43	24	40	460
				11-27	21	1	0	0	13	22	20	17	27	57	34	48	260
				28-47	0	0	0	0	0	0	0	0	0	1	0	7	8
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**51**	**21**	**26**	**19**	**64**	**86**	**67**	**58**	**82**	**101**	**58**	**95**	**728**
Alexandria (A)	79	0	0	1-10	43	47	42	61	55	35	22	52	19	10	20	46	452
				11-27	14	14	3	3	6	4	5	32	21	15	43	49	209
				28-47	0	0	0	0	0	0	0	3	1	0	0	0	4
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**57**	**61**	**45**	**64**	**61**	**39**	**27**	**87**	**41**	**25**	**63**	**95**	**665**
Port Said (A)	1	11	0	1-10	16	61	58	34	44	43	56	37	71	50	42	50	562
				11-27	9	17	4	1	0	0	6	52	70	8	1	2	170
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**25**	**78**	**62**	**35**	**44**	**43**	**62**	**89**	**141**	**58**	**43**	**52**	**732**
Ghazza	1	77	15	1-10	21	22	16	32	64	169	66	22	22	18	28	34	514
				11-27	0	1	0	0	5	41	34	25	11	19	9	2	137
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**21**	**23**	**16**	**32**	**69**	**210**	**100**	**47**	**33**	**37**	**37**	**36**	**651**
Tanta	124	19	3	1-10	18	11	59	48	44	24	22	49	134	76	47	49	581
				11-27	0	0	0	0	0	0	0	1	16	0	0	0	17
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**18**	**11**	**59**	**48**	**44**	**24**	**22**	**50**	**150**	**76**	**47**	**49**	**598**
Cairo (A)	31	15	26	1-10	13	61	58	66	44	9	16	51	31	34	32	35	450
				11-27	0	10	20	7	8	9	29	48	39	31	13	8	222
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**13**	**71**	**78**	**73**	**52**	**18**	**45**	**99**	**70**	**65**	**45**	**43**	**672**
Fayoum	38	0	211	1-10	122	32	8	8	8	21	34	76	39	41	21	72	482
				11-27	0	0	0	0	0	0	0	1	11	1	0	0	13
				28-47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**122**	**32**	**8**	**8**	**8**	**21**	**34**	**77**	**50**	**42**	**21**	**72**	**495**

Table A 5 (*contd.*)—NUMBER IN HOURS OF OCCURRENCE OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

DECEMBER -- 1964

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing from the ranges of directions indicated												All directions
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	
Minya . . . . . (A)	0	28	81	1–10	157	46	3	0	8	45	43	8	28	39	33	153	563
				11–27	12	10	1	0	0	1	1	0	4	26	10	7	72
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**169**	**56**	**4**	**0**	**8**	**46**	**44**	**8**	**32**	**65**	**43**	**160**	**635**
Assyout. . . . . (A)	15	0	0	1–10	0	22	14	40	39	31	14	13	71	216	127	23	610
				11–27	0	0	0	1	4	7	0	0	37	27	37	6	119
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**0**	**22**	**14**	**41**	**43**	**38**	**14**	**13**	**108**	**243**	**164**	**29**	**729**
Luxor . . . . . (A)	5	0	0	1–10	40	102	72	48	43	40	73	65	32	25	40	99	679
				11–27	0	0	2	2	0	0	0	0	14	4	9	29	60
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**40**	**102**	**74**	**50**	**43**	**40**	**73**	**65**	**46**	**29**	**49**	**128**	**739**
Aswan . . . . . (A)	5	0	0	1–10	381	118	16	11	4	3	2	8	15	34	33	84	709
				11–27	20	0	0	0	0	0	0	0	0	0	6	4	30
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**401**	**118**	**16**	**11**	**4**	**3**	**2**	**8**	**15**	**34**	**39**	**88**	**739**
Siwa	105	0	0	1–10	0	7	12	41	54	37	23	56	15	172	42	36	495
				11–27	0	0	0	3	3	10	7	17	7	51	39	7	144
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**0**	**7**	**12**	**44**	**57**	**47**	**30**	**73**	**22**	**223**	**81**	**43**	**639**
Hurghada	7	8	20	1–10	29	26	12	6	18	9	6	3	9	72	107	35	332
				11–27	20	0	0	0	1	4	1	0	0	77	181	93	377
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**49**	**26**	**12**	**6**	**19**	**13**	**7**	**3**	**9**	**149**	**288**	**128**	**709**
Quseir	0	0	50	1–10	37	20	4	1	4	2	3	12	133	106	88	79	489
				11–27	12	1	0	0	0	0	1	3	31	24	61	72	205
				28–47	0	0	0	0	0	0	0	0	0	0	0	0	0
				≥48	0	0	0	0	0	0	0	0	0	0	0	0	0
				All speeds	**49**	**21**	**4**	**1**	**4**	**2**	**4**	**15**	**164**	**130**	**149**	**151**	**694**

UPPER AIR CLIMATOLOGICAL DATA

Table B1 – MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER & LOWER VALUES OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

DECEMBER - 1964

Station	Pressure Surface (Millibars)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh(A)0000 U.T.	Surface	23	1018m.b.	1023m.b.	1009m.b.	23	13.4	17.0	10.1	23	9.7
	1000	23	175	221	103	23	11.6	19.0	10.6	23	9.3
	850	23	1533	1591	1476	23	7.9	15.6	— 1.3	22	- 0.8
	700	23	3105	3193	2990	23	2.6	2.9	-11.1	20	— 9.6
	600	23	4310	4418	4186	23	-10.7	- 5.0	-19.3	18	-17.7
	500	23	5688	5809	5516	23	-21.3	-16.2	-27.8	16	-24.3
	400	23	7383	7570	7210	23	-32.1	-28.5	-40.1	10	-35.6
	300	22	9247	9434	9021	22	-47.1	-40.8	-55.0	—	—
	200	21	11890	12074	11635	21	-59.1	-53.3	-65.7	—	—
	150	17	13665	13825	13446	17	-62.0	-55.6	-67.0	—	—
	100	16	16146	16275	15972	16	-65.0	-57.8	-72.2	—	—
	70	11	18325	18440	18230	11	-68.1	-58.9	-74.0	—	—
	60	—	—	—	—	—	—	—	—	—	—
	50	8	20448	20514	20324	8	-58.1	—54.9	-62.5	—	—
	40	—	—	—	—	—	—	—	—	—	—
	30	7	23674	23796	23496	7	-52.5	-49.4	—61.0	—	—
	20	4	26292	26413	26057	4	—49.5	46.2	—55.3	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan(A)0000 U.T.	Surface	27	1001m.b.	1005m.b.	993m.b.	27	13.0	20.0	7.4	27	6.8
	1000	27	148	182	85	23	13.5	20.0	7.4	23	6.5
	850	27	1511	1561	1446	27	9.2	18.8	1.6	24	— 2.2
	700	27	3093	3178	2976	27	- 0.4	6.5	- 8.9	24	— 9.7
	600	27	4303	4417	4158	7	8.8	- 3.8	15.7	21	-17.9
	500	27	5693	5821	5518	7	-20.3	-13.4	-25.6	21	-23.5
	400	27	7321	7451	7196	27	-30.7	-23.3	-39.6	13	-34.4
	300	27	9304	9503	9091	27	-44.8	-37.8	-54.3	10	—
	200	27	11928	12141	11669	27	-58.5	-53.5	-63.3	—	—
	150	27	13734	13922	13583	27	-61.4	-54.0	-67.8	—	—
	100	24	16265	16390	15981	24	-66.5	-59.6	-78.7	—	—
	70	17	18381	18550	18220	17	-63.8	-57.3	-68.7	—	—
	60	17	19325	19467	19181	17	-61.4	-56.7	-64.3	—	—
	50	17	20464	20591	20374	16	-59.3	-54.4	—63.9	—	—
	40	15	21864	22003	21733	15	-56.0	-51.3	-60.5	—	—
	30	12	23700	23853	23549	12	-53.6	-50.3	-59.2	—	—
	20	7	26345	26524	26160	7	-48.3	-41.8	-54.2	—	—
	10	1	30062	—	—	1	-42.9	—	—	—	—
Aswan(A)0000 U.T.	Surface	23	993m.b.	995m.b.	991m.b.	23	13.0	20.0	7.7	23	3.9
	1000	18	133	153	108	—	—	—	—	—	—
	850	23	1499	1538	1460	23	9.9	18.2	3.0	22	— 0.6
	700	23	3099	3163	3007	23	2.0	6.4	— 5.0	9	— 9.4
	600	23	4376	4407	4294	23	— 4.9	— 1.9	—11.0	9	—14.9
	500	23	5724	5828	5586	23	—14.1	—10.3	—18.1	8	—23.3
	400	23	7383	7493	7206	23	—26.2	—21.9	—32.0	5	—32.6
	300	22	9402	9610	9181	22	—41.3	—36.9	—49.6	—	—
	200	22	12056	12302	11801	22	—58.1	—54.8	—60.7	—	—
	150	21	13256	14076	13571	21	—66.9	—64.4	—70.6	—	—
	100	14	16238	16409	16011	14	—73.0	—67.5	—78.6	—	—
	70	11	18328	18530	18120	11	—70.6	—66.4	—75.2	—	—
	60	—	—	—	—	—	—	—	—	—	—
	50	11	20374	20552	20207	11	—60.7	—58.0	—63.7	—	—
	40	—	—	—	—	—	—	—	—	—	—
	30	8	23596	23773	23053	8	—53.7	—49.7	—57.6	—	—
	20	4	26202	26339	26079	4	—50.5	—46.6	—53.2	—	—
	10	2	30743	30873	30613	2	—47.6	—47.5	—47.8	—	—

N = The number of cases the element has been observed during the month.

* The [illegible] of the radiosonde station

UPPER AIR CLIMATOLOGICAL DATA

Table B1 (*contd*).—MONTHLY MEANS AND MONTHLY ABSOLUTE HIGHER & LOWER VALUES OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

DECEMBER — 1964

Station	Pressure Surface Millibar	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mersa Matruh 1200 U.T.	Surface	23	*1017m.b.	*1022m.b.	*1009m.b.	23	17.7	22.3	12.2	23	11.4
	1000	23	109	220	106	23	16.4	23.2	11.7	23	9.7
	850	23	1534	1581	1449	23	8.9	15.1	— 0.6	22	1.2
	700	23	3099	3185	2982	23	— 2.6	2.6	—10.3	20	— 9.0
	600	23	4305	4410	4156	23	—10.5	— 6.9	—17.4	16	—16.5
	500	23	5680	5808	5496	23	—20.0	—15.0	—27.6	10	—24.4
	400	22	7305	7458	7064	22	—32.2	—26.6	—39.5	7	—34.7
	300	22	9279	9483	8970	22	—46.6	—39.6	—54.0	—	—
	200	22	11889	12113	11592	22	—58.4	—52.2	—62.4	—	—
	150	17	13686	13930	13450	17	—60.4	—55.6	—63.6	—	—
	100	15	16212	16409	16060	15	—64.2	—59.2	—68.9	—	—
	70	12	18409	18580	18280	12	—60.2	—52.6	—65.6	—	—
	50	9	20524	20618	20378	9	—56.9	—51.0	—61.2	—	—
	30	4	23877	24001	23748	4	—50.7	—47.0	—55.8	—	—
	20	3	26494	26657	26383	3	—46.5	—45.4	—47.5	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 1200 U.T.	Surface	26	*1000m.b.	*1003m.b.	*992m.b.	26	19.4	24.3	13.2	29	7.3
	1000	26	139	165	76	18	19.8	23.5	14.6	18	7.5
	850	26	1509	1555	1424	26	9.7	17.7	0.4	19	— 1.6
	700	26	3092	3165	2363	26	— 1.2	4.7	— 7.7	20	— 8.4
	600	26	4307	4395	4147	26	— 8.7	— 3.0	—15.5	18	—15.6
	500	26	5696	5821	5497	26	—18.6	—10.4	—25.6	16	—24.4
	400	26	7225	7494	7070	26	—30.2	—24.8	—39.5	12	—33.9
	300	26	9309	9523	8994	26	—44.7	—38.5	—54.0	—	—
	200	26	11937	12164	11646	26	—58.0	—50.4	—65.0	—	—
	150	26	13735	13954	13444	26	—61.2	—54.0	—70.1	—	—
	100	24	16228	16397	16026	34	—66.4	—59.4	—73.6	—	—
	70	19	18400	18530	18260	19	—64.0	—57.5	—69.1	—	—
	60	17	19349	19476	19236	17	—60.3	—54.9	—65.2	—	—
	50	16	20500	20620	20390	16	—58.1	—52.6	—61.7	—	—
	40	12	21870	22040	21824	12	—54.9	—50.7	—58.9	—	—
	30	10	23790	23904	23706	10	—50.6	—42.8	—55.5	—	—
	20	7	26479	26616	26382	7	—45.5	—43.9	—48.8	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan 1200 U.T	Surface	25	*992m.b.	*995m.b.	*991m.b.	25	23.7	29.1	17.5	25	6.2
	1000	25	124	150	105	—	—	—	—	—	—
	850	25	1507	1550	1466	25	11.2	18.3	2.4	22	— 0.3
	700	25	3103	3173	3020	25	3.2	9.6	— 2.9	9	—10.8
	600	25	4336	4428	4231	25	— 3.9	0.2	— 8.7	9	—17.8
	500	20	5761	5855	5624	25	—13.1	— 8.7	—17.6	4	—25.3
	400	15	7415	7529	7260	25	—24.8	—19.9	—30.5	5	—30.9
	300	25	9446	9578	9284	25	—39.4	—34.1	—44.6	2	—42.8
	200	25	12112	12316	11885	25	—57.1	—52.0	—61.1	—	—
	150	24	13902	14073	13741	24	—64.8	—57.3	—70.0	—	—
	100	19	16352	16743	16074	19	—71.2	—61.0	—78.7	—	—
	70	10	18451	18590	18320	10	—67.1	—56.6	—75.9	—	—
	50	7	20509	20585	20442	7	—59.3	—56.5	—63.6	—	—
	30	6	23776	23849	23682	6	—50.7	—47.3	—53.5	—	—
	20	6	26444	26540	26352	6	—45.0	—49.8	—48.8	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

Table B 2.—MEAN AND EXTREME VALUES OF THE FREEZING LEVEL AND THE TROPOPAUSE. THE HIGHEST WIND SPEED IN THE UPPER AIR

DECEMBER - 1964

	Station	Freezing level									First Tropopause									Highest wind speed			
		Mean			Highest			Lowest			Mean			Highest			Lowest						
		Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Dew point (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Temperature (°C)	Altitude (gpm)	Pressure (mb.)	Direction (000–360)°	Speed in Knots
0000 U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh (A)	2644 (23)	743 (23)	-5.5 (21)	3530	668	-8.4	1350	863	-3.7	11766 (18)	206 (18)	-60.9 (18)	15060	122	-72.4	8990	304	-54.8	11090	231	260	148
	Helwan	2924 (27)	718 (27)	-6.6 (22)	3980	633	—	1700	828	-0.9	12053 (25)	201 (25)	-61.5 (25)	17000	90	-73.4	8340	332	-50.8	13350	160	270	122
	Aswan . . . (A)	3241 (23)	689 (23)	-12.0 (12)	4380	600	-11.8	1600	836	-9.2	14863 (15)	124 (15)	-70.9 (15)	17290	84	-81.0	12940	166	-65.6	13060	172	300	141
1200 U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh (A)	2660 (23)	711 (23)	-6.4 (19)	3490	673	-9.3	1430	857	-6.3	12039 (15)	201 (15)	-60.6 (15)	16640	96	-70.6	9660	266	-53.5	11235	225	270	172
	Helwan	2965 (26)	714 (26)	-7.3 (12)	3840	643	-5.2	1510	842	-3.4	12058 (25)	200 (25)	-60.9 (25)	15000	127	-69.8	9020	298	-49.7	12750	176	290	158
	Aswan . . . (A)	3588 (25)	659 (25)	-10.5 (11)	4410	598	—	1700	816	-4.4	14707 (18)	136 (18)	-67.9 (18)	17740	79	-79.0	10590	258	-43.0	11810	210	310	130

N = The Number of cases the element has been observed during the month.

Table B 3.—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

MERSA MATRUH (A) DECEMBER 1964

Time	Ptessure Surface (Millibar)	Wind between ranges of direction (000—360)°																						Number of Calm winds	Total Number of Observations (T N)	Mean Scalar wind Speed (Knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	1	11	2	4	0	—	1	10	4	14	5	10	2	6	2	10	5	7	5	12	0	—	1	7	3	31	9
	1000	2	4	3	6	1	17	0	—	2	16	5	14	4	11	6	—	1	31	2	22	6	10	4	12	1	31	12
	850	0	—	0	—	1	7	0		1	4	2	8	2	10	4	18	5	11	5	17	4	12	6	22	1	31	14
	700	0	—	0	—	0	—	0	—	0	—	0	—	1	5	1	17	9	29	5	25	7	27	6	25	2	31	24
	600	1	26	0		0	—	0	—	0	—	0	—	0	—	1	3	7	33	12	39	5	22	4	24	1	31	30
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	33	17	42	4	28	4	26	0	31	36
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	45	15	48	5	56	6	40	0	31	48
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	60	13	74	4	67	5	53	0	28	48
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	78	12	91	5	64	2	82	0	22	82
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	64	1	55	1	71	0	8	64
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	53	1	30	0	—	1	34	0	3	39
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	13	0	—	0	—	0	1	13
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	10	0	—	0	—	0	1	10
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	10	1	—	0	—	0	1	10
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	15	—	—	0	—	0	—	0	1	15
	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	—	—	0	—	0	—	0	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	4	7	2	6	2	10	1	10	2	12	4	12	1	9	1	16	0	—	3	16	3	12	7	17	1	31	12
	1000	3	7	1	7	1	10	1	5	2	14	4	10	2	7	1	17	0	—	2	18	5	17	7	17	2	31	12
	850	5	14	0	—	0	—	0	—	2	9	2	4	2	13	5	12	2	16	3	13	5	16	5	25	0	31	15
	700	2	26	0	—	0	—	0	—	0	—	0	—	0	—	2	24	5	29	9	20	10	20	3	28	0	31	23
	600	3	20	0	—	0	—	0	—	0	—	0	—	1	51	1	43	6	27	10	31	7	31	3	28	0	31	30
	500	1	8	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	44	13	38	6	42	5	33	0	31	35
	400	2	30	0	—	0	—	0	—	0	—	0	—	0	—	1	35	5	42	13	49	6	55	3	38	0	30	46
	300	1	13	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	60	11	67	8	66	4	49	0	29	61
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	87	15	86	5	86	4	61	0	27	82
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	74	10	68	5	44	2	64	0	18	61
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	44	5	28	1	44	0	9	35
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	19	0	—	0	2	14
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	14	0	—	0	1	14
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	12	0	—	0	1	12
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	10	0	1	10
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = The total number of cases the wind has been observed for all dirictions during the month.

Table B 3—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

HELWAN—DECEMBER 1964

Time	Pressure Surface (Millibar)	Wind between ranges of direction (000–360)°																						Number of Calm winds	Total Number of observations (TN)	Mean Scalar wind Speed (Knots)
		345/014		015/044		045/074		075/104		105/134		135/164		165/194		195/224		225/254		255/284		285/314		315/344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U. T.	Surface	1	5	3	5	7	9	0	—	2	4	1	4	1	8	3	10	0	—	1	9	1	3	1	5	8	27	5
	1000	1	15	5	15	5	12	1	8	3	6	1	4	1	10	0	—	0	—	1	9	2	4	1	10	2	23	9
	850	3	10	1	4	1	4	1	4	0	—	1	15	0	—	3	16	4	16	3	15	7	14	2	9	0	26	12
	700	1	11	0	—	0	—	0	—	0	—	1	3	0	—	0	—	7	16	6	17	7	20	4	10	0	26	18
	600	3	15	0	—	0	—	0	—	0	—	0	—	0	—	1	21	5	32	4	29	9	20	5	19	0	27	23
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	35	6	40	10	31	7	29	0	27	32
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	20	2	38	8	51	14	33	2	39	0	27	39
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	13	52	9	56	2	64	0	24	55
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	11	82	10	61	0	—	0	21	72
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	15	60	2	67	1	60	0	18	61
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	52	1	35	0	—	0	8	50
	70	1	21	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	43	0	—	0	—	0	5	39
	60	0	—	0	—	0	—	1	30	0	—	0	—	0	—	0	—	0	—	1	29	1	22	0	—	0	3	27
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	22	1	37	0	—	0	2	30
	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	48	0	—	0	—	0	1	48
	30	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0000 U. T.	Surface	1	12	3	15	2	15	0	—	1	5	0	—	2	7	7	6	3	12	1	18	5	8	0	—	1	26	9
	1000	1	12	3	17	2	18	0	—	0	—	0	—	2	2	2	5	1	8	2	10	3	7	2	9	0	18	10
	850	3	17	0	—	3	12	0	—	0	—	0	—	3	13	0	—	4	20	7	22	4	14	2	13	0	26	18
	700	1	15	1	13	0	—	0	—	0	—	0	—	0	—	2	21	5	18	4	24	10	19	2	14	0	25	19
	600	1	21	0	—	0	—	0	—	0	—	0	—	0	—	1	30	5	25	2	26	12	26	4	16	0	25	24
	500	2	36	0	—	0	—	0	—	0	—	0	—	0	—	1	14	5	27	11	36	1	37	0	—	0	25	34
	400	1	46	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	92	13	42	6	51	2	50	0	25	44
	300	1	84	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	62	14	56	3	64	3	50	0	23	58
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	14	64	3	76	1	104	0	18	68
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	41	7	72	3	59	1	132	0	12	71
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	56	3	41	0	—	0	5	49
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	36	0	—	0	1	36
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	29	0	—	0	—	0	1	29
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	27	0	—	0	—	0	—	0	1	27
	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	21	0	—	0	—	0	1	21
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	20	0	—	0	—	—	1	20
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed during the month.

TN = Total number of cases the wind has been observed for all directions during the month.

Table B 3 (*contd.*).—**NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES**

ASWAN (A) DECEMBER — 1964

Time	Pressure Surface Millibar	Wind between specified ranges of direction (000—300)°																						Number of calm winds	Total number of observations (TN)	Mean scalar wind Speed (knots)
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m	N	(ff) m			
0000 U.T.	Surface	11	11	5	10	0	—	1	12	0	—	0	—	0	—	0	—	1	6	0	—	0	—	4	10	1	23	10
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	5	8	2	12	5	9	1	3	1	8	0	—	0	—	1	6	0	—	3	10	1	13	4	16	0	23	10
	700	3	18	2	22	0	—	0	—	0	—	0	—	0	—	1	14	4	16	1	27	7	19	5	18	0	23	19
	600	3	26	—	—	0	—	0	—	0	—	0	—	0	—	0	—	1	24	6	30	7	29	6	50	0	23	25
	500	0	—	—	—	0	—	0	—	0	—	0	—	0	—	1	25	1	31	8	46	8	39	5	36	0	23	40
	400	0	—	—	—	0	—	0	—	0	—	0	—	0	—	1	25	1	69	8	55	12	55	1	50	0	23	53
	300	1	92	—	—	0	—	0	—	0	—	1	17	0	—	0	—	0	—	5	83	11	68	1	50	0	19	69
	200	0	—	—	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	93	5	61	0	—	0	10	77
	150	0	—	—	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	90	2	94	0	—	0	4	92
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	16	9	1	8	1	8	0	—	1	6	0	—	0	—	0	—	0	—	1	15	0	—	4	12	1	25	9
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	2	18	3	12	6	7	2	14	1	5	1	10	1	1	1	1	1	10	1	16	1	11	5	16	0	25	11
	700	1	19	4	22	0	—	0	—	0	—	0	—	0	—	0	—	1	4	6	26	7	15	6	21	0	25	20
	600	1	25	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	11	33	6	25	7	32	0	25	30
	500	1	33	0	—	0	—	0	—	0	—	0	—	1	18	0	—	0	—	14	42	7	33	2	46	0	25	38
	400	2	48	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	13	47	6	53	0	—	0	21	49
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	59	8	61	1	53	0	18	60
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	8	80	6	60	1	105	0	15	74
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	70	3	69	0	—	0	8	70
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	58	0	—	0	—	0	2	58
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	1	0
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the wind has been observed from the range of directions during the month.

TN = The total number of cases the wind has been observed for all directions during the month.

REVIEW OF AGRO-METEOROLOGICAL STATIONS

EL KASR DECEMBER 1964

The month was mild and humid as regards to mean values of air temperature and humidity respectively.

The daily mean air temperature at 2 metres was slightly above normal (+0.3°C) and the mean daily relative humidity was 8% above normal. Light warm spells occurred on the 4th., 22nd., 27th. and 28 th. The most significant was the first one which gave the absolute maximum air temperature for the month (25.4°C). A moderate cold spell prevailed between the 7th. and the 15th. giving the lowest maximum air temperature (15.6°C) on the 9th.

Total amount of rainfall was remarkably above normal (+57.8 mms) and occurred between the 7th. and the 14th. inclusive. The maximum amount of rainfall was 27.0 mms and occurred on the 9th. The station field was flooded by rainfall from the southern higher level areas and accordingly measurments of soil temperatures during the period 8th. to 15th. were not taken. The extreme maximum soil temperatures at all depths occurred on the 1st. of the month when the maximum soil temperatures were 28.3 and 23.6°C at 0.3 and 5 cms depths respectively. Excluding the mentioned period, the lowest minimum soil temperatures recorded for the depths between 0.3 and 20 cms inclusive occurred on the last day of the month when the minimum soil temperatures were 7.0 and 8.8°C at 0.3 and 5 cms depths respectively. At 50, 100 and 200 cms depths the lowest minimum soil temperatures recorded occurred on the 15th., 30th. and 31st. of the month respectively.

The total actual duration of bright sunshine was 60% of the total possible duration with maximum on the 6th. (9.7 hours) and minimum on the 11th. (0.0 hours).

TAHRIR - DECEMBER 1964

This month was cold and rainy, mainly in the second week, when the total of 20.4 millimetres rain fell, and when the mean mximum air temperature was 17.3 degrees, against 21.2 degrees for the whole month.

As to the monthly mean values of air temperature, sunshine duration, piche and pan A evaporation and wind speed at 2 metres, this month gave the lowest values for December;while on the reverse, its rainfall was the highest monthly total for December since 1960 when data for Tahrir has been published for the 1st. time.

Travelling cold fronts, this month were associated with heavy rainfall and strong winds during the second week in particular.

Deviations from last December of mean air temperature, relative humidity, vapour pressure were -0.5°C + 1% and + 0.5 millimetre respectively, while that of mean wind at 2 metres was -0.3 metre per second.

Total sunshine duration was less by 27.2 hours or 9% of possible duration while total rainfall exceeded its corresponding value of last year by 17.3 millimetres and exceeded its corresponding value of December 1961 by 7.5 mms which comes as the second order of the greatest total rain ever fell in December since 1960.

Mean evaporation of piche and of pan A was less by 2.5 qnd 1.34 millimetres respectively, which conforms with the deviations in the above mentioned elements.

As for extreme soil temperature at different depths down to one metre, the maxima were found to be less by 1.4 — 2.3 degrees in the upper 2 centimetres ; later the difference becoming of the order of ± 0.1 degree, except at 50 centimetres where the difference was —0.8 degree, a significant deviation which may be attributed to the rainfall water penetrating to that depth. On the other hand, the minima were higher by 0.6 — 2.3 degrees down to 10 centimetres, after which the difference changed its sign and became of the order of 1.8 —0.8 degrees less, down to one metre.

GIZA — DECEMBER 1964

This month was slightly cooler and drier than normal. The mean air temperature at 2 metres above ground level and the total amount of rainfall were slightly below normal (i.e. - 1.1°C &- 0.7 mm respectively). The daily mean relative humidity was normal.

A cold wave was distinguished from the 5th to the 20th giving rise to the absolute minimum temperature at 5 cms above ground level in the 3 fields together with the absolute minimum air temperature at 2 metres above ground level on 6th and the lowest daily mean, day time mean & night time mean air temperatures on 9th, 7th & 9th respectively.

The minimum air temperature at 5 cms above grass (Libia) fell below 0°C only on the 6th (-2.0°C).

The extreme maximum soil temperature were generally lower than those of the last year, the maximum difference was -5.0°C at 1 cm depth in dry field. The extreme minimum soil temperatures were higher than those of last year for the surface layer down to 10 cms depth, the maximum difference was 3.4°C at 1 cm depth of wet field. For deeper layers the extreme minimum soil temperatures showed irregular insignificant deviations from the corresponding values of December 1963.

The daily mean wind speed at 2 metres above ground was higher than the corresponding value of last year by 0.3 m/sec. The total actual duration of bright sunshine was 24.5 hours less than that of December 1963. The daily mean value of piche evaporation, water pan evaporation, potential evaporation and potential evapotranspiration for grass (Libia) were all less by 1.5, 1.05, 0.4 & 0.7 mms respectively than the corresponding values of last December.

KHARGA — DECEMBER 1964

This month was slightly warmer but sharply drier as compared with the normal values of air temperature and relative humidity at 2 metres above ground.

It was distinguished by a warm spell at the beginning of the month yielding the maximum value of soil temperature for depths 0.3 cms & 1 cm on the 2nd., and the absolute maximum of air temperature at 2 metres in the screen 30.9°C (4.8°C above normal) on the 3rd. as well as the maximum value of minimum air temperature (15.0°C i.e. 4.6 above normal), the maximum values of daily, night and day time means of temperature, the minimum daily mean of relative humidity and the absolute maximum soil temperature for depths between 2 cm. and 20 cms. For further depths the maximum values were recorded on the beginning of the month.

The maximum values of surface wind speed at heights 50, 100, 200 & 300 cms were recorded on the 5th. as well as maximum evaporation from pan class A, piche in free air at different heights and also piche in the screen (20.9 mms i.e. 13.5 mms above normal) while the minimum values of water vapour pressure took place on the 6th.

A pronounced cold wave was experienced on the 6th., yielding the minimum value of maximum air temperature on the 9th. (17.5°C i.e. 7.9°C below normal), and the absolute minimum of air temperature on the 10th. (3.8°C i.e. 5.7°C below normal). On the 13th. the minimum value of daily mean of temperature, the maximum value of relative humidity, the minimum value of water vapour deficit, the minimum value of evaporation from pan class A, piche in free aire at different heights and also in the screen (4.4 mms i.e. 3.0 mms below normal) have been marked. The minimum value of soil temperature up to 50 cms depth took place on the 20th. while for further depths were recorded at the end of the month.

The mean surface wind speed dropped to its minimum value on the 29th. during the prevailing warm spell at the end of the month.

The actual sunshine duration was 91.7 % from the possible duration.

The means of maximum, minimum, and daily mean of temperature were all higher than normals by + 0.7°C, + 0.2°C and + 0.8°C respectively.

The mean relative humidity was 12% below the normal, while the evaporation from piche in the screen was 3.0 mms above normal.

Table C 1.—AIR TEMPERATURE AT 2 METRES ABOVE GROUND

DECEMBER — 19 4

STATION	Air Temperature (°C)					Mean Duration in hours of daily air temperature above the following values.										
	Mean Max.	Mean Min.	Mean of the day	Night time mean	Day time mean	-5°C	0°C	5°C	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C
El Kasr	19.8	10.3	14.8	13.3	16.9	24.0	24.0	24.0	24.0	10.7	1.4	0.0	0.0	0.0	0.0	0.0
Tahrir	21.2	9.0	14 2	12.4	16.6	24.0	24.0	24.0	20.3	9.1	2.4	0.1	0.0	0.0	0.0	0.0
Giza	20.9	8.4	14.1	12.3	16.5	24.0	24.0	24.0	19.2	9.9	2.1	0.0	0.0	0.0	0.0	0.0
Kharga	24.6	8.3	16.4	13.8	19.7	24.0	24.0	23.8	20.2	14.1	6.4	2.0	0.1	0.0	0.0	0.0

Table C 2.—ABSOLUTE VALUES OF AIR TEMPERATURE AT 2 METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS.

DECEMBER — 1964

STATION	Max. Temp. at 2 metres (°C)				Min. Temp. at 2 metres (°C)				Min. Temp. at 5 cms. above (°C)			
	Highest		Lowest		Highest		Lowest		Dry soil		Grass	
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date
El Kasr	25.4	4	15.6	9	12.9	29	7.0	9	5.6	9	—	6
Tahrir	26.4	28	13.7	9	13.8	29	5.2	6	2.4	6	—	—
Giza	24.8	1	15.5	9	13.1	29	4.8	6	0.0	6	— 2.0	6
Kharga	30.9	3	17.5	9	15.0	3	3.8	10	1.2	12	—	—

Table C 3.—(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 2 METRES ABOVE GROUND, EVAPORATION & RAINFALL.

DECEMBER — 1964

STATION	(Solar+Sky) Radiation gm. cal/cm²	Duration of Bright Sunshine (hours)			Relative Humidity. %						Vapour pressure (mms)						Evaporation(mms)		Rainfall (mms)		
		Total Actual monthly	Total Possible monthly	%	Duration in hoars > 90 %	Duration in hoars > 80 %	Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 UT	Highest	Date	Lowest	Date	Piche	Pan class (A)	Total Amount Monthly	Max. Fall in one day	Date
El Kasr. .	205.2	185.0	314.6	59	—	—	78	60	22	4	9.2	9.2	13.4	29	5.1	7	8.3	4.18	92.3	27.0	9
Tahrir . .	248.4	199.8	316.8	64	7.3	12.0	76	53	19	4	8.9	8.7	12.7	29	4.5	4	5.1	2.60	20.4	9.2	9
Giza . . .	259.2	207.0	307.3	68	4.1	9.0	71	49	30	4,5	8.3	8.3	13.0	30	5.3	4	5.9	5.59	5.3	2.7	11
Kharga . .	340.6	301.9	329.2	92	23	0	44	29	13	4	5.8	6.1	10.2	24	3.7	6	14.3	7.07	0.0	—	—

TABLE C 4.—EXTREME SOIL TEMPERATURE AT DIFFERENT DEPTHS IN DIFFERENT FIELDS

DECEMBER — 1964

STATION	Highest (H) Lowest (L)	Extreme soil temperature (°C) in dry field at different depths (cms.)										Extreme soil temperature (°C) in grass field at different depths (cms.)									
		0.3	1	2	5	10	20	50	100	200	300	0.3	1	2	5	10	20	50	100	200	30
El Kasr . . .	H	28.3	25.7	25.6	23.6	21.2	18.8	18.7	20.3	22.5	—	—	—	—	—	—	—	—	—	—	—
	L	7.0	7.3	7.6	8.8	10.5	13.0	15.0	17.7	20.1	—	—	—	—	—	—	—	—	—	—	—
Tahrir	H	30.6	29.9	27.7	26.3	23.2	20.2	20.1	22.3	24.6	25.5	—	—	—	—	—	—	—	—	—	—
	L	4.7	4.7	5.7	8.2	9.3	11.1	15.2	18.9	21.5	23.2	—	—	—	—	—	—	—	—	—	—
Giza	H	35.2	32.0	32.2	25.1	21.8	21.4	22.8	25.2	27.2	27.1	20.2	19.7	19.2	18.2	17.8	18.0	19.4	21.0	23.1	—
	L	2.7	3.9	4.3	10.2	13.6	17.2	19.4	21.8	24.9	26.2	8.6	10.0	10.0	11.0	13.1	14.5	16.5	18.3	21.3	—
Kharga. . . .	H	40.0	35.4	32.9	29.0	25.5	23.8	24.5	26.6	28.8	29.1	—	—	—	—	—	—	—	—	—	—
	L	4.0	4.6	5.8	7.2	14.0	17.7	24.3	24.0	26.9	28.3	—	—	—	—	—	—	—	—	—	—

TABLE C 5.—SURFACE WIND

DECEMBER — 1964

STATION	Wind Speed m/sec (2 metres)			Days with surface wind speed at 10 metres.							Max. Gust (knots) at 10 metres	
	Mean of the day	Night time mean	Day time mean	≥10 knots	≥15 knots	≥20 knots	≥25 knots	≥30 knots	≥35 knots	≥40 knots	value (knots)	Date
Kasr	4.1	3.7	4.5	—	—	—	—	—	—	—	—	—
hrir	2.4	1 9	3.0	20	11	7	5	2	0	0	39	8
a	2.1	1.6	2.7	28	9	2	0	0	0	0	31	9
arga	2.8	2.2	3.8	—	—	—	—	—	—	—	—	—

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