THE ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 21 NUMBER 1

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THE EGYPTIAN METEORLOGICAL AUTHORITY
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PUBLICATIONS OF THE METEOROLOGICAL AUTHORITY OF THE ARAB REPUBLIC OF EGYPT—CAIRO

In fulfilment of its duties, the Egyptian Meteorological Authority issues several reports and publications on weather, climate and agro-meteorology. The principal publications are described on this page.

Orders for publications should be addressed to :

"Chairman of the Board of Directors, Meteorological Authority, Kubri-el-Qubbeh — CAIRO.

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 the Meteorological Authority.

TECHNICAL NOTES

As from October 1970, the Meteorological Authority 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.

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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 climatological 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 infromation 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 Egypt 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 giving informations 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 monthly mean values, monthly totals, monthly frequencies and monthly absolute values. More specific climatological data have to be requested from the Meteorological Authority.

Starting from the Report of January 1958, the Monthly Weather Report of Egypt carries serial reference in volume and number ; each year carries a serial number in volume, Number I, being for January and 12 for Deoember. The reference number of January 1958 is volume I, number I.

Cairo, December 1980

Chairman (M. ALI BADRAN)
Board of Directors

INTRODUCTION AND EXPLANATION OF THE TABLES

For the purpose of this Monthly Weather Report, the Arab Republic of Egypt 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 observations made at a representative selection of the basic network of synoptic stations. The data included in Tables B1, B2, B3 are based on upper air observations. The data included in Tables C1, C2, C3, C4 & C5, are based on observaions taken at the Agro-Meteorological stations at Bahtim, Tahrir, Mersa Matruh and Kharga. The observation fields at Mersa Matruh and Kharga are considered for the moment as dry and bare fields. At Bahtim and Tahrir there are grass fields covered with Libia in addition to the dry and bare fields.

The soil characteristics of these fields are:

	MERSA MATRUH	TAHRIR	BAHTIM	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 metre	20 cms.
Sub soil type . .	,,	Pure sand	Clay loam and loam	Platy 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 met. 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 millibar = 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,

—Duration of bright sunshine in hours,

—Sky cover in octas,

—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 pressure corrected to Mean Sea Level (M.S.L.) are the arithmetic means over the month of their corresponding daily hourly values. 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. The dry and wet bulb thermometers used are of the mercury type and are freely exposed in sloping double roofed louvred screens with their bulbs at a height of 140-150 centimetres above the ground. Deviations from normals appear beside monthly mean values in a separate column.

Relative Humidity :

The relative humidity at a certain hour is derived from the values of the dry and wet bulb temperatures using Jelinek's Psychrometer Tables (Leipzig 1911). The mean monthly relative humidity is the arithmetic mean over the month of its daily hourly values,. 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 periods 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 possilbe 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.

Evaporation (Piche) :

The monthly mean value of piche evaporation is computed from its daily routine values observed at 0600 UT over the month. Evaporation measurements are taken once daily at 0600 UT and give the evaporation for the previous 24 hours. The evaporation readings are measured by a piche tube freely exposed in sloping double roofed louvred screens, the evaporation disc has an effective area of 10.1 centimetres square, white in colour, and at a height of 140-150 centimetres above the ground

TABLE A2.—**Maximum & Minimum Air Temperatures**

Higher and lower limits of both maximum and minimum temperatures and their corresponding dates of occurrences during the month are extracted from the daily readings of maximum (mercury) and minimum (alcohol) thermometers respectively. These dates are included for actual occurrences up to three ; when exceeding three, the symbol* is added beside the last three dates.

The number of days during the month with maximum air temperature above 25°C, 30°C, 35°C, 40°C &45°C and with minimum air temperature below 10°C, 5°C, 0°C & —5°C are included also in this table under separate columns.

The types and exposure of the maximum and of the minimum thermometers are as indicated in the notes on table A1.

The monthly mean values of grass minimum temperatures are the arithmetic means over the month of their corresponding daily values. The grass minimum temperatures are measured by ordinary minimum(alcohol)thermometers suitably exposed in the open air at the station field on special stands with their bulbs at a height of 5 centimeters above ground just touching the grass tops if there is any. Grass minimum thermometres readings are taken daily as a routine base at 0600 U.T. Deviations from normals appear besides mean values in a separate column.

TABLE A3.—Sky Cover & Rainfall

The monthly mean values of the total sky cover at the principal hours (00,06,12 &18UT)are compted from their corresponding daily routine values observed during the month,Mean values of the daily total sky cover is the arithmetic means over the month of the daily hourly values or of the daily observations taken at the 8 synoptic hours (00, 03, 06, 09, 12, 15, 18 & 21 U.T). Sky cover is in octas.

The monthly total rainfall is the total rainfall during the month. The maximum daily rainfall and the number of days with rain<0.1 and more than or equal 0.1, 1, 5, 10, 25 & 50 mms are extracted from the routine daily rainfall totals during the month. The rainfall for a given day is the amount of rain which has fallen during the 24 hours commencing at 0600U.T of that day; when the amount of rain which has fallen is not large enough to be measured (less than 0.1 mm) the term "Trace" is entered as (Tr.). The amount of rainfall measured includes the water equivalent of the rain water which has frozen after falling and the water equivalent of solid precipitation if any such as hail. Dates of maximum rain in 24 hours are included for actual occurrences up to three ; when exceeding three, the symbol* is added besides the last three dates.

The amount of rainfall is normally measured by ordinary rain gauges. Some selected stations are also equipped with a recording type of rain gauge. The rim of both types of gauges are at a height of 90-100 centimetres above the ground.

TABLE A4.—Number of Days of Occurrence of Miscellaneous Weather Phenomena

This table gives the number of days of occurrence of rain, snow, ice pellets, hail, frost, thunderstorm, mist, fog, haze, thick haze, dust or sandrising, dust or sandstorm, gale, clear sky & cloudy sky. Except for rain (see notes on table A3) the days of occurrence of these weather phenomena are those days during which the phenomenon has occurred at any time between 2200, and 2200 U.T.

In compiling this table, the terminology and definitions of these different weather phenomena are as follows.

—A day of rain is the day during which the total amount of rainfall is 0.1 millimetre or more

—A day of snow is the day during which snow or snow flakes or snow showers is or are observed even if it is or (they are) so small in quantity as to yield no measurable amounts of precipitation in the rain-gauge.

—A day of ice pellets is the day during which ice pellets are observed even if they are so small in quantity as to yield no measurable amounts of precipitation in the rain-gauge.

—A day of hail is the day during which either one or more of the following types of precipitation is or are observed, even if they are so small in quantity as to yield no measurable precipitation in the rain-gauge :

—Soft hail
—Small hail
—Hail stone

—A day of frost is the day during which frost is observed at the station.

—A day of thunderstorm is the day during which thunder is heard at the station whether lightning is seen or not. A day on which lightning is seen but thunder is not heard at the station is not counted as a day of thunderstorm.

—A day of mist is the day during which the surface horizontal visibility at the station has deteriorated and became equal to or greater than 1000 metres due to mist.

—A day of fog is the day during which the surface horizontal visibility at the station has deteriorated and fell below 1000 metres due to fog.

—A day of haze is the day during which the horizontal visibility at the station has deteriorated and became equal to or greater than 1000 metres due to haze.

—A day of thick haze is the day during which the horizontal visibility at the station has deteriorated and fell below 1000 metres due to thick haze.

—A day of dust or sandrising is the day during which the horizontal visibility at the station has deteriorated and became equal to or greater than 1000 metres due to dust or sandrising.

—A day of dust or sandstorm is the day during which the horizontal visibility at the station has deteriorated and fell below 1000 metres due to dust or sandstorm.

—A day of gale is the day during which the mean surface wind speed reached or exceeded 34 knots at the station for at least 10 minutes.

—A day of clear sky is the day on which the mean cloud amount at the station is less than 28/.

—A day of cloudy sky is the day on which the mean cloud amount at the station is 6/8 or more

As regards the last two items above, the mean cloud amount for a day is the mean of the 24 hours, the 8 synoptic hours or the 4 main synoptic hours of cloud observations according to the number of the routine observations taken at the station.

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 stations. 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 W. M. O, 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 range of direction during the month irrespective of their speed.

UPPER AIR DATA

TABLE B1.—Monthly Means and Monthly Absolute Higher & Lower Values of Altitude air Temperature & Dew point at Standard and Selected Pressure Surface

The routine upper air observations are taken at 0000 and 1200 UT, 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. Whenever it is not posible to obtain a complete set of daily values, a useful monthly mean value may be obtained as the mean of available values, taking in consideration; (a) number of missing observations not more than 10, and (b) there is no continuous period of 5 days wtihout an assigned value.

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 pressure 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 U.T. The number of cases the altitude of the freezing level and of the first tropopause have been 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 B1.

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

—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 tropopaus 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 and the pressure 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 numbe 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 cise of table Bl, follows the general lines recommended by the Commission for Climatolcgy of the World Meteorological Organization REC. 34 (CCL-1). The ranges of wind direction used are twelve ranges of 30° each beginning with the range (345°—014°) as being the true north. It gives for the hour of cbservation indicated the followng data :

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

—The mean scalar wind speeds (ff) blowing from the specified ranges of direction 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 total number of cases (TN) the wind has been observed at the surface of the station and at different pressure surfaces during the month irrespective of the wind direction

—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 Agrometeorological Stations at Mersa Matruh, Tahrir, Bahtim & Kharga.

The monthly review of all agrometeorological elements that have been observed at each agrometeorological station includes a general summary of pronounced weather phenomena that prevailed during the month together with a comparison between the monthly values and average values specified elements that are of great interest to agriculturists as well as to agrometeorologists. For recently operated stations departure from last year values appears in the monthly review.

During winter, the monthly review includes normally the days of minimum air temperature below 0°C at the height of five centimetres above the ground.

TABLE C1.—Air Temperature at 1½ Metres Above Ground

The monthly mean values of the maximum, minimum, night-time mean, day-time mean and mean of day of air temperatures are the arithmetic means over the month of their corresponding daily mean values. The mean air temperature of a day is the mean of the eight values of the dry bulb temperature at each of the principal and secondary observation hours, the value at 0000, 0300, & 2100 U.T. being extracted from the record of the dry bulb thermometer of a mercury in steel hygrograph, except at Mersa Matruh and Kharga where they are obtained from visual readings.

The night-time mean temperature of a day is the mean temperature for the period from sunset of the previous day to sunrise of the same day. The day-time mean temperature refers to the period from sunrise to sunset of the same day. Both night-time and day-time mean temperatures are computed from empirical formulae, which may vary from month to month but are common for all centres. These formulae were found by trial comparison with true means of the year 1966. The errors were never permitted to reach a whole degree, and usually stayed equal to or lower than 0.5°C.

The duration of air temperatures above a specified limit of temperature is obtained graphically from the same recording charts, daily to the nearest whole hour.

The maximum (mercury), the minimum (alcohol) and the dry bulb (mercury ventilated) thermometers are freely exposed in louvred Stevenson screens of the Egyptian type with heir bulbs at a height of 190-195 centimetres above ground for the maximum and minimum thermometers, and 170 cms approximately for the dry bulb thermometer ; the recording thermometer used is of the bi-metallic type and is exposed in a similar screen ; the height of the bi-metallic piece s 165 centimetres approximately above the ground.

TABLE C2.—Extreme Values of Maximum & Minimum Air Temperatures at 1½ metres above Ground, Absolute Minimum Air Temperature at 5 cms above Ground over Different Fields.

The extreme values of maximum and minimum air temperatures at 1½ metres above ground and of minimum air temperatures at 5 cms above ground over different fields are extracted from their routine values. Dates of occurrences are included in separate columns beside the extreme value. Extreme values of maximum & minimum air temperature at 1½metres inculde the Highest & Lowest limits of the daily corresponding routine values during the month.

The thermometres used for minimum air temperature at 5 cms above ground are of the ordinary minimum type (alcohol) with the bulbs screened with small separate screens of horizontal 5 cm. length and 2 cm. diameter metal tubing painted whité outside and black inside, and centered on the thermometer bulbs.

TABLE C3.—**(Solar + Sky) Radiation, Duration of Bright Sunshine, Relative Humidity Vapour Pressure at 1½ meters above Ground, Evaporation & Rainfall.**

The monthly total values of Bright Sunshine duration, & 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 1½ metres and Evaporation are the arithmetic means of their corresponding daily mean values for the month

The (Solar + Sky) Radiation is obtained from the records of a Robitzsch Actinograph ; the Robitzch values at Bahtim, Tahrir and Kharga are regularly compared with the records of an Eppley pyrheliometer installed at the station. The sensitive elements of the Robitzsch Actiongraph and of the Eppley phyrheliometer are at 100 cms approximately above the ground.

The types of insturments 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 A1.

The relative humidity and vapour pressure values for Tahrir, Bahtim and Kharga are derived from the readings of ventilated dry and wet bulb mercury thermometers freely exposed in the screen using the Aspirations psychrometer Tafeln of the Deutschen Wetterdients 1955. The relative humidity and vapour pressure values for Mersa Matruh are drived from the readings of unventitlated dry and wet bulb mercury thermometers freely exposed in the screen, using the Jelineks Psychrometer Tables (Leipzig 1911). No corrections are applied for the wind speeds or the atmospheric pressure. The height of the bulbs is 170 cms approximately above the ground.

The mean relative humidity or vapour pressure for a given day is the mean of the eight principal and secondary observation values which are extracted from the readings of the dry and wet bulb thermometers, the values at 0000, 0300, and 2100 U.T. being extracted from the records of the mercury in steel hygrograph except at Mersa Matruh and Kharga where these values are obtained from visual readings of the dry and wet bulb thermometers.

The mean monthly values of the relative humidity or vapour pressure are the means of the corresponding mean daily values during the month. The lowest value of the relative humidity and its date of occurrence are obtained from the records of a hair hygrograph exposed in the screen, the height of the hair is 170 centimetres approximately above the ground.

The extreme maximum and minimum values of vapour pressure during the month are extracted from the values of the eight prinicipal and secondary observations.

Evaporation measurements are taken once daily at 0600 U.T. from a Piche tube and also a class "A" evaporation pan and give the evaporation for the previous 24 hours. The Piche tube is installed in the screen with the dry bulb, maximum and minimum thermometers ; the colour and effective area of the evaporation disc are as given in the notes on table A1. The class "A" evaporation pan is of the type recommended by the Commisision 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, 120.6 centimetres in diameter (inside dimentions). The pan except at Bahtim is freely exposed in the open air in the dry field, its rim at a height of 41 centimetres above ground away from obstacles such as buildings or trees. At Bahtim the pan is protected from animals and birds by a cylindrical cover of the same diameter as the pan and 30 cm high made of metal wire mesh of one cm, side. Reduction of evaporation by 11%—established by systematic study-is being allowed for in the data published.

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 Temperature at Different Depths (cms) in different Fields**

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

The soil temperature readings are taken in different fields at the specified depths ranging from 2 cms to 300 cms in each field as indicated in the table. These readings are taken regularly during the period from 0600 to 1800 U.T. according to the following schedule, except at Kharga where the observations are as appropriate but extend in the period between 1800 and 0600 U.T.

— at 0600 U.T. and every three hours for the 2,5 and 10 cm depths.

— at 0600 U.T. and every six hours for the 20 and 50 cms depths.

-- at 1200 U.T. for the 100 and 200 cms. depths.

— at 0900 U.T. once every 3 days for the 300 cms depth.

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

TABLE C5.—**Surface Wind**

The monthly values of the daily mean, the night time mean and of the day time mean of the surface wind speed are the arithmetic means 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 1800 U.T. of the previous day ; the night-time mean wind speed of the day is obtained from the total run of air during the period 1800 U.T. of the previous day to 0600 U.T. of that day ; the day-time mean is similarly computed for the period 0600 to 1800 U.T. 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 1½ metres above the ground.

The number of days with surface wind speed reaching or exceeding specified values of velocities (≥10 Knots, ≥15 Knots, ≥20 Knots, ≥25 Knots, ≥30 Knots, ≥35 Knots and ≥40 Knots) for at least 5 minutes at any time between 2200 & 2200 U.T. irrespective of its direction are extracted from the daily routine analysis of surface wind records during the whole month. The daily records of the Dine Pressure Tube Anemograph are used, the highest gust refers to the highest excursion made by the velocity pen on the records during the month. The head of the instrument is at a height of 10 metres above the ground level.

LIST OF STATIONS APPEARING IN THE REPORT—SYNOPTIC AND CLIMATOLOGICAL STATIONS

District.	Station	Index Number II iii	Latitude °N	Longitude °E	Elevation of the ground H or Ha (metres)	Altitude of the Station Hp (metres)	Altitude of the barometric Cistern (metres)	Height of Wind recording instrument (metres) above building	Height of Wind recording instrument (metres) above ground	Synoptic Observations 00	03	06	09	12	15	18	21	Hourly Observations (H Half hourly obs. ns (h) (0000—24600)	Upper airobservations P (Pilot Ballon) W (Radio Wind) R (Radio Sonde) 00	06	12	18	Remarks
Mediterranean	Sallum	62 300	31 33	25 11	4.0	6.0	5.2	10.0	14.0	×	×	×	×	×	×	×	×	H	P	—	P	—	
	Mersa Matruh (A)	306	31 20	27 13	30.7	30.0	30.0	10.0	17.5	×	×	×	×	×	×	×	×	H	RW	W	RW	W	
	Alexandria (A)	318	31 12	29 57	—3.35	6.78	6.45	10·0	22.08	×	×	×	×	×	×	×	×	H	P	—	P	—	
	Port Said (A)	333	31 17	32 14	1.1	6.1	2.7	—	—	×	×	×	×	×	×	×	×	H	P	—	P	—	
	El Arish	336	31 07	33 45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Ghazza	338	31 30	34 27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Lower Egypt	Tanta	348	30 47	31 00	7.31	14.85	12.51	10.0	12.0	×	×	×	×	×	×	×	×	H	—	—	—	—	
Cairo Area	Cairo (A)	366	30 08	31 24	111.54	74.5	64.72	—	10.0	×	×	×	×	×	×	×	×	h	—	—	—	—	
	Helwan	378	29 52	31 20	139.26	140.68	140.68	—	10.0	×	×	×	×	×	×	×	×	—	RW	W	RW	W	
Upper Egypt	Fayoum	381	29 18	30 51	23.43	—	—	10.0	13.8	—	—	×	×	×	×	×	—	H	—	—	—	—	
	Minya (A)	387	28 05	30 44	39.0	40.5	44.2	10.0	20.15	×	×	×	×	×	×	×	×	H	P	—	P	—	
	Assyout (A)	393	27 11	31 06	71.08	69.6	69.6	15.0	20.0	×	×	×	×	×	×	×	×	H	—	—	—	—	
	Luxor (A)	405	25 40	32 42	95.0	88.45	88.45	10.0	21.0	×	×	×	×	×	×	×	×	H	P	—	P	—	
	Aswan (A)	414	23 58	32 47	200.0	193.5	198.96	10.0	15.0	×	×	×	×	×	×	×	×	H	RW	W	RW	W	
Western Desert	Siwa	417	29 12	25 29	—15.0	-13.26	-13.26	10.0	14.6	×	×	×	×	×	×	×	×	H	P	—	P	—	
	Bahariya	420	28 20	28 54	128.0	129.5	129.5	—	—	×	×	×	×	×	×	×	×	H	P	—	P	—	
	Farafra	423	27 03	27 58	90.0	92.1	92.1	—	—	—	—	×	×	×	×	×	—	H	—	—	P	—	
	Dakhla	432	25 29	29 00	106.21	111.27	107.75	10.0	14.7	×	×	×	×	×	×	×	×	H	P	—	P	—	
	Kharga	435	25 27	30 32	77.79	72.75	78.68	10.2	14.2	×	×	×	×	×	×	×	×	H	P	—	P	—	
Red Sea	Tor	459	28 14	33 37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Hurghada	462	27 17	33 46	1.0	2.75	2.75	10.0	15.0	×	×	×	×	×	×	×	×	H	—	—	P	—	
	Quseir	465	26 08	34 18	8.7	10.83	10.0	10.0	14.4	×	×	×	×	×	×	×	×	H	—	—	—	—	

GENERAL SUMMARY OF WEATHER CONDITIONS

JANUARY 1978

Markedly cold and rainy weather during the first half of the month. Min. temperature records at Asiut Qena. Luxor, Dakhla, kharga. Two warm spells during the second half.

PRESSURE DISTRIBUTION

The atmospheric pressure over Egypt was mainly influenced by the frequent transits of depressions through East Mediterranean on the *2nd*, *8th*, *18th*, *20th*, *23rd*, *25th*, & *28th*.

The mean pressure during the month was above normal.

SURFACE WIND

Surface winds were generally light to moderate and blew from SW to NW directions in the north and from N ly to NW ly in south. Fresh to strong winds were experienced during several days in scattared placed.

TEMPERATURE

Three successive cold waves prevailed during the first half of the month; both maximum and minimum temperatures showed marked departures below normal. It is worthy of mention that minimum temperature attained records at Asiut (0°C on the *5th*), Qena (-0.8°C on the *7th*), Luxor (-1.5°C on the *7th*), Dakhla (-0.4°C on the 7th), Kharga (-1°C on the *7th*).

Two warm spells prevailed most of the second half of the month and were intervened by a light cold wave.

The highest and lowest maximum air temperatures were respectively 32.4°C at Dakhla on the 19th and 11.0°C at Alexandria on the *10th*.

The highest and lowest minimum air temperatures were respectively 19.0°C at Cairo airport on the *19th* and -4.0°C at Dakhla on the *19th*.

PRECIPITATION

Rain fell over north of the country during several days mainly in the first half of the month Rain was heavy in scattered places during few days.

The monthly rainfall amounts showed slight departures from normal.

The maximum daily rainfall was 31.7mm. at Mersa Matruh on the *8th*.

The maximum monthly rainfall was 59.5 mm. at Alexandria.

OTHER WEATHER PHENOMENA

Early morning mist developed during several days over Lower Egypt & Cairo.

Rising sand was reported in scattered places during few days.

Chairman (M. A. BADRAN)

Board of Directors

Cairo, March 1980

SURFACE DATA

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

JANUARY — 1978

STATION	Atmospheric Pressure mbs. M.S.L		Air Temperature 'C									Relative Humidity %		Bright Sunshine			Piche Evap
			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	%	
ElSallum	1017.5	0.4	18.6	—0.2	9.1	—0 2	13.8	13 3	—0.3	9.1	—0.9	56	—4	—	—	—	6.0
Mersa Matro	1018.3	0.9	16.7	—1.4	8 0	—0.3	12.3	12.2	—0.6	9.0	—0.7	67	—1	215.8	321.4	67	5.9
Alexandria	1018.6	0.9	17.9	—0.6	8.2	—0 9	13 0	12 8	—0.7	10.0	—0.9	69	—0	197.5	321.9	61	3.2
Port Said	1018.2	0.9	17.3	0.7	11.5	—0 2	14 4	14.0	—0.3	10.9	—0.9	66	—7	248.3	321.8	77	3.7
Cairo	1019.4	1.5	18.6	—0.5	9.0	—0.2	13 8	13.7	—0.0	9.5	—0.4	58	0	—	—	—	7.7
ElFayoum	—	—	20.0	—0.4	5.5	—0.9	12.7	12.2	—0.6	9.0	—0.4	66	5	—	—	—	4.9
El minia	1020.2	1.5	20.5	—0.1	3.9	—0 0	12.2	11.6	—0.2	8.0	—0.1	62	4	259.4	328.2	79	6.3
Assuit	1019.8	1.4	19.5	—1.2	4.1	—2 6	11.8	11 6	—1.8	6.5	—1.9	46	—0	—	—	—	3.4
Luxor	1019.2	2.0	23.0	—0.2	3.9	—1.6	13.4	12.9	—1.1	8 3	—1.1	53	0	—	—	—	11.0
Aswon	1019.2	2.2	23.2	—0.8	7.4	—1.5	15.3	14.7	—1.2	7.9	—1.0	34	—5	314.6	336.1	94	6.4
Sewa	1019.1	0.5	19.7	—0.1	5.7	—0.9	2.7	12.1	—0.4	7.7	—0.2	53	—	238.4	315.5	76	6.4
El-Baharia	1019.9	1.1	20 1	—0.1	4 9	—0.1	12.5	12.3	—0.2	7.4	—0.4	49	—5	—	—	—	6.1
El-Farafra	1021.7	1.8	20.5	—0.0	3.8	—0 1	12.1	11.9	—0 2	6.7	—0.1	44	5	—	—	—	6.4
El-Dakhla	1021.2	2.4	21.6	—0.1	1.9	—1.9	11.7	11.3	—0.8	4.9	—2.3	42	—7	—	—	—	6.7
El-Kharga	1019.8	1.0	22.7	—0.3	4.0	—1.6	13.3	13.4	—0.2	7.6	—0.4	46	3 4	298.3	333.2	90	6.1
El- Hurgada	1018.7	2.1	20.7	—0.2	9.9	—0.3	15.3	15.5	—0.0	9.9	—1.0	44	—10	289.2	329.9	88	10.4
ElQuseir	1018.3	1.8	21.8	—0.6	13 0	—0.8	17.4	17.0	—0.9	11.3	—1.3	45	8	—	—	—	6.3

Table A 2.—MAXIMUM AND MINIMUM AIR TEMPERATURE

JANUARY — 1978

Station	Maximum Temperature °C									Grass Min. Temp.		Maximum 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
El Sallum	26.0	17	11.2	2	01	00	00	00	00	6·7	—	15.0	16	5.4	3,8	21	00	00	00
Mersa Matro . .	23.7	19	11.1	7	00	00	00	00	00	6.6	—	13·4	18	4.6	8,10	28	02	00	00
Alexandria	22.6	31	11.0	10	00	00	00	00	00	5.9	—	15.2	20	3.4	6	26	03	00	00
Port Said	24.0	18	11.5	3	00	00	00	00	00	11.2	—	17.7	19	7.7	11	09	00	00	00
Cairo A. P. . . .	30.2	19	11.4	3	03	01	00	00	00	—	—	19.0	19	5.2	11	22	00	00	00
El-Fayoum	29.0	19	12.9	3	02	00	00	00	00	2.7	—	12.0	19	2.2	6	28	18	00	00
ElMinia	29.2	19	15.6	3	02	00	00	00	00	1.3	—	10.2	20	0.4	5	29	23	00	00
Assuit	30.3	19	12.8	3	04	01	00	00	00	3.1	—	12.0	20	0.0	5	28	18	00	00
Luoxr	29.3	19	16.0	3	10	00	00	00	00	1.4	—	11.2	20	1.5	7	30	24	01	01
Aswan	31.5	20	15.9	11	09	02	00	00	00	—	—	13.5	20	2.7	12	25	06	00	00
Sewa	29.1	19	13.8	7,9	03	00	00	00	00	3.7	—	15.2	19	0.2	12	27	14	01	00
El-baharia	30.1	19	13.1	3	04	01	00	00	00	4.3	—	13.5	19	0.8	5	28	19	01	01
El-Farafra	30.5	19	14.8	3	04	01	00	00	00	2.0	—	9.4	20	1.8	12	31	23	02	02
El-Dakhla	32.4	19	13.6	3	05	01	00	00	00	1.8	—	8.4	19	4.0	7	31	23	08	07
El-Kharga	31.9	19	15.5	3	08	01	00	00	00	1.7	—	14.9	15	3.1	7	29	18	03	03
El-Hurgada . . .	24.8	20	17.3	11	00	00	00	00	00	—	—	14.7	02	6.9	5	18	00	00	00
El-Quseir	25.8	2,20	17.4	3	02	00	00	00	00	10.2	—	16.0	21	9.5	9	01	00	00	00

Table A. 3—SKY COVER AND RAIN FALL

JANUARY — 1978

Station	Mean Sky Cover Oct.					Rain Fell mms										
	00 U.T.	60 U.T.	12 U.T.	18 U.T.	Daily Mean	Total Amount	Dev. From Normal	Max. Fall in one day		Number of Dayswith Amountof Rain						
								Amount	Date	<.1	>=.1	>=1	>=5	>=10	>=25	>=05
Elsallum	3.8	3.5	4.0	3.0	3.6	20.7	1.7	11.2	2	00	06	03	02	01	00	00
Mersa Matro (A)	2.2	3.7	3.8	3.2	3.1	58.0	—30.7	31.7	8	03	08	04	04	02	01	00
Alexandria (A)	3.0	3.8	5.3	3.8	3.9	59.5	—6.9	20.9	2	01	10	06	05	02	00	00
Port Said (A)	1.5	2.6	2.8	1.8	2.2	11.4	—1.0	7.5	3	00	07	02	01	00	00	00
Gairo A.P.	1.3	2.6	3.5	1.8	2.4	13.2	8.0	9.1	2	02	06	03	01	00	00	00
El-Fayoum	—	1.6	2.5	1.3	—	1.6	0.1	1·6	2	03	01	01	00	00	00	00
El Minia (A)	0.8	1.4	2.6	1.5	1.5	Tr.	—	Tr	2	01	00	00	00	00	00	00
Assult (A)	0.2	0.7	1.2	0.5	0.6	0.0	0.0	—	1	00	00	00	00	00	00	00
Luxor (A)	0.1	1.2	1.3	0.6	0.7	0.0	0.3	—	2,10	00	00	00	00	00	00	00
Aswan (A)	0.0	0.4	0.5	0.4	0.3	0.0	0.0	—	2	00	00	00	00	00	00	00
Sewa (A)	2.4	2.4	2.0	1.5	2.1	2.8	—2.0	1.8	—	00	03	01	00	00	00	00
El-Baharia	0.8	1.5	2.6	1.3	2.5	Tr.	—	Tr	—	02	00	00	00	00	00	00
El Farafra	—	1·4	2.3	1.3	—	Tr.	—	Tr	—	01	00	00	00	00	00	00
El Dakhla (A)	0.1	0.4	1.0	0.3	0.5	0.0	0.2	—	—	00	00	00	00	00	00	00
El-Kharga (A)	0.1	0.3	1.2	0.3	0.5	0.0	0.0	—	—	00	00	00	00	00	00	00
El Hurgada (A)	0.8	1.2	2.3	0.6	1.3	0.0	0.0	—	—	00	00	00	00	00	00	00
ElOuseir	0.2	1.0	1.2	0.5	0.8	0.0	0.0	—	—	00	00	00	00	00	00	00

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

JANUARY — 1976

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											
Sallum	08	00	00	01	00	00	00	18	00	00	00	08	04
Mersa Matruh . . . (A)	09	00	00	01	02	00	00	10	00	02	00	12	04
Alexandira . . . . (A)	10	00	00	02	01	06	02	03	00	00	00	05	06
Port Said . . . . (A)	07	00	00	00	02	00	00	05	00	00	00	20	03
El Ariah	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo . . . . . (A)	05	00	00	00	09	02	12	09	00	00	00	15	01
Fayoum	01	00	00	00	03	00	00	00	00	00	00	16	01
Minya . . . . . (A)	00	00	00	00	14	02	05	03	00	00	00	24	00
Assyout. . . . . (A)	00	00	00	00	00	00	00	03	00	00	00	28	00
Luxor . . . . . (A)	00	00	00	00	00	00	28	05	00	01	00	25	00
Aswan . . . . . (A)	00	00	00	00	00	00	03	05	00	00	00	31	00
Siwa	03	00	00	00	00	00	00	04	00	00	00	18	02
Bahariya	00	00	00	00	01	00	00	03	00	00	00	22	00
Farafra	00	00	00	00	00	00	00	06	00	01	00	19	00
Dakhla	00	00	00	00	00	00	00	03	00	00	00	29	00
Kharga	00	00	00	00	00	00	00	02	00	00	00	31	
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	00	00	00	00	00	00	00	10	00	00	00	24	01
Quseir	00	00	00	00	00	00	00	00	00	00	00	22	00

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

JANUARY 1978

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing within 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 . . .	18	00	00	1—10	03	05	09	24	14	18	10	14	13	65	47	10	232
				11—27	03	01	01	00	00	02	03	20	107	204	134	18	493
				28—47	00	00	00	00	00	00	00	00	00	00	01	00	01
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	06	06	10	24	14	20	13	34	120	269	182	28	762
Mersa Matruh .(A)	01	00	00	1—10	00	06	04	16	46	59	35	97	49	33	21	16	382
				11—27	00	00	00	00	00	15	44	94	118	39	29	17	356
				28—47	00	00	00	00	00	00	00	00	03	00	00	02	05
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	00	06	04	16	46	74	79	191	170	72	50	35	743
Alexandria . . (A)	3	00	00	1—10	12	36	37	39	29	40	40	100	41	43	23	29	460
				11—27	00	01	05	00	00	00	11	72	104	15	34	03	281
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	12	37	42	39	29	40	51	172	145	58	57	32	741
Cairo . . . . (A)	27	00	00	1—10	18	53	51	45	11	37	79	55	29	23	32	03	436
				11—27	03	19	03	00	01	09	116	84	35	11	00	00	281
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	21	72	54	45	12	46	195	139	64	34	32	03	717
Fayoum	28	06	00	1—10	16	97	15	08	14	38	56	137	118	60	26	17	653
				11—27	00	10	06	00	00	00	00	14	23	10	00	00	63
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	16	107	21	08	14	38	56	151	141	70	26	17	710
Minya . . . . (A)	27	03	00	1—10	147	13	02	03	08	166	71	25	39	28	31	97	633
				11—27	25	02	00	00	00	03	02	10	08	21	16	06	84
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	172	15	02	03	08	169	73	35	47	49	47	103	714
Asyout . . . . (A)	16	00	00	1—10	26	15	04	03	12	18	33	47	63	90	122	88	521
				11—27	09	00	00	00	02	14	20	08	06	45	45	58	207
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	35	15	04	03	14	32	53	55	69	135	167	146	728
Luxor	08	00	00	1—10	44	49	61	35	73	52	118	82	40	52	75	83	788
				11—27	00	00	00	00	00	00	00	00	00	00	04	04	2
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	44	49	61	35	73	52	118	82	40	52	79	87	7036

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

JANUARY — 1978

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing within 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
Aswan . . . . (A)	00	00	00	1—10	299	51	02	02	03	09	20	07	11	21	27	81	533
				11—27	162	18	00	00	00	00	00	00	00	00	05	26	211
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**461**	**69**	**02**	**02**	**03**	**09**	**20**	**07**	**11**	**21**	**32**	**107**	**744**
Siwa.	21	02	03	1—10	01	06	18	31	99	45	34	43	46	141	70	11	547
				11—27	02	00	00	00	05	08	08	08	19	37	74	12	173
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**03**	**06**	**18**	**31**	**104**	**53**	**42**	**51**	**65**	**178**	**144**	**23**	**715**
Dakhla.	43	02	00	1—10	57	28	16	33	36	30	23	33	37	83	151	134	663
				11—27	01	35	00	00	00	00	03	00	00	03	15	16	38
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**58**	**28**	**16**	**33**	**36**	**30**	**26**	**33**	**37**	**86**	**166**	**150**	**699**
Kharga.	05	04	00	1—10	252	96	32	29	17	16	32	14	19	36	64	90	701
				11—27	26	07	00	00	00	00	00	00	00	00	02	03	38
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**278**	**103**	**32**	**29**	**17**	**16**	**32**	**14**	**19**	**36**	**66**	**93**	**735**
Hurghada	04	00	00	1—10	22	08	05	07	18	04	11	07	10	76	118	35	321
				11—27	37	00	00	01	12	05	00	00	00	73	157	133	418
				28—47	00	00	00	00	00	00	00	00	00	00	01	00	01
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**59**	**08**	**05**	**08**	**30**	**09**	**11**	**07**	**10**	**149**	**276**	**168**	**740**
Quseir	00	00	00	1—10	72	29	13	09	17	06	15	10	23	192	165	53	604
				11—27	69	02	00	00	00	00	00	00	00	08	17	44	140
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**141**	**31**	**13**	**09**	**17**	**06**	**15**	**10**	**23**	**200**	**182**	**97**	**744**

UPPER AIR CLIMATOLOGICAL DATA

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

JANUARY — 1978

	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 0600 U.T.	Surface	31	*1015mb.	*1022mb.	*1007mb.	31	10.8	15.6	6.8	31	5.4
	1000	31	152	210	88	31	10.6	18.0	6.6	31	4.9
	850	31	1493	1559	1421	31	4.4	17.0	— 3.7	31	— 3.7
	700	31	3052	3133	2924	31	— 4.3	6.8	—15.5	30	—14.1
	600	31	4252	4386	4070	31	—11.3	— 1.5	—22.7	30	—22.7
	500	31	5625	5797	5388	31	—21.3	—13.5	—33.3	29	—31.3
	400	30	7236	7425	6923	30	—30.4	—24.8	—41.3	29	—42.5
	300	29	9214	9428	8897	26	—44.9	—39.7	—51.7	28	—54.1
	250	28	10424	10638	10131	28	—50.3	—40.4	—57.8	27	—59.5
	200	28	11870	12103	11612	28	—54.5	—47.1	—63.7	22	—62.5
	150	26	13708	13936	13478	26	—58.3	—51.5	—62.1	8	—62.9
	100	26	16216	16445	16072	26	—65.2	—57.8	—70.7	1	—64.3
	70	15	18365	18606	16188	15	—65.4	—58.5	—72.7	—	—
	60	10	19325	19590	19150	10	—63.5	—60.1	—67.0	—	—
	50	9	20437	20661	20213	9	—63.8	—60.1	—68.6	—	—
	40	6	21872	22050	21670	6	—61.8	—59.8	—65.5	—	—
	30	4	23608	23796	23498	4	—61.3	—59.5	—62.5	—	—
	20	3	26146	26300	26018	3	—58.8	—56.5	—61.5	—	—
	10	1	30320	—	—	1	—61.5	—	—	—	—
Helwan 0000 U.T.	Surface . . .	31	*1003m.b.	*1000m.b.	*993m.b.	31	10.7	21.8	6.5	31	4.0
	1000 . . .	31	161	211	83	24	10.6	20.8	7.1	24	4.0
	850 . . .	31	1506	1550	1459	31	5.2	18.0	— 2.1	31	— 6.0
	700 . . .	30	3074	3169	2955	30	2.0	5.7	—13.1	29	—16.2
	600 . .	29	4282	4411	4117	29	— 9.3	— 2.9	—16.5	29	—22.8
	500 . . .	29	5671	5825	5461	29	—18.0	—12.9	—26.4	29	—30.4
	400 . . .	29	7305	7489	7103	29	—29.0	—23.0	—36.4	29	—52.3
	300 . . .	29	9306	9502	9095	29	—43.0	—34.0	—49.0	28	—58.3
	250 . . .	29	10519	10750	10285	28	—48.9	—41.7	—56.1	28	—62.6
	200 . . .	29	11973	12238	11762	28	—53.3	—48.3	—62.5	19	—62.5
	150 . . .	28	13817	14087	13615	28	—57.5	—52.1	—62.6	3	—67.4
	100 . . .	26	16343	16591	16151	25	—64.5	—57.3	—71.1	—	—
	70 . . .	15	18484	18608	18346	15	—65.2	—57.4	—72.0	—	—
	60 . . .	12	19448	19560	19300	12	—65.5	—58.9	—69.8	—	—
	50 . . .	12	20523	20637	20367	12	—64.8	—58.5	—70.4	—	—
	40 . . .	8	22024	22090	21940	8	—61.9	—58.4	—63.6	—	—
	30 . . .	7	23708	23787	23596	7	—60.7	—58.3	—62.0	—	—
	20 . . .	3	26220	26268	26136	3	—57.1	—56.3	—58.0	—	—
	10 . . .	—	—	—	—	—	—	—	—	—	—
Aswan 0000 U.T.	Surface . . .	31	*997m.b.	*1003m.b.	*993m.b.	31	10.0	18.0	18.0	31	— 0.3
	1000 . .	31	170	220	126	8	7.2	11.0	11.0	8	— 1.5
	850 . . .	31	1532	1561	1497	31	10.2	17.2	17.2	31	— 2.4
	700 . . .	31	3133	3190	3079	31	3.8	10.4	10.4	31	— 8.7
	600 . . .	31	4372	4448	4303	31	— 3.2	0.4	— 0.4	31	—14.8
	500 . . .	31	5791	5887	5688	31	—13.0	— 8.9	— 8.9	31	—23.7
	400 . . .	30	4754	7568	7318	30	—24.9	—19.7	—18.7	30	—33.9
	300 . . .	30	9490	9625	9301	30	—39.1	—32.2	—30.7	30	—47.3
	250 . . .	29	10719	10881	10510	29	—46.1	—41.2	—46.4	29	—53.8
	200 . . .	29	12183	12360	11944	29	—53.6	—49.7	—59.0	29	—61.0
	150 . . .	29	13997	14194	13760	29	—62.4	—58.9	—66.5	7	—66.0
	100 . . .	27	16429	16584	16238	27	—73.6	—68.5	—78.0	—	—
	70 . . .	19	18512	18624	18354	18	—74.2	—68.9	—80.1	—	—
	60 . . .	12	19503	19871	19380	12	—71.1	—68.7	—75.0	—	—
	50 . . .	12	20492	20580	19500	12	—68.0	—64.9	—70.4	—	—
	40 . . .	8	21944	22040	21850	8	—63.7	—58.7	—67.4	—	—
	30 . . .	8	23626	23710	23512	8	—59.2	—57.0	—64.0	—	—
	20 . . .	4	26186	26244	26130	4	—53.0	—52.2	—54.1	—	—
	10 . . .	—	—	—	—	—	—	—	—	—	—

N = Number of observations of the specified pressure surface.

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

UPPER AIR CLIMATOLOGICAL DATA

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

JANUARY — 1978

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 UT	Surface	31	* 1015m.b.	* 1022m.b.	* 1008m.b.	31	15.2	21.0	09.0	31	06.2
	1000	31	154	214	97	31	14.2	20.0	07.8	31	05.3
	850	31	1502	1558	1453	31	05.3	14.8	—02.7	31	—06.2
	700	31	3064	3145	2946	31	—03.2	02.6	—14.0	31	—16.7
	600	31	4271	4365	4095	31	—10.7	—03.9	—22.5	31	—32.4
	500	31	5650	5765	5411	31	—19.5	—12.9	—31.6	31	—43.6
	400	31	7269	7410	6968	31	—30.6	—25.1	—44.0	31	—54.9
	300	31	9292	9416	8932	31	—43.1	—37.8	—48.7	31	—60.6
	350	31	10471	10643	10153	31	—49.3	—46.1	—56.0	20	—63.1
	200	28	11931	12 40	11633	28	—52.9	—43.5	—62.5	11	—68.6
	150	28	13772	14024	13506	28	—56.8	—47.6	—61.6	—	—
	100	24	16287	16564	16056	24	—64.8	—58.2	—69.0	—	—
	70	22	18458	18611	18266	22	—63.0	—58.6	—67.8	—	—
	60	18	19441	19600	19250	18	—62.8	—59.0	—66.0	—	—
	50	18	20536	20671	20370	18	—62.1	—58.7	—67.2	—	—
	40	7	22021	22120	21860	7	—59.6	—57.1	—62.8	—	—
	30	7	23760	23863	23603	7	—55.1	—52.0	—57.9	—	—
	20	3	26358	26495	26229	3	—51.9	—50.3	—53.2	—	—
	10	1	30229	—	—	1	—43.6	—	—	—	—
Helwan 1200 UT	Surface	31	* 1002m.b.	* 1008m.b.	* 995m.b.	31	17.1	27.6	08.8	31	04.5
	1000	30	158	210	108	21	14.4	20.3	10.8	21	04.4
	850	30	1513	1559	1446	30	05.9	13.0	—00.3	30	—03.4
	700	30	3085	3166	2991	30	—01.0	05.4	—11.5	30	—14.5
	600	30	4300	4385	4166	30	—07.9	—01.8	—19.7	30	—21.6
	500	30	5695	5793	5499	30	—16.8	—11.4	—62.0	30	—29.8
	400	30	7342	7461	7090	30	—27.8	—21.5	—33.4	30	—39.3
	300	30	9356	9504	9087	30	—40.4	—32.9	—47.6	30	—51.0
	250	30	10577	10760	10241	30	—46.5	—39.8	—55.0	30	—56.7
	200	30	12272	12272	11821	29	—50.2	—44.0	—56.3	29	—60.4
	150	29	13908	14160	13643	29	—54.1	—48.8	—60.0	27	—64.0
	100	26	16473	16654	16243	26	—60.0	—51.4	—67.3	9	—66.7
	70	19	18696	18925	18454	19	—58.0	—45.6	—64.0	—	—
	60	14	19720	19940	19500	14	—56.6	—44.5	—61.5	—	—
	50	14	20851	20990	20611	14	—54.0	—43.3	—59.4	—	—
	40	8	22364	22560	22260	8	—50.2	—39.1	—55.3	—	—
	30	8	24164	24500	24500	8	—44.2	—33.2	—56.8	—	—
	20	4	27019	27352	26735	4	—33.2	—25.1	—42.2	—	—
	10	1	32396	—	—	1	—21.6	—	—	—	—
Aswan 1200 UT	Surface	31	* 966m.b.	* 1002m.b.	* 991m.b.	31	22.7	29.4	14.4	31	02.7
	1000	31	160	211	113	5	19.4	22.0	16.4	5	02.6
	850	31	1542	1566	1508	31	12.5	20.7	03.5	31	—08.5
	700	31	3154	3197	3096	31	06.0	11.0	02.9	31	—15 2
	600	31	4401	4464	4344	31	—01.8	04.2	—05.6	31	—20 7
	500	31	5828	5911	5771	31	—10.8	—06.0	—15.6	31	—27.8
	400	31	7509	7618	7423	31	—23.0	—17.4	—27.8	31	—37.0
	300	31	9555	9688	9438	31	—37.8	—31.5	—45 3	31	—50.1
	250	31	10797	10941	10641	31	—44.2	—39.3	—52.7	31	—56.0
	200	31	12270	12414	12070	31	—51.9	—48.0	—55.2	31	—50 8
	150	30	14097	14223	13902	30	—61.6	—55.3	—64.7	7	—57.4
	100	30	16546	16656	16432	30	—72.4	—63.1	—77.6	—	—
	70	28	18644	18785	18556	28	—72.0	—65.5	—75.4	—	—
	60	22	19623	20588	19420	22	—69.7	—63.0	—75.0	—	—
	50	21	20654	20838	20534	21	—66.5	—61.8	—75.9	—	—
	40	11	22093	22160	22040	11	—60.9	—59.5	—62.1	—	—
	30	10	23822	23890	23759	10	—57.0	—53.3	—65.1	—	—
	20	4	26465	26500	26420	4	—51.5	—49.9	—54.1	—	—
	10	—	—	—	—	—	—	—	—	—	—

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 B2— MEAN AND EXTREME VALUSE AT THE FREEZING LEVEL AND THE TROPOPAUSE THE HIGHEST WIND SPEED IN THE UPPER AIR

JANUARY — 1978

	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)	Altitde (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.	Mersa Matruh	2224 (31)	782 (31)	—7.5 (29)	4120	618	— 1.4	920	910	—3.0	10678 (23)	24.7 (23)	—55.1 (23)	16270	103	—67.8	6680	424	—39.1	10710	243	240	180
0000 U.T.	Helwan	2568 (31)	750 (31)	—10.9 (31)	4000	62.7	—12.8	1100	888	—4.0	11583 (21)	226 (21)	—55.4 (21)	16460	100	—71.2	5780	484	—28.3	10060	267	270	142
0000 U.T.	Aswan	3662 (25)	660 (25)	—11.8 (24)	4580	584	—16.3	1400	867	—3.0	16125 (14)	149 (14)	—69.3 (14)	18830	67	—78.0	9670	289	—54.8	9350	244	245	110
1200 U.T.	Mersa Matruh.	2441 (31)	765 (31)	—10.7 (31)	3420	674	— 2.0	1100	892	— 5.0	11133 (28)	233 (28)	—55.2 (28)	17650	79	—69.4	7270	387	—45.7	10660	239	215	180
1200 U.T.	Helwan . . .	2868 (31)	722 (31)	—11.7 (30)	5070	554	— 3.9	1450	855	— 0.0	11701 (27)	221 (27)	—52.9 (27)	17140	90	—64.9	7220	394	—37.8	17450	84	325	138
1200 U.T.	Aswan	4172 (22)	618 (22)	—19.9 (22)	4900	566	—21.4	3520	668	—25.5	16036 (6)	115 (16)	—71.0 (16)	18970	67	—78.6	11350	230	—44.6	12700	184	270	115

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

MEASA MTARUH JANUARY 1978

Time	Pressure Surface (Millibar)	Wind within 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			
T.U. 0000	Surface of station	0	—	0	—	0	—	0	—	3	9	4	6	3	14	8	13	8	14	4	14	0	—	1	12	0	31	12
	1000	0	—	0	—	0	—	0	—	4	10	2	22	4	16	6	27	8	22	6	20	1	25	0	—	0	31	19
	850	0	—	0	—	1	7	0	—	0	—	1	4	2	12	5	33	11	28	7	17	4	31	0	—	0	31	24
	700	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	43	12	30	8	27	4	26	1	27	0	29	30
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	43	16	45	7	34	5	25	0	—	0	29	39
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	43	17	40	4	48	4	32	0	—	0	27	43
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	58	11	60	9	48	1	50	0	—	0	25	55
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	70	8	86	6	54	0	—	0	—	0	16	77
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	101	4	76	0	—	0	—	0	11	94
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	80	0	—	0	—	0	1	80
	150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
T.U. 0000	Surface of station	0	—	1	8	0	—	0	—	2	10	3	10	3	16	4	16	5	21	6	19	2	16	5	11	0	31	15
	1000	0	—	0	—	0	—	1	19	1	10	3	13	4	20	3	24	5	27	6	26	7	19	0	—	1	31	21
	850	0	—	1	4	1	5	1	3	1	17	0	—	1	15	7	22	6	21	9	25	4	19	0	—	0	31	20
	700	1	18	1	14	0	—	0	—	0	—	0	—	0	—	8	30	9	31	9	33	1	13	2	24	0	31	29
	600	0	—	1	13	0	—	0	—	0	—	0	—	0	—	7	44	10	44	9	32	1	22	2	33	0	30	38
	500	0	—	1	22	0	—	0	—	0	—	0	—	0	—	6	64	11	50	7	42	3	21	2	43	0	30	47
	400	0	—	1	17	0	—	0	—	0	—	0	—	0	—	2	59	16	66	6	54	1	35	3	45	0	29	57
	300	0	—	1	48	0	—	0	—	0	—	0	—	0	—	2	79	9	91	6	60	2	56	0	—	0	20	63
	250	0	—	1	69	0	—	0	—	0	—	0	—	0	—	1	80	5	96	2	54	1	95	0	—	0	10	76
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	76	0	—	0	—	0	2	—
	150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

T = The total number of cases the wind has been observed for all directions 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 JANUARY 1978

	Pressure Surface (Millibar)	Wind within 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)	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		(ff) m			
0000 U.T.	Surface	1	7	5	9	2	3	5	3	5	4	3	5	3	8	1	7	1	3	0	—	0	—	3	5	2	31	5
	1000	0	—	4	12	5	10	3	5	4	4	2	6	2	8	0	—	1	6	1	18	0	—	2	5	0	24	8
	850	1	32	2	16	2	11	2	21	0	—	1	5	0	—	2	10	1	19	9	27	6	02	5	13	0	31	19
	700	2	20	3	39	0	—	0	—	0	—	0	—	0	—	1	18	0	—	9	33	12	27	3	22	0	30	29
	600	6	45	0	—	1	22	0	—	0	—	0	—	0	—	0	—	0	—	10	47	12	36	0	—	0	29	41
	500	4	44	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	59	10	52	4	51	0	27	53
	400	2	36	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	59	9	69	6	68	0	22	63
	300	2	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	67	3	74	3	80	0	12	71
	250	2	71	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	75	1	86	3	91	0	9	81
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	83	2	66	0	5	76
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	79	1	88	0	3	82
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	85	0	1	85
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T	Surface	3	8	3	8	0	—	2	2	1	3	4	8	2	8	6	7	5	11	3	3	0	—	1	2	1	31	7
	1000	3	6	4	10	2	11	0	—	0	—	1	3	1	4	3	9	2	13	5	7	0	—	0	—	0	21	8
	850	3	10	0	—	3	14	1	—	0	—	1	21	1	9	0	—	1	14	11	20	6	22	3	8	0	30	17
	700	2	24	3	27	0	—	0	18	0	—	0	—	0	—	0	—	3	35	9	91	6	30	7	19	0	30	28
	500	4	38	1	31	0	—	0	—	0	—	0	—	0	—	0	—	1	37	6	43	12	38	5	26	0	29	38
	600	2	46	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	56	11	47	7	46	0	27	50
	400	2	48	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	57	4	63	9	65	6	53	0	23	64
	300	2	56	0	—	1	20	0	—	0	—	0	—	0	—	0	—	0	—	1	94	6	79	4	56	0	14	66
	250	1	41	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	82	6	76	3	72	0	11	66
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	80	3	63	0	7	72
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	81	1	101	0	1	86
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N= The number of cases the wind has been observed within 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 WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

ASWAN JANUARY — 1978

Time	Pressure Surface (Millibar.)	Wind within 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	19	11	4	9	0	—	0	—	2	6	0	—	0	—	0	—	0	—	0	—	3	9	3	9	0	31	10
	1000	6	10	1	5	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	13	0	8	10
	850	2	24	4	13	3	10	4	12	1	9	1	18	0	—	1	13	0	—	2	21	6	13	7	11	0	31	13
	700	2	15	1	8	1	7	0	—	0	—	2	14	1	16	0	—	5	33	11	25	3	23	2	19	0	28	23
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	13	40	7	29	5	32	3	26	0	28	34
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	12	56	10	38	4	52	2	32	0	28	47
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	49	13	69	8	56	5	52	0	—	0	27	61
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	8	88	10	79	6	75	0	—	0	24	81
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	93	10	87	4	91	0	—	0	20	89
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	90	11	97	1	103	0	—	0	19	96
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	71	6	60	2	86	0	—	0	12	68
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	31	4	69	0	—	0	—	0	6	56
	70	0	—	0	—	0	—	0	—	0	—	0	—	1	24	0	—	1	20	0	—	0	—	0	—	0	2	22
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	17	0	—	0	—	0	1	17
	50	0	—	0	—	0	—	0	—	0	—	0	—	1	10	0	—	0	—	0	—	0	—	0	—	0	1	10
	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	21	0	—	0	—	0	—	0	1	21
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	14	11	4	9	1	10	2	8	0	—	1	6	0	—	0	—	0	—	3	6	2	12	3	11	1	31	9
	1000	4	11	1	10	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	5	11
	850	3	15	4	16	5	8	1	12	0	—	4	6	0	—	0	—	1	10	5	15	4	11	4	13	0	31	12
	700	1	11	0	—	1	3	0	—	0	—	1	10	0	—	0	—	6	34	9	20	10	19	3	12	0	31	20
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	14	42	10	25	5	28	2	24	0	31	33
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	13	51	14	44	3	46	1	30	0	31	46
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	13	66	12	64	6	55	0	—	0	31	63
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	11	89	15	79	3	70	0	—	0	29	82
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	10	94	13	86	4	92	0	—	0	27	90
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	92	11	95	1	110	0	—	0	21	97
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	76	8	73	0	—	0	—	0	15	74
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	55	5	50	0	—	0	—	0	9	52
	70	0	—	1	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	32	0	—	0	2	26
	60	0	—	1	10	0	—	0	—	0	—	0	—	0	—	0	—	1	25	0	—	0	—	0	—	0	2	18
	50	0	—	0	—	0	—	0	—	0	—	0	—	1	10	0	—	0	—	0	—	0	—	1	23	0	2	16
	40	0	—	0	—	0	—	0	—	1	10	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	10
	30	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	13	0	—	0	1	13
	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.

MONTHLY REVIEW OF AGRO METEOROLOGICAL STATIONS

MERSA MATRUH — JANUARY 1978

The mean monthly air temperature was below normal and the mean monthly relative humidity was above normal. The total monthly rainfal was 58.0 mm. which is higher than normal by 26.3 mm.

A sever cold wave prevailed during the first and second weeks giving rise to the lowest maximum temperature (11.8°C) on both the *2nd* & *7th*, the lowest minimum temperature (4.6°C) on both the *8th* & *10th* and the maximum daily rainfall (31.7) mm. on the *8th*.

During rest of the month, maximum temperatures were slightly below normal apart from two short warm spells on the (19th) and (30th & 31st).

The mean monthly actual sunshine duration and wind speed at 1.5 met. height were slightly higher than normal.

The highest maximum soil temperatures were lower than the corresponding values of January 1977 with departures between 2,8°C (at 5 cm.) and 3.4°C/at 10 cm.) The lowest minimum soil temperatures were also lower than January 1977 with departure between 2.1°C (at 5 cm.) & 4.2°C (at 20 cm.).

TAHRIR — JANUARY 1978

The mean monthly air temperature was below normal and the mean monthly relative humidity was the same as normal The total monthly rainfall was 14.0 mm. against 8.2 mm. for normal.

Weather was markedly cold most of the first half of the month during which a long cold wave prevailed from the 1st till the 12th giving the lowest maximum temprature (13.°1C) on the 3rd.

The second half of the month was characterized by two warm spells in the periods (17th — 22nd) and (29th — 31st) and a light cold spell on the 24th & 25th. The first warm spell yielded the highest maximum temperature (26.9°C) on the 18th.

It is worthy of mention that minimum temperature at 5 cm. was below 0°C in the dry field on the 6th (—0.6°), and in the grass field on the 6th, 11th, 23rd & 24th (—2.4°C, —0.°9, —0.°4 & —0.9°C) respectively.

The mean monthly actual sunshine duration, wind speed at 1.5 met.. height and pan evaporation were nearly the same as normal.

The highest maximum soil temperatures were lower than normal at 2,5, 100 cm. depths with departures between 1.8° & 0.5°C; higher than normal at 10, 20, 50 cm. with departures betweeen 0.9°C & 0.4°C. The lowest minimum soil temperatures were lower than normal at all depths with departures between 2.9°C (at 10 & 20 cm.) and 0.3°C (at 100cm.)

BAHTIM — JANUARY 1978

The mean monthly air temperature was below average and the mean monthly relative humidity was nearly the same as average. The total monthly rainfall was 13.5 mm. against 6.8 mm. for average.

Weather was markedly cold during the first half of the month. The lowest maximum temperature was 11.7°C (on the 3rd°).

During the second half of the month, two warm spells were experienced in the periods (17th — 20th) and (30th & 31st); and two light cold spells from the 23rd till the 28th. The highest maximum temperature was 27.4°C (on the 19th).

An important feature of this month is that minimum temperature at 5 cm. fell below 0°C during 6 days in the dry field, and during 10 days in the grass fields. These minima and their dates of occurrences are as follows :

Date	6	12	22	23	24	31		
Min. temp. at 5 cm. above the dry field	—2.1	—0.8	—1.2	—1.0	—1.8	—0.6		
Date	6	7	11	12	14	22	23	24
Min. temp. at 5 cm. above the dry field	—3.0	—1.0	—0.6	—1.5	—0.9	—2.0	—0.5	—4.4
Date	25	31						
Min. temp. at 5 cm. above the dry field	—2.0	—1.6						

The mean monthly actual sunshine duration, wind speed al 1.5 met. height and pan evaporation were higher than average by 0.4 hour 0.4 met./sec. and 0.59 mm. respectively.

The highest maximum soil temperatures were higher than average at 2, 5 & 10 cm. depths with departures between 2.3° & 0.9°C; lower than average at 20, 50 & 100 cm. depths with departures between 0.1° & 1.2°C. The lowest minimum soil temperatures were lower than average at all depths with departures between 0.7 and 2.0°C.

ASSYOUT — JANUARY 1978

The mean monthly air temperature and relative humidity were below the corresponding values of last January.

A long cold wave prevailed from the 3rd till the 13th giving the lowest maximum temperature (13.6°C) on the 3rd. From the 14th till the end of the month three warm spells were experienced inervened by a light cold spell in the period ((24th — 27th). The second warm spell gave the highest maximum temperature (27.2°C) on the 19th.

The most important feature of this month is that minimum temperature at 5cm. above soil fell below 0°C during most days of the month (25 days). These minima are as follows :

Date	1	2	4	5	6	7	9	10		
Min temp. at 5cm. above soil	—3.0	—1.8	—1.8	—5.4	—3.7	—4.8	—1.6	—5.0		
Date	11	12	13	14	15	16	17			
Min temp. at 5cm. above soil	—2.6	—4.0	—3.8	—3.0	—0.2	—2.0	—4.3			
Date	21	22	23	24	25	26	27	28	30	31
Min temp. at 5 cm. above soil	—0.3	—1.6	—0.3	—3.4	—3.8	—3.8	—3.2	—1.4	—2.0	—1.8

The mean monthly actual sunshine duration and pan evaporation were higher than January 1977 by 0.5 hour and 0.78 mm. respectively.

The highest maximum soil temperatures wete higher than Jaunary 1977 at depths between 2 & 20 cm. with departures between 8.2°C (at 2 cm) & 0.7°C (at 20 cm); but lower at 50 & 100 cm. by 0.8° & 0.1°C respectively. The lowest misimum soil temperatures were lower than January 1977 at depths between 2 & 50 cm. with departures between 2.8°C (at 5 cm) and 0.5°C); but higher at 100cm. by 0.3°C.

KHARGA — JANUARY 1978

The mean monthly air temperature and relative humidity were nearly the same as normal.

A long cold wave prevailed from the 3rd till the 13th giving the lowest maximum temperature (15.5°C) on the 3rd and the lowest misimum temperature (-3.1°C) on the 7th.

The period from the 14th till the end of the month was characterized by two warm spells intervened by a light cold wave in the period (23rd - 27th) the highest maximum temperature was 31.9°C (on the 19th).

It is worthy of mention that minimum temperature at 1.5 met. height fell below 0°C durng 3 days and at 5cm. height during 11 days. These minima are indicated in the following :

Date	4	6	7					
Min· temp. at 1.5 met. height	-1.1	-1.0	-3.1					
Date	2	4	5	6	7	9	10	12
Min. temp. at 5cm. height	-0.2	-2.0	-2.3	-3.1	-5.0	-1.4	-2.8	-0.7
Date	13	25	27					
Min. temp. at 5 cm· height	-0.5	-0.6	-0.6					

The mean monthly actual sunshine duration, wind speer at 1.5 met. height and pan evaporation were lower than normal by 0.1 hour, 0.8 met./sec and 0.38 mm. respectively.

The highest maximum soil temperatures were higher than normal at depths between 2 & 20 cm. with departures between 7.5°C (at 2 cm) & 0.6°C(at 20 cm); lower than normal at 50 & 100 cm. by 1.2°C & 0.2°C respectively. The lowest minimum soil temperatures were lower than normal at all depths with departures between 4.3°C (at 10 cm) & 0.3°C (at 100 cm.).

Table C 1.—AIR TEMPERATURE AT 1½ METRES ABOVE GROUND
JANUARY — 1978

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
M. Matruh	16.7	8.0	12.1	10.6	13.7	24.0	24.0	23.9	15.6	5.8	0.6	0.0	0.0	0.0	0.0	0.0
Tahrir	19.9	6.0	11.9	8.9	14.9	24.0	24.0	22.0	12.8	7.2	1.5	0.1	0.0	0.0	0.0	0 0
Bahtim	18.6	5.8	11.5	9.4	14.4	24.0	24.0	22.0	13.5	6.8	1.7	0.1	0.0	0.0	0.0	0.0
Assiut	20.6	4.2	11.7	8.4	15 1	24.0	24.0	21.4	13.0	6.5	2.2	0 2	0.0	0.0	0.0	0 0
Kharga	22.7	4.0	13.4	9.9	16.8	24.0	24 0	21.0	16.0	9.0	5.0	0.9	0.1	0.0	0 0	0 0

Table C 2.— EXTREME VALUES OF AIR TEMPERATURE AT 1½ METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS.
JANUARY — 1978

STATION	Max. Temp. at 1½ metres (°C)				Min Temp. at 1½ metres. (°C)				Min. Temp. at 5 cms. above ground			
	Highest		Lowest		Highest		Lowest		Dry soil		Grass	
	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date	Value	Date
M. Matruh.....	23.7	19	11.8	2,7	13 4	18	4.6	8,10	3.5	24	—	—
Tahrir	26.9	18	13.1	3	17 1	19	0.5	6	—0.6	6	—2.4	6
Bahtim	27.4	19	11.7	3	16 2	19	1.5	6	—2.1	6	—4.4	24
Assiut	27.2	19	13.6	3	11 6	19	0.2	5	5.4	5	—	—
Kharga	31.9	19	15.5	3	11 9	15	—3.1	7	—5.0	7	—	—

Table C 3 — (SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 1½ METRES ABOVE GROUND, EVAPORATION & RAINFALL.
JANUARY — 1978

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	%	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
M. Matruh	226.6	215.8	320 5	67	68	55	24	24	7.1	7.4	10.8	18	3.7	24	5.9	—	58.0	31.7	8
Tahrir....	296.7	224.0	322.8	69	69	48	22	17	6.9	7.2	10.7	30	3.8	25	4.0	3.98	14.0	8.6	3
Bahtim ...	278 3	223.5	324.1	69	68	50	21	19	6.8	7.5	11.6	19	3.7	25	4 .0	4.01	13.5	8.9	2
Assiut ...	—	291.3	330.6	88	58	36	25	7,23	5 8	6.0	8.6	17	3.7	24	3.9	3.16	0.8	0.8	2
Kharga ...	408.9	298.3	334.1	89	46	32	17	31	5.2	6.1	8.3	16	2.6	27	6 1	5.86	0.0	0.0	—

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

JANUARY — 1978

STATION	Highest (H) Lowest (L)	Dry Field								Grass							
		2	5	10	20	50	100	200	300	2	5	10	20	50	100	200	300
M. Matruh . . .	H	21.0	19.8	16.4	14.2	13.6	16.0	20.5	—	—	—	—	—	—	—	—	—
	L	4.1	4.4	6.5	8.0	10.0	13.0	16.7	—	—	—	—	—	—	—	—	—
Tahrir	H	25.4	22.2	20.9	18.8	17.7	17.7	21.3	23.1	19.3	17.1	15.9	15.2	14.8	15.3	19.0	—
	L	3.5	3.7	4.7	7.6	11.9	16.1	19.6	21.4	5.8	6.9	7.7	9.6	10.9	13.7	17.3	—
Bahtim	H	31.2	23.4	20.4	18.1	18.2	20.5	24.2	24.8	24.7	19.3	17.6	15.7	15.8	18.0	21.2	—
	L	3.4	4.9	9.6	13.1	16.2	18.8	22.6	23.8	4.0	6.0	8.4	11.1	14.0	16.8	19.6	—
Assiut	H	39.3	28.2	22.8	19.3	19.0	21.2	23.8	25.3	—	—	—	—	—	—	—	—
	L	3.5	6.0	9.1	12.8	17.8	19.9	22.2	24.3	—	—	—	—	—	—	—	—
Kharga	H	39.1	32.2	27.1	21.6	20.5	23.7	27.2	28.8	—	—	—	—	—	—	—	—
	L	1.1	3.6	6.9	12.4	18.8	22.2	25.4	27.6	—	—	—	—	—	—	—	—

Table C 5.—SURFACE WIND

JANUARY — 1978

STATION	Wind Speed m/sec (2 metres)			Days with surface wind speed at (10 metres)							Na.. Gust 10 metres	
	Mean of the day	Night time mean	Day time mean	≧10 (konts)	≧15 (konts)	≧20 (konts)	≧25 (konts)	≧30 (konts)	≧35 (konts)	≧40 (konts)	Value (konts)	Date
M. Matruh .	4.4	4.1	4.6	29	24	18	13	6	4	3	51	2
Tahrir. . . .	2.2	1.6	2.7	25	17	11	3	0	0	0	39	3
Bahtim . . .	2.6	2.1	3.1	25	20	11	9	1	0	0	37	1
Assiut . . .	—	—	—	—	—	—	—	—	—	—	—	—
Kharga . . .	1.8	1.1	2.5	21	7	1	0	0	0	0	24	3,15

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MONTHLY WEATHER REPORT

VOLUME 21 NUMBER 2

FEBRUARY 1978

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THE EGYPTIAN METEORLOGICAL AUTHORITY
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL AUTHORITY OF THE ARAB REPUBLIC OF EGYPT—CAIRO

In fulfilment of its duties, the Egyptian Meteorological Authority issues several reports and publications on weather, climate and agro-meteorology. The principal publications are described on this page.

Orders for publications should be addressed to :

"Chairman of the Board of Directors, Meteorological Authority, Kubri-el-Qubbeh — CAIRO.

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 the Meteorological Authority.

TECHNICAL NOTES

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THE ARAB REPUBLIC OF EGYPT

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THE EGYPTIAN METEORLOGICAL AUTHORITY
CARIO

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Note : For expanatory notes on tables please refer to Volume 21, Number 1 (January 1976).

GENERAL SUMMARY OF WEATHER CONDITIONS

FEBRUARY 1978

Rather warm weather intervened by light and short cold waves. Subnormal rainfall.

PRESSURE DISTRIBUTION

The atmospheric pressure over Egypt was mainly influenced by the frequent transit of depressions or troughs through East Mediterranean on the 2*nd*, 6*th*. 9*th*, 15*th*, 19*th* & 21*st*.

The mean monthly atmospheric pressure was generally around normal.

SURFACE WIND

Surface winds blew mostly from NWly directions in the north and from Nly to NWly directions in the south, and were light to moderates in general but fresh to strong during several days in scattered places.

TEMPERATURE

This month was characterized by five warm spells intervened by light and short cold waves.

Maximum temperature were moderately above normal in general during the warm spells, and slightly below normal during the cold waves.

Minimum temperatures showed irregular departures below and above normal, slight or moderate.

The highest and lowest maximum temperatures were respectively 34.4°C at Dakhla on the 28*th* and 14.7°C at Mersa Matrouh on the 16*th*.

The highest and lowest minimum temperatures were respectively 17.8°C at Sallum on the 13*th* and -0.2°C at Dakhla on the 9*th*.

PRECIPITATION

Light rain was reported during the third week over some places in the northern parts.

The monthly rainfall amounts were markedly below normal.

The maximum daily rainfall was 4.0mm. at Alexandria on the 16*th*.

The maximum monthly rainfall was 5.6mm. at Alexandria.

OTHER WEATHER PHENOMENA

Early morning mist developed during several days over scattered places in Lower Egypt and Cairo.

Light rising sand was reported during few days in scattered places.

Chairman (M. ALI BADRAN)

Board of Directors

Cairo, March 1979

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

FEBRUARY —1978

STATION NAME	Atmospheric Pressure (mbs) M.S.L.		Air Temperature °C									Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evap
			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.	1014.7	—2.3	22·7	2.8	11.4	1.4	17.0	16.3	1.9	10.3	0.3	45	—13	—	—	—	9.9
Mersa Matruh(A)	1015.8	—1.4	20.6	1.8	10.0	1.6	15.3	14.8	1.5	10.7	0 4	63	— 2	233.9	310.1	75	9.1
Alexandria. (A)	1016.7	—0.8	0.7	1.4	9 3	—0.1	15·0	14.7	0.5	11.1	—0.0	63	— 8	213.7	310.3	69	5.9
Port Said. . (A)	1016.3	—0.6	18.9	0.2	13.1	—1.1	16.0	15.7	0.8	12.0	—0.0	62	— 4	234.6	310.2	76	4.1
El Arish	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo . . . (A)	1016.8	—0.7	22.5	1.7	11.1	—1.5	16.8	16.4	—1.5	10.5	—0.0	45	—10	—	—	—	10.7
Fayoum.	—	—	23.9	1.5	6.5	—1.1	15.2	14.6	—0.1	10.3	0.1	59	6	—	—	—	5.7
Minia. . . .(A)	1017.3	—0.4	24.2	1.7	5.3	0.0	14.7	14.5	1.0	9.5	0.5	53	0	267.8	313.7	85	6.1
Assyout. . . (A)	1017.5	—0.3	23.6	0.9	6.4	—1.2	15.0	15.1	0.2	7.9	—1.4	31	—10	—	—	—	7.6
Luxor. . . . (A)	1016.2	—0.1	26 4	0.9	6.7	0.1	16.5	16.5	0.5	10.7	0.6	47	3	—	—	—	4.8
Aswan. . . . (A)	1016.1	—0.3	26.6	0.2	0.1	—0.0	18.3	18.3	—0.5	9.8	0.4	27	4	283.3	317.9	89	13.6
Siwa.	1015.4	—1.8	23.8	2.0	7.4	—1.3	15.6	15.2	1.6	8.9	—0.1	40	—13	267.9	312.4	86	8.8
Bahariya.	1017.1	—0.9	23.5	1.4	6.6	0.2	15.0	15.1	1.3	8.6	0.2	38	—15	—	—	—	8.0
Farafra.	1018.7	—0.8	24.1	1.5	5.5	0.2	14.8	14.7	1.0	8.1	0.6	36	— 7	—	—	—	8.3
Dakhla	1017.8	—0.2	25.7	1.9	3.6	—8.1	14.6	14.5	0.3	7.6	0.6	36	— 4	—	—	—	8.5
Kharga	1016.6	—1.2	26.8	2.2	6.8	—0.5	16.8	17.1	1.6	7.9	1.0	37	— 2	280.5	316.4	89	8.1
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada. . . .	1016.2	0.4	22.9	1.5	11.3	1.2	17.1	17.6	1.3	11.2	—0.1	41	—10	273.6	314.4	87	11.6
Quseir	1015.9	0.3	23.4	0.6	14.6	0.4	19.0	18.9	0.5	13.1	—0.5	48	— 3	—	—	—	7.1

Table A 2.—MAXIMUM AND MINIMUM AIR TEMPERATURES

FEBRUARY — 1978

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	33.4	14	16.0	16	07	03	00	00	00	10.9	—	17.8	13	7.4	16	09	00	00	00
Mersa Matruh (A)	28.5	14	14.7	16	04	00	00	00	00	8.6	—	14.2	14	6.0	25	15	00	00	00
Alexandria (A)	28.8	14	16.6	2	04	00	00	00	00	6.8	—	13.0	22	8.4	11	14	01	00	00
Port Said (A)	27.5	15	16.8	17	01	00	00	00	00	12.6	—	16.1	15	10.5	8	00	00	00	00
El Arish	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo (A)	30.0	14	18.0	6	07	00	00	00	00	—	—	15.2	15	8.6	12	09	00	00	00
Fayoum	29.1	13	18.3	6	11	00	00	00	00	3.6	—	11.8	19	2.4	10	26	10	00	00
Minya (A	30.8	15	18.8	6	11	01	00	00	00	2.4	—	10.0	15	2.2	10,12	27	14	00	00
Assyout (A)	31.5	15	17.5	6	09	02	00	00	00	5.5	—	13.0	15	1.4	9	23	09	00	00
Luxor (A)	33.8	15	20.8	17	17	04	00	00	00	4.7	—	13.0	16	2.4	7	25	09	00	00
Aswan (A)	33.2	14	20.4	17	16	06	00	00	00	—	—	14.3	15	6.7	3,9	13	00	00	00
Sewa	34.3	28	16.7	5	08	03	00	00	00	4.1	—	11.7	14	3.1	10	23	04	00	00
El-Baharia	31.9	28	17.2	6	07	02	00	00	00	5.9	—	11.4	15	2.5	10	25	08	00	00
El-Farafra	33.0	28	17.5	6	10	02	00	00	00	3.6	—	10.6	22	1.4	10	26	11	00	00
El-Dhla	33.4	28	18.6	6	15	03	00	00	00	3.7	—	10.0	24	0.2	9	27	20	00	00
El-kharga	34.4	14	20.2	6	18	06	00	00	00	4.9	—	14.0	16	0.9	7	23	10	00	00
El-Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
El-Hurgada	26.3	14	19.3	17	02	00	00	00	00	—	—	16.0	2	8.4	5	07	00	00	00
El-Quseir	26.6	16	20.4	17	05	00	00	00	00	12.0	—	17.2	22	11.6	7	00	00	00	00

TABLE A3 SKY COVER AND RAIN FALL

FEBRUARY 1979

Station Name	Mean Sky Cover					Rain Fall mms.										
	00 U.T	06 U.T	12 U.T	18 U.T	Daily Mean	Total Amount	D.F.N	Max. In One Day		Number Of Days With Amount Of Rain						
								Value	Date	<0.1	≧0.1	≧1.0	≧5.0	≧10	≧25	≧50
Elsallum	3.5	3.0	3.6	3.2	3.2	0.4	— 9.6	0.2	5,16	00	02	00	00	00	00	00
Mersa Matroh	1.5	2.9	3.3	2.7	2.6	0.5	—15.6	0.2	6,15	01	03	00	00	00	00	00
Alexandria	2.2	2.6	3.5	2.9	2.8	5.6	—20.8	0.4	16	00	04	02	00	00	00	00
Port Said	1.9	2.4	2.4	2.1	2.1	1.4	— 9.9	1.1	19	00	03	01	00	00	00	00
Cairo A.P.	1.3	2.2	2.5	1.0	1.6	1.5	— 2.3	1.3	19	01	02	01	00	00	00	00
El-Fayoum	—	3.6	2.5	5.3	—	0.0	— 1.1	—	—	00	00	00	00	00	00	00
El-Minia	0.6	1.6	1.8	0.8	1.2	0.0	— 0.5	—	—	00	00	00	00	00	00	00
Assuit	0.0	0.6	0.7	0.3	0.4	0.0	— 2.2	—	—	02	00	00	00	00	00	00
Luxor	0.7	1.6	1.4	1.0	1.1	0.0	— 0.0	—	—	00	00	00	00	00	00	00
Aswan	0.0	1.1	0.8	0.3	0.6	0.0	— 0.0	—	—	00	00	00	00	00	00	00
Sewa	1.9	0.9	1.5	1.2	1.3	0.0	— 2.6	—	—	00	00	00	00	00	00	00
El- Baharia	0.3	1.9	1.6	0.9	1.1	0.0	— 1.2	—	—	00	00	00	00	00	00	00
El-Farafra	—	1.0	1.0	0.6	—	0.0	— 0.4	—	—	00	00	00	00	00	00	00
El-Dakhla	0.0	0.6	0.7	0.4	0.4	0.0	— 0.4	—	—	00	00	00	00	00	00	00
El-Kharga	0.4	0.8	1.1	0.4	0.7	0.0	— 0.4	—	—	00	00	00	00	00	00	00
El-Hurgada	1.1	1.6	1.1	0.8	1.2	Tr	—	Tr	5	01	00	00	00	00	00	00
El-Quseir	0.4	1.5	1.7	0.4	1.0	Tr	—	Tr	16	01	00	00	00	00	00	00

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

FEBRUARY — 1978

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											
Elsallum	02	00	00	00	01	00	00	17	00	02	02	07	01
Mersa Matroh . . .	03	00	00	00	02	00	00	11	00	03	01	12	01
Alexandria	04	00	00	01	02	02	00	05	00	00	00	11	02
Port Said	02	00	00	00	02	00	00	04	00	00	00	16	01
Cairo	02	00	00	00	02	01	07	10	00	01	00	18	00
El-Fayum	00	00	00	00	02	02	00	01	00	00	00	07	01
El-Minia	00	00	00	00	10	00	06	02	00	00	00	21	00
Assuit	00	00	00	00	00	00	00	03	00	00	00	27	00
Luxor	00	00	00	00	00	00	20	04	00	00	00	21	00
Awan	00	00	00	00	00	00	00	04	00	01	00	25	00
Sewa	00	00	00	00	00	00	03	06	00	00	00	19	00
El-Baharia	00	00	00	00	00	00	00	07	00	00	00	23	00
El-Farafra	00	00	00	00	00	00	01	03	00	00	00	22	00
El-Dakhla	00	00	00	00	00	00	00	07	00	00	00	27	00
El-kharg	00	00	00	00	00	00	00	03	00	00	00	23	00
El-Hurgda	00	00	00	01	00	00	00	01	00	00	00	19	00
El-Quseir	00	00	00	00	00	00	00	00	00	00	00	21	00

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

FEBRUARY 1978

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing within 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	14	02	00	1—10	14	18	08	28	20	14	11	13	08	30	37	25	228
				11—27	07	04	04	01	00	10	25	61	78	145	49	15	399
				28—47	00	00	00	00	00	00	00	02	20	08	11	00	31
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**21**	**22**	**12**	**29**	**20**	**24**	**36**	**76**	**106**	**183**	**87**	**40**	**656**
Mersa Matruh . (A)	16	00	00	1—10	14	21	09	37	54	50	23	25	34	27	14	41	349
				11—27	01	06	00	02	10	29	38	72	87	23	27	07	296
				28—47	00	00	00	00	00	00	00	04	05	02	00	00	11
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**15**	**21**	**09**	**39**	**64**	**79**	**61**	**101**	**126**	**52**	**41**	**48**	**656**
Alexandrai . . (A)	00	00	00	1—10	29	32	52	67	81	37	30	30	29	07	16	14	424
				11—27	08	05	00	07	00	00	04	18	87	48	22	48	247
				28—47	00	00	00	00	00	00	00	00	01	00	00	00	01
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**37**	**37**	**52**	**74**	**81**	**37**	**34**	**48**	**117**	**55**	**38**	**62**	**672**
Cairo . . . . (A)	10	01	00	1—10	10	36	52	44	25	31	53	36	26	47	38	18	417
				11—27	02	25	19	01	07	18	28	62	48	19	03	02	243
				28—47	00	00	00	00	00	00	00	02	00	00	00	00	02
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**12**	**61**	**71**	**45**	**32**	**49**	**81**	**100**	**74**	**66**	**41**	**20**	**661**
Fayoum	36	03	00	1—10	50	124	46	07	13	46	49	87	96	25	27	08	608
				11—27	00	00	00	00	00	00	00	05	13	10	00	00	82
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**50**	**124**	**46**	**07**	**13**	**46**	**49**	**92**	**109**	**62**	**27**	**08**	**633**
Minia	41	05	00	1—10	134	24	04	01	14	115	46	22	23	39	51	115	593
				11—27	07	00	00	00	00	03	02	01	04	06	15	00	39
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**141**	**24**	**04**	**01**	**14**	**118**	**48**	**23**	**27**	**45**	**66**	**115**	**626**
Assuit	29	00	00	1—10	53	16	08	13	23	20	37	34	31	76	99	80	490
				11—27	19	05	00	01	01	08	17	07	00	13	44	38	153
				28—47	00	00	00	00	00	00	00	00	00	00	00	01	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**72**	**21**	**08**	**14**	**24**	**28**	**54**	**41**	**31**	**89**	**143**	**118**	**646**

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

FEBRUARY — 1978

Staion	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	number in hours of occurrences of wind blowing within the ranges of directions indicated												
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 314	285 / 314	315 / 344	All directions
Luxor	04	00	00	1—10	56	31	57	32	39	18	42	67	50	28	53	146	652
				11—27	00	00	00	00	00	00	00	00	00	00	00	13	16
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**56**	**31**	**57**	**32**	**39**	**18**	**42**	**67**	**50**	**28**	**53**	**157**	**668**
Aswan	01	02	00	1—10	281	72	11	05	05	17	12	03	02	07	22	81	518
				11—27	112	12	00	00	00	00	00	00	00	00	01	28	153
				28—47	00	00	00	00	00	0	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**393**	**84**	**11**	**05**	**05**	**17**	**12**	**03**	**02**	**07**	**23**	**109**	**671**
Siwa	21	01	00	1—10	05	09	34	57	76	45	32	32	57	87	40	14	489
				11—27	00	01	00	02	05	13	28	08	29	46	28	09	162
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**05**	**10**	**34**	**57**	**76**	**58**	**60**	**40**	**86**	**133**	**68**	**23**	**650**
Dakhla	41	18	00	1—10	45	24	31	37	28	34	29	21	29	49	78	162	594
				11—27	00	00	00	00	00	00	00	01	00	01	04	31	37
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**45**	**24**	**31**	**37**	**28**	**34**	**29**	**22**	**29**	**50**	**82**	**193**	**613**
Kharga	03	01	00	1—10	171	89	25	23	15	61	22	14	08	25	42	95	546
				11—27	62	16	00	00	00	00	00	01	00	00	11	33	123
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**233**	**105**	**25**	**23**	**15**	**61**	**22**	**15**	**08**	**25**	**53**	**128**	**668**
Hurgada	00	00	00	1—10	19	27	01	07	19	09	21	09	16	54	160	21	363
				11—27	39	13	00	04	13	04	00	00	00	03	113	120	309
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**58**	**40**	**01**	**11**	**32**	**13**	**21**	**09**	**16**	**57**	**273**	**141**	**672**
Quseir	01	00	00	1—10	45	42	17	10	07	16	11	11	16	19	163	28	485
				11—27	111	04	00	00	00	00	00	00	00	07	18	46	186
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**156**	**46**	**17**	**10**	**07**	**16**	**11**	**11**	**16**	**26**	**181**	**74**	**671**

UPPER AIR CLIMATOLOGICAL DATA

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

FEBRUARY 1978

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
			m.b.*	m.b.*	m.b.						
Mersa Matruh 0000 UT	Surface of station	28	1014	1023	1006	28	13.4	20.0	11.0	28	0.6
	1000	28	142	215	78	28	13.4	21.2	9.5	28	5.2
	850	28	1496	1566	1412	28	7.0	16.4	— 0.6	28	— 4.5
	700	28	3066	3164	2942	28	— 2.0	6.4	— 9.5	28	—14.7
	600	28	4280	4410	4115	28	— 9.3	— 1.3	—17.9	28	—23.0
	500	28	5660	5831	5450	28	—18.9	—13.0	—27.7	28	—30.0
	400	28	7284	7481	7026	28	—30.5	—25.0	—37.1	28	—45.8
	300	28	9265	9480	8985	28	—45.5	—39.1	—50.0	28	—55.1
	250	28	10460	10702	10185	28	—52.7	—46.0	—56.7	28	—61.8
	200	28	11889	12137	11635	28	—55.1	—47.8	—64.2	17	—63.6
	150	26	13708	13927	13485	26	—59.0	—54.9	—64.4	11	—66.6
	100	26	16219	16427	16058	26	—64.6	—53.0	—72.7	—	—
	70	12	18374	18474	18288	12	—67.4	—62.9	—75.3	—	—
	60	3	19370	19450	19260	3	—67.3	—64.1	—68.9	—	—
	50	3	20443	20495	20358	3	—64.8	—62.1	—67.2	—	—
	40	2	21940	21950	21930	2	—59.7	—59.6	—59.8	—	—
	30	1	23695	—	—	1	—55.0	—	—	—	—
	20	1	26321	—	—	1	—49.6	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 U.T.	Surface of Station	28	1000m.b.*	1007m.b.*	994mb.*	28	12.7	19.7	7.7	28	2.2
	1000	26	145	199	98	18	12.8	17.0	9.6	18	3.1
	850	26	1502	1540	1440	26	7.4	17.8	— 0.4	26	— 4.6
	700	26	3080	3166	2997	26	0.0	5.9	— 7.5	26	—16.1
	600	26	4300	4406	4209	26	— 7.3	— 2.7	—13.2	26	—22.4
	500	25	5693	5818	5594	25	—16.9	—11.7	—24.1	25	—29.9
	400	25	7331	7489	7193	25	—28.9	—23.3	—33.3	25	—39.9
	300	24	9323	9518	9149	24	—43.7	—40.1	—48.1	24	—52.3
	250	22	10529	10704	10386	22	—51.1	—41.0	—55.7	22	—59.5
	200	22	11968	12147	11827	22	—54.1	—44.1	—59.1	22	—63.1
	150	22	13800	13992	13662	22	—58.4	—54.7	—63.7	13	—66.8
	100	20	16308	16510	16188	20	—65.4	—59.5	—71.5	—	—
	70	11	18462	18685	18303	11	—65.6	—63.9	—68.7	—	—
	60	7	19487	19660	19250	7	—64.4	—59.5	—67.3	—	—
	50	7	20547	20766	20385	7	—62.6	—53.6	—66.6	—	—
	40	3	21967	22040	21900	3	—64.1	—63.1	—64.8	—	—
	30	3	23635	23635	23530	3	—59.8	—59.3	—60.9	—	—
	20	3	26194	26288	26085	3	—56.6	—53.3	—58.7	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan 0000 UT	Surface of station	27	995m.b.*	998m.b.*	989m.b.*	27	12.7	21.2	9.0	27	— 0.2
	1000	27	184	179	101	—	—	—	—	—	—
	850	27	1521	1556	1495	27	11.9	18.7	7.3	27	— 3.8
	700	27	3126	3173	3069	27	4.5	9.0	0.2	27	—10.9
	600	27	4366	4415	4298	27	— 3.6	0.1	— 8.0	27	—17.6
	500	27	5782	5847	5712	27	—13.1	—11.5	—17.5	27	—26.1
	400	27	7441	7526	7354	27	—25.8	—22.0	—31.7	27	—35.9
	300	27	9466	9574	9324	27	—40.5	—35.7	—47.9	27	—48.8
	250	27	10694	10812	10542	27	—46.0	—39.2	—52.1	27	—54.7
	200	27	12156	12298	12020	27	—53.9	—47.3	—60.0	27	—62.0
	150	26	13959	14132	13845	26	—63.8	—56.1	—71.5	2	—66.3
	100	25	16392	16585	16279	25	—73.2	—68.5	—75.2	—	—
	70	21	18468	18636	18365	21	—73.0	—67.1	—80.5	—	—
	60	18	19429	19820	19290	18	—70.1	—62.3	—75.4	—	—
	50	18	20469	20555	20349	18	—67.5	—62.6	—72.6	—	—
	40	14	21954	22130	21800	14	—62.5	—58.7	—65.2	—	—
	30	14	23603	23829	23519	14	—67.6	—53.5	—61.6	—	—
	20	8	26239	26411	26075	8	—49.5	—43.5	—55.1	—	—
	10	1	30575	—	—	1	—47.6	—	—	—	—

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

UPPER AIR CLIMATOLOGICAL DATA

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

FEBRUARY 1978

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	27	1013*mb.	1022*mb.	1004*mb.	27	18.8	25.0	12.6	27	6.8
	1000	27	140	212	26	27	18.1	24.7	11.0	27	5.0
	850	27	1506	1566	1417	27	8.2	17.4	0.5	26	— 6.1
	700	26	3083	3170	2987	26	— 0.1	6.6	—10.5	26	—16.5
	600	26	4298	4412	4158	26	— 8.6	— 2.9	—17.9	26	—24.4
	500	26	5588	5824	5536	26	—17.5	—10.0	—25.3	26	—32.2
	400	26	7322	7488	7113	26	—28.9	—23.7	—35.9	25	—42.2
	300	25	9316	9528	9016	25	—43.6	—35.3	—50.4	25	—55.9
	250	25	10512	10752	10251	25	—51.0	—39.9	—55.1	24	—62.3
	200	23	11959	12219	11721	23	—53.2	—44.0	—61.0	19	—63.4
	150	23	13804	14108	13591	23	—56.6	—50.4	—62.1	14	—65.5
	100	20	16473	16708	16123	20	—63.9	—58.1	—68.0	—	—
	70	13	18513	18644	18351	13	—65.3	—56.1	—74.3	—	—
	60	9	19473	19610	19350	9	—64.3	—60.6	—68.0	—	—
	50	9	20573	20793	20426	9	—63.5	—60.3	—66.8	—	—
	40	2	21870	21900	21840	2	—61.4	—59.8	—62.9	—	—
	30	1	23631	—	—	1	—58.9	—	—	—	—
	20	1	26221	—	—	1	—52.1	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 1200 U.T.	Surface	28	1000*mb.	1007*mb.	991*mb.	28	12.4	29.3	16.3	28	2.3
	1000	26	137	197	61	16	20.6	27.9	17.1	16	1.9
	850	26	1512	1549	1462	26	8.8	19.4	2.0	26	— 6.0
	700	26	3097	3198	3005	26	1.2	10.4	— 7.8	26	—16.0
	600	26	4326	4465	4196	26	— 6.5	— 2.1	—13.2	26	—21.4
	500	26	5729	5914	5615	26	—15.4	— 6.4	—20.3	26	—30.5
	400	25	7373	7515	7194	25	—26.8	—21.5	—32.0	25	—40.7
	300	25	9387	9555	9201	25	—41.9	—37.9	—45.6	25	—53.5
	250	25	10600	10785	10415	25	—49.1	—43.7	—52.7	25	—59.7
	200	25	12058	12241	11875	25	—52.0	—39.3	—56.3	25	—61.8
	150	23	13923	14173	13713	23	—53.9	—49.0	—59.9	23	—64.9
	100	22	16482	16636	16279	22	—59.5	—54.5	—63.5	4	—69.4
	70	17	18679	18841	18059	17	—59.2	—55.2	—64.0	—	—
	60	13	19684	19870	19290	13	—58.0	—54.2	—63.9	—	—
	50	13	20834	20975	20600	13	—56.4	—51.0	—62.7	—	—
	40	8	22363	22500	22130	8	—53.2	—51.4	—55.1	—	—
	30	8	24129	24251	23888	8	—48.7	—43.8	—51.6	—	—
	20	4	26924	26968	26800	4	—38.0	—33.0	—45.1	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan 1200 U.T.	Surface	28	994*mb.	997*mb.	987*mb.	28	26.2	32.6	21.0	28	1.6
	1000	28	138	168	76	—	—	—	—	—	—
	850	28	1533	1566	1490	28	13.7	21.4	6.0	28	— 7.1
	700	28	3147	3190	3110	28	5.9	10.0	1.6	28	—16.2
	600	28	4394	4452	4340	28	— 2.1	1.6	— 6.8	28	—22.2
	500	28	5817	5895	5730	28	—12.1	— 9.3	—18.2	28	—29.2
	400	28	7488	7515	7365	28	—24.1	—19.9	—29.5	28	—39.9
	300	28	9521	9650	9360	28	—39.1	—32.1	—43.8	28	—52.3
	250	28	10761	10897	10568	28	—44.9	—37.1	—49.7	28	—57.9
	200	28	12234	12365	12125	28	—52.3	—46.2	—57.0	28	—64.2
	150	27	14058	14232	13824	27	—61.9	—55.4	—68.5	7	—69.4
	100	26	16509	16682	16224	26	—71.6	—66.9	—74.8	—	—
	70	26	18602	18737	18360	26	—72.0	—63.1	—76.4	—	—
	60	24	19562	19890	19440	24	—69.2	—66.5	—73.0	—	—
	50	24	20615	20730	20501	24	—65.3	—61.0	—68.4	—	—
	40	18	22065	22410	21600	18	—60.1	—54.8	—64.2	—	—
	30	16	23801	23961	23507	16	—56.0	—49.1	—66.3	—	—
	20	9	26372	26553	26077	9	—51.4	—45.7	—69.4	—	—
	10	—	—	—	—	—	—	—	—	—	—

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

FEBRUARY — 1978

	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
0000U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh(A)	2639 (28)	742 (28)	—11.0 (28)	4140	617	—21,3	1390	858	—2 1	10996 (26)	228 (26)	—57.5 (26)	13400	160	—67,6	9480	285	—51,9	7270	395	225	100
	Helwan	2929 (26)	717 (26)	—13.3 (26)	3690	631	—20.2	1410	858	—1 4	10999 (22)	235 (22)	—54,9 (22)	13860	153	—63,5	9640	288	—42.7	8910	315	250	148
	Aswan . . (A)	3834 (27)	641 (27)	—14.5 (27)	4480	595	—24.2	2600	746	—5,1	16414 (20)	104 (20)	—74.0 (20)	18455	70	—80,5	13090	172	—61.5	11150	232	280	155
0021U.T.		N	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh	2995 (26)	715 (26)	—14.9 (26)	4030	631	—23,5	1570	840	—6.1	11000 (21)	229 (21)	—55.9 (21)	12740	177	—57.7	8100	347	—48.4	10530	252	280	130
	Helwan . . .	3170 (26)	699 (26)	—13.8 (26)	4800	576	—26,8	1690	830	—6.6	10940 (22)	239 (22)	—52.3 (22)	12600	184	—58.7	9270	299	—44.9	12430	190	355	150
	Aswan	4076 (28)	628 (28)	—21,9 (28)	4650	585	—20 2	3400	678	—24.2	16786 (26)	98 (25)	—72.8 (25)	18508	70	—75.8	14300	139	—68,3	10350	267	245	155

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

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

M. MATRUH (A) — FEBRUARY 1978

Observation	Pressure Surface (Millibar)	Wind within 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		105/135		135/164		165/194		195/224		235/254		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 T U.	Surface	3	8	0	—	0	—	0	—	2	10	4	12	3	12	7	11	6	14	2	8	0	—	0	—	1	28	11
	1000	0	—	0	—	0	—	0	—	1	18	3	18	3	17	5	18	5	16	2	17	2	10	1	5	0	22	16
	850	1	9	0	—	0	—	0	—	0	—	2	26	5	22	2	16	8	26	4	19	0	—	0	—	0	22	22
	700	0	—	0	—	0	—	0	—	1	18	0	—	2	23	0	—	3	22	3	32	0	—	1	8	0	10	24
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	42	3	46	3	30	0	—	0	—	0	8	39
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	65	3	36	3	35	0	—	0	—	0	8	43
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	65	2	28	3	40	0	—	0	—	0	7	44
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	57	1	49	1	37	1	39	0	—	0	5	48
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	33	1	23	1	46	0	—	0	3	34
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	63	1	38	0	—	0	—	0	2	50
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	78	1	39	0	—	0	—	0	2	58
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	34	0	—	0	—	0	—	0	1	34
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
0021 U.T	Surface	2	12	3	10	0	—	0	—	1	10	2	14	4	14	4	12	3	22	3	61	3	18	2	10	0	27	15
	1000	2	12	1	6	0	—	0	—	1	17	2	14	5	17	3	15	3	23	3	35	4	17	1	15	0	25	19
	850	1	11	0	—	0	—	1	3	0	—	1	13	5	17	5	22	6	21	3	29	1	24	2	16	0	25	20
	700	1	16	0	—	0	—	0	—	0	—	0	—	1	31	3	36	5	32	9	30	4	24	1	8	0	24	29
	600	1	8	0	—	0	—	0	—	0	—	0	—	0	—	3	55	6	28	5	42	7	29	2	20	0	24	36
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	68	8	45	5	50	4	44	2	36	0	22	48
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	76	6	44	7	61	2	36	1	51	0	18	54
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	86	3	75	7	73	2	64	1	68	0	15	74
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	78	3	80	7	79	2	87	1	45	0	15	78
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	97	3	67	2	74	3	86	1	70	0	11	79
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	89	2	72	1	120	3	73	0	—	0	7	28
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	70	1	41	0	—	0	—	0	2	56
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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 FEBRUARY 1978

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			
0000 U.T.	Surface	2	4	5	7	5	9	4	6	3	6	1	7	0	—	2	4	0	—	0	—	0	—	3	4	3	28	6
	1000	1	5	3	8	4	12	2	12	0	—	0	—	0	—	1	3	0	—	0	—	0	—	4	5	2	17	7
	850	1	15	2	18	2	16	2	12	2	6	1	4	0	—	1	16	4	12	3	32	3	13	5	22	0	26	16
	700	4	10	1	34	0	—	1	4	0	—	0	—	0	—	2	32	2	23	3	40	7	25	6	30	0	26	26
	600	2	22	1	37	1	17	1	3	0	—	0	—	0	—	1	62	5	31	1	46	5	26	8	39	0	25	32
	500	2	56	2	38	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	41	10	31	3	36	0	22	38
	400	2	60	0	—	1	45	0	—	0	—	0	—	0	—	0	—	3	70	5	42	5	55	6	48	0	22	52
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	67	5	55	3	54	0	13	69
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	47	2	60	3	74	4	76	0	10	74
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	10	59	4	91	1	48	0	8	104
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	104	2	104	0	—	0	3	—
	100	—	—	—	—	—	—	—	—	—	—	0	—	0	—	—	—	—	—	0	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 T.U.	Surface	1	6	4	11	0	—	1	6	0	—	0	—	3	13	8	9	5	6	5	5	1	3	0	—	1	28	6
	1000	0	—	3	12	0	—	1	6	0	—	0	—	1	6	3	6	1	3	3	7	2	3	0	—	1	16	7
	850	1	10	1	7	2	9	2	12	1	11	1	10	1	7	2	24	3	15	5	8	6	18	1	20	0	26	14
	700	2	32	2	18	1	11	0	—	0	—	0	—	0	—	2	38	3	27	6	24	3	33	7	24	0	26	26
	600	5	22	2	16	0	—	0	—	0	—	0	—	0	—	1	37	4	36	5	27	5	35	4	36	0	26	30
	500	2	19	1	16	0	—	0	—	0	—	0	—	0	—	0	—	3	56	3	32	8	48	6	38	0	23	40
	400	1	35	0	—	0	—	0	—	0	—	0	—	0	—	1	69	2	54	2	52	12	55	5	39	0	23	51
	300	1	68	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	63	4	66	6	58	5	77	0	18	67
	250	1	37	1	88	0	—	0	—	0	—	0	—	0	—	0	—	1	56	3	74	6	71	4	84	0	16	73
	200	2	128	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	75	3	94	3	120	3	66	0	10	93
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	95	2	74	1	126	0	5	89
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	56	1	118	0	3	77
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	55	1	83	0	2	69
	60	0	—	0	—	—	—	—	—	0	—	—	—	0	—	—	—	0	—	1	62	—	—	0	—	0	1	62
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N= The number of cases the wind has been odserved 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.—NUMBER OF OCCURRENCES F WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

ASSWAN (A)— FEBRUARY 1978

Time	Pressure Surface (Millibar.)	Wind between ranges of direction (000—360)																								Number of Calm winds	Total number of Observations (TN)	Mean scalar winc 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 T.U.	Surface	14	10	6	10	0	—	2	8	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	11	0	27	10
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	5	12	5	11	3	11	1	12	3	5	2	12	0	—	0	—	1	8	0	—	1	24	6	15	0	27	12
	700	0	—	1	6	2	10	0	—	1	7	1	7	0	—	0	—	4	20	9	24	6	21	3	12	0	27	18
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	31	9	24	10	28	5	27	2	22	0	27	26
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	43	15	35	6	28	1	36	0	27	35
	400	1	2	0	—	0	—	0	—	0	—	0	—	0	—	0	—	8	53	10	54	8	37	0	—	0	27	48
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	75	14	64	2	104	2	60	0	27	42
	250	0	—	1	28	0	—	0	—	0	—	0	—	0	—	0	—	5	108	16	94	3	69	1	90	0	26	91
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	116	14	97	2	78	2	72	0	21	95
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	92	9	88	1	86	0	—	0	15	89
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	70	4	59	0	—	0	—	0	6	62
	70	0	—	0	—	0	—	0	—	1	—	0	—	0	—	0	—	1	26	0	—	1	30	0	—	0	2	28
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	27	0	—	0	—	0	—	0	1	27
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	30	0	—	0	—	0	—	0	1	30
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	16	11	2	6	1	8	0	—	0	—	0	—	1	3	0	—	0	—	1	5	1	18	4	12	2	28	10
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	4	15	1	11	3	11	2	8	1	10	1	18	0	—	2	5	1	11	2	16	5	13	6	12	0	28	13
	700	1	22	0	—	3	14	1	5	0	—	0	—	1	6	1	22	4	31	9	20	5	19	3	14	0	28	19
	600	1	26	0	—	0	—	1	11	0	—	1	6	0	—	2	20	5	47	10	28	4	28	4	20	0	28	28
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	35	10	37	7	32	2	36	0	28	35
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	64	16	54	4	31	2	38	0	28	52
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	81	15	72	4	71	0	—	0	25	74
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	99	15	96	4	86	0	—	0	26	96
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	109	17	88	1	78	0	—	0	24	97
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	105	13	79	0	—	0	—	0	16	84
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	76	10	56	0	—	0	—	0	12	60
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	—	0	—	4	26	1	26	0	—	0	5	26
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	20	2	22	0	—	0	—	0	3	22
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	16	0	—	0	—	0	—	0	1	16
	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	12	0	—	0	—	0	1	12
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

GENERAL SUMMARY OF WEATHER CONDITIONS

MERSA MATRUH — FEBRUARY 1978

The mean monthly air temperature was above normal and the mean monthly relative humidity was nearly the same as normal. The total monthly rainfall was only 0.5 mm. (15.0 mm. below normal).

The month was characterized by five warm spells in the periods : (1st), (3rd & 4th), (10th - 15th), (18th) and (27th & 28th). The third spell gave rise to both the highest maximum temperature (28.5°C) and the highest minimum temperature (14.2°C) on the 14th. In the rest of the month light cold spells were experienced. The lowest maximum temperature was 14.7°C (on the 16th). The lowest minimum temperature was 6.0°C (on the 25th).

The mean monthly actual sunshine duration was higher than normal by 1.0 hour. The mean monthly wind speed at 1.5 met. height was the same as normal.

The highest maximum soil temperatures were higher than the corresponding values of February 1977 at 2 & 10 cm. depths and lower at other depths; the departures varied between 0.1°C & 0.8°C. The lowest minimum soil temperatures were lower than February 1977 at all depths with departures between 0.5°C (at 5cm.) and 1.9°C (at 10 cm.).

TAHRIR — February 1978

The mean monthly air temperature was above normal and the mean monthly relative humidity was below normal). The Total monthly rainfall was only 0.7 mm. (3.8 mm. below normal).

The month was characterized by five warm spells in the periods : (1st), (3rd - 5th), (11th -15th), (18th - 21st) and (27th & 28th) : The last spell gave rise to the highest maximum temperature (30.8°C) on the 28th.

In the rest of the month maximum air temperatures were below normal.

Weather was generally cool night time. Minimum air temperatures were below normal most days of the month. Minimum air temperature at 5 cm. above the grass field fell below 0°C (-0.6°C) on the 8th.

The mean monthly wind speed at 1.5 met. height was nearly the same as normal. The mean monthly actual sunshine duration and pan evaporation were higher than normal by 1.2 hour and 0.96 mm.

The highest maximum soil temperatures in the dry field were lower than normal at 2 & 5 cmm. depths by 05 & 1.1°C respectively ; higher than normal at other depths between 10 & 100 cm. with slight departures between 0.1° & 0.4C. The lowest minimum soil temperatutes were higher tyan normal at all depths with departures between 0.1°C (as 2cm.) and 1.5°C (at 50 cm.)

BAHTIM — February 1978

The mean monthly air temperatur was above average and the mean monthly relative humirity was below average. The total monthly rainfall was 3.7 mm. against 1.2 mm. for normal.

The month was characterized by five warm spells in the periods :((1st), (4th & 5th); (12th — 18th), (19—21st) and (27th & 28th). The third spell gave the highest maximum temperature (29.6°C) on the 14th. In the rest periods of the month light cold spells were experienced.

It is worthy of mention that minimum temperature at 5cm. fell below 0°C in the dry field during 6 days and in the grass field during 14 days. These minima and their dates of occurrence are as follows :

Date	1	4	11	12	13	25	
Min. temp. at 5cm. above the dry field	—1.4	—0.7	—2.3	—3.2	—0.4	—0,8	
Date	1	4	5	8	9	11	12
Min. temp. at 5cm. above the grass field	—2.4	—1.2	—2.4	—0.6	—0.4	—2,7	—4,4
Date	13	14	23	24	25	26	28
Min. temp. at 5cm. above the grass field	—1.8	—1.0	—0.6	—2.9	—3.6	—2,6	—0,9

The mean monthly wind speed was nearly the same as average. The mean monthly actual sunshine duration and pan evaporation were higher than average by 0.9 hour and 0.86 mm.

The highest maximum soil temperatures in the dry field were higher than average at 2,5 & 50 cm. depths by 5.0°, 1.5° & 0.4°C respectively; and lower by 0.1°C at both 10,20 & 100 cm. depths. The lowest minimum soil temperatures were higher than average at all depths except at 10cm. where it was lower than average; the departures varied between 0.2° & 0.8°C.

ASSYOUT — February 1978

The mean monthly air temperature and relative humidity were lower than the corresponding values of last February.

The month was intervened by five warm spells in the peirods : (1st, (4th & 5th), (11th — 15th), (19th), 27th & 28th). The third spell gave the highest maximum temperature (32.0°C) on the 15th. In the rest periods of the month light cold spells were experienced.

Weather was markedly cool night times. Minimum temperature at 5 cm. above soil fell below 0°C during 12 days. These minima and their dates of occurrence are as follows :

Date	3	6	7	8	9	10	11
Min. temp. at 5cm. above soil	—2.2	—1.4	—2.8	—1.3	—3.8	—2,7	—2,2
Date	12	13	14	17	25		
Min. temp. at 5cm. above soil	—3.8	—0.3	—0.3	—0.8	—1.2		

The mean monthly actual sunshine duration and pan evaporation were higher thaan February 1977 by 0.4 hour and 0.60 mm. respectively.

The highest maximum soil temperatures were higher than the corresponding values of February 1977 at 2,5 & 10cm. depths by 8.7°, 3.8° & 1.3°C respectively; lower at 20 & 50cm. depths by 0.3° & 0.5°C; the same as February 1977 at 100cm. depth. The lowest minimum soil temperatures were lower than February 1977 at depths between 2 & 50cm. with departures between 0.3°C (at 2cm.) and 2.6°C (at 5 & 10cm.); higher at 100cm. by 0.4°C.

KHARGA — February 1978

The mean monthly air temperature was slightly above normal, and the mean monthly relative humidity was nearly the same as normal.

The month was characterized by five warm spells in the periods (1st.), (4th & 5th), (11th — 15th), (19th — 23rd) and (26th — 28th). The third spell gave the highest maximum temperature (34.4°C) on the 14th. In the rest periods of the month maximum air temperatures were below normal.

Minimum air temperatures were below normal most days of the month. Minimum temperature at 5cm. above soil fell below 0°C (—1.0°C) on the 7th.

The mean monthly actual sunshine duration, wind speed at 1.5 met. height and pan evaporation were lower than normal by 0.1 hour, 1.0 met./Sec and 1.43 mm. respectively.

The highest maximum soil temperatures were higher than normal at depths between 2 & 20cm. with departures between 4.8°C (at 2 cm.) & 1.0°C (at 20cm.); lower than normal at 50cm. depths by 0.4°C; the same as normal at 100cm. depth. The lowest minimum soil temperatures were higher than normal at 2.50 & 100cm. depths with departures between0.1° & 0.6°C; lower than normal at 5, 10& 20cm. depths with departures between 1.2° & 0.3°C.

Table C 1.—AIR TEMPERATURE AT 1½ METRES ABOVE GROUND
FEBRUARY — 1978

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
Mersa Matruh . .	20.6	10.0	14.3	12.6	16.9	24.0	24.0	24.0	21.3	10.4	2.9	0.5	0.0	0.0	0.0	0.0
Tahrir	23.6	6.5	14.3	10.3	18.1	24.0	24.0	23.0	17.1	10.7	4.6	1.3	0.0	0.0	0.0	0.0
Bahtim	22.5	5.8	14.0	10.1	17.9	24.0	24.0	22.7	17.7	9.5	3.5	1.0	0.0	0.0	0.0	0.0
Assuit	23.8	5.9	14.6	10.7	18.5	24.0	24.0	23.0	17.0	10.0	5.0	1.0	0.1	0.0	0.0	0.0
Kharga	26.8	6.8	17.1	13.3	21.0	24.0	24.0	23·0	19.5	14.1	8.5	3.5	0.7	0.0	0.0	0.0

Table C 2.—EXTREME VALUES OF AIR TEMPERATURE AT 1½ METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cm ABOVE GROUND OVER DIFFERENT FIELDS
FEBRUARY — 1978

STATION	Max. Temp. at 1½ metres				Min. Temp. at 1½ 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
Mersa Matruh . . .	28.5	14	14.7	16	14.2	14	6.0	25	4.0	10,25	—	—
Tahrir	30.8	28	18.4	6	12.2	19	2.0	11	1.0	11	0.6	8
Bahtim	29.6	14	18.2	6	12.4	19	1.5	12	—3.2	12	4.4	12
Assuit	32.0	15	17.6	6	11.6	15	1.7	7,9	—3.8	9,12	—	—
Kharga	34.4	14	20.2	6	14.0	16	0.9	7	1.0	7	—	—

Table C 3.—(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 1½ METRES ABOVE GROUND, EVAPORATION & RAINFALL
FEBRUARY — 1978

STATION	(Solar+Sky) Radiation gm. cal/cm²	Duration of Bright Sunshine (hour .)			Relative Humidity				Vapour pressure (mms)						Evaporation E (mms)		Ramfall (mms)		
		Total Actual monthly	Total Possible monthly	%	Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 U.T.	Highest	Date	Lowest	Date	Piche	pan class	Total Amount	max. fall in one day	Date
Mersa Matruh	316.0	233.6	309.5	75	63	49	20	28	7.8	8.1	12.4	19	4.2	3	8.6	—	0.5	0.2	6,15
Tahrir. . .	410.1	256.0	310.5	82	59	34	13	14	6.8	6.6	11.3	20	2.7	9	5.5	6.00	0.7	0.6	16
Bahtim . .	392.0	250.8	311.3	81	60	36	16	14	6.9	6.8	11.2	21,28	3.5	9	5.6	5.74	3.7	3.5	18
Assuit . . .	—	286.6	314.8	91	51	32	20	5	6.1	6.6	10.8	5,20	3.6	7	5.0	5.00	0.0	0.0	—
Khrga .	503.0	280.5	316.8	89	37	24	12	2	5.2	5.9	9.0	15	2.2	3	8.3	7.29	0.0	0.0	—

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

FEBRUARY — 1978

STATION	Highest (H) Lowest (L)	Extreme soil temperature (°C) in dry field at different depths (cms.)								Extreme soil temperature (°C) in grass fied at different depths (cms.)							
		2	5	10	20	50	100	200	300	2	5	10	20	50	100	200	300
M. Matruh	H	27.5	25.2	22.5	17.6	16.4	16.4	17.8	—	—	—	—	—	-	—	—	—
	L	7.6	8.3	10.1	12.0	13.0	14.2	17.1	—	—	—	—	—	—	—	—	—
Tahrir. . .	H	34.1	28.0	25.4	21.4	18.9	18.7	19.7	21.4	21.6	19 8	18.5	16 8	16.3	16.3	17.7	—
	L	7.1	8.2	9.7	12.8	15.8	17.3	19.2	20.9	7.9	8.1	9.1	12.0	13.2	15.1	17.3	—
Bahtim . .	H	41.0	28.4	22.8	19.5	19.4	19.5	21.8	23.6	31.9	22 8	19 4	18.5	17.2	17.7	19.6	—
	L	6.6	8.6	11.1	15.7	17.4	19.0	22.5	22.9	6.7	9.3	11.2	13.5	15.3	17.0	19.2	—
Asiut. .	H	45.4	34.1	26.9	21.8	20.2	20.6	22.1	24.3	—	—	—	—	—	—	—	—
	L	7.6	8.2	10.8	15.1	18.5	20.0	21.5	23.4	—	—	—	—	—	—	—	—
Kharga . .	H	44.1	36.8	31.7	25.0	22.5	23.2	25.3	27.6	—	—	—	—	—	—	—	—
	L	5.6	7.0	10.9	16.0	20.2	22.2	24.7	26.8	—	—	—	—	—	—	—	—

Table C 5.—SURFACE WIND

FEBRUARY — 1978

STATION	Wind Speed m/sec at $1^1/_2$ 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
M. Matruh	4.3	3.4	5.1	28	20	14	8	4	2	2	49	6
Tahrir.	2.2	1.4	3.1	26	17	7	5	0	0	0	35	2,6
Bahtim..	2.3	1.5	3.0	25	18	9	4	1	0	0	39	15
Asiut	—	—	—	—	—	—	—	—	—	—	—	—
Kharga.	1.9	1.3	2.5	23	14	5	0	0	0	0	27	2

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THE ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 21 NUMBER 3

MARCH 1978

U.D.C. 551. 505. 1 (65)

THE EGYPTIAN METEOROLOGICAL AUTHORITY
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL AUTHORITY OF THE ARAB REPUBLIC OF EGYPT—CAIRO

In fulfilment of its duties, the Egyptian Meteorological Authority issues several reports and publications on weather, climate and agro-meteorology. The principal publications are described on this page.

Orders for publications should be addressed to :

"Chairman of the Board of Directors, Meteorological Authority, Kubri-el-Qubbeh — CAIRO.

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 the Meteorological Authority.

TECHNICAL NOTES

As from October 1970, the Meteorological Authority 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.

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THE EGYPTAIN METEOROLOGICAL AUTHORITY
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GENERAL SUMMARY OF WEATHER CONDITIONS

MARCH 1973

Two Khamsin heat waves during the first third of the month, Rather cool weather most of scenod and last thirds. Abnormal rainfall over the northern coast.

PRESSURE DISTRIBUTION

The atmospheric pressure over Egypt was influanced by the following :

— Two depressions moving eastwards along the Mediterranean coast of North Africa passed through East Mediterranean on the 4*th* & 9*th*.

— A depression developed over Cyprus area on the 11*th* and traversed East Mediterranean on the 13*th*.

— High pressure established over East Mediterranean and NE Africa most of the period from the 14*th* till the end of the month. This high pressure was disturbed by the rapid transit through East Mediterranean of two depressions on the 20*th* & 29*th* and two troughs on the 23*rd* & 26*th*.

The mean monthly atmospheric pressure over Egypt was generally around normal.

SURFACE WIND

Surface Winds were generally light to moderate and blew mostly from SW ly & NW ly directions in north of the country and from N ly & NW ly in the south.

Fresh to strong winds were experienced during several days by the break down of heat waves.

TEMPERATURE

The first third of the month was characterized by two pronounced Khamsin heat waves with marked abnormal maximum and minimum temperatures.

During the rest of the month weather was rather cool intervened by two short and light heat waves, and maximum & minimum temperatures were moderately below normal in general..

The highest and lowest maximum temperatures were respectively 37.2°C at Dakhla on the 9*th* and 14.6°C at Mersa Matruh on the 13*th*.

The highest and lowest minimum temperatures were respectively 19.8 at Cairo airport on the 9*th* and at Quseir on the 11*th* and 1.4°C at Dakhla on the 15*th*.

PRECIPITATION

Light to moderate rain fell over the northern parts till Cairo during several days mostly in the period between the 11*th* & 14*th*. Rain was heavy on the 12*th* over scattered places in the Mediterranean district.

The monthly rainfall amounts were above normal in general.

The maximum daily rainfall was 14.2 mm at Mersa Matruh on the 11*th*.

The maximum monthly rainfall was 25.27 mm. at Mersa Matrouh.

OTHER WEATHER PHENOMENA

Scattered early morning mist developed during several days over Lower Egypt & Cairo

Rising sand was reported in Scattered places by the break down of the heat waves.

Chairman (M. ALI. BADRAN)

Board of Directors

Cairo, March 1979

SURFACE DATA

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

MARCH 1978

STATION	Atmospheric Pressure (mbs) M.S.L		Air Temperature °C									Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evap.
			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	DF Normal or Average	Mean	D.F. Normal or Average	Total Actua	Total Possible	%	
El Sallum	1015.1	—0.1	21.4	0.0	11.6	0.4	16.5	15.9	0.1	11.5	—0.1	57	—0	—	—	—	6.1
Mersa Matruh	1015.8	0.3	18.7	—1.6	10.2	0.1	14.4	14.5	—0.5	11.7	—0.4	69	6	272.1	371.6	73	8.0
Alexandria	1015.6	—0.1	21.2	0.0	10.8	0.4	16.0	15.8	—0.1	12.3	0.0	65	1	261.7	371.6	70	4.9
Port Said	1015.0	—0.1	19.9	—0.4	13.9	—1.4	16.9	16.6	0.1	13.0	0.2	65	—3	254.1	371.6	68	5.5
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo	1015.4	0.2	24.2	0.3	12.4	0.9	18.3	17.9	0.4	11.7	0.4	47	2	—	—	—	11.2
Fayoum	—	—	25.5	0.1	8.7	—1.5	17.1	17.0	—0.7	12.0	0.0	56	9	—	—	—	5.9
Minya (A)	1015.8	0.5	26.3	0.5	8.1	0.2	17.2	17.1	0.5	11.3	0.2	49	1	291.4	372.0	78	7.9
Assouit (A)	1015.7	0.9	25.7	—0.9	9.6	—1.1	17.6	17.8	—0.7	9.4	—1.6	28	—5	—	—	—	11.2
Luxsr. (A)	1014.6	1.1	29.6	0.1	10.3	—0.5	19.9	19.8	—0.3	12.2	0.1	38	3	—	—	—	6.5
Aswan (A)	1014.3	—1.0	30.1	—0.2	13.3	—.4	21.7	21.5	—0.2	11.5	0.3	23	—1	263.5	372.6	98	15.8
Sewa	1015.4	—0.4	25.2	0.2	9.7	1.0	17.4	17.2	0.5	10.8	—0.4	44	—1	275.5	371.8	74	10.9
Ev-Baharia	1015.5	0.0	25.6	0.1	9.6	0.5	17.6	17.9	0.8	10.4	—0.1	36	—10	—	—	—	9.8
El-Farafria	1017.0	0.5	26.6	0.5	8.9	0.4	17.7	17.7	0.4	9.9	0.2	32	—0	—	—	—	10.5
El-Dakhla	1016.8	1.4	28.5	0.9	6.8	—2.0	17.6	17.8	—0.2	9.5	—0.8	31	—2	—	—	—	10.9
El-Kharga	1015.1	0.0	29.3	0.6	10.4	—0.5	19.8	20.2	0.7	10.7	0.2	31	—0	300.4	372.4	81	10.0
ElHurgadà	1014.8	1.3	24.3	0.7	13.3	0.8	18.8	19.4	0.7	12.4	—0.8	39	—11	308.1	372.1	83	12.8
El-Qnseia	1014.0	0.3	25.1	0.5	16.4	0.1	20.7	20.8	0.3	14.5	0.3	46	—3	—	—	—	7.3

TABLE A2.— MAXIMUM AND MINIMUM AIR TEMPERATURE

MARCH — 1978

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
El-Sallum	31.6	7	16.1	14	01	01	00	00	00	10.6	--	15.6	9	8.4	15	09	00	00	00
Mersa Matroh	24.5	25	14.6	13	00	00	00	00	00	8.9	—	14.0	3	6.0	15	11	00	00	00
Alexandria	28.3	8	16.6	13	00	01	00	00	00	8.6	--	14.2	29	6.9	19	08	00	00	00
Port Said	32.2	9	15.6	12	01	00	00	00	00	14.0	—	18.6	9	6.4	4	01	00	00	00
ElArish	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gaza	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo (A)	34.3	9	16.4	12	10	06	00	00	00	—	—	19.8	9	8.8	20	04	00	00	00
Fayoum	34.0	2	18.2	12	14	05	00	00	00	6.2	-	16.6	10	5.0	14	21	00	00	00
Minya (A)	34.6	3	20.4	12	18	06	00	00	00	5.4	—	15.0	10	4.7	19	62	02	00	
Assyout (A)	33.8	2	18.8	12	15	07	00	00	00	8.6	—	17.3	10	5.5	28	18	00	00	00
Luxor (A)	35.4	3	22.0	12	27	13	01	00	00	6.3	—	15.6	10	5.8	15	16	00	00	00
Aswan (A)	36.3	10	23.7	24	27	14	04	00	00	—	—	18.6	11	9.0	15	01	00	00	00
Siwa	36.6	8	19.5	12	12	05	02	00	00	7.5	—	16.0	8	4.5	15	18	01	00	00
Bahariya	35.3	9	18.6	12	14	05	01	00	00	9.0	—	18.0	10	5.0	14	19	00	00	00
Farafra	36.2	9	18.5	12	17	06	02	00	00	7.1	--	18.6	10	5.0	51,16	21	00	00	00
Dakhla	37.2	9	18.6	12	24	10	04	00	00	6.8	—	13.8	11	1.4	15	27	05	00	00
Kharga	37.0	3	21.7	12	26	11	05	00	00	7.9	—	17.2	11	6.0	15	14	00	00	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	28.2	23	20.2	14	12	00	00	00	00	—	—	17.5	5	10.6	13	00	00	00	00
Quseir	31.0	3	21.8	15	13	01	00	00	00	13.4	—	19.8	11	14.0	16	00	00	00	00

TABLE A 3 SKY COVER AND RAIN FALL

MARCH — 1978

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
Elsallum	2.4	2.7	3.6	2.5	2.8	17.6	7.8	11.6	11	00	06	02	01	01	00	00
Mersa Matroh	1.7	3.2	3.6	2.4	2.7	25.7	14.5	14.2	11	00	05	04	02	01	00	00
Alexandria	2.2	3.6	4.6	3.0	3.5	20.7	8.3	13.6	11	00	07	03	01	01	00	00
Port Said	2.5	3.0	3.1	2.3	2.8	17.0	8.3	9.3	12	00	05	05	01	00	00	00
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo (A)	0.6	1.7	2.9	1.8	1.9	1.7	0.1	1.7	12	01	04	01	00	00	00	00
Fayoum	—	1.6	2.4	1.8	—	Tr.	—	Tr.	12,29	02	00	00	00	00	00	0
Minya (A)	0.6	1.6	1.5	1.2	1.2	0.0	0.0	—	—	00	00	00	00	00	00	00
Assyout (A)	0.5	1.1	1.0	0.7	0.8	0.0	0.0	—	—	00	00	00	00	00	00	00
Luxor (A)	0.3	1.2	1.6	0.8	0.9	0.0	−0.1	—	—	00	00	00	00	00	00	00
Aswan (A)	0.2	0.8	1.0	0.8	0.7	0.0	0.0	—	—	00	00	00	00	00	00	00
Siwa	1.8	1.1	1.9	1.6	1.6	0.0	−0.2	—	—	00	00	00	00	00	00	00
Baharya	0.8	2.1	2.2	1.0	1.3	0.0	0.0	—	—	00	00	00	00	00	00	00
Farafa	—	0.7	1.6	0.6	—	0.0	−0.1	—	—	00	00	00	00	00	00	00
Dakha	0.2	0.5	0.6	0.4	0.4	0.0	0.0	—	—	00	00	00	00	00	00	00
Kharga	0.2	0.8	1.0	0.4	0.6	0.0	0.0	—	—	00	00	00	00	00	00	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	0.7	1.0	1.7	1.1	1.2	0.0	0.4	—	—	00	00	00	00	00	00	00
Quseir	0.1	0.6	1.1	0.4	0.6	0.0	0.3	—	—	00	00	00	00	00	00	00

Table A. 4 DAYS OF OCCURENCE OF MISCELLANEOUS WEATHER PHENOMENA

MARCH — 1978

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 Tky	Cloudy Sky
	Rain	Snow											
Sallum	05	00	00	00	00	00	00	13	00	00	00	12	02
Mersa Matruh (A)	07	00	00	01	05	02	03	09	00	01	00	10	00
Alexandria (A)	07	00	00	01	02	02	00	04	00	01	00	07	03
Port Said (A)	07	00	00	02	01	00	00	04	00	00	00	10	00
El Ari h	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo (A)	03	00	00	00	02	02	06	10	00	01	00	18	01
Fayoum	00	00	00	00	01	01	00	03	00	01	00	16	03
Minya (A)	00	00	00	00	05	00	04	04	00	00	00	24	00
Assyout (A)	00	00	00	00	00	00	03	07	00	01	01	26	00
Luxor (A)	00	00	00	00	00	00	16	08	00	01	00	26	01
Aswan (A)	00	00	00	00	00	00	06	06	00	00	00	27	00
Siwa	00	00	00	00	00	00	01	09	00	01	00	20	00
Bahariya	00	00	00	00	02	00	00	06	00	00	00	23	01
Farafra	00	00	00	00	00	00	03	05	00	02	00	23	00
Dakhla	00	00	00	00	00	00	00	03	00	01	00	29	00
Kharga	00	00	00	00	00	00	01	06	00	00	00	27	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	00	00	00	00	00	00	00	07	00	02	00	25	01
Quseir	00	00	00	00	00	00	02	03	00	00	00	26	00

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

MARCH — 1978

Station	Calm (hours)	Variable (hours)	Uncorded (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	325/344	ALL DIR
Sallum	29	00	00	1—10	23	12	78	54	31	16	22	08	16	33	54	48	395
				11—27	08	03	03	00	00	02	07	02	33	91	108	62	316
				28—47	00	00	00	00	00	00	00	00	00	01	03	00	04
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**31**	**12**	**81**	**54**	**31**	**18**	**29**	**10**	**49**	**125**	**165**	**110**	**715**
Mersa Matroh	06	00	00	1—10	14	25	13	63	49	37	40	41	66	42	39	69	498
				11—27	00	00	01	20	07	03	10	19	40	33	88	12	233
				28—47	00	00	00	00	00	00	00	00	00	05	02	00	07
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**14**	**25**	**14**	**83**	**56**	**40**	**50**	**60**	**106**	**80**	**129**	**81**	**738**
Al Exandria	01	00	00	1—10	55	38	58	47	66	26	21	34	22	14	24	47	452
				11—27	05	03	04	03	06	00	00	09	31	71	89	65	286
				28—47	00	00	00	00	00	00	00	00	03	01	01	00	05
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**60**	**41**	**62**	**50**	**72**	**26**	**21**	**43**	**56**	**86**	**114**	**112**	**743**
Cairo	21	05	00	1—10	30	66	40	33	26	09	39	42	25	34	54	41	444
				11—27	05	37	21	07	13	03	29	38	71	40	12	00	276
				28—47	00	00	00	00	00	00	00	00	03	00	00	00	03
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**35**	**103**	**61**	**40**	**39**	**12**	**68**	**80**	**99**	**74**	**66**	**41**	**718**
El Fayoum	09	06	00	1—10	64	162	30	22	20	23	41	76	93	60	54	34	685
				11—27	00	07	03	00	00	00	01	06	12	18	03	00	50
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**64**	**169**	**33**	**22**	**20**	**23**	**42**	**82**	**105**	**78**	**57**	**34**	**729**
El Minia	37	02	00	1—10	168	38	05	02	13	102	43	15	23	28	46	98	583
				11—27	55	00	00	00	00	00	05	00	03	29	20	12	124
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**223**	**38**	**05**	**02**	**13**	**102**	**48**	**15**	**26**	**57**	**66**	**110**	**705**
Assuit	25	00	00	1—10	72	88	49	21	22	35	31	10	10	30	67	46	481
				11—27	41	58	33	00	00	10	23	03	03	09	23	27	230
				28—47	00	00	00	00	00	00	00	00	00	01	02	05	08
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**113**	**146**	**82**	**21**	**22**	**45**	**54**	**13**	**13**	**40**	**92**	**78**	**719**

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

MARCH - 1978

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 DIR
Luxor . . . . . (A)	06	00	00	1—10	52	52	28	36	24	17	71	59	45	71	108	149	712
				11—27	00	01	00	03	00	00	00	00	00	03	15	04	26
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	52	53	28	39	24	17	71	59	45	74	123	153	738
Aswan . . . . . (A)	00	00	00	1—10	333	75	09	02	04	03	01	03	02	15	35	69	552
				11—27	119	15	02	00	01	00	00	00	00	11	25	19	192
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	452	91	11	02	05	03	01	03	02	26	60	88	744
Siwa	08	00	00	1—10	12	12	14	87	82	25	22	38	54	93	61	26	526
				11—27	05	09	00	00	14	16	12	04	10	46	59	24	209
				28—47	00	00	00	00	00	00	00	00	00	00	01	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	17	21	14	87	96	41	34	42	64	149	121	50	736
Dakhla	33	11	00	1—10	67	30	25	43	34	35	28	41	32	49	78	169	632
				11—27	04	00	00	00	00	00	00	00	01	03	30	30	68
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	81	30	26	43	34	35	28	41	33	52	108	199	700
Kharga	07	00	00	1—10	191	88	27	16	14	12	11	09	13	29	54	125	598
				11—27	81	17	01	00	00	00	00	00	00	01	13	35	148
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	272	105	28	16	14	12	11	09	13	30	76	160	737
Hurghada	03	00	00	1—10	10	26	21	21	16	32	13	10	08	62	137	26	382
				11—27	50	28	00	02	03	06	02	00	00	24	105	138	358
				28—47	00	00	00	00	00	00	00	00	00	00	00	01	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	69	54	21	23	19	38	15	10	08	86	242	165	741
Quseir	07	00	00	1—10	66	42	29	12	19	15	16	11	16	95	148	75	544
				11—27	110	05	00	00	01	00	00	00	00	11	18	47	193
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	176	47	29	12	20	15	16	11	16	106	166	122	737

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

MARCH — 1978

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 U.T.	Surface	31	1013mb.*	1022mb.*	1005mb.*	31	14.0	15.0	10.8	31	7.9
	1000	31	140	213	70	31	13.6	19.6	9.6	31	7.4
	850	31	1499	1564	1410	31	8.1	19.5	—0.3	31	6.5
	700	31	3079	3188	2945	31	—0.4	6.5	—9.4	31	—18.2
	600	31	4292	4402	4120	31	—8.5	—1.8	—17.4	31	—25.8
	500	31	5680	5802	5460	31	—18.5	—13.0	—27.5	31	—32.1
	400	31	7304	7454	7025	31	—29.8	—25.1	—39.4	31	—42.9
	300	31	9298	9453	8969	31	—43.4	—37.1	—49.8	31	—55.7
	250	31	10506	10700	10206	31	—50.2	—41.4	—56.9	31	—51.7
	200	31	11953	12185	11724	31	—53.3	—44.7	—62.5	26	—65.1
	150	29	13791	14025	13554	29	—58.4	—53.0	—63.1	16	—67.5
	100	29	16302	16580	16085	29	—66.5	—60.1	—71.7	—	—
	70	20	18433	18615	18267	20	—67.5	—60.7	—78.3	—	—
	60	10	19378	19500	19240	10	—65.1	—60.8	—69.0	—	—
	50	9	20475	20595	20322	9	—63.1	—58.5	—66.5	—	—
	40	5	21974	22080	21810	5	—59.1	—56.0	—62.5	—	—
	30	5	23605	23768	23514	5	—55.3	—53.2	—57.5	—	—
	20	3	26254	26353	26111	3	—51.3	—51.0	—54.0	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 U.T.	Surface	—	999m.b.*	1008m.b.*	998m.b.*	31	14.1	23.0	11.0	31	04.5
	1000	29	147	203	160	12	11.7	14.4	09.0	12	05.7
	850	29	1496	1543	1415	29	09.3	20.6	—00.2	29	—05.9
	700	29	3086	3155	2958	29	09.7	07.9	—09.3	29	—15.0
	600	29	4305	4395	4150	29	—07.0	—02.8	—12.7	29	—22.4
	500	29	5703	5810	5518	29	—16.6	—12.7	—22.3	29	—29.6
	400	29	7347	7472	7132	29	—27.8	—22.7	—33.0	29	—38.5
	300	29	9357	9496	9125	29	—41.0	—35.0	—45.8	29	—51.5
	250	28	10590	10722	10381	28	—47.0	—39.2	—52.8	28	—56.9
	200	28	12056	12213	11869	28	—52.5	—46.0	—61.4	27	—61.9
	150	26	13891	14040	13701	26	—59.3	—55.3	—64.9	12	—66.5
	100	21	16385	16513	16222	21	—67.3	—63.7	—74.8	1	—70.7
	70	11	18535	18684	18404	11	—68.2	—60.2	—74.1	—	—
	60	7	19466	19660	19380	7	—68.0	—64.5	—72.2	—	—
	50	7	20531	20739	20440	7	—66.5	—62.8	—70.7	—	—
	40	6	21976	22240	21875	6	—63.8	—59.2	—71.4	—	—
	30	5	23689	23929	23566	5	—61.2	—58.7	—63.1	—	—
	20	2	26150	26198	26103	2	—59.0	—58.0	—60.0	—	—
	10	—	—	—	—	—	—	—	—	—	—
aswan 0000 U.T.	Surface	31	993m.b.*	1000m.b.*	985m.b.*	31	16.4	24.0	10.4	31	—2.1
	1000	31	132	193	58	—	—	—	—	—	—
	850	31	1516	1543	1478	31	13.6	21.8	3.4	31	—4.3
	700	31	3129	3160	3060	31	4.9	8.2	—0.7	30	—12.7
	600	31	4371	4406	4286	31	—2.6	0.3	—6.3	31	—18.1
	500	31	5795	5833	5699	31	—11.3	—8.3	—15.0	31	—25.8
	400	31	7473	7542	7363	29	—22.5	—19.0	—27.0	29	—34.1
	300	31	9528	9624	9431	31	—36.8	—29.3	—43.1	31	—34.2
	250	31	10771	10882	10647	31	—44.6	—40.7	—49.4	31	—54.5
	200	31	12229	12358	12097	31	—54.1	—51.0	—59.4	31	—62.6
	150	31	14039	14150	13907	31	—65.2	—59.8	—68.6	1	—68.2
	100	31	16437	16530	16323	31	—76.2	—69.6	—83.5	—	—
	70	22	18494	18579	18413	22	—75.8	—69.9	—81.9	—	—
	60	15	19447	19520	19330	15	—71.4	—68.0	—76.0	—	—
	50	15	20484	20588	20375	15	—76.6	—63.7	—70.8	—	—
	40	11	21923	22060	21540	11	—63.9	—60.1	—66.8	—	—
	30	11	23631	23887	23540	11	—56.8	—54.7	—58.7	—	—
	20	4	26284	26416	26209	4	—49.8	—46.0	—52.3	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = Number of observations of specified pressure surface.

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

UPPER AIR CLIMATOLOGICAL DATA

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

MARCH — 1978

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	*1013m.b.	*1021m.b.	*1005m.b.	31	18.0	23.0	11.8	31	7.3
	1000	31	140	206	70	31	16.9	21.7	11.0	31	5.4
	850	31	1501	1567	1420	31	8.0	19.7	0.6	31	—7.7
	700	31	3076	3146	2959	31	—0.4	6.5	—9.5	31	—15.7
	600	31	4298	4388	4146	31	—8.0	—4.0	—15.3	31	—26.5
	500	30	5688	5794	5499	30	—17.7	—14.0	—52.3	30	—34.9
	400	30	7321	7440	7080	30	—29.2	—23.5	—37.5	29	—44.1
	300	29	9319	9442	9040	29	—42.9	—37.9	—46.0	28	—56.1
	250	27	10540	10654	10288	27	—47.6	—39.6	—55.0	27	—57.9
	200	27	11993	12122	11821	27	—52.7	—42.3	—60.0	26	—65.2
	150	26	13823	13928	13703	26	—58.1	—52.0	—64.2	15	—68.2
	100	25	16345	16468	16241	24	—64.6	—53.0	—74.8	—	—
	70	23	18518	18726	18341	23	—65.1	—58.9	—70.1	—	—
	60	16	19492	19650	19350	16	—63.1	—57.0	—67.5	—	—
	50	15	20597	20783	20431	15	—61.2	—55.0	—69.8	—	—
	40	6	22075	22260	22020	6	—57.2	—54.0	—61.2	—	—
	30	6	23823	24063	23695	6	—53.5	—50.1	—58.7	—	—
	20	2	26373	26447	26299	2	—47.6	—45.1	—50.0	—	—
	10	1	30909	—	—	1	—34.5	—	—	—	—
Helwan 1200 U.T.	Surface	31	*998m.b.	*1005m.b.	*989m.b.	31	22.7	23.6	13.5	31	2.8
	1000	28	129	194	047	12	20.6	27.6	16.7	12	—
	850	28	1508	1561	1407	27	10.1	20.2	0.6	27	3.0
	700	28	3102	3161	2946	28	1.6	8.6	—6.3	28	—60.0
	600	26	4326	4435	4137	26	—5.6	—1.4	—13.9	26	—16.4
	500	26	5734	5853	5499	26	—14.5	—11.0	—23.1	26	—23.5
	400	26	7390	7520	7103	26	—26.1	—20.5	—63.4	26	—30.9
	300	26	9426	9561	9125	26	—38.1	—30.0	—44.2	26	—40.4
	250	26	10662	10791	10400	26	—44.7	—32.9	—94.7	26	—51.3
	200	25	12146	12344	11927	25	—48.8	—44.2	—53.7	25	—56.5
	150	24	13991	14176	13357	24	—55.1	—49.2	—60.6	22	—60.4
	100	23	16564	16708	16387	23	—61.2	—55.1	—69.3	5	—65.2
	70	16	18811	19197	18687	16	—60.4	—54.7	—68.0	—	—70.2
	60	10	19793	19950	19640	10	—55.8	—52.9	—62.7	—	—
	50	10	20911	21006	20782	10	—57.1	—53.9	—63.2	—	—
	40	5	22452	23550	22380	5	—48.1	—43.4	—50.8	—	—
	30	5	24263	24356	24182	5	—42.9	—37.6	—48.2	—	—
	20	2	26956	26967	26944	2	—42.0	—40.4	—43.5	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan 1200 U.T.	Surface	31	*992m.b.	*999m.b.	*986m.b.	31	26.1	35.1	22.6	31	2.2
	1000	31	123	184	65	—	—	—	—	—	—
	850	31	1534	1567	1483	31	16.1	23.0	8.7	31	—3.6
	700	31	3157	3202	3073	31	7.0	12.0	1.8	31	—16.0
	600	31	4410	4468	4321	31	0.2	2.7	—3.4	31	—21.5
	500	31	5848	5920	5744	31	—9.2	—4.5	—12.0	31	—27.2
	400	31	7539	7626	7435	31	—20.7	—13.9	—26.0	31	—36.0
	300	30	9615	9725	9527	30	—34.7	—28.0	—39.9	30	—47.9
	250	28	10865	10997	10767	28	—43.0	—38.3	—47.0	28	—55.9
	200	28	12355	12479	12226	28	—52.4	—49.3	—55.7	28	—63.1
	150	28	14157	14301	14053	28	—63.4	—60.0	—66.8	1	—70.9
	100	28	16540	16700	16492	28	—74.3	—68.8	—79.7	—	—
	70	28	18648	18780	18555	28	—73.8	—67.8	—78.2	—	—
	60	25	19567	19720	19280	25	—70.5	—63.7	—72.8	—	—
	50	25	20642	20787	20550	25	—66.2	—55.4	—72.2	—	—
	40	14	22146	22520	22000	14	—59.4	—53.9	—62.2	—	—
	30	13	23854	24007	23710	13	—52.6	—47.8	—56.5	—	—
	20	6	26535	26627	26432	5	—47.9	—47.5	—48.4	—	—
	10	—	—	—	—	—	—	—	—	—	—

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

* = The atmospheric pressuree 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 — 1978

	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
1200 U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh (A)	2984 (31)	711 (31)	—17.4 (31)	3900	637	—22.0	1530	840	—2.3	11517 (23)	223 (23)	—55.6 (22)	17420	85	—73.1	7450	380	—40.1	12750	175	210	150
	Helwan	3248 (26)	690 (26)	—15.4 (26)	4200	614	—26.8	1510	840	2.7	12120 (23)	207 (23)	—52.7 (23)	16627	100	—63.5	8440	332	—34.4	8515	347	300	150
	Aswan . . . (A)	4355 (31)	605 (31)	—21.4 (31)	4860	572	—12.5	3780	643	—17.6	16903 (26)	93 (26)	—75.6 (26)	18720	69	—78.5	14500	142	—69.8	7680	381	240	146
0000 U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh (A)	2784 (31)	731 (31)	—13.2 (31)	4140	617	—30.4	1450	855	—3.8	11590 (28)	216 (28)	—56.1 (28)	18200	74	—66.5	7770	230	—39.6	8868	330	235	150
	Helwan	2998 (29)	711 (29)	—13.7 (29)	4060	625	—15.0	1230	881	—0.2	11553 (19)	226 (19)	—53.5 (19)	15900	111	—68.3	7760	367	—36.3	10260	256	300	150
	Aswan . . . (A)	3974 (31)	632 (31)	—16.3 (31)	4470	597	—13.8	2960	711	—10.4	16716 (37)	97 (27)	—77.4 (27)	18240	75	—78.4	15420	119	—73.7	11950	207	260	140

N — The number of cases the element has been dur observeding 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 MAACH — 1977

Station	Pressure Surface (Millibar)	Wind within 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		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)			
0000 U.T.	Surface	0	—	0	—	0	—	1	10	4	9	6	7	1	7	2	12	5	12	2	16	6	14	4	10	0	31	11
	1000	1	6	0	—	0	—	2	12	7	17	0	—	1	7	4	19	3	20	4	17	5	24	3	8	0	30	17
	850	1	15	0	—	1	13	0	—	1	5	3	23	2	11	3	29	7	20	9	19	1	26	2	16	0	30	19
	700	0	—	0	—	0	—	0	—	0	—	0	—	3	23	7	31	6	27	8	29	6	25	0	—	0	30	29
	600	0	—	0	—	0	—	0	—	0	—	0	—	2	20	5	42	10	29	11	34	2	43	0	—	0	30	33
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	63	10	44	12	40	3	45	0	—	0	29	45
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	54	8	39	14	55	1	89	0	—	0	27	52
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	70	9	58	8	73	2	77	0	—	0	21	67
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	89	8	88	6	77	1	85	0	—	0	17	84
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	77	7	106	1	100	0	—	0	—	0	9	102
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	84	0	—	0	—	0	—	0	2	84
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	2	6	4	9	0	—	3	15	2	13	0	—	0	—	0	—	3	11	3	23	8	19	6	12	0	31	14
	1000	1	4	2	6	2	10	4	16	0	—	0	—	0	—	1	33	3	20	3	27	12	19	2	12	0	30	17
	850	0	—	1	2	0	—	0	—	1	16	0	—	3	28	5	18	6	20	11	26	2	12	2	12	0	31	21
	700	0	—	0	—	0	—	0	—	1	27	0	—	0	—	6	37	9	26	10	32	4	19	1	23	0	31	29
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	30	15	45	7	43	6	26	0	—	0	31	39
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	26	14	47	7	51	6	31	0	—	0	27	43
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	28	13	58	10	57	0	—	0	—	0	29	55
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	14	9	79	4	78	1	28	0	—	0	16	71
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	70	7	92	6	75	0	—	0	—	0	15	83
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	130	4	114	1	89	0	—	0	—	0	6	113
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	90	2	89	1	73	0	—	0	—	0	4	85
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	41	0	—	0	—	0	—	0	1	41
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	—	—	—	—	0	—	0	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the element has been observed within 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, NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

HELWAN — MARCH 1978

	Pressure surface (millibar)	Wind within 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 T.U.	Surface	2	06	8	08	2	12	4	06	2	05	0	—	3	06	0	—	1	04	3	06	1	04	2	06	3	28	06
	1000	0	—	4	10	3	12	0	—	0	—	0	—	0	—	0	—	0	—	3	06	1	04	1	04	0	12	09
	850	2	05	3	15	2	16	0	—	0	—	1	16	0	—	1	15	5	19	5	18	3	28	7	15	0	29	17
	700	4	14	1	12	0	—	0	—	0	—	0	—	1	02	2	23	5	39	2	15	8	31	6	26	0	29	25
	600	4	17	0	—	0	—	0	—	0	—	0	—	0	—	1	20	3	53	5	41	9	36	6	32	0	28	35
	500	1	26	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	23	2	34	12	51	9	31	0	25	40
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	53	2	51	17	61	1	47	0	22	59
	300	0	—	0	—	0	—	0	—	0	—	0	—	0		0	—	1	37	3	86	11	87	3	91	0	18	85
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	64	3	88	8	110	2	109	0	14	102
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0		1	120	5	132	0	—	0	06	130
	150	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 T.U.	Surface	4	06	1	08	0	—	1	07	0	—	0	—	1	10	6	09	7	10	8	08	3	07	0	—	0	31	8
	1000	0	—	3	09	1	15	1	07	0	—	0	—	0	—	0	—	2	04	1	08	4	06	0	—	0	12	8
	850	3	11	0	—	5	11	0	—	1	12	0	—	0	—	3	12	3	25	4	16	5	17	4	10	0	28	14
	700	2	24	1	10	1	07	0	—	1	27	0	—	0	—	3	18	4	32	4	30	8	29	3	22	0	27	25
	600	2	30	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	47	4	25	11	34	5	34	0	26	35
	500	1	60	0	—	0	—	0	—	0	—	0	—	0	—	1	50	2	48	5	43	9	30	6	46	0	24	41
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	81	3	57	5	54	10	55	4	55	0	23	56
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	83	5	75	8	91	2	57	0	17	81
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	87	5	82	6	104	0	—	0	13	93
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	108	3	117	4	94	0	—	0	9	105
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	91	0	—	2	114	0	—	0	3	106
	100	0	—	0	—	0	—	0	—	0	—		—	0	—	0	—	0	—	0	—	1	104	0	—	0	1	104
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N= The number of cases the wind has been observed within 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. NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

ASWAN MARCH — 1978

Time	Pressure Surfase Millibar	Wind within specided 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	14	11	5	10	3	12	1	12	0	—	0	—	0	—	0	—	0	—	0	—	3	9	5	10	0	31	11
	1000	1	10	0	—	0	—	—	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	10
	850	4	16	7	11	5	12	0	—	0	—	0	—	0	—	1	26	0	—	4	18	7	12	4	11	0	31	13
	700	2	14	0	—	0	—	0	—	1	17	0	—	0	—	1	14	2	15	7	24	12	18	3	16	0	30	18
	600	0	—	0	—	1	11	0	—	0	—	0	—	0	—	2	13	4	34	16	29	7	17	1	22	0	30	25
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	10	48	14	40	5	26	0	—	0	30	40
	400	0	—	0	—	1	43	0	—	0	—	0	—	0	—	0	—	13	66	15	57	2	26	0	—	0	30	61
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	11	83	15	79	4	80	0	—	0	30	80
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	11	87	14	95	4	93	0	—	0	29	92
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	96	13	89	3	95	0	—	0	22	96
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	71	9	80	0	—	0	—	0	11	79
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	52	5	48	0	—	0	—	0	7	49
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	20	1	15	0	—	0	—	0	3	19
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	20	0	—	0	—	1	21	0	—	0	1	20
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	17	0	—	0	1	21
	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	—	0	—	0	—	0	—	0	—	0	1	17
	30	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	—
	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	17	10	4	11	0	—	0	—	0	—	0	—	1	8	0	—	1	8	1	20	4	11	2	10	1	31	10
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	5	17	4	11	1	3	3	9	0	—	0	—	0	—	0	—	1	10	3	12	10	14	4	14	0	31	13
	700	0	—	2	10	1	10	0	—	1	3	0	—	0	—	1	14	4	29	12	20	5	17	5	15	0	31	18
	600	0	—	0	—	0	—	0	—	1	11	0	—	0	—	1	17	8	35	39	22	6	21	2	14	0	31	24
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	52	20	39	4	31	0	—	0	31	42
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	10	71	18	60	0	—	0	—	0	30	64
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	85	21	78	3	57	0	—	0	27	75
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	103	19	92	2	195	0	—	0	26	94
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	125	10	95	1	105	0	—	0	22	98
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	78	5	44	0	—	0	—	0	16	82
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	22	2	38	3	40	0	—	0	—	0	8	40
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	3	40
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	6	1	16	0	—	0	1	16
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	2	0	—	0	—	0	1	6
	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	0	2
	30	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	19	0	—	0	—	0	—	0	1	19
	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	0	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the wind has been observed within the range of direction 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

MERSA MATRUH — MARCH 1978

The mean monthly air temp; was below normal, and the mean monthly rel, humidity was above normal. The total monthly rainfall was 25.7mm. which is higher than normal by 14.0 mm.

Weather was generally cold most days of the month. the lowest max. temp 14.6° on the 13*th*. The lowest min. Temp. was 6.0°C on the 15*th*.

The month was intervend by four light warm spells on the 3*rd*, (6*th* - 8*th*), 22*rd* & 25*th*. The highest max. temp. was 24.5°C on the 25*th*.

The mean monthly sunshine duration was higher than normal by 0.9 hour. The mean monthly wind speed at 1.5 met. height was slightly below normal.

The highest max. soil temps. were lower than the corresponding values of March 1977 at all depths with departures batween 1.5°C & 1.3°C.

The lowest min. soil temp. were higher the March 1977 at depths between -2 & 50 cm. with departures between2.4°C (at 10cm.) & 1.0°C (at both 20 & 50).

TAHRIR - MARCH 1978

The mean monthly air Temp. and humidity were slightly below normal. The total monthly rainfall was only 1.0mm. which is lower thas normal by 1.8 mm.

The first third of the month was characterized by two khamsin heat waves. The second were gave rise to be highest max. temp. (34.8°C) on the 8*th*.

In the rest of the month temp. were below normal report from shortwarm spell on the 20*th*.

The lowest max. temp. was 18.5°C on the 12*th* Min temp. at 5 cm. above the grass tield fell below 0°C (-0.6°C) on the 16*th*.

The mean monthly sunshine duration was slightly above normal. The mean monthly wind speed at 1.S met. height and pour evaporation were slightly below normal.

The highest max. soil Temp. were lower thannormal at depths below 2 & 20 cm. with departures below 3.3°C at 2 cm. & 0.1°C at 20 cm: higher than normal at 50cm & 100 cm. by 0.S°C & 0.3°C.

The lowest min. soil. temp. wete higher than normal at all depths except there at 5 cm & 10cm which were lower than normal; the departures variedbetween 0,2°C & 1.0°C.

BAHTIM — MARCH 1978

The mean monthly air temp. and rel. humidity were nearly the same as normal. The total monthly rainfall was 2.6 mm which is nearly the same as normal.

The first third of the month was characterized by two heat waves in the periods (1*st*-4*th*) & (7*th*-9*th*). The second wave the highest max. temp. (33.8°C) on the 9 *th*.

In the rest of the month max. temps. were below normal apart from a short warm spell on the 20th. The lowest max. temp. was 15.8°C (on the 12*th*).

It is worthly mention that min. temps. at 5cm above both the dry & grass fields fell beloy 0°C on the 15*th*, 16*th*, 17*th* & 18*th*. Its values in there days are as follows :

Date	Min. at 5cm. above the dry field	Min. at 5cm. above the grass field
15	—0 2	—1 0
16	—1 2	—2 0
17	—0 9	—1 2
18	—0 6	—1.0

The highest max. soil temp. were higher than normal at 2 & 50 & 100 cm depths with departures between 0.8°C & 0.1°C; lower than normal at5 & 10 & 20 cm. depths with departures below 1.6°C & 0.4°C.

The lowest min. soil temp. were higher than normal by 0.3°C; the dpartures varied below 2.5°C at 2cm & 0.2°C at 100cm.

ASSYOUT — MARCH 1978

The mean monthly air temp. was higher than the corresponding value of March 1977,, while the mean mosthly rel. humidity was lower.

The first third of the month was characterized by two heat weves in the periods (1*st* - 4*th*) & (7th - 10th). The first wave gave the highest max temp, (33.0°C) on the 2*nd*.

In the rest of the month max. temp. yere below normal apart from a warm spell in the period (18*th* - 20*th*). The lowest max. temp. was 19.8°C reported on the 12th Min air temp. at 5cm above soil fell below 0°C on the 16th, 19th & 20th when its values were respectively —0.8°C, —1.4°C & —0.2°C.

The mean monthly actual sunshine duration was lower than March 1977 by 0.6 hour. The mean monthly pan evaporation was higher than March 1977 by 1.58m.

The highest max. soil temp. were higher than March 1977 at 2 & 10 cm. depths by 1.2°C & 2.2°C respectively ; lower at 5,20cm. depths with departures below 0.5°C & 1.3°C : the some as March 1977 at 100 cm. depths.

The lowest min. soil temp. were higher than March 1977 at all depths except at 50 cm where its was the same as March 1977 ; the departures varied below 5.0°C at 2 cm & 0.1°C at 100 cm.

KHARGA — MARCH 1978

The mean monthly air temp. and relative humidity were nearly the same as normal.

Two heat waves prevailed, during the first third of the month. The first wave gave the highest max. temp. (37.0°C) on the 3rd.

In the rest of the month, max. temps. were generally below normal apart from three warm spells in the periods (19th & 20th), 26th & 28th. The mean monthly actual sunshine duration wind speed at 1.5 met. height and pan evaporation were lower than normal by 0.° hour, 1.3 met./sec. & 2.21mm respectively.

The highest max. soil temp. were higher than normal at depths below 2 & 20 cm. with departures below 3.1°C at 10 cm. & 0.6°C at 20 cm ; lower than normal at 50 & 100 cm by 1.2°C & 0.3°C respect.

The lowest min. soil temp. were higher than normal at 2 & 5 & 100 cm depths with depart. below 1.0°C & 0.1°C ; lower than normal at 10 cm by 0.8°C ; the same as normal at 20 & 50 cm depths.

Table C 1.—AIR TEMPERATURE AT 1½ METRES ABOVE GROUND

MARCH — 1978

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°
Mersa Matruh. .	18.7	10.2	14.5	12.8	15.3	24.0	24.0	24.0	21.9	9.8	1.3	0.0	0.0	0.0	0.0	0.0
Tahrir	24.7	7.9	15.9	12.0	19.8	24.0	24.0	23.5	20.1	12.1	5.3	1.5	0.7	0.0	0.0	0.0
Bahtim	23.7	7.7	15.6	11.6	19.7	24.0	24.0	23.5	12.3	11.1	5.3	1.5	0.6	0.0	0.0	0.0
Assiut	26.2	8.6	17.0	13.0	21.1	24.0	24.0	24.0	20.6	13.1	7.9	2.2	0.5	0.0	0.0	0.0
kharga	29.2	10.4	20.2	16.2	24.1	24.0	24.0	24.0	22.0	18.0	12.0	6.0	2.0	0.3	0.0	0.0

Table C 2.—EXTREME VALUES OF AIR TEMPERATURE AT 1½ METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS.

MARCH — 1978

Station	Max. Temp. at 1½ metres (°C)				Min. Temp. at 1½ 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
M. Matruh . . .	24.5	25	14.6	13	14.0	3	6.0	15	2.8	15	—	—
Tahrir	34.8	8	18.5	12	12.3	23	2.9	16	1.2	15,17	—0.6	16
Bahtim	33.8	9	15.8	12	12.7	10	2.6	16	— 1.2	16	—2.0	16
Assiut	33.0	2	19.8	12	15.8	10	4.4	15	— 1.4	19	—	—
Kharga	37.0	3	21.7	12	17.2	11	6.0	15	3.6	15	—	—

Table C 3.—(SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 1½ METRES ABOVE GROUND, EVAPORATION & RAINFALL.

MARCH — 1978

Station	solars + 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	%	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
M. Matruh . .	407.1	272.1	370.9	73	68	56	18	3	8.4	8.7	13.6	1	3.7	3	8.2	—	25.7	14.2	11
Tahrir . . .	466.4	273.5	371.4	74	50	38	11	8	7.6	7.6	13.9	2	2.9	22	6.0	6.37	1.0	0.5	12
Bahtim	472.6	270.0	371.4	73	64	40	13	9	8.0	7.9	13.1	2	4.0	9	5.7	6.02	2.6	1.2	12
Asiut	—	312.6	317.7	84	49	30	9	18	6.8	6.9	12.6	3	2.6	18	6.5	7.03	0.0	0.0	—
Kharga	579.3	300.2	371.8	81	31	21	5	10	5.2	5.7	9.2	7	1.5	9,10	10.7	9.78	0.0	0.0	—

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

MARCH — 1978

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.)							
		2	5	10	20	50	100	200	300	2	5	10	20	50	100	200	300
Mersa Matruh.	H	28.1	26.6	23.0	19.4	17.7	17.5	18.5	—	—	—	—	—	—	—	—	—
	L	8.5	8.8	11.4	12.8	15.4	16.3	17.5	—	—	—	—	—	—	—	—	—
Tahrir . . .	H	37.1	32.2	28.9	25.0	22.3	20.6	20 7	21.4	24.7	23.3	21.6	19.2	19.1	18.5	19.0	—
	L	10.9	10.5	12.0	15.0	17.8	18.7	19.7	20.9	10.8	11.0	12 0	14.4	16.1	16.4	17.7	—
Bahtim . . .	H	41.7	30.8	25.2	22.2	21.3	20.9	22.0	22.8	32.9	24.2	21.0	19.2	19.1	18.7	19.5	—
	L	13.1	11.6	14.3	17.0	19 2	19.6	21.8	22.4	11.3	11.5	12.9	15.5	17.2	17.7	19.2	—
Asuit.	H	51.9	37.5	33.5	24.4	22.2	21.8	21.8	23.4	—	—	—	—	—	—	—	—
	L	14.2	13.4	14.1	19.4	20.2	20.6	21.5	23.0	—	—	—	—	—	—	—	—
Kharga . . .	L	48.5	41.5	35.9	28.6	24.5	24.4	25.2	27.5	—	—	—	—	—	—	—	—
	H	8.8	11.5	14.5	19.6	22.3	23.2	23.2	26.5	—	—	—	—	—	—	—	—

TABLE C 5.—SURFACE WIND

MARCH — 1978

STATION	Wind Speed m/sec (at 1½ metres)			Days with surface wind speed (at 10 metres)							Max. Gust (knots) (at 10 metre)	
	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
Mersa. Matruh	4.1	3.2	4.7	29	22	15	7	3	1	1	47	23
Tahrir . . .	2.4	1.5	3.3	30	20	7	4	1	0	0	41	13
Bahtim . . .	2.3	1.5	3.0	27	19	13	5	4	0	0	39	13
Asuit. . . .	—	—	—	—	—	—	—	—	—	—	—	—
Kharga . . .	2.1	1.4	2.9	26	12	5	1	0	0	0	30	12,16

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THE EGYPTIAN METEOROLOGICAL AUTHORITY
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL AUTHORITY OF THE ARAB REPUBLIC OF EGYPT—CAIRO

In fulfilment of its duties, the Egyptian Meteorological Authority issues several reports and publications on weather, climate and agro-meteorology. The principal publications are described on this page.

Orders for publications should be addressed to :

"Chairman of the Board of Directors, Meteorological Authority, Kubri-el-Qubbeh — CAIRO.

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 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 the Meteorological Authority.

TECHNICAL NOTES

As from October 1970, the Meteorological Authority 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 ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 21 NUMBER 4

APRIL 1978

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THE EGYPTIAN METEOROLOGICAL AUTHORITY
CAIRO

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GENERAL SUMMARY OF WEATHER CONDITIONS

APRIL 1978

Changeable weather characterized by five variant khamsin waves, generally short.

PRESSURE DISTRIBUTION

The atmospheric pressure was mainly influenced by the frequent formation of secondary depression which moved along the coast of North Africa and passed rapidly through North Egypt & East Mediterranean on the *2nd, 4th, 9th, 16th. 21st, 23rd* and *27th.*

In the rear of these secondary depresions, weak high pressure established over East Mediterranean & the cestern Desert.

The mean monthly atmospheric pressure was generally around normal.

SURFACE WIND

Surface winds blow mostly from NE to NW directions, generally light to mederate.

In association with the knamsin heat waves surface winds were generally SW ly & Wly, moderate to fresh and strong at times.

TEMPERATURE

This month was intervened by five Khamsin heat waves of variant intensity and short duration with their peaks round the *4th, 8th, 16th, 23rd* & *27th.*

Apart from the Khamsin heat waves, weather was mild with subnormal temperatures.

The departures of maximum temperatures from normal were moderate to large.

Minimum temperatures showed frequent departures below and above normal, slight to moderate.

The highest and lowest maximum temperatures were respectively 44.0°C at Kharga on the *4th* and 17.6°C at Sallum on the *20th.*

The highest and lowest minimum temperatures were respectively 25.0°C at Aswan on the *10th* and 7.4°C at Dakhla on the*7th.*

PRECIPITATION

Precipitation was confined to light rain (3.2 mm) over Mersa Matruh on the *16th.*

OTHER WEATHER PHENOMENA

Rising sand was reported in scattered places by the break down of Khamsin heat deat waves.

Early morning mist developed during days over scattered places in Lower Egypt & Cairo.

Cairo December 1981

Chairman (M. ALI BADRAN)

Board of Directors.

SURFACE DATA

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

APRIL 1978

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	1012.9	—1.2	25.2	1.5	14.1	0.5	19.6	19.7	1.0	13.6	—0.1	54	—5	—	—	—	7.2
Mersa Matruh. (A)	1013.7	—0.7	23.1	0.5	12.0	—0.1	17.5	17.4	—0.1	13.1	—0.4	65	1	277.3	388.3	71	7.4
Alexandria (A)	1013.8	—0.8	25.0	1.0	12.9	—0.6	18.9	18.4	0.0	14.7	0.1	68	3	281.1	388.1	72	4.5
Port Said. (A)	1013.5	—0.3	22.6	0.0	16.7	0.7	19.6	19.0	0.3	15.3	—0.2	66	—4	280.8	375.3	75	6.0
El Arish.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo. (A)	1013.1	—0.4	28.9	0.6	15.0	0.9	21.9	21.6	0.7	14.2	—0.2	44	—1	—	—	—	15.2
Fayoum.	—	—	31.0	1.1	12.8	0.6	21.9	21.3	0.1	14.7	0.5	50	9	—	—	—	7.8
Minya. (A)	1012.7	—0.3	31.6	1.0	12.4	0.4	22.0	21.9	0.7	14.2	0.3	43	2	294.0	385.1	76	11.6
Assyout. (A)	1012.3	0.1	31.5	0.2	14.3	—0.8	22.9	23.2	—0.2	12.5	—0.9	24	—1	—	—	—	15.1
Luxor. (A)	1010.7	0.0	36.0	1.3	16.1	0.6	26.0	26.2	—0.7	15.5	0.5	29	2	—	—	—	9.6
Aswan. (A)	1010.0	—0.5	36.8	1.4	19.6	1.4	28.2	28.0	—1.4	14.6	1.1	16	—4	273.3	381.5	72	19.4
Siwa	1012.4	—1.5	30.3	0.4	13.8	1.1	22.0	22.2	1.0	13.7	0.6	37	—4	269.7	386.3	70	12.6
Bahariya.	1012.4	—1.0	31.2	0.8	14.2	1.2	22.7	23.0	1.4	13.3	—0.1	31	—10	—	—	—	11.5
Farafra.	1013.9	—0.2	32.3	1.2	14.3	1.4	23.3	23.2	1.2	13.5	1.0	29	2	—	—	—	15.6
Dakhla.	1013.3	0.4	34.2	1.9	13.6	—0.2	23.9	24.0	0.8	13.2	0.1	25	—1	—	—	—	15.9
Kharga.	1011.1	1.5	35.5	2.1	17.0	1.4	26.3	26.8	2.0	15.5	2.2	31	6	293.7	382.8	77	14.9
Tor.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada.	1011.2	—0.1	27.6	1.1	17.7	1.6	22.6	23.1	1.2	14.8	—0.9	36	—15	329.7	384.4	86	15.2
Quseir	1010.8	—0.3	27.7	0.7	20.2	0.9	23.9	24.1	—0.8	16.5	—0.1	43	—7	—	—	—	9.3

Table A 2.—MAXIMUM & MINIMUM AIR TEMPERATURE

APRIL — 1978

tion name	Maximum Temperature									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	40.2	8	17 6	3	09	04	03	01	00	12.5	—	21.0	08	10.6	22	00	00	00	00
Mersa Matruh (A)	36.5	8	18.6	16	08	04	01	00	00	10.5	—	16.1	27	08.0	3	04	00	00	00
Alexandria (A)	38.3	8	20.7	25	11	04	02	00	00	11.2	—	16.2	09	10.2	20	00	00	00	00
Port Said (A)	34.5	4	18.7	6	05	01	00	00	00	16.3	—	19.2	16	14.6	6	00	00	00	00
Arish	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo (A)	38.9	4	23.4	24	21	31	03	00	00	—	—	20.1	16	11.4	6	00	00	00	00
Fayoum	37.5	4,27	24.8	24	29	17	05	00	00	10.1	—	17.4	09	09.4	1	01	00	00	00
Minya (A)	40.0	4	26 0	18	30	17	04	01	00	10.2	—	17.8	16	09.0	7,11	05	00	00	00
Assyout (A)	40.9	4	25.1	24	30	18	06	01	00	13 4	—	20.8	04	09.2	7	01	00	00	00
Luxor (A)	43.2	4	30.4	24	30	30	17	02	00	11.1	—	21.5	05	08.4	1	01	00	00	00
Aswan (A)	42.8	9	30.2	25	30	30	21	04	00	—	—	25.0	10	12.0	1	00	00	00	00
Siwa	41.8	8	23.6	21	26	13	05	01	00	12.0	—	20.5	30	08.4	3	03	00	00	00
Bahariya	39.6	27	24.3	24	29	16	05	00	00	13 5	—	22.1	09	10.0	6,25	00	00	00	00
Farafra	40.0	8	25.2	24	30	18	06	00	00	12.8	—	23.0	09	08.6	6	03	00	00	00
Dakhla	42 9	4	28.1	19	30	27	12	02	00	13.6	—	21.0	04	07.4	7	05	00	00	00
Kharga	44.0	4	28.5	19	30	27	15	06	00	14.9	—	23.8	16	08.7	1	01	00	00	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Harghada	31.3	15	24.6	1	25	06	00	00	00	—	—	22.2	17	12.2	1	00	00	00	00
Quseir	31.2	42	24.5	25	28	03	00	00	00	17.3	—	24.0	28	15.7	1	00	00	00	00

Table A 3.—SKY COVER AND RAINFALL

APRIL — 1978

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	1.8	2.5	2.9	2.5	2.5	5.8	6.0	5.8	15	00	01	01	01	00	00	00
Mersa Matruh (A)	1.6	4.2	2.3	2.3	2.8	3.2	0.9	3.2	16	01	01	01	00	00	00	00
Alexandria . . (A)	1.4	3.1	4.6	2.8	2.9	TR	—	TR	16,24	02	00	00	00	00	00	00
Port Said . . (A)	2.4	2.7	2.4	1.7	2.3	4.2	1.7	3.2	24	00	02	02	00	00	00	00
El Arish	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo . . . . (A)	0.8	2.7	2.7	1.2	1.8	TR	—	TR	16	00	00	00	00	00	00	00
Fayoum	—	2.7	2.6	1.0	—	0.0	0.5	—	—	01	00	02	00	00	00	00
Minya	0.4	2.0	2.7	1.8	1.7	0.0	0.2	—	—	00	00	00	00	00	00	00
Assyout . . . (A)	0.9	2.2	2.6	2.2	1.8	0.0	0.4	—	—	00	00	00	00	00	00	00
Luxor . . . . (A)	1.5	2.2	2.4	2.1	2.1	0.0	0.0	—	—	00	00	00	00	00	00	00
Aswan . . . . (A)	0.2	1.2	1.5	0.9	0.9	0.0	0.7	—	—	00	00	00	00	00	00	00
Siwa	1.3	2.1	1.8	2.2	1.9	0.0	0.7	—	—	00	00	00	00	00	00	00
Bahariya	0.9	1.8	2.1	1.6	1.5	TR	—	TR	15,16	02	00	00	00	00	00	00
Farafra	—	1.8	1.6	1.2	—	TR	—	TR	16	01	00	00	00	00	00	00
Dakhla	0.3	0.9	1.3	0.8	0.9	0.0	0.2	—	—	00	00	00	00	00	00	00
Kharga	0.6	1.5	2.2	1.1	1.4	0.0	0.1	—	—	00	00	00	00	00	00	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	0.8	2.3	2.3	2.2	1.9	0.0	0.1	—	—	00	00	00	00	00	00	00
Quseir	1.3	2·1	2.3	2.0	1.9	0.0	0.1	—	—	00	00	00	00	00	00	00

Table A 4.—DAYES OF OCCURRENCE OF MISCCLLANEOUS WEATHER PHENOMENA

APRIL — 1978

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											
Sallum	01	00	00	00	00	00	03	09	00	00	00	12	02
Mersa Matruh (A)	01	00	00	00	05	00	03	09	00	01	00	10	02
Alexandria . (A)	00	00	00	00	01	02	01	05	00	00	00	08	01
Port Said . (A)	02	00	00	01	00	00	02	06	00	00	00	11	01
El Arish	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo . . . . (A)	00	00	00	00	05	02	08	09	00	00	00	17	00
Fayoum	00	00	00	00	00	00	02	03	00	01	00	19	00
Minya . . . . (A)	00	00	00	00	03	00	05	07	00	01	00	20	01
Assyout. . . . (A)	00	00	00	00	00	00	00	12	00	02	01	19	00
Luxor . . . . (A)	00	00	00	00	00	00	22	11	00	00	00	16	02
Aswan . . . . (A)	00	00	00	00	00	00	04	15	00	00	00	23	00
Siwa	00	00	00	00	00	00	05	10	00	00	00	20	02
Bahariya	00	00	00	00	00	00	00	07	00	00	00	18	00
Farafra	00	00	00	00	00	00	04	06	00	00	00	16	02
Dakhla	00	00	00	00	00	00	01	07	00	00	00	26	00
Kharga	00	00	00	00	00	00	01	12	00	01	00	22	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	00	00	00	00	00	00	00	09	00	01	00	18	01
Quseir	00	00	00	00	00	00	00	02	00	00	00	17	00

Table A5—NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

APIRL — 1978

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 direction
					345 / 014	015 / 044	045 / 074	075 / 10	10[illegible] / 13	13[illegible] / 16[illegible]	165 / 194	195 / 224	225 / 255	255 / 284	285 / 314	315 / 341	
Sallum	39	03	00	1—10	26	42	77	[illegible]	62	32	20	18	14	31	72	55	715
				11—27	01	[illegible]	03	01	01	04	00	25	08	16	53	4[illegible]	164
				28—47	00	00	00	00	00	00	00	00	00	00	00	03	00
				≥48	00	00	00	00	00	0	00	00	00	00	00	00	00
				All speeds	27	48	80	66	63	36	26	43	22	47	125	95	678
Mersa Matruh	14	02	00	1—10	32	28	22	53	78	27	21	27	56	30	62	32	470
				11—27	00	08	14	36	15	05	2[illegible]	00	05	20	79	18	234
				28—47	00	00	00	00	00	00	02	00	00	00	00	00	02
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	32	36	36	91	93	35	46	33	61	50	141	50	704
Alexandria	02	00	00	1—10	41	55	31	41	74	33	22	14	07	13	51	73	455
				11—27	24	13	21	19	05	02	00	10	15	17	82	48	263
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	65	68	52	60	80	[illegible]	26	24	22	30	133	121	718
Cairo. A. P.	11	09	00	1—10	51	88	46	34	18	05	0[illegible]	12	18	54	70	63	475
				11—27	21	45	13	17	08	07	2[illegible]	20	10	25	18	17	233
				28—47	00	00	00	00	00	00	0[illegible]	01	00	00	00	00	01
				≥48	00	00	00	00	00	00	0[illegible]	00	00	00	00	00	00
				All speeds	72	133	59	51	26	12	[illegible]	[illegible]	28	79	88	80	700
El Fayoum	04	06	00	1—10	129	220	79	23	14	16	2[illegible]	22	32	18	63	17	655
				11—27	04	15	12	00	00	00	00	00	08	09	02	02	61
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	133	235	91	23	14	[illegible]	[illegible]	[illegible]	40	27	36	19	710
El Minia	15	00	00	1—10	281	46	05	04	02	00	24	02	10	08	12	72	542
				11—27	92	27	00	00	00	01	00	03	05	03	05	14	162
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	373	73	05	04	02	70	30	12	15	16	18	86	704
Assuit	03	00	00	1—10	70	50	12	11	09	26	20	33	30	18	34	85	398
				11—27	117	66	01	00	00	06	03	18	10	03	20	71	315
				28—48	00	01	00	00	00	00	00	00	03	00	00	00	04
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	187	117	13	11	09	32	23	51	43	21	54	155	717
Luxor	00	00	00	1—10	69	59	48	37	21	21	68	38	20	62	74	170	678
				11—27	00	03	00	00	00	00	04	01	01	00	08	16	33
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	69	62	48	37	21	21	72	39	21	62	82	186	720

Table A5— NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

APRIL — 1978

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	number in hours of occurrences 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
Aswan	02	02	00	1—10	217	62	10	09	09	13	23	12	09	14	14	54	448
				11—27	201	13	00	00	00	00	01	00	00	01	13	40	269
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	418	57	10	09	09	13	24	12	09	15	27	94	715
Siwa	17	01	00	1—10	44	60	53	71	53	22	16	39	42	32	38	38	509
				11—27	01	10	05	12	34	17	05	26	27	21	30	06	194
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	45	70	58	83	78	39	21	65	69	53	68	44	702
El Dakhla	18	12	00	1—10	70	62	38	52	48	41	42	27	25	24	35	121	597
				11—27	35	26	01	00	00	00	01	01	03	02	03	33	105
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	105	88	39	52	48	41	43	28	28	26	38	154	690
El Kharga	08	00	00	1—10	185	58	19	06	06	18	14	08	11	23	19	80	447
				11—27	195	32	00	00	00	00	02	04	03	03	04	22	265
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	380	90	19	06	06	18	16	12	14	26	23	102	712
El Hurghada	06	01	00	1—10	23	38	17	08	19	39	08	05	05	48	112	35	358
				11—27	35	08	01	01	08	03	00	00	00	20	106	170	351
				28—47	01	00	00	00	00	00	00	00	00	00	02	00	05
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	59	46	18	09	27	42	08	05	05	68	217	209	713
El Quseir	11	00	00	1—10	93	27	14	09	13	34	23	09	12	44	69	121	468
				11—27	150	04	00	00	00	01	00	01	00	00	00	85	241
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	243	31	41	09	13	35	23	10	12	44	69	206	709

UPPER AIR CLIMATOLOGICAL DATA

Table B 1.—MONTHLY MEAN AND MONTHLY ABSOLUTE HIGHEST AND LOWEST VALUES OF ALTITUDE, AIR TEMPERATURE AND DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

APRIL — 1978

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	28	1012m.b.*	1018m.b.*	1002m.b.*	28	16.3	28.6	11.7	28	9.9
	1000	28	128	181	46	28	16.2	28.6	12.0	28	9.8
	850	28	1508	1582	1454	28	12.5	23.2	2.5	28	— 2.1
	700	28	3108	3202	3000	28	9.2	8.4	— 6.3	28	—10.4
	600	28	4339	4453	4190	28	— 5.2	0.5	—13.8	28	—17.7
	500	28	5746	5888	5554	28	—14.6	— 9.9	—22.4	28	—27.8
	400	28	7399	7568	7164	28	—26.6	—22.3	—31.7	28	—36.7
	300	28	9414	9555	9154	28	—41.7	—38.4	—45.7	28	—50.9
	250	28	10626	10842	10358	28	—50.7	—47.1	—54.7	28	—58.8
	200	28	12055	12277	11818	28	—57.4	—52.7	—26.7	20	—63.7
	150	27	13876	14112	1·661	27	—59.6	—54.9	—65.5	11	—65.2
	100	27	16373	16657	16206	27	—66.5	—61.7	—73.1	—	—
	70	14	18518	18847	18395	14	—66.0	—60.9	—69.7	—	—
	60	9	19464	19840	19350	9	—64.4	—59.0	—68.9	—	—
	50	8	20564	20917	20455	8	—62.2	—57.0	—67.1	—	—
	40	5	22014	22400	21800	5	—60.2	—57.0	—65.7	—	—
	30	4	23776	24133	23622	4	—59.4	—55.5	—67.7	—	—
	20	1	26352	—	—	1	—50.0	—	—	—	—
	10	1	30972	—	—	1	—41.0	—	—	—	—
Helwan 0000 U.T.	Surface	30	997mb.*	1002mb.*	989mb.*	30	17.4	29.0	12.5	30	06.8
	1000	30	113	160	044	6	15.1	19.0	13.6	6	10.0
	850	30	1491	1526	1444	29	13.7	26.3	06.0	29	03.1
	700	30	3101	3183	3025	29	04.7	12.0	—01.5	29	—11.4
	600	30	4340	4450	4247	30	—03.6	02.4	—09.0	30	—17.2
	500	30	5760	5893	5639	29	—12.9	—08.5	—18.9	29	—25.8
	400	28	7420	7581	7277	27	—24.9	—20.9	—28.1	27	—35.5
	300	27	9447	9641	9277	27	—40.3	—35.9	—43.1	27	—48.7
	250	27	10667	10885	10487	27	—49.3	—45.3	—54.1	27	—57.0
	200	27	12110	12352	11927	27	—55.7	—50.8	—63.3	25	—63.6
	150	24	13970	14183	13764	24	—58.9	—53.8	—65.2	15	—63.7
	100	18	16446	16640	16294	18	—65.0	—60.5	—70.9	—	—
	70	7	18551	18689	18469	7	—65.9	—59.7	—70.6	—	—
	60	5	19522	19680	19420	5	—65.5	—60.6	—69.1	—	—
	50	5	20598	20729	20715	5	—63.3	—60.6	—65.4	—	—
	40	3	22110	22180	22050	3	—61.0	—58.3	—62.6	—	—
	30	3	23821	23889	23753	3	—58.1	—55.9	—59.4	—	—
	20	1	26425	—	—	1	—52.7	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Asswan 0000 U.T.	Surface	30	989mb.*	992mb.*	985mb.*	30	22.4	28.4	14.5	30	— 2.5
	1000	30	96	125	55	—	—	—	—	—	—
	850	30	1509	1535	1478	30	20.0	24.8	14.5	30	— 3.1
	700	30	3149	3182	3116	30	8.5	12.1	3.8	30	—10.7
	600	30	4404	4454	4351	30	— 4.3	2.8	— 7.6	30	—15.6
	500	30	5837	5897	5722	30	—10.0	— 5.0	—16.0	30	—25.4
	400	30	7523	7573	7428	30	—22.4	—19.2	—28.4	30	—35.5
	300	29	9576	9667	9452	29	—37.5	—33.3	—41.3	29	—46.4
	250	29	10710	10891	10636	29	—46.8	—43.2	—51.0	29	—54.3
	200	29	12262	12369	12103	29	—54.9	—50.8	—59.2	29	—63.1
	150	28	14064	14190	13843	28	—64.5	—61.1	—69.3	—	—
	100	28	16474	16606	16219	28	—75.7	—71.3	—79.6	—	—
	70	21	18528	18672	18299	21	—75.8	—65.6	—84.9	—	—
	60	10	19520	19620	19420	10	—68.7	—66.1	—72.3	—	—
	50	10	20584	20718	20511	10	—64.9	—57.8	—75.7	—	—
	40	5	22032	22140	21882	5	—60.4	—59.0	—63.8	—	—
	30	4	23784	23882	23687	4	—56.7	—56.0	—57.4	—	—
	20	3	26424	26482	26317	3	—48.0	—45.4	—51.1	—	—
	10	—	—	—	—	—	—	—	—	—	—

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

* = pressure corrected to the elevation of the radiosonde station.

UPPER AIR CLIMATOLOGICAL DATA

Table B1 (*contd*).—MONTHLY MEANS, ABSOLUTE HIGHEST & LOWEST VALUES OF ALTITUOE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

APRIL — 1978

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	1012*m.b.	1019*m.b.	1002*m.b.	29	21.6	35.0	18.0	29	10.6
	1000	29	131	180	88	29	20.7	34.9	15.9	29	8.7
	850	29	1515	1548	1458	29	13.3	27.2	3.6	28	— 5.6
	700	28	3131	3202	3064	28	4.0	11.0	— 1.3	28	—15.0
	600	27	4353	4465	4263	27	— 3.9	3.4	— 9.7	27	—21.4
	500	27	5771	5920	5662	27	—13.2	— 0.6	—19.0	27	—28.9
	400	27	7431	7660	7308	27	—25.2	—15.8	—32.3	27	—39.5
	300	26	9448	9740	9278	24	—40.8	—32.9	—47.6	24	—53.2
	250	26	10662	10976	10478	24	—49.7	—46.7	—55.5	24	—61.0
	200	26	12112	12411	11939	26	—55.8	—49.7	—61.9	23	—66.2
	150	26	13935	14211	13770	26	—58.5	—52.3	—64.9	13	—68.0
	100	25	16447	16771	16299	25	—64.8	—57.4	—71.3	—	—
	70	22	18635	19007	18392	22	—64.3	—57.3	—70.1	—	—
	60	18	19621	20000	19370	18	—62.0	—55.3	—70.0	—	—
	50	18	20726	21137	20607	18	—59.4	—52.9	—64.9	—	—
	40	6	22270	22700	22110	6	—55.2	—50.0	—57.6	—	—
	30	4	23919	23994	23884	4	—52.4	—51.5	—52.1	—	—
	20	3	26537	26552	26510	3	—49.3	—47.7	—52.1	—	—
	10	1	30964	—	—	1	—55.0	—	—	—	—
Helwan 1200 U.T.	Surface	30	996*mb.	1001*mb.	992*m.b	30	27.6	36.4	22.3	30	02.6
	1000	28	107	149	068	3	23.1	24.0	22.3	3	04.2
	850	28	1513	1537	1484	28	15.9	25.8	08.4	28	—06.3
	700	28	3141	3201	3055	28	06.9	12.8	—01.5	28	—13.8
	600	28	4384	4466	4271	28	—01.0	03.6	—07.7	27	—20.0
	500	28	5815	5905	5677	28	—10.0	—05.6	—14.5	28	—27.4
	400	27	7428	7612	7346	27	—21.6	—15.5	—24.9	27	—37.1
	300	25	9570	9682	9384	25	—36.6	—31.3	—44.2	25	—49.4
	250	25	10811	10939	10614	25	—45.1	—39.9	—51.7	25	—56.6
	200	24	12273	12424	12087	24	—52.0	—46.3	—57.2	24	—65.8
	150	23	14127	14299	13973	23	—54.8	—49.2	—60.2	20	—68.7
	100	20	16709	16935	16540	20	—59.3	—53.6	—64.6	4	—
	70	14	18950	19201	16612	14	—58.6	—54.7	—62.2	—	—
	60	12	19950	20200	19800	12	—68.2	—54.5	—61.3	—	—
	50	12	21068	21301	20914	12	—55.4	—51.9	—61.2	—	—
	40	7	22560	22678	22400	7	—52.0	—48.7	—60.0	—	—
	30	6	24364	24483	24244	6	—47.0	—43.3	—50.3	—	—
	20	2	27047	27058	27036	2	—39.8	—38.1	—41.5	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan (A) 1200 U.T.	Surface	30	989*m.b.	992*m.b.	985*m.b	30	35.7	41.9	30.9	30	12.7
	1000	30	91	122	62	—	—	—	—	—	—
	850	30	1534	1556	1510	30	22.6	27.4	18.0	30	— 6.4
	700	30	3186	3220	3135	30	10.5	16.0	7.0	30	—14.1
	600	30	4449	4490	4389	30	1.1	6.5	— 2.5	30	—19.9
	500	30	5892	5952	5810	30	— 8.2	— 4.6	—13.6	30	—28.5
	400	30	7585	7663	7490	30	—20.2	—17.7	—24.7	30	—37.5
	300	29	9519	9747	9506	29	—35.8	—30.5	—40.7	29	—49.1
	250	28	10893	10997	10709	28	—44.6	—39.5	—49.8	28	—56.3
	200	28	12333	12480	12198	28	—53.0	—49.2	—56.8	28	—63.9
	150	26	14153	14320	14039	26	—62.7	—58.7	—66.9	3	—70.5
	100	25	16606	16770	16501	25	—75.2	—68.4	—77.6	—	—
	70	24	18668	18830	18565	24	—73.1	—67.6	—77.2	—	—
	60	19	19660	19840	19500	19	—70.1	—64.7	—74.1	—	—
	50	19	20719	20831	20545	19	—65.5	—60.0	—72.5	—	—
	40	11	22195	22300	22050	11	—57.6	—55.7	—61.1	—	—
	30	10	23948	24101	23800	10	—51.4	—40.5	—56.3	—	—
	20	4	26619	26711	26576	4	—44.9	—40.3	—47.3	—	—
	10	—	—	—	—	—	—	—	—	—	—

N The number of casses 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

APRIL — 1978

	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)										
	M. Matruh. .	3532 (28)	666 (28)	—12.5 (28)	4540	593	—24.2	1940	800	— 5.0	11820 (22)	208 (22)	—59.4 (22)	13270	163	—64.0	10670	245	—54.2	8708	330	245	140
	Helwan . . .	5502 (30)	528 (30)	—19.0 (29)	4740	587	—14.6	2840	722	—19.1	12274 (20)	201 (20)	—56.6 (20)	14710	193	—60.0	10500	260	—49.2	10900	240	185	135
	Aswan	4916 (30)	569 (30)	—13.0 (30)	4840	572	—22.0	3900	636	— 5.6	17130 (10)	91 (10)	—77.3 (10)	18800	67	—78.0	15400	116	—73.5	13140	174	305	126
1200 U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	M. Matruh. .	3803 (27)	644 (27)	—20.3 (27)	5720	514	—30.4	3000	708	—33.3	12625 (25)	187 (25)	—58.7 (25)	16880	096	—72.0	9180	305	—47.6	11450	223	265	140
	Helwan . . .	4154 (28)	619 (28)	—17.7 (28)	4920	567	—19.1	2380	760	—04.9	13094 (22)	182 (22)	—55.4 (22)	17650	087	—66.1	10120	271	—49.8	13720	159	310	140
	Aswan . . .	4646 (30)	586 (30)	—21.6 (30)	5276	545	—27.8	4040	632	—22.7	17035 (23)	095 (23)	—75.1 (23)	18220	076	—75.4	14270	146	—64.2	13500	169	280	135

N = The number of cases the element has been observed 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

MERSA MATRUH APRIL 1978

Time	Pressure Surface (Millibar.)	Wind within 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			
U.T. 0000	Surface	0	—	0	—	0	—	3	03	6	10	0	—	4	08	3	10	3	06	5	12	3	12	0	—	1	28	9
	1000	0	—	0	—	3	08	2	18	3	13	3	13	3	20	2	18	1	14	7	13	4	18	0	—	0	28	15
	850	1	22	1	14	1	08	0	—	0	—	0	—	2	16	5	18	5	33	7	27	4	24	2	14	0	26	19
	700	1	09	0	—	0	—	0	—	0	—	0	—	1	19	5	38	6	32	10	28	2	30	1	21	0	26	30
	600	1	02	0	—	0	—	0	—	0	—	0	—	0	—	1	58	9	43	8	36	3	36	1	25	0	23	38
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	12	50	10	33	1	30	0	—	0	23	42
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	13	60	7	40	1	33	0	—	0	21	52
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	14	71	4	51	0	—	0	—	0	18	67
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	10	89	5	55	1	36	0	—	0	16	75
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	99	3	94	0	—	0	—	0	5	96
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	88	2	70	0	—	0	—	0	4	79
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
U.T. 1200	Surface	4	8	3	12	3	12	5	15	0	—	1	15	1	28	1	14	1	7	0	—	7	18	3	12	0	29	14
	1000	1	4	3	16	1	7	5	16	0	—	0	—	0	—	0	—	2	14	3	16	8	18	5	10	0	28	15
	850	1	20	1	15	1	9	0	—	0	—	0	—	4	20	4	12	6	22	7	26	3	20	1	15	0	28	20
	700	0	—	1	13	0	—	0	—	0	—	0	—	0	—	4	27	11	35	7	31	3	25	1	19	0	27	30
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	40	7	53	12	34	3	44	1	12	0	25	40
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	38	13	46	7	50	2	50	1	22	0	25	46
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	25	11	59	6	62	3	48	0	—	0	22	57
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	72	7	70	1	49	0	—	0	10	68
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	77	2	69	0	—	0	7	57
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	114	2	78	0	—	0	7	104
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	78	0	—	0	—	0	1	78
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

T.N. = The total number of cases the wind 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.

HELWAN — APRIL 1978

Time	Pressure Surface (Millibar)	Wind within 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	3	07	4	11	11	08	4	06	0	—	2	08	1	04	0	—	0	—	0	—	2	06	3	07	0	30	8
	1000	1	08	1	04	3	10	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	12	0	6	9
	850	3	13	5	16	2	19	2	11	2	14	0	—	1	28	1	18	2	36	2	24	6	23	4	16	0	30	19
	700	1	22	2	32	0	—	1	06	0	—	0	—	1	29	0	—	1	07	3	46	12	28	9	27	0	30	28
	600	2	38	0	—	1	26	0	—	0	—	0	—	1	44	0	—	0	—	5	53	14	34	7	35	0	30	38
	500	2	32	0	—	0	—	0	—	0	—	0	—	1	60	0	—	0	—	6	50	13	44	4	38	0	26	45
	400	1	76	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	61	21	51	4	51	0	22	55
	300	2	82	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	66	8	77	1	42	0	13	73
	250	1	56	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	98	3	60	0	6	72
	200	1	89	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	104	2	69	0	4	83
	150	1	91	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	112	0	2	102
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	6	07	5	11	1	12	0	—	1	04	1	07	0	—	4	10	3	12	1	12	4	13	4	09	0	30	10
	1000	0	—	1	11	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	10	1	08	0	3	10
	850	4	13	4	08	1	19	2	18	0	—	0	—	2	07	0	—	3	07	5	23	2	12	5	14	0	28	14
	700	4	21	1	12	0	—	1	12	0	—	0	—	0	—	1	10	0	—	8	28	7	23	6	23	0	28	24
	600	1	21	0	—	1	33	0	—	0	—	0	—	0	—	0	—	1	15	6	39	11	32	8	26	0	28	31
	500	1	28	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	14	5	62	12	42	9	35	0	28	43
	400	2	48	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	45	2	87	8	61	10	48	0	23	56
	300	2	64	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	66	5	75	10	77	0	19	74
	250	1	66	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	101	2	82	2	80	5	75	0	11	79
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	118	3	110	0	5	113
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	104	1	76	0	2	90
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the wind has been observed within 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 B3—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.
ASWAN —APRILE 1978

Station	Pressure Surface (Milibar)	Wind between ranges of direction (000—360°)																								Number of Calm winds	Total number of observations (TN)	Mean scalar wind speedknots
		345 / 014		015 / 044		045 / 074		075 / 104		105 / 134		135 / 164		165 / 194		195 / 224		225 / 254		255 / 284		285 / 314		315 / 344				
		(ff) m	N	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 UT.	Surface	21	14	3	6	0	—	0	7	1	4	1	6	2	9	0	—	0	—	0	—	0	—	2	7	0	30	21
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	—	—	—	16	—	—	—
	850	8	15	7	16	1	17	3	—	2	5	0	—	0	—	1	—	1	11	5	—	2	11	6	12	0	30	13
	700	1	20	2	17	0	—	0	—	0	—	1	10	1	11	0	9	2	23	12	18	10	14	7	22	0	30	15
	600	0	—	1	9	0	—	0	—	0	—	0	—	0	—	0	—	3	27	12	22	7	20	7	18	0	30	22
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	48	13	45	10	26	3	11	0	30	29
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	8	84	11	41	7	40	2	—	0	30	38
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	95	12	50	12	45	0	56	0	29	55
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	95	11	73	12	65	2	74	0	29	71
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	85	11	86	13	92	1	94	0	28	90
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	51	10	86	7	80	1	—	0	22	77
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	—	0	48	1	42	0	—	0	14	41
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	42	0	—	1	—	2	26	0	—	0	3	32
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	17	0	—	0	—	0	1	17
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	—	15	0	—	0	—	0	1	15
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	18	12	1	4		—	0	—	0	—	0	—	2	4	2	6	1	5	1	5	0	—	5	10	1	30	10
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	12	12	4	7	1	17	1	8	0	—	0	—	1	9	2	7	0	—	1	8	3	11	5	13	0	30	11
	700	3	9	3	14	1	20	0	—	0	—	0	—	2	14	0	—	6	16	3	21	9	16	3	19	0	30	16
	600	3	16	1	5	0	—	0	—	0	—	0	—	0	—	1	5	6	26	6	27	8	22	5	13	0	30	21
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	36	12	29	10	26	2	8	0	29	28
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	33	8	46	9	47	10	33	1	22	0	29	41
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	85	14	56	6	58	1	52	0	26	62
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	90	9	64	10	71	0	—	0	26	75
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	87	11	78	8	81	1	54	0	25	84
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	73	12	75	4	76	0	—	0	21	75
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	31	0	—	9	37	5	38	0	—	0	15	37
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	20	3	19	2	11	0	—	1	17	0	8	17
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	-	2	22	1	12	0	—	0	4	17
	50	0	—	0	—	0	—	1	10	0	—	0	—	0	—	0	—	0	—	1	20	1	9	0	—	0	3	31
	40	0	—	0	—	—	—	1	10	2	44	—	—	—	—	0	—	—	—	0	—	0	—	—	—	—	2	44
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

TN = The number of cases the wind has been obsersed from the frange of direction during the month.
N = The total number of cases wind has been the observep or all directions during the month.

MONTHLY REVIEW OF AFRO - METEOROLOGICAL STATIONS

MERSA MATRUH — APAIL 1978

The mean monthly air temperature and relative humidity were nearly the same as normal. The total monthly rainfall was 3.2 mm. which is higher than normal by 0.9 mm.

The month was intervened by five short heat wave in the periods (3rd & 4th), 7th—9th), (15th), (26th) and (29th & 30th). The wave gave the highest maximum temperature (36.5°C) on the 8th. In the rest of the month weather was mild.

The mean monthly actual sunshine duration and wind speed at 1,5 met. height were slightly lower than normal.

The highest maximum soil temperatures were higher than the correspondint values of April 1977 at depths between 2 & 50 cm. with departures between 2.6°C (at 2 cm.) and 0.1°C (at 5 cm.). The lowest minimum soil temperatures were higher than last April at 2,5,10 cm. depths with departures be tween 0.9° & 0.5°C; lower than last April at 20 cm. by 0.2°C.

TAHRIR — APRIL 1978

The mean monthly air temperatures and relative humidity were nearly the same as normal. The month was rainless apart from trace on the 17th against 1.8 mm. for normal.

Weather was changeable characterised by six heat waves in the periods (1st — 4th), (7th — 9th), (14th & 15sh), (21st), (27th) and (29th & 30th). The first wave gave the highest maximum temperature (39.8°C) on the 4th. In the rest of the month, mild weather prevailed.

The mean monthly actual sunshine duration was slightly higher than normal. The mean monthly wind speed at 1.5 met. height and pan evaporation were higher than normal at depths between 2 & 50 cm. with departures between 2.2°C (at 10 cm.) & 0.4°C (at 50 cm.) but lower than normal at 100 cm. by 0.3°C. The lowest minimum soil temperatures were higher than normal at 2, 10, 20, 50 cm. depths with departures between 0.1° & 0.8°C; lower at 5cm. by 0,8°C; the same as normal at 100 cm. depths.

BAHTIM — APRIL 1978

The mean monthly air temperature was slightly higher than average, and the mean monthly relative humidity was the same as average. The month was rainless apart from trace on the 16th, against 4.0 mm. for average.

Weather was changeable, intervened by short heat waves in the periods (1st & 2nd), 4th), 7th — 9th), (14th & 15th), (21st), 23rd), (27th) and (30th). The second wave gave the highest maximum temperatures (38.0°C) on the 4th Apart from the heat waves, mild weather was experienced.

The mean monthly actual sunshine duration and wind speed at 1.5 met. height were slightly below average. The mean monthly pan evaporation was nearly the same as average.

The highest maximum soil temperatures were higher than average at all depths with departures between 4.0°C (at 2 cm.) and 0.5°C (at 100 cm.). The lowest minimum soil temperatures were also higher than average at all depths with departures between 3.7°C (at 2 cm.) and 0.1°C (at 100 cm).

ASSYOUT — APRIL 1978

The mean monthly air temperature was higher than the corresponding value of last April, and the mean monthly relative humidity was the same as last April.

Weather was changeable, characterized by several heat waves in the periods (3rd & 4th), 7th - 9th), (13*th* - 16*th*), (21*st*), (27*th*) and 29*th* & 30*th*). The first wave gave the highest maximum temperature (40.4°C) on the 4*th*. Apart from the heat waves, mild weather was experienced.

The mean monthly actual sunshine duration was normal the same as last April. The mean monthly pan mon-evaporation was higher than last April by 1.23 mm.

The highest maximum soil temperatures were lower than last Avril at 2 cm. depth by 0.2°C; but higher at other depths with departures between 0.2°C (at 5 cm) and 2.8°C (at 10 cm.). The lowest minimum soil temperatures were higher than last April at 2,5,10,100 cm. depths with departures between 2.7°C (at 2cm.) & 0.3°C (at 100 cm.), but lower at 20 & 50 cm. depths by 0.3° & 0.7°C respectively.

KHARGA — APRIL 1978

The mean monthly air temperature and relative humidity were higher than average.

Weather was changeable, characterized by six heat waves in the periods (1*st* - 4*th*), (7*th* - 9*th*), (14*th* -16*th*), (21*st*, (23*rd*) and (26*th* - 30*th*). The first wave gave the highest maximum temperature (44.0°C) on the 4*th*. In the rest periods of the month, mild wealther was experienced.

The mean monthly actual sunshine duration, wind speed at 1.5 met. height and pan evaporation were lower than average by 0.6 hour, 0.8 met./sec. and 2.64 mm. respectively.

The highest maximum soil temperatures were higher than average at 2,5,10,20 cm. depths with departures between 2.6°C (at 10 cm.) and 1.2°C (at 20 cm.); lower than average as 100 cm. depth.

The lowest minimum soil temperatures were higher than average at 10,20,50,100 cm. depths with departures between 0.2° and 1.0°C.

Table C 1.—AIR TEMPERATURE AT 1½ METRES ABOVE GROUND

APRIL — 1978

STATION	Air Temperature (°C)					Duratio in hours to the nearest half hour of 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
M. Matruh. . . .	23.1	12.0	17.5	15.1	19.0	24.0	24.0	24.0	23.5	16.5	4.8	1.4	0.7	0.2	0.0	0.0
Thrira	29.1	11.2	19.4	14.9	22.3	24.0	24.0	24.0	23.2	16.4	10.0	4.4	1.3	0.5	0.0	0.0
Bahtim	28.0	10.3	19.1	14.1	22.1	24.0	24.0	24.0	22.6	15.4	10.0	4.2	1.1	0.4	0.0	0.0
Assiut	32.3	12.2	22.4	17.4	25.1	24.0	24.0	24.0	24.0	19.9	13.7	8.1	3.3	0.9	0.0	0.0
Kharga	35.4	17.3	26.9	22.8	29.3	24.0	24.0	24.0	23.9	23.3	20.0	14.3	7.7	3.0	0.8	0.0

Table C 2.—EXTREME VALUES OF AIR TEMPERATURE AT 1½ METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5 cms ABOVE GROUND OVER DIFFERENT FIELDS.

APRIL — 1978

STATION	Max. Temp. at 1½ Metres				Min. Temp. at 1½ 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
M. Matruh. . . .	36.5	8	18.6	16	16.1	27	8.0	3	5.2	12	—	—
Tahrir	39.8	4	23.4	24	15.4	9	8.4	19,20	6.6	12	5.2	12,20,25
Bahtim	38.0	4	23.0	24	15.1	16	7.0	1	4.2	1	3.0	25
Assiut	40.4	4	25.8	24	18.0	4	9.3	25	5.4	23	—	—
Kharga	44.0	4	28.5	19	23.8	16	8.7	1	7.0	1	—	—

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

APRIL — 1978

STATION	(Solar+Sky Radiation gm. cal/cm²)	Duration of Bright Sunshine			Relative Humidity %				Vapour Pressure (mms)						Evaporation(mms)		RainFall (mms)		
		Total Actual	Total Possible	%	Mean of dry	1200 U.T.	Lowest	Date	Mian of dry	1200 U.T.	Highest	Date	Lowest	Dete	Piche	Pan Class(A)	Total Amount	Max. Fall in one day	Date
M. Matruh	483.1	277.3	387.9	71	65	52	07	08	9.3	9.6	13.2	16	2.9	8	7.4	—	3.2	3.2	16
Tahrir . .	581.8	300.1	386.9	78	59	32	07	08	9.2	8.3	13.2	16,27	1.8	9	7.8	8.66	Tr.	Tr.	17
Bahtim . .	571.5	285.9	386.5	74	62	36	15	04	9.6	9.4	15.1	82	4.3	9	7.0	8.23	Tr.	Tr.	16
Assiut. .	—	303.6	383.4	79	41	21	09	29	7.5	6.8	12.0	17	4.4	29	9.0	8.90	0.0	0.0	—
Kharga. .	657.8	294.6	381.7	77	31	20	07	04	7.9	8.3	15.2	16	2.9	6	14.5	13.44	0.0	0.0	—

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

APRIL 1978

STATION	Highest (A) Lowest (L)	Extreme soil temperature (°C) in dry field at different depths (cms.)								Extreme soil tmperature (°C) in grass field at different depths (cms.)							
		2	5	10	20	50	100	200	300	2	5	10	20	50	100	200	300
M. Matruh	H	36.6	33.8	28.9	25.0	21.4	19.6	19 5	—	--	=	—	—	—	—	—	—
	L	12.9	12.5	13.6	16.0	17.0	17.4	18.1	—	--	—	—	—	—	—	—	—
Tahrir	H	49.6	43.1	37.2	30.6	26.3	23.6	22.5	22.4	30.9	29.4	26.9	24.4	23.2	22.0	21.1	—
	L	15.9	14.8	16.0	19.0	20.3	20.4	20.5	21.4	14.5	14.8	14.7	16.0	18.2	18.4	19.0	—
Bahtim	H	51.9	40.4	33.0	28.9	25.0	23.3	22.5	22.5	31.3	28.1	24.8	22.2	20.8	20.2	19.9	—
	L	20.2	16.8	18.5	20.6	21.2	20.7	21.8	22.4	15.5	14.9	15.4	17.1	18.2	18.6	19.5	—
Asiut.	H	58.8	44.9	37.9	30.6	26.0	24.4	22.8	23.2	—	—	—	—	—	—	—	—
	L	20.9	18.2	19.4	22.0	22.2	22.0	21.8	23.0	—	—	—	—	—	—	—	—
Kharga	H	55.3	48.0	41.0	33.6	28.6	27.2	26.2	26.7	—	—	—	—	—	—	—	—
	L	12.5	16.1	18.4	23.0	24.2	24.6	25.2	26.5	—	—	—	—	—	—	—	—

Table C 5.—SURFACE WIND

APRIL 1978

STATION	Wind Speed m/sec at 1½ 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 konts	≥20 knots	≥25 knots	≥30 knots	≥35 knots	≥40 knots	value knots	Date
M. Matruh .	4.0	2.8	5.2	29	25	14	11	2	1	0	39	08
Tahrir . . .	2.4	6.1	3.1	28	15	05	03	0	0	0	38	4,12
Bahtim. . . .	2.2	1.5	2.9	26	20	10	07	4	0	0	40	23
Asiut	—	—	—	—	—	—	—	—	—	—	—	—
Kharga . . .	3.0	2.3	3.7	28	21	13	06	1	0	0	38	16

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The Chairman

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THE ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 21 NUMBER 5

MAY 1978

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THE EGYPTIAN METEOROLGICAL AUTHORITY

CAIRO

PUBLICATIONS OF THE METEOROLOGICAL AUTHORITY OF THE ARAB REPUBLIC OF EGYPT—CAIRO

In fulfilment of its duties, the Egyptian Meteorological Authority issues several reports and publications on weather, climate and agro-meteorology. The principal publications are described on this page.

Orders for publications should be addressed to :

"Chairman of the Board of Directors, Meteorological Authority, Kubri-el-Qubbeh — CAIRO.

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 the Meteorological Authority.

TECHNICAL NOTES

As from October 1970, the Meteorological Authority 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 ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 21 NUMBER 5

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THE EGYPTIAN METEOROLGICAL AUTHORITY

CAIRO

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GENERAL SUMMARY OF WEATHER CONDITIONS

MAY 1978

Changeable weather intervened by five heat waves, the last of which was excessive and prevailed mast of the last week

PRESSURE DISTRIBUTION

the atmospheric pressure over Egypt was mainly influenced by the following :

— Weak high pressure over East Mediterranean most days of the month.

— Five secondary desert depressions passed through north Egypt while filling on the *3rd, 13th, 17th, 27th* & *30th.*

— Monsoon low pressure over north of Arabia and Sudan.

The mean monthly atmospheric pressure was generally around normal.

SURFACE WIND

Light to moderate NE ly to NW ly winds prevailed most days of the month, Fresh to strong winds were reported in scattered places during several days mainly by the break down of heat waves.

TEMPERATURE

Five variant heat waves prevailed most days of the month. The first four heat waves were light to moderate and prevailed most of the first three weeks. The last wave was excessive and prevailed from the *23rd* till the *29th.*

The heat waves were separated by short mild periods with subnormal temperatures.

The highest and lowest maximum temperatures were respectively 49.8C° at Kharga on the *30th* and 20.3°C at Matruh.

The highest and lowest minimum temperature were respectively 31.3°C at Quseir on the *29th* and 11.4°C at Mersa Matruh on the *7th.*

PRECIPITATION

No rain was reported during the month.

OTHER WEATHER PHENOMENA

Early morning mist developed during several days over scattered places in Lower Egypt & Cairo.

Light rising sand was reported in few scattered places by the break down of heat waves.

Cairo March 1980

Chairman (M.A. BADRAN)
Board of Directors

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

MAY — 1978

STATION	Atmospheric Pressure (mbs) M.S.L.		Air Temperature °C									Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evap.
			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 Aci.	Total Poss.	—	
Sallum	1014.2	0.7	28.1	2.0	17.7	1.1	22.9	22.2	1.3	16.6	3.0	57	—5	—	—	—	7.4
Mersa MTatro	1014.4	0.8	26.3	0.9	15.4	0.6	20.8	20.6	0.5	16.5	0.1	69	1	329.1	426.0	77	7.4
Alexandria	1013.5	0.0	28.2	1.5	17.1	0.6	22.0	22.1	0.8	17.5	0.4	66	—1	342.2	425.8	80	5.6
Port Said	1012.6	—0.2	25.6	0.0	20.5	1.1	23.0	22.8	0.9	18.8	—0.1	67	—4	342.1	425.9	80	6.3
Elrich	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gaza	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo	1012.2	0.5	34.1	1.5	1.81	0.7	26.1	25.8	—1.2	17.2	0.2	44	1	—	—	—	19.5
Fayum	—	—	16.9	3.5	7.3	0.3	27.1	2.68	—1.9	17.7	1.3	41	4	—	—	—	10.9
Minia	1010.9	—0.4	37.4	2.6	17.2	0.8	27.3	27.3	—1.5	15.9	0.9	36	0	353.8	419.8	84	16.4
Assuit	1010.1	—0.5	37.6	1.6	19.1	0.0	28.3	28.7	—0.9	18.3	0.0	22	1	—	—	—	19.4
Louxer	1008.3	—0.6	41.6	2.5	20.4	0.2	31.0	3.13	—1.2	16.7	0.9	25	—1	—	—	—	11.6
Aswan	1007.8	—0.6	42.0	2.3	23.9	1.3	32.9	33.1	—1.9	16.7	2.1	12	5	374.5	412.3	91	22.9
Sewa	1012.5	—0.4	36.5	2.4	18.2	1.3	27.3	27.4	—1.8	16.7	1.2	32	—6	328.8	421.9	78	16.1
Baharia	1011.1	—1.0	37.1	2.7	18.8	1.4	27.9	28.3	—2.3	16.5	0.7	28	—10	—	—	—	14.0
Farafra	1012.3	—0.5	37.7	2.8	19.5	2.4	28.6	28.7	—2.8	16.0	1.2	22	—5	—	—	—	17.7
Dakhla	1011.6	0.6	39.5	2.9	18.9	0.3	29.2	29.7	—1.7	16.4	0.8	22	—2	—	—	—	20.0
Kharga	1008.9	—1.6	41.1	3.6	22.4	—1.6	31.7	32.4	—3.4	18.2	2.7	26	—3	361.8	414.9	87	18.5
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurgada	1008.9	—0.4	32.0	2.0	22.8	2.4	27.4	27.6	2.0	18.4	0.3	37	—11	375.2	418.1	50	20.4
Qusir	1008.4	—0.9	32.0	2.0	24.5	1.7	28.2	28.3	1.7	19.5	0.6	41	—8	—	—	—	11.4

TABLE A2— MAXIMUM AND MINIMUM AIR TEMPERATURE

MAY — 1978

Station	Maximum Temperature °C									Grass Min. Temp.		Minimnm Temperature Deg. 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	<05	<00	<-5
Sallum	42.9	26	21.5	5	22	08	02	02	00	15.9	—	22.8	24	13.8	6	00	00	00	00
Mersa Matro . . .	41.4	26	20.3	4	14	07	03	01	00	13.7	—	20 8	26	11.4	7	00	00	00	00
Alexandrla	37.8	26	23 0	4	26	08	04	00	00	14.7	—	21 8	29	13·8	15	00	00	00	00
Port Said.	35.5	27	22.0	1	14	03	01	00	00	20.2	—	24.8	27	17.9	5	00	00	00	00
Alrlch	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gaza	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Calro	44.0	27	25 4	5	31	28	12	04	00	—	—	25.0	27	14.8	14	00	00	00	00
FAYOUM	45.3	27	30.2	14	31	31	19	07	01	15.0	—	12.0	30	13.8	6	00	00	00	00
Minia	45.2	27	30.8	14	31	31	22	09	01	15.5	—	25.0	30	13.2	2	00	00	00	00
Assuit	44.7	29	30.7	14	31	31	22	11	00	18 2	—	28.5	30	15.1	6	00	00	00	00
Luxor	48.2	30	36.4	14	31	31	31	23	03	14.0	—	26.8	29	16.0	7	00	00	00	00
Aswan	48.4	30	36.0	21	31	31	31	23	03	—	—	03.8		19.8	15	00	00	00	00
Sewa	47.3	29	29.0	13	31	30	02	05	01	16.2	—	23.8	31	31.5	5	00	00	00	00
Baharia	45.2	27	03.2	13	31	31	21	09	01	18.2	—	25.7	29	13 6	5	00	00	00	00
Farafra	46·4	29	03·8	14	31	31	24	08	02	18.0	—	25.2	30	15.0	14	00	00	00	00
Dakhla	84.2	29	23.3	14	31	31	82	12	04	18.8	—	25.4	29	11.2	3	00	00	00	00
Kharga	49.8	30	33.9	14	31	31	29	17	04	20.0	—	29.8	29	14.1	3	00	00	00	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurgada	37.7	27	28.3	6,7,14	31	25	05	00	00	—	—	26 6	29	18.9	9	00	00	00	00
Quseir	43.0	30	27.7	14	31	22	05	02	00	20.8	—	13.3	29	20·5	3	00	00	00	00

Table A 3. — SKY COVER AND RAINFALL.

MAY — 1978

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	2.4	3.2	2.7	3.0	2.6	0.0	— 3.9	—	—	00	00	00	00	00	00	00
Mersa Matruh (A)	1.7	4.0	3.2	3.5	3.1	0.0	— 2.3	—	—	00	00	00	00	00	00	00
Alexandria (A)	1.0	2.2	3.5	2.5	2.4	0.0	— 1.7	—	—	00	00	00	00	00	00	00
Port Said (A)	1.6	2.1	1.5	1.7	1.8	0.0	— 2.6	—	—	00	00	00	00	00	00	00
El Arish	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo	0.6	2.3	1.9	1.5	1.5	0.0	— 0.7	—	—	00	00	00	00	00	00	00
Fayom	—	1.1	1.7	0.8	—	0.0	— 0.1	—	—	00	00	00	00	00	00	00
Minia	0.1	1.1	1.5	1.3	0.9	0.0	— 0.1	—	—	00	00	00	00	00	00	00
Assuit	0.1	0.5	1.4	0.5	0.4	0.0	0.0	—	—	00	00	00	00	00	00	00
Luxor	0.6	1.0	0.5	1.1	0.8	0.0	— 0.1	—	—	00	00	00	00	00	00	00
Asawan	0.5	0.5	0.9	0.9	0.7	0.0	— 0.0	—	—	00	00	00	00	00	00	00
Sewa	1.3	1.1	2.0	1.8	1.5	0.0	— 2.0	—	—	00	00	00	00	00	00	00
Buhaira	1.0	1.3	1.9	1.7	1.4	0.0	— 0.1	—	—	00	00	00	00	00	00	00
Farafra	—	0.3	1.5	1.3	—	0.0	0.0	—	—	00	00	00	00	00	00	00
Dakhla	0.3	0.2	0.6	0.5	0.5	0.0	— 0.1	—	—	00	00	00	00	00	00	00
Kharga	0.1	0.5	0.5	0.7	0.4	0.0	— 0.3	—	—	00	00	00	00	00	00	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	0.7	0.8	1.6	1.7	1.1	0.0	— 0.4	—	—	00	00	00	00	00	00	00
Quseir	0.5	0.7	1.4	1.0	0.8	0.0	— 0.1	—	—	00	00	00	00	00	00	00

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

MAY — 1978

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	Sky Cover Clear Cloudy
	Rain	Snow											
Sallum	00	00	00	00	01	00	01	01	00	00	00	01	00
Mersa Matruh (A)	00	00	00	00	00	02	06	01	00	01	00	07	00
Alexandria (A)	00	00	00	00	03	02	00	00	00	00	00	13	01
Port Said (A)	00	00	00	00	00	00	00	01	00	00	00	16	00
El Arish	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo (A)	00	00	00	00	09	01	04	30	00	00	00	20	00
Fayoum	00	00	00	00	00	00	00	00	00	00	00	22	00
Minya (A)	00	00	00	00	00	00	01	04	00	00	00	26	00
Assout (A)	00	00	00	00	00	00	00	06	00	00	00	30	00
Luxor (A)	00	00	00	00	00	00	14	08	00	02	00	26	00
Aswan	00	00	00	00	00	00	03	08	00	00	00	27	00
Siwa	00	00	00	00	00	00	02	06	00	00	00	22	00
Bahariya	00	00	00	00	00	00	06	04	00	00	00	22	00
Farafra	00	00	00	00	00	00	01	03	00	00	00	20	00
Dakhla	00	00	00	00	00	00	00	04	00	00	00	29	00
Khrga	00	00	00	00	03	00	00	03	00	00	00	29	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	00
Hurghada	00	00	00	00	00	00	00	07	00	00	00	25	00
Quseir	00	00	00	00	00	00	02	02	00	00	00	25	00

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

MAY—1978

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing Within 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
EL Salulm.	00	00	00	1—10	00	00	00	00	00	00	00	00	00	00	00	00	00
				11—27	00	00	00	00	00	00	00	00	00	00	00	00	00
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	00	00	00	00	00	00	00	00	00	00	00	00	00
Mersa Matroh. . (A)	26	00	00	1—10	26	54	27	51	56	41	11	09	07	54	53	74	469
				11—27	03	15	18	18	12	13	14	02	01	10	101	42	249
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	29	69	45	69	74	54	25	11	08	64	154	116	718
Alexandria . . . (A)	02	00	00	1—10	64	134	50	17	30	14	06	02	03	07	24	128	479
				11—27	39	62	03	00	00	00	00	00	00	03	51	105	263
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	10
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	103	196	53	17	30	14	06	02	03	10	75	233	742
Cairo A.P.p. (A)	04	03	00	1—10	48	94	46	07	03	02	03	06	18	46	73	59	636
				11—27	29	155	73	11	03	00	03	06	02	04	02	26	103
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	77	249	119	18	06	02	06	12	02	05	39	85	737
EL-Fayoum	05	04	00	1—10	245	266	45	11	02	05	09	13	16	01	01	18	636
				11—27	03	68	32	00	00	00	00	00	00	00	00	00	103
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	248	334	77	11	02	05	09	13	16	01	01	18	735
EL Minia . . . (A)	06	01	00	1—10	332	32	08	02	01	02	02	05	03	03	06	94	464
				11—27	223	45	05	00	00	00	00	00	03	00	00	01	274
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	555	77	13	02	01	02	02	05	06	03	06	95	738
Assuit	00	00	00	1—10	96	75	24	13	07	07	04	09	21	16	22	82	379
				11—27	151	155	21	03	01	00	00	05	03	02	03	21	365
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	247	230	45	16	08	07	04	14	24	18	25	106	744
Luxor . . . . . (A)	10	00	00	1—10	81	79	41	43	19	28	70	43	28	57	75	141	705
				11—27	03	06	03	01	00	00	00	00	00	00	03	22	38
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	84	85	44	44	19	28	70	43	28	57	78	163	743

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

MAY— 1978

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing within 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
Aswan . (A) . . .	00	02	00	1-10	37	118	28	06	04	03	09	05	01	08	19	89	524
				11-27	00	26	07	00	00	00	00	01	02	01	22	63	220
				28-47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All Speeds	337	144	35	06	04	08	09	06	03	09	41	143	744
Sewa	11	00	00	1-10	71	143	92	29	10	12	05	13	20	64	72	123	646
				11-27	60	09	19	06	02	02	03	02	03	09	12	14	87
				28-47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All Speeds	77	152	111	26	12	14	09	15	23	73	84	137	733
El-Dakhla	50	80	00	1-10	80	85	32	28	18	23	20	32	41	46	82	145	640
				11-27	45	28	00	00	00	00	00	00	03	00	06	20	99
				28-47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All Speeds	125	113	32	28	18	23	20	32	41	46	88	165	731
El-kharga	30	00	00	1-10	170	74	26	06	06	10	05	07	07	21	22	108	462
				11-27	200	32	00	00	00	00	00	00	00	00	05	42	279
				28-47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All Speeds	370	106	26	06	06	10	05	07	07	21	27	150	741

UPPER AIR CLIMATOLOGICAL DATA

Table B 1 (*contd.*)—MONTHLY MEANS, ABSOLUTE HIGHEST AND LOWEST VALUES OF ALTITUDE, AIR TEMPERATURE AND DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

MAY — 1978

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	Surface	31	*1012mb.	*1018mb.	*1005m.b.	31	19.0	29.0	14.4	31	185
	1000	31	101	1018	1005	31	18.8	29.8	8.1	31	13.0
	850	31	114	179	72	31	18.1	25.7	13.0	31	— 2.7
	700	31	1532	1559	1477	32	—7.6	13.1	3.6	21	—9.6
	600	31	3161	3222	3111	31	1.8	— 85	—5 8	31	—14.3
	500	30	4414	4495	4141	30	—11.7	— 20.1	—16 0	30	— 24.1
	400	30	5839	2942	5746	30	—23 6	—35·0	—27.1	30	—35.0
	300	30	7209	7634	7402	30	—395	—43.9	—44.2	30	—49.6
	250	30	9548	9707	9417	30	—48.9	—54.0	—52.3	30	—58.2
	200	29	10769	10957	10630	29	—58.6	—56.3	—62.0	12	—65.9
	152	29	12203	12417	12062	29	—68.3	—56.3	—7 .8	3	—68.0
	100	28	13991	14209	13242	28	—66.9	—62 5	—715	—	—
	70	22	16460	16689	16299	22	—67.3	—61.8	—72.0	—	—
	60	12	18608	18835	18472	12	—63.9	—609	—68.4	—	—
	50	12	19292	19800	19420	12	—62.4	—57.3	—67.7	—	—
	40	5	20694	20859	20209	2	—57.8	—55.0	—59.2	—	—
	30	3	22148	22300	22000	3	—54.3	—52.7	—56.7	—	—
	20	2	23916	24079	23761	2	—49.0	—46.0	—51.9	—	—
	10	—	26470	26578	26372	—	—	—	—	—	—
Helwan 0000 U.T.	Surface	31	*996m.b.	*1001m.b.	*984m.b.	31	21.9	34.2	17.8	31	09.0
	1000	29	102	150	074	3	17·5	18.6	16.8	3	12.2
	850	29	1508	1547	1456	28	19.6	31.4	11.6	28	—01.1
	700	29	3117	3184	3089	28	09.6	16.8	06.4	28	—07·6
	600	29	4410	4454	4338	29	00 5	05.0	—03.9	28	—14.6
	500	29	5844	5910	5765	29	—09.4	—04.3	—14.9	29	—24.0
	400	28	7535	7636	7439	28	—21.6	—15.7	—27.1	28	—34.1
	300	27	9591	9725	9483	27	—37.3	—33.9	—40.2	27	—47.3
	250	27	10825	10971	10719	26	—46.4	—51.0	—20.9	27	—55.2
	200	26	12274	12430	12145	23	—55.6	—55.7	—60.1	25	—63.5
	150	23	14078	14283	13952	20	—61.9	—59.2	—67.3	5	—66.5
	100	20	16559	16782	16446	11	—66·2	—64.2	—72.1	—	—
	70	11	18751	18932	18592	8	—67.4	—63.7	—69.9	—	—
	60	8	19714	19890	19560	8	—65.8	—61.2	—68.5	—	—
	50	8	20799	20964	20644	7	—73.5	—57.2	—65.4	—	—
	40	7	22276	22450	22100	7	—60.0	—53.9	—62.1	—	—
	30	7	24600	24156	23829	5	—56.8	—48.7	—58.0	—	—
	20	5	26586	26725	26401	—	—54.6	—	—63.9	—	—
	10	1	31083	—	—	—	—47.1	—	—	—	—
Aswan 0000 U.T.	Surface	30	987m.b	*989m.b.	*984m.b.	30	26.7	32.2	21.8	30	3.2
	1000	30	77	105	50	—	—	—	—	—	—
	850	30	1514	1550	1476	30	23.9	29.4	18.9	30	— 1.6
	700	30	3170	3202	3129	30	11.3	15.5	7.4	30	—10.1
	600	30	4439	4482	4396	30	2.1	6.9	—3.4	30	—17.1
	500	30	5886	5956	5829	30	— 7.2	— 3.7	—11.2	30	—26.0
	400	30	7589	7667	7532	30	—19.9	—16.7	—24.5	30	—36.5
	300	27	9658	9757	9536	29	—35.7	—31.5	—42.7	29	—47.6
	250	23	10902	11009	10825	29	—45.1	—40.2	—49.4	29	—55.6
	200	23	12353	12473	12201	29	—55.5	—51.1	—59.8	29	—64.6
	150	22	14158	16719	13975	29	—64.6	—60.6	—67.3		—
	100	16	16580	18755	16425	29	—73.8	—70.1	—79.5	—	—
	70	13	18655	19860	18533	24	—73.6	—66.2	—77.5	—	—
	60	12	19616	20792	19500	20	—69.6	—66.3	—76.0	—	—
	50	12	20667	22270	20548	20	—64.4	—56.2	—67.5	—	—
	40	7	22194	24014	21630	14	—59.3	—56.4	—61.3	—	—
	30	7	23878	26664	23752	14	—54.4	—49.4	—56.6	—	—
	20	5	26484	—	26664	6	—48 .6	—44.7	—54.0	—	—
	10	—	31096		—	—	43.8	—	—	—	

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

MAY — 1978

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 . . .	30	* 1013 mb	* 1017 mb	* 1007 mb	30	21.6	39.9	19.4	30	13.4
	1000 . . .	30	136	174	90	30	23.5	39.2	18.2	29	-10.2
	850 . . .	30	1543	1579	1497	30	19.6	28.6	12.4	29	— 4.0
	700 . . .	30	3183	3245	3122	30	9.2	16.0	4.8	30	—11.3
	600 . . .	30	4440	4515	4372	30	0.2	5.0	— 4.3	30	—17.8
	500 . . .	30	4874	5965	5793	30	—16.0	— 5.5	—16.6	29	—27.6
	400 . . .	30	7555	7665	7449	30	—22.4	—17.5	—27.9	30	—39.2
	300 . . .	29	9599	9745	9464	29	—37.5	—32.9	—42.1	29	—52.5
	250 . . .	28	10839	10978	10684	28	—47.1	—41.7	—50.0	28	—61.2
	200 . . .	28	12280	12487	12113	28	—57.2	—51.1	—60.9	24	—65.7
	150 . . .	25	14335	14353	13904	25	—61.7	—52.9	—67.1	4	—69.9
	100 . . .	24	16583	169.2	16402	24	—65.0	—53.9	—72.5	—	—
	70 . . .	22	18763	19142	18780	22	—64.5	—60.0	—69.5	—	—
	60 . . .	19	19772	20150	19.50	19	—63.2	—57.2	—76.3	—	—
	50 . . .	19	20580	21237	20636	19	—60.3	—54.9	—72.0	—	—
	40 . . .	11	22333	22500	22109	11	—56.1	—51.3	—65.2	—	—
	30 . . .	9	24136	24210	23847	9	—51.0	—46.4	—58.4	—	—
	20 . . .	4	26905	26950	26885	4	—44.3	—42.3	—47.7	—	—
	10 . . .	—	—	—	—	—	—	—	—	—	—
Helwan 1200 U.T.	Surface . . .	—	994 m.b.	* 996 m.b.	990m.b.	31	33.2	—	29.0	31	04.9
	1000 . . .	31	—	—	—	—	—	3.19	26.2	31	03.1
	850 . . .	31	097	140	053	30	26.4	18.0	—	31	05.2
	700 . . .	31	1530	1565	1485	31	22.0	08.4	13.7	31	—11.8
	600 . . .	31	3188	3253	3118	31	12.7	00.9	08.3	31	—17.0
	500 . . .	31	4459	4545	4377	31	—03.4	11.5	—06.7	29	—24.9
	400 . . .	31	5912	5973	5828	31	—06.4	— 8.3	—09.4	28	—34.9
	300 . . .	31	7652	7718	7518	31	—18.3	—23.2	—22.1	27	—26.2
	250 . . .	30	9701	9900	9590	30	—23.9	—28.3	—36.8	21	—53.4
	200 . . .	29	10948	11126	10834	29	—42.9	—38.3	—45.4	4	—67.7
	150 . . .	29	12424	12607	12305	29	—52.0	—48.1	—55.9	—	—66.4
	100 . . .	28	14256	14447	14127	28	—57.2	—49.9	—61.1	—	—
	70 . . .	27	19803	17013	16615	27	—60.7	—54.2	—67.0	—	—
	60 . . .	12	19039	19255	18737	21	—60.1	—50.5	—65.5	—	—
	50 . . .	13	20043	20240	19920	13	—57.4	—49.0	—61.1	—	—
	40 . . .	13	21168	21410	21034	7	—23.4	—47.0	—57.0	—	—
	30 . . .	7	22733	23180	22290	6	—46.4	—40.7	—52.6	—	—
	20 . . .	6	24431	24900	23634	3	—38.5	—31.8	—45.6	—	—
	10 . . .	3	27298	27533	27130	—	—33.5	—30.7	—34.0	—	—
Aswan (A) 1200 U.T.	Surface	31	* 987mb.	* 988mb.	* 983mb.	—	—	33.8	19.9	31	3.9
	1000	31	1536	111	1517		26.6	19.9	9.7	—	—
	850	31	3207	1536	3164	31	13.2	8.5	1.6	30	— 5.8
	700	31	4283	3256	32	31	4.1	2.8	9.4	30	—14.3
	600	31	5938	4540	4437	31	5.8	13.4	21.6	30	20.9
	500	31	7653	6016	5879	31	—18.1	—30.0	—38.3	30	—30.2
	400	31	97.0	7752	7556	31	—33.8	—39.3	—48.3	29	—39.6
	300	30	10993	19868	9606	29	—43.5	—49.7	—59.4	28	—61.1
	250	30	12165	11144	10832	29	—53.5	—60.2	—67.9	28	—59.1
	200	30	14278	12640	12266	30	—63.2	—68.4	—77.0	29	98.0
	150	30	16718	14485	14066	30	—71.8	—65.7	—74.0	—	—
	100	28	18826	6971	16227	28	—71.4	—60.9	—72.4	—	—
	70	25	19789	19071	18661	25	—67.8	55.7	—66.8	—	—
	60	22	20833	20030	19620	22	—61.8	[illegible]	—61.2	—	—
	50	22	22364	21143	20135	22	—55.5	[illegible]	—53.3	—	—
	40	11	24151	22650	22180	15	—49.9	—40.0	—42.5	—	—
	30	16	28446	24485	23961	14	—43.8	—	—	—	—
	20	14		27222	26633	9	—	—	—	—	—
	10	9	—	—	—	—	—	—	—	—	—

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

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

Note : No upper air observations were taken at Mersa Matroh and Asswan at 0000 U.T.

Table B 2. -MEAN AND EXTREME VALUES AT THE FREEZING LEVEL AND THE TROPOPAUSE. THE HIGHEST WIND SPEED IN THE UPPER AIR

MAY—1978

	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)										
	M. Matruh (A)	4170 (31)	619 (31)	—13.6 (31)	4870	573	—13.5	3500	670	—12.8	13529 (28)	165 (28)	—56.4 (24)	20270	22	—69.3	12930	178	—56.6	11158	233	255	111
	Helwan . . .	4471 (28)	596 (28)	—14.6 (28)	5070	557	—8.0	3760	648	—20.8	14626 (17)	142 (17)	—53.5 (17)	18340	76	—70.1	12550	188	—60.0	12570	192	365	145
	Aswan . . (A)	4819 (30)	574 (30)	—19.0 (30)	5450	532	—25.4	4330	604	—21.4	16854 (22)	098 (22)	—64.8 (22)	12930	88	—69.3	12040	204	—69.5	11000	245	240	98
1200 U.T.	M. Matruh (A)	4472 (30)	4472 (0)	—18.7 (30)	5180	055	—28.0	3700	627	—2.9	13677 (34)	127 (24)	—93.6 (26)	16650	079	—70.6	11900	152	—66.0	12603	188	245	85
	Helwan . . .	4957 (31)	4957 (31)	—18.7 (31)	2078	511	—532	4360	605	—12.8	14126 (24)	127 (24)	—28.7 (21)	17106	96	—65.7	12010	214	—48.7	13420	172	300	150
	Aswan . (A)	5075 (31)	5075 (31)	—24.3 (30)	2092	527	—26.0	4290	590	—57.9	16636 (25)	105 (25)	—72.1 (25)	18400	98	—77.7	46.0	225	46.0	11450	232	290	100

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

Table B3.— 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 1978

Time	Pressure Surface (Millibar)	Wind within 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	5	1	6	2	2	1	3	3	9	4	6	1	12	1	3	1	3	6	8	5	11	1	7	1	31	7
	1000	3	11	1	7	4	8	0	—	7	13	0	—	1	14	0	—	1	16	2	10	10	15	2	8	0	31	12
	850	3	15	2	11	2	14	0	—	2	15	0	—	0	—	1	22	2	12	4	25	7	14	8	16	0	31	16
	700	1	15	0	—	0	—	0	—	0	—	1	5	1	9	2	14	7	29	5	26	8	19	4	24	0	29	21
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	11	33	11	23	4	23	3	18	0	29	26
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	21	8	34	12	36	5	20	1	25	0	27	32
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	32	13	49	2	44	1	33	0	25	45
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	34	7	53	11	50	2	40	1	40	0	22	48
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	52	7	53	1	63	1	91	0	15	56
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—		—	5	62	5	48	0	—	0	—	0	10	55
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—		—	2	40	2	42	0	—	0	—	0	4	41
	150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	4	9	4	12	4	11	3	13	0	—	0	—	1	16	0	—		—	1	18	2	17	8	16	0	30	
	1000	4	10	3	11	4	13	3	13	0	—	0	—	1	19	0	—		—	1	9	9	21	5	17	0	30	54
	850	1	21	1	7	0	—	2	8	4	8	1	16	1	56	0	—	0	21	2	17	11	16	4	18	0	30	46
	700	2	12	0	—	0	—	1	7	0	—	1	13	0	—	3	31	0	17	7	27	5	14	5	20	0	81	48
	600	1	34	0	—	0	—	0	—	0	—	0	—	1	15	2	32	3	26	8	41	8	23	1	26	0	29	37
	500	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	38	5	27	8	41	3	27	1	32	0	29	33
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	33	6	35	7	44	2	44	1	—	0	27	26
	300	0	—	1	—	0	—	0	—	0	—	0	—	0	—	1	59	11	44	4	32	1	69	0	30	0	25	21
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	50	10	21	1	—	2	61	1	—	0	22	16
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	61	0	—	—	48	0	—	0	11	15
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	—	—	—	—	—	—	—	0	7	14
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	[illegible]	—	—	—	—	—	—	—	0	4	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

TN = The total number of cases the wind has been observed for all direction 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 MAY 1973

Time	Pressure Surface (Millibar.)	Wind within ranges of direction (000—360°)																								Number of Calm winds	Total Number of Observations (T.N)	Mean Scalar wind speed (knots)
		345/014		015/043		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 T.U.	Surface	8	07	8	08	8	15	2	12	0	—	1	04	0	—	1	07	0	—	0	—	2	06	1	05	0	31	8
	1000	0	—	3	09	0	—	1	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	3	9
	850	7	16	5	17	1	24	5	13	0	—	1	08	1	03	0	—	0	—	2	22	1	15	6	17	0	29	16
	700	4	15	2	12	1	11	1	19	1	10	0	—	0	—	0	—	4	11	1	57	7	22	8	22	0	29	20
	600	3	20	1	17	0	—	1	—	1	08	0	—	0	—	0	—	1	25	2	32	10	29	11	25	0	29	25
	500	3	24	1	13	1	51	0	—	0	—	0	—	0	—	0	—	1	14	7	23	12	22	2	30	0	27	25
	400	4	40	1	38	0	—	0	—	0	—	0	—	0	—	0	—	2	38	9	37	5	30	3	34	0	24	36
	300	2	37	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	69	4	60	11	47	3	43	0	21	49
	250	1	63	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	66	6	66	8	43	1	56	0	19	56
	200	1	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	40	5	84	2	70	2	87	0	12	72
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	86	0	—	0	—	0	3	89
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	129	0	—	0	—	0	1	129
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 T.U.	Surface	3	09	7	11	9	12	0	—	0	—	0	—	2	06	0	—	1	05	3	09	3	10	3	08	0	31	10
	1000	0	—	1	12	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	12
	850	4	12	7	10	8	11	4	14	0	—	1	08	0	—	0	—	0	—	4	06	2	15	1	07	0	31	10
	700	4	14	5	14	3	14	1	11	0	—	0	—	0	—	0	—	3	17	3	37	6	12	6	17	0	31	17
	600	4	22	3	14	1	10	0	—	0	—	0	—	0	—	0	—	3	11	6	31	6	20	7	18	0	30	20
	500	2	21	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	12	9	27	10	35	8	30	0	30	29
	400	1	40	1	35	0	—	0	—	0	—	0	—	0	—	0	—	2	32	8	35	13	31	2	36	0	27	33
	300	1	55	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	43	13	45	7	54	1	79	0	23	50
	250	1	95	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	36	15	55	6	62	3	59	0	23	82
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	70	10	68	4	88	3	64	0	18	72
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	08	4	82	1	100	0	15	82
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	100	1	77	0	—	0	—	0	2	88
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	68	0	—	0	—	0	—	0	1	86
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	100	0	—	0	—	0	—	0	1	100
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

T.N. = The total number of cases the wind has been observed 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 — 1978

Time	Pressure Surface Millibar	Wind between range 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	14	10	6	11	3	12	3	9	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	11	0	30	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	3	20	14	20	3	13	0	—	1	7	0	—	0	—	1	10	0	—	1	29	1	23	6	14	0	30	13
	700	3	24	4	19	1	3	1	22	1	6	0	—	3	17	1	25	3	14	4	17	4	19	2	8	0	27	17
	600	3	7	5	15	1	19	0	—	0	—	0	—	1	3	3	13	6	18	3	14	4	23	1	10	0	27	15
	500	3	16	3	38	0	—	0	—	0	—	0	—	1	13	0	—	8	21	5	30	5	17	2	18	0	27	23
	400	3	19	1	48	0	—	0	—	0	—	1	5	0	—	0	—	9	31	5	27	3	13	5	25	0	27	26
	300	1	49	0	—	0	—	0	—	0	—	0	—	0	—	0	—	10	46	3	20	4	35	7	28	0	25	36
	250	1	53	0	—	0	—	0	—	0	—	0	—	0	—	0	—	13	45	1	11	4	46	6	32	0	25	41
	200	0	—	0	—	1	45	0	—	0	—	0	—	0	—	0	—	11	55	2	28	6	57	5	37	0	25	49
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	35	9	51	5	37	6	50	2	48	0	23	47
	100	0	—	1	7	1	14	0	—	0	—	0	—	2	13	2	28	7	37	5	37	2	23	0	—	0	20	30
	70	1	8	0	—	0	—	2	13	4	13	0	—	0	—	2	11	2	16	2	12	1	11	0	—	0	14	14
	60	0	—	2	11	2	11	3	14	3	19	2	8	0	—	0	—	0	—	0	—	0	—	0	—	0	12	13
	50	1	8	1	10	1	5	6	14	1	18	0	—	0	—	0	—	0	—	0	—	1	18	0	—	0	10	14
	40	0	—	1	13	1	15	6	13	1	16	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	9	16
	30	0	—	0	—	1	10	3	23	2	16	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	6	18
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	14	10	3	8	2	12	1	6	0	—	1	3	0	—	0	—	1	2	1	10	5	9	3	10	0	31	9
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	8	13	2	9	5	10	2	10	0	—	1	4	0	—	0	—	2	8	2	10	2	20	4	14	0	31	11
	700	2	18	3	15	4	14	1	10	0	—	0	—	2	8	2	18	3	18	5	17	6	16	2	11	0	31	15
	600	3	14	3	8	2	14	0	—	0	—	0	—	2	9	2	24	6	16	3	26	5	20	5	14	0	31	16
	500	2	26	1	22	3	11	0	—	0	—	0	—	1	8	2	30	7	19	6	18	6	16	3	18	0	31	18
	400	4	24	0	—	0	—	1	22	0	—	1	10	0	—	1	23	10	34	6	22	3	16	5	24	0	31	25
	300	1	47	0	—	0	—	0	—	0	—	0	—	1	12	0	—	10	38	5	39	7	37	6	25	0	30	85
	250	3	29	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	50	8	33	6	50	4	41	0	30	42
	200	2	33	0	—	0	—	0	—	0	—	0	—	0	—	0	—	8	57	9	37	8	58	3	36	0	30	48
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	45	11	42	6	49	2	50	0	28	46
	100	1	5	0	—	0	—	0	—	0	—	1	10	1	3	2	22	8	30	5	23	5	34	1	19	0	24	25
	70	2	10	0	—	2	17	5	19	1	10	0	—	0	—	4	15	1	32	1	10	1	10	1	16	0	18	17
	60	0	—	1	13	2	27	2	17	3	15	1	18	1	8	1	21	2	12	1	9	0	—	0	—	0	15	16
	50	0	—	0	—	3	22	2	25	2	19	0	—	0	—	1	10	0	—	0	—	0	—	0	—	0	8	20
	40	0	—	0	—	0	—	3	20	1	16	1	10	0	—	0	—	0	—	0	—	0	—	0	—	0	5	17
	30	0	—	1	8	0	—	2	16	1	9	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	4	12
	20	0	—	0	—	2	10	1	22	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	—	3	14
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—	—

N — The number of cases the wind has been observed within the range of direction during the month.
TN — The total number of cases the wind has been observed for all direction during the month.

MONTHLY REVIEW OF AGROMETEOROLOGICAL STATIONS

MERSA MATRUH — MAY 1978

The mean monthly air temperature and relative humidity were slightly above normal.

Weather during the first three weeks was generally mild intervened by three light warm spells on the (2*nd*), 11*th*) & 12*th*) and 15*th*, 16*th* & 17*th*).

The last week was characterized by on excessive heat wave which prevailed from the 23*rd* till the 29*th* and gave the highest maximum temperature (41.4C) on the 26*th*.

The mean monthly actual sushine duration and wind speed at 1.5 met. height were slightly below normal.

The highest maximum soil temperatures were higher than the corresponding values of May 1977 at 2 & 10 cm. depths and lower at 5,20 & 50 cm. depts; the departures varied between 0.2° and 0.9°C. The lowest minimum soil temperatures were higher than May 1977 at all depths with departures between 0.4°C (at 2 cm) and 1.9°C (at 20 cm).

TAHRIR — MAY 1973

The mean monthly air temperature was above normal and the mean monthly relative humidity was the same as normal.

The month was characterized by five heat waves intervened by short mild periods. The first four heat waves prevailed most of the first three weeks of the month and were of moderate intesity. The last heat wave was excessive. It prevailed from the 23*rd* till the 29*th* and gave the highest maximum temperature (44.6°C) on he 27*th*.

The mean monthly actual sunshine duration and wind speed at 1.5 met. height were slightly below normal. The mean monthly pan evaporation was slightly above normal.

The highest maximum soil temperatures were higher than normal at all depths with departures between 3.8°C (at 10 cm) and 0.8°C (at 100cm). The lowest minimum soil temperatures were higher than normal at all depths except at 5 cm where it was lower by 0.7°C; the departures varied between 1.4°C (at both 20 & 50cm. depths) and 0.1°C (at 100 cm.).

BAHTIM — MAY 1978

The mean monthly air temperature was above average and the mean monthly relative humidity was below average.

The month was characterized by five heat waves separated by short mild periods. The first four heat waves were experienced most of the first three weeks and were of moderate intensity.

The last heat wave was excessive. It prevailed from the 23*rd* till the 29*th* and gave the highest maximum temperature (43.9°C) on the 27*th*.

The mean monthly wind speed at 1.5met. height was the same as average. The mean monthly sunshine duration and pan evaporation were higher than average by 0.5 hour and 3.12 mm. respectively.

The highest maximum soil temperatures were higher than average at all depths with departures between 4.7°C (at 2cm) and 1.0°C (at 100 cm.). The lowest minimum soil temperatures were the same as average at 2cm., higher than average at other depths with departures between 1.8°C (at 10 cm) and 0%°C (at 100 cm.).

ASSYOUT — MAY 1978

The mean monthly air temperature was higher than the corresponding value of May 1977 and the mean monthly relative humidity was slightly lower.

Four hest waves prevailed the whole month apart from short mild perid. The last heat wave was excessive. It prevailed from the 23*rd* till the 30*th* and gave the highest maximum temperature (45.4°C) on the 29*th*.

The mean monthly actual sunshine duration and pan evaporation were higher than May 1977 by 0.3 hour and 1.61 mm respectively.

The highest maximum soil temperatures were hisgher than last May at all depths except at 5cm. where it was lower by 0.3°C; the departures varied between 0.6°C (at 2cm) and 1.8°C (at 10cm). The lowest minimum soil temperatures were higher than last May at all depths with departures between 2.1°C (at 2cm) and 0.5°C (at 100 cm.).

KHARGA MAY 1978

The mean monthly air temperature and relative humidity were above normal.

Four excessive heat waves prevailed the whole month apart from few mild days. The last wave was excessive. It prevailed from the 23*rd* till the 30th and gave the highest maximum temperature (49.8°C) on the 30*th* which is a record since the year.

The mean monthly actual sunhine duration was slightly higher than normal. The mean monthly wind speed at 1.5 met. height and pan evaporation were slightly lower than normal.

The highest maximum soil temperatures were higher than normal at all depths with departues between 6.5°C (at 10 cm) and 0.6°C (at 100 cm.). The lowest minimum soil temperatures were also higher than normal at all depths with departures between 2.7°C (at 2cm) and 0.1°C at both 50,100cm).

TABLE C 1.—AIR TEMPERATURE AT 1½ METRES ABOVE GROUND

MAY — 1978

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
Mersa Matruh. .	26.3	15.4	20.7	17.9	21 6	24.0	24.0	24.0	24.0	22.1	15.4	3.2	0 8	0.4	0.2	0.0
Tahrir	33.8	15.2	23.7	19.0	25.6	24.0	24.0	24.0	24.0	22.1	15.2	9.6	4.2	1.3	0.3	0.0
Bahtim	33.6	14.3	24.0	18 8	26.0	24.0	24.0	24.0	24.0	21.3	15.4	10.4	5.2	1.6	0.4	0.0
Assiut	38.9	17.8	27.8	22.7	29.7	24.0	24.0	24.0	24.0	23.8	19.9	13.8	9.1	4.7	1.3	0.0
Kharga	41.1	22.4	32.4	28.4	33.8	24.0	24.0	24.0	24.0	24.0	23.6	20.7	14 5	8.5	3.8	0.6

TABLE C 2.—EXTREME VALUES OF AIR TEMPERATURE AT 1½ METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS

MAY — 1978

STATION	Max. Temp. at 1½ metres (°C)				Min. Temp. at 1½ 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
Mersa Matruh. . . .	41.4	26	20.3	4	20.8	26	11.4	7	8.0	2	—	—
Tahrir	44.6	27	27.3	5	20.0	29	11.0	14	9.8	14	8.0	14
Bahtim	43.9	27	25.3	5	19.8	28	10.2	5	7.0	2	4.7	5
Assiut	45.4	29	33.0	14	27.0	30	13.3	2	7.8	2	—	—
Kharga	49.3	30	33.9	14	29.8	29	14.1	3	12.8	3	—	—

TABLE C 3.— SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 1½ METRES ABOVE GROUND EVAPORATION & RAINFALL

MAY— 1978

STATION	Soar+Sky) Radiation gm. cal/cms	Duration of Bright Sunshine (hours)			Relative Humidity %				Vapour pressure (mms)						Evaporation (mms)		Rainfall (mms)		
		Total Actual monthly	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
Mersa Matruh .	552.0	329.1	426.3	77	69	57	14	26	12.1	12.6	18.4	20	6 8	12	7.4	—	0.0	0.0	—
Thahrir	654 7	341.6	424.6	80	59	31	10	27	11.9	10.9	16.3	27	6.8	27	9.3	11.09	0.0	0 0	—
Bahtim	663.9	343 9	423 2	82	53	26	09	27	10.7	9.4	21.3	28	5.1	9	11.6	13.75	0.0	0.0	—
Asslut	—	376.4	417.2	90	34	16	09	7	8.7	7.9	13.3	30	3.9	7	11.5	12.29	0 0	0.0	—
Kharga	713.6	362.8	413.8	88	26	17	05	10	8.9	9.2	15.3	16	2.7	1	18.6	19.12	0.0	0.0	—

Table C 4.—EXTREME SOIL TEMPERATURE AT DIFFER DEPTH IN DIFFERENT FIELDS·cms

MAY 1978

STATIOL	Highest (H) Lowest (L)	Extreme soil temperature (,C) in dry field at different depths (,ms.)								Extreme soil temperature (°C) in grass fisld at different depths (·ms.)							
		2	5	10	20	50	100	200	300	2	5	10	20	50	100	200	300
M. Matruh	H	42.0	38.3	32.5	29.4	25.4	22.8	20.8	—	—	—	—	—	—	—	—	—
	L	18.3	18.3	18.7	21.0	20.6	19.2	19.1	—	—	—	—	—	—	—	—	—
Tahrir. . .	H	53.9	47.8	42.4	36.2	31.7	28.2	25.0	24.1	35.9	33.4	31.1	28.6	28.1	26.1	23.7	—
	L	21.7	20.2	21.0	24.3	25.7	23.9	22.6	22.6	19.4	19.2	19.5	20.7	23.3	22.2	21.1	—
Bahtim . .	H	56.6	46.4	38.9	34.2	30.1	26.5	23.8	22.9	37.4	32.6	29.4	26.4	24.6	22.6	20.9	—
	L	22.1	22.7	23.8	25.8	25.4	23.3	22.6	22.5	91.3	19.8	20.1	21 2	21.0	20.2	19.9	—
Asiut . . .	H	65.8	51.1	43.8	36.8	30.6	27.8	24.5	23.8	—	—	—	—	—	—	—	—
	L	28.3	24.6	24.8	27.6	26.1	24.5	22.8	23.1	—	—	—	—	—	—	—	—
Kharga . .	H	61.6	54.9	48.4	41.4	33.5	30.5	27.9	27.4	—	—	—	—	—	—	—	—
	L	19.3	22.2	26.2	30.0	28.6	27.3	26.2	29.6	—	—	—	—	—	—	—	—

TableC 4.—SURFACE WIND

MAY — 1978

STATION	Wind Speed m/scc at 1% metres			Days with surface wind speed at 10 metres							Max. Cust (knots	
	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
M. Matruh	3.6	2.4	4.7	31	26	14	3	2	0	0	33	92
Tahrir.	2.3	1.6	3.0	31	18	2	0	0	0	0	33	21,27
Bahtim..	2.6	1.7	3.5	30	26	11	2	0	0	0	23	16
Asiut	—	—	—	—	—	—	—	—	—	—	—	—
Kharga	3.1	2.5	3.7	30	27	13	2	0	0	0	33	14

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THE ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 21 NUMBER 6

JUNE 1978

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THE EGYPTIAN METEOROLOGICAL AUTHORITY
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL AUTHORITY OF THE ARAB REPUBLIC OF EGYPT—CAIRO

In fulfilment of its duties, the Egyptian Meteorological Authority issues several reports and publications on weather, climate and agro-meteorology. The principal publications are described on this page.

Orders for publications should be addressed to :

"Chairman of the Board of Directors, Meteorological Authority, Kubri-el-Qubbeh — CAIRO.

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 the Meteorological Authority.

TECHNICAL NOTES

As from October 1970, the Meteorological Authority 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 ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 21 NUMBER 6

JUNE 1978

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THE EGYPTIAN METEOROLOGICAL AUTHORITY
CAIRO

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GENERAL SUMMARY OF WEATHER CONDITIONS

JUNE 1978

Generally mild summer weather during the third of the ; markedly hot otherwise

PRESSURE DISTRIBUTION

The atmospheric pressure over Egypt was mainly influenced by the following :

- The complex monsoon low pressure over Iraq, Arabia & North Sudan.
- Weak high pressure over Central Mediterranean extending through north of the Western Desert.
- Four depressions passing through Italy & the Balkans. The transits of these depressions through the Black Sea area on the 15*th*, 19*th*, 22*nd* & 28*th* were associated with the northwestward elongation and slight deepening of the Iraq monsoon trough.
- Northern elongation of the Sudan trough on the 4*th* & 5*th*.

The monthly mean atmospheric pressure over Egypt was generally around normal.

SURFACE WIND

Surface winds were generally light to moderate and blew mostly from N ly and NW ly directions and with a less frequency from NE ly.

Winds freshened during several days in scattered places mainly in the Mediterranean, Upper Egypt and Red Sea districts.

TEMPERATURE

Mild summer weather with subnormal temperatures prevailed during the first third of the month, apart from a short heat wave in Upper Egypt. on the 4*th* & 5*th*.

The rest of the month was characterized by successive three pronounced heat waves from the 12*th* till the 23*rd*, the last of which was the hottest, and a short heat wave on the 27*th* & 28*th*.

The highest and lowest maximum air temperatures were respectively 47.7°C at Kharga on the 18 the and 24.0°C at Sallum on the 4*th* and 5*th*.

The highest and lowest minimum air temperatures were respectively 30.7°C at Dakhla on the 19th and 13.9°C at Mersa Matruh on the 3*rd*.

PRECIPITATION

The month was rainless apart from light rain over Alexandria Balteam.

The maximum daily rainfall was 0.1mm. at Alexandria on the 3rd and at Cairo airport on the 4*th*.

OTHER WEATHER PHENOMENA

Early morning mist developed during several days over scattered places in Lower Egypt & Cairo.

Light rising sand was reported during few days in scattered places in Upper Egypt and the Western Desert.

Cairo, MAY 1979

Chairman (M. A. BADRAN)

(Board of Directors)

SURFACE DATA

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

JUNE — 1978

STATION	Atmospheric Pressure mbs. M.S.L		Air Temperature 'C									Relative Humidity %		Bright Sunshine			Piche Evap.
			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	%	
ElSallum	1013.6	0.8	30.3	0.6	20.1	0.2	25.2	24.0	0.4	18.9	—0.9	56	—5	—	—	—	7.9
Mersa Matro	1013.2	0.5	27.6	—0.2	18.1	—0.4	32.0	23.0	—0.4	19.0	—0.5	72	3	563.9	424.5	68	7.4
Alexandria	1012.1	0.0	29.1	0.2	20.3	0.1	24 7	24.3	—0.1	20.3	—0.2	69	0	743.5	424.7	28	4.7
Port Said	1010.5	—0.5	27.7	—0.8	22 8	0.4	25.2	25.0	0.1	20.9	—0.4	68	—3	553.2	424.8	48	6.5
Cairo	1010.8	—0.1	34.4	—0.5	20.1	—0.1	27.2	26.9	—0.3	19.1	—0.5	45	3	—	—	—	16.2
ElFayoum	—	—	36.9	—0.1	19 3	—1.2	28.1	27.9	—0.7	19.4	—0.1	45	6	—	—	—	10.5
El minia	1009.8	—0.1	36.6	0.0	19.0	—0.1	27.8	28.0	0.1	18.5	—0.1	42	2	463.7	416.5	88	16.6
Assuit	1009.8	0.9	26.6	—1.2	20.1	—1 6	28.6	25.0	0.8	17.2	—1.1	27	0	—	—	—	22.2
Luxor	1005.8	0.0	41.1	—0.1	22.2	—0.3	31.6	32.0	—0.4	19 0	—1.1	26	2	—	—	—	21.4
Aswon	1006.3	—0.4	41.8	—0.1	24.6	—0.1	33.2	33.4	0.0	17.1	—1.0	13	—5	833.4	653.9	29	32.6
Swa	1012.4	0.3	37.4	—0.0	19.7	—0.2	28.5	28.8	—0.1	18.1	—0.3	35	—3	353.0	419.3	48	41.3
El-Baharia	1010.4	—0.5	37.1	0.3	19.6	—0.3	28.3	28.6	—0.1	17.5	—0.6	34	—5	—	—	—	2 .6
El-Farafra	1011.6	0.0	37.8	0.3	21.0	0.8	29.4	29.5	—0.4	16.8	—0.1	32	—3	—	—	—	02.2
El-Dakhla	1010.5	1.7	39.1	0.7	22.6	0.2	30.8	31.2	—0.7	17.1	—0.6	20	—5	—	—	—	32.9
El-Kharga	1007.9	1.1	40.1	1.2	24.0	0.4	32.0	32.6	—0.6	20.4	—2.6	34	10 —12	364.0	410.6	98	02.4
El- Hurgada	1007.5	0.4	32.6	0.4	25.1	1.4	28 8	26.2	—0.8	19.2	—1.1	35	—4	377.5	415.2	91	32.9
El-Quseir	1006.0	—1.2	32.1	0.0	25.6	0.2	28.8	28.9	—0.1	20.7	—0.1	45		—	—	—	11.8

Table A 2.—MAXIMUM AND MINIMUM AIR TEMPERATURE

JUNE — 1978

Station	Maximum Temperature °C									Grass Min. Temp.		Maximum 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
El Sallum	43.4	22	24.0	4,5	26	15	05	01	00	18.6	—	26.0	20	16.3	8	00	00	00	00
Mersa Matro . .	44.5	22	22.6	1	20	06	02	01	00	16.8	—	23.0	22	13.9	3	00	00	00	00
Alexandria	41.3	22	25.3	1	30	07	01	01	00	18.2	—	23.2	20	16.9	3	00	00	00	00
Port Said	73.8	22	24.2	5	52	04	01	00	00	22.3	—	25.6	28	19.6	2	00	00	00	00
Cairo A. P. . . .	44.7	22	58.5	1	03	24	15	02	00	—	—	25.8	22	16.0	7	00	00	00	00
El-Fayoum	45.5	22	13.5	1,6	30	30	02	08	01	17.0	—	23.3	18	15.2	8,9	00	00	00	00
EltMinia	45.2	22	13.0	1	30	30	19	06	01	17.3	—	22.2	23	16.8	9	00	00	00	00
Assuit	45.5	18	30.1	7	30	30	18	09	02	19.8	—	42.8	22	17.3	8	00	00	00	00
Luoxr	47.4	18	43.8	7	30	30	29	08	05	15.1	—	52.8	22	71.6	10	00	00	00	00
Aswan	47.4	18	35.2	8	30	30	30	20	06	—	—	82.4	24	02.7	10	00	00	00	00
Sewa		22	30.2	6	30	30	20	11	01	17.4	—	32.8	23	0.22	6	00	00	00	00
El-baharia	47.3	22	30.3	6	30	30	18	07	01	18.9	—	42.8	23	0.8	7	00	00	00	00
El-Farafra	46.2	23	31.8	7	30	30	21	10	02	19.2	—	24.7	18	1.8	7	00	00	00	00
El-Dakhle	46.6	23	32,8	6,9	30	30	25	13	03	22.6	—	30.7	19	4.0	11	00	00	00	00
El-Kharga	47.2 47.7	18	33,0	6	30	30	26	16	05	12.8	—	30.3	15	3.1	8	00	00	00	00
El-Hurgada . . .		23	29,1		30	25	04	00	00	—	—	28.9	02	6.9	3	00	00	00	00
El-Quseir	38.9 40.6	23	29,0	6 7,8	30	20	02	01	00	22.2	—	28.7	21	9.5	9	00	00	00	00

Table A. 3—SKY COVER AND RAIN FALL

JUNE — 1978

Station	Mean Sky Cover Oct.					Rain Fell mms										
	00 U.T.	60 U.T.	12 U.T.	18 U.T.	Daily Mean	Total Amount	Dev. From Normal	Max. Fall in one day		Number of Dayswith Amountof Rain						
								Amount	Date	<.1	>=.1	>=1	>=5	>=10	>=25	>=05
Elsallum	0.5	0.8	0.7	0.4	0.6	0.0	—0.4	—	—	00	00	00	00	00	00	00
Mersa Matro (A)	1.2	2.2	0.6	2.1	1.4	0.0	—2.4	—	—	00	00	00	00	00	00	00
Alexandria (A)	1.5	2.5	2.8	1.8	2.1	0.1	0.1	0.1	3	00	10	00	00	00	00	00
Port Said (A)	1.2	1.7	0.4	0.9	1.0	0.0	0.0	—	—	00	00	00	00	00	00	00
Gairo A.P.	0.6	2.7	0.6	0.2	0.9	0.1	—0.1	0.1	4	00	00	00	00	00	00	00
El-Fayoum	—	0.8	0.2	0.2	—	0.0	0.0	—	—	00	00	00	00	00	00	00
El Minia (A)	0.0	0.3	0.3	0.0	0.1	Tr.	—	—	—	00	00	00	00	00	00	00
Assuit (A)	0.0	0.2	0.2	0.1	0.1	0.0	0.0	—	—	00	00	00	00	00	00	00
Luxor (A)	0.0	0.2	0.2	0.4	0.2	0.0	0.0	—	—	00	00	00	00	00	00	00
Aswan (A)	0.0	0.1	0.0	0.3	0.1	0.0	0.0	—	—	00	00	00	00	00	00	00
Sewa (A)	0.2	0.4	0.0	0.5	0.2	0.0	—3.0	—	—	00	00	00	00	00	00	00
El-Baharia	0.2	0.2	0.2	0.1	0.2	Tr.	—	—	—	00	00	00	00	00	00	00
El Farafra	—	0.1	0.3	0.1	—	Tr.	—	Tr	4	00	00	00	00	00	00	00
El Dakhla (A)	0.1	0.1	0.2	0.1	0.1	0.0	0.0	—	—	00	00	00	00	00	00	00
El-Kharga (A)	0.0	0.2	0.1	0.1	1.1	0.0	0.0	—	—	00	00	00	00	00	00	00
El Hurgada (A)	0.0	0.1	0.2	0.2	1.1	0.0	0.0	—	—	00	00	00	00	00	00	00
ElOuseir	0.0	0.1	0.2	0.1	0.1	0.0	0.0	—	—	00	00	00	00	00	00	00

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

JUNE — 1978

Station	Precipitation		Frost	Thunderstorm	Mist Vis ≥ 1000 Metre	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	Sky Cover Clear Cloudy
	Rain	Snow											
Sallum	00	00	00	00	01	00	00	02	00	00	00	26	00
Mersa Matruh . . . (A)	00	00	00	00	12	01	00	12	00	00	00	20	00
Alexandria . . . . (A)	01	00	00	00	01	01	00	01	00	00	00	16	00
Port Said . . . . (A)	00	00	00	00	11	00	00	05	00	00	00	25	00
El Arish	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo . . . . . (A)	01	00	00	00	00	01	08	01	00	00	00	25	00
Fayoum	00	00	00	00	00	00	01	01	00	00	00	29	00
Minya . . . . . (A)	00	00	00	00	14	00	00	05	00	00	00	29	00
Assyout. . . . . (A)	00	00	00	00	00	00	00	06	00	01	00	29	00
Luxor . . . . . (A)	00	00	00	00	00	00	04	03	00	00	00	25	00
Aswan . . . . . (A)	00	00	00	00	00	00	01	07	00	00	00	30	00
Siwa	00	00	00	00	00	00	03	04	00	00	00	03	00
Bahariya	00	00	00	00	00	00	00	02	00	00	00	28	00
Farafra	00	00	00	00	00	00	01	07	00	00	00	28	00
Dakhla	00	00	00	00	00	00	03	09	00	00	00	29	50
Kharga	00	00	00	00	00	00	00	06	00	00	00	29	00
Tor	—	00	—	—	—	—	—	—	—	—	—	—	00
Hurghada	00	00	00	00	00	00	00	08	00	00	00	03	00
Quseir	00	00	00	00	00	00	00	01	00	00	00	22	00

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

JUNE 1978

Station	calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing within 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	14	02	00	1 –10	73	67	05	21	45	01	14	01	00	26	73	127	548
				11—27	12	32	12	00	00	00	00	00	06	07	16	59	135
				28—47	00	00	00	00	00	00	00	00	00	00	0	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**85**	**120**	**62**	**21**	**45**	**10**	**14**	**10**	**06**	**33**	**89**	**186**	**681**
Mersa Matruh · (A)	16	00	00	1—10	26	06	11	09	01	02	06	06	84	126	89	118	451
				11—27	00	04	02	00	00	00	00	05	07	01	97	145	261
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**26**	**10**	**13**	**09**	**01**	**02**	**06**	**14**	**55**	**127**	**186**	**263**	**712**
Alexandria . . (A)	00	00	00	1—10	36	17	07	02	07	02	07	05	04	51	96	279	477
				11—27	11	04	01	00	00	00	00	00	04	01	49	176	237
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**47**	**21**	**08**	**02**	**07**	**02**	**07**	**05**	**08**	**16**	**145**	**446**	**704**
Cairo . . . . (A)	10	01	00	1—10	115	71	06	02	05	02	02	05	09	65	105	128	519
				11—27	43	44	02	01	07	00	00	04	02	02	02	71	189
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**158**	**115**	**11**	**03**	**05**	**02**	**02**	**09**	**11**	**67**	**125**	**199**	**707**
Fayoum	36	03	00	1—10	272	338	21	03	02	03	00	03	07	06	03	24	678
				11—27	00	35	06	00	00	00	00	00	00	00	00	01	41
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**272**	**373**	**27**	**03**	**02**	**03**	**00**	**03**	**07**	**06**	**03**	**25**	**716**
Minia	41	05	00	1—10	207	23	04	01	01	03	04	02	01	01	04	42	275
				11—27	402	38	00	00	01	00	00	00	00	00	15	10	442
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**609**	**61**	**04**	**01**	**02**	**03**	**04**	**02**	**01**	**01**	**04**	**25**	**717**
Assuit	29	00	00	1—10	42	64	10	01	00	02	03	07	04	02	44	42	717
				11—27	172	95	12	01	05	00	00	00	00	00	00	137	502
				28—47	01	00	00	00	00	00	00	00	00	00	00	00	01
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**215**	**159**	**22**	**01**	**05**	**02**	**03**	**07**	**04**	**02**	**121**	**179**	**720**

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

JUNE — 1978

Staion	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing within the ranges of directions indicated												
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 314	285 / 314	315 / 344	All directions
Luxor	04	00	00	1—10	56	31	57	32	39	18	42	67	50	28	22	82	652
				11—27	00	00	00	00	00	00	00	00	00	00	21	41	16
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**56**	**31**	**57**	**32**	**39**	**18**	**42**	**67**	**50**	**28**	**23**	**94**	**668**
Aswan	01	02	00	1—10	132	95	24	11	04	11	01	08	01	05	66	155	513
				11—27	18	33	01	00	00	00	00	00	00	00	21	68	204
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**213**	**128**	**25**	**11**	**04**	**11**	**01**	**08**	**01**	**05**	**87**	**223**	**717**
Siwa	21	01	00	1—10	48	43	12	12	05	05	26	30	58	121	112	163	635
				11—27	03	01	00	00	00	00	00	03	07	08	23	18	63
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**51**	**44**	**12**	**12**	**05**	**05**	**26**	**33**	**65**	**129**	**135**	**181**	**698**
Dakhla	41		00	1—10	97	68	26	23	14	01	01	19	21	19	64	145	520
				11—27	93	64	05	00	00	00	00	01	00	00	02	29	193
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**190**	**132**	**31**	**23**	**14**	**10**	**10**	**19**	**21**	**19**	**66**	**174**	**709**
Hurgada	00	01	00	1—10	19	30	09	06	04	11	04	02	00	21	80	36	222
				11—27	92	15	00	00	00	00	00	00	00	08	141	239	495
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**111**	**45**	**09**	**06**	**04**	**11**	**04**	**02**	**00**	**29**	**221**	**175**	**717**
Quseir	01	00	00	1—10	172	11	11	03	05	03	03	80	13	18	53	159	460
				11—27	158	00	00	00	13	00	00	00	00	00	01	101	260
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**330**	**11**	**11**	**03**	**05**	**03**	**03**	**08**	**13**	**18**	**54**	**260**	**719**

UPPER AIR CLIMATOLOGICAL DATA

TABL : B 1—MONTHLY MEANS DAND MONTHLY ABSOLUTE HIGHEST & LOWEST VALUES OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

JUNE — 1978

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
M. Matruh 0000 U.T.	Surface	30	1012m.b.*	1015m.b.*	1007m.b.*	30	22.2	26.2	18.0	31	16.0
	1000	30	159	158	90	30	21.6	27.6	16.9	30	15.8
	850	30	1531	1567	1497	30	17.4	26.0	9.2	30	— 1.3
	700	30	3163	3241	3091	30	8.5	13.8	— 0.2	28	—10.9
	600	30	4418	4515	4307	30	0.1	2.0	— 7.7	30	—18.7
	500	30	5851	5962	5700	30	—10.0	— 3.9	—17.7	30	—27.1
	400	30	7537	7664	7330	30	—20.9	—14.1	—30.5	30	—37.4
	300	29	9611	9779	9323	29	—33.9	—27.1	—45.0	29	—48.6
	250	29	10868	11051	10530	29	—42.2	—35.1	—50.1	29	—55.9
	200	29	12350	12568	11995	29	—51.0	—45.7	—59.5	29	—63.1
	150	28	14180	14382	13855	28	—61.3	—26.7	—64.0	7	—69.7
	100	24	16653	16897	16339	24	—71.2	—62.3	—76.3	—	—
	70	02	18757	18904	18519	02	—69.7	—59.9	—77.9	—	—
	60	13	19712	19880	19500	13	—65.9	—60.3	—72.6	—	—
	50	13	20797	20966	20609	13	—62.9	—59.0	—70.8	—	—
	40	8	22312	22430	22100	8	—58.7	—54.7	—63.7	—	—
	30	8	24066	24216	23891	8	—53.7	—50.0	—28.6	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 U.T.	Surface	30	995 m.b.*	999m.b.*	988m.b.*	30	22.4	27.6	18.3	30	31.6
	1000	30	095	129	031	30	18.3	—	09.3	—	00.8
	850	30	1496	1530	1447	30	10.3	27.2	04.1	29	—07.6
	700	30	3139	3218	4325	29	01.9	18.3	—02.7	30	—13.7
	600	30	4405	4211	5753	30	—06.6	07.9	—12.7	29	—14.0
	500	30	5854	5983	7425	30	—17.5	—00.1	—24.0	30	—22.4
	400	30	7565	7732	9465	29	—30.8	—11.4	—38.8	30	—32.3
	300	30	9667	9833	99601	30	—39.2	—25.1	—47.3	29	—43.7
	250	30	10906	11158	12202	27	—47.8	—33.9	—54.9	30	—50.8
	200	27	12460	12678	14048	72	—57.8	—44.1	—64.0	29	—58.3
	150	27	14315	14248	16529	42	—67.3	— 54.	—74.5	21	—67.0
	100	24	16823	17050	18801	12	—68.7	—61.8	—75.1	—	—
	70	12	18913	19102	16790	9	—65.5	—60.7	—71.0	—	—
	60	9	19926	21133	20835	9	—62.2	—59.6	—66.0	—	—
	50	9	20986	22590	22280	7	—60.5	—56.1	—65.0	—	—
	40	7	22461	24335	50042	7	—55.3	—58.9	—57.8	—	—
	30	7	24191	26941	26595	6	—50.7	—5297	—53.3	—	—
	20	6	26803	—	—	1	—47.7	—46.7	—	—	—
	10	1	31479	—	—	—		—	—	—	—
Aswan 0000 U.T.	Surface	30	986m.b.*	990m.b.*	982m.b.*	30	26.9	34.7	22.8	30	4.1
	1000	30	63	106	24	—	—	—	—	—	—
	850	30	1502	1538	1467	29	24.5	30.0	16.6	29	0.0
	700	30	3166	3221	3124	30	11.3	15.1	9.8	29	— 8.9
	600	30	4437	4495	4397	30	3.1	7.3	— 1.1	30	—15.5
	500	30	5895	5940	5854	30	— 4.7	— 1.3	—11.2	29	—24.7
	400	30	7614	7664	7575	29	—16.0	—11.9	—20.0	29	—34.1
	300	30	9722	9814	9645	30	—30.4	—25.7	—36.9	30	—46.1
	250	29	10994	11106	10893	29	—40.5	—36.7	—49.1	29	—54.4
	200	28	12478	12554	12355	28	—51.3	—48.5	—54.8	27	—60.6
	150	26	14297	14379	14163	26	—64.4	—61.0	—66.5	—	—
	100	25	16693	16789	16563	52	—77.7	—73.1	—82.1	—	—
	70	21	18743	18889	18643	15	—73.5	—62.5	—79.9	—	—
	60	19	19706	19890	19580	19	—67.3	—61.7	—72.1	—	—
	50	91	20775	20979	20693	19	—61.7	—53.2	—65.4	—	—
	40	13	22240	22380	22140	13	—59.2	—56.8	—64.7	—	—
	30	13	23966	24043	23848	13	—54.4	—51.8	—60.3	—	—
	20	8	26625	26699	26536	8	—47.4	—42.6	—52.0	—	—
	10	—	—	—	—	—	—	—	—	—	—

UPPER AIR CLIMATOLOGICAL DATA

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

JUNE 1978

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
Mount Hotuh 1200 UT	Surface	29	*1012m.b.	*1015m.b.	*1006m.b.	29	26.5	37.1	22.5	29	17.1
	1000	29	131	194	83	29	52.6	35.4	20.3	29	15.2
	850	29	1538	1582	1498	29	19.0	28.4	10.2	29	— 0.1
	700	29	3176	3254	3102	29	9.5	16.7	2.4	29	—10.9
	600	29	4435	4524	4347	29	1.0	— 7.4	— 5.8	29	—17.6
	500	29	5876	2980	5753	29	— 8.5	— 2.1	—16.0	29	—27.0
	400	29	7572	7711	7403	29	—19.7	—11.5	—28.7	29	—36.9
	300	29	9656	9825	9419	29	—34.0	—28.1	—43.0	29	—74.6
	250	28	10895	11101	10631	28	—42.5	—47.4	—50.7	26	—56.2
	200	27	12376	12603	12075	27	—51.6	—46.0	—60.1	22	—63.1
	150	24	14206	14443	13907	24	—60.2	—54.0	—70.5	6	—64.7
	100	24	16679	16893	16388	24	—69.0	—60.5	—77.1	—	—
	70	17	18847	18985	18734	17	—65.1	—54.5	—73.1	—	—
	60	11	19824	19990	19720	11	—62.2	—57.2	—67.1	—	—
	50	10	20926	21042	20810	10	—56.0	—49.4	—61.3	—	—
	40	3	22437	22650	22300	3	—55.7	—54.2	—56.5	—	—
	30	3	24161	24285	24084	3	—51.4	—50.4	—52.7	—	—
	20	2	26864	26965	26764	2	—44.6	—44.1	—45.2	—	—
	10	—	—	—	—	—	—	—	—	—	—
Kaiwa 1200 UT	Surface	30	*994m.b.	*998m.b.	*989m.b.	30	33.2	42.2	27.2	30	08.9
	1000	29	085	120	041	—	—	—	—	—	—
	850	29	1523	1562	1484	28	21.9	29.4	12.8	28	01.7
	700	29	3183	3245	3119	29	13.6	20.0	05.2	29	—10.2
	600	28	4461	4530	4365	28	05.4	11.6	—01.0	28	—16.3
	500	28	5927	6019	5796	28	—03.4	01.4	—09.5	28	—24.8
	400	27	7658	7775	7485	27	—13.5	—07.0	—20.8	27	—33.7
	300	25	9798	9939	9545	25	—26.7	—20.9	—36.0	25	—44.5
	250	24	11096	11280	10790	24	—34.8	—26.8	—45.1	24	—51.1
	200	24	12626	12836	12278	24	—43.1	—38.1	—51.2	24	—57.7
	150	22	14508	14761	14160	22	—52.7	—48.9	—57.9	22	—65.0
	100	20	17078	17316	16760	20	—61.2	—55.3	—69.4	3	—65.9
	70	16	19276	19551	19038	16	—59.8	—51.2	—66.1	—	—
	60	11	20309	20530	20050	11	—56.1	—52.2	—60.1	—	—
	50	11	21445	21711	21233	11	—50.4	—46.0	—54.2	—	—
	40	9	23078	23340	22900	9	—43.2	—38.5	—47.9	—	—
	30	8	24928	25233	24696	8	—35.3	—26.6	—41.1	—	—
	20	4	27754	27982	27556	5	—29.1	—21.8	—33.0	—	—
	10	—	—	—	—	—	—	—	—	—	—
Arwa 1200 UT	Surface	30	*985m.b.	*989m.b.	*981m.b.	30	40.4	45.2	34.2	30	4.6
	1000	30	57	93	14	—	—	—	—	—	—
	850	30	1521	1551	1480	30	26.5	30.7	19.0	30	— 3.9
	700	30	3195	3238	3147	30	13.6	16.4	—11.7	30	—13.9
	600	30	4474	4523	4423	30	— 4.7	8.8	— 5.6	30	—19.4
	500	30	5938	5983	5891	30	— 3.6	— 0.2	—10.6	30	—27.9
	400	30	7671	7733	7603	30	—14.9	— 9.7	—25.1	30	—36.8
	300	28	9796	9879	9678	28	—28.8	—23.8	—33.9	28	—49.4
	250	27	11076	11179	10976	27	—38.3	—34.2	—43.3	27	—55.6
	200	27	12577	12693	12414	26	—49.7	—47.0	—53.5	25	—64.5
	150	27	14409	14540	14229	26	—62.4	—59.8	—65.9	2	—72.2
	100	26	16836	16990	16637	26	—76.1	—71.7	—80.0	—	—
	70	25	18904	19074	18736	25	—73.3	—63.8	—79.6	—	—
	60	22	19874	20040	19730	22	—66.2	—59.3	—68.0	—	—
	50	22	20954	21134	20795	22	—59.0	—51.3	—63.6	—	—
	40	14	22383	22530	21780	14	—55.1	—51.4	—60.8	—	—
	30	11	24223	24338	24052	11	—50.5	—43.2	—53.6	—	—
	20	6	26910	27045	26820	6	—44.1	—40.3	—47.6	—	—
	10	2	31682	31835	31530	2	—35.9	—32.8	39.0	—	—

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

JUNE — 1978

	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
0000U.T.		(N) 4391	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh(A)	(29)	604 (28)	—18.5 (30)	5230	544	—20.2	3030	702	—16.3	15590 (.6)	136 (16)	—66.9 (16)	19350	09	—79.5	9700	285	—47.0	6125	490	350	85
	Helwan	4728 (30)	578 (26)	—16.1 (30)	5910	504	—22.7	3850	638	—21.4	15968 (10)	119 (10)	—66.5 (10)	17660	089	—70.4	11970	211	—54.3	11240	231	240	150
	Aswan (A)	4948 (30)	565 (30)	—17.7 (30)	5650	517	—22.2	4300	611	—17.2	17255 (20)	92 (29)	—79.1 (20)	18420	74	—75.2	16120	111	—78.8	13275	176	180	72
0021U.T.	Mersa Matruh	N 4637 (29)	(N) 589 (29)	(N) 17.5 — (29)	6200	485	—12.6	3450	674	—9.1	(N 14553 (16)	(N) 154 (18)	(N) (18)	17640	88	—74.5	9670	2 90	—44.3	10300	275	240	80
	Helwan	5306 (28)	543 (28)	—21.5 (27)	6380	477	—22.0	4160	614	—19.6	15913	129 (10)	—59.7 (16)	18980	074	—66.2	11340	229	—46.1	10820	262	320	135
	Aswan	5252 (30)	546 (30)	—23.1 (20)	6000	498	—23.4	4500	596	—20.3	172 71	94	—77.9	19240	66	—76.8	15980	116	—72.0	11100	244	240	75

= number of cases the element has been observed 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.

M. MATRUH (A) — JUNE 1978

Observation	Pressure Surface (Millibar)	Wind within 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		105/135		135/164		165/194		195/224		235/254		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 T.U.	Surface	1	86	0	—	0	—	1	8	0	—	0	—	0	—	1	10	3	5	12	8	3	9	7	11	2	30	8
	1000	3	6	0	—	1	10	0	—	0	—	0	—	0	—	0	—	2	9	7	14	10	14	6	18	0	29	13
	850	7	20	1	12	0	—	0	—	0	—	0	—	0	—	0	—	1	13	2	22	8	18	10	19	0	29	20
	700	3	23	0	—	1	10	0	—	0	—	0	—	0	—	0	—	0	—	10	26	6	24	6	31	0	27	25
	600	3	21	0	—	0	—	0	—	0	—	0	—	0	—	1	48	0	—	8	36	5	23	8	28	0	25	29
	500	3	32	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	55	10	38	7	28	4	26	0	25	33
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	31	3	51	7	36	1	35	0	15	38
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	51	3	41	2	29	0	—	0	6	37
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	42	2	50	1	30	0	—	0	6	42
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	46	0	—	0	—	0	1	46
	150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	4	8	1	13	0	—	0	—	0	—	0	—	0	—	1	14	0	—	0	—	10	16	13	12	0	29	13
	1000	2	12	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	17	20	10	15	0	29	18
	850	4	26	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	25	11	19	8	14	3	6	0	29	18
	700	5	27	2	11	0	—	0	—	0	—	0	—	0	—	0	—	2	36	8	30	8	16	4	23	0	29	24
	600	2	34	2	17	0	—	0	—	0	—	0	—	0	—	0	—	2	35	11	28	7	30	5	20	0	29	27
	500	2	33	0	—	0	—	0	—	0	—	1	2	0	—	0	—	2	59	14	27	4	31	3	30	0	26	30
	400	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	33	5	34	4	22	0	—	0	18	30
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	32	4	47	4	42	0	—	0	—	0	10	42
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	42	2	52	0	—	1	52	0	—	0	5	47
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	52	2	63	0	—	0	—	0	—	0	3	59
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	45	0	—	0	—	0	—	0	1	45
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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 JUNE 1978

Pressure Surface (Millibar)	Wind within 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)	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		(ff) m			
0000 .U.T																											
Surface	13	7	4	10	2	06	2	09	1	10	0	—	1	03	0	—	0	—	1	05	1	06	4	06	1	30	67
000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
850	6	12	7	12	3	11	5	18	2	12	0	—	0	—	0	—	1	04	1	05	0	—	5	12	0	30	18
700	4	16	4	16	1	06	3	15	2	13	1	04	0	—	1	36	0	—	2	21	5	25	7	17	0	30	12
600	5	21	0	—	0	—	3	15	3	15	1	13	0	—	1	22	0	—	7	22	4	33	6	23	0	30	21
500	6	19	1	10	0	—	2	24	1	22	0	—	0	—	1	38	0	—	5	30	9	41	5	32	0	30	33
400	4	20	0	—	0	—	1	08	0	—	0	—	1	42	0	—	0	—	5	38	9	52	5	21	0	25	49
300	2	22	1	18	0	—	0	—	0	—	0	—	0	—	0	—	0	—	9	52	6	56	2	55	0	20	49
250	1	43	2	25	0	—	0	—	0	—	0	—	0	—	1	—	4	63	6	61	1	24	2	27	0	16	40
200	0	—	2	34	0	—	0	—	0	—	0	—	0	—	0	100	0	—	2	29	1	31	0	33	0	8	30
150	1	35	1	23	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	32	0	—	0	—	0	3	24
100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	—	—	1	24	0	—	0	—	—	—	0	1	—
70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 .U.T																											
Surface	5	09	6	10	4	09	1	10	0	—	0	—	2	10	0	—	0	—	0	—	6	08	6	08	0	30	9
1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
850	3	16	9	13	7	10	2	07	0	—	2	14	0	—	0	—	0	—	1	21	2	14	3	10	0	29	12
700	2	32	3	20	2	12	3	04	1	09	1	16	0	—	0	—	1	07	3	14	9	14	4	14	0	29	18
00	2	28	2	25	3	39	1	19	1	03	1	16	0	—	0	—	0	—	7	18	5	38	6	29	0	28	27
500	2	28	2	30	3	49	1	11	1	14	0	—	0	—	0	—	0	—	7	29	7	43	4	19	0	27	32
600	2	66	1	16	2	24	1	07	1	41	0	—	0	—	0	—	1	07	5	43	9	47	2	42	0	24	14
400	3	34	0	—	2	50	0	—	0	—	0	—	0	—	0	—	0	—	10	59	2	63	2	74	0	19	56
350	3	53	2	37	0	—	0	—	0	—	0	—	0	—	0	—	3	68	4	57	3	56	1	126	0	16	60
200	2	38	2	51	0	—	0	—	0	—	0	—	0	—	0	—	2	60	2	78	0	—	1	70	0	9	58
250	2	23	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	83	0	—	1	85	0	4	54
1100	1	42	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	—	—	0	1	24
70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N= The number of cases the wind has been observed within 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 *(cantd)* — **NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES**

ASWAN JUNE 1978

Time	Pressure Surface (Millibar)	Wind within specified ranges of direction (000—360)°																								Number of calm winds	Total Number of Observations (1N)	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 of station	17	12	5	10	4	9	0	—	0	—	0	—	1	5	0	—	0	—	0	—	0	—	2	13	1	30	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	7	15	9	15	6	15	1	7	1	10	0	—	0	—	0	—	1	12	1	13	2	8	2	14	0	30	14
	700	1	15	7	23	2	15	2	15	1	32	1	9	0	—	1	19	2	20	8	16	3	22	3	10	0	26	17
	600	1	14	2	14	2	15	1	14	1	18	0	—	2	14	1	21	1	9	8	22	6	14	1	18	0	26	17
	500	2	12	2	27	0	—	4	18	0	—	2	13	0	—	0	—	6	18	5	25	3	13	1	3	0	26	17
	400	1	13	4	18	3	15	2	8	1	3	0	—	1	10	4	25	2	31	5	31	1	18	2	11	0	26	20
	300	3	22	4	17	4	12	2	16	0	—	0	—	1	12	5	35	4	38	3	26	0	—	0	—	0	26	25
	250	1	12	1	13	4	16	4	14	1	7	1	20	0	—	6	39	3	53	2	36	2	14	1	13	0	26	26
	200	1	11	1	4	4	15	2	14	2	16	2	15	1	60	4	44	5	42	2	42	0	—	2	6	0	26	27
	150	0	—	0	—	1	8	2	18	4	41	3	31	3	42	3	59	5	34	1	54	2	12	0	—	0	24	31
	100	0	—	0	—	1	10	4	02	4	27	2	36	1	30	4	26	3	33	1	37	0	—	0	—	0	20	27
	70	0	—	0	—	1	21	8	27	2	26	1	12	0	—	4	15	1	10	0	—	0	—	0	—	0	17	22
	60	0	—	0	—	0	—	8	26	3	17	0	—	2	16	0	—	0	—	0	—	0	—	0	—	0	13	23
	50	0	—	0	—	3	25	7	21	1	16	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	11	21
	40	0	—	0	—	3	26	5	19	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	8	26
	30	0	—	0	—	1	41	4	35	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	5	36
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface of station	17	11	2	15	1	7	0	—	1	5	0	—	0	—	0	—	0	—	2	12	1	7	5	11	1	30	01
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	4	14	3	12	3	9	1	11	0	—	0	—	0	—	0	—	1	10	0	21	7	15	11	13	0	30	13
	700	3	02	1	16	4	17	2	10	0	—	0	—	1	9	3	15	3	17	4	20	3	22	6	9	0	30	16
	600	0	12	5	17	1	17	0	—	3	12	0	—	1	30	3	21	3	15	9	27	1	13	2	21	0	30	18
	500	0	—	6	19	2	14	2	30	0	—	1	9	2	16	2	7	5	22	3	30	2	9	4	14	0	29	18
	400	1	7	4	16	4	17	4	17	1	15	1	11	0	—	2	24	4	29	4	40	2	10	2	13	0	29	19
	300	0	—	0	—	6	16	4	15	1	13	1	17	0	—	5	31	6	45	2	23	0	—	3	12	0	28	23
	250	1	11	1	02	3	14	5	13	1	11	1	24	1	16	6	34	4	52	1	40	1	9	2	9	0	27	25
	200	1	9	0	—	1	8	6	15	5	18	1	12	2	30	6	31	4	22	1	28	0	—	0	—	0	27	26
	150	1	10	1	9	0	—	7	19	4	23	3	33	3	49	3	27	2	—	1	—	0	—	0	—	0	25	28
	100	0	—	1	24	2	12	4	22	8	28	3	31	2	33	2	24	3	—	0	23	0	—	0	—	0	25	27
	70	0	—	0	—	3	26	11	29	2	30	1	25	1	19	0	—	0	—	1	—	1	3	0	—	0	20	27
	60	0	—	0	—	0	—	9	27	2	28	2	03	0	—	0	—	0	—	0	—	1	7	0	—	0	14	28
	50	0	—	0	—	1	21	4	35	5	25	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	10	29
	40	0	—	0	—	2	35	6	28	1	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	9	30
	30	0	—	0	—	0	—	3	27	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	3	27
	20	0	—	0	—	1	14	2	23	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	3	23
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

MONTHLY REVIEW OF AGRO METEOROLOGICAL STATIONS

MERSA MATRUH — JU JE 1978

The mean monthly air temperature was slightly below normal. The mean monthly relative humidity was slightly above normal. The month was rainless as usual.

Three hot waves occured during the month on the periods (13th, 14th) (16th—22nd) and 26th. During the rest of the month the maximum temperature was normal. The highest maximum temperature (44.4°C) and the highest minimum (44.5°C) were reported on the 22nd.

The monthly mean actual sunshine duration was higher than normal by 0.7 hr. The mean monthly wind speed at 1.5 m. height was higher than normal by 0.7 m./sec.

The highest maximum soil temperatures were around the corresponding values of June 1977 at all depths with departures between + 0.8°C 6 at 20 cm depth and — 2.2°C (at 5cm. depth).

The lowest minimum soil temperatures were lower than these of June 1977 at all depths with departures between .06°C (at 5cm. depth) and 14.°C (at 20 cm. depth).

TAHRIR — JUNE 1978

The mean monthly air temperature was below normal. The mean monthly relative humidity was above normal. A trace of rain was reported on each of the 3rd and the 4th, although the month is usually rainless.

Air temperature was above normal during the periods (11th — 23rd) and (26th — 28th) and below normal during the rest of the month. The highest maximum temperature was 45.9°C on the 22nd and the highest minimum temperature was 21.9°C on the 23rd.

The mean monthly actual sunshine duration was lower than normal by 0.3 hr. and the mean montly wind speed at 1.5 m. height was lower than normal by 0.1 m./sec. Pan evaporation was lower than normal by 1.31 mms.

The highest maximum soil temperatures were above normal at all depths between 2 cm. 100 cm. with departures between 0.8°C (at 5cm. depth) and was below normal lesewhere with departures between 0.1°C (at 200 cm. depth) and 0.8°C (at 600 cm depth).

The lowest minimum soil temperatures were below normal at 2, 5. 10 and 600 cm. depths with departures between 0.5°5 (at 2 cm. depth) and 0.9°C (at 5 cm. depth) and above normal elsewhere with depratures between 0.8°C (at 50 cm. depth) and 0.2°C (at 200 & 300 cm. depths).

BAHTIM — JUNE 1978

The mean monthly air temperature and relative humidity were nearly equal to normal. A trace of rain was recorded while the month is usually rainless.

Two hot waves occurred during the periods (12th —23rd) and (26th — 29th). The highest maximum air temperature (43.6°C) was recorded on the 22nd and the highest minimum temperature (20.4°C) was recorded on the 20th. During the rest of the month, the maximum air temperature was below normal.

The mean monthly actual sunshine duration and the mean monthly wind speed at 1.5 m. height were lower than normal by 0.2 hr. and 0.5 m./sec. Pan evaporation was equal to normal.

The highest maximum soil temperatures were lower than normal by 0.3°C at 300 cm. depth and higher than normal elsewhere with departures between 0.2°C (at 200 cm. depth) and 2.4°C (at 20 cm. depth).

The lowest minimum soil temperatures were around normal at all depths with departures between —1.9°C (at 2 cm. depth) and + 2.1°C (at 50 cm. depth).

ASSIUT — JUNE 1978

The mean monthly air temperture was below normal. while the mean monthly relative humidity was above normal. The month was rainless while the normal is trace.

The mild waves occured in the periods (22nd). (5th — 11th) and on the 30th. Apart from these, the maximum temperature was above normal. The highest maximum temperature was 47.4°C on the 18th and the lowest maximum temperature was 32.4° C on the 7th. The lowest minimum temperature was 16.2°C on the 8th.

The mean monthly actual sunshine duration was higher than that of June 1977 by 0.1 hr. The mean monthly pan evaporation was higher than that of June 1977 by 1.03 mms.

The highest maximum soil temperatures were higher than those of June 1977 at all depths with departures between 4.2°C (at 5 cm. depth) and 0.5°C (at 300 cm. depth.

The lowest minimum soil temperatures were around those of June 1977 at all depths with departures between — 1.4°C (at 50 cm. depth) and + 1.1°C (at 100 cm. depth).

El-KARGA — JUNE 1978

The mean monthly air temperature was equal to normal, while that of relative humidity was above normal. The month was rainless as usual.

The maximum temperature was below normal during the first two weeks of the month, except for a short hot wave on the 4th. The maximum temperature was above or around normal for the remainder of the month. The highest maximum temperature was 47.7°C on the 18th and the highest minimum temperature was 30.3°C on the 24th.

The mean monthly actual sunshine duration was 0.5 hr. below normal. The mean monthly wind speed at 1.5 m. height was 0.9 m./sec. below normal.

The mean monthly pan evaporation was 3.13 mm. below normal.

The highest maximum soil temperatures were above or around normal at all depths with departures between + 3.1°C (at 10 cm. depth) and — 0.3°C (at 50 cm. depth).

The lowest minimum temperatures were below or around normal with departures between — 2.5°C (at 10 cm. depth) and + 0.5°C (at 100 cm. depth).

Table C 1.—AIR TEMPERATURE AT 1½ METRES ABOVE GROUND

JUNE — 1978

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
Mersa Matruh . .	27.9	18.2	23.1	20.5	23.9	24.0	24.0	24.0	24.0	23.7	18.1	6.7	1.1	0.2	0.07	0.0
Tahri	34.5	17.8	25.4	21.1	27.0	24.0	24.0	24.0	24.0	24.0	18.9	10.9	5.1	1.4	0.1	0-03
Bahtim	34.1	16.9	25.4	21.0	27.2	24.0	24.0	24.0	24.0	23.7	18.1	11.6	5.7	1.9	0.2	0.0
Assuit	38.4	19.6	28.9	24.6	30.3	24.0	24.0	24.0	24.0	24.0	22.3	15.8	10.3	4.9	1.4	0.1
Kharga	40.1	24.0	32.6	29.3	33.8	24.0	24.0	24.0	24.0	24.0	23.9	21.3	15.6	8.3	3.3	0.6

Table C 2.—EXTREME VALUES OF AIR TEMPERATURE AT 1½ METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cm ABOVE GROUND OVER DIFFERENT FIELDS

JUNE — 1978

STATION	Max. Temp. at 1½ metres				Min. Temp. at 1½ 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
Mersa Matruh . . .	44.5	22	22.6	1	23.5	22	13.9	3	11.8	3	—	—
Tahrir	45.9	22	28.8	1	21.9	23	14.2	6	12.6	6	11.2	6
Bahtim	43.6	22	29.0	1,2,5,6	20.4	20	13.2	9	10.0	9	8.0	9
Assuit	47.4	18	32.2	7	23.0	24	16.2	8	12.4	3	—	—
Kharga	47.7	18	33.0	6	30.3	24	17.6	8	14.4	8	—	—

Table C 3.—(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 1½ METRES ABOVE GROUND, EVAPORATION & RAINFALL

JUNE — 1978

STATION	(Solar+Sky) Radiation g.n. cal/cm²	Duration of Bright Sunshine (hours)			Relative Humidity				Vapour pressure (mms)						Evaporation (mms)		Rainfall (mms)		
		Total Actual monthly	Total Possible monthly	%	Mean of day	1200 U.T.	Lowest	Date	Mean of day	1200 U.T.	Highest	Date	Lowest	Date	Piche	pan class	Total Amount	max. fall in one day	Date
Mersa Matruh	595.7	364.9	425.2	86	71	59	11	22	14.8	15.2	20.2	25	7.2	22	7.4	—	0.0	0.0	—
Tahrir. . .	1696.4	329.4	422.2	85	63	34	10	22	14.2	12.7	21.1	28	7.2	22	8.9	10.94	Tr.	Tr.	3,4
Bahtim . .	670.7	353.4	421.6	83	57	31	14	22	12.9	12.0	19.4	28	8.7	11	9.9	13.06	Tr.	Tr.	4
Assiut . . .	—	377.8	413.6	19	40	24	12	18	11.1	11.0	18.7	24	5.0	29	13.1	13.82	0.0	0.0	—
Kharga .	743.3	358.3	410.2	87	34	22	11	1	12.2	11.9	19.3	18	4.5	1	20.8	20.73	0.0	0.0	—

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

JUNE — 1978

STATION	Highest (H) Lowest (L)	Dry Field								Grass							
		2	5	10	20	50	100	200	300	2	5	10	20	50	100	200	300
M. Matruh . . .	H	41.9	38.9	34.0	30.0	27.2	24.8	22.2	—	—	—	—	—	—	—	—	—
	L	22.2	22.1	22.1	23.8	23.5	22.2	20.0	—	—	—	—	—	—	—	—	—
Tahrir	H	55.3	48.4	42.6	36.8	33.1	30.2	27.3	25.7	37.4	35.8	32.2	29.8	29.5	27.7	25.9	—
	L	26.1	24.8	25.0	28.4	29.2	28.0	25.2	24.4	22.5	22.5	22.5	23.7	25.7	25.7	23.9	—
Bahtim	H	56.9	46.7	40.1	35.6	31.9	29.0	25.2	23.6	40.6	34.6	31.4	28.5	26.4	24.6	22.3	—
	L	26.1	25.6	26.7	28.6	29.3	26.7	23.8	23.0	23.2	22.7	22.7	24.4	24.2	22.9	21.0	—
Assiut	H	67.1	55.8	44.5	37.8	32.1	29.7	26.0	24.4	—	—	—	—	—	—	—	—
	L	30.2	27.7	28.2	30.0	29.6	28.0	24.5	23.8	—	—	—	—	—	—	—	—
Kharga	H	59.4	52.8	47.0	40.8	34.1	23.5	29.2	28.2	—	—	—	—	—	—	—	—
	L	18.6	22.4	26.0	30.2	30.7	30.5	28.0	27.4	—	—	—	—	—	—	—	—

Table C 5.—SURFACE WIND

JUNE — 1978

STATION	Wind Speed m/sec (2 metres)			Days with surface wind speed at (10 metres)							Na .. Gust 10 metres	
	Mean of the day	Night time mean	Day time mean	≧10 (konts)	≧15 (konts)	≧20 (konts)	≧25 (konts)	≧30 (konts)	≧35 (konts)	≧40 (konts)	Value (konts)	Date
M. Matruh. .	3.8	2.7	4.9	30	23	11	3	0	0	0	32	22
ahrir	2.4	1.6	3.1	29	12	2	1	0	0	0	39	22
Bahtim . . .	2.3	1.4	3.2	30	22	3	1	0	0	0	29	4,22
Assiut . . .	—	—	—	—	—	—	—	—	—	—	—	—
Khazga . , .	—	—	—	—	—	—	—	—	—	—	—	—

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MONTHLY WEATHER REPORT

VOLUME 21 NUMBER 7

JULY 1978

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THE EGYPTIAN METEOROLOGICAL AUTHORITY
CAIRO

PUBLICATIONS OF THE METEOROLOGICAL AUTHORITY OF THE ARAB REPUBLIC OF EGYPT—CAIRO

In fulfilment of its duties, the Egyptian Meteorological Authority issues several reports and publications on weather, climate and agro-meteorology. The principal publications are described on this page.

Orders for publications should be addressed to :

"Chairman of the Board of Directors, Meteorological Authority, Kubri-el-Qubbeh — CAIRO.

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 statisticsfor 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 the Meteorological Authority.

TECHNICAL NOTES

As from October 1970, the Meteorological Authority 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 ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 21 NUMBER 7

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THE EGYPTIAN METEOROLOGICAL AUTHORITY
CAIRO

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Note : For explanatory notes on the tables please refer to Volume 21 number 1 (January 1975).

GENERAL SUMMARY OF WEATHER CONDITIONS

JULY 1978

Hot summer weather most of the First three weeks. Mild summer weather during the last week.

PRESSURE DISTRIBUTION

The atmospheric pressure over Egypt was mainly influenced by the complex monsoon low pressure over Iraq, Arabia & Sudan ; and the weak high pressure over Central Mediterranean & north of the Western Desert.

The monsoon trough over Iraq showed westward elongations through East Mediterranean with slight deepening several times during this month. Accordingly the pressure over Egypt was below normal most days of the month.

SURFACE WIND

Surface winds were generally light to moderate and blew mostly from N ly to NW ly directions and with a less frequency from NE ly.

Fresh winds were experienced during several days in scattered places.

TEMPERATURE

This month was characterized by four successive heat waves which prevailed most of the first three weeks. There waves were generally of light intensity at coast, pronounced inland.

During the last week mild summer weather prevailed with subnormal temperatures.

The highest and lowest maximum temperatures were respectively 47.5°C at Kharga on the *5th* (absolute record) and 26.3°C at Port Said on the *1st*.

The highest and lowest minimum temperatures were respectively 31.8°C at Aswan on the *23rd* and 18.0°C at Sewa on the *28th*.

PRECIPITATION

The month was rainless as usual.

OTHER WEATHER PHENOMENA

Early morning mist developed frequently over scattered places in lower Egypt & Cairo.

Light rising sand was reported during few days in scattered places.

Cairo, JULY 1979

Chairman (M. A. BADRAN)

(Board of Directors)

SURFACE DATA

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

JULY 1978

STATION	Atmospheric Pressure (mbs) M.S.L		Air Temperature °C									Relative Humidity %		Bright Sunshine Duration (Hours)			Piche Evap.
			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 Actua	Total Possible	%	
El Sallum	1010 9	—0.5	31.6	0.7	21.4	0.0	26.5	26 1	0.2	20.2	—1.0	58	—7	—	—	—	8.9
Mersa Matruh	1010.2	^.2	28.5	—0 6	20.7	0 3	24.6	24.9	0.0	21.6	0.1	76	2	370.1	432.7	86	5.8
Alexandria	1008.9	—0.2	30.2	0 4	22.4	—0 2	26.3	26.0	0.0	22.4	0.1	73	1	356.1	432.3	82	4.9
Port Said	1007.6	—0.2	29.2	0.4	24.9	0.6	26.9	26.7	0.2	32.1	0.1	72	—1	366.5	432.6	85	5.9
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo	1007.7	—0.4	35.1	—1.1	22.0	0.5	28.5	28.0	0.2	21.4	0.2	57	3	—	—	—	14.8
Fayoum	—	—	38.5	0.2	21.6	—0.5	30.	29.5	—0.9 —	21.2	0.5	49	3	—	—	—	10.2
Minya (A)	1010.9	—1.4	37.6	1.8	21.3	1.1	29 4	29.4	0.9	20.8	0.6	46	1	375 3	425 6	88	16.4
Assouit (A)	1006.0	—0.8	37.9	0.9	22.7	0.4	30.3	30.5	0.8	19.2	—0.3	32	—3	—	—	—	20.7
Luxsr (A)	1003.6	—1.3	42.4	1.2	24.9	1.5	33.6	33 6	0.9	21.5	1.6	32	5	—	—	—	11.6
Aswan (A)	1003.5	—1.9	42.6	1.6	2,.6	2.0	35.1	35.0	1.2	19.8	1.7	20	—1	334.3	417.1	80	24.3
Sewa	1009.7	—0.9	37.5	—0.1	20 9	0.0	29.2	29.3	—0.1	19 7	0.9	42	1	375.5	428.1	88	15.0
Ev-Baharia	1007.3	1.0	37.8	0.8	21.2		29.5	29.6	0.5	19.5	0.0	39	—3	—	—	—	12.2
El-Farafria	1008.6	—0.8	38.0	0.7	22.7	0.4 1.5	30.3	30.4	1.0	17.9	0.1	26	—3	—	—	—	19.6
El-Dakhla	1007 1	—1.8	39.8	0.4	25.0	2.3	32.4	32.6	1.8	17.9	—0.4	18	—7	—	—	—	23.7
El-Kharga	1004.6	—2.5	40.9	1.8	26.1	2.9	33.5	34.0	2.5	21 6	3.3	35	9	355.4	420.2	85	19.8
ElHurgada	1004.2	—0.3	34.1	1.2	27.1	2.2	30.6	30.7	1.4	21 6	0.2	42	—9	365.8	423.8	86	22.0
El-Qnseia	1003.0	—2.0	33.1	0.2	27.1	0.9	30.1	30.3	0.5	22.8	0.7	51	1	—	—	—	9.2

TABLE A2.— MAXIMUM AND MINIMUM AIR TEMPERATURE

JULY — 1978

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
El-Sallum	36.4	15	27.2	1	31	26	03	00	00	20.2	—	23.4	7,8,13*	19.4	1,28	00	00	00	00
Mersa Matroh	30.2	14,15	26.8	1	31	02	00	00	00	19.5	—	23.8	13	18.4	1	00	00	00	00
Alexandria	33.7	5	28.0	1	31	13	00	00	00	21.4	—	23.9	17	18.6	13	00	00	00	00
Port Said	33.0	21	26.3	1	31	05	00	00	00	24.2	—	26.5	20	22·4	25	00	00	00	00
ElArish	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gaza	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo (A)	40.4	5	30.8	31	31	31	15	01	00	19.9	—	23.8	20	19.4	1	00	00	00	00
Fayoum	42.7	5	33.5	1	31	31	25	11	00	20.1	—	24.0	5	18.8	1,27	00	00	00	00
Minya (A)	42.8	5	32.6	1	31	31	23	08	00	21.8	—	23.6	15	17.5	1	00	00	00	00
Assyout (A)	43.5	5	32.0	1	31	31	21	10	00	19.1	—	25.4	6,18	19.2	1,2	00	00	00	00
Luxor (A)	46.0	15	36.8	28	31	31	31	21	08	—	—	31.1	18	20.6	3	00	00	00	00
Aswan (A)	46.8	15	38.6	27,28	31	31	31	25	07	18.6	—	31.8	23	21.8		00	00	00	00
Siwa	43.0	9	32.9	1	31	31	22	10	00	20.8	—	23.2	15	18.0	2 28	00	00	00	00
Bahariya	42.7	5	32.1	31	31	31	23	08	00	21.0	—	25.5	6	18.1	1	00	00	00	00
Farafra	42.4	5,22	32.3	1	31	31	25	08	00	24.9	—	26.6	6	18.7	2	00	00	00	00
Dakhla	45.2	22	34.2	1	31	31	28	17	01	24.1	—	31.4	18	19.8	25	00	00	00	00
Kharga	47.5	5	35.5	1	31	31	31	19	03	—	—	31.4	23	20.0	3,30	00	00	00	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	37.6	14	29.9	1,2	31	29	11	00	00	—	—	30.3	16	23.7	1	00	00	00	00
Quseir	36.4	15	29.4	1	31	30	04	00	00	23.7	—	29.7	14	23.5	3	00	00	00	00

TABLE A 3 SKY COVER AND RAIN FALL

JULY — 1978

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
Elsallum	0.8	0.4	0.8	0.3	0.6	0.0	0.0	—	—	00	00	00	00	00	00	00
Mersa Matroh	1.3	2 5	1.5	2.2	1.8	0.0	0.0	—	—	00	00	00	00	00	00	00
Alexandria	1.7	2 5	3.3	1.7	2.1	0.0	0.0	—	—	00	00	00	00	00	00	00
Port Said	1.5	1.1	0.3	0.5	0.8	0.0	0.0	—	—	00	00	00	00	00	00	00
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo (A)	2.1	2.6	0.4	0.2	1.2	0.0	0.0	—	—	00	00	00	00	00	00	00
Fayoum	—	0.5	0.2	0.1	—	0.0		—	—	00	00	00	00	00	00	0
Minya (A)	0.0	0.9	0 4	0.6	0 4	0 0	0.0	—	—	00	00	00	00	00	00	00
Assyout (A)	0.3	0.4	0.3	0.3	0.3	0.0	0.0	—	—	00	00	00	00	00	00	00
Luxor (A)	0.6	1.2	1.4	1.2	1.0	0.0	0.0	—	—	00	00	00	00	00	00	00
Aswan (A)	0.6	1.4	1.6	1.5	1.2	0.0	0.0	—	—	00	00	00	00	00	00	00
Siwa	0.2	0 2	0.0	0.1	0.1	0.0	0.0	—	—	00	00	00	00	00	00	00
Baharya	0.0	0.6	0.4	0.4	0 4	0.0	0.0	—	—	00	00	00	00	00	00	00
Farafa	—	0.4	0.3	0 4	—	0 0	0.0	—	—	00	00	00	00	00	00	00
Dakha	0.1	0 4	0.2	0 2	0.2	0 0	0.0	—	—	00	00	00	00	00	00	00
Kharga	0.5	0.8	0.6	0.8	0.7	0.0	0.0	—	—	00	00	00	00	00	00	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	0 4	0.9	0.8	0.8	0.8	0.0	0.0	—	—	00	00	00	00	00	00	00
Quseir	0.2	1.0	0.9	0.7	0 7	0.0	0.0	—	—	00	00	00	00	00	00	00

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

JULY — 1977

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											
Sallum	00	00	00	00	01	00	00	03	00	00	00	28	00
Mersa Matruh	00	00	00	00	19	01	00	11	00	00	00	17	00
Alexandria (A)	00	00	00	00	01	00	00	00	00	00	00	17	00
Port Said (A)	00	00	00	00	00	00	00	00	00	00	00	27	00
El Arish	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo (A)	00	00	00	00	16	03	08	00	00	00	00	26	00
Fayoum	00	00	00	00	00	00	00	01	00	00	00	29	00
Minya (A)	00	00	00	00	01	00	00	03	00	00	00	29	00
Assyout (A)	00	00	00	00	00	00	00	01	00	00	00	29	00
Luxor (A)	00	00	00	00	00	00	12	03	00	01	00	24	00
Aswan (A)	00	00	00	00	00	00	06	15	00	02	00	22	00
Siwa	00	00	00	00	00	00	05	08	00	00	00	31	00
Bahariya	00	00	00	00	00	00	00	01	00	00	00	29	00
Farafra	00	00	00	00	00	00	01	03	00	00	00	29	00
Dakhla	00	00	00	00	00	00	00	10	00	00	00	30	00
Kharga	00	00	00	00	00	00	00	02	00	00	00	27	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	00	00	00	00	00	00	00	07	00	00	00	27	00
Quseir	00	00	00	00	00	00	00	00	00	00	00	27	00

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

JULY — 1978

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	325 / 344	ALL DIR
Sallum	01	02	00	1—10	119	105	16	01	01	05	02	04	04	05	70	141	475
				11—27	59	33	03	00	00	00	00	00	00	02	57	114	258
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**178**	**138**	**19**	**01**	**01**	**05**	**02**	**04**	**04**	**07**	**127**	**255**	**741**
Mersa Matroh	00	00	00	1—10	11	00	00	00	00	00	00	00	36	120	121	73	364
				11—27	26	00	00	00	00	00	00	00	00	02	164	188	330
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**37**	**00**	**00**	**00**	**00**	**00**	**00**	**00**	**36**	**122**	**285**	**216**	**74[illegible]**
Exandria	00	00	00	1—10	87	11	00	02	02	00	00	00	01	09	151	265	528
				11—27	16	00	00	01	00	00	00	00	00	01	45	153	216
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	05
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**103**	**11**	**00**	**03**	**02**	**00**	**00**	**00**	**01**	**10**	**169**	**418**	**744**
Cairo	17	03	00	1—10	147	61	16	01	01	00	00	00	04	29	118	175	555
				11—27	50	41	07	00	00	00	00	00	00	00	14	60	172
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**197**	**102**	**23**	**01**	**01**	**00**	**00**	**00**	**04**	**29**	**132**	**253**	**724**
El Fayoum	01	01	00	1—10	219	384	24	00	00	00	00	00	00	00	15	43	687
				11—27	01	32	24	00	00	00	00	00	00	00	00	00	57
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**220**	**416**	**48**	**00**	**00**	**00**	**00**	**00**	**00**	**00**	**15**	**43**	**742**
El Minia	00	00	00	1—10	309	36	00	00	00	00	00	00	00	02	02	23	372
				11—27	369	03	00	00	00	00	00	00	00	00	00	00	372
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**678**	**39**	**00**	**00**	**00**	**00**	**00**	**00**	**00**	**02**	**02**	**23**	**744**
Assuit	00	00	00	1—10	107	51	06	00	00	00	00	00	00	06	31	94	295
				11—27	242	47	00	00	00	00	00	00	00	00	13	147	449
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**349**	**98**	**06**	**00**	**00**	**90**	**00**	**00**	**00**	**06**	**44**	**241**	**744**

Table A 5 *(contd.)* — **NUMBER IN HOURS OF OCCURENCES OF CONCURRENT SURFACS WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES JULY — 1978**

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 DIR
Luxor . . . . . (A)	01	00	00	1—10	68	66	16	06	13	37	72	62	94	118	129	149	704
				11—27	10	02	03	00	03	00	00	01	00	00	19	04	39
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**68**	**68**	**19**	**06**	**16**	**37**	**72**	**63**	**94**	**118**	**148**	**153**	**743**
Aswan . . . . . (A)	05	02	00	1—10	111	19	04	04	05	38	47	27	16	30	48	99	450
				11—27	49	00	01	00	01	11	40	24	15	09	54	85	289
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**160**	**19**	**05**	**04**	**06**	**49**	**87**	**51**	**31**	**39**	**102**	**184**	**737**
Siwa	03	00	00	1—10	32	17	05	10	01	01	06	35	125	154	186	130	693
				11—27	01	00	00	00	00	00	00	00	08	08	13	18	48
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**33**	**17**	**05**	**10**	**01**	**01**	**60**	**35**	**162**	**162**	**199**	**148**	**741**
Dakhla	00	05	00	1—10	105	38	14	50	04	03	11	12	16	49	86	198	546
				11—27	108	39	03	00	00	00	00	00	00	01	00	47	198
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**213**	**77**	**17**	**05**	**04**	**03**	**11**	**12**	**16**	**50**	**86**	**245**	**739**
Kharga	02	00	00	1—10	185	23	06	07	00	02	05	00	02	06	33	169	438
				11—27	199	13	00	00	00	00	00	00	00	00	04	88	304
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**348**	**36**	**06**	**07**	**00**	**02**	**05**	**00**	**02**	**06**	**37**	**257**	**742**
Hurghada	00	00	00	1—10	29	44	21	02	01	20	02	01	01	19	97	34	271
				11—27	113	19	00	00	00	00	00	00	00	04	71	265	472
				28—47	00	00	00	00	00	00	00	00	00	00	00	01	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**142**	**63**	**21**	**02**	**01**	**20**	**02**	**01**	**01**	**23**	**168**	**300**	**744**
Quseir	04	00	00	1—10	199	34	04	09	11	13	11	08	08	22	69	164	552
				11—27	136	09	00	00	00	00	00	00	00	00	01	42	188
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**335**	**43**	**04**	**09**	**11**	**13**	**11**	**08**	**08**	**22**	**70**	**206**	**740**

UPPER AIR CLIMATOLOGICAL DATA

Table B 1.—MONTHLY MEAN AND MONTHLY ABSOLUTE HIGHEST AND LOWEST VALUES OF ALTITUDE, AIR TEMPERATURE AND DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

JULY — 1978

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	1010m b.*	1013m.b.*	1007m.b.*	31	23.5	25.8	21.4	31	18 9
	1000	31	112	141	88	31	23.1	25.8	20.7	31	18 4
	850	31	1516	1560	1491	31	18.1	23.8	10.0	31	—2.6
	700	30	3158	3201	3109	30	10.6	15.9	0.8	30	—12 6
	600	30	4426	4463	4365	30	4.0	7.8	0.9	30	—19.4
	500	30	2886	5939	5808	30	— 4.4	—1.0	—8.0	30	—25.1
	400	30	7611	7682	7509	30	—14.7	—11.1	—18.0	30	—34 5
	300	30	9731	9828	9617	30	—28.8	—26.0	—30.6	30	—45 0
	250	29	11011	11115	10890	29	—38.3	—35.6	—40.1	28	—53 0
	200	27	12206	12604	12390	27	—49 2	—44.7	—51.2	27	—61 6
	150	26	14342	14435	14216	26	—61.9	—57.2	—64.0	1	—71.7
	100	20	16782	16863	16714	20	—73.7	—70.5	—78.7	—	—
	70	13	18869	18916	18815	13	—71.0	—65.4	—75.8	—	—
	60	7	19821	19880	19740	7	—64.8	—62.7	—68.0	—	—
	50	7	20931	20976	20889	7	—61.4	—59.5	—93.2	—	—
	40	1	22200	—	—	1	—58.4	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 U.T.	Surface	31	992mb.*	996mb.*	989mb.*	31	23.8	26.8	21.2	31	18.1
	1000	29	068	101	039		—	—	—	—	—
	850	24	1483	1523	1451	29	21.8	27 6	15.3	29	05.6
	700	29	3113	3226	3039	29	17.5	21.5	08.7	29	03.2
	600	29	4430	4530	4361	29	05.4	09.6	00.7	29	—09.8
	500	29	5860	5994	5832	29	—02.1	01.1	—05.6	29	—18.6
	400	29	7643	7756	7573	29	—12.2	—08.4	—15.9	29	—27.7
	300	29	9786	9910	9687	29	—26 6	—23.4	—30.9	29	—39.7
	250	29	11078	11193	10960	29	—35.6	—32.8	—38.2	29	—47.6
	200	29	12599	12745	12468	29	—45.7	—43.3	—47.1	29	56.4
	150	28	14460	14602	14332	28	—57.4	—55.5	—59.5	27	—66.1
	100	24	16949	17110	16810	24	—70.0	—76.9	—75.3	—	—
	70	16	19074	19230	18930	16	—69.1	—66.6	—72.3	—	—
	60	14	20039	20200	19890	14	—66.1	—63.3	—68.7	—	—
	50	14	21124	21288	20954	14	—61.0	—59.7	—65.8	—	—
	40	12	22600	22800	22430	12	—28.1	—55.9	—61.3	—	—
	30	11	24337	24545	24163	11	—45.4	—51.1	—59.0	—	—
	20	6	26920	27135	26774	6	—51.5	—50.7	—52.6	—	—
	10	1	29633	—	—	—	—48.6	—	—	—	—
Aswan 0000 U.T.	Surface	30	983mb.*	986mb.*	978mb.*	30	29.3	33.3	24.0	30	9.3
	1000	30	38	69	3	—	—	—	—	—	—
	850	30	1480	1580	1447	30	25.2	30.1	17.8	30	3.7
	700	30	3152	3187	3110	30	12.9	13.8	8.2	29	—4.0
	600	30	4426	4459	4374	29	4.0	6.4	1.7	29	—10 8
	500	30	5886	5927	5839	29	—5.6	—2.0	—11.7	30	—17.9
	400	30	7608	7699	7545	30	—15.5	—18.[illegible]	—12.5	28	—29.3
	300	29	9723	9796	9600	28	—29.7	—24 5	—39.3	29	—41.3
	250	29	10996	11072	10968	29	—39.4	—34.1	—41.7	28	—50.3
	200	28	12490	12595	12402	28	—50.8	—46 0	—53.7	2	—59.6
	150	28	14313	12465	12207	27	—64.0	—57.0	—76.0	—	—68.4
	100	25	16699	16786	16587	25	—78.4	—75.6	—81.9	—	—
	70	19	18755	1 840	18647	19	—71.7	—66.5	—77.3	—	—
	60	17	19700	19800	19550	17	—68.2	—63 7	—71.5	—	—
	50	17	90775	90850	20637	17	—64.7	—56 5	—70.5	—	—
	40	11	22271	22350	22150	11	—59.4	—59.5	—69.5	—	—
	30	11	23984	24080	23859	11	—57.0	—45.1	—69 0	—	—
	20	7	26624	26710	26529	7	—48.2	—42.1	—51 2	—	—
	10	1	31120	—	—	1	—56.4	—	—	—	—

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

* = pressure corrected to the elevation of the radiosonde station.

UPPER AIR CLIMATOLOGICAL DATA

Table B1 (*contd*).—MONTHLY MEANS, ABSOLUTE HIGHEST & LOWEST VALUES OF ALTITUOE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

JULY— 1978

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	*1010m.b.	*1013m.b.	*1007m.b.	31	28.0	30.0	26.3	31	20.0
	1000	31	113	142	09	31	27.0	29.5	23.4	31	19.0
	850	31	1531	1573	8021	31	20.5	26.3	14.8	31	— 0.5
	700	31	3183	3245	5313	30	12.9	20.0	9.4	30	— 9.3
	600	31	4459	4539	3044	31	5.8	8.2	1.5	31	—15.7
	500	31	5929	6022	4485	31	— 2.5	1.8	— 5.0	31	—22.5
	400	31	7667	7784	9727	31	—13.1	— 6.0	—18.8	31	—31.6
	300	30	9800	9992	9969	30	—27.5	—18.0	—32.7	29	—42.8
	250	29	11086	11178	10926	29	—36.8	—26.4	—41.0	29	—51.1
	200	28	12596	12912	12420	28	—47.6	—36.0	—50.0	29	—60.1
	150	27	14455	14862	14304	27	—59.7	—48.7	—62.3	9	—69.1
	100	32	16919	17427	16806	23	—68.3	—61.0	—77.7	—	—
	70	51	19015	19406	18917	15	—68.7	—56.7	—77.1	—	—
	60	9	20006	20420	19880	9	—63.8	—54.0	—71.3	—	—
	50	9	21097	21556	20956	9	—58.9	—51.0	—61.8	—	—
	40	3	22407	22600	22140	3	—58.6	—52.5	—66.9	—	—
	30	2	24312	24388	24237	2	—50.7	—50.2	—51.2	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 1200 U.T.	Surface	31	*991mb.	*994mb.	*987m.b	31	34.7	40.3	29.0	31	11.4
	1000	29	059	089	022	—	—	—	—	—	—
	850	29	1504	1549	1476	29	23.8	31.3	14.2	29	01.6
	700	29	3176	3258	3111	29	15.8	21.0	10.4	29	09.4
	600	29	4370	4617	4383	29	07.8	16.0	02.2	29	—15.0
	500	29	5956	6116	5859	29	00.3	04.9	—04.1	29	—22.9
	400	29	7716	7876	7618	29	—09.3	—04.9	—12.9	29	—30.7
	300	29	9885	10047	9750	29	—23.4	—17.9	—28.3	29	—51.2
	250	29	11196	11369	11054	29	—32.0	—26.9	—35.5	29	—49.0
	200	28	12738	12924	12592	28	—42.1	—36.9	—45.2	28	—57.0
	150	28	14282	14859	14478	28	—53.6	—49.1	—56.9	28	—66.2
	100	26	17172	17429	17006	26	—64.4	—58.8	—68.5	1	—71.6
	70	22	19339	19620	19153	21	—63.9	—54.4	—70.9	—	—
	60	31	20327	20660	20200	13	—58.5	—56.6	—61.5	—	—
	50	31	21448	21830	21323	13	—53.1	—43.4	—56.3	—	—
	40	9	23041	23430	22880	9	—47.6	—36.5	—51.8	—	—
	30	9	24848	25390	24689	9	—42.8	—38.7	—48.3	—	—
	20	5	27556	27807	27446	5	—36.9	—34.5	—42.6	—	—
	10	1	32216	—	—	1	—35.7	—	—	—	—
Aswan (A) 1200 U.T.	Surface	30	*982m.b.	*987m.b.	*977m.b	30	41.4	45.4	36.4	30	8.9
	1000	30	35	74	3	—	—	—	—	—	—
	850	30	1501	1535	1445	30	27.5	31.8	21.4	30	— 1.0
	700	30	3182	3229	3142	30	14.9	21.6	6.3	30	— 9.3
	600	30	4464	4511	4404	30	5.7	8.8	2.0	30	—16.9
	500	29	5934	5985	5869	29	— 4.0	— 0.4	—10.1	29	—22.8
	400	29	7675	7977	7602	29	—13.8	—10.4	—17.7	29	—33.8
	300	26	9797	9868	9719	24	—27.5	—24.7	—30.0	24	—44.4
	250	24	11088	11157	10994	23	—37.2	—35.5	—39.5	23	—52.6
	200	21	12604	12664	12532	21	—49.0	—46.7	—56.1	21	—61.8
	150	20	14441	14510	14347	20	—62.3	—60.0	—64.8	1	—73.2
	100	18	16859	16958	16737	18	—75.7	—56.4	—79.0	—	—
	70	16	18939	19048	18822	16	—70.5	—65.6	—76.4	—	—
	60	14	19832	20020	19800	14	—65.0	—62.4	—70.7	—	—
	50	14	20986	21100	20872	14	—61.1	—55.7	—71.5	—	—
	40	8	22455	22570	22350	8	—56.0	—51.9	—62.3	—	—
	30	7	24228	24365	24056	7	—50.8	—47.4	—55.6	—	—
	20	3	26965	27020	16930	3	—43.9	—42.1	—45.1	—	—
	10	—	—	—	—	—	—	—	—	—	—

N The number of casses 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 AT THE FREEZING LEVEL AND THE TROPOPAUSE. THE HIGHEST WIND SPEED IN THE UPPER AIR

JULY—1978

	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)	5112 (30)	552 (30)	—22.8 (30)	5780	510	—17.3	4500	590	—10.1	16452 (31)	106 (31)	—73.7 (13)	17200	94	—74.1	16090	112	—74.6	14972	139	165	65
0000 U.T.	Helwan . . .	5412 (29)	533 (29)	—14.9 (29)	6100	490	—20.7	4500	595	—13.1	16472	115	—67.5	18370	081	—72.6	9910	296	—33.3	12590	202	225	71
0000 U.T.	Aswan . . (A)	5067 (30)	556 (30)	—13.5 (29)	5610	519	—23.2	4472	600	— 8.4	16853 (19)	99 (19)	—79.1 (19)	18350	75	—81.2	15300	127	—73.5	15380	—	125	80
1200 U.T.	M. Matruh (A)	5467 (31)	531 (31)	—20.3 (31)	6550	468	—26.0	4610	564	—28.0	16718 (11)	102 (11)	71.7 (11)	18820	73	—79.3	15530	105	—73.5	7635	400	300	65
1200 U.T.	Helwan . . .	6005 (29)	499 (62)	—22.7 (28)	6900	448	—21.4	4860	570	—23.3	16960	104	—66.1	18130	084	—69.9	15820	124	—62.9	12290	—	250	60
1200 U.T.	Aswan . (A)	5409 (30)	535 (30)	—20.1 (30)	6150	488	—27.9	4940	566	— 9.8	16926 (16)	100 (16)	—77.2 (16)	17800	86	—77.2	15980	115	—74.3	15400	127	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 SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.

MERSA MA TRWT — JULY 1978

Time	Pressure Surface (Millibar)	Wind within specified ranges of direction (000—360)°																								Number of Calm winds	Total Number of Observations (TN)	Mean scalar wind speed
		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	10	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	8	11	8	8	11	9	11	0	31	10
	1000	1	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	—	7	14	15	15	6	14	0	30	15
	850	12	15	3	23	0	—	0	—	0	-	0	—	0	—	1	6	0	14	2	23	7	13	4	22	0	30	16
	700	5	15	3	17	2	28	0	—	1	18	0	—	0	—	0	—	3	12	4	13	3	15	5	14	0	27	16
	600	2	5	5	17	2	17	0	—	0	—	0	—	0	—	1	13	7	17	1	14	6	14	3	11	0	27	15
	500	1	24	2	22	0	—	0	—	1	4	0	—	0	—	4	14	9	19	6	16	2	8	2	13	0	27	16
	400	0	—	0	—	0	—	1	6	0	—	1	17	6	16	9	22	3	30	3	18	2	20	1	2	0	26	19
	300	0	—	0	—	0	—	0	—	1	2	1	20	8	30	5	17	2	18	6	25	1	3	0	—	0	24	23
	250	0	—	0	—	0	—	0	—	0	—	3	23	6	26	6	22	3	28	3	15	1	26	0	—	0	22	23
	200	0	—	0	—	0	—	0	—	0	—	2	36	9	25	4	20	2	24	1	23	0	—	0	—	0	18	25
	150	0	—	0	—	0	—	0	—	1	11	6	31	5	30	1	20	1	18	1	19	0	—	0	—	0	15	27
	100	0	—	0	—	0	—	0	—	0	—	3	24	1	26	1	13	0	—	0	—	0	—	0	—	0	5	22
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	1	14	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	12	17	18	16	0	31	16
	1000	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	12	15	21	15	19	0	31	20
	850	7	16	2	8	3	13	0	—	0	—	0	—	0	—	0	—	1	4	5	18	9	17	4	13	0	31	15
	700	2	8	2	13	2	19	0	—	0	—	0	—	0	—	2	18	2	14	7	16	8	15	5	21	0	30	15
	600	6	11	1	5	3	13	0	—	0	—	0	—	0	—	3	15	7	16	5	18	2	14	2	10	0	29	14
	500	1	12	2	11	0	—	2	8	1	3	2	10	0	—	5	24	10	21	2	14	3	7	2	18	0	30	16
	400	0	—	2	8	0	—	2	8	0	—	1	3	3	16	11	25	7	24	2	14	1	65	1	7	0	30	21
	300	0	—	1	17	0	—	0	—	—	—	1	19	8	24	6	23	5	22	5	12	1	30	0	—	0	27	22
	250	0	—	1	15	0	—	0	—	1	38	3	27	6	27	8	28	5	17	1	13	0	—	0	—	0	25	24
	200	0	—	0	—	0	—	0	—	—	—	3	29	10	17	3	25	2	14	0	—	0	—	1	4	0	19	24
	150	0	—	0	—	0	—	0	—	1	26	3	30	3	—	1	30	1	18	2	22	0	—	0	—	0	11	24
	100	0	—	0	—	0	—	0	—	2	22	4	20	0	—	0	—	0	—	0	—	0	.	0	—	0	6	21
	70	0	—	0	—	0	—	2	18	2	28	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	4	23
	60	0		0	—	0	—	1	39	—	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	39
	50	0	—	0	—	0	—	1	27	—	—	0	—	0	—	0	—	0	—	0	—	0	-	0	—	0	1	27
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the wind has been observed within 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 SPECIFIEDRANGES AND THE MEAN SCALAR SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.**

HELWAN (A) JULY — 1978

Observation	Pressure Surface (Millibar)	Wind within specified ranges of direction (000—360)°																								Number of calm winds	Total number of observations (TN)	Mean scalar wind speed
		345/014		015/044		045/074		075/104		105/135		135/164		165/194		195/224		235/254		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 T.U.	Surface	17	07	7	08	5	09	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	10	1	03	0	31	08
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	4	13	5	10	5	12	8	10	0	—	0	07	1	—	0	—	0	—	0	—	4	12	2	17	0	28	11
	700	1	16	5	10	2	12	2	10	0	—	1	—	1	08	2	16	5	14	1	12	8	13	1	25	0	29	13
	600	2	06	4	10	1	08	2	04	1	10	0	04	1	08	7	15	0	—	1	06	9	19	1	14	0	29	13
	500	1	08	1	07	3	07	2	07	1	04	1	09	1	03	2	16	1	02	2	16	11	16	3	11	0	29	21
	400	1	13	2	13	1	03	0	—	4	12	1	12	1	33	2	06	3	04	4	10	9	16	1	29	0	29	21
	300	1	15	1	12	2	10	2	09	1	28	2	17	1	04	4	19	6	13	4	15	3	30	2	11	0	29	71
	250	1	16	0	—	1	2	1	08	1	32	3	06	1	04	6	18	4	22	0	—	3	33	1	04	0	22	19
	200	0	—	0	—	0	12	0	—	1	07	1	18	0	—	3	17	1	24	0	—	2	27	2	38	0	12	20
	150	0	—	0	—	0	—	0	—	0	—	1	19	0	—	4	20	0	—	0	—	0	—	1	57	0	6	26
	100	0	—	0	—	0	—	0	—	0	—	2	—	1	28	0	—	0	—	0	—	0	—	0	—	0	2	19
	70	0	—	0	—	—	—	0	—	0	—	0	—	—	—	0	—	0	—	0	—	0	—	0	—	0	1	28
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	13	09	5	13	3	17	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	90	5	09	0	31	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	2	10	5	14	6	14	5	12	2	10	1	20	0	—	0	—	0	—	3	13	1	60	7	08	0	29	12
	700	3	11	2	10	2	06	3	06	2	07	1	10	1	13	2	10	2	12	3	19	5	15	3	17	0	29	11
	600	0	—	1	11	2	08	0	—	2	13	1	12	0	—	5	18	4	11	4	15	6	11	5	18	0	29	15
	500	1	05	1	09	1	09	2	06	3	17	0	—	3	10	1	10	2	12	7	18	8	20	3	11	0	29	14
	400	2	14	0	—	1	10	1	06	3	13	2	14	2	20	3	12	2	16	6	17	5	14	1	04	0	29	14
	300	0	—	1	23	0	—	1	07	3	21	2	14	2	23	3	13	2	18	3	22	6	22	3	10	0	28	18
	250	0	—	0	—	1	24	0	—	3	14	0	—	2	20	4	15	2	28	2	23	5	21	2	14	0	25	20
	200	0	—	0	—	1	06	0	—	2	15	1	09	2	28	5	24	1	16	1	23	3	24	3	21	0	217	21
	150	0	—	0	—	0	—	0	—	0	—	0	—	3	46	2	25	0	—	0	16	0	—	0	—	0	4	33
	100	0	—	0	—	0	—	0	—	1	28	0	—	2	38	0	—	0	—	0	—	0	—	0	—	—	1	30
	70	0	—	0	—	0	—	0	—	0	—	1	54	—	—	0	—	0	—	—	—	0	—	0	—	—		54
	60	0	—	0	—	0	—	0	—	0	—	1	44	—	—	0	—	0	—	—	—	0	—	0	—	—	—	44
	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 *a*.l directions during the month.

TABLE B 3, (eentd.)—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 — 1978

Time	Pressure Surface Millibar	Wind between range 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	—	1	5	0	—	0	—	2	6	1	15	2	13	2	7	0	—	2	9	3	11	0	30	10
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	5	12	2	12	5	13	0	—	2	20	0	—	1	5	1	7	2	7	4	12	3	9	4	11	0	29	11
	700	4	11	1	6	5	11	4	12	1	14	1	24	2	12	3	14	0	—	3	12	2	19	2	17	0	28	13
	600	4	12	1	12	4	23	6	15	0	—	1	7	3	11	4	12	0	—	1	12	3	22	1	12	0	28	15
	500	1	16	2	4	5	21	9	21	1	15	2	9	0	—	0	—	1	5	4	8	3	14	0	—	0	28	15
	400	1	5	1	6	3	14	11	19	4	16	1	10	0	—	0	—	1	3	3	12	1	6	2	7	0	28	14
	300	0	—	0	—	3	15	10	20	8	17	1	15	1	9	0	—	1	14	7	14	0	—	1	11	0	27	17
	250	0	—	0	—	5	14	7	24	10	23	2	24	0	—	2	11	1	21	0	—	0	—	0	—	0	27	21
	200	0	—	1	2	1	10	10	28	9	31	2	18	1	17	1	5	0	—	0	—	0	—	0	—	0	25	25
	150	0	—	0	—	2	28	6	34	14	32	1	15	0	—	0	—	0	—	0	—	0	—	0	—	0	23	31
	100	0	—	0	—	0	—	8	42	9	46	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	17	44
	70	0		0	—	1	34	9	34	2	44	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	12	36
	60	0	—	0	—	1	31	9	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	10	39
	50	0	—	0	—	1	36	6	41	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	7	40
	40	0	—	0	—	1	46	4	36	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	5	38
	30	0	—	0	—	1	46	3	41	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	4	42
	20	0	—	0	—	0	—	2	38	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	2	38
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	7	11	1	10	0	—	0	—	1	5	2	10	5	13	2	15	2	11	3	13	1	12	6	2	0	30	12
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	5	10	0	—	0	—	1	6	0	—	0	—	0	—	4	14	7	12	4	10	3	14	6	16	0	30	12
	700	3	10	0	—	4	15	2	15	1	4	1	25	2	14	3	24	3	18	4	15	6	18	1	14	0	30	16
	600	4	9	1	13	3	15	5	19	1	5	1	15	1	15	5	11	3	11	2	15	3	16	1	7	0	30	13
	500	0	—	1	20	6	19	5	17	3	16	1	14	2	10	1	13	1	3	5	11	1	12	2	31	0	29	15
	400	0	—	1	18	7	16	9	20	3	17	1	20	0	—	2	7	0	—	3	5	0	—	2	10	0	28	15
	300	0	—	1	5	2	18	13	27	3	18	2	10	1	2	0	—	2	13	0	—	0	—	0	—	0	24	20
	250	0	—	1	22	3	14	11	21	5	22	0	—	0	—	0	—	2	14	0	—	0	—	0	—	0	20	20
	200	0	—	0	—	1	12	8	29	9	36	1	12	0	—	0	—	0	—	0	—	0	—	0	—	0	19	31
	150	0	—	0	—	1	19	7	36	10	46	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	18	40
	100	0	—	0	—	0	—	4	72	11	47	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	15	48
	70	0	—	0	—	0	—	4	4	5	48	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	9	46
	60	0	—	0	—	0	—	4	43	2	35	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	6	40
	50	0	—	0	—	0	—	3	42	3	37	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	6	39
	40	0	—	0	—	0	—	2	48	1	40	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	3	45
	30	0	—	0	—	0	—	2	46	1	37	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	3	43
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N — The number of cases the wind has been observed within the range of directionduring th month

TN — The total number of cases the wind has been observed for all diection during the monteh.

MONTHLY REVIEW OF AGROMETEOROLOGICAL STATIONS

MERSA MATRUH — JUIY 1978

The mean daily air temperature was equalts normal. The mean daily relative humidity was slightly above normal. The month was rainless as usual.

Mild summer weather prevailed all over the months.

The mean daily actual sunshine duration and wind speed at 1.5 met. height were lower than average by 0.2 hour and 0.4 met./sec. respectively.

The highest maximum soil temperature were around those of July 1977 with departures between —0.6°C at 5 cm. depth and +0.8°C at 2cm. de pth. The lowest minimum soil temperatures were around those of July 1977 with departures between —0,6°C at 200 cm. depth and +0.5°C at 10cm. depth.

TAHRIR — JUIY 1978

The mean daily air temperature was almost equal to normal. The mean daily relative humidity was equal to normal. The month was rainless as usual.

The month was intervened by three heat waves in the periods (3rd - 10th), (12th - 17th) and (19th - 22nd), besides three mild waves in the periods (1st, 2nd), (23rd - 27th) and 31st. The maximum temperatures ranged between 30.8°C on the 1st and 39.4°C on the 5th. The minimum temperatures ranged between 16.4°C on the 26th and 23.5°C on the 19th.

The mean daily actual sunshine duration, wind speed at 1.5 met. height and pan evaporation were respectively lower than normal by 0.4 hour, 0.1 met./sec and 0.86 mm.

The highest maximum soil temperatures were around normal with departures between —0.1°C at 2cm. and 100cm. depths and +1.1°C at 10cm. depth. The lowest minimum soil temperatures were ground normal with departures between —0.8°C at 600 cm. depth and +0.5°C at 20 cm. depth.

The mean daily air temperature and relative humidity were nearly equal to normal. The month was rainless as usual.

The maximum temperatures were around normal, except for two mild waves in the periods (1st. 2nd) and (23rd - 31st) and two heat weves in the periods (4th - 9th) and the 14th.

The maximum temperatures ranged between 29.8°C on the 1st and 38.2°C on the 5th. The minimum temperatures ranged between 15.5°C on(the 27th and 22,6°C on the 16th.

The mean daily actual sunshine duration and wind speed at 1.5 met. height were less than normal by 0.2 hour and 0.2 met./sec. respectively. The mean daily pan evaporation was 1.49 mm, higher than normal.

The highest maximum soil temperature was 0. 4°C below normal at 300cm. depth and higher than normal at all other depths with departures between 0.1°C at 200 cm. depth and 2.2°C at 20 cm. depth. The lowest minimum soil temperatures were around normal at all depths with departures between. —0.9°C at 2cm. depth and +1.4°C at 50 cm. depth.

ASSYOUT — JUIY 1978

The mean daily air temperature was nearly to that of last July. The mean daily relative humidity was higher than that of last July. The month was rainless.

Hot weather prevailed except in the last week which was mild. The maximum temperatures renged between 33.4°C on the 31st and 45.0°C on the5th. The minimum temperatures ranged between 18.5°C on the 28th and 24.4°C on the 19th.

The mean daily actual sunshine duration was slightly less than that of last July.

The highest maximum soil temperatures were higher than those of last July with departures between 0.6°C at 200 cm. and 300 cm. depths and5.4°C at 2cm. depth. The lowest minimum soil temperatures were around those of last July with departures between —0.3°C at 5cm. depth and +1.2°C at 10 cm. depth.

KHARGA — JUIY 1978

The mean daily air temperature and relative humidity were above normal. The month was rainless as usual.

The month was in general hot except for two mild waves in the periods (lst 2nd) and (24th-31st) . The maximum temperatures ranged between 35.5°C on the lst and 47.5°C on the 5th. The minimum temperatures rangen between 20.0°C on the lst and the 20th and 31.4°C on the 23 rd.

The mean actual sunshine duration, wind speed at 1.5 met. height and pan evaporation were less than normal respectively by 0.9 hour, 0.3 met. /sec /and 1. 69 mm.

The highest maximum soil temperatures were above or equal to normal with departues equal to 0.0°C at 50cm. and 200cm. depths and 3.8°C at 10cm. depth. The lowest minimum soil temperatures at 10cm. depth and + 0.2°C at 100cm. and 500cm. were around normal with departures between 1.4°C nepths.

Table C 1.—AIR TEMPERATURE AT 1½ METRES ABOVE GROUND

JULY — 1978

STATION	Air Temperature (°C)					Duratio in hours to the nearest half hour of 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
M. Matruh. . . .	28.4	20.7	24.9	22.8	26.5	24.0	24.0	24 0	24.0	24.0	23.2	10.9	0.0	0.0	0.0	0.0
Thrira	35.3	19.8	26.7	22.8	29.7	24.0	24.0	24.0	24.0	24.0	22.1	13.0	6.9	1.3	0.0	0.0
Bahtim	33.6	18.8	26.0	22.1	29.2	24.0	24.0	24.0	24.0	24.0	2).8	12.1	6.1	0.7	0.0	0.0
Assiut	38.6	21.7	29.6	25.6	32.8	24.0	24 0	24.0	24.0	24.0	23.5	17.5	10.5	5.0	1.2	0.0
Kharga	40.9	26.1	34.0	31.3	36.5	24.0	24.0	24.0	24.0	24.0	24.0	22.9	18.1	10.2	3.9	0.4

Table C 2.—EXTREME VALUES OF AIR TEMPERATURE AT 1½ METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5 cms ABOVE GROUND OVER DIFFERENT FIELDS.

JULY — 1978

STATION	Max. Temp. at 1½ Metres				Min. Temp. at 1½ 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
M. Matruh. . . .	30.2	14,15	26.8	1	23.8	13	18.4	1	16.4	1	—	—
Tahrir	39.4	5	30.8	1	23.5	19	16.4	26	14.9	26	12.7	25
Bahtim	38.2	5	29.8	1	22.6	16	15.5	27	13.1	1	11.7	27
Assiut	45.0	5	33.4	31	24.4	19	18.5	28	14.4	28	—	—
Kharga	47.5	5	35.5	1	31.4	23	20.0	3	16.8	3	—	—

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

JULY — 1978

STATION	(Solar+Sky Radiation gm. cal/cm²	Duration of Bright Sunshine			Relative Humidity %				Vapour Pressure (mms)						Evaporation(mms)		RainFall (mms)		
		Total Actual	Total Possible	%	Mean of dry	1200 U.T.	Lowest	Date	Mian of dry	1200 U.T.	Highest	Date	Lowest	Date	Piche	Pan Class(A)	Total Amount	Max. Fall in one day	Date
M. Matruh	579.1	370.1	433.8	85	76	65	51	25,26	17.9	18.7	23.5	11	12.4	1	5.7	—	0	0	—
Tahrir . .	681.5	372.4	430.7	86	67	38	27	5	16.8	15.0	22.5	14	12.0	2	7.7	10.61	0	0	—
Bahtim . .	663.5	357.0	429.9	83	68	42	27	5	16.5	15.9	21.7	14	11.4	2	7.4	11.59	0	0	—
Assiut. .	—	381.6	422.6	90	49	31	13	6	14.6	14.8	22.3	18	8.1	6	11.8	13.12	0	0	—
Kharga. .	706.6	355.4	419.1	85	35	25	16	6	13.3	13.8	20.6	13	7.9	6	1 .8	19.31	0	0	—

Table C 4.—EXTREME SOIL TEMPERATURE AT DIFFER DEPTH IN DIFFERENT FIELDS·cms

JULY 1978

STATION	Highest (H) Lowest (L)	Extreme soil temperature (°C) in dry field at different depths (,ms.)								Extreme soil temperature (°C) in grass field at different depths (·ms.)							
		2	5	10	20	50	100	200	300	2	5	10	20	50	100	200	300
M. Matruh	H	41.5	38.1	34.5	31.0	28.4	26.5	24.0	—	—	—	—	—	—	—	—	—
	L	25.3	24.8	25.1	26.5	26.3	25.0	22.4	—	—	—	—	—	—	—	—	—
Tahrir . . .	H	54.5	48.9	43.5	37.8	34.1	31.1	28.9	27.3	39.1	37.5	33.4	31.1	31.5	30.0	27.7	—
	L	28.5	2o.6	27.2	30.6	31.3	30.0	27.4	26.2	24.1	24.1	24 4	26.0	28.8	27.8	52.8	—
Bahtim . .	H	55.7	46.7	40.4	36.7	33.3	3ɔ.6	26.6	24.5	42.8	36.6	32.4	30.0	28.1	26.2	23 4	—
	L	28.0	28.6	29.3	30.8	31.5	29.1	25.3	23.7	23.1	23.2	23.9	25 4	25.7	24.7	22.2	—
Assiut . . .	H	66.1	54.8	44.3	37.8	32.4	30.7	27.2	25.4	—	—	—	—	—	—	—	—
	L	32.3	29.2	31.1	32.4	31.4	29.7	26.0	24.4	—	—	—	—	—	—	—	—
Kharga . .	H	59.8	53.2	47.7	40.8	35.3	33 3	30.5	29.0	—	—	—	—	—	—	—	—
	L	22.1	25.3	28.4	32.6	33.2	32.0	29.2	28.2	—	—	—	—	—	—	—	—

TableC 4.—SURFACE WIND

JULY. — 1978

STATION	Wind Speed m/scc at 1% metres			Days with surface wind speed at 10 metres							Max. Cust (knots)	
	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
M. Matruh	4.0	2.6	5.5	31	31	16	0	0	0	0	26	1,21,30
Tahrir.	2.4	1.6	3.2	31	19	0	0	0	0	0	25	3,4
Bahtim..	2.1	1.3	2.9	25	8	1	0	0	0	0	30	3
Assiut	—	—	—	—	—	—	—	—	—	—	—	—
Kharga	3.7	2.7	4.6	31	27	20	1	0	0	0	37	11

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MONTHLY WEATHER REPORT

VOLUME 21 NUMBER 8

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THE EGYPTIAN METEOROLOGICAL AUTHORITY
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In fulfilment of its duties, the Egyptian Meteorological Authority issues several reports and publications on weather, climate and agro-meteorology. The principal publications are described on this page.

Orders for publications should be addressed to :

"Chairman of the Board of Directors, Meteorological Authority, Kubri-el-Qubbeh — CAIRO.

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 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 the Meteorological Authority.

TECHNICAL NOTES

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THE ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

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THE EGYPTIAN METEOROLOGICAL AUTHORITY
CAIRO

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Note : For explanatory notes on tables please refer to Volume 21, Number 1 (January 1976).

GENERAL SUMMARY OF WEATHER CONDITIONS

AUGUST 1978

Mild humid Summer weather in the northern and middle parts, hot in the southern parts.

PRESSURE DISTRIBUTION

The prevailing pressure systems were the monsoon low pressure over Iraq and Arabia and the weak high pressure over central Mediterranean and Libya.

The mean monthly atmospheric pressure over Egypt was above normal.

SURFACE WIND

Most Surface winds were light to moderate Nly to NW ly, became fresh during several days in Scattered parts.

TEMPERATURE

Temperature was below normal most days of this month, mild humid Summer weather prevailed in the northern parts, rather mild humid in the middle parts.

The month was intervened by two slightly hot waves in far upper Egypt in the periods (9th - 12th) and 22nd.

The highest and lowest maximum temperatures were respectively 43.3°C at Aswan on the 10th and 11th, and 27.0°C at Mersa - Matruh on the 13th and 18th.

The highest and Lowest minimum temperatures were respectively 28.7°C at El-Quseir on the 9th 17.0°C at Sewa on the 23rd.

PRECIPITATION

The month was rainless as usual.

OTHER WEATHER PHENOMENA

Low clouds and mist developed in the early morning during many days over scattered parts of Lower Egypt and Cairo.

Chairman (M.A. BADRAN)

Board of Directors

SURFACE DATA

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

AUGUST 1978

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	1013.1	2.8	29.9	1.5	20.9	0.9	25.4	25.2	1.1	20.5	—1.3	65	—1	—	—	—	7.4
Mersa Matruh. (A)	1012.0	1.9	28.2	1.7	20.4	—0.7	24.3	24.5	—1.1	21.2	—0.5	76	3	352.5	411.4	88	6.7
Alexandria (A)	1011.1	1.7	29.5	1.1	22.3	—0.6	25.9	25.5	1.0	21.6	1.2	70	—1	346.7	411.2	84	4.3
Port Said. (A)	1009.9	1.7	28.3	2.4	23.7	1.0	26.0	25.8	1.4	22.1	—1.5	17	—1	349.9	411.2	85	5.8
El Arish.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo. (A)	1010.2	—1.6	32.4	2.2	20.8	1.0	26.6	26.1	1.7	20.6	—1.1	62	—5	—	—	—	10.8
Fayoum.	—	—	35.4	1.5	20.1	1.5	27.7	27.2	1.6	20.5	0.9	22	5	—	—	—	8.1
Minya. (A)	1008.9	—1.3	34.4	2.0	19.3	1.1	26.8	26.8	1.4	19.9	0.8	53	3	365.7	407.0	90	10·8
Assyout. (A)	1009.4	2.3	33.9	2.9	19.9	—2.5	26.9	27.1	—2.5	17.7	—2.1	38	1	—	—	—	15.9
Luxor. (A)	1007.1	1.8	39.3	1.8	22.1	1.5	30.7	30.5	—2.1	19.9	0.1	35	8	—	—	—	9.3
Aswan. (A)	1007.0	—1.6	40.1	1.7	24.2	1.7	32.1	32.1	—1.8	17.8	0.5	19	—3	373.7	401.6	93	20.1
																	11.8
Siwa	1011.8	—1.7	35.2	2.3	19.5	1.5	27.3	27.6	1.7	18.7	1.1	43	—1	356.0	408.4	87	
Bahariya.	1010.1	—1.5	35.1	2.2	19.7	1.5	27.4	27.4	1.8	19.0	—0.9	45	2	—	—	—	9.5
Farafra.	1011.7	—2.2	35.4	2.2	20.6	0.7	28.0	28.0	1.5	17.4	0.7	32	2	—	—	—	15.0
Dakhla.	1010.5	2.5	36.3	2.3	21.2	—1.3	28.7	29.1	1.5	17.2	1.2	26	0	—	—	—	17.8
Kharga.	1008.0	0.6	37.5	2.1	21.9	0.9	29.7	30.5	0.9	19.8	1.3	39	12	373.3	403.4	93	19.1
																	19.0
Tor.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Hurghada.	1005.9	—2.0	32.2	1.1	25.7	0.5	28.9	29.2	0.5	12.1	—0.9	45	—5	374.6	405.9	89	—
Quseir.	1006.1	—0.9	32.3	1.2	26.0	0.7	29.1	29.3	—1.0	22.2	—0.1	52	2	—	—	—	8.6

Table A 2.—MAXIMUM & MINIMUM AIR TEMPERATURE

AUGUST — 1978

tion name	Maximum Temperature									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
Salum	33.4	10	27.2	23	31	14	00	00	00	19.8	—	23.2	10	19.1	23	00	00	00	00
Mersa Matruh (A)	30.2	7	27.0	13,18	31	01	00	00	00	19.2	—	23.7	11	18.3	24,25	00	00	00	00
Alexandria (A)	31.2	9	28.6	15,16	31	04	00	00	00	20.6	—	23.5	11	20.4	21	00	00	00	00
Port Said (A)	30.7	8	27.1	23	31	01	00	00	00	23.2	—	25.3	19	22.3	23	00	00	00	00
Arish	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo (A)	36.0	8	30.3	14	31	31	02	00	00	—	—	22.7	11	19.0	21	00	00	00	00
Fayoum	38.7	10	35.5	15,23	31	31	14	00	00	18.0	—	22.6	9	17.2	23	00	00	00	00
Minya (A)	37.2	5	32.6	1	31	31	09	00	00	17.7	—	21.8	11	17.2	15,27	00	00	00	00
Assyout (A)	38.2	5	34.2	1,15	31	31	08	00	00	19.3	—	22.5	10	18.2	27	00	00	00	00
Luxor (A)	43.2	11	35.7	15	31	31	31	10	00	15.8	—	25.3	9	19.4	18	00	00	00	00
Aswan (A)	43.3	10,11	36.7	24	31	31	31	15	00	—	—	27.5	12	21.6	17	00	00	00	00
Siwa	39.8	10	32.2	24	31	31	17	00	00	17.1	—	22.1	7	17.0	23	00	00	00	00
Bahariya	38.8	5	33.2	14,15,16	31	31	11	00	00	19.0	—	22.4	9	17.6	25	00	00	00	00
Farafra	38.2	10	33.0	15	31	31	17	00	00	18.8	—	23.2	10	18.5	30	00	00	00	00
Dakhla	39.7	11	34.1	14	31	31	23	00	00	21.0	—	24.6	12	17.8	15	00	00	00	00
Kharga	41.6	11	35.1	15	31	31	31	04	00	19.6	—	25.8	10	18.0	26	00	00	00	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	35.3	8	30.5	15	31	31	01	00	00	—	—	28.6	12	24.0	8	00	00	00	00
Quseir	34.2	10	30.8	14,15,25	31	31	00	00	00	22.2	—	28.7	9	23.8	28	00	00	00	00

Table A 3.—SKY COVER AND RAINFALL

AUGUST — 1978

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 Rsin						
								Amount	Date	0.1	≥0.1	≥1.0	≥5.0	≥10	≥25	05
Sallum	0.0	0.3	0.5	0.0	0.1	0.0	0.0	—	—	00	00	00	00	00	00	00
Mersa Matruh (A)	1.0	2.1	0.7	0.7	1.1	0.0	0.0	—	—	00	00	00	00	00	00	00
Alexandria . . (A)	2.4	3.0	4.4	3.2	3.2	0.0	—	—	—	00	00	00	00	00	00	00
Port Said . . (A)	2.7	2.4	0.4	0.8	1.6	0.0	0.0	—	—	00	00	00	00	00	00	00
El Arish	—	2.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo . . . . (A)	1.7	1.7	0.4	0.1	1.5	0.0	—	—	—	00	00	00	00	00	00	00
Fayoum	0.0	1.5	0.0	0.0	—	0.0	0.0	—	—	00	00	00	00	00	00	00
Minya	0.0	0.3	0.0	0.0	0.2	0 0	0 0	—	—	00	00	00	00	00	00	00
Assyout . . . (A)	0.0	0.1	0.0	0.0	0.0	0 0	0.0	—	—	00	00	00	00	00	00	00
Luxor . . . . (A)	0.0	0.5	0.0	0.0	0.0	0.0	0 0	—	—	00	00	00	00	00	00	00
Aswan . . . . (A)	0.0	0.3	0.3	0.1	0.2	0.0	0.0	—	—	00	00	00	00	00	00	00
	0.0															
Siwa	0.0	1.0	0.0	0.2	0.1	0.0	0.0	—	—	00	00	00	00	00	00	00
Bahariya	0.0	0.0	0.0	0.0	0.2	0.0	—	—	—	00	00	00	00	00	00	00
Farafra	—	0.1	0.0	0.0	—	0.0	—	—	—	00	00	00	00	00	00	00
Dakhla	0.0	0.0	0.1	0.0	0.0	0.0	0.1	—	—	00	00	00	00	00	00	00
Kharga	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—	—	00	00	00	00	00	00	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—	—	00	00	00	00	00	00	00
Quseir	0.0	0·0	0.1	0.0	0.0	0.0	0 0	—	—	00	00	00	00	00	00	.00

Table A 4.— DAYES OF OCCURRENCE OF MISCCLLANEOUS WEATHER PHENOMENA

AUGUST — 1978

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											
Sallum	00	00	00	00	01	00	00	02	00	00	00	31	00
Mersa Matruh (A)	00	00	00	00	15	00	02	13	00	00	00	22	00
Alexandria . (A)	00	00	00	00	00	00	00	00	00	00	00	09	00
Port Said . (A)	00	00	00	00	00	00	00	00	00	00	00	19	00
El Arish	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo . . . . (A)	00	00	00	00	05	05	11	00	00	00	00	23	00
Fayoum	00	00	00	00	00	00	00	00	00	00	00	31	00
Minya . . . . (A)	00	00	00	00	09	00	02	01	00	00	00	31	00
Assyout. . . . (A)	00	00	00	00	00	00	00	00	00	00	00	31	00
Luxor . . . . (A)	00	00	00	00	00	00	04	00	00	00	00	31	00
Aswan . . . . (A)	00	00	00	00	00	00	00	03	00	00	00	31	00
Siwa	00	00	00	00	00	00	02	10	00	00	00	31	00
Bahariya	00	00	00	00	00	00	00	00	00	00	00	31	00
Farafra	00	00	00	00	00	00	00	02	00	00	00	31	00
Dakhla	00	00	00	00	00	00	00	01	00	00	00	31	00
Kharga	00	00	00	00	00	00	00	01	00	00	00	31	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	00	00	00	00	00	00	00	03	00	00	00	31	00
Quseir	00	00	00	00	00	00	00	00	00	00	00	31	00

Ie A5—NUMBER IN HOURS OF OCCURRENCE OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

AUGUST — 1978

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 / 245	255 / 284	285 / 314	315 / 344	All direction
Elsalium	01	06	00	1—10	90	113	88	04	03	00	00	20	04	08	98	190	606
				11—27	26	15	03	00	00	00	00	00	00	00	52	41	137
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	116	128	91	04	03	00	00	20	04	08	150	231	737
Mersa Ma roh	02	00	00	1—10	22	20	00	00	00	00	00	00	59	50	08	146	397
				11—27	08	00	00	00	00	00	00	00	00	01	120	216	345
				23—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	30	00	00	00	00	00	00	00	59	51	200	362	742
Alexandrlala	00	00	00	1—10	25	00	00	00	00	00	00	00	00	52	104	444	575
				11—27	00	00	00	00	00	00	00	00	00	00	35	134	169
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	25	09	00	00	00	00	00	00	00	52	139	577	744
Cairoap	21	00	00	1—10	146	53	06	00	00	00	00	00	01	53	102	186	646
				11—27	30	10	00	00	00	00	00	00	00	00	07	39	77
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	176	54	06	00	00	00	00	00	01	53	802	225	723
El-fayoum	01	00	11	1—10	354	306	27	04	01	00	00	00	00	00	08	27	727
				11—27	00	05	00	00	00	00	00	00	00	00	00	00	05
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	354	311	27	04	01	00	00	00	00	00	08	27	721
El minia	11	00	00	1—10	550	39	00	00	00	00	00	00	00	00	00	54	643
				11—27	87	03	00	00	00	00	00	00	00	00	03	00	90
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	637	45	00	00	00	00	00	00	00	00	00	54	733
assuit	08	00	00	1—10	153	105	06	00	00	00	00	00	03	08	12	88	375
				11—27	125	187	05	00	00	00	00	00	00	00	07	37	361
				28—48	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	278	292	11	00	00	00	00	00	03	08	19	125	736
Luxor	00	00	00	1—10	32	18	06	04	09	13	70	132	104	117	158	77	740
				11—27	01	00	00	00	00	00	00	00	00	01	00	01	04
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	33	18	06	04	00	13	70	132	105	118	158	78	744

Table A5— NUMBER IN HOURS OF OCCURRENCES OF CONCURRENT SURFACE WIND SPEED AND DIRECTION RECORDED WITHIN SPECIFIED RANGES

AUGUST — 1978

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	number in hours of occurrences wind blowing from the ranges of directions indicated												
					345 / 014	015 / 044	047 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 284	285 / 314	315 / 344	All directions
Aswan	00	00	00	1—10	120	41	13	04	03	20	19	10	19	63	85	194	95
				11—27	12	01	01	00	01	02	01	01	02	13	48	67	519
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	100
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	132	42	14	04	04	22	20	11	21	76	137	261	744
Siwa	08	00	00	1—10	28	14	07	02	09	05	12	34	111	232	166	99	719
				11—27	00	00	00	00	00	00	00	00	00	08	09	00	17
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	28	14	07	02	09	05	12	34	111	240	175	99	736
El Dakhla	02	03	00	1—10	119	34	03	04	02	01	02	11	20	62	118	249	628
				11—27	66	23	00	00	00	00	00	00	00	00	00	25	114
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	185	57	03	04	02	01	02	11	20	62	118	274	739
El Kharga	02	00	00	1—10	309	37	07	02	00	00	02	02	01	17	51	210	638
				11—27	89	01	00	00	00	00	00	00	00	00	00	14	104
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	398	38	07	02	00	00	02	02	01	17	51	224	742
El Hurghada	04	0	00	1—10	34	57	08	01	02	09	03	01	00	18	126	52	311
				11—27	109	15	00	00	00	00	00	00	00	00	27	278	426
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	05
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	143	72	08	01	02	09	03	01	00	18	153	330	740
El Quseir	05	00	00	1—10	71	37	11	07	07	07	16	17	14	38	107	128	460
				11—27	198	30	00	00	00	00	00	00	00	00	01	50	279
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	269	67	11	07	07	07	16	17	14	38	108	178	739

UPPER AIR CLIMATOLOGICAL DATA

Table B 1 (*contd.*)—MONTHLY MEANS, ABSOLUTE HIGHEST AND LOWEST VALUES OF ALTITUDE, AIR TEMPERATURE AND DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

AUGUST 1978

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	Surface	31	1011mb.*	1013mb.*	1009m.b.*	31	23.6	25.2	21.4	31	
	1000	31	124	150	107	31	22.8	24.6	21.0	31	18.
	850	31	1520	1537	1500	31	16.2	24.3	10.6	31	17.5
	700	31	3154	3195	3128	31	10.1	13.6	5.6	21	1.6
	600	31	4442	4465	4386	31	3.1	5.1	1.0	31	12.6
	500	31	5876	5922	5836	31	—5.7	—2.1	—9.0	31	—19.1
	400	31	7588	7652	7528	31	—16.7	—14.3	—19.3	31	—25.3
	300	31	9693	9778	9631	3.	—30.4	—26.7	—34.7	30	—34.6
	250	29	10965	11063	10885	31	—39.6	—36.0	—44.7	29	—45.9
	200	28	12456	12535	12345	29	—50.4	—47.1	—56.4	28	—53.8
	152	28	14283	14421	14120	28	—62.3	—58.2	—69.9	3	—63.0
	100	27	16714	16891	16495	28	—72.9	—64.5	—78.3	—	—71.7
	70	16	18828	18983	18626	27	—68.2	—64.8	—72.9	—	—
	60	14	19796	19920	19220	16	—64.1	—60.7	—67.5	—	—
	50	13	20912	21040	20726	13	—60.3	—55.2	—65.0	—	—
	40	9	22386	22500	22120	9	—56.4	—54.1	—61.8	—	—
	30	6	24205	24265	24228	6	—54.0	—51.4	—56.0	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 U.T.	Surface	31	994m.b.*	997m.b.*	991m.b.*	31	22.2	24.2	19.6	31	17.8
	1000	29	089	115	064	—	—	—	—	—	—
	850	29	1489	1517	1462	28	17.9	21.1	13.6	28	—00.2
	700	29	3138	3175	3104	29	12.1	14.8	09.9	29	—08.5
	600	29	4413	4459	4382	29	05.4	07.6	02.6	29	—14.3
	500	29	5878	5938	5820	29	—03.0	00.0	—07.0	29	—21.5
	400	27	7614	7672	7550	27	—13.1	—10.0	—18.1	27	—29.4
	300	25	9751	9829	9655	25	—27.6	—24.5	—31.3	25	—41.4
	250	25	11039	11122	10941	25	—36.8	—34.0	—40.4	25	—49.5
	200	25	12555	12691	12434	25	—47.0	—44.8	—50.6	25	—58.2
	150	25	14416	14517	14264	25	—58.5	—55.0	—62.6	20	—65.7
	100	22	16887	17011	16699	21	—71.3	—67.0	—75.7	—	—
	70	13	18993	19103	18800	12	—69.8	—66.8	—71.0	—	—
	60	9	19997	20170	19790	9	—66.2	—64.[illegible]	—68.1	—	—
	50	9	21030	21108	2086[illegible]	9	—62.8	—50.0	—65.7	—	—
	40	7	22444	22600	22300	7	—59.4	—57.7	—62.7	—	—
	30	7	24232	24338	24072	7	—55.7	—54.5	—58.1	—	—
	20	2	26892	26938	26846	2	—50.8	—50.5	—51.1	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan 0000 U.T.	Surface	30	986m.b.*	990m.b.*	984m.b.*	30	26.1	29.7	23.8	30	6.5
	1000	30	71	105	38	—	—	—	—	—	—
	850	30	1498	1524	1482	30	21.6	26.2	18.0	30	2.8
	700	30	3148	3194	3193	30	11.0	14.0	7.0	30	—8.0
	600	30	4417	4460	4460	30	4.0	6.6	0.8	30	—16.2
	500	30	5877	5931	5931	30	—3.1	—0.3	—7.5	30	—22.8
	400	30	7613	7690	7690	30	—14.5	—18.5	—11.0	30	—31.5
	300	28	9732	9831	9831	28	—29.4	—19.2	—31.4	27	—43.3
	250	26	11002	11112	11112	26	—39.9	—28.0	—42.0	26	—49.7
	200	25	12493	12612	12612	24	—51.1	—49.9	—52.9	23	—61.6
	150	24	14308	14442	14442	24	—61.7	—61.8	—66.2	—	—
	100	20	16704	16847	16847	20	—73.5	—75.3	—81.9	—	—
	70	12	18762	18962	18962	12	—72.[illegible]	—65.3	—81.4	—	—
	60	7	19666	19740	19740	7	—67.4	—64.0	—69.4	—	—
	50	7	20733	20801	20801	7	—64.6	—57.5	—67.3	—	—
	40	2	22185	22250	22250	2	—61.2	—58.9	—63.8	—	—
	30	2	23966	23971	23961	2	—54.6	—49.4	—55.3	—	—
	20	1	26521	—	—	1	—50.5	—54.0	—	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = The Nunber of easses the elemen. has been observed during the month

* The atmospheric pressure corrected to the elevation of the radiosound 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

AUGUST— 1978

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 . . .	30	* 1011 mb	* 1013 mb	* 1009 mb	30	27 6	30 0	26 0	30	19.6
	1000 . . .	30	125	142	108	30	26 1	29 6	16 8	30	17.7
	850 . . .	30	1534	1550	1509	30	18 3	24 2	13.5	30	0.8
	700 . . .	30	3179	3207	3148	30	11 6	15 8	9 0	30	—9.8
	600 . . .	30	4452	4491	4400	30	4.7	7.8	— 1.0	30	—16.3
	500 . . .	28	5916	5965	5830	28	—3.9	— 0.9	—10 0	28	—22.5
	400 . . .	28	7641	7702	7540	28	—14 8	—11.0	—17.0	28	—31.7
	300 . . .	28	9763	9854	9641	28	—28.5	—25.9	—31.7	28	—43.4
	250 . . .	28	11046	11154	10905	28	—37.6	—35.0	—40.6	28	—51.7
	200 . .	28	12551	12682	12490	28	—48.0	—45.0	—51.5	28	—60.4
	150 . . .	27	14393	14557	14200	27	—60.3	—56 9	—63 5	10	—70.1
	100 . . .	27	16846	17032	19740	27	—72.0	—68.1	—77.4	—	—
	70 . . .	20	18874	19180	18695	20	—65.0	—61.9	—70 2	—	—
	60 . . .	16	19626	20160	19320	16	—62.1	—58.3	—70 5	—	—
	50 . . .	14	21046	21290	20765	16	—58.1	—51.9	—67.3	—	—
	40 . . .	5	22550	22800	22300	5	—53.1	—49.2	—55.8	—	—
	30 . . .	4	24322	24645	24023	4	—48.0	—43.1	—52.9	—	—
	20 . . .	—	—	—	—	—	—	—	—	—	—
	10 . . .	—	—	—	—	—	—	—	—	—	—
Helwan 1200 U.T.	Surface . . .	31	* 993 m.b.	* 997 m.b.	* 991m.b.	31	31.8	35.2	29.2	31	12.5
	1000 . . .	29	082	114	061	—	—	—	—	—	—
	850 . . .	29	1510	1534	1471	29	20.0	24.2	15.2	29	02.3
	700 . . .	28	3168	3196	3144	28	14.0	16.2	11.4	28	—10·0
	600 . . .	28	4450	4491	4352	28	07.5	10.6	05.1	28	—16.5
	500 . . .	27	5927	5984	5840	26	—00.7	01.5	—02.7	26	—22.7
	400 . . .	26	7675	7739	7594	26	—10.8	—07.9	—13.8	26	—30.5
	300 . . .	26	9826	9917	9755	26	—24.4	—13.7	—27.9	26	—41.1
	250 . . .	24	11127	11173	11042	24	—33.5	—28.8	—37.2	24	—48.7
	200 . . .	24	12662	12817	12552	24	—43.5	—39.9	—47.1	24	—57.4
	150 . . .	23	14556	14722	14415	23	—54.4	—51.9	—577.	22	—66·3
	100 . . .	22	17080	17250	16588	22	—65 6	—61.9	—69.9	—	—
	70 . . .	18	19260	19426	19024	18	—62.6	—55.2	—74.0	—	—
	60 . . .	9	20234	20460	20020	9	—57.7	—55.1	—60.9	—	—
	50 . . .	9	21388	21556	21122	9	—53.2	—51.1	—56 6	—	—
	40 . . .	5	22976	23100	22860	5	—47.3	—44.9	—50.0	—	—
	30 . . .	5	24871	24946	24750	5	—41.5	—37.7	—44.3	—	—
	20 . . .	4	27649	27813	26490	4	—35.2	—28.0	—37.8	—	—
	10 . . .	—	—	—	—	—	—	—	—	—	—
Aswan (A) 1200 U.T.	Surface . . .	31	* 986 mb.	* 988 mb.	* 983 mb.	31	38.7	42.3	35.3	31	6.7
	1000 . . .	31	64	84	33	—	—	—	—	—	—
	850 . . .	31	1521	1541	1498	31	24.6	30.4	20.6	13	—1.6
	700 . . .	31	3182	3220	3146	31	13.2	17.8	8.8	.9	—12.3
	600 . . .	31	4458	4512	4439	31	5.6	10.1	1.4	29	— 19.2
	500 . . .	31	5931	6010	5892	31	—1.2	—11.0	—5.1	30	—25.9
	400 . . .	30	7677	7780	7618	30	—12.2	—7.2	—15.9	29	—34.0
	300 . . .	26	9816	9945	9751	26	—27.5	—22.1	—30.3	26	—45.8
	250 . . .	25	11102	11279	11026	25	—37.2	—31.1	—40.0	25	—63.9
	200 . . .	25	12616	12829	12510	25	—48.7	—43.9	—50.9	25	—62.3
	150 . . .	25	14444	14719	14323	25	—62.1	—55.7	—64.8	3	—70.1
	100 . . .	22	16862	17219	16705	22	—75.5	—67.0	—80.0	—	—
	70 . . .	17	18921	19252	18765	17	—71.1	—63.7	—74.9	—	—
	60 . . .	12	19980	21005	19700	12	—65.3	—59 7	—86.9	—	—
	50 . . .	11	20991	21209	20808	11	—61.0	—54.5	—63.8	—	—
	40 . . .	5	22525	22700	22430	5	—57.7	—56.1	—59.0	—	—
	30 . . .	5	24275	24475	24175	5	—46.4	—50.4	—54.1	—	—
	20 . . .	3	26978	27169	26877	3	—46.4	—43.0	—48.9	—	—
	10	1	31497	—	—	1	—42.7	—	—	—	

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

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

Note : No upper air observations were taken at Mersa Matroh and Aswan at 0000 U.T.

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

AUGUST — 1978

	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)										
	M. Matruh (A)	4968 (30)	562 (31)	—21.4 (31)	5600	520	—25.0	4560	590	—10.5	15936 (18)	113 (18)	—42.0 (18)	14380	91	—73.7	13400	118	—70.3	11059	248	200	62
	Cario (A)	5342 (29)	536 (29)	—18.7 (29)	5850	500	—12.8	4760	573	—23.4	16728 (11)	103 (11)	—72.1 (11)	17950	085	—75.8	15800	120	—65.3	10140	—	220	47
	Aswan . . (A)	5175 (30)	546 (30)	—18.5 (30)	6020	496	—21.4	4120	588	—11.5	16867 (10)	98 (10)	—79.7 (10)	18140	79	—81.8	16280	108	—77.5	20850	—	100	52
1200 U.T.			(N)	(N)							(N)	(N)	(N)										
	M. Matruh (A)	5257 (29)	544 (29)	—19.3 (29)	2800	510	—23.5	4210	614	—10.5	16472 (20)	107 (20)	—42.7 (20)	17700	88	—74.2	15680	122	—69.1	9246	223	220	66
	Cairo . . . (A)	5782 (26)	510 (26)	—21.9 (26)	6100	490	—22.0	5440	531	—18.7	14774 (14)	104 (14)	—65.5 (14)	17800	089	—54.7	14480	145	—57.5	14660	—	240	65
	Aswan . . (A)	5659 (31)	519 (31)	—22.0 (31)	6720	455	—26.8	4700	585	—9.6	17156 (17)	95 (17)	—28.2 (16)	18080	81	—79.0	16120	111	—77.3	22250	41	105	65

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

MERSA MATRUH AUGUST 1978

Time	Pressure Surface (Millibar.)	Wind within 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			
U.T. 0000	Surface	2	5	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	3	8	7	7	14	13	13	0	31	10
	1000	2	10	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	13	11	18	11	17	0	31	16
	850	5	14	0	—	1	12	0	—	0	—	1	9	0	—	0	—	1	13	0	—	6	21	17	21	0	31	19
	700	1	13	0	—	1	13	0	—	0	—	0	—	0	—	0	—	1	6	12	13	8	12	8	15	0	31	13
	600	2	8	1	27	0	—	1	15	0	—	0	—	0	—	1	27	7	14	7	17	10	17	2	8	0	31	16
	500	2	25	1	15	0	—	1	18	0	—	0	—	1	33	3	24	10	20	6	24	4	10	3	12	0	31	20
	400	1	20	0	—	1	6	1	27	0	—	0	—	0	—	5	41	17	27	5	28	0	—	1	17	0	31	28
	300	0	—	0	—	0	—	0	—	1	22	0	—	0	—	12	40	12	33	1	26	0	—	0	—	0	27	34
	250	0	—	0	—	0	—	0	—	0	—	0	—	2	34	12	47	8	36	2	34	0	—	0	—	0	24	41
	200	0	—	0	—	0	—	0	—	0	—	0	—	1	20	7	38	4	39	0	—	0	—	0	—	0	12	37
	150	0	—	0	—	0	—	0	—	0	—	0	—	4	38	4	32	2	28	0	—	0	—	0	—	0	10	33
	100	0	—	0	—	0	—	0	—	0	—	1	17	3	34	2	18	0	—	0	—	0	—	0	—	0	6	26
	70	0	—	1	12	0	—	1	20	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	2	16
	60	0	—	0	—	1	20	1	28	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	2	24
	50	0	—	0	—	0	—	1	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	50
	40	0	—	0	—	1	33	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	33
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
U.T. 1200	100	2	12	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	17	21	16	0	30	16
	850	1	20	0	—	0	—	0	—	1	16	0	—	0	—	1	22	0	—	1	25	13	20	13	19	0	30	20
	700	2	14	0	—	0	—	0	—	0	—	1	4	0	—	0	—	1	18	4	10	13	16	9	10	0	30	15
	600	2	22	0	—	0	—	1	4	1	4	0	—	1	7	0	—	2	10	8	11	9	14	6	20	0	30	14
	500	5	11	1	8	0	—	0	—	0	—	0	—	0	—	5	14	10	16	1	11	6	16	2	17	0	30	14
	400	1	8	0	—	0	—	0	—	0	—	0	—	1	6	9	25	6	16	4	22	4	14	3	14	0	28	19
	300	1	6	0	—	0	—	0	—	0	—	0	—	0	—	9	35	13	28	2	24	1	21	1	27	0	27	29
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	8	38	10	37	7	44	0	—	1	46	0	21	38
	200	0	—	0	—	0	—	0	—	0	—	0	—	1	38	11	40	9	37	0	—	0	—	0	—	0	21	38
	150	0	—	0	—	0	—	0	—	0	—	0	—	2	22	6	40	4	42	0	—	0	—	0	—	0	12	38
	100	0	—	0	—	0	—	0	—	0	—	1	24	0	—	6	32	1	10	0	—	0	—	0	—	0	8	38
	70	0	—	0	—	0	—	0	—	1	13	0	—	1	29	1	27	0	—	0	—	0	—	0	—	0	3	23
	60	0	—	0	—	0	—	2	14	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	2	14
	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 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 AUGUST 1978

	Pressure Surface (Millibar)	Wind within 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)	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		(ff) m			
T.U.0000	Surface	22	05	3	07	2	08	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	06	3	06	0	31	6
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	6	09	10	09	6	09	1	13	0	—	1	29	0	—	0	—	0	—	1	03	1	06	3	06	0	29	9
	700	6	05	4	09	1	16	1	08	0	—	0	—	1	02	1	08	4	08	2	08	0	—	9	07	0	29	7
	600	5	07	4	07	1	07	2	05	0	—	0	—	0	—	0	—	1	12	7	10	3	07	6	07	0	29	8
	500	1	05	2	11	1	07	0	—	0	—	0	—	0	—	0	—	3	10	8	14	6	12	6	09	0	27	11
	400	0	—	0	0	0	—	0	—	0	—	0	—	0	—	0	—	1	06	18	15	5	16	1	18	0	25	15
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	19	14	19	5	20	0	—	0	23	19
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	28	5	24	11	20	3	21	0	—	0	20	21
	200	0	—	0	—	0	—	0	—	0	—	1	22	0	—	3	15	4	28	9	25	1	32	0	—	0	18	23
	150	0	—	0	—	0	—	0	—	0	—	1	29	0	—	02	29	7	21	3	24	1	29	0	—	0	14	24
	100	0	—	0	—	0	—	0	—	0	—	0	—	1	11	—	—	1	38	0	—	—	—	0	—	0	3	26
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
U.T1200	1000	7	09	8	10	1	07	0	—	0	—	0	—	0	—	0	—	0	—	1	02	7	07	7	08	0	31	8
	850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	700	3	06	10	08	7	07	0	—	0	—	0	—	0	—	1	05	1	09	0	—	1	03	6	06	0	29	7
	600	3	07	1	07	1	04	1	06	0	—	0	—	0	—	3	15	3	12	7	07	6	07	3	05	0	28	8
	500	1	05	2	08	1	08	1	08	0	—	0	—	0	—	2	10	2	12	9	11	3	07	6	10	0	27	10
	400	0	—	0	—	2	05	1	12	1	08	0	—	0	—	0	—	3	07	9	12	5	09	6	13	0	27	11
	300	0	—	0	—	0	—	1	17	0	—	1	15	0	—	0	—	1	14	11	18	8	17	4	24	0	26	19
	250	0	—	0	—	0	—	0	—	0	—	0	—	1	14	1	13	3	22	13	24	5	19	0	—	0	23	22
	200	0	—	0	—	0	—	0	—	0	—	0	—	1	19	0	—	5	23	10	27	5	25	0	—	0	21	25
	150	0	—	0	—	0	—	0	—	0	—	0	—	2	12	1	11	4	34	7	27	2	37	0	—	0	16	27
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	16	3	35	6	36	1	51	0	—	0	13	32
	70	0	—	0	—	0	—	0	—	0	—	0	—	1	19	0	—	3	36	2	28	1	45	0	—	0	7	28
	60	0	—	0	—	0	—	0	—	0	—	1	24	0	—	0	—	1	10	0	—	0	—	0	—	0	2	17
	50	0	—	0	—	0	—	0	—	0	—	1	12	1	11	0	—	0	—	0	—	0	—	0	—	0	2	12
	40	0	—	—	—	0	—	0	—	1	12	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	12
	30	0	—	—	—	0	—	0	—	0	—	1	45	0	—	0	—	0	—	0	—	0	—	0	—	0	1	45
	20	0	—	—	—	0	—	0	—	1	32	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	32
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N= The number of cases the wind has been observed within 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 B3—NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES.
ASWAN —AUGUST 1978

Station	Pressure Surface (Milibar)	Wind between ranges of direction (000—360°)																								Number of Calm winds	Total number of observations (TN)	Mean scalar wind speedknots
		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			
00000 U.T.	Surface	15	7	0	—	0	—	0	—	1	3	0	—	0	—	0	—	0	—	1	10	3	10	10	11	0	30	9
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	3	13	2	11	1	12	0	—	0	—	0	—	0	—	0	—	2	12	6	9	12	13	3	13	0	29	12
	700	0	—	0	—	0	—	0	—	0	—	1	19	2	8	2	19	0	—	3	15	0	—	1	5	0	9	14
	600	2	4	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	8	2	3	0	—	1	5	0	7	5
	500	0	—	0	—	1	6	0	—	0	—	1	5	0	—	1	8	2	6	0	—	0	—	2	10	0	7	7
	400	1	13	1	6	1	5	0	—	0	—	1	6	1	6	0	—	1	2	1	5	0	—	0	—	0	7	6
	300	0	—	0	—	2	10	2	10	1	13	0	—	2	4	0	—	0	—	0	—	0	—	0	—	0	7	9
	250	0	—	1	10	0	—	1	13	1	7	2	18	0	—	0	—	0	—	0	—	0	—	0	—	0	5	13
	200	0	—	0	—	0	—	1	18	2	23	2	18	0	—	0	—	0	—	0	—	0	—	0	—	0	5	20
	150	0	—	0	—	0	—	1	20	3	24	1	28	0	—	0	—	0	—	0	—	0	—	0	—	0	5	24
	100	0	—	0	—	0	—	2	34	2	27	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	4	30
	70	0	—	0	—	0	—	1	37	0	—	0	—	0	—	0	—	0	—	0	—	1	33	0	—	0	2	35
	60	0	—	0	—	0	—	1	25	0	—	0	—	0	—	0	—	0	—	0	—	1	32	0	—	0	2	28
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	—	—	1	48	0	—	0	1	48
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	6	7	1	7	0	—	0	—	0	—	3	12	0	—	2	5	1	6	5	9	2	8	11	10	0	31	9
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	3	10	0	—	0	—	0	—	0	—	0	—	0	—	1	9	4	6	8	8	11	10	4	12	0	31	9
	700	0	—	0	—	0	—	1	14	0	—	0	—	3	16	6	16	12	16	5	16	2	3	2	11	0	31	15
	600	1	4	0	—	1	3	0	—	2	10	3	7	6	13	6	15	4	8	4	11	4	—	0	—	0	31	11
	500	1	5	1	4	4	10	7	12	1	7	2	12	3	9	4	9	4	5	2	8	1	—	1	3	0	31	9
	400	0	—	1	12	4	12	13	14	3	11	2	12	1	4	1	2	0	—	1	5	1	—	1	6	0	28	11
	300	0	—	1	5	2	9	9	15	7	14	4	11	1	4	0	—	0	—	0	—	0	—	0	—	0	4	13
	250	0	—	0	—	3	15	5	36	10	15	4	11	1	14	0	—	0	—	0	—	0	—	0	—	0	3	18
	200	0	—	1	16	0	—	4	19	11	18	6	20	0	—	0	—	0	—	0	—	0	—	0	—	0	2	20
	150	0	—	0	—	0	—	6	24	5	27	4	21	1	21	0	—	0	—	0	—	0	—	0	—	0	16	24
	100	0	—	0	—	0	—	2	29	5	34	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	7	33
	70	0	—	0	—	0	—	4	42	2	37	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	6	40
	60	0	—	0	—	0	—	1	27	3	47	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	4	42
	50	0	—	0	—	0	—	3	39	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	3	39
	40	0	—	0	—	0	—	1	36	1	45	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	2	40
	30	0	—	0	—	—	—	2	43	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	2	44
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

TN = The number of cases the wind has been obsersed from the range of direction during the month.
TN = The total number of cases windh asbeen the observep or all directions during the month.

MONTHLY REVIEW OF AGROMETEOROLOGICAL STATIONS

MERSA MATRUH — AUGUST 1978

The mean daily air temperature was slightly below-normal. The mean daily relative humidity was slightly above normal. The month was rainless as usual.

Mild summer weather prevailed in general during the month.

The mean daily actual sunshine duration and wind speed at 1.5 met. height were lower than average by 0.2 hour and 0.4 met./sec. respectively.

The highest maximum soil temperatures were below those of August 1977 with departures between 0.4°C at 20 cm. depth and 1.8°C at 5 cm. depth, except for the depth of 200 cm. where the maximum soil temperature was equal to that of August 1977. The lowest minimum soil temperatures were lower than those of August 1977 with departures between 0.2°C at depths of 100 cm. and 200 cm., and 2.1°C at 10 cm. depth.

TAHRIR — AUGUST 1978

The mean daily air temperature was almost below normal. The mean daily relative humidity was sligytly below normal. The month was rainless as usual.

Mild weather prevailed all over the month, except for a slight short heat wave in the period (8th — 10th). The maximum temperatures ranged between 31.0°C on the 14th and 15th and 36.8°C on the 8th. The mimimum temperatures ranged between 14.3°C on the 28th and 21.8°C on the 6th.

The mean daily actual sunshine duration, wind speed at 1.5 met. height and pan evaporation were less than normal by 0.1 hour, 0.1 met./sec. and 1.45 mm. respectively.

The highest maximum soil temperatures were at all depths less than or equal to normal, with departures between 0.0°C as 50 cm. depth and 2.8°C at 2 cm. depth. The lowest minimum soil temperatures were less than or equal to normal with departures between 0.0°C at 300 cm. depth and 2:2°C at 5 cm. depth.

BAHTIM — AUGUST 1978

The mean daily air temperatures and relative humidity were slightly less than normal. The month was rainless as usual.

The maximum temperatures were below normal except for the 9th and the 10th were they were slightly above normal. The maximum temperatures ranged between 29t6°C at the 23rd and 34.0°C on the 10th. The minimum temperatures ranged between 15.2°C on the 28th and 20.9°C on the 11th.

The mean daily actual sunshine duration and wind speed at 1.5 met. height were less than normal respectively by 0.2 hour and 0.2 met./sec. The mean daily pan evaporation was 0.14 mm. above normal.

The highest maximum soil temperatures were around normal with departures between —1.7°C at 2 cm. depth and + 1.1°C 20 cm. depth. The lowest minimum soil temperatures were around normal with departures between —0.7°C at 10 cm. depth and + 1.1°C at 100 cm. depth:

EL-KHARGA — AUGUST 1978

The mean daily air temperature was below - nomal . The mean daily relative humidity was above normal. The month was rainless as usual.

The month was is general mild except for a light hot wave in the period (8th — 11th). The maximum temperatures ranged between 35.1°C on the 15th and 41.6°C on the 11th. The minimum temperatures ranged between 18.0°C on the 26th and 26.8°C on the 10th.

The daily actual sunshine duration, wind speed at 1.5 met. height and pan evaporation were less than normal respectively by 0.1 hour, 0.5 met./sec. and 3.22 mm.

The highest maximum soil temperatures were around normal with departures between — 2.2°C at 2 cm. depth and + 0.6°C at 10 cm. depth. The lowest minimum soil temperatures were around normal with departures between — 2.4.0°C at 10 cm. depth and + 0.1°C at 200 cm. and 300 cm. depths.

Table C 2.—AIR TEMPERATURE AT 1½ METRES ABOVE GROUND

AUGUST — 1978

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
Mersa Matruh . .	28.2	20.4	24.6	22.8	26.0	24.0	24.0	24.0	24.0	24.0	22.3	10.7	0.0	0.0	0.0	0.0
Tahri	33.2	18.9	25.2	21.7	27.9	24.0	24.0	24.0	24.0	24.0	21.4	11.1	4.3	0.0	0.0	0-0
Bahtim	31.4	17.6	24.2	20.2	27.1	24.0	24.0	24.0	24.0	24.0	17.5	10.0	3.2	0.0	0.0	0.0
Assuit	34.4	18.8	26.0	22.2	37.0	24.0	24.0	24.0	24.0	24.0	21.1	12.0	6.9	0.8	0.0	0.0
Kharga	37.5	21.9	30.6	27.4	33.4	24.0	24.0	24·0	24.0	24.0	23.3	20.0	12.5	6.1	0.4	0.0

Table C 2.—EXTREME VALUES OF AIR TEMPERATURE AT 1½ METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cm ABOVE GROUND OVER DIFFERENT FIELDS

AUGUST — 1978

STATION	Max. Temp. at 1½ metres				Min. Temp. at 1½ 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
Mersa Matruh . . .	30.2	7	27.0	13,18	23.7	11	18.3	24,25	16.8	18	—	—
Tahrir	36.8	8	31.0	14,15	21.8	6	14.3	28	13.1	28	11.6	28
Bahtim	34.0	10	29.6	23	20.9	1	15.2	28	13.0	27,28	11.3	23
Assuit	37.6	9	32.2	15	21.6	12	16.4	27	12.0	27	—	—
Kharga	41.6	11	35.1	15	26.8	10	18.0	26	15.5	26	—	—

Table C 3.—(SOLAR+SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 1½ METRES ABOVE GROUND, EVAPORATION & RAINFALL

AUGUST — 1978

STATION	(Solar+Sky) Radiation gm. cal/cm²	Duration of Bright unshine (hour .)			Relative Humidity				Vapour pressure (mms)						Evaporation (mms)		Ramfall (mms)		
		Total Actual monthly	Total Possible monthly	%	Mean of day	1200 U.T.	Lowest	Date	e.n of day	1200 U.T.	Highest	Date	Lowest	Date	Piche	pan class	Total Amoune	max. fally in onp day	Date
Mersa Matruh	528.7	362.7	412.0	88	76	64	50	14	17.4	18.0	22.3	29	12.2	15	6.7	—	0	0	—
Tahrir. . .	635.1	328.6	410 0	87	69	42	27	19	16.1	14.5	20.9	4	10.2	19	5.6	9.01	0	0	—
Bahtim . .	619.2	337.6	409.7	82	42	45	34	5	15.6	15.1	19.4	7,11	11.8	20	4.9	8 .59	0	0	—
Assiut . . .	—	377.8	405.4	93	71	39	27	7,28	14.0	19.7	19.9	11	9.6	22	8.6	10.89	0	0	—
Kharga .	698.0	373.3	430.1	93	39	27	19	21	12.3	12.8	18.9	12	7 5	21	16.0	16 47	0	0	—

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

AUGUST 1978

STATION	Highest (A) Lowest (L)	Extreme soil tomperature (°C) in dry field at different depths (cms.)								Extreme soil tmperature (°C) in grass field at different depths (cms.)							
		2	5	10	20	50	100	200	300	2	5	10	20	50	100	200	300
M. Matruh	H	39.2	37.3	33.4	30.0	23.0	26.7	24.5	—	--	—	—	—	—	—	—	—
	L	23.4	23.4	23.0	26.4	26.7	26.2	24.0	—	--	—	—	—	—	—	—	—
Tahrir	H	51.8	46.4	41.6	36.6	33.3	31.1	29.0	28 0	36.8	36.4	32.3	29.8	31.7	30.1	28.0	—
	L	25.7	24.3	25.4	29.2	30.7	30.1	28.7	27.5	23.5	23.5	23.9	24.7	27.8	27.8	27.5	—
Bahtim	H	53.8	46.3	39.8	36.1	33.2	30.9	27.6	2.55	43.2	36.8	34.2	30.6	28.8	26.8	24.3	—
	L	2 82	27.6	28.6	31.4	31 7	30.6	26.7	24.7	24.1	23.9	24.4	26.2	27.2	26.2	23.3	—
Asiut.	H	59.4	51.4	41 7	35.4	31.7	30.5	27.7	26.2	—	—	—	—	—	—	—	—
	L	29.6	26.8	28.4	39.2	30.6	92.9	27.2	25.4	—	—	—	—	—	—	—	—
Kharga	H	55.0	49.3	44.1	38.6	34.3	33.0	31.0	29.6	—	—	—	—	—	—	—	—
	L	19.7	24.0	27.1	31.4	32.7	32.4	30.5	29.0	—	—	—	—	—	—	—	—

Table C 5.—SURFACE WIND

AUGUST 1978

STATION	Wind Speed m/sec at 1½ 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 konts	≥20 knots	≥25 knots	≥30 knots	≥35 knots	≥40 knots	value knots	Date
M. Matruh .	3.8	2.6	5.0	31	29	14	2	0	0	0	33	3
Tahrir . .	2.2	1.4	2.9	31	12	0	0	0	0	0	23	13
Bahtim. . . .	1.6	1.0	2.3	23	3	0	0	0	0	0	21	28
Asiut	—	—	—	—	—	—	—	—	—	—	—	—
Kharga . . .	3.1	2.0	4.2	31	22	3	0	0	0	0	27	16,27,29

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MONTHLY WEATHER REPORT

VOLUME 21 NUMBER 9

SEPTEMBER 1978

U.D.C. 551. 505.1 (62)

THE EGYPTIAN METEOROLOGICAL AUTHORITY

CAIRO

PUBLICATIONS OF THE METEOROLOGICAL AUTHORITY OF THE ARAB REPUBLIC OF EGYPT—CAIRO

In fulfilment of its duties, the Egyptian Meteorological Authority issues several reports and publications on weather, climate and agro-meteorology. The principal publications are described on this page.

Orders for publications should be addressed to :

"Chairman of the Board of Directors, Meteorological Authority, Kubri-el-Qubbeh — CAIRO.

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 statisticsfor 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 [illegible] staff of "The Meteorological Institute for Research and Training" and the Operational Divisions of the Meteorological Authority.

TECHNICAL NOTES

As from October 1970, the Meteorological Authority 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 ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

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THE EGYPTIAN METEOROLGICAL AUTHORITY

CAIRO

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GENERAL SUMMARY OF WEATHER CONDITIONS

SEPTEMBER 1978

Generally mild autumn weather in the north and middle parts, hot in the southern parts, intervened by two hot waves during the first half of the month, the first was severv around the 8th & 9th with records of maximum temperature.

PRESSURE DISTRIBUTION

The monsoon low pressure over Iraq and Arabia prevailed the whole month and extended Westwards to the middle of the Mediterranean in some days during the first half of the month.

The mean monthly atmospheric pressure over Egypt was above normal.

SURFACE WIND

Most surface winds were light to moderate NE ly to NW ly, become fresh in few days and caused dust in the south.

TEMPERATURE

The prevailing weather was mild autumn weather in the northern and middle parts, hot in the southern parts most of the month. **Two hot waves intervened the first half of** the month, the first of them was severe around the 8th & 9th of the month.

The highest and lowest maximum.

The highest and lowest minimum temperatures were respectively 45.2°C at Aswan on the 11th and 14.8°C at Sewa on the 27th and the 29th.

PRECIPITATION

Rain fell on the North Western Coast recording maximum total amount of 2.8 mms and maximum daily amount of 2.8 mms on the 23rd at Mersa - Matruh.

OTHER WEATHER PHENOMENA

Low clouds and mist developed over scattered parts of lower Egypt and Cairo during many days of the month.

Cairo, March 1979

Chairman (M. ALI. BADRAN)

Board of Directors

SURFACE DATA

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

SEPTEMPER 1978

STATION	Atmospheric Pressure mbs. M.S.L		Air Temperature 'C									Relative Humidity %		Bright Sunshine			Piche Evap.
			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	%	
ElSallum	1014.7	1.0	29.8	0.5	19.8	0.6	24.8	24.2	—0.5	18.9	—1.3	59	—7	—	—	—	7.1
Mersa Matro	1014.3	0.8	27.8	—0.9	18.7	—1.0	23.2	23.3	—1.0	18.7	—1.4	66	2	308.9	370.9	83	6.6
Alexandria	1014.2	1.2	29.8	0.3	19.0	1.3	24.8	24.7	—0.6	20.4	—0.7	68	0	312.0	370.8	84	4.3
Port Said	1013.3	1.2	28.1	1.1	23.4	0.3	25.7	25.5	—0.6	21.2	—0.9	67	—2	310.0	307.8	84	6.5
Cairo	1013.3	1.2	31.9	—0.5	20.1	0.1	26.0	25.7	—0.2	19.4	—0.7	56	—1	—	—	—	10.3
ElFayoum	—	—	33.9	—0.4	18.9	—1.0	26.4	26.0	—0.7	19.0	—0.7	54	1	—	—	—	7.2
El minia	1012.6	1.4	33.5	0.0	18.1	—0.4	25.8	25.8	0.0	17.1	—0.6	53	—2	326.4	369.9	88	10.8
Assuit	1015.6	2.2	38.5	—1.4	18.7	—1.4	26.1	26.3	—1.1	19.1	—1.5	38	—2	—	—	—	16.2
Luxor	1009.8	1.5	38.1	—0.5	20.3	—1.2	29.2	29.0	—1.1	19.0	—0.2	37	3	—	—	—	9.9
Aswon	1009.5	1.3	33.7	—1.2	22.7	—0.6	30.7	30.6	0.9	17.2	—0.2	21	—5	324.3	368.7	88	24.5
Swa	1014.3	0.8	33.1	—1.6	18.1	0.6	25.6	25.9	0.8	17.2	—1.0	42	—5	313.2	370.3	85	10.1
El-Baharia	1013.1	0.9	34.2	0.0	19.0	—0.3	26.6	26.7	0.1	18.2	—0.6	43	—7	—	—	—	9.0
El-Farafra	1014.2	1.2	35.2	0.3	19.6	0.6	27.3	27.2	0.4	17.0	0.2	33	—3	—	—	—	13.7
El-Dakhla	101.31	1.9	36.1	0.5	19.7	—0.5	27.9	28.1	0.3	17.1	—0.3	30	—2	—	—	—	17.6
El-Kharga	1010.7	0.3	36.7	0.0	22.3	0.7	29.5	29.7	0.7	19.0	1.1	38	6	330.6	369.0	90	16.1
El-Hurgada	1010.0	1.9	31.5	0.4	23.5	0.4	27.5	27.7	0.1	19.9	—1.0	45	—10	332.8	369.6	90	19.5
El-Quseir	1009.5	1.2	31.6	0.0	25.0	0.0	28.3	28.4	0.0	21.1	—0.1	50	—4	—	—	—	9.9

Table A 2.—MAXIMUM AND MINIMUM AIR TEMPERATURE

SEPTEMPER — 1978

Station	Maximum Temperature °C									Grass Min. Temp.		Maximum 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
El Sallum	39.8	6	25.2	30	30	10	02	00	00	18.4	—	23.1	7	16.6	23	00	00	00	00
Mersa Matro . .	34.0	7	25.0	27	29	05	00	00	00	17.0	—	22.0	17	15.4	28	00	00	00	00
Alexandria	36 3	14	27.3	25,30	30	07	03	00	00	17.6	—	22.6	18	16.0	29	00	00	00	00
Port Said	35.6	8	25.5	28	30	04	01	00	00	22.9	—	25.4	8,915	12.8	2629	00	00	00	00
Cairo A. P. . . .	43.7	8	27.3	25	30	20	05	01	00	—	—	25.4	8	16.5	26	00	00	00	00
El-Fayoum . . .	43 8	8	29.8	25	30	29	08	02	00	16 3	—	22.4	9	15.2	29	00	00	00	00
EltMinia	43.4	8	28 7	26	30	27	07	01	00	15.9	—	23.4	9	15.2	25	00	00	00	00
Assuit	43.5	8	28.6	26	30	23	09	03	00	17 9	—	22.6	10	15.7	24	00	00	00	00
Luoxr	44 5	8	34.4	29	30	30	23	05	00	14.6	—	23.0	6	17.8	30	00	00	00	00
Aswan	44.6	9	35.2	18,24	30	30	30	10	00	—	—	27.5	11	18.4	30	00	00	00	00
Sewa		7	27.3	23	30	22	08	02	00	16 7	—	2[illegible].4	8	14.8	27,29	00	00	00	00
El baharia . . .	42.3	8	29.2	26	30	29	11	02	01	18.4	—	23.8	9	15.3	29	00	00	00	00
El-Farafra	45.2	8	30.7	26	30	30	14	03	00	17.9	—	24.8	9	15 5	24	00	00	00	00
El-Dakhle	43.0	8	31.3	26	30	30	17	04	00	19.6	—	26.0	10	15 8	29	00	00	00	00
El-Kharga	44.3	8	31 2	26	30	30	17	05	00	20.5	—	27.0	10	18 0	27	00	00	00	00
	44.7																		
El-Hurgada . . .		8	28.3		30	18	03	00	00	—	—	26.4	10	20.4	24	00	00	00	00
El-Quseir	36.9	9	29.0	25	30	25	01	00	00	22.2	—	27.1	8·10	22.6	26	00	00	00	00
	36.1			25															

Table A. 3 SKY COVER AND RAIN FALL

SEPTEMPER — 1978

Station	Mean Sky Cover Oct.					Rain Fell mms										
	00 U.T.	60 U.T.	12 U.T.	18 U.T.	Daily Mean	Total Amount	Dev. From Normal	Max. Fall in one day		Number of Dayswith Amountof Rain						
								Amount	Date	<.1	> =.1	> =1	> =5	>=10	>=25	>=05
Elsallum	0.2	0.9	1.4	0.4	0.8	0.0	—1.6	—		00	00	00	00	00	00	00
Mersa Matro (A)	1.6	2.3	2.1	1.8	2.0	2.8	—1.5	2.8	23	00	01	01	00	00	00	00
Alexandria (A)	1.3	3.6	3.9	2.9	2.9	0.1	1.1	0.1	17	00	01	00	00	00	00	00
Port Said (A)	2.2	2.0	0.9	1.2	1.5	0.0	0.3	—	—	00	00	00	00	00	00	00
Gairo A.P.	0.6	0.6	1.5	0.4	0.9	0.0	—0.0	—		00	00	00	00	00	00	00
El-Fayoum	—	0.2	0.5	0.0	—	0.0	0.0	—	—	00	00	00	00	00	00	00
El Minia (A)	0.0	0.2	0.4	0.1	0.2	0.0	0.0	—	—	00	00	00	00	00	00	00
Assuit (A)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—	—	00	00	00	00	00	00	00
Luxor (A)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	—	—	00	00	00	00	00	00	00
Aswan (A)	0.0	0.7	0.2	0.0	0.2	0.0	0.0	—	—	00	00	00	00	00	00	00
Sewa (A)	0.4	0.2	1.4	0.5	6.0	0.0	—0.1	—	—	00	00	00	00	00	00	00
El-Baharia	0.0	0.1	0.5	0.2	0.2	0.0	—0.1	—	—	00	00	00	00	00	00	00
El Farafra	—	0.1	0.2	0.0	—	0.0	—0.0	—	—	00	00	00	00	00	00	00
El Dakhla (A)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—	—	00	00	00	00	00	00	00
El-Kharga (A)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	—	—	00	00	00	00	00	00	00
El Hurgada (A)	0.0	0.1	0.0	0.1	0.0	0.0	0.0	—	—	00	00	00	00	00	00	00
ElOuseir	0.0	0.2	0.2	0.1	0.1	0.0	0.0	—	—	00	00	00	00	00	00	00

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

SEPTEMPER- 1978

Station	Precipitation		Frost	Thunderstorm	Mist Vis ≥1000 metres	Fog Vis. <1000 metres	Haze Vis. ≥1000 Metres	Thick Haze Ves <1000 Metres	Dust or Sanderising Vis. ≥1000 Metres	Dust or Sandstorm Vis. <1000 Metres	Cale	Clear Sky	Sky Cover Clear Cloudy
	Rain	Snow											
Salum	00	00	00	00	00	00	00	03	00	00	00	29	00
Mersa Matro . . . . (A)	02	00	00	00	05	00	01	05	00	00	00	15	00
Al Exandria . . . . (A)	01	00	00	00	03	10	00	00	00	00	00	09	00
Port Said . . . . . (A)	00	00	00	00	00	00	00	00	00	00	00	21	00
El Arish	00	00	00	00	00	00	00	00	00	00	00	25	00
Ghazza	00	00	00	00	00	00	00	00	00	00	00	27	00
Cairo . . . . . (A)	00	00	00	00	11	00	10	01	00	00	00	30	00
Fayoum	00	00	00	00	00	00	00	00	00	00	00	30	00
Minya . . . . . (A)	00	00	00	00	02	06	01	00	00	00	00	30	00
Assyout . . . . . (A)	00	00	00	00	00	00	00	00	00	00	00	30	00
Luxor . . . . . (A)	00	00	00	00	00	00	04	02	00	00	00	27	00
Aswan . . . . . (A)	00	00	00	00	00	00	00	06	00	00	00	30	00
Siwa	00	00	00	00	00	00	01	01	00	00	00	30	00
Bahariya	00	00	00	00	00	00	00	00	00	00	00	30	00
Farafra	00	00	00	00	00	00	00	00	00	00	00	30	00
Dakhla	00	00	00	00	00	00	00	03	00	00	00	30	00
Kharga	00	00	00	00	00	00	00	04	00	00	00	30	00
Tor	00	00	00	00	00	00	00	02	00	00	00	00	00
Hurghada	00	00	00	00	00	00	00	01	00	00	00	00	00
Quseir	00	00	00	00	00	00	00	00	00	00	00	00	00

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

SEPTEMPER 1978

Station Name	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing within 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
Esalllum	25	03	00	1-10	76	72	87	25	16	09	06	04	13	53	188	84	636
				11—27	05	07	04	00	00	00	00	03	15	11	09	05	59
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**81**	**79**	**91**	**25**	**16**	**09**	**06**	**07**	**28**	**64**	**179**	**89**	692
Mersajmatroh	12	00	00	1—10	87	31	11	09	16	18	15	46	95	43	60	171	602
				11—27	01	00	00	03	01	03	02	12	06	01	32	45	106
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	88	**31**	**11**	**12**	**17**	**21**	**17**	**58**	**101**	**44**	92	**216**	**711**
Alexandria	09	00	00	1—10	99	28	10	15	19	22	28	24	10	41	106	307	682
				11—27	03	00	00	00	00	00	00	00	01	00	09	16	29
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**102**	**28**	**10**	**15**	**19**	**22**	**28**	**24**	**11**	**41**	**115**	**323**	**711**
Calroap	55	10	00	1—10	115	115	40	25	12	01	00	01	05	23	60	154	561
				11—27	46	09	01	07	03	00	00	00	01	00	03	43	104
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**161**	**124**	**41**	**32**	**15**	**01**	**00**	**01**	**06**	**23**	**63**	**188**	655
El-fayoem	05	02	00	1—10	299	296	56	06	03	02	03	02	11	10	01	23	714
				11—27	00	00	01	00	00	00	00	00	00	00	00	00	01
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**299**	**296**	**47**	**06**	**03**	**02**	**03**	**02**	**11**	**10**	**01**	**23**	**713**
El minia	17	10	00	1—10	385	26	02	00	00	01	00	00	01	04	15	58	493
				11—27	190	19	00	00	00	00	00	00	00	00	00	01	210
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**575**	**45**	**02**	**00**	**00**	**01**	**00**	**00**	**01**	**04**	**15**	**59**	**702**
Assuit	25	00	00	1—10	85	202	32	07	05	07	01	03	05	02	04	51	404
				11—27	29	244	17	00	00	00	00	00	00	00	00	01	291
				28—47	01	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**114**	**446**	**49**	**07**	**05**	**07**	**01**	**03**	**05**	**02**	**04**	**52**	692

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

SEPTEMPER— 1978

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing within the ranges of directions indicated												
					345 / 014	015 / 044	045 / 074	075 / 104	105 / 134	135 / 164	165 / 194	195 / 224	225 / 254	255 / 314	285 / 314	315 / 344	All directions
Luxor	09	00	00	1—10	84	47	17	24	12	18	105	85	45	69	77	117	700
				11—27	12	0.	00	00	00	00	00	00	00	00	21	07	16
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	96	48	17	24	12	**18**	105	85	**45**	69	77	**124**	**720**
Aswan	15	20	00	1—10	140	60	00	01	00	03	04	03	02	10	15	112	350
				11—27	01	49	00	00	00	00	00	00	00	00	16	140	370
				28—47	00	00	00	00	00	0	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	305	**109**	**00**	**01**	00	**03**	**04**	03	02	**10**	**31**	252	**720**
sewa	12	06	00	1—10	43	44	29	12	12	10	47	105	123	72	82	76	675
				11—27	01	00	00	02	01	01	00	07	09	02	04	03	30
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**44**	44	**29**	**14**	**13**	**11**	47	**112**	**132**	**74**	86	89	685
Dakhla	04	00	00	1—10	164	54	26	05	10	15	15	21	19	25	63	191	625
				11—27	43	33	05	03	00	00	00	00	00	00	00	04	83
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	207	87	**12**	**29**	**10**	**15**	**16**	**21**	19	65	63	195	**702**
kharja	05	00	00	1—10	324	45	12	06	00	03	03	01	00	05	18	85	502
				11—27	197	11	00	00	00	00	00	00	00	00	00	06	214
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	521	56	**12**	**06**	**00**	03	03	01	00	05	**18**	**91**	716
hurgada	05	00	00	1—10	23	16	02	00	00	00	01	00	00	02	138	22	204
				11—27	139	03	00	00	00	00	00	00	00	00	120	266	510
				28—47	00	00	00	00	00	00	00	00	00	00	00	01	01
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	162	19	02	00	00	**00**	**01**	00	00	02	204	289	715
Quseir	05	00	00	1—10	94	19	03	01	01	00	04	02	01	10	112	174	430
				11—27	188	14	00	00	00	00	00	00	00	00	00	93	295
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				>48	00	00	00	00	00	00	00	00	00	00	00	00	00
				ALL SPEED	281	33	03	01	01	00	04	02	01	10	112	267	715

UPPER AIR CLIMATOLOGICAL DATA

TABL B 1—MONTHLY MEANS DAND MONTHLY ABSOLUTE HIGHEST & LOWEST VALUES OF ALTITUDE, AIR TEMPERATURE & DEW POINT AT STANDARD AND SELECTED PRESSURE SURFACES

SEPTEMBCR— 1978

Station	Pressure Surface (Millibar)	Altitude of Pressure Surface (gpm)				Temperature (°C)				Dew Point (°C)	
		N	Mean	Highest	Lowest	N	Mean	Highest	Lowest	N	Mean
M. Matruh 0000 U.T.	Surface	30	1013m.b.*	1017m.b.*	1009m.b.*	30	22.3	25.4	20.0	30	15.7
	1000	30	137	175	105	30	21.4	26.6	18.8	30	15.5
	850	30	1526	1564	1491	30	13.1	25.8	5.0	30	-- 3.8
	700	30	3142	3237	3076	30	6.5	13.6	— 0.6	20	—10.2
	600	30	4394	4504	4312	30	— 0.1	1.6	— 3.0	30	—16.8
	500	30	5828	5928	5732	30	— 9.7	— 7.3	—11.8	30	—26.9
	400	30	7515	7618	7403	30	— 21.4	—15.7	—23.9	30	—36.6
	300	30	9568	9689	9336	20	—35.0	—31.0	—39.9	29	—49.5
	250	28	10822	10943	10724	28	—44.3	—39.5	—48.5	28	—56.9
	200	28	12299	12422	12178	28	—52.8	—49.3	—55.7	28	—61.9
	150	26	14103	14245	13990	26	—62.8	—59.9	—67.5	—	—
	100	22	16556	16685	16436	22	—69.6	—60.7	—78.5	—	—
	70	17	18610	18798	18568	17	—65.8	— 59.5	—71.0	—	—
	60	10	19686	19800	19580	10	—62.9	—57.8	—67.3	—	—
	50	10	20785	20927	20652	10	—60.4	—54.7	—65.9	—	—
	40	7	22097	22400	22000	7	—57.2	—54.0	—59.3	—	—
	30	5	24040	24207	23931	5	—55.1	—51.5	—590	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 U.T.	Surface	30	997 m.b.*	1001m.b.*	998m.b.*	30	22.1	29.4	18.6	30	15.6
	1000	27	116	151	087	4	20.9	22.1	19.4	4	16.0
	850	27	1515	1556	1496	27	16.5	26.8	08.9	27	—01.4
	700	27	3152	3205	3106	27	10.0	13.9	07.2	27	—07.5
	600	27	4418	4477	4358	26	02.6	05.0	00.2	26	—14.0
	500	27	5871	5932	5800	27	—06.5	—01.9	—09.4	27	—22.9
	400	26	7583	7560	7524	26	—17.8	—11.7	—21.7	26	—32.5
	300	25	9674	9786	9569	25	—32.1	—26.6	—36.3	24	—44.7
	250	24	10940	11077	10853	24	—40.2	—35.5	—44.4	24	—50.0
	200	23	12436	12599	12323	23	—49.9	—45.1	—53.7	23	—60.7
	150	19	14266	14478	14141	19	—60.3	—55.9	—62.8	7	—68.3
	100	15	16744	16978	16580	15	—69.8	—65.0	—74.5	—	—
	70	12	18858	18963	18790	11	—67.3	—64.8	—72.9	—	—
	60	10	19806	19940	19650	10	—64.7	—62.2	—66.5	—	—
	50	10	20914	21029	20717	10	—61.6	—59.1	—66.0	—	—
	40	9	22380	22520	22160	9	—58.4	—56.3	—62.3	—	—
	30	8	24130	24260	23867	8	—55.8	—54.3	—59.0	—	—
	20	4	26830	26872	27687	4	—51.7	—51.1	—52.3	—	—
	10	1	31382	—	—	1	—47.2	—	—	—	—
Aswan 0000 U.T.	Surface	28	988m.b.*	993m.b.*	984m.b.*	28	25.0	27.4	20.3	28	6.5
	1000	28	95	133	48	—	—	—	—	—	—
	850	28	1515	1550	1476	28	22.3	27.6	18.1	28	0.1
	700	28	3175	3210	3139	28	11.0	13.4	8.8	28	— 6.8
	600	28	4437	4480	4402	28	0.7	5.8	— 3.0	28	—12.5
	500	27	5878	5944	5833	27	— 6.9	— 3.3	—12.1	27	—24.3
	400	26	7587	7675	7538	26	—16.7	—15.0	—19.9	24	—34.7
	300	23	9679	9742	9611	23	—32.2	—29.4	—34.6	23	—47.0
	250	22	10938	11015	10856	22	—42.0	—38.5	—44.9	22	—55.2
	200	21	12435	12788	12310	21	—53.0	—49.6	—55.6	21	—64.1
	150	19	14213	14355	14081	19	—65.4	—60.5	—69.2	—	—
	100	14	16604	16805	16419	14	—76.7	—72.2	—84.3	—	—
	70	5	18706	18850	18636	5	—72.5	—62.7	—81.3	—	—
	60	2	19610	19650	19570	2	—65.4	—62.8	—68.0	—	—
	50	2	20716	20762	20670	2	—58.8	—57.9	—59.7	—	—
	40	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = The Number of casses the element has been observed during the month,

* The atmospherie pressure correeted to the elevation of the radiosonde station.

UPPER AIR CLIMATOLOGICAL DATA

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

SEPTEMBER 1978

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	1013m.b.*	1017m.b.*	1009m.b.*	30	27.1	32.0	24.8	30	17.1
	1000	29	141	174	107	29	25.9	31.4	23.0	29	15.2
	850	30	1545	1582	1522	30	12.9	25.6	8.8	30	0.1
	700	30	3171	3248	3133	30	8.7	13.0	5.8	30	—10.4
	600	30	4431	4515	4378	30	2.1	7.0	- 1.3	30	—17.7
	500	30	5882	5964	5810	30	— 7.1	— 2.0	—10.5	30	— 25.9
	400	30	7585	7684	7490	30	— 19.1	—11.7	—23.0	30	—36.5
	300	30	9663	9804	9548	30	—33.9	—26.1	—37.5	30	—48.5
	250	30	10919	11085	10792	30	— 42.0	—36.0	—46.9	30	—55.7
	200	29	12403	12600	12272	29	— 50.5	—46.0	—54.1	29	—63.1
	150	28	14245	14468	14120	28	—59.9	—54.2	— 63.0	8	—68.5
	100	27	16722	16966	16620	27	— 67.9	—57.6	— 70.0	—	—
	70	25	18873	19061	18767	25	—63.5	—55.0	— 72.9	—	—
	60	19	19852	20000	19500	19	—60.4	—54.0	— 68.0	—	—
	50	19	20987	21140	20870	19	—57.3	—52.8	— 63.5	—	—
	40	8	22471	22690	22100	8	—54.5	—52.3	—58.0	—	—
	30	8	24277	24415	24143	8	—50.2	—47.9	— 51.7	—	—
	20	5	26944	27047	26900	5	—48.0	—44.3	—58.9	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 1200 UT	Surface	30	996m.b.*	1000m.b.*	993m.b.*	30	30.9	42.2	25.7	30	11.7
	1000	24	107	139	080	1	26.8	—	—	1	11.2
	850	24	1531	1555	1496	24	18.1	30.3	11.9	24	05.0
	700	24	3175	3241	3115	24	11.8	15.8	07.8	24	—10.5
	600	22	4451	4524	4416	21	04.7	08.9	02.8	21	—15.8
	500	21	5916	5978	5862	21	—03.8	—02.0	—08.0	20	—24.1
	400	19	7644	7708	7592	19	— 15.4	— 10.1	—18.9	19	—33.8
	300	16	9761	9830	9696	16	— 28.7	— 23.3	—33.9	16	—44.2
	250	15	11042	11120	10960	15	—36.9	—33.0	—39.6	15	—51.9
	200	14	12562	12644	12464	14	— 45.8	— 43.3	— 49.1	14	—59.5
	150	13	14428	14533	14314	13	— 56.2	—53.4	— 60.0	13	—68.0
	100	12	16953	17075	16819	12	— 65.4	— 62.5	— 67.3	—	—
	70	8	19119	19245	19019	8	— 62.5	—58.1	— 66.0	—	—
	60	5	20112	20180	20000	5	— 58.0	— 54.5	—60.8	—	—
	50	5	21256	21409	21142	5	— 52.9	— 49.7	—55.0	—	—
	40	4	22845	23000	22760	4	— 47.1	— 44.1	—48.5	—	—
	30	3	24700	24841	24588	3	— 40.9	—37.8	— 42.9	—	—
	20	1	27368	—	—	1	—37.3	—	—	—	—
	10	1	32308	—	—	1	—27.7	—	—	—	—
Aswan 1200 UT	Surface	30	988m.b.*	991m.b.*	984m.b.*	30	38.3	43.8	35	30	5.8
	1000	30	82	112	22	—	—	—	—	—	—
	850	30	1538	1560	1504	30	25.1	30.0	20.4	30	— 3.8
	700	30	3206	3232	3173	30	13.2	16.6	9.5	30	— 12.0
	600	28	4479	4516	4414	28	2.9	7.1	0.5	28	—16.4
	500	28	5931	5978	5885	28	— 5.6	— 1.6	— 10.9	28	—24.4
	400	27	7654	7719	7591	27	— 14.9	— 11.5	—17.4	27	—34.4
	300	24	9788	9869	9681	24	— 30.0	— 21.5	—33.1	24	—48.5
	250	24	11044	11177	10942	24	—39.6	— 32.7	— 43.1	24	—55.9
	200	22	12532	12717	12382	21	— 50.9	—42.5	—51.4	21	— 65.5
	150	19	14317	14561	14188	19	— 63.3	—54.8	— 66.5	2	—66.5
	100	18	16752	17092	16579	18	— 74.1	— 64.0	—80.7	—	—
	70	14	18865	19302	18719	14	— 69.8	—59.4	— 83.3	—	—
	60	7	19891	20320	19700	7	— 63.8	—56.0	— 68.5	—	—
	50	7	20981	21110	20790	7	— 60.9	— 52.8	— 62.5	—	—
	40	3	22406	22500	22280	3	—55.7	—55.0	— 57.3	—	—
	30	3	24148	24232	24005	3	—52.4	— 49.0	— 56.3	—	—
	20	1	28879	—	—	1	—45.0	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—

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

—SEPTEMBER 1978

	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
T.U. 0000		(N)	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh (A)	4284 (30)	566 (30)	—17.6 (30)	4700	580	—28.0	2600	745	— 0.8	15827 (17)	114 (17)	—70.1 (17)	17200	90	—70.5	14130	149	—63.3	10436	263	210	96
	Helwan	4963 (72)	570 (72)	—16.4 (27)	5480	529	—16.3	4440	595	—19.6	15968 (12)	115 (12)	—69.0 (12)	17220	093	—76.3	14660	141	—63.1	15040	132	265	95
	Aswan . . . (A)	4578 (82)	591 (82)	—13.2 (28)	5430	532	—21.4	4080	628	—10.1	15232 (4)	126 (4)	—74.6 (4)	15780	112	—80.3	14750	137	—71.6	2260	—	270	29
U.T. 1200		(N)	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh (A)	4759 (30)	576 (30)	—19.7 (30)	5670	520	—10.1	4120	625	—6.1	16438 (23)	107 (23)	—69.7 (23)	18440	79	—75.4	13700	163	—60.0	10934	245	215	97
	Helwan	5242 (21)	545 (21)	—20.2 (20)	5888	500	—25.9	4700	577	—	17022 (5)	099 (5)	—66.9 (5)	18240	081	—71.0	16380	108	—66.7	11920	434	335	105
	Aswan . . . (A)	4875 (28)	572 (28)	—18.6 (28)	5600	524	—25.0	4380	607	—10.5	16140 (14)	112 (14)	—73.5 (14)	17290	92	—81.6	14900	136	—68.6	14700	—	150	42

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

Table B3. – 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 1978

Time	Pressure Surface (Millibar)	Wind within 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		315/341				
		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	5	0	—	0	—	1	2	1	10	1	9	3	8	1	8	9	4	3	6	1	10	6	11	1	30	7
	1000	2	13	0	—	1	10	0	—	1	16	2	14	1	22	2	8	3	7	9	10	3	13	6	18	0	30	12
	850	1	14	1	5	0	—	0	—	0	—	1	10	0	—	2	22	0	—	9	16	11	17	5	14	0	30	16
	700	1	38	0	—	0	—	0	—	0	—	0	—	1	30	2	30	7	20	13	18	6	20	0	—	0	30	20
	600	0	—	0	—	0	—	0	—	0	—	0	—	2	24	4	27	12	24	7	20	4	22	1	36	0	30	24
	500	0	—	0	—	0	—	0	—	0	—	0	—	1	32	8	26	10	30	7	22	3	30	0	—	0	29	27
	400	0	—	0	—	0	—	0	—	0	—	0	—	2	40	8	42	8	39	5	27	3	45	1	42	0	27	39
	300	0	—	0	—	0	—	0	—	0	—	0	—	1	54	7	61	7	45	3	45	0	—	0	—	0	18	52
	250	0	—	0	—	0	—	0	—	0	—	0	—	2	62	9	61	2	26	0	—	0	—	0	—	0	13	56
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	61	1	33	0	—	0	—	0	—	0	3	52
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	32	0	—	0	—	0	—	0	—	0	1	32
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	17	0	—	0	—	0	—	—	1	17
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	7	10	4	10	1	13	0	—	0	—	0	—	0	—	0	—	0	—	1	23	4	16	13	14	0	30	13
	1000	3	13	3	13	1	12	0	—	0	—	0	—	0	—	0	—	1	20	0	—	8	25	13	17	0	29	18
	850	1	21	1	7	0	—	0	—	0	—	0	—	0	—	5	17	8	16	6	16	8	16	1	12	0	30	16
	700	0	—	0	—	0	—	0	—	0	—	0	—	1	10	3	26	9	24	11	16	5	15	1	34	0	30	20
	600	0	—	0	—	0	—	0	—	0	—	0	—	1	20	9	23	9	21	6	20	3	18	2	28	0	30	22
	500	0	—	0	—	0	—	0	—	0	—	0	—	2	18	8	30	11	29	2	22	3	19	2	18	0	28	26
	400	0	—	0	—	0	—	0	—	0	—	0	—	2	35	9	48	12	37	1	27	2	32	0	—	0	26	40
	300	0	—	0	—	0	—	1	4	0	—	0	—	1	50	7	57	5	56	3	35	1	66	0	—	0	18	50
	250	0	—	0	—	0	—	0	—	0	—	0	—	1	59	7	56	1	30	3	52	0	—	0	—	0	12	53
	200	0	—	0	—	0	—	0	—	—	—	0	—	0	—	3	65	0	—	0	—	0	—	0	—	0	3	65
	150	—	—	0	—	—	—	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100	—	—	0	—	—	—	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of cases the wind has been observed within 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. NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

ASWAN SEPTEMBER — 1978

Time	Pressure Surfase Millibar	Wind within specided 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.	face	7	06	7	08	12	08	1	08	1	09	0	—	0	—	0	—	0	—	0	—	0	—	1	06	1	03	7
	00	1	10	0	—	2	09	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	06	0	4	8
	50	2	12	12	12	4	09	1	02	0	—	0	—	1	05	1	05	1	06	0	—	2	08	3	12	0	27	01
	00	3	14	3	19	2	14	0	—	1	03	1	04	1	03	0	—	1	15	7	08	6	10	2	12	0	27	12
	00	0	—	2	12	1	19	0	—	1	16	0	—	0	—	1	14	8	13	8	12	2	18	4	19	0	27	14
	00	3	11	2	18	0	—	0	—	0	—	0	—	0	—	1	20	5	17	9	19	5	17	1	21	0	26	18
	00	1	25	1	22	0	—	0	—	0	—	0	—	0	—	0	—	7	25	7	28	5	20	5	29	0	26	25
	00	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	38	7	39	4	34	5	31	0	23	26
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	45	8	45	4	36	1	40	0	02	43
	00	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	6	55	7	46	2	52	0	—	0	15	50
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	4	05	4	48	2	33	0	—	0	01	46
	00	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	46	1	09	1	51	0	—	0	3	52
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	60	0	—	0	1	60
	60	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	70	0		70
	50	0	—	0	—	0	—	0	—	1	73	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	73
	40	0	—	0	—	0	—	0	—	0	—	1	60	0	—	1	—	0	—	0	—	0	—	0	—	0	1	60
	30	0	—	0	—	0	—	0	—	0	—	1	40	0	—	0	—	0	—	0	—	0	—	0	—	0	1	40
	20	0	—	0	—	0	—	0	—	1	72	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	72
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	12	09	1	08	2	08	0	—	0	—	0	—	1	03	0	—	1	03	0	—	7	07	6	08	0	30	8
	1000	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	12	0	1	12
	850	6	12	5	13	4	14	4	09	0	—	0	—	0	—	1	06	1	03	1	10	1	11	1	07	0	24	10
	700	2	16	4	16	1	34	0	—	1	02	0	—	1	04	2	—	5	17	5	16	4	18	1	08	0	24	16
	600	4	28	1	20	1	02	0	—	1	03	0	—	0	—	0	—	3	22	6	22	5	16	0	—	0	21	20
	500	2	22	1	10	1	12	0	—	0	—	0	—	0	—	1	—	1	34	5	19	6	19	2	37	0	19	23
	400	3	03	0	—	0	—	0	—	0	—	0	—	0	—	0	56	2	24	2	25	8	19	1	17	0	18	24
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	36	2	33	6	38	3	31	4	38	0	15	36
	250	1	41	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	34	7	37	3	34	1	96	0	14	42
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	50	2	50	6	51	0	—	3	64	0	11	54
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	45	0	—	1	36	0	4	43
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	43	0	—	0	—	0	—	0	1	43
	70	0	—	0	—	0	—	0	—	1	22	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	22
	60	0	—	0	—	0	—	0	—	0	—	1	20	0	—	0	—	0	—	0	—	1	—	0	—	0	1	20
	50	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	18	0	—	0	—	0	—	0	—	0	1	18
	40	0	—	0	—	0	—	0	—	1	16	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	16
	30	0	—	0	—	0	—	0	—	0	—	1	15	0	—	0	—	0	—	0	—	0	—	0	—	0	1	15
	20	0	—	0	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

TN = The total nnmber of cases the wird 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 SEPTEMBER 1978

Time	Pressure Surface (Millibar)	Wind within specified ranges of direction (000—360)°																								Number of calm winds	Total Number of Observations (TN)	Mean scalarwind 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 of station	16	11	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	10	11	13	0	28	11
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	3	8	4	15	1	7	0	—	0	—	0	—	0	—	0	—	0	—	2	17	11	13	7	15	0	28	13
	700	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	19	0	—	0	—	0	—	0	1	19
	600	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	19	7	—	0	—	0	—	0	1	19
	500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	—	—	—
	400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	250	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface of station	24	12	0	—	0	—	0	—	0	—	0	—	0	—	1	5	0	—	1	6	3	12	1	10	0	30	12
	1000	—	—	—	—	—	—	—	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	4	15	0	—	1	15	1	1	1	—	0	—	0	—	0	—	4	8	4	11	7	14	8	15	0	30	12
	700	0	—	0	—	1	15	1	5	0	—	1	9	1	22	7	14	10	12	7	19	2	9	0	—	0	30	14
	600	1	32	0	—	0	—	1	16	0	12	2	16	3	16	9	20	8	20	3	7	1	15	0	—	0	28	18
	500	2	6	1	4	1	14	3	11	1	4	1	13	4	10	3	19	7	10	3	16	1	7	1	7	0	28	11
	400	3	8	0	—	3	11	2	15	1	4	2	18	4	9	2	12	4	16	3	11	2	12	0	—	0	26	12
	300	2	15	0	—	1	4	3	13	1	8	2	9	4	18	4	14	4	12	0	—	1	4	1	8	0	23	12
	250	0	—	1	3	0	—	1	8	2	—	3	10	4	15	6	20	2	15	0	—	1	2	1	11	0	21	13
	200	1	14	0	—	1	8	0	—	0	—	2	12	6	20	3	16	2	12	1	5	0	—	0	—	0	16	15
	150	0	—	1	21	0	—	3	10	0	—	2	20	3	24	1	18	1	11	0	—	0	—	0	—	0	11	17
	100	0	—	0	—	0	—	0	—	0	—	1	20	0	—	0	—	0	—	0	—	0	—	0	—	0	1	20
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

MONTHLY REVIEW OF AGRO-METEOROLOGICAL STATIONS

MERSA MATRUH — SEPTEMBER 1978

The mean daily air temperature and relative humidity were slightly below normal. The total monthly amount of rainfall was 2.8 mm. while the normal is 1.2 mm.

The maximum temperatures were slightly below normal most of the month, a part from three short slight heat waves in the periods (6th, 7th), (13th — 15th) and 29th. The highest and lowest maximum temperatures were respectively 34.0°C on the 27th. The highest and lowest minimum temperatures were respectively 22.0°C on the 17th and 15.4°C on the 28th.

The mean daily actual sunshine duration and wind speed at 1.5 met height were lower than average by 0.8 hour and 0.7 met./sec. respectively.

The highest maximum soil temperatures were around those of September 1977 with departures between — 0.7°C at 50 cm. depth and + 0.9°C at 200 cm. depth. The lowest minimum soil temperatures were lower than those of September 1977 with departures betwees 1.0°C at 50 cm. and 100 cm. depths, and 1.6°C at 2 cm. depth except for the depth of 200 cm. where it was equal to that of September 1977.

TAHRIR — SEPTEMBER 1977

The mean daily air temperatures and relative hunidity were slightly below normal. The month was rainless (0.3 mm. below normal).

The month was intervened by two heat waves in the periods (6th — 9th) and (14th — 16th), a part from which weather was mild. The maximum temperatures ranged between 29.2°C on the 25th and 45.4°C on the 8th. The minimum temperatures ranged between 13.1°C on the 26th and 19.3°C on the 14th.

The mean daily actual sunshine duration was 0.1 hour above normal. The mean daily wind speed at 15 met. height and pan evaporation were above normal respectively by 0.2 met./sec. and 1.0 mm.

The highest maximum soil temperatures were around normal with departures between — 1.1°C at 600 cm. depth and + 1.5°C at 2 cm. and 10 cm. depth. The lowest minimum soil temperatures were below normal with departures between 0.1 cm. at 600 cm. depth and 2.9°C at 5 cm. depth.

BAHTIM — SEPTEMBER 1978

The mean daily air temperature and relative humidity were slightly less than normal. The month was rainless as usual.

The maximum temperatures were below normal except for two heat waves in the periods (7th — 9th) and (14th—16th). The maximum temperatures ranged between 27.0°C on the 25th and 43.2°C on the 8th. The minimum temperatures ranged between 11.5°C on the 26th and 18.7°C on the 9th.

The mean daily actual sunshine duration and wind speed at 1.5 met. height were less than normal respectively by 0:4 hour and 0.2 met:/sec: The mean daily pan evaporation was 0.55 mm. above normal:

The highest maximum soil temperatures were around normal with departures between — 0.4°C at 330 cm. depth and +. 4.7°C at 2 cm. depth. The lowest minimum soil temperatures were below normal at all depths with departures between 0.1°C at 200 cm. depth and 2.0°C at 5 cm. and 10. cm. depths.

ASYOUT — SEPTEMBER 1978

The mean daily air temperature and relative humidity were nearly equal to those of last September. The month was rainless.

Mild weather prevailed, except for two heat waves in the periods (7th — 9th) and (14th — 16th). The maximum temperatures ranged between 30.4°C on the 26th and 44.0°C on the 8th. The minimum temperatures ranged between 14.8°C on the 31st and 20.8°C on the 10th.

The mean daily pan evaporation was slightly higher than that of last September.

The highest maximum soil temperatures were around those of last September with departures between — 0.2°C at 50 cm. depth and + 5.2°C at 5 cm. depth. The lowest minimum soil temperatures were around those of last September with departures betwee n— 2.6°C at 5 tm. depth and + 0:8°C at 300 cm. depth.

EL-KHARGA — SEPTEMBER 1978

The mean daily air temperature was less than normal. The mean daily relative humidity was above normal. The month was rainless as usual.

The month was mild in general, except for two heat waves in the periods (5th — 10th) and (13th — 16th). The maximum temperatures ranged between 31.2°C on the 26th and 44.7°C on the 8th. The minimum temperatures ranged between 18.0°C on the 27th and 27.0°C on the 10th.

The mean daily actual sunshine duration, wind speed at 1.5 met. height and pan evaporation were less than normal respectively by 0.3 hour, 0.6 met:/ sec: and 3.07 mm:

The highest maximum soil temperatures were around normal with departures between — 0.9°C at 50 cm. depth and + 4.8°C at 5 cm. depth. The lowest minimum soil temperatures were around normal with departures between — 2.4°C at 10 cm. depth and + 0.2°C at 2 cm. depth:

TABLE C 1.—AIR TEMPERATURE AT 1½ METRES ABOVE GROUND

SEPTEMLEER — 1978

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
Mersa Matruh. .	27.8	18.8	23.4	21.3	25.5	24.0	24.0	24.0	24.0	24.0	19.6	7.5	0.6	0.0	0.0	0.0
Tahrir	32.8	16.3	23.9	19.7	28.1	24.0	24.0	24.0	24.0	23.8	16.5	9.9	3.0	0.0	0.2	0.0
Bahtim	31.4	15.6	23.6	19.3	27.9	24.0	24.0	24.0	24.0	23.3	15.8	9.4	2.8	0.5	0.2	0.0
Assiut	34.5	17.6	25.5	21.2	29.8	24.0	24.0	24.0	24.0	24.0	18.4	11.3	6.1	1.9	0.2	0.0
Kharga	36.7	22.3	29.5	25.9	32.8	24.0	24.0	24.0	24.0	24.0	23.9	17.7	11.3	4.3	0.9	—

TABLE C 2.—EXTREME VALUES OF AIR TEMPERATURE AT 1½ METRES ABOVE GROUND ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS

SEPTEMLEER — 1978

STATION	Max. Temp. at 1½ metres (°C)				Min. Temp. at 1½ 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
Mersa Matruh. . . .	34.0	7	25.0	27	22.0	17	15.4	28	14.0	28	—	—
Tahrir	45.4	8	29.2	25	19.3	14	13.1	26	11.0	26	8.5	26
Bahtim	43.2	8	27.0	25	18.7	9	11.5	26	8.4	26	6.9	26
Assiut	44.0	8	30.4	26	20.8	10	14.8	30	10.8	30	—	—
Kharga	44.7	8	31.2	26	27.0	10	18.0	27	15.4	2	—	—

TABLE C 3.— SOLAR + SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 1½ METRES ABOVE GROUND EVAPORATION & RAINFALL

SEPTEMLEER — 1978

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	%	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
Mersa Matruh .	400.4	308.9	371.3	83	66	56	29	29	14.0	14.9	20.0	7	7.0	7	6.7	—	2.8	2.8	23
Thahrir	530.2	314.7	370.8	85	67	38	11	8	14.1	12.7	20.4	9	8.1	8	6.8	7.94	0.0	0.0	—
Bahtim	530.0	306.6	370.8	83	66	38	12	8	13.8	12.7	19.6	8	7.4	7,8	5.9	8.72	0.0	0.0	—
Asslut	—	333.2	369.8	90	52	31	10	8	12.0	11.8	17.8	3	7.5	29	8.2	9.71	0.0	0.0	—
Kharga	634.2	330.6	368.9	89	38	25	15	8	11.2	11.3	16.3	5	7.2	29	15.7	15.49	0.0	0.0	—

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

SEPTEMBER — 1978

STATION	Highest (H) Lowest (L)	Dry Field								Grass							
		2	5	10	20	50	100	200	300	2	5	10	20	50	100	200	300
M. Matruh . . .	H	40.3	37.4	33.2	29.8	27.8	27.0	26.4	—	—	—	—	—	—	—	—	—
	L	20.0	20.0	21.9	24.6	25.4	25.2	24.4	—	—	—	—	—	—	—	—	—
Tahrir	H	52.1	46.3	41.3	35.4	32.0	30.3	28.9	28.0	32.0	31.7	29.2	28.5	29.1	28.5	27.7	—
	L	21.5	20.3	21.7	26.2	28.2	28.5	28.4	27.8	20.6	20.8	21.4	23.2	25.9	26.6	26.8	—
Bahtim	H	56.6	45.8	39.3	34.6	32.3	30.5	27.8	26.0	34.1	31.2	28.9	27.5	27.3	26.2	24.6	—
	L	24.6	22.4	24.5	28.2	29.7	29.6	27.5	25.6	22.0	20.2	20.2	23.3	25.1	25.4	24.4	—
Assint	H	63.1	51.6	41.7	35.2	31.3	30.1	27.8	26.7	—	—	—	—	—	—	—	—
	L	26.9	23.6	26.0	28.8	29.3	29.5	27.6	26.4	—	—	—	—	—	—	—	—
Kharga	H	57.4	52.2	45.0	38.7	33.7	32.6	31.2	30.0	—	—	—	—	—	—	—	—
	L	20.4	22.1	24.6	28.8	31·0	31.7	30.8	29.6	—	—	—	—	—	—	—	—

Table C 5.—SURFACE WIND

SEPTEMBER — 1978

STATION	Wind Speed m/sec (2 metres)			Days with surface wind speed at (10 metres)							Max. Gust 10 metres	
	Mean of the day	Night time mean	Day time mean	≧10 (konts)	≧15 (konts)	≧20 (konts)	≧25 (konts)	≧30 (konts)	≧35 (konts)	≧40 (konts)	Value (konts)	Date
M. Matruh. .	2.9	1.8	4.0	30	19	3	1	0	0	0	30	29
Tahrir . . .	1.8	1.0	2.7	24	0	0	0	0	0	0	21	18
Bahtim . . .	7.1	1.0	2.4	25	6	0	0	0	0	0	21	8,26
Assiut . . .	—	—	—	—	—	—	—	—	—	—	—	—
Kharga . . .	3.7	2.7	4.7	30	27	12	4	0	0	0	32	25

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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 RESEARÉH 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 the Meteorological Authority.

TECHNICAL NOTES

As from October 1970, the Meteorological Authority 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 ARAB REPUBLIC OF EGYPT

MONTHLY WEATHER REPORT

VOLUME 21 NUMBER 10

OCTOBER 1978

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

THE EGYPTIAN METEORLOGICAL AUTHORITY
CAIRO

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GENERAL SUMMARY OF WEATHER CONDITIONS

OCTOBER 1978

Generally mild autumn weather in the northern parts-hot in the middle and southern parts intervened by five hot waves.

PRESSURE DISTRIBUTION

Some frontal depressions passed the mediterranean causing scattered rain over the north coast on the 12th, 13th, 14th & 30th replaced by high pressure covering N & NE Africa many days of the month.

These depressions were always replaced by high pressure covering most of the Mediterranean and North Africa.

The mean monthly atmospheric pressure over Egypt was below normal.

SURFACE WIND

Most winds were light to moderate NE ly to NW ly, became fresh in few days causing rising dust in the south.

TEMPERATURE

The prevailing weather most of the month was mild autumn weather in the northern-parts, hot in the middle and southern parts; the second half of the month was intervened by two hot waves in the northern parts, the first of which became severe on the 9th of the month.

Also, most of the month was intervened by three hot waves in the middle and southern parts.

The highest maximum temperature was 42.4°C at Aswan on the 3rd and at El-Kharga on the 10th and 11th and the lowest maximum was 20.6°C at Mersa-Matruh on the 30th.

The highest and lowest minimum temperatures were respectively 25.2°C at El-Quseir on the 3rd, 4th & 14th and 8.7°C at El-Baharia on the 31st.

PRECIPITATION

Scattered rain fell on the NW Coast on the 12th, 13th, 14th, 14th & 30th of the month recording maximum total amount of 58.9mm and maximum daily amount of 37.1 on the 25th both at El Sallum.

OTHER WEATHER PHENOMENA

Low clouds and mist developed over scattered parts of Lower Egypt and Cairo during many days of the month.

Chairman (M. ALI BADRAN)

Board of Directors.

Cairo December 1981

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

OCTOBER — 1978

STATION	Atmospheric Presure (mbs) M.S.L		Air Temperature °C									Relative Humidity %		Bright Sunshine Duration (Hours)			Picge Evap.
			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 Aci.	Total Poss.	—	
Sallum	1015.6	—0.3	26.6	—0.7	18.3	0.4	22.4	22.1	—0.2	17.9	—0.1	66	3	—	—	—	5.8
Mersa MTatro	1015.5	—0.7	25.8	—1.1	17.4	0.4	21.6	21.5	—0.2	18.4	0.6	76	9	217.5	353.7	61	5.7
Alexandria	1015.0	—0.9	27.8	0.1	18.6	0.8	23.2	23.1	0.5	19.3	0.5	69	2	245.1	353.8	69	4.2
Port Said	1014.5	—0.5	26.9	—0.3	22.4	0.8	24.6	24.3	0.2	20.4	0.2	69	0	262.2	353.8	74	5.1
Elrich	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gaza	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo	1014.1	—1.0	31.0	1.2	19.3	1.5	25.1	24.4	—1.0	18.5	0.4	57	0	—	—	—	11.4
Fayum	—	—	12.4	1.2	17.7	0.6	25.0	24.3	—0.4	18.7	0.7	59	5	—	—	—	6.2
Miia	1013.4	—0.9	33.1	1.8	16.9	1.1	25.0	24.4	—1.2	17.8	0.5	53	—1	294.7	356.4	83	9.1
Asnuit	1013.1	—0.4	33.1	1.8	17.0	—0.8	25.0	24.9	—0.6	15.6	—1.4	35	—10	—	—	—	13.1
Losuxer	1011.5	—0.3	46.4	1.1	18.2	0.5	27.3	27.0	—0.6	18.5	0.7	43	2	—	—	—	7.9
Aswan	1011.1	—0.3	37.2	0.4	21.1	1.5	29.1	28.9	—0.5	16.2	0.4	22	—7	310.0	359.5	86	20.0
Sewa	1014.8	—1.2	30.6	—0.5	16.4	1.2	23.5	23.3	—0.4	16.8	0.8	51	2	247.7	355.5	70	8.9
Baharia	1013.5	—1.5	32.7	1.5	17.5	1.6	25.1	24.7	—1.4	16.8	0.2	45	—7	—	—	—	8.7
Farafra	1014.5	—1.5	33.1	1.8	17.2	1.9	25.1	24.7	—1.6	15.9	1.4	38	—2	—	—	—	11.7
Dakhla	1013.6	—0.5	34.6	1.7	16.9	0.2	25.7	25.7	—1.3	15.8	0.3	33	—5	—	—	—	14.6
Kharga	1011.5	—2.0	36.4	2.5	19.7	—1.4	28.0	28.3	—2.5	16.6	0.7	32	—3	303.8	358.4	85	14.2
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Huurgada	1012.1	—0.1	29.9	1.0	21.2	1.7	25.5	25.8	1.1	19.4	0.3	52	—6	306.9	357.0	—	13.1
Qsir	1011.5	—0.6	30.0	0.3	22.8	0.3	26.4	26.3	0.2	02.6	1.0	57	1	—	—	86	6.7

TABLE A2— MAXIMUM AND MINIMUM AIR TEMPERATURE

OCTOBER— 1978

Station	Maximum Temperature °C									Grass Min. Temp.		Minimum Temperature Deg. 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	38.4	19	21.3	29	22	03	02	00	00	16.4	—	22.8	12,13	13.6	29	00	00	00	00
MersaMatro . . .	35.5	19	20.6	30	17	03	01	00	00	16.0	—	21.8	14	13.9	29	00	00	00	00
Alexandria. . . .	33.6	19	22.8	30	28	04	00	00	00	15.4	—	22.2	14	11.8	29	00	00	00	00
port Said.	32.4	22	22.8	30	27	02	00	00	00	21.9	—	24.7	25	17.4	31	00	00	00	00
cairo A. P	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fayoum	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
minia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Assuit	36.1	20	23.4	31	26	20	02	00	00	—	—	23.1	19	15.0	31	00	00	00	00
Luoxr	36.9	3	25.3	31	31	25	06	00	00	15.0	—	20.4	4	10.8	31	00	00	00	00
aswan	38.4	20	24.8	31	30	25	09	00	00	14.5	—	20.3	43,25	10.4	31	00	00	00	00
sewa	39.4	22	23.5	31	29	25	14	00	00	16 3	—	22.5	25	9.6	31	01	00	00	00
baharia.	41.6	4	27.4	31	31	28	23	03	00	13.1	—	22.8	14	12.0	31	00	00	00	00
Farafra.	42.4	3	26.8	31	31	28	25	07	00	—	—	25.0	11	14.8	31	00	00	00	00
Dakhla	39.0	19	22.7	30	28	19	04	00	00	14.9	—	21.4	14	8.8	31	01	00	00	00
kharrga	38.4	12.19,22	23.2	30	29	24	09	00	00	16.9	—	23.5	12	8.7	31	01	00	00	00
hurgada	40.3	20	24.8	30.31	29	24	10	01	00	15.5	—	21.8	13	8.8	31	01	00	00	00
quseirr	41.9	12	25.1	31	31	25	15	05	00	16.9	—	21.4	13	10.0	31	00	00	00	00
Khargn	42.4	10.11	26.1	31	31	26	19	07	00	17.0	—	25.0	13	11 8	29	00	00	00	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Qargada	42.4	3	25.1	31	31	14	00	00	00	—	—	23.9	8,11,14	14.8	31	00	00	00	00
HTsseir	32.2	15	26.4	31	31	18	00	00	00	19.8	—	25.2	3, 4,14	18.7	31	00	00	00	00

Table A 3. — SKY COVER AND RAINFALL

OCTOBER — 1978

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	2.4	3.1	3.1	3.1	3.0	58.9	41.0	37.1	25	00	06	02	02	02	01	00
Mersa Matruh (A)	3.2	4.1	4.2	4.3	3.9	2.2	— 15.2	1.0	17	02	04	01	00	00	00	00
Alexandria (A)	2.7	4.2	4.7	3.3	3.7	7.8	—2.5	5.3	29	01	05	01	01	00	00	00
Port Said (A)	2.8	2.9	2.1	2.1	2.5	1.6	—5.7	1.6	14	00	01	01	00	00	00	00
El Arish	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ghazza	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tanta																
Cairo	1.8	2.9	2.2	0.8	2.0	0.0	—1.2	—	—	00	00	00	00	00	00	00
Fayom	—	1.0	1.6	0.6	—	TR	— —	TR	13	01	00	00	00	00	00	00
Minia	0.5	1.9	1.8	0.8	1.2	0.0	0.0	—	—	00	00	00	00	00	00	00
Assuit	0.4	1.2	1.2	0.5	0.8	TR	— —	TR	13	01	00	00	00	00	00	00
Luxor	0.5	1.1	1.3	1.4	1.0	TR	— —	TR	14	01	00	00	00	00	00	00
Asawan	0.3	1.0	1.0	0.1	0.6	0.0	0.0	—	—	00	00	00	00	00	00	00
Sewa	1.0	1.5	2.2	1.8	1.5	0.3	—0.1	0.3	13	03	01	00	00	00	00	00
Behaira	0.8	1.7	1.9	0.7	1.2	TR	— —	TR	13	01	00	00	00	00	00	00
Farafra	—	0.4	1.9	1.2	—	0.0	0.0	—	—	00	00	00	00	00	00	00
Dakhla	0.2	0.5	0.6	0.4	0.4	0.0	0.0	—	—	00	00	00	00	00	00	00
Kharga	0.3	0.7	0.9	0.[illegible]	0.6	0.0	0.0	—	—	00	00	00	00	00	00	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	1.0	0.8	1.4	1.5	1.2	TR	— —	TR	14	01	00	00	00	00	00	00
Quseir	0.5	0.7	1.3	0.9	0.8	TR	— —	TR	14	01	00	00	00	00	00	00

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

OCTOBER — 1978

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	Sky Cover Clear Cloudy
	Rain	Snow											
Salum	05	00	00	01	02	00	00	04	00	00	00	12	02
Mersa Matro (A)	05	00	00	00	11	00	00	12	00	03	00	04	06
Al Exandria (A)	03	00	00	02	04	00	00	02	00	00	00	08	04
Fort Said (A)	02	00	00	01	00	00	00	01	00	00	00	13	02
El Aaish	—	—	—	—	—	—	—	—	—	—	—	—	—
Chazza	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo (A)	00	00	00	00	11	04	07	07	00	00	00	19	00
Fayoum	00	00	00	00	00	00	00	00	00	00	00	22	01
Minya (A)	00	00	00	00	07	00	06	04	00	00	00	23	00
Assout (A)	00	00	00	00	00	00	00	02	00	00	00	25	00
Luxor (A)	00	00	00	01	00	00	09	02	00	02	00	23	00
Aswan (A)	00	00	00	00	00	00	08	08	00	00	00	26	00
Siwa	04	00	00	00	00	00	02	06	00	00	00	22	00
Bahariya	00	00	00	01	00	00	00	01	00	00	00	23	00
Farafra	00	00	00	00	00	00	02	02	00	00	00	23	03
Dakhla	00	00	00	00	00	00	00	02	00	00	00	29	00
Khrga	00	00	00	00	00	00	00	00	00	00	00	27	00
Tor	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	00	00	00	00	00	00	00	02	00	00	00	23	01
Quseir	00	00	00	00	00	00	00	00	00	00	00	23	00

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

OCTOBER—1978

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing Within 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.	34	01	00	1—10	46	50	112	56	30	27	10	10	08	38	114	35	537
				11—27	03	14	28	08	04	01	01	14	19	50	26	05	173
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**49**	**64**	**140**	**64**	**34**	**28**	**11**	**24**	**27**	**88**	**140**	**40**	**709**
Mersa Matroh . (A)	24	00	00	1—10	61	67	43	21	14	21	19	19	27	54	07	33	386
				11—27	35	68	26	10	06	07	13	09	38	37	31	05	330
				28—47	00	00	00	00	00	00	01	03	00	00	00	00	04
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**96**	**135**	**69**	**31**	**20**	**28**	**33**	**31**	**65**	**91**	**38**	**83**	**720**
Alexandria . . . (A)	01	00	00	1—10	169	130	24	25	52	12	20	13	13	18	39	130	645
				11—27	18	20	07	02	00	00	00	00	17	23	08	03	98
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**187**	**150**	**31**	**27**	**52**	**12**	**20**	**13**	**30**	**41**	**47**	**133**	**743**
Cairo A.P p. (A)	08	14	00	1—10	71	137	62	30	14	10	16	13	13	48	45	45	518
				11—27	30	96	23	17	10	02	01	14	09	10	03	03	218
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**101**	**233**	**85**	**47**	**24**	**12**	**17**	**27**	**22**	**58**	**48**	**48**	**722**
EL-Fayoum	09	10	00	1—10	97	310	84	08	05	08	08	17	48	40	30	36	701
				11—27	00	14	20	00	00	00	00	00	00	00	00	00	34
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**97**	**324**	**104**	**08**	**05**	**08**	**08**	**17**	**48**	**40**	**30**	**36**	**725**
EL Minia . . . (A)	47	00	00	1—10	211	44	10	04	02	19	22	15	08	07	17	121	481
				11—27	111	17	02	03	02	00	01	00	00	00	14	67	173
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**322**	**61**	**12**	**07**	**04**	**19**	**23**	**15**	**08**	**07**	**31**	**188**	**697**
Assuit	90	00	00	1—10	49	86	17	10	09	32	28	78	64	38	29	50	481
				11—27	14	45	05	02	02	05	02	24	31	27	08	08	173
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**63**	**131**	**22**	**12**	**11**	**28**	**30**	**102**	**95**	**65**	**37**	**58**	**654**
Luxor . . . . . .(A)	10	00	00	1—10	101	113	72	40	18	09	59	69	62	48	52	84	727
				11—27	02	03	01	05	00	01	02	00	01	00	00	02	17
				28—47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speeds	**103**	**116**	**73**	**45**	**18**	**10**	**61**	**69**	**63**	**48**	**52**	**86**	**744**

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

OCTOBER. — 1978

Station	Calm (hours)	Variable (hours)	Unrecorded (hours)	Wind speed in knots	Number in hours of occurrences of wind blowing within 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
Aswan . (A) . . .	01	01	00	1-10	209	93	26	22	19	18	10	10	12	17	32	93	562
				11-27	70	40	01	02	02	02	04	00	01	00	05	54	181
				28 4	00	00	00	00	00	00	00	00	00	00	00	00	00
				>47	00	00	00	00	00	00	00	00	00	00	00	00	00
				All Speeds	279	133	27	24	21	20	14	10	13	17	37	147	743
Sewa	21	00	00	1-10	60	60	37	11	14	19	24	78	73	63	52	67	576
				11-27	32	10	00	04	07	01	08	15	09	05	18	38	147
				28-47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All Speeds	92	70	37	15	21	20	50	93	82	68	70	105	723
El-Dakhla	52	13	00	1-10	108	21	27	15	19	30	22	24	32	48	109	184	652
				11-27	10	11	01	00	00	01	00	00	00	01	07	09	40
				28-47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≥48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All Speeds	118	32	28	15	19	31	22	24	32	49	116	193	679
EL-kharga	00	00	00	1-10	218	109	41	07	07	07	09	07	13	19	32	131	600
				11-27	77	45	01	01	00	00	00	00	00	00	00	20	144
				28 47	00	00	00	00	00	00	00	00	00	00	00	00	00
				≧48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All Speeds	295	154	42	08	07	07	09	07	13	19	32	151	744
EL-hurgada . . .	06	00	00	1-10	47	33	15	11	17	17	17	06	06	27	169	48	413
				11-27	96	02	00	03	04	01	00	00	00	00	34	185	325
				28-47	00	00	00	00	00	00	00	00	00	00	00	00	00
				>48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All sqeed	143	35	15	14	21	18	17	06	06	27	203	233	738
EL Guseir	06	00	00	1-10	83	40	20	12	12	08	17	11	13	53	144	141	554
				11-27	126	11	00	00	00	00	00	00	00	00	01	46	184
				28-47	00	00	00	00	00	00	00	00	00	00	00	00	00
				>48	00	00	00	00	00	00	00	00	00	00	00	00	00
				All speed	209	51	20	12	12	08	17	11	13	53	145	187	738

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

OCTOBER — 1978

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 U.T.	Surface	31	1013mb.*	1016mb.*	1009mb.*	31	20.7	23.8	15.8	31	16.1
	1000	31	1013	1022	1009	31	20.0	23.0	14.8	31	15.6
	850	31	141	169	107	31	14.2	20.2	4.2	31	0.7
	700	31	1529	1565	1481	31	3.9	10.0	— 4.1	30	— 9.2
	600	31	3840	3190	3045	31	4.2	2.9	— 8.0	30	—17.3
	500	31	4375	4450	4152	31	—13.9	— 7.3	—18.3	30	—28.5
	400	31	5786	5893	5646	31	—25.7	—18.8	—30.0	30	—39.0
	300	31	7445	7581	7288	31	—40.6	—33.0	—46.1	29	—52.3
	250	29	9470	9662	9303	29	—48.9	—42.0	—56.3	26	—60.1
	200	25	10695	10821	10521	25	—55.4	—51.3	—61.1	17	—67.2
	150	19	12152	12403	11961	19	—61.7	—57.1	—67.1	2	—68.8
	100	18	13984	14235	13786	18	—66.1	—60.6	—72.1	—	—
	70	7	16467	16715	16271	7	—65.6	—61.2	—69.3	—	—
	60	3	18599	18779	18444	3	—62.4	—61.5	—63.0	—	—
	50	2	19550	19620	19430	2	—61.2	—61.0	—61.5	—	—
	40	1	20599	20980	20518	1	—59.8	—	—	—	—
	30	—	22050	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 0000 U.T.	Surface	—	998m.b.*	1002m.b.*	992m.b.*	31	20.9	27.3	14.4	31	14.3
	1000	31	119	154	066	7	19.1	23.8	14.2	12	12.3
	850	30	1525	1570	1492	29	17.9	24.0	05.4	7	04.1
	700	30	3158	3218	3075	30	07.6	13.4	00.2	28	—06.7
	600	30	4414	4485	4380	30	—00.7	5.9	—10.6	30	—13.5
	500	30	5847	5946	5726	30	—09.4	—04.3	—14.6	30	—22.1
	400	30	7536	7669	7392	30	—20.9	—17.0	—27.0	30	—33.4
	300	30	9598	9734	9431	30	—35.7	—29.6	—41.1	30	—45.6
	250	30	10546	11036	10657	29	—45.0	—39.9	—52.5	30	—53.9
	200	30	12311	12526	12095	29	—52.8	—48.9	—61.0	29	—59.2
	150	29	14136	14357	13853	29	—60.7	—54.8	—66.2	29	—67.8
	100	29	16632	16871	16301	27	—66.7	—69.7	—72.6	31	—70.9
	70	17	18824	18970	18643	17	—65.1	—58.9	—70.8	1	—
	60	11	19802	20050	19600	11	—63.0	—57.4	—69.5	—	—
	50	11	20883	21011	20746	11	—61.6	—55.8	—69.4	—	—
	40	6	22334	22470	22199	8	—60.0	—54.2	—69.3	—	—
	30	5	24000	24250	23986	8	—56.6	—51.9	—60.2	—	—
	20	2	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan 0000 U.T.	Surface	30	990m.b.*	996m.b.*	987m.b.*	30	23.8	28.8	18.0	30	5.8
	1000	30	104	159	67	—	—	—	—	—	—
	850	30	1528	1556	1509	30	20.9	24.8	12.6	29	1.3
	700	30	3171	3211	3143	30	8.3	11.3	5.8	29	— 8.0
	600	28	4423	4475	4386	28	— 0.8	2.7	— 5.4	27	—16.3
	500	27	5859	5897	5795	27	— 8.5	— 4.4	—12.5	26	—26.3
	400	27	7557	7622	7462	27	—20.2	—14.5	—29.0	26	—36.1
	300	27	9622	9735	9502	27	—35.2	—30.5	—38.5	26	—48.4
	250	26	10869	11006	10773	26	—44.8	—40.7	—49.0	25	—56.4
	200	25	12333	12496	12185	25	—55.2	—51.8	—60.2	22	—64.9
	150	23	14130	14305	13985	32	—66.3	—61.1	—69.5	—	—
	100	19	16629	16660	16394	19	—74.8	—70.5	—79.9	—	—
	70	9	18624	18710	18528	9	—69.1	—65.5	—74.8	—	—
	60	3	19583	19650	19500	3	—65.6	—64.0	—67.0	—	—
	50	3	20678	20770	20569	3	—62.6	—62.5	—62.8	—	—
	40	2	22165	22200	22130	2	—60.4	—60.3	—60.6	—	—
	30	2	23937	23980	23895	2	—54.6	—53.5	—55.7	—	—
	20	2	26554	26600	26508	2	—52.0	—52.0	—52.0	—	—
	10	—	—	—	—	—	—	—	—	—	—

N = Number of observatiuns of specified pressure surface.

* The atmosaheric pressure corrected to the elevation of the radiosonde stations,

UPPER AIR CLIMATOLOGICAL DATA

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

OCTOBER — 1978

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	1013*m.b.	1017*m.b.	1009*m.b.	31	25.0	34.0	18.5	31	15.2
	1000	31	141	1017	105	31	24.0	33.6	17.3	31	14.0
	850	31	1533	183	1442	31	15.4	25.5	4.2	31	— 1.5
	700	31	3150	1574	3053	31	3.3	12.1	— 1.7	31	—10.8
	600	31	4397	3237	4277	31	— 5.7	5.0	— 6.8	31	—17.6
	500	30	5815	4490	5675	30	—12.2	— 3.7	—16.3	29	—24.1
	400	29	7483	5957	7327	29	—24.1	—15.0	—28.5	28	—38.9
	300	26	9523	7686	9341	26	—42.9	—28.7	—44.9	26	—52.5
	250	23	10749	9808	10565	23	—39.1	—36.9	—54.5	21	—60.0
	200	22	12209	11092	11979	22	—47.6	—46.3	—59.3	19	—64.6
	150	19	14034	12609	13800	19	—54.2	—52.3	—66.0	4	—67.5
	100	17	16499	14479	16312	17	—60.4	—61.0	—74.1	—	—
	70	11	18663	16717	18500	11	—69.9	—58.1	—72.8	—	—
	60	5	19806	18733	19530	5	—63.1	—56.3	—61.3	—	—
	50	5	20780	20600	20708	5	—59.4	—51.9	—58.7	—	—
	40	3	22227	22269	22180	3	—54.5	—51.5	—55.8	—	—
	30	3	24009	24049	23973	3	—51.5	—48.7	—54.3	—	—
	20	2	26685	26740	26630	2	—47.2	—44.8	—49.5	—	—
	10	—	—	—	—	—	—	—	—	—	—
Helwan 1200 U.T.	Surface	31	997*m.b.	1003*m.b.	991m.b.	31	30.2	36.8	22.1	31	10.1
	1000	27	112	169	060	2	27.4	32.8	22.0	2	08.2
	850	27	1535	1578	1504	29	19.4	22.0	09.6	26	02.1
	700	25	3171	3232	3111	25	09.0	14.8	02.8	25	—10.7
	600	24	4428	4502	4343	24	19.1	00.8	08.6	24	—16.6
	500	24	5869	5980	5757	24	—08.3	—02.5	—16.0	23	—24.3
	400	24	7563	7711	7407	24	—19.6	—14.5	—25.8	23	—34.0
	300	24	9644	9842	9474	24	—33.6	—28.2	—41.2	24	—45.8
	250	24	10908	11132	10688	24	—42.3	—36.1	—46.2	24	—53.6
	200	24	12382	14231	12168	24	—57.5	—45.8	—54.8	23	—62.2
	150	24	14228	17072	13991	24	—62.5	—51.0	—60.7	18	—66.9
	100	24	16795	17078	16522	24	—59.3	—57.4	—72.0	1	—68.7
	70	19	18960	19229	18755	19	—50.7	—53.1	—66.1	—	—
	60	15	19944	20200	19770	15	—55.8	—50.8	—70.0	—	—
	50	15	21084	21349	20884	15	—52.3	—48.7	—55.3	—	—
	40	10	22632	22880	22420	10	—48.7	—44.2	—52.4	—	—
	30	10	24454	24721	24199	10	—43.9	—37.5	—58.9	—	—
	20	4	27833	27450	26907	4	—36.6	—28.7	—44.4	—	—
	10	—	—	—	—	—	—	—	—	—	—
Aswan 1200 U.T	Surface	31	989*m.b.	996*m.b.	986*m.b.	31	37.0	41.8	27.8	31	5.4
	1000	31	93	158	66	—	—	—	—	—	—
	850	31	1542	1575	1515	31	23.9	28.2	16.8	31	— 3.2
	700	31	3199	3240	3154	31	10.9	15.5	7.4	31	—12.2
	600	31	4464	4512	4407	31	1.6	6.5	— 3.0	30	—17.0
	500	30	5914	5962	5839	29	— 5.8	— 2.1	—10.3	28	—29.2
	400	28	7625	7698	7534	28	—17.7	—13.2	—19.7	28	—40.0
	300	28	9714	9837	9595	28	—33.1	—28.2	—36.3	28	—50.2
	250	28	10972	11120	10835	28	—42.7	—39.3	—45.8	28	—57.9
	200	26	12-38	12620	12299	26	—52.6	—49.6	—57.1	26	—66.2
	150	26	14246	14456	14109	26	—64.2	—59.1	—67.4	1	—73.8
	100	25	16680	19070	16260	25	—72.6	—65.8	—75.8	—	—
	70	23	18775	19070	18657	23	—70.1	—65.0	—75.9	—	—
	60	19	19694	20020	19600	19	—64.9	—59.8	—68.4	—	—
	50	19	20836	21128	20713	19	—59.2	—52.3	—63.1	—	—
	40	12	22313	22650	22180	11	—55.6	—53.4	—57.7	—	—
	30	12	24090	24418	23985	12	—50.7	—47.2	—54.4	—	—
	20	8	26776	27116	26621	8	—45.5	—41.5	—48.1	—	—
	10	—	—	—	—	—	—	—	—	—	—

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

OCTOGER — 1978

	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)	3660 (31)	659 (31)	—115 (30)	4800	578	20.3	2100	790	—30.0	13302 (.2)	,72 (12)	—63.8 (12)	16910	94	—76.7	10500	236	—58.5	9310	301	245	105
	Helwan	4227 (30)	613 (30)	—12.5 (30)	5200	547	—18.2	2400	765	— 4.4	15386 (19)	125 (19)	—65.2 (19)	16661	100	—65.3	12740	180	—66.2	16020	113	260	140
	Aswan . . (A)	4348 (28)	607 (28)	—15.6 (27)	4890	570	—20.7	3850	642	— 7.9	16236 (8)	106 (8)	—74.3 (8)	17450	87	—77.0	14840	132	—73.2	1870	—	280	39
1200 U.T.		(N)	(N)	(N)							(N)	(N)	(N)										
	Mersa Matruh	3923 (31)	640 (31)	—14.3 (31)	5400	538	—20.7	2160	784	—6.8	13478 (11)	172 (11)	—60.8 (11)	16880	95	—68.7	10060	269	—48.9	9469	296	260	120
	Helwan . . .	4542 (24)	593 (24)	—17·1 (24)	5530	529	—21.4	3580	662	—10.7	14960 (19)	132 (19)	—60.2 (19)	17240	095	—69.2	12100	202	—52 0	13930	163	300	140
	Aswan	4684 (31)	583 (31)	—19.3 (31)	5300	542	—20.2	4150	622	—12.8	16230 (23)	109 (23)	—72.9 (23)	18100	79	—76.7	14250	149	—63.9	12510	193	260	86

N = 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 OCTOPOR — 1978

Station	Pressure Surface (Millibar)	Wind within specified ranges of direction (000—360°)																								Number of calm winds	Total number of observations (TN)	Mean scalar wind speed (knots)
		345/014		015/044		450/074		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	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	11	4	10	4	6	0	—	1	13	3	8	1	6	1	7	4	8	2	12	0	—	6	6	1	31	8
	1000	7	12	6	16	2	8	0	—	3	18	2	10	0	—	0	—	2	12	5	17	1	20	3	13	0	31	14
	850	2	9	6	15	4	16	1	22	0	—	1	20	1	29	0	—	5	18	4	21	3	12	4	20	0	31	17
	700	1	14	1	8	0	—	1	10	0	—	3	19	1	10	2	24	12	21	4	24	3	15	3	13	0	31	19
	600	0	—	3	11	0	—	0	—	0	—	1	10	2	37	6	32	11	24	6	22	1	26	1	13	0	31	24
	500	0	—	0	—	1	8	0	—	1	4	0	—	2	34	9	26	11	31	2	27	0	—	1	6	0	30	26
	400	0	—	0	—	1	12	1	3	0	—	0	—	5	29	10	55	7	54	1	30	0	—	0	—	0	25	33
	300	0	—	0	—	0	—	0	—	0	—	0	—	2	22	10	49	7	51	1	66	0	—	0	—	0	20	84
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	12	52	3	55	1	80	0	—	0	—	0	16	54
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	68	2	62	0	—	0	—	0	—	0	7	17
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	41	0	—	0	—	0	—	0	—	0	3	41
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	21	0	—	0	—	0	—	0	—	0	2	21
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	7	11	8	11	1	10	0	—	0	—	1	20	1	9	1	32	1	20	1	20	4	17	6	14	0	31	14
	1000	6	14	4	17	2	14	0	—	0	—	1	23	1	39	1	13	1	25	2	27	6	21	6	18	0	30	19
	850	2	8	4	9	4	15	1	15	0	—	0	—	2	12	2	20	3	24	5	22	3	14	3	13	0	29	16
	700	1	8	2	9	0	—	1	7	1	21	2	10	4	14	3	23	5	33	7	21	3	19	0	—	0	29	19
	600	0	—	1	13	1	3	0	—	1	12	2	13	3	33	7	28	5	30	6	22	3	13	0	—	0	29	25
	500	1	12	0	—	0	—	0	—	3	15	1	48	1	32	10	29	8	27	3	67	2	31	0	—	0	29	52
	400	0	—	0	—	0	—	0	—	0	—	1	14	2	28	10	33	9	39	3	46	0	—	1	6	0	26	28
	300	0	—	0	—	0	—	0	—	0	—	1	13	1	32	9	51	5	59	1	92	0	—	0	—	0	17	34
	250	0	—	0	—	0	—	0	—	0	—	0	—	2	26	8	28	3	61	0	—	0	—	0	—	0	13	52
	200	0	—	0	—	0	—	0	—	0	—	0	—	1	83	7	59	2	48	0	—	0	—	0	—	0	10	59
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	34	1	10	0	—	0	—	0	—	0	2	22
	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		—
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N = The number of casee the element has been observed within 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, NUMBER OF OCCURRENCES OF WIND DIRECTION WITHIN SPECIFIED RANGES AND THE MEAN SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

HELWAN — OCTOBER 1978

	Pressure surface (millibar)	Wind within 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 T.U.	Surface	6	06	7	07	11	08	2	10	1	05	1	05	0	—	0	—	0	—	0	—	0	—	3	07	0	31	7
	1000	1	03	2	06	3	07	1	09	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	7	6
	850	3	14	2	11	3	10	4	10	3	10	0	—	2	15	1	06	4	15	3	08	4	13	1	10	0	30	12
	700	3	19	0	—	1	04	0	—	2	06	2	04	2	12	4	24	4	17	5	25	4	31	3	14	0	30	19
	600	0	—	0	—	2	06	1	02	1	12	2	07	1	10	3	20	2	18	10	34	4	15	3	21	0	29	21
	500	0	—	0	—	1	13	0	—	1	04	2	10	1	17	3	33	4	18	15	33	1	33	1	27	0	29	28
	400	0	—	0	—	0	—	0	—	0	—	0	—	2	08	2	16	4	34	18	40	1	33	2	32	0	29	35
	300	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	5	51	17	49	1	58	3	46	0	26	50
	250	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	55	13	49	4	54	1	88	0	21	53
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	62	10	50	4	60	1	88	0	18	57
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	3	67	10	53	2	76	1	60	0	16	59
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	40	1	24	0	—	0	—	0	2	32
	70	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	24	0	—	0	—	0	—	0	1	24
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 T.U.	Surface	2	09	9	01	6	11	0	—	0	—	0	—	0	—	1	06	3	07	3	04	5	06	2	06	0	31	8
	1000	1	07	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	1	04	0	—	0	—	0	2	6
	850	1	07	6	08	4	09	3	11	1	06	1	09	1	10	2	10	1	05	4	13	3	08	0	—	0	27	9
	700	2	24	1	12	0	—	0	—	0	—	0	—	0	—	6	20	4	16	6	16	5	14	1	08	0	25	17
	600	1	34	0	—	0	—	1	07	2	10	0	—	1	05	4	28	2	24	8	20	3	17	2	22	0	24	21
	500	0	—	0	—	0	—	0	—	1	18	0	—	3	15	2	18	4	20	9	42	2	14	2	22	0	23	29
	400	0	—	0	—	0	—	0	—	0	—	2	12	1	11	1	25	3	54	13	41	2	40	1	34	0	23	38
	300	0	—	0	—	0	—	0	—	0	—	0	—	1	51	0	—	3	56	13	57	5	252	0	—	0	22	55
	250	0	—	0	—	0	—	0	—	0	—	0	—	1	69	0	—	1	62	13	70	6	54	0	—	0	21	65
	200	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	70	9	69	5	63	0	—	0	16	67
	150	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	7	46	4	60	0	—	0	11	66
	100	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	—	2	—	2	51	0	—	0	4	48
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

N= The number of cases the wind has been observed within 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 WIND DIRECTION WITHIN SPECIFIED RANGES AND THE SCALAR WIND SPEED AT THE STANDARD AND SELECTED PRESSURE SURFACES

ASWAN OCTOBER — 1978

Time	Pressure Surface (Millibar.)	Wind within 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	9	19	5	9	1	5	2	9	0	—	0	—	0	—	1	5	1	4	0	—	0	—	1	6	0	30	8
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	2	12	3	8	3	13	1	11	2	12	1	13	1	4	0	—	1	7	2	12	3	15	11	11	0	30	11
	700	0	—	0	—	0	—	0	—	1	23	0	—	0	—	0	—	0	—	0	—	0	—	0	—	0	1	23
	600	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	500	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	400	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	300	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	250	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	200	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	150	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	70	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	50	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40	—	—	—	—	0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1200 U.T.	Surface	14	10	3	16	0	—	2	9	3	6	0	—	0	—	2	6	1	7	1	10	2	6	2	15	1	31	9
	1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	850	5	16	3	16	1	12	1	12	3	14	0	—	3	9	4	7	2	5	5	10	2	10	1	5	0	30	11
	700	2	12	2	9	2	16	3	12	3	11	1	8	1	21	5	15	3	25	4	14	3	12	1	6	0	30	14
	600	0	—	0	—	3	11	0	—	1	10	3	9	0	—	5	15	7	19	7	16	0	—	2	16	0	28	16
	500	1	2	0	—	0	—	3	21	2	10	3	23	0	—	2	17	9	28	3	22	2	17	1	15	0	26	21
	400	0	—	0	—	1	36	1	14	1	21	2	11	1	7	1	9	9	37	5	33	3	24	1	22	0	25	28
	300	0	—	0	—	1	55	0	—	1	1	0	—	1	14	1	29	10	41	6	43	3	38	1	38	0	24	39
	250	0	—	0	—	0	—	1	65	1	5	0	—	0	—	2	22	7	54	9	50	4	39	0	—	0	24	45
	200	0	—	0	—	0	—	1	60	0	—	1	7	0	—	1	21	8	53	10	53	1	71	0	—	0	22	51
	150	0	—	0	—	0	—	0	—	0	—	1	15	0	—	2	33	6	48	6	55	1	66	0	—	0	16	47
	100	0	—	0	—	0	—	1	14	0	—	0	—	0	—	1	15	1	56	1	46	0	—	0	—	0	4	33
	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	—	—
	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	—	—
	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	—	—
	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

MONTHLY REVIEW OF AGRO-METEOROLOGICAL STATIONS

MERSA MATRUH — OCTOBER 1978

The mean daily air temperature was equal to normal. The mean daily relative humidity was higher than normal. The total monthly rainfail was 2.2 mm while the normal is 18.7mm.

The maximum temperatures were few or several degrees below normal most days of the month, apart from two heat waves in the periods (17th-19th) and (21st, 22nd). The maximum temperatures ranged between 20.6°C on the 30th and 35.5°C on the 19th.

The minimum temperatures ranged between 13.9°C on the 29th and 21.8°C on the 14th.

The mean daily actual sunshine duration was less than average by 1.7 hours. The mean wind speed at 1.5 met. height was higher than average by 0.1 met/sec.

The highest maximum soil temperatures were around those of October 1977 with departures between —1.1°C at 2cm. depth and 1.2°C at 20cm. depth. The lowest minimum soil temperatures were around those of October 1977 with departures between —0.2°C at 200 cm. depth and +1.4°C at 2cm. and 5cm. depths.

TAHRIR — OCTOBER 1978

The mean daily air temperature and relative humidity were nearly equal to normal. The month was rainless while the normal total monthly rainfall is 2.4 mm.

The maximum air temperatures were near or above normal, except on the 30th and 31st when they fell about three degrees below normal. The maximum temperatures ranged between 24.6°C on the 30the and 36.8°C on the 22nd. The minimum temperatures ranged between 9.6°C on the 29th and 20.7°C on the 25th.

The mean daily actual sunshine duration and pan evaporation were less than normal by 0.6 hour and 1.67mm. respectively. The mean daily wind speed at 1.5met. height was equal to normal.

The highest maximum soil temperautes were below normal at all depths with departures betwlen 0.5°C at 200 cm. depth and 2.7°C at 5cm. depth. The lowest minimum soil temperatures were at all depths around normal with departures between —35 °C at 20cm. depth and +0.6°C at 100cm. depth.

BAHTIM — OCTOBER 1978

The mean daily air temperature and relative humidity were slightly above normal. The month was rainless while the normal total monthly rainfall is 0.2mm.

The maximum temperatures were above or around normal, except for a short mild wave on the 30th and the 31st. The maximum temperatures ranged between 23.9°C on the 30th and 36.2°C on the 22nd. The minimum temperatures ranged between 11.0°C on the 29th and 19.4°C on the 25th.

The mean daily actual sunshine duration was 0.8 hour less than normal. The mean daily wind speed and pan evaporation were above normal respectively by 0.1 met./sec. and 0.94mm.

The highest maximum soil temperautes were around normal °ith departures between —0.6°C at 300cm. depth and +0.5°C at 2cm. and 5cm. depth.

The lowest minimum soil temperatures were around normal with departures between —1.8°C at 20cm. depth and +0.5°C at 2cm. 5cm. and 100cm. depth.

ASSYOUT — OCTOBER 1978

The mean daily air temperature was higher than that of last October. The mean daily relative humidity was less than that of last October. The month was rainless.

The month was hot, except for a mild waves in the last 6 days. The maximum temperatures ranged between 24.8°C on the 31st and 40.8°C on the 10th. The minimum temperatures ranged between 11..4°C on the 31st and 20.2°C on the 25th.

The mean actual sunshine duration was slightly less than that of last October. The mean daily actual pan evaporation was sligher than that of the last October.

The highest maximum soil temperatures were around those of last October with departures between —1.1°C at 50cm. depth and +2.0°C at 5cm. de pth. The lowest minimum soil temperatures were around those of last October with departures betw een —0.4°C at 5cm. depth and +1.9°C at 20cm. depth.

KHARGA — OCTOBER 1978

The meas daily air temperature was above nor mal. The mean daily relative humidity was nearly equal to normal. The month was rainless as usual.

The month was in general hot, except for three mild weves in the periods (1st), (6th, 7th) and (27th - 31st). The maximum temperatures ranged between 26.1°C on the 31st and 42.4°C on the 10th and 11th. The minimum temperatures ranged between 11.8°C on the 29th and 25.0°C on the 11th.

The mean daily actual sunshine duration, wind speed at 1.5met. height and pan evaporation were less than normal respectively by 0.9 hour, 1.3met./sec and 1.52 mm.

The highest maximum soil temperatures were around normal with departures between —0.9°C at 50cm. depth and 4.0°C at 5cm. depth. The lowest minimum soil temperatures were around normal with departures between —1.4°C at 10cm. depth and +0.7°C at 50 cm. and 100 cm. depth.

Table C 1. -AIR TEMPERATURE AT 1½ METRES ABOVE GROUND

OCTOBER — 1978

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°
Mersa Matruh. .	25 8	17.4	21 6	20.0	23.4	24.0	24.0	24.0	24.0	23.3	16.9	2.3	0.5	0.06	0.0	0.0
Tahrir	31.1	15.8	22.5	18.8	26.2	24.0	24.0	24.0	23.9	22.0	15.3	7.7	2.0	0.0	0.0	0.0
Bahtim	30.8	15.9	22.7	19.1	26.4	24 0	24 0	24.0	24.0	22.4	15.0	7.8	2.5	0.1	0.0	0.0
Assiut	34.4	16.1	24 3	19.9	28.9	24.0	24 0	24.0	24.0	22.9	16.5	9.7	5.4	1.7	0.0	0.0
kharga	36.4	19.7	28.3	25.3	31.7	24.0	24.0	24.0	24.0	82 6	22.1	16.3	8.5	3.8	0.5	0.0

Table C 2. EXTREME VALUES OF AIR TEMPERATURE AT 1½ METRES ABOVE GROUND, ABSOLUTE MINIMUM AIR TEMPERATURE AT 5cms ABOVE GROUND OVER DIFFERENT FIELDS.

OCTOBER — 1978

Station	Max. Temp. at 1½ metres (°C)				Min. Temp. at 1½ 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
M. Matruh . . .	35.5	19	20.6	30	21 8	14	13.9	29	12.5	29	—	—
Tahrir	36.8	22	24.6	30	20.7	25	9.6	29	6.5	29	8.0	30
Bahtim	36.2	22	23 9	30	19.4	25	11.0	29	7.0	29	5.8	29
Assiut	40.8	10	24.8	31	20 2	25	11 4	31	5.2	31	—	—
Kharga	42.4	10.11	26.1	31	25.0	11	11.8	29	9.4	29	—	—

Table C 3.—(SOLAR +SKY) RADIATION, DURATION OF BRIGHT SUNSHINE, RELATIVE HUMIDITY, VAPOUR PRESSURE AT 1½ METRES ABOVE GROUND, EVAPORATION & RAINFALL.

OCTOBER — 1978

Station	solars+ SKY Radiation g.n. cal/cm²	Duration of Bright Sunshine (hours)			Relative Humidity				Vapour pressure (mms)						Evaporation mms		Rainfall (mms)		
		Total Actual monthly	Total Possible monthly	%	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
M. Matruh . .	276.7	217.5	354.0	61	75	62	23	19	14.4	14 6	19 2	20	8 0	19	5.7	—	2.2	1.0	17
Tahrir . . .	415.0	273.9	354.3	77	69	40	21	22	13.6	12 4	19.4	14	4.4	30	5.4	5.96	0.0	0.0	—
Bahtim	417.1	271.9	355.0	77	66	37	18	22	13.1	11.8	18.2	25	7.2	29,30	6.3	7.63	0.0	0.0	—
Asiut	—	261.8	357.7	87	47	26	10	12	10.1	5.9	16.1	4	6.0	12	7.4	7.55	0.0	0.0	—
Kharga	505.5	303.8	358.7	84	32	21	06	23	8.6	8.9	13.8	1	2.4	23	13.8	12.73	0.0	0.0	—

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

OCTEPER— 1978

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.)							
		2	5	10	20	50	100	200	300	2	5	10	20	50	100	200	300
Mersa Matruh.	H	34.7	33.0	30.1	28.2	25.8	25.6	25.1	—	—	—	—	—	—	—	—	—
	L	15.9	16.1	18.3	20.2	22.4	24.2	24.2	—	—	—	—	—	—	—	—	—
Tahrir . . .	H	42.3	38.0	34.5	30.3	28.6	28.6	28 3	27.8	30.2	29.2	28.7	26.4	26.4	26.6	26.7	—
	L	16.2	15.9	16.8	18 4	24.5	26.6	27.1	27.2	16.0	16.7	17 1	19.3	21.4	23.8	25.5	—
Bahtim . . .	H	45.4	39.0	33.8	31.0	29.9	29.5	27.8	26.2	33.0	29.1	27.2	25.7	25.4	25.4	24.3	—
	L	19.5	19.2	21.5	23.2	27 2	28.1	27.5	26 0	15.5	17.0	18.4	20.6	23 4	24.7	24.1	—
Asuit.	H	56.6	47.0	37.6	32.2	29.3	29.4	27 8	26.7	—	—	—	—	—	—	—	—
	L	19.4	17.3	21.1	25.1	26.8	28.4	27.5	26.6	—	—	—	—	—	—	—	—
Kharga . . .	L	51.3	46.0	40.5	35.2	31.8	31.7	31.1	30.1	—	—	—	—	—	—	—	—
	H	14.7	17.7	22.2	25.4	29.5	30.9	30.5	29.9	—	—	—	—	—	—	—	—

TABLE C 5.—SURFACE WIND

OCTEPER— 1978

STATION	Wind Speed m/sec (at 1½ metres)			Days with surface wind speed (at 10 metres)							Max. Gust (knots (at 10 metre)	
	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
Mersa Matruh	3.6	2.7	4.6	31	24	15	8	3	1	0	39	19
Tahrir	1.9	1.3	2.6	31	9	4	0	0	0	0	31	29
Baht m . . .	2.2	1.5	2.9	28	13	6	1	0	0	0	31	13
Asutij.	—	—	—	—	—	—	—	—	—	—	—	—
Kharga	2.5	1.9	3.1	30	20	5	0	0	0	0	27	8

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