



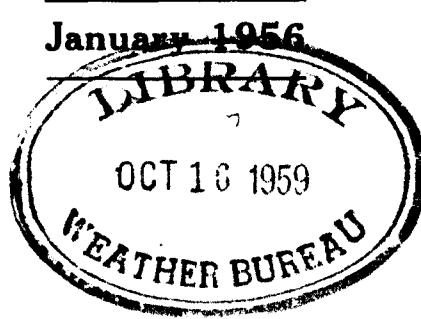
REPUBLIC OF EGYPT

MINISTRY OF WAR

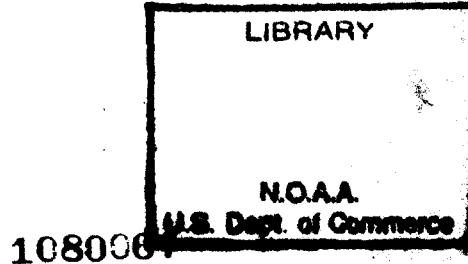
Egypt. METEOROLOGICAL DEPARTMENT

Report on the weather

MONTHLY WEATHER REPORT



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1956



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FOREWARD

On February 1955 the Meteorological Department started to issue the monthly weather report in a new form by including a more detailed description of the weather prevailing during the month together with more detailed meteorological summaries for surface data.

With the effect from the 1st January 1956 it has been felt the importance of including upper air and agro-meteorological data in these monthly reports.

The inclusion of upper air data comprises of meteorological summaries for average monthly values and wind frequency at standard levels together with miscellaneous upper air data. These data are confined at present to the upper air observations at Cairo Aerodrome and shall be extended in the future to include the upper air observations at Mersa Matruh and Aswan Aerodromes.

The Meteorological Department has been able to establish a central Agro-Meteorological Station in the fields of the Plant Breeding Farm at Giza. The observation field of this station is divided into several plots of the size of about 400-600 m²; three of these are used for standard observations running throughout the whole year; one serves as a dry and bare field, the second as a wet and bare field, and the third as wet field covered with grass and libia. The Department publishes and distributes during the first week of each month, the standard meteorological observations carried out by the station in detail for the previous month. This monthly weather report shall only include :

- (a) The monthly average values for temperature at 2 metres, sunshine duration, humidity, total rainfall, mean values of wind speed at 2 metres and Piche Evaporation.
- (b) Mean extreme soil temperatures at various depths for dry and wet soil and for grass.
- (c) Amount of solar radiation day by day.
- (e) Duration in hours of temperature at a height of 2 metres above certain levels day by day.

M.F. TAHA
Director General

GENERAL SUMMARY OF WEATHER CONDITIONS

Gale winds with occasional sand and duststorms in the north within the last week, mild otherwise.

The main features of the month were:

- (a) Total rainfall was generally below normal all over the Country apart from few localities where it was slightly above normal (Alexandria, Port Said and Zagazig).
- (b) Frequent sand and dust storms over the northern coast extending inland to Middle Egypt between the 27th and 29th.
- (c) Two cold fronts on the 8th and 26th respectively.
- (d) Frequent fog patches over scattered parts of Lower Egypt.

General description of weather for the whole month:

For the month as a whole the weather started mild all over the Republic and continued so till the 26th. During this period Egypt enjoyed two warm periods, the first between the 8th and 12th, the second between the 24th and 26th. From the 26th till the end of the month a severe cold wave prevailed and was accompanied by occasional sand and dust storms over Lower Egypt and Middle Egypt.

For the month as a whole the barometric pressure was below normal, maximum temperature was above normal while minimum temperature was changeable.

The total rainfall amount was below normal apart from Middle Egypt and Red Sea coasts where it exceeded its normal.

The mean relative humidity was above normal at Alexandria (Kom-El-Nadora), Giza and Helwan, below normal at Cairo (Ezbekiya).

Pressure and wind:

At the beginning of this month the Siberian Anticyclone extended SW wards and occupied Iraq, East Mediterranean and Western Desert of Egypt, while a deep secondary depression appeared over Central Mediterranean and proceeded rapidly NE wards. It was filling up along its course and on the 3rd it was over the Black Sea. During this period the surface wind was light to moderate SW in the west and light variable elsewhere.

On the 4th the small anticyclone over the Western Desert was stationary while a large complex low pressure system developed from the NW African coast till the eastern part of Iraq and started afterwards to amalgamate gradually as a complex low while deepening rapidly and occupying the Mediterranean. On the 8th a shallow secondary to this deep low developed around 30° N and crossed Lower Egypt from the west. Between the 4th and the 6th the prevailing winds were light to moderate W/NW in the extreme west, light variable or light N^w elsewhere. During the 7th and 8th winds were moderate to fresh southerly in advance of the shallow coastal secondary depression and N^w in the rear. Accordingly the barometric pressure was remarkably below its normal all over the Country. Its fall below normal approached 9 mb. in the north and 11 mb. in the south.

A deep primary depression which traversed the British Isles on the 9th with an attached deep secondary over Spain was the direct reason of the filling up of the Mediterranean complex low, its rapid displacement towards Asia Minor and the loose pressure gradient that was exerted over Mediterranean. Between the 10th and 12th a shallow desert depression proceeding from the Libyan desert traversed the northern parts of Egypt. The barometric pressure therefore continued below normal while the surface winds were mostly light to moderate southerly in advance of this depression and N^{ly} in its rear.

The barometric pressure over Egypt started to rise gradually from the 12th and reached its normal around the 14th. From that day it exceeded its normal appreciably and continued so for a long period that ended around the 24th. During that period a ridge of the Siberian anticyclone reestablished over Iraq, east Mediterranean and north Africa, while the western parts of the Mediterranean were under the influence of consecutive deep Atlantic depressions proceeding NE wards. The prevailing winds were light to moderate N/NW ly till the 19th, N/NE ly from the 19th till the 24th.

From the 25th till the end of the month, the Mediterranean area was an area of cyclogenesis. Secondary depressions tend to develop over its western and central parts on the southern troughs of the primary travelling Atlantic depressions. The first secondary depression appeared on the 25th extending from Greece southwards towards Cyrenica and started its rapid motion eastwards, while the second secondary depression developed on the 30th over Italy and proceeded SE wards towards central Mediterranean. The pressure trend showed two minima within this period, while the prevailing surface winds were moderate to fresh southerly on the 25th, part of the 26th and veered afterwards to fresh to strong W/NW ly in the north with occasional widespread gales; moderate to fresh NW ly in the south.

Temperature :

During this month the Country enjoyed two remarkable warm periods whose maxima were around the 8th and 26th while on the other hand two cold fronts were experienced, the first on the 8th, the second which was the more active on the 26th. This latter cold front caused a general fall of about (9°C. to 11°C.) in maximum temperature.

Minimum temperature was generally above normal in the north, below normal in the south and changeable over Middle Egypt.

Precipitation :

Two rainy periods were remarked during this month over Lower Egypt, the first between the 4th and 16th, the 2nd between the 26th. and 30th. The total rainfall amount was generally below normal apart from few scattered localities where it slightly exceeded its normal viz (Alexandria, Port Said and Zagazig).

Miscellaneous weather phenomena :

- (a) Thunderstorms were reported at few stations in the northern coast.
- (b) Widespread gales were experienced over Lower Egypt between 27th and 29th and were accompanied by widespread rising dust, sandstorms and dustorms which extended southerly till the northern districts of Middle Egypt.
- (c) Scattered mist and fog patches developed frequently over many parts of Lower Egypt especially the inland areas and extended sometimes to Middle Egypt.

CONDENSED CLIMATOLOGICAL DATA

The deviations of meteorological elements from their normals for various districts are shown in the following table.

TABLE A.

DISTRICTS	Barometric Pressure		Temperature						Rainfall	
	1956 mb.	Diff. F. Nor. mb.	Maximum		Minimum		Max. 1956 °C.	Min. 1956 °C.	Max. 2 Diff. F. Nor. °C.	Min. 2 Diff. F. Nor. °C.
			1956 °C.	Diff. F. Nor. °C.	1956 °C.	Diff. F. Nor. °C.				
1. Mediterranean	1017.9	-0.1	19.2	+ 1.1	11.2	+1.1	15.2	+1.1	34	0
2. Lower Egypt	1018.3	-0.5	20.5	+ 0.7	7.5	+0.8	14.0	+0.8	17	0
3. Middle Egypt	1018.8	-0.5	20.0	+ 0.8	9.0	+1.5	14.5	+1.2	6	+ 2
4. Upper Egypt	1018.9	-0.7	22.7	+ 1.2	6.2	-0.3	14.4	+0.4	drops	0
5. Western Desert	1019.5	-0.8	21.9	+ 1.1	5.6	+0.8	13.8	+1.0	,,	0
6. Red Sea	1016.8	-1.3	21.4	+ 0.5	10.6	-0.4	16.0	0.0	12	+ 11

CLIMATOLOGICAL DATA-STATIONS

TABLE B.

Stations	TEMPERATURE								Rainfall			
	Maximum. Temp.				Minimum. Temp.				Total Rainfall	Number of days of rain*	Max. fall in one day	
	Mean	Dev. from Normal	Max. Absolute	Date	Mean	Dev. from Normal	Abs. Min	Date				
Mersa Matruh	18·6	—	21·8	19	8·9	—	5·0	31	24·2	8	6·4	5
Kom-el-Nadora	19·7	+1·1	22·3	26	12·4	+ 1·8	8·6	31	78·1	12	14·6	16
Damietta	18·7	+0·6	25·4	26	8·3	+ 0·1	5·5	31	24·3	7	6·3	5
Port-Said	19·1	+1·4	25·0	26	12·8	+ 1·4	8·9	31	24·3	9	7·2	13
El Arish	19·7	—	28·2	26	8·1	—	3·6	21	26·3	11	12·3	30
Damanhour	20·3	+0·7	28·4	26	8·5	+ 1·0	6·0	2	24·0	10	5·8	12
Mansura	20·5	+0·8	26·2	26	8·4	+ 1·2	5·2	31	16·2	7	7·5	30
Tanta	20·2	+0·2	26·4	26	6·3	0·0	3·7	21	6·6	7	2·3	13
Shebin El Kom	—	—	—	—	—	—	—	—	—	—	—	—
Zagazig	21·0	+1·3	28·8	26	6·9	+ 1·0	4·0	1,3	10·0	2	5·0	12,13
Almaza (A)	20·0	+0·7	26·8	26	9·1	+ 0·5	5·1	2	8·3	6	4·0	12
Cairo (Ezbekiya)	21·0	+1·2	28·5	26	9·5	+ 1·9	6·5	31	6·6	4	3·4	12
Giza	19·7	+0·4	26·9	26	6·9	+ 1·3	3·5	21	4·7	7	2·9	13
Helwan	19·5	+0·9	25·6	26	10·2	+ 2·1	5·1	2	2·6	5	1·6	13
Fayoum	20·4	-0·3	26·0	26	7·0	+ 1·1	2·9	31	0·5	2	0·5	30
Minya (A)	22·1	+1·7	28·8	26	4·4	+ 0·1	1·8	10	0	0	0	—
Assiut (A)	21·6	+0·9	29·3	26	7·1	+ 0·7	4·1	25	0	0	0	—
Nag-Hamadi	22·5	+1·2	27·8	26	6·0	+ 0·9	3·8	10	0	0	0	—
Qena	24·4	+0·7	30·3	26	4·9	- 2·1	2·6	29	0	0	0	—
Luxor (A)	—	—	—	—	—	—	—	—	—	—	—	—
Aswan	25·0	+1·6	33·0	8	7·8	- 2·4	4·5	30	0	0	0	—
Siwa	20·0	+0·4	23·5	25	6·4	+ 2·6	1·5	31	Trace	2	Trace	6,7
Bahariya	21·7	+2·0	—	—	5·8	+ 1·2	—	—	—	—	—	—
Dakhla	22·2	+0·7	27·8	24	4·8	0·0	0·0	10	0	0	0	—
Kharga	23·6	+1·4	31·4	25	5·5	- 0·5	1·8	10	0	0	0	—
Suez	21·2	+1·3	26·0	25	8·4	- 1·0	3·7	31	10·5	5	7·0	30
Tor	21·9	+1·2	26·0	8	—	—	—	—	0	0	0	—
Hurghada	20·2	0·0	24·5	8	9·7	0·0	7·0	29	0	0	0	—
Quseir	22·5	-0·2	27·5	12	13·8	- 0·1	11·3	31	0	0	0	—

* Drops are taken into consideration.

MISCELLANEOUS WEATHER PHENOMENA

TABLE C.

Stations	NUMBER OF DAYS OF OCCURRENCE					
	Rain Showers	Thunder- storm	Fog	Mist Sandrising distrising	Dust or Sand- Storm	Gales
	(a)	(b)	(c)	(d)	(e)	(f)
Sallum	6	0	0	1	0	3
Sidi-Barrani	10	1	0	0	0	2
Mersa-Matruh	8	0	0	1	0	5
Alexandria (A)	13	1	9	0	0	0
Port-Saïd (A)	8	1	1	0	0	1
El-Arish	10	1	0	0	2	0
Cairo (A)	2	0	3	5	1	2
Almaza (A)	4	0	3	5	0	0
Minya (A)	0	0	5	1	2	0
Assiut (A)	0	0	1	0	0	0
Luxor (A)	—	—	—	—	—	—
Siwa	0	0	0	0	0	0
Hurghada	0	0	0	0	0	0
Aswan	0	0	0	0	2	0

(a) Number of days in which rainfall is 0·1 mm. or more within 24 hours from 0600 U.T. to 0600 U.T. next day.

(b) Number of days of thunderstorm heard within station.

(c) Number of days of Fog in which visibility is less than 1000 metres.

(d) Number of days of mist or sandrising or dustrising in which visibility is more than 1000 metres and less than 2000 metres.

(e) Number of days of sandstorms in which visibility is less than 1000 metres.

(f) Number of days of gales in which wind velocity is equal or more than 34 knots.

UPPER AIR DATA

Radiosonde Data. Cairo Aerodrome

TABLE.—D. AVERAGE MONTHLY VALUES.

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 1500 UT.		Highest	Lowest	Readings at 1500 UT.		Highest	Lowest
	n	Mean			n	Mean		
Surface	31	1010 m.b.	1016 m.b.	1001 m.b.	31	17.1	23.5	11.8
1000	31	154	207	079	31	16.4	23.4	11.2
850	31	1510	1577	1448	31	5.9	11.8	0.2
700	31	3078	3170	2989	31	— 1.6	4.0	— 9.3
600	30	4291	4389	4172	30	— 9.0	— 4.0	— 18.4
500	30	5677	5792	5550	30	— 18.1	— 13.6	— 26.5
400	30	7304	7432	7142	30	— 30.0	— 23.6	— 37.5
300	28	9297	9452	9082	28	— 43.3	— 34.8	— 48.7
200	22	11923	12133	11741	22	— 54.6	— 46.5	— 59.3
150	20	13747	13973	13606	20	— 58.6	— 52.5	— 66.7
100	15	16256	16481	16134	15	— 66.0	— 60.5	— 75.2
60	5	19422	19521	19288	5	— 64.5	— 60.0	— 72.0

n = Number of observations of specified pressure surfaces.

RAWIN DATA — Cairo Aerodrome

TABLE E.—FREQUENCY WIND RANGES AND MEAN SCALAR WIND SPEEDS

Constant Pressure Surface mb.	Wind between specified ranges of direction 000—360														Calm	Total No. of obs N	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					
	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				
Surface ...	5	7	4	8	4	12	2	10	—	—	—	—	5	13	2	16	3	7	2	6	4	5	0	31	9	
1000	5	7	4	8	4	12	2	10	—	—	—	—	5	13	2	16	3	7	2	6	4	5	0	31	9	
850	2	10	2	12	2	8	—	—	—	—	—	—	1	41	3	14	3	15	2	20	5	10	0	20	14	
700	1	17	2	7	—	—	—	—	—	—	—	—	1	32	2	30	5	25	5	24	3	17	0	19	22	
600	2	22	—	—	—	—	—	—	—	—	—	—	1	48	1	29	6	34	7	31	2	15	0	19	30	
500	—	—	—	—	—	—	—	—	—	—	—	—	1	49	3	46	5	53	8	38	2	34	0	19	43	
400	—	—	—	—	—	—	—	—	—	—	—	—	1	65	2	48	8	78	4	64	2	51	0	17	67	
300	—	—	—	—	—	—	—	—	—	—	—	—	—	1	83	3	83	5	68	—	—	0	—	9	74	
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	89	1	48	1	75	—	—	0	—	3	71
150	—	—	—	—	—	—	—	—	—	—	—	—	—	1	83	—	—	1	96	—	—	0	—	2	90	
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
060	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

Notes: n1, n2, . . . etc = Number of occurrence of wind direction from the specified ranges.

(ff)m = mean scalar wind speed (regardless of direction).

N = Total number of observations from all directions including calms.

MISCELLANEOUS DATA-Cairo Aerodrome

TABLE.—F.

Day	Time UT.	Freezing level						Highest Wind Speed.						Tropopause			
		Lowest			Highest			Wind Speed			Height			Tropopause			
		GGgg	Height	PPPP	TdTdTd	Height	PPPP'	TdTdTd	Height	PPPP	ddd	fff	Height	PPP	TTT		
1	1700	2340	770	—	—	—	—	—	400	974	030	010	—	—	—	—	—
2	1500	2550	746	—	—	—	—	—	10800	238	290	117	—	—	—	—	—
3	1500	3340	683	—	—	—	—	—	9200	310	300	091	—	—	—	—	—
4	1500	3740	674	581	—	—	—	—	7800	380	300	066	—	—	—	—	—
5	1500	2640	733	621	—	—	—	—	6500	445	240	049	—	—	—	—	—
6	1600	2230	776	607	—	—	—	—	6750	432	270	112	—	—	—	—	—
7	1515	2760	727	593	—	—	—	—	6650	417	250	091	17150	086	190	—	—
8	1545	2000	795	523	—	—	—	—	8300	344	270	139	—	—	—	—	—
9	1530	2740	726	—	—	—	—	—	8600	333	280	081	12100	196	092	—	—
10	1515	3300	682	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	1500	4000	622	607	—	—	—	—	—	—	—	—	—	—	—	—	—
12	1515	2200	777	514	—	—	—	—	7600	377	280	042	14810	125	127	—	—
13	1530	1850	814	527	—	—	—	—	1900	807	320	021	16420	090	156	—	—
14	1700	1850	818	514	—	—	—	—	7600	382	340	087	10080	262	057	—	—
15	1515	2190	787	000	—	—	—	—	—	—	—	—	10720	240	078	—	—
16	1500	2370	770	508	—	—	—	—	2700	738	350	015	12120	196	078	—	—
17	1430	2440	766	533	3450	672	—	—	—	—	—	—	11830	204	120	—	—

18	1515	2820	728	534	—	—	—	—	—	—	—	—	—	—
19	1515	3500	670	—	—	—	—	—	—	—	—	—	—	—
20	1500	3520	670	703	—	—	—	13850	152	290	97	10710	246	036
21	1515	3400	678	651	—	—	—	5750	500	300	025	—	—	—
22	1630	3050	710	664	—	—	—	—	—	—	—	—	—	—
23	1500	2970	716	610	—	—	—	10800	238	290	117	14600	130	201
24	1500	3450	673	—	—	—	—	10700	245	290	116	14950	125	189
25	1530	3630	657	—	—	—	—	14500	137	250	119	16440	100	199
26	1500	2820	720	667	—	—	—	8900	315	220	087	—	—	—
27	1530	1800	814	535	—	—	—	—	—	—	—	—	—	—
28	1530	2130	786	527	2930	712	616	7800	372	270	063	16100	103	154
29	1515	1930	804	523	—	—	—	—	—	—	—	—	—	—
30	1500	1510	848	501	—	—	—	7800	366	270	113	13850	146	090
31	1500	2030	796	633	—	—	—	8600	326	270	126	13100	164	124
Highest...	—	3740	674	581	—	—	—	8300	344	270	139	1715	086	190
Lowest ...	—	1510	848	501	—	—	—	—	—	—	—	10080	262	057

Notes.—GGgg is the actual time of release of balloon to the nearest minute (universal time).

PPPP is the pressure in whole millibars (eg. 1027.7 m.b. PPPP 1028)

TTT and **T_dT_dT_d** are the temperature and dew point in tenths of degrees celsuis (centigrade) eg. 28.1 °C. will be entered 281. For temperature below 0°C. add 50 to the absolute value of temperature eg. -0.7 °C. will be entered 507.

ddd is wind direction in whole degrees east of the true north. For calm winds enter 000 for ddd and fff.

fff is the wind speed in Knots. Heights are in geopotential metres above M.S.L.

AGRO-METEOROLOGICAL DATA — GIZA

TABLE G.—AIR TEMPERATURE, HUMIDITY, RAINFALL, SUNSHINE DURATION,
WIND SPEED AND PICHE EVAPORATION.

Max. temp. at 2 metres	... ... ... ... ... ... ...	26.9°C on 26
Min. temp. at 2 metres	... ... ... ... ... ... ...	3.5°C on 21
Min. temp. at 5 cms. over dry soil.	... ... ... ... ... ... ...	— 0.5°C on 1
Min. temp. at 5 cms. over wet soil.	... ... ... ... ... ... ...	1.7°C on 31.
Min. temp. at 5 cms. over grass.	... ... ... ... ... ... ...	— 0.9°C. on 1.
Min. Relative Humidity at 2 metres	... ... ... ... ... ...	15% on 26
Max. Absolute Humidity at 2 metres	... ... ... ... ... ...	11.1 on 12
Min. Absolute Humidity at 2 metres	... ... ... ... ... ...	3.8 on 26.
Mean daily temp. at 2 metres	... ... ... ... ...	12.1°C.
Mean day-time temp. at 2 metre	... ... ... ... ...	15.5°C.
Mean. night-time temp. at 2 metres	... ... ... ... ...	10.9°C.
Mean. Relative Humidity at 2 metres.	... ... ... ... ...	81%
Mean Absolute Humidity at 2 metres.	... ... ... ... ...	8.1
Mean day-time wind speed at 2 metres.	... ... ... ... ...	28.7 m/sec.
Mean night-time wind speed at 2 metres	... ... ... ... ...	11.4 m/sec.
Mean Piche Evaporation at 120 cm.	... ... ... ... ...	5.2 mm.
Total Rainfall.	... ... ... ... ...	4.7 mm.
Sunshine-Duration.	... ... ... ... ...	209 hours (out of 324 hrs.)

TABLE H.—EXTREME SOIL TEMPERATURE.

Extreme Soil Temp.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Depth in cm.	0.3		5		10		20		40		60		100			
Dry Soil	38.5	4.0	22.5	9.5	19.0	12.0	17.5	14.5	18.5	17.0	19.5	18.0	21.5	20.0		
Wet Soil	27.0	4.0	19.5	7.0	17.5	9.0	16.0	11.5	15.5	14.0	15.5	15.0	18.5	17.0		
Grass	22.5	6.5	17.5	9.0	16.0	10.5	15.5	12.5	—	—	—	—	—	—	—	—

TABLE I.—AMOUNT OF SOLAR + SKY RADIATION IN GRAM CALORIES PER CM.²

	DATE															—
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	—
Solar & Sky Rad.	322	301	268	314	308	280	268	330	371	344	223	262	329	324	223	—
DATE																—
Solar & Sky Rad.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	256	324	360	335	349	375	360	369	335	297	396	270	202	268	188	415

Monthly Total = 9566.

TABLE J.—DURATION IN HOURS OF TEMPERATURES AT 2 METRES HEIGHT ABOVE CERTAIN LEVELS IN °C.

	DATE																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Duration above 0°C.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24	—	—	—	—	—	—	—	—	—	24	
,, , 5°C	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	22	24	24	—	24	24	—	24	24	23		
,, , 10°C	13	13	14	16	12	14	19	19	11	15	12	15	17	20	16	20	18	13	15	12	13	14	16	24	19	23	24	19	16	14	11
,, , 15°C	8	7	8	10	8	7	10	10	6	8	7	6	8	8	7	11	10	8	10	9	10	9	12	13	8	12	7	7	8	1	4
,, , 20°C	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	2	3	4	1	3	7	0	0	0	0	0	
,, , 25°C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	—	—	—	0	0	0	0	0	3	—	—	—	—	—	
,, , 30°C.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	

NOTES

TABLE G.

(a) Air temperature and humidity are measured by ventilated dry and wet-bulb thermometers freely exposed in Louvered Stevenson Screen of the Egyptian type. Thermometer bulbs are at 210 cms. above ground (approximately 2m.) Maximum (mercury) and minimm (alcohol) thermometers are exposed in the same screen for the 2m values. The minimum thermometers for the 5cm heights are of the alcohol type freely exposed in the open air on wood supports.

The daily mean values of air temperatures are computed from the formula 1/4 (values at 0800+14000+2000+Minimum).

The day-time mean air temperature is computed graphically from the record of a thermograph exposed in the screen, for the peroid sunrise to sunset. The night mean is similarly obtained for the peroid sunset to sunrise.

(b) In computing relative humidity Aspirations-Psychrometer tables of the Preussischen Meteorologischen Institut - 1927 are used, corrections for wind speed are applied. The mean relative humidity is computed from the formula 1/2 (values at 0800+1400-Local time).

(c) Absolute humidity is expressed by vapour pressure in units of mms. of mercury. The mean value is calculated from the formula 1/3 (values at 0800+1400+2000 L.T.).

(d) Rainfall is measured by ordinary rain gauge; the height of its rim is 40 cm. above ground. Tr. stands for trace (i.e amounts of rain less than 0.1 mm.).

(e) The mean wind speed by day is computed from the total run of air during the period 0800 to 1800 L.T., as indicated by the counter of an ordinary cup anemometer freely exposed at a height of 2 metres above ground.

The mean wind speed at night is similarly computed for the peroid 1800 to 0800 L.T.

(f) Evaporation is measured by a piche tube freely exposed in the open air ; the evaporation disc has a diameter of 3cms, white in colour and at a height of 120 cms, above dry soil.

The Piche is read at 0800 L.T. daily in millimetres, the daily values given are for the 24 hours beginning at 0800 L.T.

TABLE H.

Soil temperature is measured by mercury thermometers, the values given are to be nearest $\frac{1}{2}$ °C.

TABLE I.

Instrument used for the measurement of solar and sky radiation (global radiation) is the (Rabitzch Actinograph".

Cairo, on 31/3/1956.

M.F. TAHA
Director General
Meteorological Department



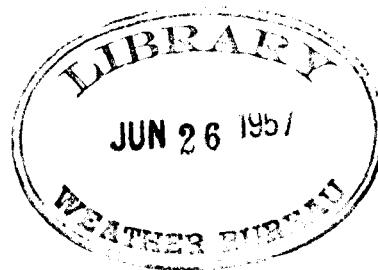
REPUBLIC OF EGYPT

MINISTRY OF WAR

METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REPORT

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GENERAL SUMMARY OF WEATHER CONDITIONS

Rather warm Lower Egypt, hot Upper Egypt; frequent gales and light rain in the north with occasional sand and duststorms.

The main features of the month were:

- (a) Rainfall was generally below normal apart from scattered places in Lower Egypt.
- (b) Fresh to strong winds Lower Egypt most of the 1st half of the month, reaching gale force frequently and causing occasional rising dust, duststorms and sandstorms.
- (c) Nocturnal thunderstorms in the northern coast on the 18th, Cairo Area on the 19th.
- (d) Light fog in scattered parts of Lower Egypt.
- (e) Four consecutive cold fronts accompanied by duststorms and rising dust in scattered parts of the Republic.

General description of weather for the whole month;

For the month as a whole the weather was rather warm in Lower Egypt, hot in Upper Egypt. Maximum temperature was appreciably above its normal e.g. Cairo reported on the 27th a maximum temperature of 32°c. (i.e. 9°c. above normal) and Aswan reported 39°c. (i.e. 16°c. above normal) on 22nd and 28th.

For the month as a whole the barometric pressure was below normal, maximum and minimum temperatures were above normal.

The total rainfall amount was below normal apart from Middle Egypt where it was slightly above normal.

The mean relative humidity was much below normal Alexandria (Kom-El-Nadora), Cairo (Ezbekiya), Giza and Helwan.

Pressure and Wind;

At the beginning of the month a deep depression developed over Central Mediterranean and proceeded eastwards through Greece then Turkey where it changed its track NE. wards and reached the Black Sea on the 5th. Loose pressure gradient at the southern parts of this depression favoured cyclogenesis. Accordingly a shallow coastal secondary traversed Lower Egypt through the Western Desert during this period causing a fall in the barometric pressure below its normal all over the Country. The prevailing winds were fresh to strong S/SW both in Lower and Middle Egypt and light variable Upper Egypt. On the 5th winds veered to NW ly over Lower Egypt due to the passage of the 1st cold front.

Between the 6th and the 9th a second deep depression developed over Central Mediterranean and proceeded similarly eastwards towards Iraq while maintaining its intensity and amalgamating with minor secondaries in its way. The prevailing winds over Lower and Middle Egypt were fresh to strong, with frequent gales, NWly till the 7th and SWly between the 7th and the 9th. Winds over Upper Egypt continued light variable. During this period the pressure trend showed a second minima below its normal (i.e. 8-11 mb. below normal.)

On the 10th a third complex Low pressure system developed over Western Mediterranean and Tunisia. It started to move eastwards till Italy where it changed its track NE wards through the Balkans. The southern trough of this low pressure system extended till N.Africa Sahara, a favourable area of cyclogenesis. Consequently a sahara shallow secondary developed on the 13th over the Western Desert of Egypt and proceeded eastwards traversing Lower and Middle Egypt by the 15th causing a remarkable fall in their atmospheric pressure. Fresh to storng S/SW winds were the outstanding feature of this period too; though winds veered to N/NWly in the rear of the travelling desert secondary.

A fourth Mediterranean complex low pressure system appeared over Tunisia and Algiers on the 16th. It started its motion as usual NE wards till Italy where it remained stationary till the 21st while several complex low extended eastwards between Italy and Iraq. A shallow desert depression attached to the southern parts of this system traversed Lower and Middle Egypt between 19th and 21st causing a fourth fall in the barometric pressure (8-13 mb). Fresh to strong winds persisted over Lower Egypt and Middle Egypt southerly in advance of the shallow desert depression, and NWly in its rear. Upper Egypt was affected to a lower extent by the secondary transit.

The subtropical high pressure occupied north Africa on the 22nd and 23rd. On the 24th it started to proceed eastwards towards East Mediterranean due to the sudden displacement of an Atlantic low through Mediterranean, and by the 25th high pressure established from Russia southwards till East Mediterranean. The barometric pressure over Lower Egypt experienced a slight rise above normal while it was still below normal Upper Egypt. Light to moderate NE winds predominated during this period.

The last Mediterranean low (fifth) during this month appeared over West Mediterranean on the 26th and shoted rapidly eatwards. By the 29th it reached norht Iraq. During this period the barometric pressure over Egypt experienced an appreciable fall below normal due to the passage of a desert secondary depression that had developed at the southern part of the main Mediterranean depression. Moderate to fresh winds were common all over the Country, though strong winds blew in the extreme west. Southerly winds prevailed in advance of the secondary depression, while Northerly winds predominated in its rear. On the 27th the fourth active cold front traversed the northern districts.

Temperature :

Maximum and minimum temperatures were generally above normal most of the month though four consecutive cold fronts crossed the Country after four consecutive hot spells in the north and abnormally hot in the south. The first cold front was followed by a rather cold spell between the 6th and 10th while the rest three cold fronts were followed by three rather warm spells. The rise in maximum and minimum temperatures above normal during the last three warm spells was remarkable viz from 7°c. to 10°c. over Lower Egypt and from 10°c. to 16°c. over Upper Egypt. Aswan reported on the 22nd a maximum temperature of 39.2°c. which is a record since 1901.

Precipitation:

Three rainy periods were observed during this month over Lower and Middle Egypt. The first period was between the 8th and 10th, the second from 17th. to 22nd while the third on 28th. and 29th. The total rainfall was below normal though it exceeded the normal at scattered localities in the Republic which are shown by the following table.

Station	Normal Rainfall mm.	Rainfall mm.	Station	Normal Rainfall mm.	Rainfall mm.
Kom El Nadora	14·0	26·3	Giza	4·7	6·2
Zagazig	6·0	8·0	Fayoun	2·0	3·0
Almaza (A)	5·0	8·0	Siwa	1·0	2·0
Ezbekiya	4·0	7·0	Suez	3·0	21·0

Miscellaneous Weather Phenomena:

- (a) Frequent frontal rising dust and dust storms were generally reported all over the Republic.
- (b) Frequent gales Lower Egypt specially, the extreme west part most of the 1st. half of the month causing widespread rising dust and dust storms.
- (c) Thundery activity was reported at Sidi Barrani on 18th, Cairo area and Bahariya on the 19th.
- (d) Fog and mist patches were confined to few scattered places in Lower Egypt.

CONDENSED CLIMATOLOGICAL DATA

The deviations of meteorological elements from their normals for various districts are shown in the following table.

DEPARTURE FROM NORMAL

TABLE A.—FOR FEBRUARY 1956

DISTRICTS	Barometric Pressure		Temperature				Max. + Min. 2		Rainfall	
	1956	Diff. F. Nor.	Maximum temp		Minimum temp				1956	Diff. F. Nor.
	mb.	mb.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
1. Mediterranean	1013.5	-3.6	19.9	+1.3	10.8	+0.3	15.4	+0.8	14	-10
2. Lower Egypt	1014.0	-3.1	22.1	+1.4	8.4	+1.2	15.2	+1.3	8	-3
3. Middle Egypt	1014.5	-3.3	23.0	+2.2	10.1	+2.0	16.6	+2.1	9	+5
4. Upper Egypt	1014.3	-3.8	27.1	+3.9	8.6	+1.5	17.8	+2.7	drops	-1
5. Western Desert	1014.2	-4.3	26.3	+2.9	8.1	+1.9	17.2	+2.4	,,	-1
6. Red Sea	1013.7	-3.1	23.4	+1.5	12.5	+0.3	18.0	+0.9	,,	-1

CLIMATOLOGICAL DATA

TABLE B.

Stations	Pressure		Temperature								Rainfall			
			Maximum. Temp.				Minimum. Temp.							
	Mean	Dev. from Normal	Mean	Dev. from Normal	Absolute Max.	Date	Mean	Dev. from Normal	Absolute Minimum	Date	Total Rainfall	Number of days of rain*	Max. fall in one day	Date
Salloum ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sidi Barrani ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mersa Matruh (A) ...	1012·3	-4·4	20·2	—	29·0	19	8·3	—	2·6	10	16·0	8	7·0	29
El Dabaa ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kom-el-Nadora ...	1013·6	-3·9	20·7	+1·6	28·3	13	11·7	+ 0·6	6·2	8,9	26·3	7	14·0	9
Alexandria (A) ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Damietta ...	1014·0	-2·6	19·3	+0·9	27·2	27	8·2	- 0·4	2·3	10	4·9	5	4·1	20
Port-Saïd (A) ...	1014·1	-3·4	19·7	+1·4	27·0	19	12·6	+ 0·8	6·9	10	4·2	7	1·6	28
El Arish ...	1013·6	-3·5	21·9	—	33·0	19	9·5	—	4·6	2	14·0	7	7·3	20
Damanhour ...	1013·7	-3·1	21·9	+1·3	29·5	19	8·5	+ 0·6	4·6	2,7,12	17·5	6	12·0	9
Mansura ...	1013·9	-2·8	21·8	+1·2	30·0	27	8·6	+ 1·1	3·3	1	3·8	4	2·0	20
Tanta ...	1014·2	-2·9	21·8	+0·7	29·6	27	7·8	+ 1·1	2·0	12	7·3	5	3·8	20
Shebin El Kom...	1014·0	-3·5	21·3	—	29·4	19	9·3	—	2·8	12	8·8	4	7·7	20
Zagazig ...	1014·0	-3·5	22·8	+2·2	31·8	19	8·5	+ 2·0	0·0	12	7·5	2	4·5	22
Ismailia ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cairo (A) ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Almaza (A) ...	1014·2	-4·2	23·0	+2·4	31·7	19	10·8	+ 1·8	5·7	10	7·1	4	3·6	21
Ezbekiya ...	1014·5	-3·0	23·9	+2·5	31·6	27	10·4	+ 2·0	5·3	9,10	7·1	3	3·2	21
Giza ...	1014·7	-2·7	22·5	+1·6	30·5	27	8·2	+ 2·1	1·5	2	6·1	5	3·0	21
Holwan ...	1014·5	-3·5	22·4	+2·1	31·7	27	10·9	+ 2·0	3·7	9	2·6	5	2·1	21
Fayoum ...	1014·9	-2·7	23·9	+1·6	32·6	27	8·2	+ 1·0	1·3	10	2·7	2	2·7	21
Minya (A) ...	1014·2	-5·5	25·4	+3·5	33·8	27	6·8	+ 1·7	1·0	1,2,10	dr.	2	dr.	14,22
Asyout (A) ...	1014·7	-4·7	26·5	+5·0	37·1	20	9·4	+ 3·1	3·0	10	0	0	0	—
Nag-Hamadi ...	1014·3	-3·2	26·8	+3·9	37·8	20	8·5	+ 3·3	2·9	9	0	0	0	—
Qena ...	1014·4	-2·7	29·3	+4·1	36·4	27	7·2	- 0·6	0·4	9	0	0	0	—
Luxor (A) ...	1014·0	-3·4	—	—	—	—	—	—	—	—	—	—	—	—
Aswan ...	1013·4	-4·4	30·7	+5·2	39·2	22	11·3	+ 0·1	4·6	11	0	0	0	—
Siwa ...	1013·2	-5·6	23·6	+2·0	35·0	27	8·6	+ 3·5	0·3	10	2·1	3	1·3	21
Bahariya ...	1014·4	-3·9	—	—	—	—	—	—	—	—	—	—	—	—
Farafra ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dakhla ...	1016·2	-2·6	27·1	+2·9	37·8	20	7·3	+ 0·9	0·0	†	0	0	0	—
Kharga ...	1013·0	-5·0	28·3	+3·9	37·2	27	8·5	+ 1·4	1·6	9	0	0	0	—
Suez ...	1014·5	-2·6	22·6	+1·6	32·9	27	10·1	+ 0·1	3·6	2	27·5	6	7·0	21
Tor ...	1013·8	-2·9	23·7	+2·2	28·0	20	—	—	—	—	0	0	0	—
Hurghada ...	1013·2	-4·2	—	—	—	—	—	—	—	—	—	—	—	—
Quseir ...	1013·4	-2·6	23·8	+0·6	26·7	27	14·9	+ 0·4	9·3	1	0	0	0	—

* Drops are taken into consideration.

† More than 3 days.

MISCELLANEOUS WEATHER PHENOMENA

TABLE C.

Stations	NUMBER OF DAYS OF OCCURRENCE					
	Rain Showers (a)	Thunder- storm (b)	Fog (c)	Mist Sandrising distrising (d)	Dust or Sand- Storm (e)	Gales (f)
Sallum	5	0	0	2	3	8
Sidi Barrani	7	1	0	2	2	3
Mersa Matruh	7	1	0	0	2	7
Alexandria (A)	6	0	0	1	2	2
Port Said (A)	5	0	0	2	1	0
El Arish	6	0	0	0	5	0
Cairo (A)	2	1	1	0	2	3
Almaza (A)	3	1	1	1	1	1
Minya (A)	0	0	0	0	0	0
Assiut (A)	0	0	0	1	0	0
Luxor (A)	—	—	—	—	—	—
Siwa	2	0	0	0	3	1
Hurghada	—	—	—	—	—	—
Aswan	0	0	0	0	2	0

(a) Number of days in which rainfall is 0·1 mm. or more within 24 hours from 0600 U.T. to 0600 U.T. next day.

(b) Number of days of thunderstorm heard within station.

(c) Number of days of Fog in which visibility is less than 1000 metres.

(d) Number of days of mist or sandrising or dustrising in which visibility is more than 1000 metres and less than 2000 metres.

(e) Number of days of sandstorms in which visibility is less than 1000 metres.

(f) Number of days of gales in which wind velocity is equal or more than 34 knots.

UPPER AIR DATA**Radiosonde Data. Cairo Aerodrome**

TABLE.—D. AVERAGE MONTHLY VALUES.

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 1500 UT.		Highest	Lowest	Readings at 1500 UT.		Highest	Lowest
	n	Mean			n	Mean		
Surface	27	1006	1012	998	27	19.6	29.0	12.0
1000	26	122	172	070	26	18.8	29.0	11.7
850	27	1490	1534	1436	27	9.3	18.1	— 0.3
700	27	3073	3134	2973	27	0.0	08.4	— 11.0
600	27	4291	4375	4151	27	— 7.8	— 2.9	— 14.6
500	27	5687	5790	5513	27	— 16.6	— 10.2	— 23.5
400	26	7322	7430	7120	26	— 28.2	— 22.7	— 32.5
300	25	9325	9455	9097	25	— 42.8	— 37.8	— 47.2
200	20	11957	12116	11742	20	— 56.2	— 50.0	— 61.6
150	18	13761	13910	13560	18	— 61.2	— 53.4	— 67.8
100	15	16231	16430	16077	15	— 66.6	— 59.6	— 74.1
60	6	19336	19416	19300	6	— 64.8	— 62.0	— 72.6

n = Number of observations of specified pressure surfaces.

RAWIN DATA — Cairo Aerodrome

TABLE E.—FREQUENCY WIND RANGES AND MEAN SCALAR WIND SPEEDS

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000—360														Calm	Total No. of obs N	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							
	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				
Surface	2	9	1	10	5	14	2	15	—	—	1	7	6	18	3	9	1	9	3	14	1	3	2	12	0	27	13	
1000	2	9	1	10	5	14	1	9	—	—	1	7	6	18	3	9	1	9	3	14	1	3	2	12	0	26	13	
850	...	1	19	—	—	—	—	1	16	—	—	—	4	13	1	16	6	16	1	19	2	14	2	10	1	19	14	
700	...	—	—	—	—	—	—	—	—	—	—	—	1	7	11	30	2	24	5	30	—	—	—	—	0	19	28	
600	...	—	—	—	—	—	—	—	—	—	—	—	6	38	12	40	1	35	—	—	—	—	—	—	0	19	40	
500	...	—	—	—	—	—	—	—	—	—	—	—	—	4	61	12	51	3	37	—	—	—	—	—	—	0	19	51
400	...	—	—	—	—	—	—	—	—	—	—	—	—	2	82	7	59	3	64	—	—	—	—	—	—	0	12	61
300	...	—	—	—	—	—	—	—	—	—	—	—	—	1	95	5	57	2	86	—	—	—	—	—	—	0	8	69
200	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	69	—	—	—	—	—	—	0	2	69		
150	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
100	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
60	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

Notes: n1, n2, . . . etc = Number of occurrence of wind direction from the specified ranges.

(ff)m = mean scalar wind speed (regardless of direction).

N = Total number of observations from all directions including calms

MISCELLANEOUS DATA-Cairo Aerodrome

TABLE F.

Day	Time UT.	Freezing level						Highest Wind Speed						Tropopause		
		Lowest			Highest			Wind Speed			Height			PPP	TTT	
	GGgg	Height	PPPP	T _w T _e T _d	Height	PPPP	T _w T _e T _d	Height	PPPP	ddd	fff	Height	PPP	TTT		
1	1530	2960	709	—	—	—	—	12000	—	260	127	—	—	—	—	
2	1430	2950	706	672	—	—	—	8400	342	250	096	10860	234	094	—	
3	1600	3360	674	—	—	—	—	—	—	—	—	11670	208	123	—	
4	1600	2760	730	653	—	—	—	6500	446	250	073	10420	254	043	—	
5	1615	2925	713	632	—	—	—	5400	517	250	058	15420	114	178	—	
6	1430	2980	704	644	—	—	—	5550	504	240	085	15850	110	135	—	
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	1700	1640	827	631	—	—	—	—	—	—	—	10380	250	010	—	
9	1600	1540	840	536	—	—	—	—	—	—	—	10300	250	014	—	
10	1430	1390	861	589	1990	799	—	9000	306	270	075	11490	208	095	—	
11	1630	2510	751	—	—	—	—	11700	—	280	103	—	—	—	—	
12	1545	3600	658	—	—	—	—	10500	342	300	136	—	—	—	—	
13	1515	3520	664	646	—	—	—	—	—	—	—	11390	220	078	—	
14	1530	3400	674	570	—	—	—	—	—	—	—	16250	100	195	—	
15	1430	3020	702	599	—	—	—	12600	178	260	080	15950	104	130	—	
16	1500	3020	706	600	—	—	—	—	—	—	—	—	—	—	—	
17	1530	3440	669	639	—	—	—	12150	194	260	071	11630	210	103	—	

Notes.—GGgg is the actual time of release of balloon to the nearest minute (universal time).

PPPP is the pressure in whole millibars (eg. 1027.7 m.b. PPPP 1028).

TTT and TdTaTd are the temperature and dew point in tenths of degrees celsuis (centigrade) eg. 28.1 °C. will be entered 281. For temperature below 0°C. add 50 to the absolute value of temperature eg. -9.7 °C. will be entered 507.

ddd is wind direction in whole degrees east of the true north. For calm winds enter 999 for ddd and fff.

fff is the wind speed in Knots. Heights are in geopotential metres above M.S.L.

AGRO-METEOROLOGICAL DATA — GIZA

**TABLE G.—AIR TEMPERATURE, HUMIDITY, RAINFALL, SUNSHINE DURATION,
WIND SPEED AND PICHE EVAPORATION.**

Max. temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	30.5 on 27
Min. temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	1.5 on 2
Min. temp. at 5 cms. over dry soil.	...	...	...	...	...	...	...	...	...	...	...	...	3.3 on 2
Min. temp. at 5 cms. over wet soil.	...	...	...	...	...	...	...	...	...	...	...	...	— 1.8 on 2
Min. temp. at 5 cms. over grass.	...	...	...	...	...	...	...	...	...	...	...	...	— 3.6 on 2
Min. Relative Humidity at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	14% on 12,13
Max. Absolute Humidity at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	13.0 on 20
Min. Absolute Humidity at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	3.0 on 8,9
Mean daily temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	14.1°C.
Mean day-time temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	17.7°C.
Mean. night-time temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	12.6°C.
Mean. Relative Humidity at 2 metres.	...	...	...	...	...	...	...	...	...	...	...	...	62%
Mean Absolute Humidity at 2 metres.	...	...	...	...	...	...	...	...	...	...	...	...	7.0
Mean day-time wind speed at 2 metres.	...	...	...	...	...	...	...	...	...	...	...	...	3.4 m/sec.
Mean night-time wind speed at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	1.6 m/sec.
Mean Piche Evaporation at 120 cm.	...	...	...	...	...	...	...	...	...	...	...	...	10.1 mm.
Total Rainfall.	...	...	...	...	...	...	...	...	...	...	...	...	6.1 mm.
Sunshine-Duration.	...	...	...	...	...	...	...	...	...	...	...	...	217 hours (67% out of possible hours.)

TABLE H.—EXTREME SOIL TEMPERATURE.

Extreme Soil Temp.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Depth in cm.	0.3	5	10	20	40	60	100							
Dry Soil	47.0	2.0	26.0	8.0	22.0	11.5	20.0	14.5	19.5	16.5	19.5	17.5	20.0	19.5
Wet Soil	29.0	1.5	22.5	5.0	19.5	7.0	17.5	9.5	16.5	12.0	16.0	13.5	17.0	16.0
Grass	24.0	4.5	20.5	7.0	19.5	9.0	17.5	11.0	16.5	14.0	—	—	17.5	16.5

TABLE I.—AMOUNT OF SOLAR + SKY RADIATION IN GRAM CALORIES PER CM.²

Solar & Sky Radiation.	DATE															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	438	452	422	384	425	345	426	456	387	450	424	476	447	301	351	
Solar & Sky Radiation.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	384	432	388	336	196	332	428	508	521	529	330	405	440	404	—	—

Monthly Total = 11817



REPUBLIC OF EGYPT

MINISTRY OF WAR

Egypt METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REPORT

March 1956

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MINISTRY OF WAR

GENERAL SUMMARY OF WEATHER CONDITIONS

March 1956

Changeable with several alternating warm and cold spells

1.—The main features were :

- (a) A large number of traversing cold fronts mostly accompanied by frequent light frontal rising dust and duststorms over scattered parts of the Country.
- (b) Fresh to strong winds Lower Egypt most of the month, reaching gale force occasionally in the extreme west.
- (c) Precipitation was generally below normal most of Lower Egypt.
- (d) Abrupt and frequent temperature variations.
- (e) Six travelling secondary depressions.

2.—General description of the weather :

For the month as a whole the weather was changeable. Alternating cold and warm spells were frequent. Abnormal atmospheric instabilities developed at certain localities.

The barometric pressure and maximum temperature were below normal while the minimum temperature was below normal generally apart from the western desert where it exceeded its normal. Rainfall was generally above normal northern coast and western desert, below normal elsewhere.

The mean relative humidity was below normal Alexandria (Kom-El-Nadora), Cairo (Ezbekiya), and Giza, above normal Helwan.

3.—Pressure and Wind :

The month started with high pressure extending from the British Isles SE wards towards Western Desert of Egypt, a primary depression north the Black Sea and a trough of low pressure over East Mediterranean and Iraq. Till the 4th this pressure distribution continued and the atmospheric pressure was around normal Lower and Middle Egypt, above normal Upper Egypt. During this period N/NW winds prevailed fresh to strong in the north with occasional gales in the extreme west, light to moderate otherwise.

On the 5th a complex secondary depression developed over the Adriatic Sea and Central part of Italy. It proceeded rapidly afterwards towards the Black Sea and its northern trough crossed the northern Egyptian coast on the 7th causing an appreciable fall in the barometric pressure all over the country. Winds backed to S/SW, freshened in the extreme west in advance of its transit and veered later to N/NW after transit.

A second complex secondary depression developed on the 8th over Central Mediterranean, shoted rapidly eastwards and reached Asia Minor on the 10th. The atmospheric pressure generally experienced another fall by the passage of its southern trough together with the northern elongation of the Sudan low.

A third secondary depression developed over West Mediterranean on the 11th while a small anticyclone appeared over the Western desert along the southern ridge of the Siberian Anticyclone. Between 12th and 15th the secondary depression proceeded rapidly eastwards towards N. Iraq and its southern trough traversed Lower Egypt. Consequently the high pressure that persisted over Lower and Middle Egypt on the 11th and 12th was followed by an appreciable fall. On the other hand the pressure continued below normal Upper Egypt all this period.

From the 16th till the end of the month the Siberian Anticyclone was extending southwards up to East Mediterranean, intensifying and stationary blocking the deep low pressure system over the Bristsh Isles and the trough of low pressure over west mediterranean. Consequently West Mediterranean and N-Africa Coast was an area of cyclogenesis. During this period four depressions crossed the Country on the 18th, 21st, 25th and 27th respectively, the second of which was however shallow and traversed Upper Egypt while the others traversed Lower Egypt. The Barometric pressure fall accompanying the 1st, 3rd and 4th travelling depressions was remarkable.

Winds were mainly moderate to fresh N/NWly from the 5th till the end of the month, backing temporarily to S/SW in advance of the travelling depressions. Frequent strong winds were reported Lower Egypt but few gales were experienced in the extreme west.

4.—Temperature:

During this month six consecutive cold fronts crossed the Country accompanying the six travelling depressions. Accordingly maximum temperature was changeable in successive cold and warm spells. Cold fronts were mostly remarkable over Middle and Upper Egypt, feeble Lower Egypt. The last cold front, the most active, caused a temperature fall of 8 °C at Minya.

Minimum temperature continued above normal most of the month Lower Egypt, but it was oscillating round the normal Upper Egypt.

5.—*Precipitation :*

Precipitation was generally light, accompanying the travelling depressions and mainly confined to the northern coastal areas though it rarely extended southwards up to Upper Egypt where it did not exceed one mm. during the whole month.

Wadi El-Natrun reported 10 mms. rainfall on the 1st which was the largest daily fall all over the country during this month while each of Mersa Matruh, Dabaa, Alexandria and Damietta reported 7 mms. on the same day.

MISCELLANEOUS WEATHER PHENOMENA

(1) Thunderstorms were reported at Matruh, Salloum, and Tor on the 1st, 21st and 30th respectively.

(2) Gale winds were experienced at Salloum on the 1st and 14th and at Sidi Barrani on the 1st, 13th and 27th.

(3) Frequent frontal duststorms and rising dust at scattered places.

TABLE A.—Condensed Climatological Data

The deviations of meteorological elements from their normals for various districts are shown in the following table.

March 1956

DISTRICTS	Barometric Pressure		Temperature						Rainfall	
	1956	Diff. F. Nor.	Maximum temp		Minimum temp		Max. + Min. 2		1956	Diff. F. Nor.
			1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.		
1. Mediterranean	1015·0	-1·0	19·1	-1·1	11·8	-0·5	15·4	-0·8	11	+ 1
2. Lower Egypt	1015·2	-1·0	21·8	-1·8	8·4	-0·7	15·1	-1·2	5	- 2
3. Middle Egypt	1015·4	-1·1	22·6	-1·4	10·2	0·0	16·4	-0·7	1	- 3
4. Upper Egypt	1014·7	-1·2	26·9	-0·3	10·2	0·0	18·6	-0·2	drops	0
5. Western Desert	1015·6	-1·0	25·8	-1·7	10·4	+0·6	18·1	-0·6	1	+ 1
6. Red Sea	1013·6	-1·4	23·3	-1·2	12·8	-1·0	18·0	-1·1	drops	- 1

TABLE B.—Climatological Data

March 1956

Stations	Pressure		Temperature								Rainfall		
			Maximum. Temp.				Minimum. Temp.						
	Mean	Dev. from Normal	Mean	Dev. from Normal	Absolute Max.	Date	Mean	Dev. from Normal	Absolute Minimum	Date	Total Rainfall	Number of days of rain*	Max. fall in one day
	mb.	mb.	°c	°c	°c		°c	°c	°c		mm.		min.
Salloum	1015.8	—	19.1	—	27.0	26	11.0	—	8.1	2,11	7.8	8	5.5
Sidi Barrani ...	1015.3	—	18.5	—	23.4	26	9.8	—	4.8	12	10.2	10	5.1
Mersa Matruh (A) ...	1015.5	+1.1	18.6	—	23.6	6	9.6	—	5.5	21	9.7	8	7.0
El Dabaa	1015.8	—	—	—	—	—	—	—	—	—	—	—	—
Kom-el-Nadora ...	1015.4	-0.6	19.6	-1.7	22.8	27	12.5	-0.4	10.2	1	18.3	10	7.3
Alexandria (A) ...	1015.1	—	—	—	—	—	—	—	—	—	—	—	—
Damietta	1014.9	-0.5	18.4	-1.4	21.9	10	9.5	-1.1	6.0	1	12.6	8	7.0
Port-Said (A) ...	1014.9	+1.4	19.4	0.0	22.6	10	13.4	+0.1	10.3	1	4.6	7	3.3
El Arish	1014.2	+1.6	20.7	—	28.4	14	9.7	—	6.2	24	11.2	10	3.9
Damanhour ...	1015.2	-0.8	21.1	-2.0	27.1	27	8.9	-0.8	5.8	13	5.2	8	4.1
Mansura	1015.2	-0.8	21.7	-1.6	26.5	27	9.3	-0.2	6.8	2	7.0	3	4.6
Tanta	1015.4	+1.0	22.1	-1.9	27.6	27	7.5	-1.0	3.4	13	2.8	4	1.1
Shebin El Kom ...	1015.1	+1.2	21.3	—	25.8	27	9.9	—	6.7	13	3.0	1	3.0
Zagazig	1015.2	+1.0	22.2	-1.8	28.0	25	8.1	-0.5	5.0	9,30,31	2.0	1	2.0
Ismailia	1015.1	—	—	—	—	—	—	—	—	—	—	—	—
Cairo (A)	1015.1	—	—	—	—	—	—	—	—	—	—	—	—
Almaza (A) ...	1015.2	+1.6	22.4	-0.6	28.8	25	10.2	-0.7	7.7	31	dr.	3	dr.
Ezbekiya	1015.5	-0.8	23.1	-1.6	29.5	25	10.9	+0.3	7.8	13	1.0	1	1.0
Giza	1015.4	+1.2	22.7	-1.5	28.5	25,27	8.6	+0.5	4.3	31	dr.	4	dr.
Helwan	1015.4	-0.9	22.0	-2.0	28.7	25	11.0	-0.1	7.3	2	0.2	3	0.2
Fayoum	1015.8	-0.4	23.8	-1.5	30.6	25	9.3	-0.2	6.6	31	dr.	1	dr.
Minya (A)	1015.5	-2.0	25.1	+0.4	32.9	27	8.0	+0.4	4.3	3,13	1.8	5	1.5
Asyout (A)	1015.5	+1.5	24.8	-0.6	32.3	27	10.0	+1.0	6.3	30	0.1	2	0.1
Nag-Hamadi ...	1014.6	+1.0	27.2	+0.5	31.9	25	10.4	+1.7	6.9	13	dr.	2	dr.
Qena	1014.4	-0.4	29.9	-0.9	34.9	11	9.6	-1.9	4.6	4	0	0	0
Luxor (A)	1013.9	+1.5	28.5	—	35.4	25	11.6	—	4.4	4	0	0	0
Aswan	1013.4	+1.6	30.7	+0.2	36.8	25	13.8	-0.8	7.1	3	0	0	0
Siwa	1016.4	+1.2	23.2	-2.0	29.5	18	9.4	+1.3	5.2	2	2.6	1	2.6
Bahariya	1015.8	-0.9	—	—	—	—	—	—	—	—	—	—	—
Farafra	1017.3	—	24.7	—	32.0	10,18	8.8	—	2.5	16	2.7	1	2.7
Dakhla	1016.6	+0.2	26.4	-2.0	32.5	27	10.2	+0.2	4.3	3	0	0	0
Kharga	1013.6	+2.2	27.7	+1.1	33.6	27	11.6	+0.4	4.6	3	0	0	0
Suez	1015.0	-0.9	23.1	-0.9	28.4	14	9.6	-2.5	6.3	31	2.0	2	2.0
Tor	1013.0	+1.7	23.3	+1.0	27.0	14	13.0	+0.3	9.0	9	0	0	0
Hurghada	1013.2	+2.3	—	—	—	—	—	—	—	—	—	—	—
Quseir	1013.1	-0.9	23.4	-1.7	26.3	14,28	15.9	-0.8	11.7	3	0	0	0

* Drops are taken into consideration.

† More than 3 days.

TABLE C.—Miscellaneous Weather Phenomena

March 1956

Stations	NUMBER OF DAYS OF OCCURRENCE					
	Rain Showers	Thunder-storm	Fog	Mist Sandrising distrising	Dust or Sand Storm	Gales
Sallum	(a) 5	(b) 1	(c) 0	(d) 0	(e) 1	(f) 3
Sidi Barrani	5	1	0	0	1	4
Mersa Matruh	8	1	0	0	3	3
Alexandria (A)	7	0	0	0	0	0
Port Said (A)	2	0	0	1	0	0
El Arish	9	0	0	0	1	0
Cairo (A)	1	0	0	0	0	0
Almaza (A)	0	0	0	8	1	0
Minya (A)	3	0	0	0	1	0
Assiut (A)	1	0	0	0	0	0
Luxor (A)	0	0	0	0	0	0
Siwa	1	0	0	0	0	0
Hurghada	—	—	—	—	—	—
Aswan	0	0		3	2	0

(a) Number of days in which rainfall is 0·1 mm. or more within 24 hours from 0600 U.T. to 0600 U.T. next day.

(b) Number of days of thunderstorm heard within station.

(c) Number of days of Fog in which visibility is less than 1000 metres.

(d) Number of days of mist or sandrising or dustrising in which visibility is more than 1000 metres and less than 2000 metres.

(e) Number of days of sandstorms in which visibility is less than 1000 metres.

(f) Number of days of gales in which wind velocity is equal or more than 34 knots.

UPPER AIR DATA

TABLE D.—Radiosonde Data. Average Monthly Values.

Cairo Aerodrome. March. 1956

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 1500 UT.		Highest	Lowest	Readings at 1500 UT.		Highest	Lowest
	n	Mean			n	Mean		
Surface	31	1006	1014	1000	31	19.8	25.4	15.2
1000	31	124	188	070	31	19.3	25.3	14.4
850	31	1490	1544	1456	31	7.7	15.0	2.3
700	31	3071	3126	3010	31	1.1	6.3	— 6.9
600	31	4295	4354	4193	31	— 4.6	0.5	— 17.4
500	31	5695	5763	5555	31	— 15.4	— 10.7	— 20.5
400	31	7339	7429	7176	31	— 27.9	— 20.7	— 32.5
300	31	9344	9481	9167	31	— 42.3	— 35.3	— 47.7
200	25	12021	12182	11809	25	— 51.9	— 47.0	— 58.8
150	21	13865	14039	13680	20	— 59.5	— 54.8	— 65.0
100	19	16360	16588	16197	19	— 65.0	— 58.7	— 69.6
60	—	—	—	—	—	—	—	—

n = Number of observations of specified pressure surfaces.

UPPER AIR DATA

TABLE D.—Radiosonde Data. Average Monthly Values.

Matruh, Aerodrome March 1956

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 1500 UT.		Highest	Lowest	Readings at 1500 UT.		Highest	Lowest
	n	Mean			n	Mean		
Surface	29	1013	1019	1006	29	11.5	18.1	06.7
1000	29	135	187	080	29	10.9	17.5	05.8
850	29	1474	1511	1431	29	3.8	11.6	— 1.5
700	29	3035	3101	2986	29	1.6	06.5	— 6.7
600	29	4247	4338	4173	29	— 8.5	— 3.4	— 12.8
500	29	5636	5742	5535	29	— 17.7	— 12.4	— 23.2
400	29	7266	7389	7129	29	— 29.3	— 26.0	— 35.6
300	24	9248	9334	9069	24	— 44.0	— 39.6	— 48.8
200	19	11891	12023	11655	19	— 53.5	— 42.0	— 59.8
150	13	13708	13929	13441	13	— 58.4	— 52.3	— 65.2
100	12	16219	16527	15885	12	— 63.2	— 56.0	— 69.0
60	—	—	—	—	—	—	—	—

n = Number of observations of specified pressure surfaces.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Cairo Aerodrome—March 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000—360														Calm	Total No. of obs N	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						
	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					
Surface	6	12	6	12	3	12	—	—	—	—	—	—	—	—	1	6	1	5	4	17	9	11	0	30	12		
1000	6	12	6	12	3	12	—	—	—	—	—	—	—	—	1	6	1	5	4	17	9	11	0	30	12		
850	3	10	3	12	1	7	1	7	—	—	—	—	3	11	1	10	2	28	6	17	6	14	1	9	0	27	14
700	—	—	—	—	—	—	1	5	—	—	—	—	—	2	15	3	27	8	31	9	25	3	23	0	26	25	
600	—	—	—	—	—	—	—	1	11	—	—	—	—	2	19	2	40	12	40	7	33	2	40	0	26	35	
500	—	—	—	—	—	—	1	5	—	—	—	—	—	1	37	1	23	14	52	7	46	—	—	0	24	46	
400	—	—	—	—	—	—	—	—	—	—	—	—	—	2	26	13	57	7	68	—	—	0	22	58			
300	—	—	—	—	—	—	—	—	—	—	—	—	—	1	21	1	58	12	88	8	72	—	—	0	22	78	
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	111	3	113	—	—	0	6	112			
150	—	—	—	—	—	—	—	—	—	—	—	—	—	1	102	—	—	—	—	—	—	0	1	102			
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				

Notes: n1, n2, . . . etc = Number of occurrence of wind direction from the specified ranges.

(ff)m = mean scalar wind speed (regardless of direction).

N = Total number of observations from all directions including calms

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Matauh Aerodrome—March 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000° - 360°													Calm	Total No. of obs. N	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						
	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					
Surface...	4	13	2	16	1	5	1	10	—	—	1	12	—	—	2	10	5	11	2	18	5	15	2	16	1	26	13
1000 ...	5	12	2	16	1	5	1	10	—	—	1	12	—	—	2	10	5	11	2	18	5	15	1	25	1	26	13
850 ...	3	9	2	10	—	—	—	—	—	—	1	12	—	—	1	8	2	31	1	25	7	15	4	12	0	21	15
700 ...	—	—	—	—	—	—	—	—	1	13	—	—	1	7	1	13	2	32	6	28	4	22	—	—	0	15	23
600 ...	—	—	—	—	—	—	1	11	—	—	—	—	—	—	1	6	2	28	6	43	4	23	—	—	0	14	30
500 ...	—	—	1	7	—	—	—	—	—	—	—	—	—	—	—	6	39	3	55	3	35	—	—	0	13	40	
400 ...	—	—	1	9	—	—	—	—	—	—	—	—	—	—	—	2	76	5	54	2	61	1	8	0	11	51	
300 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	82	2	18	2	30	—	—	0	6	44		
200 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	41	—	—	—	—	—	0	3	41		
150 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	49	—	—	—	—	—	0	3	49		
100 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	40	2	48	—	—	—	—	0	3	45		
50 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

Notes : n1, n2, . . . , etc. = Number of occurrence of wind direction from the specified ranges.

(ff) m = mean scalar wind speed (regardless of direction).

N = Total number of observations from all directions including calms.

TABLE F.—Miscellaneous Data

Cairo Aerodrome—March 1956

Day	Time UT.	Freezing level						Highest Wind Speed					Tropopause		
		Lowest			Highest			Height	PPPP	ddd	fff	Height	PPP	TTT	
	GGgg	Height	PPPP	TdTdTd	Height	PPPP	TdTdTd	Height	PPPP	ddd	fff	Height	PPP	TTT	
1	1515	2020	793	518	—	—	—	5200	524	270	087	—	—	—	
2	1500	1820	814	532	—	—	—	9200	300	280	089	10000	266	023	
3	1600	2110	788	519	—	—	—	7800	324	290	124	10660	244	052	
4	1530	3470	666	656	—	—	—	9400	298	300	027	11430	216	110	
5	1500	3320	680	659	—	—	—	13200	—	280	048	10360	258	030	
6	1600	3860	636	640	—	—	—	10250	265	250	028	9900	280	969	
7	1500	2460	754	564	—	—	—	8010	360	250	057	—	—	—	
8	1500	3340	678	—	—	—	—	9300	302	270	105	—	—	—	
9	1530	3110	692	—	—	—	—	—	—	—	—	—	—	—	
10	1500	3140	694	586	—	—	—	—	—	—	—	—	—	—	
11	1500	3860	637	—	—	—	—	6800	431	260	123	15280	122	171	
12	1500	3340	678	—	—	—	—	10250	264	280	111	10940	238	033	
13	1545	4050	622	—	—	—	—	8880	326	250	065	15510	114	212	
14	1500	4370	597	—	—	—	—	10600	249	260	149	—	—	—	
15	1500	3410	672	—	—	—	—	8500	337	260	064	11170	226	040	
16	1500	3720	617	—	—	—	—	12720	184	300	145	11380	226	013	
17	1500	2750	724	635	—	—	—	10180	—	280	102	—	—	—	
18	1515	2590	740	564	—	—	—	9180	304	270	184	14960	124	184	
19	1500	3150	693	539	—	—	—	—	—	—	—	15240	122	158	
20	1500	3810	641	—	—	—	—	9100	314	260	132	14300	142	167	
21	1500	3950	631	—	—	—	—	—	—	—	—	16100	106	156	
22	1500	3360	678	681	—	—	—	8850	326	300	096	15800	112	167	
23	1600	3760	644	—	—	—	—	11850	210	280	134	15040	126	193	
24	1500	3560	660	663	—	—	—	11230	224	270	089	14930	124	176	
25	1500	3570	659	643	—	—	—	12440	182	280	136	17470	084	192	
26	1500	3440	672	622	—	—	—	9600	293	290	086	—	—	—	
27	1430	2860	714	592	—	—	—	4920	550	270	061	15830	109	148	
28	1515	2340	754	523	—	—	—	480	955	320	022	—	—	—	
29	1500	1780	819	542	—	—	—	5600	494	300	090	—	—	—	
30	1500	1790	820	542	2170	782	647	8600	334	300	096	16960	090	192	
31	1515	3640	657	—	—	—	—	11800	—	310	090	—	—	—	
Highest...	...	—	4370	597	—	—	—	9180	304	270	184	16960	090	192	
Lowest ...	...	—	1780	819	542	—	—	—	—	—	—	9900	280	969

TABLE F.—Miscellaneous Data
Mersa Matruh Aerodrome—March 1956

Day	Time UT.	Freezing level								Highest Wind Speed				Tropopause			
		Lowest				Highest				Height		PPPP	ddd	fff	Height	PPP	TTT
	GGgg	Height	PPPP	T _d T _d T _d	Height	PPPP	T _d T _d T _d	Height	PPPP	ddd	fff	Height	PPP	TTT			
1	0500	1640	0820	520	—	—	—	—	—	—	—	—	—	—	11380	0217	058
2	0500	1740	0824	000	—	—	—	—	—	—	—	—	—	—	—	—	—
3	0500	1930	0803	515	—	—	—	—	—	—	—	—	—	—	—	—	—
4	0500	3170	0687	—	—	—	—	—	17700	0063	270	078	—	11000	0230	088	—
5	0500	2940	0710	—	—	—	—	—	14650	—	280	040	—	—	—	—	—
6	0500	3360	0674	—	—	—	—	—	16250	—	260	075	11550	0214	070	—	
7	0500	1980	0794	000	—	—	—	—	—	—	—	—	10000	0265	991	—	
8	0500	1670	0827	545	2720	0727	—	—	—	—	—	—	—	—	—	—	—
9	0500	1610	0835	592	2430	0754	—	—	—	—	—	—	—	—	—	—	—
10	0500	2470	0750	—	—	—	—	8400	0330	250	116	11200	0224	014	—	—	—
11	0400	1530	0843	516	2360	0761	—	—	—	—	—	—	10400	0250	022	—	—
12	0400	1250	0877	522	1670	0835	621	—	—	—	—	—	11220	0220	071	—	—
13	0500	3240	0684	—	—	—	—	11200	0225	250	110	12100	0194	094	—	—	—
14	0400	3050	0695	—	—	—	—	—	—	—	—	—	15400	0116	120	—	—
15	0500	1670	0825	576	—	—	—	—	—	—	—	—	10250	0256	032	—	—
16	0500	2760	0722	—	—	—	—	—	—	—	—	—	11600	0210	093	—	—
17	0500	3000	0704	553	—	—	—	—	—	—	—	—	10300	0260	977	—	—
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
19	0400	2540	0746	540	—	—	—	—	—	—	—	—	10150	0266	963	—	—
20	0400	1500	0845	518	—	—	—	—	—	—	—	—	10700	0242	984	—	—
21	0400	1250	0870	545	—	—	—	9069	0300	250	103	—	—	—	—	—	—
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
23	0400	3000	0707	—	—	—	—	—	—	—	—	—	10500	0250	—	—	—
24	1400	3900	0634	605	—	—	—	—	—	—	—	—	—	—	—	—	—
25	0400	3300	0676	—	—	—	—	—	—	—	—	—	—	—	—	—	—
26	0500	2880	0717	574	—	—	—	—	—	—	—	—	—	—	—	—	—
27	0400	3150	0692	—	—	—	—	—	—	—	—	—	—	—	—	—	—
28	0600	2030	0790	505	2700	0730	—	—	—	—	—	—	9900	0274	931	—	—
29	0500	1600	0840	523	2940	0710	—	—	—	—	—	—	10400	0253	995	—	—
30	0400	1100	0893	530	—	—	—	—	—	—	—	—	—	—	—	—	—
31	0400	1380	0866	522	3230	0687	—	—	—	—	—	—	—	—	—	—	—
Highest	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lowest	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Notes.—GGgg is the actual time of release of balloon to the nearest minute universal (time).

PPPP is the pressure in whole millibars (eg. 1027.7 m.b. PPPP 1028).

TTT and TdTdTd are the temperature and dew point in tenths of degrees celsuis (centigrade) eg. 28.1 °C. will be entered 281. For temperature below 0 °C. add 50 to the absolute value of temperature eg. -0.7 °C. will be entered 507.

ddd is wind direction in whole degrees east of the true north. For calm winds enter 000 for ddd and fff.

AGRO-METEOROLOGICAL DATA—GIZA

TABLE G.—Air Temperature, Humidity, Rainfall, Sunshine Duration,
Wind Speed and Piche Evaporation

March 1956

Max. temp. at 2 metres	... ... ... ... ... ... ... ...	28.5 °C on 25&27
Min. temp. at 2 metres	... ... ... ... ... ... ... ...	4.3 °C on 31
Min. temp. at 5 cms. over dry soil.	... ... ... ... ... ... ... ...	0.4 °C on 31
Min. temp. at 5 cms. over wet soil.	... ... ... ... ... ... ... ...	1.4 °C on 31
Min. temp. at 5 cms. over grass.	... ... ... ... ... ... ... ...	0.9 °C on 31
Min. Relative Humidity at 2 metres	... ... ... ... ... ... ... ...	12% on 24
Max. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	10.9 on 6
Min. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	2.8 on 24
Mean daily temp. at 2 metres	... ... ... ... ... ... ... ...	14.5 °C.
Mean day-time temp. at 2 metres	... ... ... ... ... ... ... ...	17.5 °C.
Mean night-time temp. at 2 metres	... ... ... ... ... ... ... ...	12.7 °C.
Mean Relative Humidity at 2 metres	... ... ... ... ... ... ... ...	64%
Mean Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	7.5
Mean day-time wind speed at 2 metres	... ... ... ... ... ... ... ...	3.4 m/sec.
Mean night-time wind speed at 2 metres	... ... ... ... ... ... ... ...	1.7 m/sec.
Mean Piche Evaporation at 120 cm.	... ... ... ... ... ... ... ...	9.8 mm.
Total Rainfall	... ... ... ... ... ... ... ...	tr.
Sunshine-Duration	... ... ... ... ... ... ... ...	251 hours (67% out of possible hours.)

TABLE H.—Extreme Soil Temperature

March 1956

Extreme Soil Temp.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Depth in cm.	0.3	5	10	20	50	100	200							
Dry Soil ...	55.0	3.5	29.5	11.5	25.5	14.0	22.5	16.5	21.5	18.5	21.0	19.5	21.0	21.0
Wet Soil ...	34.5	6.0	25.5	8.5	22.0	11.0	19.0	13.5	17.5	15.5	17.5	16.5	18.5	18.0
Grass ...	28.5	8.0	23.0	10.0	18.5	12.0	17.5	15.0	17.5	16.0	18.0	17.0	—	—

TABLE I.—Amount of Solar + Sky Radiation in Gram per cm.²

March 1956

Solar & Sky Radiation	DATE															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	382	412	378	503	412	530	546	512	614	604	551	611	629	487	627	581
DATE																
Solar & Sky Radiation	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	—
	507	600	379	644	662	626	663	720	652	634	633	527	528	635	685	—

Monthly Total = 17474

TABLE J.—Duration in Hours of Temperature at 2 Metres Height Above Certain Levels in °C.

March 1956

	DATE																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Duration above 0°C.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
" " 5°C	21	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	25		
" " 10°C	21	13	18	16	19	20	19	19	22	19	24	20	17	24	19	17	23	19	24	24	20	24	18	24	17	24	22	24	23	17	17
" " 15°C	8	6	9	14	13	14	11	9	11	15	15	8	13	19	12	11	12	16	19	15	14	12	14	14	14	15	13	10	8	8	10
" " 20°C	0	0	0	5	1	6	5	0	3	10	1	0	7	9	5	0	0	9	7	4	6	5	4	7	9	6	7	4	0	0	1
" " 25°C	—	—	—	0	0	0	0	—	0	1	0	—	0	0	0	—	1	0	0	0	0	0	0	5	0	4	0	—	—	0	
" " 30°C	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	—	—	—	—	—	—	0	—	0	—	—	—	—	—
" " 35°C	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
" " 40°C	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

NOTES

TABLE G.

(a) Air temperature and humidity are measured by ventilated dry and wet-bulb thermometers freely exposed in Louvered Stevenson Screen of the Egyptian type. Thermometer bulbs are at 210 cms. above ground (approximately 2m.) Maximum (mercury) and minimum (alcohol) thermometers are exposed in the same screen for the 2m values. The minimum thermometers for the 5cm heights are of the alcohol type freely exposed in the open air on wood supports.

The daily mean values of air temperatures are computed from the formula $1/4$ (values at 0800+14000+2000+Minimum).

The day-time mean air temperature is computed graphically from the record of a thermograph exposed in the screen, for the period sunrise to sunset. The night mean is similarly obtained for the period sunset to sunrise.

(b) In computing relative humidity Aspirations—Psychrometer tables of the Preussischen Meteorologisch Institut - 1927 are used, corrections for wind speed are applied. The mean relative humidity is computed from the formula $1/2$ (values at 0800+1400-Local time).

(c) Absolute humidity is expressed by vapour pressure in units of mms. of mercury. The mean value is calculated from the formula $1/3$ (values at 0800+1400+2000 L.T.).

(d) Rainfall is measured by ordinary rain gauge; the height of its rim is 40 cm. above ground. Tr. stands for trace (i.e amounts of rain less than 0.1 mm.).

(e) The mean wind speed by day is computed from the total run of air during the period 0800 to 1800 L.T., as indicated by the counter of an ordinary cup anemometer freely exposed at a height of 2 metres above ground.

The mean wind speed at night is similarly computed for the period 1800 to 0800 L.T.

(f) Evaporation is measured by a piche tube freely exposed in the open air; the evaporation disc has a diameter of 3cms, white in colour and at a height of 120 cms, above dry soil.

The Piche is read at 0800 L.T. daily in millimetres, the daily values given are for the 24 hours beginning at 0800 L.T.

TABLE H.

Soil temperature is measured by mercury thermometers, the values given are to be nearest $\frac{1}{2}$ °C.

TABLE I.

Instrument used for the measurement of solar and sky radiation (global radiation) is the (Rabitzch Actinograph".

Cairo, 27/6/1956.

M. F. TAHA
Director General
Meteorological Department



REPUBLIC OF EGYPT

MINISTRY OF WAR

Egypt. METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REPORT

April 1956

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REPUBLIC OF EGYPT – MINISTRY OF WAR

METEOROLOGICAL DEPARTMENT

CAIRO – EGYPT

GENERAL SUMMARY OF WEATHER CONDITIONS

April 1956

Changeable with numerous Kamasin disturbances.

(1) The main features were :

- (a) Six consecutive Kamasin depressions of short durations.
- (b) Heavy showers at few localities, thundery North Sinia.
- (c) Frontal duststorms and occasional rising dust generally all over the Country.
- (d) Fog and mist patches Lower Egypt during the 1st and 4th weeks.

(2) *General description of weather.*

For the month as a whole the weather was changeable; six short consecutive heat waves has been experienced while a long rather cold period has been enjoyed between the 2nd and 3rd.

The barometric pressure was generally below normal, maximum and minimum temperatures were changeable while the rainfall was below normal generally apart from the Western Desert where it exceeded its normal.

The mean relative humidity was below normal Cairo (Ezbekiya) Giza and Helwan, around normal Alexandria (Kom-el-Nadora.).

(3) *Pressure and wind.*

During the month six consecutive desert depressions crossed Egypt and were associated by moderate Kamasin weather conditions. The barometric pressure was generally changeable and experienced abrupt fall during the passage of these successive depressions.

The first and second Kamasin depressions developed over Cyrenica on the 1st and 5th as secondary depressions to the primary Central Mediterranean Lows and crossed Lower and Middle Egypt on the 2nd and 7th respectively.

The atmospheric pressure over Egypt started to rise rapidly from the 9th continued above normal over Lower Egypt till the 18th. During the period high pressure was establishing over East Mediterranean.

The third Kamasin depression developed over Lybia on the 17th and traversed Lower Egypt by 19th while the 4th, 5th and 6th Kamasin depressions appeared over the Gulf of Serte, at the southern parts of the primary depressions over Central and Western Mediterranean. They crossed Lower and Middle Egypt on the 25th, 27th and 30th respectively.

Winds over Egypt were generally moderate to fresh. Northerly blowing temporarily from the South ahead the travelling depressions. Occasional strong winds were reported from Lower Egypt and Red Sea Coasts due to passage of the attached cold fronts.

(4) *Temperature.*

During the month maximum temperatures were changeable; five short consecutive heat waves were experienced all over the Country. The heat waves were characterised by abnormal high peaks and followed by abrupt and considerable temperature fall. The mild periods following the heat waves were generally of short durations apart from the 2nd mild period which lasted for 10 days.

Minimum Temperatures were similarly changeable, and generally below normal most of the month over both Extreme West and Upper Egypt, more or less around normal otherwise.

(5) *Precipitation.*

Rain was generally light and confined to the Northern parts, though El-Arish reported thundery rain of 12 millimetres on the 4th and Wadi El-Natrun reported 27 millimetres on the 10th.

(6) *Miscellaneous—Weather Phenomena.*

(a) Thundery activity developed over North Sinai on 4th.

(b) Duststorms and rising dust accompanied the traversing fronts generally all over the Country.

(c) Ten days of fresh strong winds were reported over the northern Coast areas, 15 days over the Red Sea Coasts.

TABLE A.—Condensed Climatological Data

The deviations of meteorological elements from their normals for various districts are shown in the following table :

April 1956

DISTRICTS	Barometric Pressure		Temperature						Rainfall	
	1956	Diff. F. Nor.	Maximum temp		Minimum temp		$\frac{\text{Max.} + \text{Min.}}{2}$		1956	Diff. F. Nor.
			1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.		
1. Mediterranean	1014.3	-0.2	22.7	0.0	14.3	-0.6	18.5	-0.3	1	-3
2. Lower Egypt	1014.6	-0.1	27.3	-0.4	11.2	-0.6	19.2	-0.5	1	-2
3. Middle Egypt	1014.6	-0.2	28.4	0.0	13.6	+0.6	21.0	+0.3	drops	-2
4. Upper Egypt	1013.4	-0.4	32.9	+1.5	13.2	-0.1	23.0	+0.7	0	0
5. Western Desert	1014.5	-0.1	31.9	+0.1	13.5	0.0	22.7	0.0	3	+3
6. Red Sea	1012.6	-0.5	27.1	0.0	15.6	-1.0	21.4	-0.5	0	0

TABLE B.—Climatological Data

April 1956

Station	Pressure 0600 U.T.		Temperature								Rainfall			
			Maximum. Temp.				Minimum. Temp.							
	Mean	Dev. from Normal	Mean	Dev. from Normal	Absolute Max.	Date	Mean	Dev. from Normal	Absolute Minimum	Date	Total Rainfall	Number of days of rain*	Max. fall in one day	Date
	mb.	mb.	°c	°c	°c		°c	°c	°c		mm.	mm.		
Salloum	1015.0	—	23.7	—	37.8	24	13.9	—	10.1	11	dr.	3	dr.	1,7,10
Sidi Barrani ...	1014.5	—	23.0	—	37.6	24	12.6	—	6.2	16	dr.	1	dr.	8
Mersa Matruh (A)	1014.7	0.0	23.6	—	36.2	24	11.6	—	7.0	12	0	—	0	—
El Dabaa	1015.1	—	23.6	—	36.6	27	12.0	—	6.8	19	0	—	0	—
Kom-el-Nadora ...	1014.9	+0.5	22.9	-0.7	35.9	27	14.8	-0.2	9.8	1	dr.	2	dr.	7,8
Alexandria (A) ...	1014.6	—	23.5	—	37.3	27	14.0	—	8.2	1	dr.	1	dr.	2
Damietta	1014.4	+0.4	22.3	-0.3	31.7	6	12.4	-1.3	7.4	18	0	—	0	—
Port-Saïd (A) ...	1014.2	-1.4	22.8	+1.0	32.0	25	15.7	-0.2	12.1	1	0.3	3	0.3	10
El Arish	1013.5	-0.5	24.3	—	37.0	25	12.3	—	5.5	1	12.1	4	12.1	4
Damanhour ...	1014.7	+0.1	26.3	-0.5	39.2	27	11.5	-0.7	5.6	1	0	—	0	—
Mansura	1014.4	-0.3	27.4	-0.1	36.2	27	12.2	0.0	7.2	1	dr.	—	dr.	—
Tanta	1014.9	+0.2	27.5	-0.8	37.0	27	10.2	-1.0	6.0	1	0.6	1	0.6	10
Shebin El Kom ...	1014.5	-0.1	27.1	—	37.4	27	12.2	—	7.1	11	3.1	1	3.1	10
Zagazig	1014.4	-0.3	28.0	-0.1	37.0	27	10.7	-0.9	5.0	11	3.0	1	3.0	10
Ismailia	1014.6	—	28.6	—	36.7	25	13.4	—	9.5	1	dr.	1	dr.	10
Cairo (A)	1014.4	—	23.3	—	38.3	27	13.6	—	8.5	11	dr.	3	dr.	2,9,10
Almaza (A) ...	1014.4	-1.4	23.5	+1.0	38.6	27	13.9	+0.5	8.8	11	dr.	3	dr.	2,8,10
Ezbekiya	1014.9	+0.3	28.9	+0.1	39.0	27	14.1	+0.5	9.5	11	dr.	1	dr.	10
Giza	1014.6	-0.1	23.3	-0.2	37.6	27	11.9	+1.2	5.7	1	dr.	1	dr.	10
Heliwan	1014.6	+0.4	28.0	-0.6	37.9	27	14.3	+0.1	10.3	1	dr.	1	dr.	2
Fayoum	1014.9	+0.2	30.2	+0.3	40.2	27	12.8	-0.1	7.2	1	0	—	0	—
Minya (A)	1014.2	-1.7	31.9	+2.3	42.0	27	11.8	+0.6	4.0	1	0	—	0	—
Asyout (A)	1014.0	-1.1	32.5	+2.1	41.6	27	14.3	+0.9	8.0	12	0	—	0	—
Naq-Hamadi ...	1013.1	+0.1	33.7	+1.9	39.9	8	13.8	+0.8	8.1	1	0	—	0	—
Qena	1012.8	0.0	36.4	+1.0	43.0	28	13.5	-2.6	8.0	5	0	—	0	—
Luxor (A)	1012.5	-0.3	35.4	—	42.2	28	14.6	—	7.5	1	0	—	0	—
Aswan	1012.1	-0.3	—	—	—	—	—	—	—	—	0	—	0	—
Siwa	1015.3	-0.2	29.9	+0.3	38.4	30	13.3	+1.4	7.4	12	13.4	3	7.2	9
Bahariya	1014.8	-0.3	30.8	+0.2	42.2	27	12.7	+0.3	7.4	1	0	—	0	—
Farafra	1016.1	—	30.3	—	42.0	27	11.8	—	6.5	12	0	—	0	—
Dakhla	1015.5	+1.5	33.0	-0.6	42.0	27	13.7	-0.7	7.3	1	0	—	0	—
Kharga	1012.4	-1.2	33.8	+0.4	41.2	27	14.2	-1.2	8.6	1	dr.	1	dr.	11
Suez	1014.1	-0.2	28.0	-0.3	35.5	25	12.9	-2.0	6.9	1	0	—	0	—
Tor	1011.8	-0.4	27.7	-0.1	33.8	28	16.1	-0.2	8.5	1	0	—	0	—
Hurghada	1012.4	-1.2	26.2	+1.5	34.7	25	15.1	-0.4	9.4	1	0	—	0	—
Quseir	1012.3	0.0	26.6	-1.1	30.5	25	18.4	-1.3	13.4	2	0	—	0	—

* Drops are taken into consideration.

† More than 3 days.

TABLE C.—Miscellaneous Weather Phenomena

April 1956

Stations	NUMBER OF DAYS OF OCCURRENCE					
	Rain Showers	Thunder-storm	Fog	Mist Sandrising distrising	Dust or Sand Storm	Gales
	(a)	(b)	(c)	(d)	(e)	(f)
Sallum	3	0	0	1	0	1
Sidi Barrani	1	0	1	0	0	0
Mersa Matruh	0	0	1	0	0	0
Alexandria (A)	1	0	2	0	1	0
Port Said (A)	3	0	0	1	0	0
El Arish	4	1	3	0	0	0
<hr/>						
Cairo (A)	3	0	0	3	1	0
Almaza (A)	3	0	1	0	1	0
<hr/>						
Minya (A)	0	0	0	0	0	0
Assiut (A)	0	0	0	0	1	0
Luxor (A)	0	0	0	0	1	0
<hr/>						
Siwa	3	0	0	0	0	0
<hr/>						
Hurghada	0	0	0	0	1	0
<hr/>						
Aswan	—	—	—	—	—	—

(a) Number of days in which rainfall is 0·1 mm. or more within 24 hours from 0600 U.T. to 0600 U.T. next day.

(b) Number of days of thunderstorm heard within station.

(c) Number of days of Fog in which visibility is less than 1000 metres.

(d) Number of days of mist or sandrising or dustrising in which visibility is more than 1000 metres and less than 2000 metres.

(e) Number of days of sandstorms in which visibility is less than 1000 metres.

(f) Number of days of gales in which wind velocity is equal or more than 34 knots.

UPPER AIR DATA

TABLE D.—Radiosonde Data. Average Monthly Values.

Cairo Aerodrome. April 1956

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 1500 UT.		Highest	Lowest	Readings at 1500 UT.		Highest	Lowest
	n	Mean			n	Mean		
Surface	30	1005	1010	1000	30	26.5	37.2	15.3
1000	30	116	157	70	30	25.9	37.2	14.7
850	30	1515	1555	1479	30	14.3	24.7	4.7
700	30	3128	3183	3058	30	4.5	10.8	— 13.0
600	30	4460	5754	4273	30	— 4.0	2.0	— 17.5
500	30	5787	5876	5667	30	— 12.9	— 8.2	— 18.7
400	29	7445	7563	7303	29	— 25.3	— 18.8	— 31.7
300	27	9455	9608	9272	27	— 40.9	— 34.0	— 48.1
200	14	12112	12322	11958	14	— 51.8	— 48.0	— 62.4
150	10	13946	14123	13780	10	— 59.2	— 51.4	— 66.3
100	9	16466	16596	16381	9	— 64.5	— 59.5	— 70.6
60	—	—	—	—	—	—	—	—

n = Number of observations of specified pressure surfaces.

UPPER AIR DATA

TABLE D.—Radiosonde Data. Average Monthly Values.

Mafruh, Aerodrome April 1956

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 0400 UT.		Highest	Lowest	Readings at 0400 UT.		Highest	Lowest
	n	Mean			n	Mean		
Surface	30	1012	1019	1004	30	14.6	18.3	8.8
1000	30	134	188	64	30	14.5	18.1	8.6
850	30	1499	1550	1443	30	10.3	17.1	0.0
700	30	3096	3196	3042	30	2.0	7.5	— 5.7
600	30	4321	4429	4257	30	— 6.4	— 1.9	— 11.0
500	30	5706	5919	5624	30	— 16.5	— 11.4	— 21.6
400	30	7358	7579	7231	30	— 28.3	— 23.5	— 33.0
300	19	9374	9598	9179	19	— 43.4	— 37.1	— 51.0
200	15	11992	12150	11741	15	— 57.4	— 52.4	— 66.6
150	11	13793	13944	13555	11	— 60.0	— 55.3	— 64.8
100	9	16271	16386	16082	9	— 64.3	— 60.5	— 69.7
60	—	—	—	—	—	—	—	—

n = Number of observations of specified pressure surfaces.

UPPER AIR DATA

TABLE D.—Radiosonde Data. Average Monthly Values.

Aswan Aerodrome. April 1956

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 0400 UT.		Highest	Lowest	Readings at 0400 UT.		Highest	Lowest
	n	Mean			n	Mean		
Surface	30	999	1005	992	30	20.1	33	11
1000	15	144	175	135	—	—	—	—
850	30	1530	1597	1481	30	17.0	26	9
700	30	3150	3228	3070	30	4.9	12	— 1
600	30	4427	4955	4282	30	— 2.7	03	— 9
500	30	5809	5938	5580	30	— 11.8	— 5	— 19
400	30	7491	7658	7305	30	— 23.7	— 16	— 36
300	28	9529	9758	9315	28	— 37.7	— 33	— 42
200	20	12181	12310	11963	—	—	—	—
150	12	13977	14153	13693	—	—	—	—
100	—	—	—	—	—	—	—	—
60	—	—	—	—	—	—	—	—

n = Number of observations of specified pressure surfaces.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Cairo Aerodrome—April 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000—360													Calm	Total No. of obs N	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				
	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			
Surface ...	3	15	4	12	3	12	—	—	—	—	2	16	1	10	—	—	—	—	6	9	10	10	29	11	
1000	—	—	—	—	—	—	—	—	—	—	—	—	1	10	—	—	—	—	1	3	2	16	0	—	
850	4	7	2	12	1	6	—	—	—	—	—	—	1	11	3	21	—	—	2	21	3	11	0	16	13
700	4	12	—	—	—	—	—	—	—	—	—	—	—	1	11	5	20	3	42	3	30	0	16	24	
600	2	23	—	—	—	—	—	—	—	—	—	—	2	7	2	42	6	27	3	30	0	15	26		
500	—	—	—	—	—	—	—	—	—	—	2	16	—	—	3	32	4	41	6	30	0	15	31		
400	1	48	—	—	—	—	—	—	—	—	2	29	—	—	2	58	5	59	4	32	0	14	46		
300	—	—	—	—	—	—	—	—	—	—	1	39	1	27	2	70	3	83	3	41	0	10	58		
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

Notes: n1, n2, . . . etc = Number of occurrence of wind direction from the specified ranges.

(ff)m = mean scalar wind speed (regardless of direction).

N = Total number of observations from all directions including calms.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Matruh Aerodrome—April 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000–360													Calm	Total No. of obs. N	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						
	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					
Surface...	8	12	—	—	—	—	1	10	1	14	2	16	—	—	3	10	1	20	3	5	3	16	6	13	2	20	11
1000 ...	8	12	—	—	1	5	—	—	—	—	2	16	—	—	3	10	1	20	2	7	3	16	5	13	0	25	12
850 ...	3	13	1	12	—	—	—	—	—	—	—	—	—	2	6	3	27	4	22	3	14	6	16	1	23	16	
700 ...	2	10	1	4	—	—	—	—	—	—	—	—	—	1	11	2	36	5	34	6	28	1	19	0	18	26	
600 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	34	4	38	3	37	4	12	0	15	30		
500 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	1	13	1	51	2	30	5	28	2	21	0	11	28	
400 ...	—	—	—	—	—	—	—	—	—	—	1	28	—	—	—	—	1	33	4	45	2	25	0	8	37		
300 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
200 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
150 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
100 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
60 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

Notes : n1, n2, . . . , etc. = Number of occurrence of wind direction from the specified ranges.

(ff)m = mean scalar wind speed (regardless of direction).

N = Total number of observations from all directions including calms.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Aswan Aerodrome April 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000—360													Calm	Total No. of 3bs N	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					
	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				
Surface	6	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	7	11	18	4		
1000	5	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	7	4	10	6		
850	9	17	4	16	3	9	—	—	—	2	10	—	1	9	—	—	—	—	1	4	2	24	1	23	14	
700	6	17	3	11	—	—	3	13	—	1	8	—	—	—	1	18	6	22	3	17	1	24	16	—		
600	4	37	1	9	—	—	3	22	1	12	—	2	28	1	30	—	—	3	26	2	20	1	18	24	—	
500	3	41	5	13	—	—	—	—	1	12	—	2	42	2	43	—	5	28	4	22	2	22	0	24	28	
400	6	70	1	28	—	—	—	—	—	—	2	40	1	26	—	—	3	64	4	31	2	34	0	19	49	
300	5	62	1	23	—	—	—	—	—	—	—	—	—	3	70	—	—	—	—	—	—	0	9	61		
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			

Notes : n1 n2, etc. = Number of occurrence of wind direction from the specified ranges.

(ff)m = mean scalar wind speed (regardless of direction).

N = Total Number of observations from all directions including calms.

TABLE F.—Miscellaneous Data
Cairo Aerodrome—April 1956

Day	Time UT.	Freezing level						Highest Wind Speed				Tropopause		
		Lowest			Highest			Height	PPPP	ddd	fff	Height	PPPP	TTT
	GGgg	Height	PPPP	TdTdTd	Height	PPPP	TdTdTd	Height	PPPP	ddd	fff	Height	PPPP	TTT
1	1515	3570	665	619	—	—	—	2640	748	300	027	16200	104	190
2	1545	3490	668	662	—	—	—	—	—	—	—	15600	114	120
3	1430	3360	674	—	—	—	—	—	—	—	—	—	—	—
4	1500	2790	724	—	—	—	—	—	—	—	—	—	—	—
5	1500	3590	660	628	—	—	—	—	—	—	—	—	—	—
6	1545	4050	625	655	—	—	—	—	—	—	—	—	—	—
7	1600	4040	630	570	—	—	—	—	—	—	—	12650	186	126
8	1545	3950	630	546	—	—	—	—	—	—	—	14960	127	162
9	1430	3540	662	—	—	—	—	—	—	—	—	10630	244	040
10	1430	3620	656	526	—	—	—	—	—	—	—	—	—	—
11	1500	2900	716	—	—	—	—	—	—	—	—	10680	248	010
12	1400	3560	664	—	—	—	—	8010	362	270	059	—	—	—
13	1400	3600	658	—	—	—	—	—	—	—	—	—	—	—
14	1420	3700	650	—	—	—	—	8400	348	210	027	—	—	—
15	1400	3230	690	644	—	—	—	—	—	—	—	—	—	—
16	1400	3520	678	644	—	—	—	—	—	—	—	—	—	—
17	1400	3880	640	—	—	—	—	9300	310	330	036	—	—	—
18	1400	3870	612	—	—	—	—	9100	318	320	044	10900	244	015
19	1400	3950	628	—	—	—	—	—	—	210	042	—	—	—
20	1400	3750	648	—	—	—	—	—	—	—	—	10593	250	030
21	1400	4200	616	—	—	—	—	10800	248	320	069	11300	228	043
22	1400	4500	594	—	—	—	—	10900	254	340	051	—	—	—
23	1600	4620	582	—	—	—	—	10300	—	350	056	—	—	—
24	1400	4780	585	—	—	—	—	7800	—	290	046	—	—	—
25	1400	4260	608	654	—	—	—	6100	395	270	040	—	—	—
26	1450	4420	599	655	—	—	—	9000	338	300	076	—	—	—
27	1400	4310	608	702	—	—	—	9100	326	270	083	—	—	—
28	1400	4430	599	—	—	—	—	11100	252	290	108	12580	182	094
29	1500	3960	632	—	—	—	—	9200	302	310	078	—	—	—
30	1415	3740	604	—	—	—	—	7500	402	290	048	14630	168	110
Highest...	...	—	4780	585	—	—	—	11100	252	290	108	16200	104	190
Lowest ...	...	—	2790	724	—	—	—	2640, 8400	748, 348	300, 210	027	10593	250	030

TABLE F.—Miscellaneous Data

Mersa Matruh Aerodrome—April 1956

Day	Time UT.	Freezing level							Highest Wind Speed				Tropopause		
		Lowest			Highest			Height	PPPP	ddd	fff	Height	PPPP	TTT	
	GGgg	Height	PPPP	T _d	T _d	T _d	Height	PPPP	T _d	T _d	Height	PPPP	TTT		
1	0600	3450	0672	590	—	—	—	—	—	—	—	—	—	—	
2	0500	3500	0678	592	—	—	—	—	—	—	—	10480	0250	081	
3	0400	3000	0706	—	—	—	—	5200	0533	270	050	10800	0240	043	
4	0500	2800	0720	—	—	—	—	8000	—	310	085	—	—	—	
5	0500	3280	0687	—	—	—	—	—	—	—	—	—	—	—	
6	1400	3800	0637	540	—	—	—	—	—	—	—	—	—	—	
7	0400	3570	0657	567	—	—	—	4900	0555	240	060	—	—	—	
8	0400	3740	0652	539	—	—	—	—	—	—	—	—	—	—	
9	0400	2810	0722	558	—	—	—	6600	0444	260	068	11550	0213	028	
10	0500	2200	0777	—	—	—	—	—	—	—	—	10700	0240	065	
11	0500	2320	0770	560	2770	0727	—	—	—	—	—	—	—	—	
12	0600	1520	0850	514	3020	0706	—	—	—	—	—	—	—	—	
13	0500	2860	0717	—	—	—	—	—	—	—	—	—	—	—	
14	0500	2830	0722	—	—	—	—	—	—	—	—	—	—	—	
15	0400	2780	0725	—	—	—	—	—	—	—	—	10120	0262	055	
16	0400	3000	0706	—	—	—	—	10000	—	340	061	—	—	—	
17	0400	3600	0660	—	—	—	—	—	—	—	—	—	—	—	
18	0400	3840	0640	—	—	—	—	13700	0153	270	059	12040	0200	135	
19	0400	3560	0657	—	—	—	—	12500	0184	210	045	11800	0205	118	
20	0400	2770	0724	—	—	—	—	13800	0144	290	038	10340	0250	100	
21	0400	2570	0660	—	—	—	—	—	—	—	—	12260	0194	122	
22	0400	3950	0633	—	—	—	—	—	—	—	—	—	—	—	
23	0400	3900	0640	—	—	—	—	11800	—	320	076	—	—	—	
24	0400	4090	0623	—	—	—	—	11300	—	280	068	—	—	—	
25	0400	3960	0630	706	—	—	—	2800	0725	260	035	11700	0213	062	
26	0400	4060	0623	—	—	—	—	—	—	—	—	—	—	—	
27	0400	3270	0680	—	—	—	—	3070	0700	260	052	—	—	—	
28	0400	3940	0630	—	—	—	—	—	—	—	—	—	—	—	
29	0400	3800	0640	—	—	—	—	—	—	—	—	—	—	—	
30	0400	3670	0650	—	—	—	—	—	—	—	—	—	—	—	
Highest... ...	—	4090	0623	—	—	—	—	8000	—	310	085	12260	0194	122	
Lowest	—	1520	0850	514	—	—	—	2800	0725	260	035	10120	0262	055	

Notes.—GGgg is the actual time of release of balloon to the nearest minute universal (time).

PPPP is the pressure in whole millibars (eg. 1027.7 m.b. PPPP 1028).

TTT and TdTdTd are the temperature and dew point in tenths of degrees celsuis (centigrade) eg. 28.1 °C. will be entered 281. For temperature below 0 °C. add 50 to the absolute value of temperature eg. -0.7 °C. will be entered 507.

ddd is wind direction in whole degrees east of the true north. For calm winds enter 000 for ddd and fff.

fff is Wind speed in Knots. Heights are in geopotential metres above M.S.L.

Highest and Lowest values correspond to available date.

AGRO-METEOROLOGICAL DATA—GIZA

TABLE G.—**Air Temperature, Humidity, Rainfall, Sunshine Duration,
Wind Speed and Piche Evaporation**

April 1956

Max. temp. at 2 metres	... ... ... ... ... ... ... ...	37.6 °C on 27
Min. temp. at 2 metres	... ... ... ... ... ... ... ...	5.7 °C on 1
Min. temp. at 5 cms. over dry soil.	... ... ... ... ... ... ... ...	2.8 °C on 18
Min. temp. at 5 cms. over wet soil.	... ... ... ... ... ... ... ...	4.1 °C on 1
Min. temp. at 5 cms. over grass.	... ... ... ... ... ... ... ...	1.7 °C on 18
Min. Relative Humidity at 2 metres	... ... ... ... ... ... ... ...	5% on 18
Max. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	12.1 on 9 & 24
Min. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	1.7 on 18
Mean daily temp. at 2 metres	... ... ... ... ... ... ... ...	19.4 °C.
Mean day-time temp. at 2 metres	... ... ... ... ... ... ... ...	22.6 °C.
Mean night-time temp. at 2 metres	... ... ... ... ... ... ... ...	16.4 °C.
Mean Relative Humidity at 2 metres	... ... ... ... ... ... ... ...	54%
Mean Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	8.0 mm
Mean day-time wind speed at 2 metres	... ... ... ... ... ... ... ...	37.6 m/sec.
Mean night-time wind speed at 2 metres	... ... ... ... ... ... ... ...	21.4 m/sec.
Mean Piche Evaporation at 120 cm.	... ... ... ... ... ... ... ...	14.9 mm.
Total Rainfall	... ... ... ... ... ... ... ...	trace.
Sunshine-Duration	... ... ... ... ... ... ... ...	286 hours (75% out of possible hours.)

TABLE H.—Extreme Soil Temperature—Giza

April 1956

Extreme Soil Temp.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Depth in cm.	0.3		5		10		20		50		100		200	
Dry Soil ...	61.0	6.0	36.5	15.5	31.0	17.5	28.0	19.5	25.5	20.5	23.5	21.0	22.0	21.0
Wet Soil ...	49.5	6.0	31.5	10.0	27.5	12.0	24.5	14.5	21.5	16.5	20.0	17.5	19.0	18.0
Grass	34.5	8.5	27.5	12.0	26.5	13.5	23.0	15.0	21.0	17.0	19.5	18.0	—	—

TABLE I.—Amount of Solar + Sky Radiation in Gram per cm.²—Giza

April 1956

Solar & Sky Radiation.	DATE															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	655	608	607	606	682	557	382	505	564	360	664	729	745	740	699	690
DATE																
Solar & Sky Radiation.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
	692	792	717	695	713	717	715	735	714	716	657	754	734	714	—	—

Monthly Total = 19858

TABLE J.—Duration in Hours of Temperature at 2 Metres Height Above Certain Levels in °C.—Giza

April 1956

	DATE															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Duration above 0°C.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
" " 5°C	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
" " 10°C	22	22	24	24	24	24	24	24	24	24	24	24	24	24	24	24
" " 15°C	14	17	21	14	16	24	24	22	8	9	12	14	13	14	17	15
" " 20°C	10	15	6	6	14	17	13	10	9	0	5	6	7	8	9	10
" " 25°C	4	10	0	0	8	15	1	0	2	—	0	0	0	4	5	8
" " 30°C	0	5	—	—	1	8	0	—	0	—	—	—	—	0	0	5
" " 35°C	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
" " 40°C	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

NOTES

TABLE G.

(a) Air temperature and humidity are measured by ventilated dry and wet-bulb thermometers freely exposed in Louvered Stevenson Screen of the Egyptian type. Thermometer bulbs are at 210 cms. above ground (approximately 2m.) Maximum (mercury) and minimum (alcohol) thermometers are exposed in the same screen for the 2m values. The minimum thermometers for the 5cm heights are of the alcohol type freely exposed in the open air on wood supports.

The daily mean values of air temperatures are computed from the formula 1/4 (values at 0800 + 14000 + 2000 + Minimum).

The day-time mean air temperature is computed graphically from the record of a thermograph exposed in the screen, for the period sunrise to sunset. The night mean is similarly obtained for the period sunset to sunrise.

(b) In computing relative humidity Aspirations—Psychrometer tables of the Preussischen Meteorological Institut - 1927 are used, corrections for wind speed are applied. The mean relative humidity is computed from the formula 1/2 (values at 0800 + 1400 - Local time).

(c) Absolute humidity is expressed by vapour pressure in units of mms. of mercury. The mean value is calculated from the formula 1/3 (values at 0800 + 1400 + 2000 L.T.).

(d) Rainfall is measured by ordinary rain gauge; the height of its rim is 40 cm. above ground. Tr. stands for trace (i.e amounts of rain less than 0.1 mm.).

(e) The mean wind speed by day is computed from the total run of air during the period 0800 to 1800 L.T., as indicated by the counter of an ordinary cup anemometer freely exposed at a height of 2 metres above ground.

The mean wind speed at night is similarly computed for the period 1800 to 0800 L.T.

(f) Evaporation is measured by a piche tube freely exposed in the open air ; the evaporation disc has a diameter of 3cms, white in colour and at a height of 120 cms, above dry soil.

The Piche is read at 0800 L.T. daily in millimetres, the daily values given are for the 24 hours beginning at 0800 L.T.

TABLE II.

Soil temperature is measured by mercury thermometers, the values given are to be nearest $\frac{1}{2}$ °C.

TABLE I.

Instrument used for the measurement of solar and sky radiation (global radiation) is the (Rabitzch Actinograph).

Cairo, 11/9/1956.

M. F. TAHA
Director General
Meteorological Department



REPUBLIC OF EGYPT

MINISTRY OF WAR

Egypt, METEOROLOGICAL DEPARTMENT

May 1956

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MINISTRY OF WAR

GENERAL SUMMARY OF WEATHER CONDITIONS

MAY 1956

Mild and rather cold generally apart from an intense heat wave near the end of the month.

The main features of the month were :

- a) Light showers Lower Egypt on 3rd and 4th, Thundery Port Said area.
- b) Occasional Sandstorms over the Western desert on 25th, 26th.
- c) Fresh to strong winds—Red Sea Coasts most of the month.

General discription of weather:

For the month as a whole the weather was mild, rather cold at times excluding a heat wave persisting over Upper Egypt during the 3d week and another prevailing all over the Country within the last week.

The barometric pressure was generally above normal while maximum temperature, minimum temperature and rainfall were below their normals.

The mean relative humidity was below normal at Alexandria (Kom-El-Nadora), Cairo (Ezbekia) and Giza ; above normal at Helwan.

Pressure and Wind :

The month started with a complex low occupying Greece, Asia Minor and Black Sea, together with an anticyclone extending from the British Isles SE wards up to the Western Desert of Egypt. Till the 4th. this low pressure system filled up gradually and amalgamated with western trough of the Iraq monsoon. The new pressure distribution prevailed generally through the rest of the month, though three minor depressions developed over Upper and middle Egypt on the 2nd., 11th. and 16th. Within the second half of this month the Sudan Monsoon showed frequent northward and southward oscillations. Accordingly the barometric pressure over Egypt was changeable, though it was above normal most of the month.

Light to moderate N/NE winds prevailed generally all over Egypt blowing temporarily from the SE and S in advance of the shallow minor depression over Upper Egypt. Fresh/Strong winds predominated over Red Sea Coasts most of the month, and over Western Coast most of the 1st and 3rd weeks. Gales were reported at Sallum on the 3rd, at Hurghada on the 3d, 15th, 18th, and 19th.

Temperature :

Three heat waves were marked during this month. The 1st heat wave was light and of short duration, (between 11th and 13th) all over Egypt. The second heat wave was experienced over Lower and Middle Egypt between 15th and 17th, over Upper Egypt between 14th. and 18th. It was light Lower Egypt, and extensive both Middle & Upper Egypt. Minya reported a maximum temperature of 39.5°C on 16th (i.e. 5.5°C above normal). The third heat wave was of long duration (Between 23rd & 27th), weak Lower Egypt, strong both Middle & Upper Egypt. On the 26th Aswan reported a maximum temperature of 46°C (i. e. 7°C above normal).

Apart from these specified heat periods maximum temperatures were rather below normal. Generally minimum temperatures were slightly above normal Delta coasts and below normal otherwise.

Precipitation.

Rainfall was light and confined to the northern coast. Light showers were reported over the west coast on the 3rd, Delta and Sina Coastal areas 4th and 6th.

Miscellaneous Weather Phenomena.

- (1) Thundery activity was reported at Port Said on the 4th.
- (2) Sandstorms were experienced at Hurghada on the 18th. and at scattered localities of the Western districts on the 1st. 3rd. 12th. 18th. 25th. and 26th.
- (3) Fog developed over Mersa Matruh on the 10th, over El-Arish on the 17th and over Tor on 19th and 26th, but was frequent at Helwan (10 days out of the month).

TABLE A.—Condensed Climatological Data

The deviations of meteorological elements from their normals for various districts are shown in the following table.

May 1956

DISTRICTS	M.S.L. Barometric Pressure 0600 U.T.		Temperature						Rainfall	
			Maximum temp.		Minimum temp.		Max. + Min. 2			
	1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Dif. F. Nor.
1. Mediterranean	1015.9	+2.5	24.7	-1.4	17.0	-1.5	20.8	-1.4	1	-1
2 Lower Egypt	1016.0	+2.2	29.9	-1.5	13.8	-1.5	21.8	-1.5	0	-3
3 Middle Egypt	1015.8	+2.7	30.8	-2.0	16.0	-0.8	23.4	-1.4	0	-2
4 Upper Egypt	1013.4	+1.9	34.8	-1.6	16.3	-2.2	25.6	-1.9	0	-1
5 Western Desert	1015.4	+2.4	33.2	-2.3	16.8	-1.2	25.0	-1.8	0	0
6 Red Sea	1012.6	+1.4	30.3	-0.5	18.8	-1.8	24.6	-1.2	0	0

TABLE B.—Climatological Data

May 1956

Stations	M.S.L. Pressure 0600 U.T.		TEMPERATURE								Rainfall			
			Maximum. Temp.				Minimum Temp.							
	Mean	Dev. from Normal	Mean	Dev. from Normal	Absolute Max.	Date	Mean	Dev. from Normal	Absolute Minum	Date	Total Rainfall	* Number of days of rain	Max. fall in one day	Date
	mb.	mb.	°C	°C	°C		°C	°C	°C		m.m.		m.m.	
Salloum ...	1017.4	—	25.1	—	36.4	26	16.0	—	11.9	5	0.9	1	0.9	3
Sidi Barrani ...	1016.9	—	23.3	—	33.9	24	14.8	—	10.0	9	2.8	1	2.8	3
Mer a Matruh (A)	1017.0	+ 3.2	24.3	—	33.9	26	13.6	—	9.4	10	2.6	1	2.6	3
El Dabaa ...	1016.7	—	24.2	—	30.8	26	14.4	—	9.9	11	0	0	0	—
Kom-el-Nadora ...	1016.6	+ 2.8	24.3	-2.0	29.8	26	17.7	-0.3	15.2	1	dr.	1	dr.	4
Alexandria (A) ...	1016.1	—	24.2	—	29.6	26	16.8	—	12.6	12	0.3	2	0.3	4
Damietta ...	1015.7	+ 3.0	24.7	-1.6	31.3	26	14.8	-2.7	9.5	5	0.3	1	0.3	4
Port-Said (A) ...	1015.7	+ 2.5	25.1	-0.5	30.1	26	18.6	-1.3	15.0	3	dr.	1	dr.	4
El Arish ...	1014.7	+ 1.2	26.0	—	32.1	13	14.4	—	11.0	1	1.2	2	1.1	4
Damanhour ...	1016.2	+ 2.3	29.1	-1.1	36.8	25	14.4	-1.0	11.4	7	0	0	0	—
Mansura ...	1015.8	+ 2.3	30.0	-1.5	36.6	26	14.7	-1.2	10.5	5	dr.	1	dr.	4
Tanta ...	1016.3	+ 2.4	30.4	-1.9	37.0	26	12.3	-2.6	9.0	6,7	0	0	0	—
Shebin El Kom ...	1015.8	+ 2.0	29.8	—	36.2	26	15.2	—	12.1	7	0	0	0	—
Zagazig ...	1016.0	+ 2.1	30.2	-1.5	36.5	26	13.7	-1.2	10.5	7	0	0	0	—
Ismailia ...	1016.0	—	30.7	—	36.2	25	15.7	—	12.8	5	0	0	0	—
Cairo (A) ...	1015.6	—	30.7	—	36.7	26	15.8	—	12.3	7	0	0	0	—
Almaza (A) ...	1015.6	+ 2.5	30.7	-2.5	36.9	25	16.0	-2.0	13.0	3	0	0	0	—
Ezbekiya ...	1016.1	+ 2.9	31.2	-1.6	37.5	24	16.7	-0.4	14.0	3,7	0	0	0	—
Giza ...	1015.9	+ 2.7	30.7	-1.8	36.8	25	14.2	-0.4	10.0	3	0	0	0	—
Helwan ...	1015.8	+ 2.8	30.4	-2.2	36.9	16	17.0	-0.5	12.4	7	0	0	0	—
Fayoum ...	1015.8	+ 2.6	32.1	-2.0	38.4	16	15.9	-1.1	11.2	5	0	0	0	—
Minya (A) ...	1014.8	+ 1.8	32.9	-2.6	39.5	16	14.9	-1.9	12.2	2	0	0	0	—
Ayyout (A) ...	1014.4	+ 3.2	34.7	-2.4	43.3	26	16.8	-3.0	12.9	7	0	0	0	—
Nag-Hamadi ...	1012.8	+ 1.8	36.0	-0.8	43.8	25	17.1	-1.5	12.1	5	0	0	0	—
Qena ...	1012.6	+ 1.8	38.4	0.0	44.3	26,28	16.6	-3.8	10.6	5	0	0	0	—
Luxor (A) ...	1012.0	+ 1.4	37.6	—	44.6	26	17.4	—	11.1	9	0	0	0	—
Aswan ...	1011.3	+ 0.6	38.7	—	46.6	26	20.6	—	14.6	9	0	0	0	—
Siwa ...	1017.6	+ 3.2	32.1	-1.9	42.6	25	15.5	-0.4	10.0	5	0	0	0	—
Bahariya ...	1015.9	+ 2.1	32.6	-1.8	41.6	1	15.5	-1.5	10.0	3	0	0	0	—
Farafra ...	1017.7	—	32.9	—	42.5	1	15.6	—	7.7	5	0	0	0	—
Dakhla ...	1015.8	+ 3.4	34.2	—	41.8	25,27	18.9	—	13.3	5	0	0	0	—
Kharga ...	1012.2	+ 0.8	35.0	-3.1	42.2	25,26	19.5	-1.6	11.0	5	0	0	0	—
Suez ...	1015.7	+ 2.9	31.2	-1.2	37.0	16	15.2	-3.3	11.2	5	0	0	0	—
Tor ...	1011.6	+ 0.9	31.5	+0.5	43.5	26	19.8	-0.3	13.5	10	0	0	0	—
Hurghada ...	1011.8	+ 1.3	29.8	+0.8	36.7	17	18.8	-1.8	13.3	1	0	0	0	—
Quseir ...	1011.5	+ 0.8	28.6	-2.4	33.2	27	21.3	-2.1	16.0	4	0	0	0	—

* Drops are taken into consideration.

† More than 3 days.

TABLE C.—Miscellaneous Weather Phenomena

May 1956

Stations	NUMBER OF DAYS OF OCCURRENCE					
	Rain Showers	Thunder-storm	Fog	Mist Sandrising dustrising	Dust or Sand Storm	Gales
	(a)	(b)	(c)	(d)	(e)	(f)
Sallum	1	0	0	0	1	1
Sidi Barrani	1	0	1	0	1	0
Mar'a Matruh	1	0	1	0	1	0
Alexandria (A)	2	0	1	0	0	0
Port-Said (A)	1	1	0	1	0	0
El Arish	2	0	1	1	0	0
Cairo (A)	0	0	0	0	0	0
Almaza (A)	0	0	0	0	0	0
Minya (A)	0	0	0	0	0	0
Aisut (A)	0	0	0	0	0	0
Luxor (A)	0	0	0	0	0	0
Siwa	0	0	0	0	0	0
Hunglada	0	0	0	0	1	4
Aswan	—	—	—	—	—	—

(a) Number of days in which rainfall is 0.1 mm. or more within 24 hours from 0600 U.T. to 0600 U.T. next day.

(b) Number of days of thunderstorm heard within station.

(c) Number of days of Fog in which visibility is less than 1000 metres.

(d) Number of days of mist or sandrising or dustrising in which visibility is more than 1000 metres and less than 2000 metres.

(e) Number of days of sandstorms in which visibility is less than 1000 metres.

(f) Number of days of gales in which wind velocity is equal or more than 34 knots.

UPPER AIR DATA

TABLE D.—Radio sonde Data. Average Monthly Values.

Matruh Aerodrome May, 1956

Pressure Surface mb.	Heights of pressure Surfaces				Temperature °C			
	Readings at 0.400 UT.		Highest	Lowest	Readings at 0.400 UT		Highest	Lowest
	n	Mean			n	Mean		
Surface	31	1014	1019	1008	31	17.4	23.3	13.4
1000	31	148	188	98	31	17.1	24.0	12.7
850	31	1525	1572	1447	31	13.0	24.4	5.1
700	31	3131	3229	2997	31	4.4	10.9	— 4.3
600	31	4370	4620	4193	31	— 3.7	— 1.2	— 11.6
500	31	5770	5920	5560	31	— 13.0	— 7.6	— 21.4
400	31	7439	7604	7174	31	— 24.8	— 19.0	— 31.6
300	23	9480	9653	9161	23	— 39.9	— 34.2	— 47.4
200	15	12178	12349	11830	15	— 53.5	— 50.8	— 55.6
150	9	14046	14167	13933	9	— 60.2	— 57.0	— 62.0
100	6	16559	16634	16479	6	— 64.7	— 60.4	— 67.7
60	—	—	—	—	—	—	—	—

n— Number of observations of specified pressure surfaces.

UPPER AIR DATA**TABLE D.—Radiosonde Data. Average Monthly Values****Cairo Aerodrome May, 1956**

Pressure Surface mb.	Heights of pressure Surfaces				Temperattre C°			
	Readings at 1500 UT.		Highest	Lowest	Readings at 1500 UT.		Highest	Lowest
	n	Mean			n	Highest		
Surface	30	1007	1011	1003	30	29.5	36.5	24.0
1000	30	128	167	96	30	28.7	35.9	19.9
850	30	1538	1560	1495	30	16.1	24.7	9.0
700	30	3157	3224	3071	30	6.6	13.1	— 4.1
600	30	4405	4497	4276	30	— 6.6	4.2	— 10.1
500	30	5835	5948	5659	30	— 10.3	— 5.8	— 17.0
400	30	7513	7654	7306	30	— 22.5	— 19.1	— 28.4
300	30	9564	9724	9343	30	— 36.4	— 30.1	— 40.9
200	26	12294	12450	12063	26	— 51.5	— 46.4	— 58.2
150	23	14121	14280	13894	23	— 58.2	— 50.9	— 63.2
100	21	16630	16740	16414	21	— 66.6	— 59.3	— 71.0
60	9	19722	19823	19617	9	— 62.1	— 58.8	— 66.2

n = Number of observations of specified pressure surfaces.

UPPER AIR DATA**TABLE D.— Radiosonde Data. Average Monthly Valves****Aswan Aerodrome. May 1956**

Pressure Surface mb.	Hights of pressure surfaces G. P. M.				Temperature °C			
	Readings at 0300 UT.		Highest	Lowest	Readings at 0300 UT.		Highest	Lowest
	n.	Mean			n.	Mean		
Surface								
1000	28	0999	1,004	0994	28	24.3	29.5	18.0
850	9	150	169	135	9	22.4	28.1	18.0
700	28	1538	1576	1507	28	20.5	8.0	10.5
600	28	3186	3254	3123	28	11.4	15.5	07.8
500	27	4454	4543	4360	27	02.3	07.0	—03.0
400	27	5886	6025	5776	27	—07.8	00.2	—14.2
300	27	7595	7765	7437	27	—20.0	—15.0	—27.0
200	24	9663	9880	9450	23	—33.8	—27.6	—41.5
150	19	12383	12690	12091	19	—52.1	—44.5	—59.0
100	7	14060	14560	13110	7	—62.2	—55.0	—73.0
60	2	16975	17030	16920	1	—70.0	(—70.0)	—70.0

n = Number of observations of specified pressures surfaces

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
CAIRO Aerodrome—May 1956

Constant Pressure	Wind between specified ranges of direction 000°–360°												Calm	Total No. of obs.	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°				
Surfaces mb.	n	(ft) m	n	(ft) m	n	(ft) m	n	(ft) m	n	(ft) m	n	(ft) m	n	(ft) m	n	(ft) m	n	(ft) m	n	(ft) m	n	(ft) m	n	(ft) m	N		
Surface	5	12	6	11	6	13	—	—	—	—	—	—	—	—	—	—	—	—	2	14	2	18	9	11	0	30	12
1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
850	10	14	4	13	1	12	—	—	—	—	—	—	1	4	1	24	1	17	2	16	3	17	5	14	0	28	14
700	4	21	3	21	—	—	—	—	—	—	—	—	—	—	—	6	26	9	21	2	21	4	18	0	28	22	
600	3	20	1	7	—	—	—	—	—	—	—	—	—	1	10	4	32	9	26	5	26	3	19	0	26	24	
500	4	13	1	11	—	—	—	—	—	—	—	—	—	—	—	4	31	8	43	6	24	1	34	0	24	30	
400	2	12	2	18	—	—	—	—	—	—	—	—	—	—	—	5	41	8	46	2	46	3	22	0	22	36	
300	2	10	1	18	—	—	—	—	—	—	—	—	—	—	—	5	44	7	49	5	39	1	21	0	21	38	
200	—	—	—	—	—	1	4	—	—	—	—	1	2	—	—	7	65	6	61	4	30	1	11	0	20	49	
150	—	—	—	—	—	—	—	—	—	—	—	—	—	1	5	8	65	4	42	1	71	—	—	0	14	55	
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	41	2	10	1	48	—	—	0	9	35		
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	—	—		

Notes:— n¹ : n², ..., etc. = Number occurrence of wind direction from the specified ranges.

(ft) = Mean scalar wind speed (regardless of direction).

F = Total number of observations from all directions including calms.

TABLE E.—Rawin Data

Frequency wind ranges and mean scalar wind speeds
Matruh Aerodrome—May 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000—360													Calm	Total No. of Obs. N	Mean Scalar wind speed										
	345—114		015—044		045—074		075—104		105—134		135—164		165—194		195—224		225—254		255—284		285—314					
	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				
Surface ...	7	9	2	5	2	12	1	5	1	9	—	—	—	—	—	1	12	4	20	7	12	6	13	0	31	12
1000	7	9	2	5	2	12	1	8	1	9	—	—	—	—	—	1	12	4	20	7	12	6	13	0	31	12
850	10	18	3	12	1	15	—	—	—	—	—	—	—	2	12	1	23	2	28	4	26	8	15	0	31	18
700	3	21	2	30	—	—	—	—	—	—	—	—	—	3	25	4	24	7	28	9	21	0	28	24		
600	3	20	1	28	—	—	—	—	—	—	—	—	—	3	37	8	32	7	26	5	19	0	27	27		
500	2	21	—	—	—	—	—	—	—	—	—	—	—	3	31	7	43	6	30	7	20	0	25	30		
400	1	12	1	10	—	—	—	—	—	—	—	—	—	2	43	5	52	7	38	6	26	0	22	36		
300	2	14	1	10	—	—	—	—	—	—	—	—	—	—	2	25	4	61	4	26	0	13	34			
200	2	16	—	—	—	—	—	—	—	—	—	—	—	—	2	40	2	44	2	28	0	8	32			
150	1	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	13			
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			

Notes : n1: n2,....., etc. = Number of occurrence of wind direction from the specified ranges.

(ff)m = mean scalar wind speed (regardless of direction).

N = Total number of observations from all directions including calms.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Aswan Aerodrome—May 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000—360													Calm	Total No. of Obs. N	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					
	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				
Surface	14	10	1	19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	23	5	21	9		
1000	6	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	8	9		
850	6	14	5	11	1	10	—	—	—	—	—	—	—	—	1	12	2	18	1	14	5	17	0	21	13	
700	—	—	1	7	1	13	—	—	—	—	—	1	7	2	10	4	18	5	22	4	13	3	11	0	21	15
600	—	—	2	6	—	—	—	—	1	3	—	—	—	—	5	23	7	23	1	6	—	—	0	16	19	
500	—	—	2	14	—	—	—	—	1	11	—	—	3	13	6	39	5	25	2	24	1	17	0	20	25	
400	—	—	—	—	—	—	—	—	—	—	1	37	—	—	6	33	2	32	—	—	—	—	0	9	33	
300	—	—	—	—	—	—	—	—	—	—	—	—	2	26	—	—	1	16	—	—	—	—	0	3	26	
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

Notes : n1, n2, ..., etc. = Number of occurrence of wind direction from the specified ranges.

(ff)m = mean scalar wind speed (regardless of direction).

N = Total number of observation from all directions including calms.

TABLE F.—Miscellaneous Data

Cairo Aerodrome—May 1956

Day	Time UT.	Freezing level							Highest Wind Speed				Tropopause		
		Lowest			Highest			Height	PPPP	ddd	fff	Height	PPP	TTT	
		GGgg	Height	PPPP	T _d	T _d	T _d								
1	1430	3780	612	—	—	—	—	7470	400	270	075	—	—	—	
2	1415	3600	657	615	—	—	—	5800	496	250	070	11100	236	003	
3	1400	2940	712	644	—	—	—	11080	240	270	132	—	—	—	
4	1400	2410	757	521	—	—	—	3000	706	260	026	—	—	—	
5	1400	3620	658	648	—	—	—	3800	646	250	045	15900	114	156	
6	1400	4060	626	—	—	—	—	3930	637	280	039	—	—	—	
7	1400	3690	654	—	—	—	—	4600	582	290	055	14970	130	106	
8	1400	3510	665	—	—	—	—	12250	190	290	104	10800	243	497	
9	1400	4280	608	—	—	—	—	—	—	—	—	12850	157	048	
10	1400	4620	585	—	—	—	—	9840	184	270	084	12400	198	078	
11	1400	3490	670	—	4010	627	—	6280	470	260	097	11380	230	483	
12	1400	4160	616	—	—	—	—	14000	154	240	116	11310	232	476	
13	1400	5070	635	—	—	—	—	14130	150	240	078	12040	208	520	
14	1400	5060	556	672	—	—	—	13180	177	270	073	14710	136	140	
15	1400	4700	582	648	—	—	—	11350	236	260	091	12980	310	842	
16	1400	4380	604	692	—	—	—	12300	337	240	099	—	—	—	
17	1400	4180	617	596	—	—	—	10800	250	250	080	—	—	—	
18	1400	4370	601	—	—	—	—	—	—	—	—	14930	132	176	
19	1400	4190	615	—	—	—	—	12050	207	260	098	11690	218	002	
20	1500	4090	623	—	—	—	—	13100	164	290	068	11400	225	024	
21	1500	4630	584	—	—	—	—	16700	100	290	048	11300	230	042	
22	1600	4580	588	—	—	—	—	14600	138	180	022	11220	234	035	
23	1500	4920	566	640	—	—	—	2400	770	030	036	11560	326	033	
24	1600	4820	572	682	—	—	—	3200	700	010	032	—	—	—	
25	1500	5080	557	—	—	—	—	3050	714	010	037	15960	114	190	
26	1500	4920	566	—	—	—	—	3700	658	360	028	17430	088	210	
27	1500	4780	574	—	—	—	—	11800	216	290	056	12200	202	082	
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
29	1500	4380	600	—	—	—	—	12400	194	230	086	14900	132	136	
30	1515	4420	600	—	—	—	—	14800	136	240	093	15070	130	136	
31	1500	4460	594	—	—	—	—	11200	358	220	053	—	—	—	
Highest	...	—	5080	557	—	4010	627	—	11080	240	270	132	17430	088	210
Lowest	...	—	2410	757	521	4010	627	—	14600	138	180	022	10800	243	497

Notes.—GGgg is the actual time of release of balloon to the nearest minute (universal time).

PPPP is the pressure in whole millibars (eg. 1027·7 m.b. PPPP 1028).

TTT and T_dT_dT_d are the temperature and dew point in tenths of degrees celsuis (centigrade) eg. 28.1°C. will be entered 281. For temperature below 0°C. add 50 to the absolute value of temperature eg.—0.7°C. will be entered 507.

ddd is wind direction in whole degrees east of the true north. For calm winds enter 000 for ddd and fff.

fff is wind speed in knots. Heights are in geopotential metres above M.S.L.

Highest and Lowest values correspond to available date.

TABLE F.—Miscellaneous Data

Mersa Matroh Aerodrome—May 1956

Day	Time UT.	Freezing Level								Highest Wind Speed					Tropopause		
		Lowest				Highest				Highest Wind Speed							
		GGgg	Height	PPPP	T _d T _d T _d	Height	PPPP	T _d T _d T _d	Height	PPPP	ddd	fff	Height	PPP	TTT		
1	0400	4360	0604	—	—	—	—	—	4020	600	250	040	—	280	935		
2	0400	3730	0645	—	—	—	—	—	3000	706	290	035	—	330	870		
3	0400	2560	0740	—	—	—	—	—	9190	—	270	067	—	—	—		
4	0400	2100	0782	—	—	—	—	—	2160	779	300	038	—	250	990		
5	0400	2360	0763	—	—	—	—	—	6120	536	270	052	—	—	—		
6	0400	2550	0750	—	—	—	—	—	8580	—	280	083	—	—	—		
7	0400	2950	0713	—	—	—	—	—	9180	309	290	086	8,300	350	850		
8	0400	3600	0662	—	—	—	—	—	6810	434	300	039	—	350	865		
9	0400	3900	0636	—	—	—	—	—	9210	—	290	063	—	—	—		
10	0400	3200	0690	—	—	—	—	—	7200	410	270	064	—	—	—		
11	0400	2930	0714	—	—	—	—	—	2130	788	340	023	—	327	905		
12	0400	2800	0718	—	—	—	—	—	5040	544	250	037	—	240	015		
13	0400	4120	0618	—	—	—	—	—	7000	425	260	035	10950	—	—		
14	0400	4120	0618	—	—	—	—	—	5400	474	245	022	—	—	—		
15	0400	3900	0640	—	—	—	—	—	7800	—	250	045	10750	314	875		
16	0400	4250	0613	—	—	—	—	—	06900	434	250	063	—	—	—		
17	0400	4200	0610	—	—	—	—	—	00390	970	325	006	—	—	—		
18	0400	3900	0636	—	—	—	—	—	04290	605	260	039	—	—	—		
19	0400	3820	0644	—	—	—	—	—	12300	194	270	038	10100	273	955		
20	0400	5110	0550	—	—	—	—	—	10440	—	315	070	—	—	—		
21	0400	3920	0634	—	—	—	—	—	12900	—	320	031	—	—	—		
22	0400	4330	0606	—	—	—	—	—	11550	120	340	037	10300	269	995		
23	0400	45 ⁰	0594	—	—	—	—	—	11100	238	355	035	11400	228	038		
24	0400	4480	0600	—	—	—	—	—	3570	670	010	032	09850	290	930		
25	0400	4600	0590	—	—	—	—	—	2640	752	350	028	10000	347	805		
26	0400	4500	0596	—	—	—	—	—	3000	710	350	027	10600	306	860		
27	0400	4130	0623	—	—	—	—	—	13500	162	280	048	11700	220	940		
28	0400	4130	0619	—	—	—	—	—	7290	410	325	048	10300	266	970		
29	0400	3820	0642	—	—	—	—	—	13050	170	260	044	8950	318	965		
30	0400	4120	0620	—	—	—	—	—	9900	282	335	038	7950	376	780		
31	0400	4240	0610	—	—	—	—	—	10350	—	315	064	—	300	890		
Highest	...	—	5110	0550	—	—	—	—	9180	309	290	086	11700	220	940		
Lowest	...	—	2100	0782	—	—	—	—	00390	970	325	006	7950	376	780		

Notes.—GGgg is the actual time of balloon to the nearest minute universal (time).

PPPP is the pressure in whole millibars (eg. 1027.7 m.b. 1028).

TTT and T_dT_dT_d are the temperature and dew point in tenths of degrees celsuis (centigrade) eg. 28.1 °C. will be entered 181. For temperature below 0 °C. add 50 to the absolute value of temperature eg. —0.7 °C. will be entered 507.

ddd is wind direction in whole degrees east of the true north. For calm wind enter 000 for ddd and fff.

fff is wind speed in Knots. Heights are in geopotential metres above M.S.L.

TABLE F.—Miscellaneous Data

Aswan Aerodrome—May 1956

Day	Time UT ₁	Freezing Level						Highest Wind Speed				Tropopause		
		Lowest			Highest			Height	PPPP	ddd	fff	Height	PPP	TTT
		GGgg	Height	PPPP	T _d T _a T _d	Height	PPPP	T _d T _a T _d						
1	0400	5900	0590	—	—	—	—	—	—	—	—	—	—	—
2	0400	—	—	—	—	—	—	9150	—	360	021	—	—	—
3	0400	4500	0595	—	—	—	—	5580	0520	260	063	—	—	—
4	0400	4550	0585	—	—	—	—	5700	0510	265	048	—	—	—
5	0400	5170	0550	—	—	—	—	7500	0412	235	046	—	—	—
6	0400	4600	0590	—	—	—	—	0480	0960	005	013	—	—	—
7	0400	5000	0560	—	—	—	—	5640	0495	250	065	—	—	—
8	0400	3780	0645	—	—	—	—	1930	0805	330	028	—	—	—
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	0409	4650	0582	—	—	—	—	6960	0440	245	027	—	—	—
12	0400	4550	0585	—	—	—	—	5700	0510	250	026	—	—	—
13	0400	4900	0560	—	—	—	—	9060	0330	235	024	—	—	—
14	0400	4650	0585	—	—	—	—	0600	0945	010	017	—	—	—
15	0400	6100	0495	—	—	—	—	7770	0700	260	024	—	—	—
16	0400	4500	0595	—	—	—	—	—	—	—	—	—	—	—
17	0400	5300	0545	—	—	—	—	—	—	—	—	—	—	—
18	0400	5100	0560	—	—	—	—	—	—	—	—	—	—	—
19	0400	4800	0575	—	—	—	—	—	—	—	—	—	—	—
20	0400	5550	0525	—	—	—	—	5640	0520	250	022	—	—	—
21	0400	4600	0695	—	—	—	—	8490	0365	240	032	—	—	—
22	0400	4200	0615	—	—	—	—	0570	0950	060	009	—	—	—
23	0400	4340	0605	—	—	—	—	9600	0310	210	040	—	—	—
24	0400	4600	0590	—	—	—	—	0480	0955	010	023	—	—	—
25	0400	4500	0600	—	—	—	—	7800	0395	100	033	—	—	—
26	0400	4800	0575	—	—	—	—	3480	0675	050	022	—	—	—
27	0400	4720	0578	—	—	—	—	1320	0870	045	032	—	—	—
28	0400	5100	0560	—	—	—	—	9600	0330	230	033	—	—	—
29	0400	5200	0550	—	—	—	—	—	—	—	—	—	—	—
30	0400	5200	0545	—	—	—	—	6750	0455	235	042	—	—	—
31	0400	—	—	—	—	—	—	—	—	—	—	—	—	—
Highest	...	...	6100	0495	—	—	—	5640	0495	250	065	—	—	—
Lowest	...	...	—	3780	0645	—	—	0570	0950	060	009	—	—	—

Notes.—GGgg is the actual time of release of balloon to the nearest minute universal (time).

PPPP is the pressure in whole millibars (eg. 1.027 m.b. PPPP 1028).

TTT and T_dT_aT_d are the temperature and dew point in tenths of degrees celsuis (centigrade) eg. 28.1 °C. will be entered 281. For temperature below 0 °C. add 50 to the absolute value of temperature eg. —8.7°C. will be entered 507.

ddd is wind direction in whole degrees east of the true north. For calm winds enter 000 for ddd and fff.

fff is wind speed in knot. Heights are in geopotential metres above M.S.L.

AGRO-METEOROLOGICAL DATA—GIZA

**TABLE G.—Air Temperature, Humidity, Rainfall, Sunshine Duration,
Wind Speed and Piche Evaporation**

May 1956

Max. temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	36.8 on 25
Min. temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	10.0 on 3
Min. temp. at 5 cms. over dry soil	...	...	...	...	...	...	...	...	...	...	...	5.7 on 3
Min. temp. at 5 cms. over wet soil	...	...	...	...	...	...	...	...	...	...	...	6.8 on 3
Min. temp. at 5 cms. over grass	...	...	...	...	...	...	...	...	...	...	...	4.6 on 5
Min. Relative Humidity at 2 metres	...	...	...	...	...	...	...	...	...	...	...	12% on 1
Max. Absolute Humidity at 2 metres	...	...	...	...	...	...	...	...	...	...	...	15.2 mm. on 24
Min. Absolute Humidity at 2 metres	...	...	...	...	...	...	...	...	...	...	...	4.4 mm. on 11
Mean daily temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	22.0
Mean day-time temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	24.9
Mean night-time temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	19.1
Mean Relative Humidity at 2 metres	...	...	...	...	...	...	...	...	...	...	...	51%
Mean Absolute Humidity at 2 metres	...	...	...	...	...	...	...	...	...	...	...	9.3 mm.
Mean day-time wind speed at 2 metres	...	...	...	...	...	...	...	...	...	...	...	4.0 m/sec.
Mean night-time wind speed at 2 metres	...	...	...	...	...	...	...	...	...	...	...	2.2 m/sec.
Mean Piche Evaporation at 120 cm.	...	...	...	...	...	...	...	...	...	...	...	18.1 m.m.
Total Rainfall	...	...	...	...	...	...	...	...	...	...	...	0.0
Sunshine-Duration	...	...	...	...	...	...	...	...	...	...	...	364 hours (86% out of possible hours).

TABLE H.—extreme Soil temperature

May 1956

Extreme Soil Temp.	Max.		Min.													
	Max.	Min.														
Depth in cm.	0.3		5		10		20		50		100		200			
Dry Soil ...	63.0	12.0	39.0	18.5	33.0	22.0	30.5	25.0	28.5	25.5	26.0	23.5	23.5	21.5		
Wet Soil ...	52.5	11.5	33.0	13.5	29.0	16.5	25.5	19.0	22.5	20.5	21.5	20.0	20.5	19.0		
Grass ...	34.5	13.5	28.0	16.0	26.0	18.0	25.0	20.0	22.5	20.5	21.5	19.5				

TABLE I.—Amount of Solar + Sky Radiation in Gram per cm.²

May 1956

SOLAR + SKY RADIATION	DATE															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	700	670	764	725	744	784	725	751	779	751	733	776	763	722	730	747
DATE																
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
	719	781	787	747	761	767	751	694	740	720	780	739	789	776	774	

Monthly Total = 23166

TABLE J.—Duration in Hours of Temperature at 2 Metres Height Above Certain Levels in °C.

May 1956

	DATE																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Duration above 0°C.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
" " 50°C.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
" " 100°C.	24	—	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24		
" " 150°C.	21	24	17	20	18	18	17	18	18	21	20	21	24	24	24	24	24	24	20	22	22	20	24	24	24	24	24	24	20		
" " 200°C.	15	9	11	10	11	10	10	12	14	15	14	16	17	16	14	17	14	12	13	13	15	16	16	19	21	20	22	15	16	15	16
" " 250°C.	11	2	5	0	2	1	0	4	7	9	9	8	12	8	9	13	9	4	6	7	8	10	13	14	14	14	12	10	9	10	11
" " 300°C.	9	0	0	—	0	0	—	0	0	0	0	0	8	0	3	7	4	0	0	0	5	8	10	9	10	7	1	0	1	6	
" " 350°C.	0	—	—	—	—	—	—	—	—	—	—	—	0	—	0	1	0	—	—	—	0	0	2	4	4	0	0	—	0	0	
" " 400°C.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	0	0	—	—	—	—	—	

NOTES

TABLE G.

(a) Air temperature and humidity are measured by ventilated dry and wet bulb thermometers freely exposed in louvered Stevenson Screen of the Egyptian type. thermometer bulbs are at 210 cms. above ground (approximately 2m.) maximum (mercury and minimum (alcohol) thermometers are exposed in the same screen for the 2m values. The minimum thermometers for the 5em heights are of the alcohol type freely exposed in the open air on wood supports.

The daily mean values of air temperature are computed from formula 1/4 (values at 0800+14000 +2000+Minimum).

The day-time mean air temperature is computed graphically from the record of a thermograph exposed in the screen, for the period sunrise to sunset. The night mean is similary obtained for the period sunset to sunrise.

(b) Incomputing relative humidity Asperations-Psychrometer tables of the Proussischen Meteorological Institut- 1927 are used. corrections for wind speed are applied. The mean relative humidity is computed from the formula 1/2 (values at 0800+1400-local time).

(c) Absolute humidity is expressed by vapour pressure in units of mms. of meroury. The mean value is calculated from the formula 1/3 (values at 0800+1400+2000 L.T.).

(d)Rainfall is measured by ordinary rain gauge; the height of its rain is 40 cm. above ground. Tr. stands from trance (1.0 amounts of rain less than 0.1 mm.).

(e) the mean wind speed by day is computed from the total run of air during the period 0800 to 1800 L.T., as indicated by the counter of an ordinary cup anemometer freely exposed at a height of 2 metres above ground.

The mean wind spead at night is similary computed for the period 1300 to 0800 L.T.

(f) Evaporation is measured by a piche tube freely exposed in the open air; the ovaporation disc has a diameter zone, white in colour and at a height of 120 cms, above dry soil.

The piche is read at 0800 L.T. daily in millimetres. The daily values given are for the 24 hours beginning at 0800 L.T.

Table H.

Soil temperature is measured by mercury thermometers, the value given are to be nearest 1/2 C
Table 1

Instrument used for the measurement of solar and sky radiation (global radiation) is the (Rabitzch Actinograph.

M. F. TAHA

Director General

Meteorological Department

Cairo, on 26/9/1956



REPUBLIC OF EGYPT

MINISTRY OF WAR

Egypt. METEOROLOGICAL DEPARTMENT

MAP

MONTHLY WEATHER REPORT

June 1956

GOVERNMENT PRESS, CAIRO
1956

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GENERAL SUMMARY OF WEATHER CONDITIONS

June 1956

Generally hot with three variant heat waves

The main features of the month were:

- (a) Three consecutive, variant heat waves.
- (b) Occasional rising sand and sand storms Western Desert.
- (c) Fresh/strong winds prevailed most of the month over the extreme West Coast, the Red Sea Coasts and the Southern parts of Sinia.

General description of weather

During this month the weather was generally hot, though it was characterised by three heat waves of different intensities.

For the month as a whole the barometric pressure was above normal, over Mediterranean, Lower Egypt and Middle Egypt districts, below normal otherwise. Maximum temperatures were below normal Mediterranean, Lower Egypt and Middle Egypt districts, above normal elsewhere. Minimum temperatures were below normal northern coast Middle Egypt and Western Desert districts, below normal rest of the districts.

The mean daily relative humidity reached 72% Alexandria (Kom, EL Nadora), 54% both Cairo (Ezbekiya) and Giza, 42% Helwan.

Pressure of Wind :

At the beginning of the month the Iraq monsoon extended slowly westwards, the subtropical high pressure belt extended from the British Isles SE wards till the Western Desert of Egypt, while a secondary depression developed over central Mediterranean on the 4th. The warm modified NEly winds blowing round the western corner of Iraq Monsoon invaded East Mediterranean causing a heat wave. During this period the barometric pressure over Egypt was above its normal.

Between the 5th and 11th the last pressure distribution prevailed with an intensification of the anticyclone over Central Mediterranean and its amalgamation with the Anticyclone North of the Black Sea. Consequently the atmospheric pressure continued above normal lower Egypt, though it was below normal Upper Egypt due to the northern elongation of the Sudan Low.

The warm modified NE flow blowing round the Western trough of the Iraq heat low invaded East Mediterranean for the second time during this month between 12th and 19th. The extension of the Iraq monsoon reached Greece and the whole East Mediterranean area and adjacent Countries suffered from a second long heat wave. During this period the Anticyclone over Central Mediterranean disappeared and accordingly the barometric pressure over Egypt was below normal.

The cold modified N/NW flow blowing round the eastern parts of the Subtropical High Pressure Belt extending from the British Isles till the Western Desert of Egypt invaded Egypt between 20th and 26 causing a cold spell and a general rise in the barometric pressure above normal both Lower and Middle Egypt. During this period and till the end of the month Upper Egypt was still under the influence of the Sudan Monsoon and its barometric pressure continued below normal.

On the 27th a slight westward extension in the Iraq monsoon caused a minor heat wave over Egypt which broke soonly on the 28th by the arrival of the modified N/NW Mediterranean cold stream that prevailed till the end of the month.

Temperature

Egypt suffered from three heat waves of different intensities during this month. The 1st. one was excessive and persisted for two days the 2nd & 3rd; over Lower Egypt; but continued to the end of the 1st. week over Upper Egypt and Southern part of Lower Egypt. The maximum temp. varied between 6 and 8°C above normal. The 2nd wave was moderate and prevailed [during the middle 10 days of the month, The maximum temp. did not exceed 5°C above normal. The 3rd heat wave was the slightest and stayed two days only during the last week of the month.

The minimum temp. was above normal during this month in Lower Egypt and below normal otherwise.

TABLE A.—Condensed Climatological Data

The deviations of meteorological elements from their normals for various districts are shown in the following table :

June 1956

DISTRICTS	M.S.L. Barometric Pressure 0600 U.T.		Temperature						Rainfall	
			Maximum temp.		Minimum temp.		Max. + Min. 2			
	1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.
	mb.	mb.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
1. Mediterranean	1012.6	+0.5	28.2	-0.1	21.2	+0.1	24.7	0.0	0	0
2. Lower Egypt	1012.4	+0.4	33.4	-0.3	17.8	-0.3	25.6	-0.3	0	0
3. Middle Egypt	1012.5	+0.7	34.9	-0.1	20.1	+0.7	27.5	+0.3	0	0
4. Upper Egypt	1009.5	-0.4	38.4	+0.8	20.2	-0.3	29.3	+0.2	0	0
5. Western Desert	1011.8	0.0	38.4	+0.7	21.4	+1.0	29.9	+0.8	0	0
6. Red Sea	1008.7	-0.4	33.4	+0.6	22.5	-0.8	28.0	-0.1	0	0

TABLE B.—Climatological Data

June 1956

Stations	M.S.L. Pressure 0600 U.T.		TEMPERATURE								Rainfall			
	Mean	Dev. from Normal	Maximum. Temp.				Minimum. Temp.				Total Rainfall	Number of days of rain*	Max. Rainfall in one day	Date
			Mean	Dev. from Normal	Absolute Max.	Date	Mean	Dev. from Normal	Absolute Minimum	Date				
	mb.	mb.	°c	°c	°c		°c	°c	°c		mm.		mm.	
Salloum	1014.3	—	29.5	—	40.1	27	20.7	—	17.9	9	0	0	0	
Sidi Barrani ...	1014.0	—	27.3	—	35.0	27	19.5	—	15.4	2	0	0	0	
Mersa Matruh (A)	1014.0	+0.7	28.1	—	36.0	27	18.0	—	11.7	2	0	0	0	
El Dabaa	1013.4	—	28.6	—	36.6	27	18.6	—	11.6	2	0	0	0	
Kom-el-Nadora ...	1013.1	+0.5	27.7	-0.5	34.1	3	21.5	+ 0.7	19.0	2	0	0	0	
Alexandria (A) ...	1012.8	—	28.5	—	35.5	3	22.8	—	17.6	2	0	0	0	
Damietta	1012.4	+1.3	28.3	-0.2	33.8	18	19.4	- 0.5	16.1	1	0	0	0	
Port-Said (A) ...	1012.2	+0.4	28.5	+0.4	32.1	18	22.6	+ 0.1	20.0	1	0	0	0	
El Arish	1011.2	-0.3	29.4	—	31.6	16	18.1	—	15.4	2	0	0	0	
Damanhour ...	1012.7	+0.7	31.7	-0.4	38.4	27	18.2	0.0	14.6	2.5	0	0	0	
Mansura	1012.4	+0.6	33.7	-0.3	38.3	15	19.0	+ 0.3	16.3	2	0	0	0	
Tanta	1012.8	+0.6	34.1	-0.3	39.1	3	16.1	- 1.4	13.7	7	0	0	0	
Shebin El Kom ...	1012.4	+0.4	34.0	—	38.4	3	19.3	—	17.1	7	0	0	0	
Zagazig	1011.9	-0.1	34.3	+0.1	38.8	3	17.9	0.0	15.3	10	0	0	0	
Ismailia	1012.2	—	35.1	—	39.1	3	19.8	—	17.9	10	0	0	0	
Cairo (A)	1012.2	—	35.1	—	41.7	3	19.8	—	17.4	7	0	0	0	
Almaza (A) ...	1012.4	+0.3	34.8	-0.1	41.7	4	20.2	0.0	18.1	7	0	0	0	
Ezbekiya	1012.7	+0.9	35.4	+0.1	41.0	3.4	20.5	+ 0.6	18.5	5	0	0	0	
Giza	1012.6	+0.8	34.7	-0.3	41.6	3	18.7	+ 1.1	16.3	30	0	0	0	
Helwan	1012.3	+0.7	34.8	0.0	43.3	4	21.1	+ 1.2	18.5	1	0	0	0	
Fayoum	1012.2	+0.6	36.6	+0.7	44.0	4	19.9	+ 0.4	17.4	2	0	0	0	
Minya (A)	1011.0	-0.9	35.9	-0.4	44.0	3.4	18.8	0.0	16.5	1.29	0	0	0	
Asyout (A)	1010.3	-0.5	38.8	+1.6	45.0	4	20.7	- 0.3	18.0	10	0	0	0	
Nag-Hamedy ...	1009.1	+0.1	38.8	+1.3	43.8	5	20.7	+ 0.6	18.2	2	0	0	0	
Qena	1008.5	-0.2	41.8	+0.9	45.4	5	20.8	- 2.4	17.8	7.11	0	0	0	
Luxor (A)	1008.0	-0.8	41.9	—	45.8	5.6	22.2	—	18.5	1	0	0	0	
Aswan	1007.5	-1.2	43.0	—	48.1	5	24.1	—	19.5	11	0	0	0	
Siwa	1014.2	+0.7	38.2	+0.6	43.7	18	20.5	+ 1.3	18.1	8	0	0	0	
Bahariya	1012.6	-0.2	37.3	+1.1	44.6	4	19.7	+ 0.8	14.2	2	0	0	0	
Farafra	1013.8	—	37.8	—	43.9	19	20.1	—	16.0	2	0	0	0	
Dakhla	1011.8	+0.6	38.6	—	44.3	4	23.4	—	20.0	10	0	0	0	
Kharga	1008.5	-1.4	39.6	+0.4	44.8	4	23.9	+ 0.7	16.6	1	0	0	0	
Suez	1012.0	+0.9	35.4	+0.5	44.3	4	19.0	- 2.0	16.3	7	0	0	0	
Tor	1007.6	-0.6	33.3	+0.2	38.3	4	22.8	- 0.4	17.8	3	0	0	0	
Hurghada	1007.3	-1.4	33.3	+2.8	39.7	3	23.7	+ 0.5	18.3	3	0	0	0	
Quseir	1007.9	-0.4	31.5	-1.3	34.0	16	24.6	- 1.1	21.2	1	0	0	0	

* Drops are taken into consideration.

† More than 3 days.

TABLE C.—Miscellaneous Weather Phenomena

June 1956

Stations	NUMBER OF DAYS OF OCCURRENCE					
	Rain Showers	Thunder-storm	Fog	Mist Sandrising dustrising	Dust or Sand Storm	Gales
	(a)	(b)	(c)	(d)	(e)	(f)
Sallum	0	0	0	0	0	0
Sidi Barrani	0	0	0	0	0	0
Mersa Matruh	0	0	0	0	0	0
Alexandria (A)	0	0	0	0	0	0
Port Said (A)	0	0	0	0	0	0
El Arish	0	0	0	0	0	0
	—	—	—	—	—	—
Cairo (A)	0	0	2	0	0	0
Almaza (A)	0	0	0	0	0	0
	—	—	—	—	—	—
Minya (A)	0	0	0	0	0	0
Assiut (A)	0	0	0	0	0	0
Luxor (A)	0	0	0	0	0	0
	—	—	—	—	—	—
Siwa	0	0	0	0	0	0
	—	—	—	—	—	—
Hurghada	0	0	0	0	1	0
	—	—	—	—	—	—
Aswan	—	—	—	—	—	—

(a) Number of days in which rainfall is 0·1 mm. or more within 24 hours from 0600 U.T. to 0600 U.T. next day.

(b) Number of days of thunderstorm heard within station.

(c) Number of days of Fog in which visibility is less than 1000 metres.

(d) Number of days of mist or sandrising or dustrising in which visibility is more than 1000 metres and less than 2000 metres.

(e) Number of days of sandstorms in which visibility is less than 1000 metres.

(f) Number of days of gales in which wind velocity is equal or more than 34 knots.

UPPER AIR DATA**TABLE D.—Radiosonde Data. Average Monthly Values.****Cairo Aerodrome. June 1956**

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 1500 UT.		Highest	Lowest	Readings at 1500 UT.		Highest	Lowest
	n	Mean			n	Mean		
Surface	28	1003	1006	1000	28	33.0	36.7	29.2
1000	28	99	124	70	28	32.7	36.1	29.3
850	28	1531	1566	1509	28	20.6	25.6	16.0
700	28	3179	3222	3147	28	11.4	16.0	7.0
600	28	4445	4496	4412	28	3.3	9.4	— 2.4
500	28	5898	5975	5848	28	— 5.5	— 0.3	— 9.6
400	28	7609	7713	7547	28	— 17.2	— 13.2	— 21.8
300	26	9710	9825	9642	26	— 31.2	— 28.0	— 39.6
200	17	12482	12578	12409	17	— 49.1	— 45.8	— 51.0
150	16	14317	14406	14239	16	— 61.6	— 56.1	— 64.1
100	15	16762	16853	16675	15	— 71.7	— 68.4	— 73.9
60	13	19800	19913	19673	13	— 63.3	— 56.6	— 71.1

n = Number of observations of specified pressure surfaces.

UPPER AIR DATA**TABLE D.—Radiosonde Data. Average Monthly Values.****Matruh, Aerodrome June 1956**

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 0400 UT.		Highest	Lowest	Readings at 0400 UT.		Highest	Lowest
	n	Mean			n	Mean		
Surface	22	1011	1015	1009	22	21.9	24.5	19.2
1000	22	128	159	100	22	21.6	23.7	18.7
850	22	1533	1573	1498	22	19.4	24.0	12.7
700	22	3169	3231	3120	22	10.3	16.3	6.4
600	22	4430	4509	4367	22	0.6	7.7	— 3.5
500	22	5862	5911	5795	22	— 9.4	— 4.0	— 13.6
400	21	7552	7677	7493	21	— 20.7	— 15.3	— 26.6
300	18	9639	9814	9534	18	— 33.1	— 26.5	— 40.5
200	12	12360	12646	12250	12	— 49.6	— 43.2	— 53.5
150	9	14201	14539	14055	9	— 62.8	— 52.2	— 77.2
100	8	16667	17131	16467	8	— 69.9	— 57.8	— 76.5
60	—	—	—	—	—	—	—	—

n = Number of observations of specified pressure surfaces.

UPPER AIR DATA**TABLE D.—Radiosonde Data. Average Monthly Values.****Aswan Aerodrome. June 1956**

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 0400 UT.		Highest	Lowest	Readings at 0400 UT.		Highest	Lowest
	n	Mean			n	Mean		
Surface	14	995	998	993	14	28.4	33.0	24.5
1000	—	—	—	—	—	—	—	—
850	14	1528	1553	1499	14	25.4	30.0	19.4
700	13	3194	3248	3143	13	14.4	24.2	— 10.5
600	13	4473	4620	4408	13	4.1	11.6	— 0.3
500	13	5919	6001	5843	13	— 6.3	— 1.7	— 11.5
400	13	7629	7731	7535	13	— 17.3	— 12.0	— 22.3
300	12	9727	9871	9563	12	— 31.2	— 26.3	— 39.0
200	8	12503	12641	12321	8	— 50.0	— 45.5	— 57.1
150	7	14298	14472	14071	7	— 63.7	— 56.0	— 74.0
100	—	—	—	—	—	—	—	—
60	—	—	—	—	—	—	—	—
40	—	—	—	—	—	—	—	—

n = Number of observations of specified pressure surfaces.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Cairo Aerodrome—June 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000–360													Calm	Total No. of obs: N	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				
	n	(ft)m	n	(ft)m	n	(ft)m	n	(ft)m	n	(ft)m	n	(ft)m	n	(ft)m	n	(ft)m	n	(ft)m	n	(ft)m	n	(ft)m			
Surface ...	8	12	11	14	2	12	—	—	—	—	—	—	—	—	—	—	—	—	—	7	13	0	28	13	
1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
850	11	15	5	15	1	20	—	—	—	—	—	—	—	—	—	—	—	—	—	2	21	7	18	0	
700	2	21	2	20	—	—	1	10	—	—	—	—	1	12	1	10	1	24	9	12	3	22	8	19	0
600	2	20	2	13	—	—	1	9	—	—	—	—	—	2	19	4	18	4	22	5	16	6	23	0	
500	—	—	1	19	—	—	1	6	—	—	—	—	—	1	28	8	21	4	24	7	22	4	22	0	
400	—	—	—	—	—	—	—	—	—	—	—	—	—	2	28	10	35	8	25	4	32	1	41	0	
300	—	—	—	—	—	—	—	—	—	—	—	—	—	2	35	13	39	4	32	3	37	1	21	0	
200	—	—	—	—	—	—	—	—	—	—	—	—	—	1	52	8	47	4	27	1	41	—	—	0	
150	—	—	—	—	—	—	—	—	—	—	—	—	—	1	22	6	50	3	30	—	—	—	—	0	
100	—	—	—	—	—	—	—	—	—	—	—	—	—	1	25	3	16	6	33	2	20	—	—	0	
60	—	—	—	—	—	—	2	10	2	10	—	—	1	2	—	—	2	10	—	—	—	—	0		
																							7		
																							9		

Note: n1, n2, . . . etc = Number of occurrence of wind direction from the specified ranges.

(ft)m = mean scalar wind speed (regardless of direction).

N = Total number of observations from all directions including calms.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Matruh Aerodrome—June 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000-360													Calm	Total No. of obs. N	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						
	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					
Surface...	5	6	1	10	—	—	—	—	1	15	—	—	—	—	—	—	2	6	5	14	5	12	0	19	10		
1000 ...	5	6	1	10	—	—	—	—	1	15	—	—	—	—	—	—	2	6	5	14	5	12	0	19	10		
850 ...	4	19	1	12	—	—	—	—	—	—	—	—	—	—	1	8	—	—	1	6	3	22	8	18	0	18	17
700 ...	3	35	2	12	—	—	—	—	—	—	—	—	—	—	1	16	1	16	4	28	7	27	0	18	26		
600 ...	2	18	2	12	—	—	—	—	—	—	—	—	—	—	—	—	1	16	6	32	6	28	0	17	26		
500 ...	1	23	—	—	1	8	—	—	—	—	—	—	—	—	1	28	—	—	1	18	7	33	6	20	0	17	25
400 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	34	1	31	5	18	4	35	3	23	0	14	26
300 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	44	2	40	6	28	1	40	0	12	35		
200 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	33	3	39	—	—	—	—	0	5	36		
150 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	33	2	44	—	—	—	—	0	3	41		
100 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	16	—	—	—	—	—	—	0	2	16		
60 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

Notes : n1, n2, . . . , etc. = Number of occurrence of wind direction from the specified ranges.

(ff)m = mean scalar wind speed (regardless of direction).

N = Total number of observations from all directions including calms.

TABLE F.—Miscellaneous Data

Cairo Aerodrome—June 1956

Day	Time UT,	Freezing level								Highest Wind Speed					Tropopause		
		Lowest				Highest				Height	PPPP	ddd	ff	Height	PPPP	TTT	
		GGgg	Height	PPPP	TdTdTd	Height	PPPP	TdTdTd									
1	1500	5300	540	—	—	—	—	—	6200	430	330	055	—	—	—	—	
2	1500	4890	571	668	—	—	—	—	12900	187	270	034	—	—	—	—	
3	1500	4260	616	—	—	—	—	—	6100	487	230	021	—	—	—	—	
4	1715	4320	608	599	—	—	—	—	—	—	—	—	—	—	—	—	
5	1500	4360	608	641	—	—	—	—	11450	230	230	068	16000	112	223	—	
6	1500	4670	582	—	—	—	—	—	11100	245	240	088	15800	116	188	—	
7	1500	4690	580	—	—	—	—	—	12900	186	240	073	15820	116	215	—	
8	1500	4940	564	—	—	—	—	—	14400	147	230	073	16560	104	239	—	
9	1530	4170	578	—	—	—	—	—	11250	240	230	060	18000	082	263	—	
10	1530	4970	562	—	—	—	—	—	10250	—	250	030	—	—	—	—	
11	1500	5300	542	—	—	—	—	—	11200	244	260	042	16400	109	212	—	
12	1500	4940	566	—	—	—	—	—	10930	—	240	050	16680	102	221	—	
13	1500	4930	564	—	—	—	—	—	10570	263	220	054	—	—	—	—	
14	1600	4700	580	645	—	—	—	—	9680	292	250	063	—	—	—	—	
15	1600	4230	580	—	—	—	—	—	10200	278	280	040	14800	138	168	—	
16	1500	4470	596	—	—	—	—	—	11440	236	270	050	16730	100	238	—	
17	1500	4680	582	—	—	—	—	—	15200	130	250	055	15500	124	194	—	
18	1500	4380	604	682	—	—	—	—	9200	322	240	035	—	—	—	—	
19	1500	5160	548	—	—	—	—	—	15800	117	210	049	17400	089	242	—	
20	1500	5520	524	—	—	—	—	—	11560	234	250	043	16900	098	246	—	
21	1500	5750	511	—	—	—	—	—	7600	406	220	022	14970	137	178	—	
22	1530	5930	502	—	—	—	—	—	—	—	—	—	—	—	—	—	
23	—	—	—	—	—	—	—	—	10000	289	240	028	17000	096	247	—	
24	1500	5730	512	—	—	—	—	—	10200	286	250	029	—	—	—	—	
25	1500	5790	512	—	—	—	—	—	—	—	—	—	—	—	—	—	
26	—	—	—	—	—	—	—	—	4950	564	340	039	—	—	—	—	
27	1500	4730	582	663	—	—	—	—	10400	—	300	056	—	—	—	—	
28	1500	5200	544	—	—	—	—	—	7600	400	280	033	—	—	—	—	
29	1500	5200	544	—	—	—	—	—	11280	240	220	034	—	—	—	—	
30	1500	5450	528	—	—	—	—	—	—	—	—	—	—	—	—	—	
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Highest	—	5930	502	—	—	—	—	—	11100	245	240	088	18000	082	263	—	
Lowest	—	4170	578	—	—	—	—	—	6100	487	230	021	14800	138	168	—	

Notes.—GGgg is the actual time of release of balloon to the nearest minute universal (t.m.).

PPPP is the pressure in whole millibars (eg. 1027·7 m.b. PPPP 1028).

TTT and TdTdTd are the temperature and dew point in tenths of degrees celsuis (centigrade) eg. 28.1 °C. will be entered 28.1 For temperature below 0 °C. add 50 to the absolute value of temperature eg.—0.7 °C. will be entered 507.

ddd is wind direction in whole degrees east of the true north. For calm winds enter 000 for ddd and ff.

ff Wind speed in Knots. Heights are in geopotential metres above M.S.L.

Highest and Lowest values correspond to available date.

TABLE F.—Miscellaneous Data

Mersa Matroh Aerodrome—June 1956

Day	Time UT.	Freezing level								Highest Wind Speed				Tropopause		
		Lowest				Highest				PPP		ddd	fff	Height	PPP	TTT
		GGgg	Height	PPP	TdTdTd	Height	PPP	TdTdTd	Height	PPP	ddd	fff	Height	PPP	TTT	
1	0400	4400	0598	—	—	—	—	—	7500	—	320	051	—	—	—	
2	0400	4350	0607	—	—	—	—	—	4600	—	320	041	—	—	—	
3	0400	4900	0570	—	—	—	—	—	10500	—	230	045	—	—	—	
4	0500	4150	0624	630	—	—	—	—	2500	—	230	019	—	—	—	
5	0700	4270	0610	573	—	—	—	—	6800	—	250	038	—	—	—	
6	0500	4160	0618	—	—	—	—	—	—	—	—	—	10670	0253	950	
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	0400	—	—	—	—	—	—	—	13700	—	250	088	—	—	—	
9	0500	4510	0594	—	—	—	—	—	9400	—	230	054	—	—	—	
10	0400	5160	0553	—	—	—	—	—	13700	—	250	045	—	—	—	
11	0600	5460	0534	—	—	—	—	—	12300	—	220	030	20340	0060	198	
12	0500	4840	0570	—	—	—	—	—	10700	—	260	046	17100	0095	205	
13	0500	4680	0582	—	—	—	—	—	10800	—	240	062	—	—	—	
14	0400	4550	0589	—	—	—	—	—	11900	—	320	041	18450	0106	200	
15	0400	4000	0629	—	—	—	—	—	9400	—	320	042	16860	0090	235	
16	0400	4000	0621	610	—	—	—	—	11300	—	280	040	17650	0092	223	
17	0400	4160	0620	—	—	—	—	—	12300	—	260	051	—	—	—	
18	0400	4050	0626	616	—	—	—	—	3500	—	290	032	14055	0150	272	
19	0400	4100	0624	—	—	—	—	—	—	—	—	—	—	—	—	
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
26	0400	4800	0576	—	—	—	—	—	2800	—	360	045	15000	0130	237	
27	0400	4550	0595	640	—	—	—	—	3000	—	330	035	—	—	—	
28	0400	5200	0545	—	—	—	—	—	11900	—	290	054	—	—	—	
29	0500	5000	0560	667	—	—	—	—	5100	—	310	057	—	—	—	
30	0500	4440	0595	—	—	—	—	—	14100	—	260	057	15550	0119	194	
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Highest	...	5460	0534	—	—	—	—	—	13700	—	250	088	20340	0060	198	
Lowest	...	4000	0621	610	—	—	—	—	2500	—	230	019	10670	0253	950	

Note.—GGgg is the actual time of release of balloon to the nearest minute universal (time).

PPP is the pressure in whole millibars (eg. 1027.7 m.b. PPPP 1028).

TTT and TdTdTd are the temperature and dew point in tenths of degrees celsuis (centigrade) eg. 28.1 °C. will be entered 281. For temperature below 0 °C. add 50 to the absolute value of temperature eg. -0.7 °C. will be entered 507.

ddd is wind direction in whole degrees east of the true north. For calm winds enter 000 for ddd and fff.

fff is Wind speed in Knots. Heights are in geopotential metres above M.S.L.

Highest and Lowest values correspond to available date.

AGRO-METEOROLOGICAL DATA—GIZA

TABLE G.—Air Temperature, Humidity, Rainfall, Sunshine Duration,
Wind Speed and Piche Evaporation

June 1956

Max. temp. at 2 metres	... ... ... ... ... ... ... ... ...	41.6 °C on 3
Min. temp. at 2 metres	... ... ... ... ... ... ... ... ...	16.3 °C on 30
Min. temp. at 5 cms. over dry soil.	... ... ... ... ... ... ... ... ...	14.0 °C on 30
Min. temp. at 5 cms. over wet soil.	... ... ... ... ... ... ... ... ...	13.9 °C on 30
Min. temp. at 5 cms. over grass.	... ... ... ... ... ... ... ... ...	11.5 °C on 29
Min. Relative Humidity at 2 metres	... ... ... ... ... ... ... ... ...	9% on 3
Max. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ... ...	18.2 m.m. on 15
Min. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ... ...	6.3 „ „ on 2 & 3
Mean daily temp. at 2 metres	... ... ... ... ... ... ... ... ...	26.0 °C.
Mean day-time temp. at 2 metres	... ... ... ... ... ... ... ... ...	28.8 °C.
Mean night-time temp. at 2 metres	... ... ... ... ... ... ... ... ...	23.1 °C.
Mean Relative Humidity at 2 metres	... ... ... ... ... ... ... ... ...	55%
Mean Absolute Humidity at 2 metres	... ... ... ... ... ... ... ... ...	12.7 mm
Mean day-time wind speed at 2 metres	... ... ... ... ... ... ... ... ...	3.9 m/sec.
Mean night-time wind speed at 2 metres	... ... ... ... ... ... ... ... ...	2.2 m/sec.
Mean Piche Evaporation at 120 cm.	... ... ... ... ... ... ... ... ...	19.6 mm.
Total Rainfall	... ... ... ... ... ... ... ... ...	0.0
Sunshine-Duration	... ... ... ... ... ... ... ... ...	367 hours (87% out of possible hours.)

TABLE H.—Extreme Soil Temperature—Giza

June 1956

Extreme Soil Temp.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Depth in cm.	0.3	5	10	20	50	100	200							
Dry Soil ...	64.0	18.5	42.0	26.0	36.0	26.5	32.5	28.5	30.5	28.0	28.5	26.0	25.0	23.5
Wet Soil ...	51.0	17.5	34.5	19.0	32.0	21.5	27.5	23.0	25.0	22.5	23.5	21.5	21.5	20.5
Grass	41.5	19.5	29.5	21.0	28.0	22.0	27.0	23.0	24.5	22.5	23.5	21.5	—	—

TABLE I.—Amount of Solar + Sky Radiation in Gram per cm.²—Giza

June 1956

Solar & Sky Radiation.	DATE														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	745	737	722	738	727	747	790	756	797	736	716	755	741	743	738
DATE															
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	754	730	748	783	780	762	782	767	770	780	738	767	762	745	—

Monthly Total = 22609

TABLE J.—Duration in Hours of Temperature at 2 Metres Height Above Certain Levels in °C.—Giza

June 1956

Duration above °C.	DATE																													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Duration above °C.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
" " 5°C	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
" " 10°C	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
" " 15°C	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	
" " 20°C	17	18	21	22	22	19	18	17	17	20	20	20	22	22	24	23	20	21	23	21	24	23	22	23	19	20	20	24	19	19
" " 25°C	10	14	16	16	13	10	9	10	10	12	13	15	16	15	14	15	14	15	16	14	11	12	15	12	11	12	13	13	12	12
" " 30°C	5	8	12	10	8	5	0	3	4	6	8	10	11	11	10	9	9	12	9	8	4	6	8	6	4	6	8	7	5	6
" " 35°C	0	0	8	7	0	0	—	0	0	0	1	5	5	5	4	3	5	2	0	0	0	0	0	0	4	0	0	0	0	0
" " 40°C	—	—	2	2	—	—	—	—	—	—	0	0	0	0	0	0	0	0	—	—	—	—	—	—	0	—	—	—	—	—

NOTES

TABLE G.

(a) Air temperature and humidity are measured by ventilated dry and wet-bulb thermometers freely exposed in Louvered Stevenson Screen of the Egyptian type. Thermometer bulbs are at 210 cms. above ground (approximately 2m.) Maximum (mercury) and minimum (alcohol) thermometers are exposed in the same screen for the 2m values. The minimum thermometers for the 5cm heights are of the alcohol type freely exposed in the open air on wood supports.

The daily mean values of air temperatures are computed from the formula $1/4$ (values at 0800 + 1400 + 2000 + Minimum).

The day-time mean air temperature is computed graphically from the record of a thermograph exposed in the screen, for the period sunrise to sunset. The night mean is similarly obtained for the period sunset to sunrise.

(b) In computing relative humidity Aspiration-Psychrometer tables of the Preussischen Meteorological Institut - 1927 are used, corrections for wind speed are applied. The mean relative humidity is computed from the formula $1/2$ (values at 0800 + 1400 - Local time).

(c) Absolute humidity is expressed by vapour pressure in units of mms. of mercury. The mean value is calculated from the formula $1/3$ (values at 0800 + 1400 + 2000 L.T.).

(d) Rainfall is measured by ordinary rain gauge; the height of its rim is 40 cm. above ground. Tr. stands for trace (i.e amounts of rain less than 0.1 mm.).

(e) The mean wind speed by day is computed from the total run of air during the period 0800 to 1800 L.T., as indicated by the counter of an ordinary cup anemometer freely exposed at a height of 2 metres above ground.

The mean wind speed at night is similarly computed for the period 1800 to 0800 L.T.

(f) Evaporation is measured by a piche tube freely exposed in the open air ; the evaporation disc has a diameter of 3cms, white in colour and at a height of 120 cms, above dry soil.

The Piche is read at 0800 L.T. daily in millimetres, the daily values given are for the 24 hours beginning at 0800 L.T.

TABLE H.

Soil temperature is measured by mercury thermometers, the values given are to be nearest $\frac{1}{2}$ °C.

TABLE I.

Instrument used for the measurement of solar and sky radiation (global radiation) is the (Rabitzch Actinograph).

Cairo, 5/8/1956.

M. F. TAHA
Director General
Meteorological Department



REPUBLIC OF EGYPT

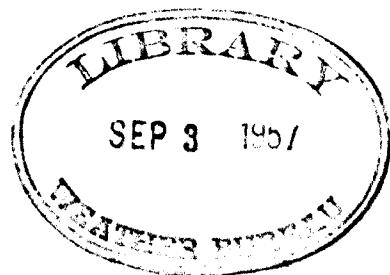
MINISTRY OF WAR

METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REPORT

July 1956

GOVERNMENT PRESS, CAIRO
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MINISTRY OF WAR

GENERAL SUMMARY OF WEATHER CONDITIONS

JULY 1956

Generally rather hot and humid, specially between 12th and 26th,
Maximum temperature records.

The main features were :

- a) Three consecutive heat waves between 12 th and 26th with record maximum temperatures.
- b) No travelling coastal and Kamasin secondaries.
- c) Frequent fresh winds Red Sea Coast and extreme West Coast.

General description of the weather:

The weather was generally humid, hot during the 1st third of the month., extensively hot the rest of the month, and three consecutive heat waves were experienced, the last of which was excessive.

For the month as a whole the barometric pressure was below normal, maximum temperature was above normal, minimum temperature was below normal extreme Upper Egypt and Red Sea Coasts, above normal elsewhere. No abnormal rainfall was reported accompanying the thundery activity on 8 th.

The mean daily relative humidity was 75% at Alexandria (Kom El-Nadora) 59% both Ezbekiya, Giza and 48% at Helwan.

Pressure and Wind:

The general outstanding featurrs of the pressure distribution during the month were :

- a) An anticyclone extending from the British Isles SEwards till the Western Desert of Egypt
- b) The Iraq monsoon and its westward elongation
- c) The Sudan monsoon and its northward elongation
- d) Local anticyclone over the Black Sea.

The barometric pressure over Egypt was oscillatory during this month and the pressure monthly trend showed 4 maxima and 3 minima. It Started at the beginning of the month above normal and continued so till the 3rd.

Between the 4th and the 9th the Sudan Monsoon elongated northwards and consequently, the atmospheric pressure fell below normal all over the Country.

On the 10th a secondary depression developed over ITALY and GREECE, while the local anticyclone over the Black Sea reestablished and till the 16th the atmospheric pressure over Egypt was slightly above normal.

Within the period 17th till 19th the thermal monsoon Lows over Iraq and Sudan deepened appreciably while shallow secondaries developed over East Mediterranean and adjacent areas, causing a second fall in the barometric pressure over Egypt. During this period the local anticyclone over the Black Sea retrograted towards the Balkans.

On the 20th and 21st the local anticyclone occupying the Balkans proceeded eastwards under the influence of a complex low pressure system over NW Mediterranean and reoccupied the Black Sea. Accordingly the atmospheric pressure over Lower Egypt has experienced a slight rise.

The third remarkable fall in the barometric pressure over Egypt was observed between 22nd and 29th when both the Iraq and Sudan monsoon Systems deepened appreciably though no material change was observed in the general pressure distribution of the month during this period.

On both 30th and 31st the barometric pressure over lower Egypt has experienced a slight rise due to the slight intensification of the local Black Sea Anticyclone.

During this month light/moderate Northerly winds prevailed all over the Country. Fresh/strong winds were reported occasionally over the extreme west and frequently over the Red Sea coasts. Gales were reported at Sallum on 18th.

Temperature.

During this month Egypt experienced three consecutive heat waves between the 12th and 27th. Though the 1st heat wave was extensive over the extreme West, the third heat wave was extensive and of long duration (21st-27th) otherwise. From the following table it is obvious that maximum temperature records was a characteristic feature.

Station	Max. Tem.	Date	Record Since	Station	Max. Tem.	Date	Record Since
Sallum	40.1	13/9/56	1909	Suez...	44.4	23/9/56	1921
Matruh	39.5	13/9/56	1920	Bahariya... ...	45.5	23/9/56 24/9/56	1931
P. Said	35.7	23/9/56	1941	Luxor	48.3	25/9/56	1935
Tanta	42.1	23/9/56	1927				

Minimum temperature was almost above normal Delta Area. Otherwise it continued below normal the 1st. half of the month and was changeable the 2nd half.

Precipitation.

Light thundery showers were reported at Tanta and Suez on the 8th.

Miscellaneous Weather Phenomena.

a) Upper air instability developed over area between Delta and Suez Canal which is not a common feature for the weather of July.

b) Early morning low stratus developed over the Delta most of the month.

TABLE A.—Condensed Climatological Data

The deviations of meteorological elements from their normals for various districts are shown in the following table:

July 1956

DISTRICTS	M.S.L. Barometric Pressure 0600 U.T.		Temperature						Rainfall	
	1956	Diff. F. Nor.	Maximum temp.		Minimum temp.		Max. + Min. 2			
			mb.	mb.	°C	°C	1956	Diff. F. Nor.	1956	Diff. F. Nor.
1. Mediterranean	1008.5	-0.5	30.6	+0.6	23.0	+0.3	26.8	+0.4	0	0
2. Lower Egypt	1008.6	-0.7	34.6	+0.3	20.0	+0.2	27.3	+0.2	0	0
3. Middle Egypt	1008.6	-0.6	36.2	+0.5	22.0	+1.0	29.1	+0.8	0	0
4. Upper Egypt	1006.8	-1.0	39.3	+0.9	22.0	-0.4	30.6	+0.2	0	0
5. Western Desert	1008.9	-1.1	39.0	+0.7	22.2	+0.4	30.6	+0.6	0	0
6. Red Sea	1005.9	-0.8	35.3	+1.3	24.2	-0.3	29.8	+0.5	0	0

TABLE B.—Climatological Data

July 1956

Stations	M.S.L. Pressure 0600 U.T.		TEMPERATURE								Rainfall			
			Maximum Temp.				Minimum Temp.							
	Mean	Dev. from Normal	Mean	Dev. from Normal	Absolute Max.	Date	Mean	Dev. from Normal	Absolute Minim.	Date	Total Rainfall	* Number of days of rain	Max. fall in one day	Date
	mb.	mb.	°C	°C	°C		°C	°C	°C		m.m.		m.m.	
Salloum ...	1010.8	—	31.6	—	40.1	13	22.0	—	19.6	29	0	0	0	
Sidi Barrani ...	1010.5	—	28.9	—	38.8	13	21.8	—	17.8	31	0	0	0	
Mersa Matruh (A)	1010.3	+ 0.3	30.2	—	39.5	13	20.2	—	16.4	2	0	0	0	
El Dabaa ...	1009.5	—	30.2	—	38.4	13	21.0	—	17.3	13	0	0	0	
Kom-el-Nadora ...	1009.0	— 0.6	29.5	0.0	34.0	24	23.4	+0.5	21.8	2	0	0	0	
Alexandria (A) ...	1008.4	—	30.2	—	37.3	24	22.7	—	18.9	13	0	0	0	
Damietta ...	1008.3	+ 0.3	30.8	+0.3	38.4	25	21.4	+0.2	17.4	2	0	0	0	
Port-Said (A) ...	1007.9	— 0.5	31.4	+1.3	35.7	23	24.3	+0.2	22.5	1	0	0	0	
El Arish ...	1007.1	— 1.7	31.8	—	35.5	23	19.9	—	17.7	14.17	0	0	0	
Damanhour ...	1008.7	— 0.5	33.1	+0.4	39.8	24	21.0	+1.1	17.9	13	0	0	0	
Mansura ...	1008.2	— 0.6	34.9	— 0.1	40.6	23	20.9	+0.5	18.8	12	0	0	0	
Tanta ...	1009.1	— 0.4	35.3	+0.5	42.1	23	18.1	— 1.2	15.1	2	dr.	0	dr.	8
Shebin El Kom ...	1008.4	— 1.1	35.0	—	40.6	23	21.3	—	18.1	2	0	0	0	
Zagazig ...	1008.4	— 1.2	35.3	+0.5	41.3	23	19.9	+0.4	17.0	2	0	0	0	
Ismailia ...	1008.4	—	37.4	—	43.3	23	21.9	—	20.0	1,2,11	0	0	0	
Cairo (A) ...	1008.5	—	36.4	—	43.7	23	21.6	—	18.7	13	0	0	0	
Almaza (A) ...	1007.9	— 1.4	36.3	+0.4	43.8	23	22.0	+0.3	19.5	1,2	0	0	0	
Ezbekiya ...	1009.0	— 0.2	36.8	+0.9	43.2	23	22.5	+0.9	19.8	2	0	0	0	
Giza ...	1009.0	— 0.2	35.9	+0.4	42.1	23	20.9	+1.5	17.5	11	0	0	0	
Helwan ...	1008.7	— 0.5	36.0	+0.5	43.7	23	22.4	+1.3	19.8	6	0	0	0	
Fayoum ...	1009.1	— 0.3	37.8	+1.2	45.0	24	21.6	+0.6	19.3	†	0	0	0	
Minya (A) ...	1007.6	— 1.4	37.7	+0.7	45.2	24	20.5	+0.4	17.0	12	0	0	0	
Asyout (A) ...	1007.2	— 0.9	37.6	+0.4	45.8	23	22.0	— 0.1	18.6	1	0	0	0	
Nag-Hamadi ...	1006.7	— 0.5	38.6	+1.0	44.6	24	21.3	+0.7	19.4	7,8	0	0	0	
Qena ...	1006.2	— 0.8	41.1	+0.3	46.3	23,25	21.4	— 2.8	17.6	10	0	0	0	
Luxor (A) ...	1005.6	— 1.2	41.7	—	48.3	25	24.1	—	20.7	8,10	0	0	0	
Aswan ...	1005.5	— 1.6	42.9	+1.7	48.1	25	25.5	— 0.9	22.1	7	0	0	0	
Siwa ...	1011.0	— 1.0	38.8	+0.8	45.4	18	21.4	+0.8	13.7	29	0	0	0	
Bahariya ...	1009.2	— 1.5	38.1	+1.5	45.5	23,24	20.9	+0.8	18.2	6	0	0	0	
Farafra ...	1010.5	—	38.0	—	44.6	24	21.7	—	18.0	20	0	0	0	
Dakhla ...	1009.5	+ 0.3	39.0	— 0.2	46.5	24	23.5	+0.4	20.0	6,8,29	0	0	0	
Kharga ...	1005.9	— 2.3	40.0	+0.5	46.8	24,25	23.1	— 0.3	18.0	29	0	0	0	
Suez ...	1008.4	— 0.2	37.6	+1.4	44.4	23	20.9	— 1.8	18.1	1	dr.	0	dr.	8
Tor ...	1004.8	— 1.1	36.1	+2.0	41.5	19	24.7	+0.5	21.5	17	0	0	0	
Hurghada ...	1004.9	— 1.2	34.4	+2.5	43.0	23	25.0	+0.4	22.0	8	0	0	0	
Quseir ...	1005.4	— 0.9	33.2	— 0.4	38.4	24	26.1	— 0.3	22.5	8	0	0	0	

* Drops are taken into consideration.

TABLE C.—Miscellaneous Weather Phenomena
JULY 1956

Stations	NUMBER OF DAYS OF OCCURRENCE					
	Rain Showers	Thunder-storm	Fog	Mist Sandrising dustrising	Dust or Sand Storm	Gales
	(a)	(b)	(c)	(d)	(e)	(f)
Sallum	0	0	0	0	0	1
Sidi Barrani	0	0	1	0	0	0
Mersa Matruh	0	0	0	0	0	0
Alexandria (A)	0	0	0	0	0	0
Port-Said (A)	0	0	0	0	0	0
El Arish	0	0	0	0	0	0
Cairo (A)	0	0	3	1	0	0
Almaza (A)	0	0	1	1	0	0
Minya (A)	0	0	0	0	0	0
Assiut (A)	0	0	0	0	0	0
Luxor (A)	0	0	0	0	0	0
Siwa	0	0	0	0	0	0
Hurghada	0	0	0	0	0	0
Aswan	0	0	0	0	0	0

- (a) Number of days in which rainfall is 0·1 mm. or more within 24 hours from 0600 U.T. to 0600 U.T. next day.
- (b) Number of days of thunderstorm heard within station.
- (c) Number of days of Fog in which visibility is less than 1000 metres.
- (d) Number of days of mist or sandrising or dustrising in which visibility is more than 1000 metres and less than 2000 metres.
- (e) Number of days of sandstorms in which visibility is less than 1000 metres.
- (f) Number of days of gales in which wind velocity is equal or more than 34 knots.

UPPER AIR DATA

TABLE D.—Radio sonde Data. Average Monthly Values.

Cairo Aerodrome. July 1956

Pressure Surface mb.	Heights of pressure Surfaces				Temperature °C			
	Readings at 1500 UT.		Highest	Lowest	Readings at 1500 UT		Highest	Lowest
	n	Mean			n	Mean		
Surface	31	999	1003	996	31	34.4	38.9	31.1
1000	13	82	97	70	13	33.6	34.8	31.0
850	31	1504	1541	1421	31	22.3	27.7	17.4
700	31	3159	3209	3077	31	13.4	17.4	6.5
600	31	4435	4500	4359	31	5.4	9.4	— 1.0
500	31	5901	5974	5783	31	— 2.8	0.3	— 10.2
400	31	7637	7706	7508	31	— 13.0	— 10.0	— 18.4
300	30	9768	9852	9662	30	— 27.4	— 23.2	— 32.3
200	26	12561	12666	12486	26	— 47.8	— 44.8	— 54.2
150	17	14399	14521	14312	17	— 61.5	— 58.4	— 65.3
100	13	16836	16899	16762	13	— 73.3	— 71.2	— 76.9
60	10	19774	19943	19008	10	— 62.8	— 59.0	— 64.8

n— Number of observations of specified pressure surfaces.

UPPER AIR DATA**TABLE D.—Radiosonde Data. Average Monthly Values****Matruh Aerodrome. July 1956**

Pressure Surface mb.	Heights of pressure Surfaces				Temperatetre °C.			
	Readings at 0400 UT.		Highest	Lowest	Readings at 0400 UT.		Highest	Lowest
	n	Mean			n	Highest		
Surface	29	1008	1010	1005	29	24.0	27.3	20.7
1000	29	99	118	74	29	24.0	30.2	21.0
850	29	1513	1547	1475	29	19.8	27.1	15.0
700	29	3152	3205	3031	29	11.2	17.8	06.0
600	29	4421	4493	4367	29	03.1	07.7	— 01.6
500	29	5873	5978	5793	29	— 04.9	— 00.3	— 10.0
400	28	7585	7658	7479	28	— 15.2	— 10.3	— 21.0
300	23	9713	9822	9550	23	— 28.8	— 24.2	— 33.4
200	20	12518	12660	12343	20	— 47.6	— 43.4	— 51.2
150	19	14378	14544	14244	19	— 60.3	— 55.2	— 64.7
100	17	16818	17064	16656	17	— 72.0	— 65.0	— 77.3
60	—	—	—	—	—	—	—	—

n = Number of observations of specified pressure surfaces.

UPPER AIR DATA**TABLE D.— Radiosonde Data. Average Monthly Values****Aswan Aerodrome. July 1956**

Pressure Surface mb.	Hights of pressure surfaces G. P. M.				Temperature °C			
	Readings at 0400 UT.		Highest	Lowest	Readings at 0400 UT.		Highest	Lowest
	n.	Mean			n.	Mean		
Surface	17	992	999	988	17	28.2	33	23
1000	—	—	—	—	—	—	—	—
850	17	1501	1537	1453	17	23.4	29	15
700	14	3150	3200	3078	14	11.6	18	5
600	11	4410	4491	4300	11	4.9	7	2
500	11	5854	5923	5497	11	— 4.5	— 2	— 16
400	9	7619	7741	7542	9	— 16.1	— 12	— 30
300	6	9696	9861	9605	6	— 30.2	— 28	— 35
200	—	—	—	—	—	—	—	—
150	—	—	—	—	—	—	—	—
100	—	—	—	—	—	—	—	—
60	—	—	—	—	—	—	—	—

n=Number of observations of specified pressures surfaces.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Cairo Aerodrome—1500 UT.—July 1956

Constant Pressure	Wind between specified ranges of direction 000–360												Calm	Total No. of obs.	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					
Surfaces mb.	n ₁	(ft) m	n ₂	(ft) m	n ₃	(ft) m	n ₄	(ft) m	n ₅	(ft) m	n ₆	(ft) m	n ₇	(ft) m	n ₈	(ft) m	n ₉	(ft) m	n ₁₀	(ft) m	n ₁₁	(ft) m	n ₁₂	(ft) m				
Surface	7	12	5	11	1	13	—	—	—	—	—	—	—	—	—	—	—	—	—	2	12	14	12	0	29	12		
1000	3	10	2	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	11	0	0	11	11		
850	9	11	3	16	5	14	—	—	—	—	—	—	—	—	—	—	—	—	2	12	7	9	5	11	0	31	11	
700	6	11	3	16	2	20	—	—	1	4	—	—	—	2	14	4	12	4	6	4	12	5	11	0	0	31	12	
600	5	18	2	11	2	22	—	—	—	—	—	—	—	4	19	5	13	3	9	7	15	3	12	0	0	31	15	
500	4	13	2	18	1	8	2	12	—	—	—	—	—	4	18	6	21	7	19	2	15	3	14	0	0	31	16	
400	2	10	3	22	2	12	—	—	2	15	1	16	3	26	6	26	8	23	1	17	3	19	0	0	31	21		
300	2	12	1	15	3	14	—	—	1	16	—	—	3	11	3	23	4	26	7	21	2	20	3	15	0	0	29	18
200	1	5	1	8	1	12	—	—	1	14	—	—	4	34	2	24	5	15	7	16	—	—	2	16	0	0	24	18
150	2	6	—	—	—	—	1	8	1	10	1	15	1	67	4	25	4	12	1	12	—	—	—	—	0	0	15	18
100	1	6	—	—	—	—	1	11	3	17	2	27	2	28	1	8	—	—	1	6	—	—	—	—	0	0	11	17
60	—	—	—	—	—	—	2	5	—	—	2	18	1	19	—	—	—	—	—	—	—	—	—	0	0	5	13	

Notes:—n₁: n₂, ..., etc. = Number occurrence of wind direction from the specified ranges.

(ft) = Mean scalar wind speed (regardless of direction).

F = Total number of obervation from all directions including calms.

TABLE E.—Rawin Data

Frequency wind ranges and mean scalar wind speeds
Matrouh Aerodrome—0400 UT.—July 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000—360													Calm	Total No. of Obs. N	Mean Scalar wind speed											
	345—014		015—014		045—074		075—104		105—134		135—164		165—194		195—224		225—254		255—284		285—314						
	n ₁	(ff) m	n ₂	(ff) m	n ₃	(ff) m	n ₄	(ff) m	n ₅	(ff) m	n ₆	(ff) m	n ₇	(ff) m	n ₈	(ff) m	n ₉	(ff) m	n ₁₀	(ff) m	n ₁₁	(ff) m	n ₁₂	(ff) m			
Surface	8	11	2	12	—	—	—	—	—	—	—	—	—	—	1	2	—	—	9	12	6	11	0	26	11		
1000	8	12	2	12	—	—	—	—	—	—	—	—	—	—	1	2	—	—	10	12	5	11	0	26	11		
850	9	19	5	30	1	9	1	4	—	—	—	—	—	—	—	—	—	—	3	16	7	14	0	26	18		
700	5	15	5	23	2	10	—	—	—	—	—	—	—	3	18	—	—	1	19	6	14	3	16	0	25	17	
600	1	7	6	23	2	8	—	—	—	—	—	—	—	3	23	—	—	2	14	5	15	6	14	0	25	16	
500	2	13	4	23	—	—	—	—	—	1	4	—	—	2	27	4	14	4	16	4	14	3	15	0	24	16	
400	3	21	1	15	—	—	1	5	1	9	—	—	1	9	2	20	3	24	5	26	2	12	1	10	0	20	19
300	2	23	1	18	1	10	—	—	—	1	9	—	—	2	35	2	30	3	24	2	19	1	11	0	15	22	
200	—	—	—	—	—	—	1	4	—	—	—	—	—	—	—	—	—	1	28	1	1	2	13	0	5	12	
150	—	—	1	13	—	—	—	—	—	—	—	—	—	—	—	—	—	1	30	—	—	1	2	0	3	15	
100	—	—	1	15	—	—	—	—	—	—	—	—	—	—	—	—	—	1	22	—	—	—	—	0	2	18	
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

Notes : n₁: n₂, ..., etc. = Number of occurrence of wind direction from the specified ranges.

(ff)m == mean scalar wind speed (regardless of direction).

N == Total number of observations from all directions including calms.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Aswan Aerodrome—0400 UT. — July 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000—360													Calm	Total No. of Obs. N	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 ₁	(ff) m	n ₂	(ff) m	n ₃	(ff) m	n ₄	(ff) m	n ₅	(ff) m	n ₆	(ff) m	n ₇	(ff) m	n ₈	(ff) m	n ₉	(ff) m	n ₁₀	(ff) m	n ₁₁	(ff) m	n ₁₂	(ff) m			
Surface*	—	—	1	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	4	
1000 †	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
850	...	4	12	1	2	3	14	—	—	—	—	—	—	—	—	2	10	—	—	1	9	1	10	—	—	12	11
700	...	—	—	1	6	2	16	1	17	—	—	—	—	1	8	1	8	3	15	1	4	—	—	1	3	—	11
600 †	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
500	...	—	—	2	10	4	12	—	—	1	10	—	—	1	8	1	10	—	—	—	—	1	7	—	—	10	10
400	...	—	—	—	—	3	13	2	6	2	8	1	8	—	—	—	—	—	—	—	—	—	—	—	—	8	9
300	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
200	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
150	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
100	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
60	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Notes: n₁ n₂, etc. = Number of occurrence of wind direction from the specified ranges.

(ff)m = mean scalar wind speed (regardless of direction).

N = Total Number of observations from all directions including calms.

* Not observed except on 3/7/56. † Not observed.

Cairo Aerodrome, July 1956

Day	Time U.T.	Freezing level							Highest Wind Speed					Tropopause		
		Lowest				Highest			Height	PPPP	ddd	fff	Height	PPP	TTT	
		GGgg	Height	PPPP	T _d T _d T _d	Height	PPPP	T _d T _d T _d								
1	1500	5330	538	—	—	—	—	—	14400	150	190	067	16600	104	—73.3	
2	1500	5960	498	—	—	—	—	—	12000	218	190	040	12400	209	—54.0	
3	1500	5900	504	—	—	—	—	—	5200	550	240	017	—	—	—	
4	1500	5800	507	—	—	—	—	—	5300	540	220	017	—	—	—	
5	1500	5510	525	—	—	—	—	—	3700	655	300	014	—	—	—	
6	1500	5570	520	—	—	—	—	—	8700	347	260	036	—	—	—	
7	1500	4690	575	—	—	—	—	—	8000	374	240	046	—	—	—	
8	1500	4200	609	—	—	—	—	—	9900	290	240	043	—	—	—	
9	1630	4960	560	—	—	—	—	—	8000	380	320	031	—	—	—	
10	1500	5080	553	—	—	—	—	—	13600	158	270	044	—	—	—	
11	1500	8730	576	—	—	—	—	—	6500	460	260	034	16500	104	—74.8	
12	1500	4830	572	—	—	—	—	—	5500	524	260	029	16350	108	—73.8	
13	1500	5300	540	—	—	—	—	—	14100	158	220	037	—	—	—	
14	1500	5920	516	—	—	—	—	—	16550	148	320	030	—	—	—	
15	1500	5620	513	—	—	—	—	—	14400	150	220	025	17400	090	—79.2	
16	1600	5560	524	—	—	—	—	—	12900	191	010	021	—	—	—	
17	1500	5240	542	—	—	—	—	—	11200	244	020	017	—	—	—	
18	1500	4670	584	14.4	—	—	—	—	3980	635	350	028	17720	086	—77.4	
19	1500	5200	544	—	—	—	—	—	20600	048	100	027	17940	082	—74.8	
20	1500	5520	525	—	—	—	—	—	6170	484	040	020	14140	156	—60.8	
21	1500	5940	510	—	—	—	—	—	6900	444	020	029	—	—	—	
22	1530	5750	512	—	—	—	—	—	7200	425	050	041	15200	170	—63.2	
23	1530	5200	545	—	—	—	—	—	7750	398	060	021	—	—	—	
24	1600	5640	519	—	—	—	—	—	18700	074	150	035	17200	096	—78.3	
25	1500	5560	523	—	—	—	—	—	4250	615	220	022	15900	116	—72.8	
26	1500	5730	511	—	—	—	—	—	7700	394	270	025	15200	132	—72.0	
27	1500	5620	516	—	—	—	—	—	7550	408	250	039	—	—	—	
28	1500	5530	522	—	—	—	—	—	12000	218	200	024	14690	144	—62.9	
29	1500	5850	504	—	—	—	—	—	4300	610	210	032	15000	109	—64.5	
30	1500	5300	512	—6.4	—	—	—	—	4300	614	220	020	14180	156	—62.0	
31	1500	5590	524	—7.4	—	—	—	—	7600	406	210	024	—	—	—	
Highest	...	—	5960	498	—	—	—	—	14400	150	190	067	17940	082	—74.8	
Lowest	...	—	4200	609	—	—	—	—	3700	655	300	014	12400	209	—54.0	

Notes.—GGgg is the actual time of release of balloon to the nearest minute (Universal Time).

PPPP is the pressure in whole millibars (eg. 1027.7 m.b. PPPP 1028).

TTT and T_dT_dT_d are the temperature and dew point in degrees celsuis (centigrade).

ddd is wind direction in whole degrees east of the true north; for calm winds enter 000 for ddd and fff.

fff is wind speed in knots; heights are in geopotential metres above M.S.L.

Highest and Lowest values correspond to available date.

TABLE F.—Miscellaneous Data

Mersa Matrouh Aerodrome. July 1956

Day	Time UT.	Freezing Level						Highest Wind Speed				Tropopause		
		Lowest			Highest			Height	PPPP	ddd	fff	Height	PPP	TTT
	GGgg	Height	PPPP	T _d	T _d	T _d	Height	PPPP	T _d	T _d	Height	PPPP	TTT	
1	0400	4640	0580	—	—	—	8200	—	240	033	—	—	—	
2	0400	4900	0563	—	—	—	9000	—	210	041	—	—	—	
3	0600	4670	0582	—	—	—	10000	—	330	030	—	—	—	
4	0400	5300	0540	—	—	—	—	—	—	—	—	—	—	
5	0400	5500	0528	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	
7	0400	4460	0594	—	—	—	8300	—	270	045	—	—	—	
8	0400	4120	0619	—	—	—	5800	0500	010	050	—	—	—	
9	0800	4950	0560	—	—	—	14800	—	300	038	17550	0078	-73.8	
10	0500	4950	0563	—	—	—	—	—	—	—	—	—	—	
11	0400	4390	0600	—	—	—	7400	—	270	031	15120	0130	-68.0	
12	0400	4400	0602	—	—	—	10400	—	260	033	15400	0126	-70.0	
13	0400	4530	0590	—	—	—	10200	—	230	039	16950	0095	-77.7	
14	0400	5140	0547	—	—	—	1500	0850	300	020	—	—	—	
15	0500	5270	0542	—	—	—	8800	—	290	029	17900	0082	-81.5	
16	—	—	—	—	—	—	—	—	—	—	—	—	—	
17	0500	4740	0577	—	—	—	2400	0767	030	033	16380	0106	-77.2	
18	0400	4550	0594	—	10.5	—	1200	0883	350	017	17000	0096	-75.0	
19	0400	4850	0566	—	—	—	12200	—	310	024	—	—	—	
20	0400	5900	0505	—	—	—	4800	0578	020	032	15450	0132	-66.0	
21	0400	5300	0542	—	—	—	2400	0767	030	042	—	—	—	
22	0400	4350	0605	—	—	4960	0564	—	—	—	—	—	—	
23	0400	5180	0549	—	—	—	1600	0844	030	039	—	—	—	
24	0500	5570	0523	—	—	—	1500	0852	040	026	17550	0096	-74.5	
25	0400	5220	0545	—	—	—	0500	0955	040	016	—	—	—	
26	0400	5600	0520	—	—	—	1600	0842	040	020	—	—	—	
27	0400	5040	0554	—	—	—	1600	0844	350	012	16600	0105	-72.6	
28	0400	5040	0554	—	—	—	8000	—	290	039	16620	0100	-71.9	
29	0400	4940	0560	—	—	—	3100	0700	290	019	17560	0090	-70.3	
30	0500	5750	0508	—	—	—	7000	0433	230	035	15800	0120	-66.3	
31	0400	5420	0530	—	—	—	6000	0494	210	038	17900	0085	-72.0	
32	—	—	—	—	—	—	4200	0616	220	026	14960	0135	-67.8	
Highest	...	—	5900	0505	—	—	5800	0500	010	050	17900	0082	0085	-81.5, -72.0
Lowest	...	—	4120	0619	—	—	1600	0844	350	012	14960	0135	—	-67.8

Notes.—GGgg is the actual time of release of balloon to the nearest minute Universal (time).

PPPP is the pressure in whole millibars (eg. 1027.7 m.b. PPPP 1028).

TTT and T_dT_dT_d are the temperature and dew point in degrees celsuis (centigrade)

ddd is wind direction in whole degrees east of the true north; for calm wind enter 000 for ddd and fff.

fff is wind speed in Knots; heights are in geopotential metres above M.S.L.

Highest and lowest correspond to available date.

AGRO-METEOROLOGICAL DATA—GIZA

**TABLE G.—Air Temperature, Humidity, Rainfall, Sunshine-Duration,
Wind Speed and Piche Evaporation**

July 1956

Max. temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	42.1 °C on 23
Min. temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	17.5 °C on 11
Min. temp. at 5 cms. over dry soil	...	...	...	...	...	...	...	...	...	...	...	...	13.7 °C on 13
Min. temp. at 5 cms. over wet soil	...	...	...	...	...	...	...	...	...	...	...	...	14.2 °C on 13
Min. temp. at 5 cms. over grass	...	...	...	...	...	...	...	...	...	...	...	...	11.1 °C on 13
Min. Relative Humidity at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	18% °C on 24
Max. Absolute Humidity at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	21.7 mm. on 26
Min. Absolute Humidity at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	9.0 mm. on 13
Mean daily temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	27.4 °C
Mean day-time temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	29.8 °C
Mean night-time temp. at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	24.8 °C
Mean Relative Humidity at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	61%
Mean Absolute Humidity at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	15.1 mm.
Mean day-time wind speed at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	3.1 m/sec.
Mean night-time wind speed at 2 metres	...	...	...	...	...	...	...	...	...	...	...	...	1.7 m/sec.
Mean Piche Evaporation at 120 cm.	...	...	...	...	...	...	...	...	...	...	...	...	16.7 m.m.
Total Rainfall	...	...	...	...	...	...	...	...	...	...	...	...	0.0 m.m.
Sunshine-Duration	...	...	...	...	...	...	...	...	...	...	...	...	363 hours (85% out of possible hours).

TABLE H.—Extreme Soil Temperature

Giza—July 1956

Extreme Soil Temp.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Depth in cm.	0.3	5	10	20	50	100	200							
Dry Soil ...	64.5	20.0	44.0	27.0	37.5	28.0	35.0	30.5	32.5	30.5	30.5	28.5	26.5	25.0
Wet Soil ...	51.5	19.0	35.5	20.0	32.5	22.5	29.5	24.0	27.0	24.5	25.0	23.5	23.0	21.5
Grass ...	36.5	21.0	31.5	22.5	30.0	23.5	29.0	25.5	27.0	24.5	25.5	23.5	—	—

TABLE I.—Amount of Solar + Sky Radiation in Gram per cm.²

Giza—July 1956

Solar + Sky Radiation	DATE														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
722	757	761	745	741	680	753	733	724	750	750	754	732	742	731	742
DATE															
Solar + Sky Radiation	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	709	736	785	771	726	720	715	703	705	703	751	744	704	693	685

Monthly Total = 22667

TABLE J.—Duration in Hours of Temperature at 2 Metres Height Above Certain Levels in °C.

Giza—July 1956

	DATE															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Duration above 0°C.	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
" " 50°C.	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
" " 10°C.	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
" " 15°C.	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
" " 20°C.	20	20	24	24	24	24	24	22	19	24	19	24	24	24	24	24
" " 25°C.	12	13	12	12	12	13	15	15	14	14	15	15	15	16	15	17
" " 30°C.	6	8	8	7	6	5	5	7	9	8	8	9	11	10	7	9
" " 35°C.	0	0	0	0	0	0	0	2	0	0	2	3	4	0	2	6
" " 40°C.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
" " 45°C.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOTES

TABLE G.

(a) Air temperature and humidity are measured by ventilated dry and wet-bulb thermometers freely exposed in louvered Stevenson Screen of the Egyptian type. Thermometer bulbs are at 210 cms. above ground (approximately 2m.) maximum (mercury) and minimum (alcohol) thermometers are exposed in the same screen for the 2m values. The minimum thermometers for the 5cm. heights are of the alcohol type freely exposed in the open air on wood supports.

The daily mean values of air temperature are computed from the formula $1/4$ (values at 0800 + 14000 + 2000 + Minimum).

The day-time mean air temperature is computed graphically from the record of a thermograph exposed in the screen, for the period sunrise to sunset. The night mean is similarly obtained for the period sunset to sunrise.

(b) Incomputing relative humidity Aspirations-Psychrometer tables of the Proussischen Meteorological Institut—1927 are, used. corrections for wind speed are applied. The mean relative humidity is computed from the formula $1/2$ (values at 0800 + 1400-Local Time).

(c) Absolute humidity is expressed by vapour pressure in units of mms. of mercury. The mean value is calculated from the formula $1/3$ (values at 0800 + 1400 + 2000 L.T.).

(d) Rainfall is measured by ordinary rain gauge; the height of its rain is 40 cm. above ground. Tr. stands from trace (i.e amounts of rain less than 0.1 mm.).

(e) The mean wind speed by day is computed from the total run of air during the period 0800 to 1800 L.T., as indicated by the counter of an ordinary cup anemometer freely exposed at a height of 2 metres above ground.

The mean wind speed at night is similarly computed for the period 1300 to 0800 L.T.

(f) Evaporation is measured by a piche tube freely exposed in the open air; the evaporation disc has a diameter of 3cms, white in colour and at a height of 120 cms., above dry soil.

The piche is read at 0800 L.T. daily in millimetres, the daily values given are for the 24 hours beginning at 0800 L.T.

TABLE H.

Soil temperature is measured by mercury thermometers, the value given are to be nearest $1/2$ °C

TABLE I

Instrument used for the measurement of solar and sky radiation (global radiation) is the "Rabitzch Actinograph".

M. F. TAHA
Director General
Meteorological Department

Cairo, on 8/11/1956



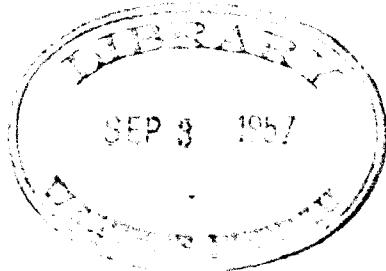
REPUBLIC OF EGYPT

MINISTRY OF WAR

METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REPORT

August 1956



GOVERNMENT PRESS, CAIRO
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GENERAL SUMMARY OF WEATHER CONDITIONS

August 1956

Hot and humid in the north, extensively hot extreme south. Record maximum temperatures. Abnormal rainfall at Sidi-Barrani and Giza.

The main features were:

- (a) Atmospheric pressure was below normal most of the month.
- (b) Record maximum temperatures at scattered places of the Republic.
- (c) Abnormal rainfall at Sidi-Barrani (3.5mm) on the 9th. and at Giza on the 22nd (0.1mm).

General description of weather :

For the month as a whole the weather was hot and excluding the west coast, the whole Country, specially Upper Egypt experienced two excessive heat waves.

The Barometric pressure was generally below normal, while maximum and minimum temperatures were above normal.

Rainfall exceeded the normal over the extreme west coast only.

The mean relative humidity reached 73% Alexandria (Kom EL Nadora), 63% Giza, 61% Ezbekiya, and 51% Helwan.

Pressure and Wind :

The month started with the two monsoons, over Iraq and Sudan respectively together with the high pressure system expanding from the British Isles SE wards over the Mediterranean towards the Western Desert of Egypt. These monsoon lows deepened together this month, five consecutive times, *vis* 1st—3rd, 6—11th, 14th—18th, 21st—25th and 27th—28th. Each deepening process was accompanied by a further fall below normal in the barometric pressure over Egypt and on the other hand was followed by a similar rise due to the local intensification of the Western Desert small anticyclone.

During the month light/moderate N/NE ly winds prevailed all over the Country. Frequent fresh/strong winds were reported over the Red Sea Coasts.

Temperature :

Maximum temperature was generally above normal most of the month, though its rise was remarkable over Middle and Upper Egypt. Two heat waves with peaks round 8th and 22nd. were experienced over Lower Egypt, while three consecutive excessive heat waves with peaks round 9th, 13th, 22nd prevailed over Middle and Upper Egypt. Record maximum temperatures was a characteristic feature of this month. The following table shows these records.

Station	Date	Record Max. Temp.	Record Since year	Station	Date	Record Max. Temp.	Record Since year
P. Said ...	{ 11/8/56 12/8/56	{ 35.7	1941	Nag. Hamadi ...	13/8/56	44.9	1942
El Arish ...	11/8/56	37.7	1907	Kharga ...	14/8/56	46.9	1926
Damanhur ...	11/8/56	39.4	1929	Tor ...	11/8/56	43.0	1905
Tanta ...	8/8/56	41.0	1927				

During this month minimum temperature was slightly above normal Lower Egypt, changeable otherwise.

Precipitation:

Sidi-Barrani reported 3.5mm. on the 9th. between 0315 U.T. and 0430 U.T. which is record since 1910. Such abnormal rain developed over the extreme west due to the intrusion of cold unstable air between 850 mb. level and 500 mb. level over the extreme west coast and Cyrenica. Giza reported 0.1mm on the 22nd. which is abnormal feature since 1902.

Miscellaneous Weather Phenomena:

- (a) Early morning low stratus developed most of the month over the Delta.
- (b) Upper Air instability developed over the West Coast and Cyrenica on the 9th. which is an uncommon feature for the weather of August.

TABLE A.—Condensed Climatological Data

August 1956

DISTRICTS	Barometric Pressure		Memperaturo						Rainfall	
			Maximum temp.		Minimum temp.		Max.+Min. 2			
	1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.
	mb.	mb.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
1. Mediterranean	1008.3	+1.2	31.4	+ 0.9	23.6	+0.4	27.5	+0.6	3.5	+0.7
2. Lower Egypt	1008.2	+1.7	35.4	+ 1.3	20.5	+0.5	28.0	+0.9	0	0
3. Middle Egypt	1007.8	+1.9	36.5	+ 1.6	22.7	+1.5	29.6	+1.6	0	0
4. Upper Egypt	1007.0	+1.3	40.2	+ 1.9	23.2	+0.6	31.7	+1.2	0	0
5. Western Desert	1009.0	+1.4	39.6	+ 1.5	23.0	+1.4	31.3	+1.4	0	0
6. Red Sea	1005.7	+1.4	36.6	+ 2.4	25.5	+0.5	31.0	+1.4	0	0

TABLE B.—Climatological Data-Stations

August 1956

Stations	Pressure		Temperature								Rainfall			
			Maximum. Temp.				Minimum. Temp.							
	Mean 0600 U.T.	Dev. from Normal	Mean	Dev. from Normal	Absolute Max.	Date	Mean	Dev. from Normal	Absolute Minimum	Date	Total Rainfall	Number of days of rain*	Max. Rainfall in one day	Date
Salloum ...	1009·4	—	30·1	—	35·0	22	21·2	—	18·9	16	0	—	0	—
Sidi-Barrani ...	1013·3	—	29·5	—	33·3	22	22·2	—	19·5	30	3·5	1	3·5	9
Mersa Matruh (A)	1009·2	-1·5	30·1	—	32·0	21	21·0	—	17·7	21	0	—	0	—
El Dabaa ...	1007·9	—	30·4	—	33·6	22	20·6	—	17·7	17	0	—	0	—
Kom-el-Nadora ...	1008·8	-1·4	30·7	+0·3	36·8	8	24·2	+ 0·6	22·3	21	0	—	0	—
Alexandria (A) ...	1008·2	—	31·3	—	38·9	8	22·8	—	19·0	17	0	—	0	—
Damietta ...	1008·3	-0·4	31·5	+0·9	37·0	11	21·3	0·0	19·0	21	0	—	0	—
Port-Said (A) ...	1008·0	-1·0	32·0	+1·6	35·7	11, 12	25·3	+ 0·5	24·0	23, 16, 24	0	—	0	—
El Arish ...	1007·2	-1·9	32·7	—	37·7	11	20·9	—	17·7	22	0	—	0	—
Damanhour ...	1008·2	-1·6	34·5	+1·8	39·4	11	21·0	+ 0·7	18·9	17	0	—	0	—
Mansura ...	1008·3	-1·2	35·4	+0·7	38·5	9	21·7	+ 0·9	18·5	21	dr.	1	dr.	11
Tanta ...	1008·6	-1·4	36·0	+1·4	41·0	8	18·6	- 0·9	16·2	24	0	—	0	—
Shebin El Kom...	1008·2	-1·8	34·9	—	38·9	8	22·1	—	19·9	21	0	—	0	—
Zagazig ...	1007·5	-2·7	35·6	+1·1	39·7	8	20·7	+ 1·1	18·0	4	0	—	0	—
Ismailia ...	1008·0	—	38·0	—	42·9	9	22·7	—	20·7	4	0	—	0	—
Cairo (A) ...	1008·2	—	36·4	—	41·7	10	22·7	—	19·0	4	0	—	0	—
Almaza (A) ...	1006·8	-2·9	36·4	+1·4	42·2	10	23·0	+ 1·1	20·0	4	0	—	0	—
Ezbekiya ...	—	—	36·8	+1·7	41·5	8	23·3	+ 1·4	21·6	4	0	—	0	—
Giza ...	1008·4	-1·4	36·2	+1·6	40·6	8	21·0	+ 1·3	17·3	4	0·1	1	0·1	22
Helwan ...	1008·2	-1·4	36·6	+1·8	41·5	10	23·4	+ 2·0	21·4	18	0	—	0	—
Fayoum ...	1009·0	-0·9	38·5	+2·4	42·0	9	22·3	+ 1·0	19·7	18	0	—	0	—
Minya (A) ...	1007·8	-1·6	37·6	+1·1	42·2	13	20·5	+ 0·2	17·7	18	0	—	0	—
Asyout (A) ...	1007·3	-1·5	38·5	+0·9	42·2	13	23·4	+ 1·0	20·5	21	0	—	0	—
Nag-Hamadi ...	1007·0	-0·8	39·6	+1·6	44·9	13	22·3	+ 1·5	19·1	20·21	0	—	0	—
Qena ...	1006·2	-1·3	43·0	+2·5	47·2	13	23·6	- 0·5	19·2	21	0	—	0	—
Luxor (A) ...	1005·7	-1·5	43·0	—	47·0	13	25·1	—	19·4	21	0	—	0	—
Aswan ...	1005·7	-1·7	44·0	+2·9	47·5	13	27·4	+ 1·0	23·0	26	0	—	0	—
Siwa ...	1009·7	-2·5	38·2	+0·3	41·4	25	22·0	+ 1·7	19·6	5	0	—	0	—
Bahariya ...	1008·6	-2·2	38·6	+2·3	43·1	13	21·5	+ 1·1	18·4	20	0	—	0	—
Farafra ...	1009·8	—	39·4	—	44·5	12	22·0	—	18·5	21	0	—	0	—
Dakhla ...	1009·3	-0·5	40·4	+1·5	46·0	13	24·1	+ 1·2	21·2	22	0	—	0	—
Kharga ...	1008·3	-0·4	41·2	+1·9	46·9	14	24·2	+ 1·5	17·0	21	0	—	0	—
Suez ...	1008·3	-0·8	38·1	+2·0	41·4	7, 9	21·8	- 1·4	18·8	4·21·24	0	—	0	—
Tor ...	1004·7	-1·7	37·0	+2·6	43·0	11	26·2	+ 1·6	22·0	22	0	—	0	—
Hurghada ...	1004·6	-1·9	36·2	+3·8	40·9	12	25·9	+ 0·9	20·5	22	0	—	0	—
Quseir ...	1005·1	-1·3	34·9	+0·9	39·9	9	28·0	+ 1·0	25·1	26	0	—	0	—

* Drops are taken into consideration.

TABLE C.—Miscellaneous Weather Phenomena

August 1956

Stations	NUMBER OF DAYS OF OCCURRENCE					
	Rain Showers	Thunder-storm	Fog	Mist Sandrising dustrising	Dust or Sand Storm	Gales
	(a)	(b)	(c)	(d)	(e)	(f)
Sallum	0	0	0	0	0	0
Sidi-Barrani	1	0	0	0	0	0
Mersa Matruh	0	0	1	0	0	0
Alexandria (A)	0	0	0	0	0	0
Port Said (A)	0	0	0	0	0	0
El Arish	0	0	1	0	0	0
Cairo (A)	0	0	1	1	0	0
Almaza (A)	0	0	1	0	0	0
Minya (A)	0	0	0	0	0	0
Assiut (A)	0	0	0	0	0	0
Luxor (A)	0	0	0	0	0	0
Siwa	0	0	0	0	0	0
Hurghada	0	0	0	0	0	0
Aswan	0	0	0	0	0	0

(a) Number of days in which rainfall is 0·1 mm. or more within 24 hours from 0600 U.T. to 0600 U.T. next day.

(b) Number of days of thunderstorm heard within station.

(c) Number of days of Fog in which visibility is less than 1000 metres.

(d) Number of days of mist or sandrising or dustrising in which visibility is more than 1000 metres and less than 2000 metres.

(e) Number of days of sandstorms in which visibility is less than 1000 metres.

(f) Number of days of gales in which wind velocity is equal or more than 34 knots.

UPPER AIR DATA

TABLE D.—Radiosonde Data. Average Monthly Values.

Cairo Aerodrome. August 1956

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 1500 U.T.		Highest	Lowest	Readings at 1500 UT.		Highest	Lowest
	n	Mean			n	Mean		
Surface	31	1000	1003	995	31	34·3	37·8	31·9
1000	*19	77	97	70	*19	33·9	37·1	31·9
850	31	1501	1537	1424	31	22·4	26·6	17·8
700	31	3154	3209	3073	31	11·7	18·7	6·4
600	31	4421	4491	4337	31	3·4	08·0	— 2·8
500	30	5873	5924	5790	30	— 5·4	— 1·0	— 10·4
400	30	7589	7679	7509	30	— 15·2	— 11·8	— 23·2
300	27	9696	9774	9562	27	— 30·6	— 26·5	— 41·8
200	23	12450	12566	12185	23	— 51·3	— 46·4	— 63·4
150	18	14285	14417	14114	18	— 63·0	— 56·2	— 70·5
100	13	16736	16895	16552	13	— 69·7	— 60·0	— 74·6
60	—	—	—	—	—	—	—	—

N = Number of observations of specified pressure surfaces.

* Surface pressure below 1000 mb. 12 days.

UPPER AIR DATA

TABLE D.—Radiosonde Data. Average Monthly Values.

Matruh, Aerodrome. August 1956

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 0400 U.T.		Highest	Lowest	Readings at 0400 UT.		Highest	Lowest
	n	Mean			n	Mean		
Surface	19	1007	1010	1003	19	23·1	27·3	20·4
1000	19	89	118	56	19	23·1	26·5	20·6
850	19	1500	1528	1468	19	19·9	25·0	16·9
700	19	3138	3185	3093	19	09·6	14·2	04·0
600	19	4398	4463	4330	19	02·8	07·2	— 3·3
500	19	5850	5926	5761	19	— 5·2	— 2·0	— 14·0
400	19	7566	7649	7427	19	— 16·5	— 11·6	— 19·5
300	18	9662	9779	9536	18	— 30·4	— 25·7	— 36·0
200	17	12429	12588	12294	17	— 48·3	— 43·2	— 52·5
150	13	14261	14443	14090	13	— 60·3	— 57·8	— 62·0
100	12	16703	16896	16555	12	— 70·2	— 67·5	— 72·1
60	—	—	—	—	—	—	—	—

N = Number of observations of specified pressure surfaces.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Cairo Aerodrome.—1500 UT.—August 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000—360													Calm	Total No. of obs N	Mean Scales 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 ₁	(ff)m	n ₂	(ff)m	n ₃	(ff)m	n ₄	(ff)m	n ₅	(ff)m	n ₆	(ff)m	n ₇	(ff)m	n ₈	(ff)m	n ₉	(ff)m	n ₁₀	(ff)m	n ₁₁	(ff)m	n ₁₂	(ff)m			
Surface ...	6	10	2	9	—	—	—	—	—	—	—	—	1	10	1	16	—	—	9	8	11	9	0	30	9		
1000	5	9	—	—	—	—	—	—	—	—	—	—	1	10	—	—	—	—	6	9	6	9	0	18	9		
850	2	12	1	12	3	7	1	8	—	—	1	2	2	10	1	7	4	14	5	10	3	16	6	10	0	29	10
700	1	9	3	27	—	—	—	—	—	—	2	24	3	22	10	22	3	17	3	9	4	8	0	29	18		
600	2	15	—	—	—	—	—	—	1	3	2	39	6	29	7	31	3	15	6	11	2	6	0	29	21		
500	—	—	2	16	—	—	—	—	1	10	—	—	3	39	4	25	10	25	3	14	5	19	—	—	0	28	23
400	1	14	2	18	1	15	—	—	—	—	2	22	2	26	14	19	3	22	2	22	—	—	0	27	20		
300	—	—	2	15	—	—	—	—	—	—	—	—	7	14	8	18	4	18	—	—	—	—	0	21	16		
200	—	—	—	—	—	—	—	—	1	6	—	—	3	17	3	17	3	21	—	—	1	4	1	12	14		
150	—	—	—	—	1	16	—	—	—	—	1	10	2	12	—	—	1	26	—	—	1	10	0	6	14		
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

Notes: n₁, n₂, . . . etc. = Number of occurrences of wind direction from the speed specified ranges.

(ff)m = Mean scalar wind speed (regardless of direction).

N = Total number of observations from all direction including calms.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Matruh Aerodrome.—0400 UT.—August 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000°—360°												Calm	Total No. of obs. N	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						
	n ₁	(ff) m	n ₂	(ff) m	n ₃	(ff) m	n ₄	(ff) m	n ₅	(ff) m	n ₆	(ff) m	n ₇	(ff) m	n ₈	(ff) m	n ₉	(ff) m	n ₁₀	(ff) m	n ₁₁	(ff) m	n ₁₂	(ff) m			
Surface...	3	8	1	13	—	—	—	—	—	—	—	—	—	—	—	—	2	6	10	9	1	8	2	19	8		
1000 ...	3	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	6	8	10	1	8	1	15	8		
850 ...	2	16	1	7	—	—	1	6	—	—	—	—	—	—	1	10	2	10	2	12	6	12	0	15	11		
700 ...	4	12	—	—	—	—	2	4	1	8	—	—	—	—	1	13	1	11	2	12	3	13	0	14	11		
600 ...	3	12	1	16	—	—	—	—	2	8	—	—	—	—	1	5	—	—	2	16	2	16	3	9	0	14	12
500 ...	4	16	—	—	1	5	1	12	—	—	—	—	1	3	—	—	2	20	—	—	2	15	3	19	0	14	15
400 ...	2	30	1	8	2	10	—	—	—	—	—	—	—	1	9	3	21	3	20	1	21	1	26	0	14	19	
300 ...	1	49	1	14	—	—	2	7	—	—	—	—	—	—	2	26	3	27	1	36	2	20	0	12	24		
200 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
150 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
100 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
60 ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			

Notes : n₁, n₂, . . . , etc. = Number of occurrence of wind direction from the specified ranges.

(ff)m = Mean scalar wind speed (regardless of direction).

N = Total number of observations from all directions including calms.

TABLE F.—Miscellaneous Data

Cairo Aerodrome. August 1956

Day	Time U.T	Freezing level						Highest Wind Speed				Tropopause		
		Lowest			Highest			Height	PPPP	ddd	fff	Height	PPP	TTT
		GGgg	Height	PPPP	TdTdTd	Height	PPPP	TdTdTd						
1	1500	5220	546	— 9.2	—	—	—	4600	590	240	030	16200	112	—70.0
2	1500	5750	510	—	—	—	—	3100	700	250	045	14500	148	—60.6
3	1500	5150	545	—	—	—	—	6000	490	240	034	—	—	—
4	1600	5700	508	—	—	—	—	6000	490	300	037	—	—	—
5	1500	5300	536	—	—	—	—	2800	730	040	024	—	—	—
6	1500	5180	542	—	—	—	—	5600	500	170	052	17300	094	—70.2
7	1500	5010	560	—10.4	—	—	—	4900	567	190	051	—	—	—
8	1500	4960	564	—	—	—	—	5400	538	030	024	—	—	—
9	1500	5100	554	—	—	—	—	18200	090	280	078	16750	100	—72.0
10	1500	4560	587	—	—	—	—	4500	593	180	044	—	—	—
11	1500	4800	573	—	—	—	—	4400	537	230	049	—	—	—
12	1500	4800	575	—	—	—	—	4300	611	210	052	—	—	—
13	1500	4330	609	—	—	—	—	4700	580	230	056	14520	140	—73.8
14	1500	4900	565	—	—	—	—	6100	486	260	052	15540	120	—72.6
15	1500	5120	548	—	—	—	—	1600	838	320	032	13840	160	—59.0
16	1500	5420	529	—	—	—	—	—	—	—	—	—	—	—
17	1500	5140	548	—	—	—	—	5800	505	260	024	—	—	—
18	1500	4870	564	—	—	—	—	8100	—	250	032	—	—	—
19	1500	4240	609	—	—	—	—	10500	266	240	032	—	—	—
20	1500	4930	560	—	—	—	—	7500	703	230	022	—	—	—
21	1600	4930	566	—	—	—	—	9400	—	230	047	—	—	—
22	1530	3900	639	—	—	—	—	6400	465	260	036	14670	140	—71.7
23	1530	5000	558	—	—	—	—	9250	320	280	026	—	—	—
24	1600	4770	568	—	—	—	—	7000	428	260	018	14760	136	—70.3
25	1530	4630	585	—	—	—	—	11070	237	250	025	—	—	—
26	1600	5260	544	—	—	—	—	8850	—	070	017	—	—	—
27	1630	4960	564	—	—	—	—	4050	630	210	026	15350	126	—67.4
28	1500	4930	566	—	—	—	—	4250	615	210	032	17480	088	—72.4
29	1500	4960	565	—	—	—	—	4350	608	230	033	15630	104	—71.7
30	1500	5000	562	—	—	—	—	3880	650	220	033	16280	108	—73.3
31	1500	5390	536	—	—	—	—	3300	693	230	033	—	—	—
Highest	...	—	5750	510	—	—	—	18200	090	280	078	17480	088	—72.4
Lowest	...	—	3900	639	—	—	—	—	—	—	—	13840	160	—59.0

Notes.—GGgg is the actual time of release of balloon to the nearest minute (universal time).

PPPP is the pressure in whole millibars (e.g. 1027.7 m.b. PPPP 1028).

TTT and TdTdTd are the temperature and dew point in degrees celsuis (centigrade).

ddd is wind direction in whole degrees east of the true north; for calm winds enter 000 for ddd and fff.

fff Wind speed in Knots. Heights are in geopotential metres above M.S.L.

Highest and Lowest values correspond to available date.

TABLE F.—Miscellaneous Data

Mersa Matruh Aerodrome. August 1956

Day	Time UT.	Freezing level								Highest Wind Speed				Tropopause		
		Lowest				Highest										
		GGgg	Height	PPPP	TdTdTd	Height	PPPP	TdTdTd	Height	PPPP	ddd	fff	Height	PPP	TTT	
1	0400	5650	0507	—	—	—	—	—	6300	0523	240	034	16550	0106	-71.5	
2	0400	5200	0542	—	—	—	—	—	—	—	—	—	17000	0092	-73.0	
3	0400	4300	0602	—	—	—	—	—	—	—	—	—	16680	0100	-72.1	
4	0400	4650	0578	—	—	—	—	—	8800	—	350	051	16120	0108	-70.8	
5	0400	4900	0562	—	—	—	—	—	5600	0515	360	025	—	—	—	
6	0400	5020	0555	—	—	—	—	—	1200	0880	340	024	—	—	—	
7	0700	3710	0652	—	—	—	—	—	—	—	—	—	15380	0125	-69.0	
8	0400	3500	0665	— 10.6	3960	0628	621	—	—	—	—	—	—	—	—	
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
15	0400	5220	0543	—	—	—	—	—	7800	0388	280	023	—	—	—	
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
22	0400	3910	0634	—	—	—	—	—	12200	0200	240	057	—	—	—	
23	0400	4860	0567	—	—	—	—	—	10000	0296	290	039	15428	0125	-67.0	
24	0400	4440	0595	—	—	—	—	—	12300	—	260	045	15120	0123	-19.5	
25	0400	4900	0563	—	—	—	—	—	16600	—	290	042	15400	0122	-17.2	
26	0400	5440	0532	—	—	—	—	—	—	—	—	—	—	—	—	
27	0400	5320	0540	—	—	—	—	—	1350	0866	010	016	—	—	—	
28	0400	5320	0540	—	—	—	—	—	800	0922	030	014	17500	090	-70.0	
29	0400	4920	0563	—	—	—	—	—	10500	0266	240	020	17700	085	-71.6	
30	0400	5220	0532	—	—	—	—	—	1500	0850	310	015	—	—	—	
31	0400	5160	0547	—	—	—	—	—	7700	0394	250	024	15600	120	-71.5	
Highest	...	—	5650	0507	—	—	—	—	12200	0200	240	057	17700	085	-71.6	
Lowest	...	—	3500	0665	—	—	—	—	—	—	—	—	15120	0123	-69.5	

Note.—GGgg is the actual time of release of balloon to the nearest minute universal (time).

PPPP is the pressure in whole millibars (eg. 1027.7 m.b. PPPP 1028).

TTT and TdTdTd are the temperature and dew point in degrees celsuis (centigrade)

ddd is wind direction in whole degrees east of the true north; for calm winds enter 000 for ddd and fff.

fff is Wind speed in Knots; heights are in geopotential metres above M.S.L.

Highest and Lowest values correspond to available date.

AGRO-METEOROLOGICAL DATA—GIZA

**TABLE G.—Air Temperature, Humidity, Rainfall, Sunshine Duration,
Wind Speed and Piche Evaporation**

August 1956

Max. temp. at 2 metres	... ... ... ... ... ... ... ...	40·6 °C on 8
Min. temp. at 2 metres	... ... ... ... ... ... ... ...	17·3 on 4
Min. temp. at 5 cms. over dry soil.	... ... ... ... ... ... ... ...	14·5 °C on 4
Min. temp. at 5 cms. over wet soil.	... ... ... ... ... ... ... ...	14·5 °C on 4
Min. temp. at 5 cms. over grass.	... ... ... ... ... ... ... ...	11·5 °C on 4
Min. Relative Humidity at 2 metres	... ... ... ... ... ... ... ...	17% on 22
Max. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	23·4 m.m. on 17
Min. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	9·1 , , on 22
Mean daily temp. at 2 metres	... ... ... ... ... ... ... ...	27·8 °C.
Mean day-time temp. at 2 metres	... ... ... ... ... ... ... ...	30·5 °C.
Mean night-time temp. at 2 metres	... ... ... ... ... ... ... ...	25·6 °C.
Mean Relative Humidity at 2 metres	... ... ... ... ... ... ... ...	64%
Mean Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	16·9 mm
Mean day-time wind speed at 2 metres	... ... ... ... ... ... ... ...	25·7 m/sec.
Mean night-time wind speed at 2 metres	... ... ... ... ... ... ... ...	14·5 m/sec.
Mean Piche Evaporation at 120 cm.	... ... ... ... ... ... ... ...	14·1 mm.
Total Rainfall	... ... ... ... ... ... ... ...	0·1 mm.
Sunshine-Duration	... ... ... ... ... ... ... ...	356 hours (87% out of possible hours.)

TABLE H.—Extreme Soil Temperature

Giza—August 1956

Extreme Soil Temp.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Depth in cm.	0·3		5		10		20		50		100		200	
Dry Soil ...	67·0	20·0	45·0	28·0	28·5	29·5	36·0	32·5	33·5	32·5	31·0	30·5	27·5	26·5
Wet Soil ...	53·5	19·0	36·5	21·0	34·5	24·0	30·0	25·5	28·0	26·5	26·0	25·0	24·0	23·0
Grass	39·0	21·0	32·5	23·5	31·0	25·0	30·0	27·0	28·0	26·5	26·0	25·0	—	—

TABLE I.—Amount of Solar+Sky Radiation in Gram per cm.²

Giza—August 1956

Solar & Sky Radiation.	DATE															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	695	733	760	716	720	711	672	643	663	691	679	672	669	675	713	726
DATE																
Solar & Sky Radiation.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
	721	691	702	687	663	551	686	685	679	653	666	643	651	658	679	

Monthly Total = 21153

TABLE J.—Duration in Hours of Temperature at 2 Metres Height Above Certain Levels in °C.

Giza—August 1956

	DATE															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Duration above 0°C.	24	24	24	24	24	24	21	24	24	24	24	24	24	24	24	24
“ “ 5°C	24	24	24	24	24	24	21	24	24	24	24	24	24	24	24	24
“ “ 10°C	24	24	24	24	24	21	24	24	24	24	24	24	24	24	24	24
“ “ 15°C	24	24	24	24	24	24	23	24	24	24	24	24	24	24	24	24
“ “ 20°C	24	24	22	20	24	24	24	24	24	24	24	23	22	24	24	24
“ “ 25°C	16	14	15	14	15	16	17	18	22	19	18	19	15	14	13	12
“ “ 30°C	8	8	10	8	8	8	12	14	14	14	12	12	9	7	8	5
“ “ 35°C	0	2	1	0	0	0	5	10	8	7	6	6	4	1	0	0
“ “ 40°C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOTES

TABLE G.

(a) Air temperature and humidity are measured by ventilated dry and wet-bulb thermometers freely exposed in Louvered Stevenson Screen of the Egyptian type. Thermometer bulbs are at 210 cms. above ground (approximately 2m.) Maximum (mercury) and minimum (alcohol) thermometers are exposed in the same screen for the 2m values. The minimum thermometers for the 5cm heights are of the alcohol type freely exposed in the open air on wood supports.

The daily mean values of air temperatures are computed from the formula $1/4$ (values at 0800 + 1400 + 2000 + Minimum).

The day-time mean air temperature is computed graphically from the record of a thermograph exposed in the screen, for the period sunrise to sunset. The night mean is similarly obtained for the period sunset to sunrise.

(b) In computing relative humidity Aspirations—Psychrometer tables of the Preussischen Meteorological Institut - 1927 are used, corrections for wind speed are applied. The mean relative humidity is computed from the formula $1/2$ (values at 0800 + 1400 - Local time).

(c) Absolute humidity is expressed by vapour pressure in units of mms. of mercury. The mean value is calculated from the formula $1/3$ (values at 0800 + 1400 + 2000 L.T.).

(d) Rainfall is measured by ordinary rain gauge; the height of its rim is 40 cm. above ground. T₁ stands for trace (i.e amounts of rain less than 0.1 mm.).

(e) The mean wind speed by day is computed from the total run of air during the period 0800 to 1800 L.T., as indicated by the counter of an ordinary cup anemometer freely exposed at a height of 2 metres above ground.

The mean wind speed at night is similarly computed for the period 1800 to 0800 L.T.

(f) Evaporation is measured by a piche tube freely exposed in the open air; the evaporation disc has a diameter of 3cms, white in colour and at a height of 120 cms, above dry soil.

The Piche is read at 0800 L.T. daily in millimetres, the daily values given are for the 24 hours beginning at 0800 L.T.

TABLE H.

Soil temperature is measured by mercury thermometers, the values given are to be nearest $\frac{1}{2}$ °C.

TABLE I.

Instrument used for the measurement of solar and sky radiation (global radiation) is the (Rabitzch Actinograph).

Cairo, 10/1/1957.

M. F. TAHA
Director General
Meteorological Department



REPUBLIC OF EGYPT

MINISTRY OF WAR

METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REPORT

September, 1956

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GENERAL SUMMARY OF WEATHER CONDITIONS

SEPTEMBER, 1956

Rather hot the first half, mild the second half. Almost humid Lower Egypt.

The main features were :

- (a) Early morning high relative humidity Lower Egypt most of the month.
- (b) Fresh to strong NW *ly* winds Red Sea coasts.
- (c) A moderate cold front traversing Lower Egypt on the 14th.

General discription of weather :

For the month as a whole the weather was rather hot during the 1st half, mild during the 2nd half.

The barometric pressure was below normal, maximum temperature was slightly above normal. Minimum temperature was slightly above normal Mediterranean and Middle Egypt districts, slightly below normal Upper Egypt, Western Desert and Red Sea districts.

The mean relative humidity reached 67.7% Alexandria (Kom El-Nadora), 66.7% Giza and 53.7% Helwan.

Pressure and wind :

The general features during this month were as the following.

- (a) Local anticyclone occupying the Black Sea.
- (b) The Two monsoon Low pressure troughs over Iraq and Sudan respectively.
- (c) The high pressure system extending from the British Isles SE/wards till the Western Desert of Egypt.

The monsoon Lows over Iraq and Sudan deepened together this month five consecutive times *Viz.* 2nd—4th, 7th—10th, 11th—14th, 21st—24th and 27th—30th. The first three deepening processes were due to the rapid transit of three consecutive deep Atlantic Low pressure systems through Europe towards the Black Sea. The remaining two processes were due to the retrograde motion of the local anticyclones over Black Sea and Western Desert which can be regarded on the other hand as blocking the Atlantic secondaries travelling eastwards. Each deepening process was accompanied by a remarkable fall in the barometric pressure over Egypt and was followed by a more or less similar rise.

During this month fresh to strong NW *ly* winds were frequent Red Sea coasts, light to moderate N/NW winds west coast and light to moderate N/NE winds otherwise.

Temperature :

Maximum temperature was generally slightly above normal during the first half of the month, slightly below normal the 2nd half. A moderate cold front traversed Lower Egypt on the 14th, causing a fall of about (8°C) at Matruh, Kom-El-Nadora ; (9°C) at Cairo (Ezbekiya).

Minimum temperature was variable over the west coast, slightly above normal Lower and Middle Egypt : slightly below normal extreme Upper Egypt.

Precipitation :

Alexandria reported 7.1 mm. on the 16th and El-Arish reported 0.3 mm. on the 18th accompanied by hail.

Miscellaneous weather phenomena :

- (a) Frequent early morning Low stratus Lower Egypt.
- (b) Frequent mist patches Helwan area most of the month.

TABLE A. — Departure from normal

September, 1956

DISTRICTS	M.S.L. Barometric Pressure 0600 U.T.	Temperature						Rainfall		
		Maximum temp.		Minimum temp.		Max. + Min. 2		1956	Diff. F. Nor.	
		1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.			
		mb.	mb.	°C	°C	°C	°C	mm.	mm.	
1. Mediterranean	1011.5	+1.7	29.5	+0.3	22.6	+0.4	26.0	+0.4	0	0
2. Lower Egypt	1011.5	+1.9	32.8	+0.4	18.4	0.0	25.6	+0.2	0	0
3. Middle Egypt	1010.9	+2.2	32.7	+0.5	20.5	+1.2	26.6	+0.8	0	0
4. Upper Egypt	1010.1	+1.4	35.8	+0.2	20.3	+0.3	28.0	0.0	0	0
5. Western Desert	1011.8	+1.6	34.8	+0.6	19.2	+0.3	27.0	-0.4	0	0
6. Red Sea	1008.6	+1.6	32.8	+1.0	22.1	+1.0	27.4	0.0	0	0

TABLE B.—Climatological Data

September, 1956

Stations	M.S.L. Pressure 0600 U.T.		TEMPERATURE								Rainfall		
	Maximum Temp.				Minimum Temp.				Total Rainfall	* Number of days of rain	Max. fall in one day	Date	
	Mean	Dev. from Normal	Mean	Dev. from Normal	Absolute Max.	Date	Mean	Dev. from Normal	Absolute Minimum	Date			
	mb.	mb.	°C	°C	°C		°C	°C	°C		m.m.	m.m.	
Salloum	1013.3	—	28.9	—	36.1	13	21.3	—	17.6	24	0.0	—	0.0
Sidi Barrani	1012.8	—	27.9	—	30.9	11	20.7	—	13.7	28	0.0	—	0.0
Mersa Matruh (A)	1012.7	+ 1.8	28.8	—	33.6	13	20.3	—	13.0	29	0.0	—	0.0
El Dabaa	1012.1	—	29.3	—	34.9	14	20.2	—	14.0	28	0.0	—	0.0
Kont-el-Nadora	1012.2	+ 1.6	29.4	+ 0.5	35.6	14	23.2	+ 0.7	20.3	17	7.1	1	7.1
Alexandria (A)	1011.6	—	29.6	—	39.7	14	21.5	—	16.6	22	0.2	1	0.2
Damietta	1011.4	+ 0.9	29.0	+ 0.1	31.7	14	20.3	+ 0.4	16.1	25	0.0	—	0.0
Port-Saïd (A)	1011.2	+ 1.5	30.0	+ 1.2	35.9	14	24.3	+ 0.5	21.5	25	0.0	—	0.0
El Arish	1010.1	+ 2.7	31.2	—	37.4	14	19.8	—	14.8	28	0.3	1	0.3
Damanhour	1011.5	+ 1.9	31.9	+ 0.4	39.8	14	19.1	+ 0.3	16.6	18, 19	0.0	—	0.0
Mansura	1011.5	+ 1.6	33.3	+ 0.4	39.5	14	19.7	+ 0.4	17.0	20	0.0	—	0.0
Tanta	1012.1	+ 1.1	33.0	+ 0.2	39.4	14	16.3	+ 1.4	12.3	28	0.0	—	0.0
Shebin El Kom	1011.4	+ 2.0	32.2	—	39.4	14	20.1	—	15.8	23	0.0	—	0.0
Zagazig	1010.8	+ 2.7	33.0	+ 0.6	39.3	14	18.6	+ 0.6	15.5	28	0.0	—	0.0
Ismailia	1011.2	—	34.2	—	39.6	14	20.7	—	18.0	26	0.0	—	0.0
Cairo (A)	1011.1	—	32.6	—	39.1	14	20.1	—	17.0	26, 27	0.0	—	0.0
Almuaza (A)	1010.0	+ 3.1	32.5	+ 0.5	39.8	14	20.6	+ 0.7	17.5	26	0.0	—	0.0
Ezbekiya	—	—	33.3	+ 0.8	39.8	14	20.9	+ 1.0	17.5	30	0.0	—	0.0
Giza	1011.4	+ 1.8	32.5	+ 0.7	38.6	14	19.1	+ 1.5	15.8	24, 25	0.0	—	0.0
Helwan	1011.2	+ 1.8	32.6	+ 0.3	38.7	12	21.5	+ 1.6	19.5	28	0.0	—	0.0
Fayoum	1011.9	+ 1.2	34.3	+ 0.7	40.0	14	20.0	+ 0.7	16.0	28	0.0	—	0.0
Minya (A)	1010.8	+ 2.1	34.0	+ 1.0	37.7	1	19.2	+ 0.9	15.7	24	0.0	—	0.0
Aisyout (A)	1010.4	+ 1.9	34.6	+ 0.3	40.0	2	19.7	+ 0.3	15.8	28	0.0	—	0.0
Nag-Hamadi	1009.9	+ 0.7	35.8	+ 0.8	40.9	15	19.5	+ 0.2	16.1	29	0.0	—	0.0
Qena	1009.3	+ 1.0	37.0	+ 0.9	42.8	1	21.0	+ 1.0	17.4	28	0.0	—	0.0
Luxor (A)	—	—	—	—	—	—	—	—	—	—	—	—	—
Aswan	1008.4	+ 1.4	39.4	+ 0.1	48.2	1	22.6	+ 1.4	19.1	27	0.0	—	0.0
Siwa	1013.5	+ 1.7	34.0	+ 1.2	38.0	2	18.8	+ 0.8	13.9	29	0.0	—	0.0
Bahariya	1012.2	+ 2.0	34.2	+ 0.5	40.8	14	18.9	+ 0.7	15.0	24	0.0	—	0.0
Farafra	1013.5	—	34.3	—	40.0	14	19.1	—	15.6	28	0.0	—	0.0
Dakhla	1012.5	+ 0.3	34.9	+ 1.3	41.0	15	19.8	+ 0.9	16.0	29	0.0	—	0.0
Kharga	1009.0	+ 2.6	36.1	+ 0.6	41.5	12	19.5	+ 1.7	14.6	25	0.0	—	0.0
Suez	1011.1	+ 1.3	34.0	+ 0.6	39.8	2	18.9	+ 2.5	13.9	28	0.0	—	0.0
Tor	1007.5	+ 1.9	32.6	+ 0.9	38.0	3, 15	22.4	+ 0.1	17.0	29	0.0	—	0.0
Hurghada	1007.7	+ 1.7	32.6	+ 2.8	36.5	4, 15	22.6	+ 0.4	19.0	21, 25, 26	0.0	—	0.0
Quseir	1007.9	+ 1.5	32.1	+ 0.3	36.0	15	24.6	+ 1.0	21.9	29	0.0	—	0.0

* Drops are taken into consideration.

TABLE C.—Miscellaneous Weather Phenomena

September, 1956

Stations	NUMBER OF DAYS OF OCCURRENCE					
	Rain Showers	Thunder- storm	Fog	Mist Sandrising dustrising	Dust or Sand Storm	Gales
	(a)	(b)	(c)	(d)	(e)	(f)
Sallum	0	0	0	0	0	0
Sidi Barrani	0	0	0	0	0	0
Mersa Matruh	0	0	0	0	0	0
Alexandria (A)	1	0	0	0	0	0
Port-Said (A)	0	0	0	0	0	0
El Arish	1	0	1	0	0	0
Cairo (A)	0	0	2	0	0	0
Almaza (A)	0	0	2	1	0	0
Minya (A)	0	0	0	0	0	0
Assiut (A)	0	0	0	0	0	0
Luxor (A)	—	—	—	—	—	—
Siwa	0	0	0	0	0	0
Hurghada	0	0	0	0	0	0
Aswan	0	0	0	0	0	0

- (a) Number of days in which rainfall is 0·1 mm. or more within 24 hours from 0600 U.T. to 0600 U.T. next day.
(b) Number of days of thunderstorm heard within station.
(c) Number of days of Fog in which visibility is less than 1000 metres.
(d) Number of days of mist or sandrising or dustrising in which visibility is more than 1000 metres and less than 2000 metres.
(e) Number of days of sandstorms in which visibility is less than 1000 metres.
(f) Number of days of gales in which wind velocity is equal or more than 34 knots.

UPPER AIR DATA

TABLE D.—Radio sonde Data. Average Monthly Values

Cairo Aerodrome. September, 1956

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 1500 UT.		Highest	Lowest	Readings at 1500 UT.		Highest	Lowest
	n	Mean			n	Mean		
Surface	30	1003	1007	998	30	30.6	36.6	26.7
1000	26	99	133	70	26	29.8	35.1	26.2
850	30	1514	1543	1480	30	18.0	26.1	13.0
700	30	3152	3195	3116	30	10.5	14.4	06.8
600	30	4417	4473	4379	30	03.3	07.0	— 1.5
500	30	5867	5932	5810	30	— 6.1	— 1.6	— 10.1
400	30	7578	7664	7503	30	— 17.5	— 13.1	— 20.8
300	27	9665	9976	9569	27	— 32.2	— 26.5	— 35.7
200	23	12407	12543	12288	23	— 51.5	— 45.7	— 55.7
150	16	14244	14369	14094	16	— 63.2	— 61.0	— 67.1
100	16	16670	16803	16506	16	— 71.3	— 68.0	— 74.1
60	8	19762	19854	19590	8	— 61.4	— 58.2	— 64.0

n = Number of observations of specified pressure surfaces.

TABLE D.—Radiosonde Data. Average Monthly Values

Matruh Aerodrome. September, 1956

Pressure Surface mb.	Heights of pressure Surfaces G.P.N.				Temperature °C			
	Readings at 0400 UT.		Highest	Lowest	Readings at 0400 UT.		Highest	Lowest
	n	Mean			n	Highest		
Surface	27	1010	1015	1002	27	21.4	26.8	14.2
1000	27	118	159	48	27	20.8	25.4	16.3
850	27	1513	1542	1464	27	15.5	21.8	09.0
700	26	3137	3195	3103	26	08.6	16.0	4.2
600	25	4392	4468	4339	25	0.9	05.0	— 3.3
500	25	5832	5907	5777	25	— 8.4	— 5.4	— 13.3
400	25	7528	7691	7443	25	— 19.8	— 15.7	— 23.5
300	21	9602	9757	9523	21	— 32.9	— 28.8	— 38.1
200	18	12356	12582	12252	18	— 51.1	— 47.8	— 53.8
150	16	14161	14408	13986	16	— 62.1	— 58.5	— 68.0
100	14	16617	16880	16453	14	— 69.5	— 67.5	— 71.6
60	—	—	—	—	—	—	—	—

n = Number of observations of specified pressure surfaces.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Cairo Aerodrome—1500 UT, September, 1956

Constant Pressure	Wind between specified ranges of direction 000°–360°												Calm	Total No. of obs.	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°								
Surfaces mb.	n ₁ (ff) m	n ₂ (ff) m	n ₃ (ff) m	n ₄ (ff) m	n ₅ (ff) m	n ₆ (ff) m	n ₇ (ff) m	n ₈ (ff) m	n ₉ (ff) m	n ₁₀ (ff) m	n ₁₁ (ff) m	n ₁₂ (ff) m	N								
Surface	6	12	6	13	—	—	—	—	—	1	8	—	—	2	8	15	10	0	30	11	
1000	6	12	6	13	—	—	—	—	—	—	—	—	—	14	10	0	26	11			
850	5	9	9	10	3	10	2	6	—	—	—	—	—	2	14	7	10	0	30	10	
700	1	4	1	5	—	—	—	—	2	4	—	—	—	1	10	10	13	8	12	9	
600	1	9	1	7	—	—	—	—	—	—	2	14	11	19	7	13	5	13	3	9	
500	1	9	1	10	—	—	—	—	—	2	23	10	21	9	20	3	15	3	11	1	
400	1	6	—	—	—	—	—	—	3	27	15	29	8	28	2	12	—	—	0	29	
300	—	—	—	—	—	—	—	—	—	15	37	8	29	1	8	—	—	0	24	33	
200	—	—	—	—	—	—	—	—	3	43	6	42	2	34	1	45	—	—	0	12	41
150	—	—	—	—	—	—	—	—	1	46	4	42	1	19	1	7	—	—	0	7	35
100	—	—	—	—	—	—	—	—	2	38	2	28	1	9	1	9	—	—	0	6	25
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Notes:— n₁ : n₂, ..., etc. = Number occurrence of wind direction from the specified ranges.

(ff) = Mean scalar wind speed (regardless of direction).

F = Total number of observations from all directions including calms.

TABLE E.—Rawin Data

Frequency wind ranges and mean scalar wind speeds
Matrouh Aerodrome—0400 UT.—September, 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000—360												Calm	Total No. of Obs. N	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				
	n ₁	(ff) m	n ₂	(ff) m	n ₃	(ff) m	n ₄	(ff) m	n ₅	(ff) m	n ₆	(ff) m	n ₇	(ff) m	n ₈	(ff) m	n ₉	(ff) m	n ₁₀	(ff) m	n ₁₁	(ff) m	n ₁₂	(ff) m	
Surface	7	9	5	9	1	5	—	—	—	—	—	—	—	—	—	—	1	6	4	9	6	12	0	24	9
1000	7	9	5	9	1	5	—	—	—	—	—	—	—	—	—	—	1	6	4	9	6	12	0	24	9
850	5	12	4	9	—	—	—	—	1	8	1	8	—	—	—	—	3	12	4	10	3	14	0	21	11
700	3	10	3	9	—	—	1	6	—	—	1	11	—	—	2	19	4	11	3	10	3	10	0	20	23
600	2	14	1	11	1	2	—	—	1	8	—	—	—	—	1	13	1	15	1	4	2	8	1	12	0
500	—	—	1	7	1	6	1	2	—	—	—	—	1	6	1	5	2	12	4	12	1	18	1	12	2
400	—	—	—	—	—	—	—	—	—	—	—	—	1	13	—	—	5	21	3	27	3	19	1	8	2
300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	31	2	34	1	20	—	—	0	7	31
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Notes : n₁; n₂,..., etc. = Number of occurrence of wind direction from the specified ranges.

(ff)m = mean scalar wind speed (regardless of direction).

N = Total number of observations from all directions including calms.

TABLE F.—Miscellaneous Data

Cairo Aerodrome. September, 1956

Day	Time U.T.	Freezing level								Highest Wind Speed					Tropopause	
		Lowest				Highest				Height	PPPP	ddd	fff	Height	PPP	TTT
		GGgg	Height	PPPP	T _d T _d T _d	Height	PPPP	T _d T _d T _d								
1	1530	4700	583	—	—	—	—	—	4900	567	230	023	—	—	—	—
2	1500	4790	576	—	—	—	—	—	4400	604	240	028	13800	163	—58.7	—
3	1500	5170	545	—	—	—	—	—	12400	202	230	046	14810	137	—65.3	—
4	1615	4740	575	—	—	—	—	—	8350	358	270	024	14790	136	—66.3	—
5	1615	4610	578	—	—	—	—	—	8800	337	260	050	16640	100	—72.2	—
6	1500	5040	555	—	—	—	—	—	10250	280	230	055	16000	113	—71.4	—
7	1500	5670	516	—	—	—	—	—	10400	274	240	059	16000	114	—72.5	—
8	1500	5280	542	—	—	—	—	—	15150	131	230	054	16180	110	—72.7	—
9	1500	4940	563	—	—	—	—	—	14550	142	230	056	14160	152	—65.4	—
10	1500	4860	568	—	—	—	—	—	7750	390	260	042	—	—	—	—
11	1500	5660	516	—	—	—	—	—	9500	—	280	036	—	—	—	—
12	1515	4860	566	—	—	—	—	—	14000	141	240	047	15850	114	—71.2	—
13	1545	4680	578	—	—	—	—	—	10300	270	250	039	14080	154	—66.5	—
14	1500	4860	569	—	—	—	—	—	10200	290	230	058	16390	106	—72.5	—
15	1600	4690	578	614	—	—	—	—	3000	712	260	032	—	—	—	—
16	1530	4190	616	—	—	—	—	—	10700	258	250	033	—	—	—	—
17	1530	5420	526	—	—	—	—	—	10400	—	250	033	—	—	—	—
18	1530	5440	526	—	—	—	—	—	5150	545	240	028	14560	142	—64.8	—
19	1530	4700	527	—	—	—	—	—	8200	366	240	034	13120	178	—59.1	—
20	1500	4880	564	—	—	—	—	—	15200	124	220	048	15980	110	—73.1	—
21	1500	4910	564	—	—	—	—	—	9550	294	230	048	—	—	—	—
22	1500	4880	568	—	—	—	—	—	14250	—	230	069	—	—	—	—
23	1500	4880	565	—	—	—	—	—	10500	265	250	058	—	—	—	—
24	1500	4800	571	—	—	—	—	—	10000	284	250	063	—	—	—	—
25	1500	4340	603	—	—	—	—	—	8700	340	250	056	—	—	—	—
26	1600	4690	580	—	—	—	—	—	9000	327	260	032	—	—	—	—
27	1500	5100	550	—	—	—	—	—	14100	154	260	062	—	—	—	—
28	1600	4920	564	—	—	—	—	—	500	957	030	019	—	—	—	—
29	1500	4900	566	—	—	—	—	—	9400	310	240	046	14650	140	—66.5	—
30	1500	4860	568	—	—	—	—	—	13100	183	220	042	14360	148	—66.2	—
Highest	...	—	5670	516	—	—	—	—	14250	—	230	069	16640	100	—72.2	—
Lowest	...	—	4190	616	—	—	—	—	500	957	030	019	13120	178	—59.1	—

Notes.—GGgg is the actual time of release of balloon to the nearest minute (Universal Time).

PPPP is the pressure in whole millibars (eg. 1027.7 m.b. PPPP 1028).

TTT and T_dT_dT_d are the temperature and dew point in degrees celsuis (centigrade).

ddd is wind direction in whole degrees east of the true north; for calm winds enter 000 for ddd and fff.

fff is wind speed in knots; heights are in geopotential metres above M.S.L.

Highest and Lowest values correspond to available date.

TABLE IV.—MISCELLANEOUS DATA

Mersa Matrouh Aerodrome. September 1956

Day	Time UT.	Freezing Level							Highest Wind Speed				Tropopause				
		Lowest			Highest												
		GGgg	Height	PPPP	T _d	T _d	Height	PPPP	T _d	T _d	Height	PPPP	ddd	fff	Height	PPP	TTT
1	0400	5100	554	—	—	—	—	—	—	—	9000	—	230	021	—	—	—
2	0400	4700	580	—	—	—	—	—	—	—	7600	400	270	023	16100	110	-71.1
3	0600	5020	558	—	—	—	—	—	—	—	7900	382	260	030	15900	110	-67.8
4	0400	4720	576	—	—	—	—	—	—	—	9200	—	280	043	14860	135	-64.7
5	0400	4400	593	—	—	—	—	—	—	—	6300	—	270	014	17000	095	-69.5
6	0400	3920	634	—	—	—	—	—	—	—	8820	334	220	038	—	—	—
7	0400	4520	693	—	—	—	—	—	—	—	2500	758	310	016	—	—	—
8	0400	4740	576	—	—	—	—	—	—	—	8600	—	270	025	—	—	—
9	0400	4680	580	—	—	—	—	—	—	—	1500	—	360	015	15780	114	-70.8
10	0400	—	—	—	—	—	—	—	—	—	11400	—	250	052	—	—	—
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	0400	4180	614	—	—	—	—	—	—	—	5200	—	260	028	14120	150	-68.0
15	0400	4220	610	—	—	—	—	—	—	—	—	—	—	—	16647	100	-71.2
16	0400	4100	620	589	—	—	—	—	—	—	11900	—	240	032	—	—	—
17	0400	4840	567	—	—	—	—	—	—	—	12000	—	230	036	16400	104	-70.3
18	0400	4720	574	—	—	—	—	—	—	—	—	—	—	—	16200	107	-71.2
19	0400	4630	582	—	—	—	—	—	—	—	1400	—	360	020	18870	095	-70.6
20	0400	4610	584	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21	0400	4580	585	—	—	—	—	—	—	—	—	—	—	—	17200	094	-69.0
22	0400	5170	550	—	—	—	—	—	—	—	—	—	—	—	—	—	—
23	0500	4620	584	—	—	—	—	—	—	—	—	—	—	—	16800	095	-70.3
24	0400	4690	578	—	—	—	—	—	—	—	—	—	—	—	15800	112	-70.5
25	0400	4080	623	—	—	—	—	—	—	—	—	—	—	—	16700	092	-70.0
26	0400	4140	618	—	—	—	—	—	—	—	—	—	—	—	—	—	—
27	0400	4620	586	—	—	—	—	—	—	—	12800	—	250	065	—	—	—
28	0400	4350	604	—	—	—	—	—	—	—	10700	—	230	068	—	—	—
29	0400	4060	625	568	—	—	—	—	—	—	8600	—	220	056	—	—	—
30	0400	3750	645	—	—	—	—	—	—	—	10700	—	230	068	17200	094	-69.0
—	—	8170	550	—	—	—	—	—	—	—	6300	—	270	014	14120	150	-68.0
Highest	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lowest	...	—	3750	645	—	—	—	—	—	—	—	—	—	—	—	—	—

Notes.—GGgg is the actual time of release of balloon to the nearest minute Universal (time).

PPPP is the pressure in whole millibars (eg. 1027.7 m.b. PPPP 1028).

TTT and TdTdT_d are the temperature and dew point in degrees celsius (centigrade).

ddd is wind direction in whole degrees east of the true north; for calm wind enter 000 for ddd and ff.

ff is wind speed in Knots; heights are in geopotential metres above M.S.L.

Highest and lowest correspond to available date.

AGRO-METEOROLOGICAL DATA—GIZA

TABLE G.—Air Temperature, Humidity, Rainfall, Sunshine-Duration,
Wind Speed and Piche Evaporation

September, 1956

Max. temp. at 2 metres	... ... ... ... ... ... ... ...	38.6 °C on 14
Min. temp. at 2 metres	... ... ... ... ... ... ... ...	15.8 °C on 24 & 25
Min. temp. at 5 cms. over dry soil	... ... ... ... ... ... ... ...	11.9 °C on 25
Min. temp. at 5 cms. over wet soil	... ... ... ... ... ... ... ...	13.1 °C on 25
Min. temp. at 5 cms. over grass	... ... ... ... ... ... ... ...	10.3 °C on 25
Min. Relative Humidity at 2 metres	... ... ... ... ... ... ... ...	17% on 14
Max. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	21.7 mm. on 2
Min. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	9.6 mm. on 14
Mean daily temp. at 2 metres	... ... ... ... ... ... ... ...	25.1 °C
Mean day-time temp. at 2 metres	... ... ... ... ... ... ... ...	27.6 °C
Mean night-time temp. at 2 metres	... ... ... ... ... ... ... ...	23.3 °C
Mean Relative Humidity at 2 metres	... ... ... ... ... ... ... ...	67%
Mean Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	15.3 mm.
Mean day-time wind speed at 2 metres	... ... ... ... ... ... ... ...	2.8 m/sec.
Mean night-time wind speed at 2 metres	... ... ... ... ... ... ... ...	1.3 m/sec.
Mean Piche Evaporation at 120 cm.	... ... ... ... ... ... ... ...	12.1 m.m.
Total Rainfall	... ... ... ... ... ... ... ...	0.0 m.m.
Sunahine-Duration	... ... ... ... ... ... ... ...	310 hours (84% out of possible hours).

TABLE H.—Extreme Soil Temperature

Giza—September, 1956

Extreme Soil Temp.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Depth in cm.	0.3	5	10	20	50	100	200							
Dry Soil ...	63.0	15.0	42.0	24.0	36.5	25.0	34.0	28.0	33.0	30.0	31.0	30.0	28.0	28.0
Wet Soil ...	44.5	15.5	34.0	18.0	33.0	20.0	30.0	22.5	27.5	24.5	26.5	25.0	24.5	24.0
Grass ...	35.0	18.0	30.5	20.0	29.0	21.0	28.5	23.5	27.0	24.5	26.0	25.0	—	—

TABLE I.—Amount of Solar + Sky Radiation in Calories per cm.²

Giza—September, 1956

Solar + Sky Radiation	DATE														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
611	655	669	643	633	655	663	658	634	636	662	627	640	595	612	639
DATE															
Solar + Sky Radiation	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	633	622	655	640	570	565	632	629	592	587	606	621	603	593	—

Monthly Total = 18780

TABLE J.—Duration in Hours of Temperature at 2 Metres Height Above Certain Levels in °C.

Giza—September, 1956

	DATE														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Duration above 0°C.	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
" " 5°C.	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
" " 10°C.	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
" " 15°C.	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
" " 20°C.	24	24	24	24	24	24	22	19	21	23	21	24	19	22	24
" " 25°C.	14	20	20	17	16	12	13	12	13	14	14	12	16	14	10
" " 30°C.	7	9	8	8	9	6	6	5	6	7	6	8	11	7	1
" " 35°C.	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
" " 40°C.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" " 45°C.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOTES

TABLE G.

(a) Air temperature and humidity are measured by ventilated dry and wet-bulb thermometers freely exposed in louvered Stevenson Screen of the Egyptian type. Thermometer bulbs are at 210 cms. above ground (approximately 2m.) maximum (mercury) and minimum (alcohol) thermometers are exposed in the same screen for the 2m values. The minimum thermometers for the 5cm. heights are of the alcohol type freely exposed in the open air on wood supports.

The daily mean values of air temperature are computed from the formula $1/4$ (values at 0800+14000 +2000+Minimum).

The day-time mean air temperature is computed graphically from the record of a thermograph exposed in the screen, for the period sunrise to sunset. The night mean is similarly obtained for the period sunset to sunrise.

(b) Incomputing relative humidity Aspirations-Psychrometer tables of the Proussischen Meteorological Institut—1927 are, used. corrections for wind speed are applied. The mean relative humidity is computed from the formula $1/2$ (values at 0800+1400-Local Time).

(c) Absolute humidity is expressed by vapour pressure in units of mm. of mercury. The mean value is calculated from the formula $1/3$ (values at 0800+1400+2000 L.T.).

(d) Rainfall is measured by ordinary rain gauge ; the height of its rain is 40 cm. above ground. Tr. stands from trace (1.c amounts of rain less than 0.1 mm.).

(e) The mean wind speed by day is computed from the total run of air during the period 0800 to 1800 L.T., as indicated by the counter of an ordinary cup anemometer freely exposed at a height of 2 metres above ground.

The mean wind spead at night is similarly computed for the period 1300 to 0800 L.T.

(f) Evaporation is measured by a piche tube freely exposed in the open air; the evaporation disc has a diameter of 3cms, white in colour and at a height of 120 cms., above dry soil.

The piche is read at 0800 L.T. daily in millimetres, the daily values given are for the 24 hours beginning at 0800 L.T.

TABLE H.

Soil temperature is measured by mercury thermometers, the value given are to be nearest $1/2$ °C

TABLE I

Instrument used for the measurement of solar and sky radiation (global radiation) is the "Rabitzel Actinograph".

M. F. TAHA

Director General

Meteorological Department

Cairo, on 26/2/1957



REPUBLIC OF EGYPT

MINISTRY OF WAR

METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REPORT

October 1956



GOVERNMENT PRESS, CAIRO
1957

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NOTE

Climatological data for Port Said, El-Arish, Tor and Luxor are not included in this report as a result of the destruction of meteorological instruments or interruption of observations by the Anglo-French-Israeli aggression on Egypt.

GENERAL SUMMARY OF WEATHER CONDITIONS

October 1956

Rather cold, northern coast with heavy showers in the west, changeable elsewhere.

The main features were.

- (a) Heavy showers in the western parts of the northern coast between 11th and 14th.
- (b) The barometric pressure was almost above normal Lower Egypt.
- (c) Considerable amounts of early morning low clouds northern coast decreasing gradually inland.
- (d) A prevailing heat wave round 9th and 10th.

General description of weather during the month.

For the month as a whole the weather was rather cold and rainy between 11th and 14th over the northern coast, changeable elsewhere.

The barometric pressure was generally above normal, both maximum and minimum temperatures were below normal.

Rainfall exceeded its normal over Mediterranean district, though it was below normal Lower Egypt, Middle Egypt and Red Sea districts.

The mean daily relative humidity reached 68% Alexandria (Kom-EL-Nadra), 67% Giza and 53% Helwan.

Pressure and wind.

The outstanding features of the pressure distribution for this month as a whole were as the following

- (a) The Siberian Anticyclone which was growing rapidly and extending westwards far as the Black Sea.
- (b) The Icelandic Low was deepening similarly at about the same rate.
- (c) The subtropical high pressure belt over North Atlantic was extending from the Azores Anticyclone across Europe and Mediterranean Sea.

At the beginning of the month ; a shallow coastal desert secondary traversed Lower Egypt rapidly eastwards causing a remarkable fall in the barometric pressure over Egypt.

On the 6th a deep depression appeared over North Balkans and shoted rapidly NEwards with a family of secondaries attached to its rear. Accordingly pressure fell over Lower Egypt, Sudan and adjacent countries to the east afterwards.

Between 10th and 28th, the Sudan Low experienced three consecutive northern elongations round the 18th, 24th, 29th respectively when shallow secondary depressions developed over ITALY (during the 1st elongation) and over Asia Minor (during the 2nd and 3d elongations). The pressure over Egypt experienced three corresponding falls, though it was generally above normal.

During this month light / moderate N/NE winds prevailed generally except for the Red Sea Coasts where fresh / strong NW by winds predominated.

Temperature.

During this month a prevailing heat wave was experienced for two days (9th and 10th) over Lower Egypt and for four days (9th to 12th) over Upper Egypt. Another two minor heat waves appeared over extreme Upper Egypt during the last week with their maxima round 26th and 29th respectively. Apart from the above mentioned short heat waves maximum temperatures were almost below normal all over the country.

Minimum temperatures were generally below normal extreme west coast, above normal Delta and changeable elsewhere.

Precipitation.

Precipitation was heavy and confined to the northern coastal area west Alexandria where the reported monthly rainfall highly exceeded the monthly mean. Sallum reported a fall of 14·4 mm. on the 12th which is a record of the maximum fall in one day since 1919. Slight rainfall amounts were reported consecutively over the same area on the 17th, 20th, 21st and 26th.

Miscellaneous weather phenomena.

- (a) Infrequent formation of fog patches over few scattered localities in Lower Egypt, mostly Alexandria, Cairo (Ezbekiya, Giza and Helwan).
- (b) Considerable amounts of early morning low clouds over the northern coastal area and persisting generally after sunrise.

The deviations of meteorological elements from their normal for various districts are shown in the following table:

TABLE A.—Condensed Climatological Data

October 1956

DISTRICTS	M.S.L. Barometric Pressure 0600 UT.	Temperature						Rainfall			
		Maximum temp.		Minimum temp.		Max. + Min. 2		1956	Diff. F. Nor.		
		1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.				
		mb.	mb.	°C.	°C.	°C.	°C.	mm.	mm.		
1. Mediterranean	1017·7	+1·5	26·2	+ 1·4	18·6	-0·8	22·4	+1·1	11	+4
2. Lower Egypt	1017·2	+1·0	29·0	+ 1·4	15·0	-1·6	22·0	+1·5	drops	-4
3. Middle Egypt	1017·2	+1·0	28·8	+ 1·3	17·0	-0·2	22·9	+0·8	0	-2
4. Upper Egypt	1015·1	+0·7	31·5	+ 1·2	17·1	-0·9	24·3	+1·0	0	0
5. Western Desert	1017·2	+1·2	29·8	+ 2·9	15·2	-1·4	22·5	+2·2	0	0
6. Red Sea	1014·5	+0·5	29·1	+ 0·7	18·7	-2·0	23·9	+1·4	0	-1

TABLE B.—Climatological Data-Stations

October 1956

Station*	M.S.L. Pressure 0600 U.T.		T E M P R A T U R E S								Rainfall			
	Mean	Dev. from Normal	Maximum. Temp.			Minimum. Temp.			Total Rainfall mm.	Number of days of rain*	Max. Rainfall in one day mm.	Date		
			Mean	Dev. from Normal	Absolute Max.	Date	Mean	Dev. from Normal						
	mb.	mb.	°C	°C	°C		°C	°C	mm.		mm.			
Aloum	1018.9	—	25.6	—	33.0	9	17.3	—	14.6	16	25.8	3	11.4	12
Adi-Barrani	1018.1	—	25.1	—	32.7	9	15.9	—	12.2	27	29.6	3	25.0	12
Mersa Matruh (A)	1018.4	+1.8	24.9	—	32.8	9	15.8	—	12.2	27	41.7	3	20.0	12
El Dabaa	1017.9	—	25.7	—	34.6	10	16.6	—	13.4	16	8.4	3	5.1	13
Kom-el-Nadura	1018.0	+1.4	26.6	+1.7	32.6	10	20.4	+0.2	16.7	13	6.7	2	4.0	12
Alexandria (A)	1017.6	—	26.3	—	30.0	9	18.3	—	13.3	30	8.1	3	4.6	12
Damietta	1016.8	+1.3	25.7	+1.3	29.2	10	16.8	+1.8	14.3	29	0.0	1	0.0	—
Port-Said (A)*	1016.8	—	25.7	—	32.7	10	16.8	—	14.3	29	0.0	1	0.0	—
El Arish*	1016.8	—	25.7	—	32.7	10	16.8	—	14.3	29	0.0	1	0.0	—
Qanat Al-Shanhour	1017.2	+0.9	28.0	+2.1	33.6	10	16.0	+1.0	12.6	29	0.4	2	0.2	12.20
Asyura	1017.2	+1.3	29.7	+0.9	34.5	1	16.8	+0.8	13.6	29	0.0	—	0.0	—
Santa	1017.7	+1.4	28.9	+1.6	33.9	1	12.6	+3.2	9.6	22	dr.	1	dr.	20
Hebin-El-Kom	1017.1	+0.8	28.5	—	32.7	1	16.6	—	13.8	23	0.0	—	0.0	—
Egazig	1016.7	+0.4	29.6	+0.7	34.0	1	14.7	+1.2	11.0	30	0.0	—	0.0	—
Emailia	1016.8	—	30.2	—	34.5	1.2	16.8	—	13.3	21	0.0	—	0.0	—
Cairo (A)	1017.3	—	28.6	—	33.5	1	16.5	—	13.4	30	0.0	—	0.0	—
Almaza (A)	1017.0	+0.6	28.6	+1.4	33.1	1	16.9	+0.6	13.5	21	0.0	—	0.0	—
Zbekiya	1017.7	—	29.6	+0.9	34.0	1	17.0	+0.5	14.0	22	0.0	—	0.0	—
Aliza	1017.4	+1.2	28.8	+1.0	33.3	10	15.7	+0.2	11.6	22	0.0	—	0.0	—
Alwan	1017.2	+1.2	28.0	+2.0	32.7	1.10	18.2	+0.6	15.9	17	0.0	—	0.0	—
Dayoom	1017.8	+2.0	29.6	+4.9	35.0	10	16.4	+0.8	13.0	21	0.0	—	0.0	—
Ninya (A)	1016.4	+4.0	30.1	+0.7	35.6	10	15.7	+0.0	10.0	30	0.0	—	0.0	—
Syout (A)	1016.2	+0.2	29.2	+0.8	35.3	11	16.8	+0.7	12.8	31	0.0	—	0.0	—
Ag-Hamadi	1014.7	+0.9	31.2	+4.3	34.6	2	16.8	+0.4	13.2	31	0.0	—	0.0	—
Nena	1014.4	+0.9	32.8	+2.1	37.2	12	17.7	+0.9	14.3	31	0.0	—	0.0	—
Luxor (A)*	1013.7	—	33.0	—	36.0	13	17.7	—	14.3	31	0.0	—	0.0	—
Aswan	1013.1	+0.3	35.0	+0.7	43.0	9	19.3	+2.3	13.9	20	0.0	—	0.0	—
Siwa	1019.2	+1.8	28.8	+3.3	33.7	9	13.5	+1.1	9.0	28	0.0	—	0.0	—
Bahariya	1017.8	+1.1	29.0	+1.8	35.0	10	14.9	+1.0	9.9	31	0.0	—	0.0	—
Barafra	1019.4	—	29.0	—	35.0	10	14.1	—	9.5	31	0.0	—	0.0	—
Dakhla	1017.7	+2.3	29.9	+3.7	36.7	10	16.0	+1.5	9.3	30	0.0	—	0.0	—
Kharga	1014.1	+0.2	31.5	+2.8	38.2	10	16.3	+2.3	10.0	30	0.0	—	0.0	—
Suez	1016.8	+1.6	29.3	+1.7	34.4	1	15.6	+3.6	11.4	30	0.0	—	0.0	—
Tor	1013.4	+0.2	29.1	+1.4	31.7	3	19.0	+0.5	15.0	30	0.0	—	0.0	—
Hurghada	1013.4	+0.2	28.8	+1.8	31.5	3	21.4	+1.9	17.6	18	0.0	—	0.0	—
Quseir	1013.3	+0.2	28.8	+1.8	31.5	3	21.4	+1.9	17.6	18	0.0	—	0.0	—

* Drops are taken into consideration.

TABLE C.—Miscellaneous Weather Phenomena

October 1956

Stations	NUMBER OF DAYS OF OCCURRENCE					
	Rain Showers	Thunder- storm	Fog	Mist Sandrising dustrising	Dust or Sand Storm	Gales
	(a)	(b)	(c)	(d)	(e)	(f)
Sallum 3 0 0 0 0 0						
Sidi-Barrani 3 0 1 0 0 0						
Mersa Matruh 3 0 1 9 0 0						
Alexandria (A) 3 0 1 0 0 0						
Port Said* (A) 0 0 0 0 0 0						
El Arish* 0 0 0 0 0 0						
Cairo (A) 0 0 4 0 0 0						
Almaza (A) 0 0 2 2 0 0						
Minya (A) 0 0 0 0 0 0						
Assiut (A) 0 0 0 0 0 0						
Luxor (A)* 0 0 0 0 0 0						
Siwa 0 0 0 0 0 0						
Hurgada 0 0 0 0 0 0						
Aswan 0 0 0 0 0 0						

(a) Number of days in which rainfall is 0·1 mm. or more within 24 hours from 0600 U.T. to 0600 U.T. next day.

(b) Number of days of thunderstorm heard within station.

(c) Number of days of Fog in which visibility is less than 1000 metres.

(d) Number of days of mist or sandrising or dustrising in which visibility is more than 1000 metres and less than 2000 metres.

(e) Number of days of sandstorms in which visibility is less than 1000 metres.

(f) Number of days of gales in which wind velocity is equal or more than 34 knots.

UPPER AIR DATA

TABLE D.— Radiosonde Data. Average Monthly Values.

Cairo Aerodrome. 1500 U.T. October 1956

Pressure Surface m.b.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 1500 U.T.		Highest	Lowest	Readings at 1500 U.T.		Highest	Lowest
	N	Mean			N	Mean		
Surface	29	1008	1012	1004	29	26.3	31.1	22.3
1000	29	140	175	106	29	25.6	30.7	21.4
850	29	1510	1577	1511	29	13.2	17.5	9.0
700	29	3150	3188	3108	29	05.8	09.6	0.2
600	29	4397	4491	4392	29	-1.4	03.6	-5.7
500	28	5818	5906	5736	28	-11.6	-7.0	-16.3
400	26	7492	7571	7380	26	-23.3	-17.9	-29.9
300	25	9547	9670	9385	25	-37.7	-30.2	-43.8
200	17	12234	12407	11997	17	-54.5	-50.8	-60.1
150	12	14050	14207	13869	12	-62.0	-57.7	-67.3
100	9	16512	16619	16324	9	-67.6	-62.5	-73.6
60	6	19657	19714	19590	6	-61.5	-59.4	-64.4

N = Number of observations of specified pressure surfaces.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Cairo Aerodrome.—1500 U.T.—October 1956

Constant Pressure Surface ab.	Wind between specified ranges of direction 000—360												Calm	Total No. of observ. N	Mean Scale 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 ₁ (ff)m	n ₂ (ff)m	n ₃ (ff)m	n ₄ (ff)m	n ₅ (ff)m	n ₆ (ff)m	n ₇ (ff)m	n ₈ (ff)m	n ₉ (ff)m	n ₁₀ (ff)m	n ₁₁ (ff)m	n ₁₂ (ff)m				
Surface	...	4	12	7	11	1	12	...	...	...	3	6	2	11	12	9
1000	...	4	12	6	11	...	...	...	...	...	3	6	2	11	11	9
850	...	6	8	11	10	2	10	1	10	1	6	...	...	1	5	11
700	...	1	2	...	...	...	...	1	1	...	4	12	8	16	5	17
600	...	1	10	1	...	...	...	...	...	4	18	16	23	4	19	1
500	2	28	17	28	4	20	1	7
400	2	30	14	36	7	38	1	34
300	2	38	11	47	9	47	...	...
200	9	61	4	56	...	...	0	13
150
100
9

Notes: n₁, n₂, . . . etc. = Number of occurrences of wind direction from the specified ranges.

(ff)m = Mean scalar wind speed (regardless of direction).

N = Total number of observations from all direction including calms.

Cairo Aerodrome--October, 1956

Day	Time U.T.	Freezing level						Highest Wind Speed			Tropopause				
		Lowest			Highest			Height	PPPP	ddd	fff	Height	PPPP	TTT	
		GGgg	Height	PPPP	TdTdTa	Height	PPPP	TdTdTa							
1	1500	4160	618	—	—	—	—	—	12000	242	230	061	—	—	
2	1500	4940	564	—	—	—	—	—	11600	—	240	051	—	—	
3	1500	4880	568	—	—	—	—	—	12330	203	250	056	15150	128	
4	1500	4780	572	—	—	—	—	—	11600	225	260	052	15100	128	
5	1500	4660	582	—	—	—	—	—	13700	472	250	053	15380	123	
6	1500	4600	583	—	—	—	—	—	9600	300	210	040	—	—	
7	1530	4410	598	—	—	—	—	—	11700	—	230	060	—	—	
8	1515	4130	622	—	—	—	—	—	11900	212	230	077	—	—	
9	1500	4230	613	—	—	—	—	—	12400	—	230	090	—	—	
10	1615	3950	640	—	—	—	—	—	—	—	—	—	—	—	
11	1500	4410	604	—	—	—	—	—	12600	186	240	083	—	—	
12	1615	4110	623	—	—	—	—	—	7400	404	230	045	—	—	
13	1500	3600	650	—	—	—	—	—	—	—	—	—	—	—	
14	1500	4200	618	—	—	—	—	—	4300	590	230	041	—	—	
15	1500	3780	650	—	—	—	—	—	4170	618	250	027	—	—	
16	1500	3900	636	—	—	—	—	—	1000	—	230	101	—	—	
17	1500	3580	600	—	—	—	—	—	16400	102	240	101	13650	160	
18	1500	3440	672	—	—	—	—	—	—	—	—	—	11850	204	
19	1500	3100	701	—5.6	3750	646	—	—	10500	257	280	085	11080	234	
20	1515	3690	673	—	—	—	—	—	12750	178	250	056	12000	202	
21	1500	3960	622	—	—	—	—	—	12200	201	250	078	16250	105	
22	1500	3820	644	—	—	—	—	—	13650	158	270	062	17430	087	
23	1500	3850	643	—	—	—	—	—	13050	—	270	109	—	—	
24	1500	4100	623	—	—	—	—	—	12250	197	240	127	—	—	
25	1600	4050	625	—	—	—	—	—	8250	—	260	064	—	—	
26	1500	4990	565	—	—	—	—	—	10450	260	250	077	—	—	
27	1500	4450	598	—	—	—	—	—	12200	203	260	076	16175	107	
28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
29	1500	4670	578	—	—	—	—	—	13250	168	25	081	—	—	
30	1415	4489	593	—	—	—	—	—	10100	—	260	073	—	—	
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Highest	...	—	4940	564	—	—	—	—	12250	197	240	127	17430	087	-68.3
Lowest	...	—	3100	701	-5.6	—	—	—	4170	618	250	027	11080	231	-56.4

Notes.—GGgg is the actual time of release of balloon to the nearest minute (time).

PPPP is the pressure in whole millibars (eg.1027.7 mb. PPPP 1028).

TTT and TdTdTd are the temperature dew point in degrees celsius (centigrade).

ddd is wind direction in whole degrees east of the true north; for calm winds enter 000 for ddd and fff.

fff is Wind speed in Knots. Heights are in geopotential metres above M.S.L.

AGRO-METEOROLOGICAL DATA—GIZA

**TABLE G.—Air Temperature, Humidity, Rainfall, Sunshine Duration,
Wind Speed and Piche Evaporation**

October 1956

Max. temp. at 2 metres	... ... ... ... ... ... ... ...	33.3 °C	on 10
Min. temp. at 2 metres	... ... ... ... ... ... ... ...	11.6 °C	on 22
Min. temp. at 5 cms. over dry soil	... ... ... ... ... ... ... ...	8.0 °C	on 22
Min. temp. at 5 cms. over wet soil	... ... ... ... ... ... ... ...	8.5 °C	on 22
Min. temp. at 5 cms. over grass	... ... ... ... ... ... ... ...	6.5 °C	on 22
Min. Relative Humidity at 2 metres	... ... ... ... ... ... ... ...	25%	on 10
Max. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	17.5 mm.	on 2
Min. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	7.0 mm.	on 29
Mean daily temp. at 2 metres	... ... ... ... ... ... ... ...	21.3 °C.	
Mean day-time temp. at 2 metres	... ... ... ... ... ... ... ...	24.0 °C.	
Mean night-time temp. at 2 metres	... ... ... ... ... ... ... ...	19.9 °C.	
Mean Relative Humidity at 2 metres	... ... ... ... ... ... ... ...	72%	
Mean Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	12.7 mm.	
Mean day-time wind speed at 2 metres	... ... ... ... ... ... ... ...	3.0 m/sec.	
Mean night-time wind speed at 2 metres	... ... ... ... ... ... ... ...	1.5 m/sec.	
Mean Piche Evaporation at 120 cm.	... ... ... ... ... ... ... ...	10.6 mm.	
Total Rainfall	... ... ... ... ... ... ... ...	0.0 mm.	
Sunshine-Duration	... ... ... ... ... ... ... ...	303 hours (86% out of possible hours.)	

TABLE H.—Extreme Soil Temperature

Giza—October 1956

Extreme Soil Temp.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Depth in cm.	0·3		5		10		20		50		100		200	
Dry Soil ...	52·0	11·0	36·5	20·0	31·5	21·5	30·0	24·5	30·0	26·5	30·0	27·5	28·0	27·5
Wet Soil ...	32·5	11·5	29·0	14·0	27·0	16·5	25·0	18·5	24·5	21·0	25·0	22·5	24·5	23·5
Grass	27·5	15·0	26·5	17·0	25·0	18·5	25·0	20·5	24·5	22·0	25·0	23·0	—	—

TABLE I.—Amount of Solar+Sky Radiation in Gram per cm².

Giza—October 1956

Solar+Sky Radiation.	DATE														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	529	528	555	519	555	513	534	539	548	541	487	507	494	481	512
Solar+Sky Radiation.	DATE														
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	491	486	479	455	483	410	472	371	438	437	450	452	445	434	387

Monthly Total = 15010

TABLE J.—Duration in Hours of Temperature at 2 Metres Height Above Certain Levels in °C.

Giza—October 1956

	DATE														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Duration above 0°C	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
" 5°C	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
" 10°C	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
" 15°C	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
" 20°C	22	16	21	24	16	16	15	18	21	24	17	17	14	14	13
" 25°C	11	10	10	12	8	8	9	10	10	12	9	8	6	5	5
" 30°C	5	0	2	6	0	0	0	0	2	6	2	0	0	0	0
" 35°C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
" 40°C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOTES

TABLE G.

(a) Air temperature and humidity are measured by ventilated dry and wet-bulb thermometers freely exposed in Louvered Stevenson Screen of the Egyptian type. Thermometer bulbs are at 210 cms. above ground (approximately 2m.) Maximum (mercury) and minimum (alcohol) thermometers are exposed in the same screen for the 2m. values. The minimum thermometers for the 5cm. heights are of the alcohol type freely exposed in the open air on wood supports.

The daily mean values of air temperatures are computed from the formula $1/4$ (values at 0800 + 1400 + 2000 + Minimum.)

The day-time mean air temperature is computed graphically from the record of a thermograph exposed in the screen, for the period sunrise to sunset. The night mean is similarly obtained for the period sunset to sunrise.

(b) In computing relative humidity Aspirations—Psychrometer tables of the Preussischen Meteorological Institut - 1927 are used, corrections for wind speed are applied. The mean relative humidity is computed from the formula $1/2$ (values at 0800 + 1400-Local time).

(c) Absolute humidity is expressed by vapour pressure in units of mms. of mercury. The mean value is calculated from the formula $1/3$ (values at 0800 + 1400 + 2000 L.T.).

(d) Rainfall is measured by ordinary rain gauge; the height of its rim is 10 cm. above ground. Tr. stands from trace (i.e amounts of rain less than 0.1 mm.).

(e) The mean wind speed by day is computed from the total run of air during the period 0800 to 1800 L.T., as indicated by the counter of an ordinary cup anemometer freely exposed at a height of 2 metres above ground.

The mean wind speed at night is similarly computed for the period 1800 to 0800 L.T.

(f) Evaporation is measured by a piche tube freely exposed in the open air; the evaporation disc has a diameter of 3cms, white in colour and at a height of 120 cms. above dry soil.

The Piche is read at 0800 L.T. daily in millimetres, the daily values given are for the 24 hours beginning at 0800 L.T.

TABLE H.

Soil temperature is measured by mercury thermometers, the values given are to be nearest $\frac{1}{2}^{\circ}\text{C}$.

TABLE I.

Instrument used for the measurement of solar and sky radiation (global radiation) is the (Rabitz) Actinograph).

Cairo. 17/3/1957.

M. F. TAHA
Director General
Meteorological Department



REPUBLIC OF EGYPT

MINISTRY OF WAR

METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REPORT

November 1956

GOVERNMENT PRESS, CAIRO
1957

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* NOTE

Climatological data for Port Said, El-Arish, Cairo (A), Almaza (A), Tor and Luxor are not included in this report as a result of the destruction of meteorological instruments or interruption of observations by the Anglo-French-Israeli aggression on Egypt.

GENERAL SUMMARY OF WEATHER CONDITIONS

November 1956

Changeable and dry with two remarkable heat waves Cairo area and Middle Egypt.

The main features of the month were.

- (a) Two prevailing remarkable heat waves Cairo area and Middle Egypt.
- (b) Frequent formation of early morning fog Lower Egypt between 21st and 25th.
- (c) Slight rainfall Lower Egypt.

General description of weather.

For the month as a whole the weather was changeable and dry but foggy Lower Egypt most of the 4th week.

The barometric pressure was generally above normal, minimum temperature was slightly below normal, while maximum temperature was slightly below normal in the north and slightly above normal elsewhere.

Rainfall was remarkably below normal in the north.

The mean daily relative humidity reached 66·2% Alexandria (Kom-EL-Nadora) and 56·5% Helwan.

Pressure and wind.

The month started with two intense anticyclones, one over N. Atlantic; the other over the Black Sea extending southerly till east Mediterranean together with a secondary depression over west Mediterranean.

Till the 4th this depression deepened appreciably and proceeded eastwards towards east Mediterranean. The barometric pressure over Egypt fell remarkably below its normal and reached its minimum on the 4th.

Between the 5th and 12th the high pressure extending from British Isles SE wards till the western desert of Egypt established rapidly and was shifted gradually eastwards, thus playing a major part in the rapid rise experienced within this period in the atmospheric pressure over Egypt which attained a maximum on 12th.

During the rest part of the month, the monthly pressure trend showed four consecutive minima, the first three of which were due to the passage of three consecutive western Mediterranean secondaries over east Mediterranean while the last, the more pronounced and far below normal, was due to the steep deepening of a stationary central Mediterranean depression.

The prevailing winds were mainly light/moderate E/SE winds in the extreme west, light/moderate NE by Lower Egypt, moderate NW by Red Sea coasts and light N by elsewhere.

Temperature.

Two pronounced warm spells were enjoyed all over the country during the first and fourth weeks respectively; but were rather excessive over Cairo area and Middle Egypt. Cairo recorded a maximum temperature of 36°C on 5th and 19th i.e. (9°C and 11°C above normal respectively). Apart from the hot spells' durations, maximum temperatures were rather below normal generally.

Minimum temperatures were slightly oscillating round normal most of the month and the deviations from normal did not exceed 4°C.

Precipitation.

Precipitation was generally light and confined to Lower Egypt. Two rainy periods were distinguished viz (7th - 9th) over Lower Egypt and (26th - 30th) over northern coast. A fall of 18.3 mm. was reported at Damietta on the 7th which was the maximum fall in one day during the month.

Miscellaneous weather phenomena.

- (a) Early morning fog patches developed over Lower Egypt between 21st and 24th while few localities reported single occasions otherwise.
(b) Sidi-Barrani reported thunderstorms on the 27th.
(c) Sandstorms were observed at Sidi-Barrani on the 30th. Mersa Matruh on the 7th.

The deviations of meteorological elements from their normal for various districts are shown in the following table:

TABLE A.—Condensed Climatological Data

November 1956

DISTRICTS	M.S.L. Barometric Pressure 0600 UT.		Temperature						Rainfall	
	1956	Diff. F. Nor.	Maximum temp.		Minimum temp.		$\frac{\text{Max.} + \text{Min.}}{2}$		1956	Diff. F. Nor.
			1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.		
1. Mediterranean	1019.0	+1.6	23.3	- 1.1	14.7	-0.7	19.0	-0.9	6	-20
2. Lower Egypt	1018.7	+1.1	26.0	- 0.1	12.3	-1.1	19.1	-0.6	1	- 8
3. Middle Egypt	1019.1	+1.4	26.4	0.0	13.5	-0.3	19.9	-0.1	drops	- 3
4. Upper Egypt	1017.8	+1.1	28.9	+ 1.1	12.5	-0.9	20.7	+0.1	drops	0
5. Western Desert	1018.2	+0.3	28.2	+ 1.0	10.9	-0.9	19.6	0.0	drops	0
6. Red Sea	1017.1	+1.4	26.7	+ 0.9	14.7	-2.2	20.7	-0.6	0	- 2

TABLE B.—Climatological Data-Stations

November 1956

Stations	M.S.L. Pressure 0600 U.T.		T E M P E R A T U R E								Rainfall			Mean Daily Evap.	
			Maximum. Temp.				Minimum. Temp.				Total Rainfall				
	Mean	Dev. from Normal	Mean	Dev. from Normal	Absolute Max.	Date	Mean	Dev. from Normal	Absolute Minimum	Date	mm.	mm.	Number of days of rain*	Max. Rainfall in one day	
	mb.	mb.	°c	°c	°c		°c	°c	°c						Date
Salloum	1018·9	—	23·9	+ 0·5	30·1	19	15·2	+ 1·2	11·0	27·28	0·1	4	0·1	27	6·4
Sidi-Barrani ...	1018·7	—	23·1	- 0·3	30·6	5	13·3	- 0·5	9·6	29	9·6	8	3·3	26	6·1
Mersa Matruh (A)	1019·0	+1·1	23·2	- 0·2	30·2	5, 19	12·8	- 0·5	7·7	29	16·1	9	12·9	9	7·3
El Dabaa	1018·4	—	23·6	+ 0·1	30·8	19	13·2	+ 0·6	8·6	30	18·3	4	10·1	9	5·4
Kom-el-Nadora ..	1019·4	+1·5	24·0	- 1·4	30·4	5	17·0	- 0·3	13·7	27	6·8	3	6·8	26	7·0
Alexandria (A) ...	1018·9	—	24·8	+ 0·6	32·1	5	14·2	- 0·5	9·3	29	5·0	5	3·0	26	4·9
Damietta	1018·7	+2·3	22·8	- 1·8	29·6	20	14·2	- 1·4	10·6	10	18·3	4	18·3	7	3·7
Port-Said (A)* ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
El Arish*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Damanhour ...	1018·8	+1·0	25·8	+ 0·1	33·8	5	13·0	- 1·0	10·2	28	4·0	4	2·6	6	3·2
Mansura	1019·1	+2·0	26·5	+ 0·5	32·5	5	13·5	- 0·9	10·2	28	tr.	1	tr.	8	2·7
Tanta	1019·5	+1·7	25·9	- 0·1	31·4	20	10·1	- 2·2	6·7	29	1·1	5	1·1	8	2·5
Shebin-El-Kom ...	1018·8	+1·1	25·5	- 0·9	32·2	20	13·8	+ 0·7	10·8	29	tr.	1	tr.	8	3·6
Zagazig	1017·4	-0·2	26·4	+ 0·1	34·7	5	10·9	- 2·1	7·0	28	1·0	1	1·0	8	3·2
Ismailia	1018·8	—	27·4	+ 1·1	34·9	5	12·7	- 1·1	9·8	29	0	0	0	—	5·2
Cairo (A)	1019·2	—	25·8	+ 1·0	—	—	12·7	- 1·2	—	—	—	—	—	—	6·4
Almaza (A) ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ezbekiya	—	—	27·2	- 0·6	36·0	19	13·9	- 0·4	11·3	28	tr.	2	tr.	8·9	5·4
Giza	1019·1	+1·5	26·0	0·0	35·2	5	11·3	- 0·8	6·7	28	tr.	3	tr.	8·9, 30	—
Helwan... ...	1019·1	+1·3	26·0	+ 0·6	34·4	5	15·3	+ 0·4	11·2	28	tr.	4	tr.	8·9, 30	8·4
Fayoum	1019·5	+2·0	25·9	+ 0·9	31·2	5	12·4	- 0·9	8·3	28	tr.	1	tr.	30	4·1
Minya (A)	1018·3	+0·8	28·4	+ 1·8	36·3	5	11·3	- 0·2	6·5	28	0	0	0	—	5·7
Asyout (A)... ...	1018·2	+0·8	27·7	+ 1·5	35·5	5, 19	12·2	- 0·5	8·5	29	0	0	0	—	9·0
Nag-Hamadi ...	1017·2	+0·9	28·8	- 0·2	36·4	20	11·8	- 0·5	8·1	29	0	0	0	—	3·1
Qena	1017·4	+1·4	29·9	0·0	35·0	4·5	12·3	- 1·5	8·2	29	0	0	0	—	4·6
Luxor (A)*... ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Aswan... ...	1015·9	+0·3	32·9	+ 2·4	38·4	5	14·8	- 1·6	11·5	29	0	0	0	—	—
Siwa	1019·1	+0·4	26·2	+ 0·5	33·3	5	10·1	- 0·1	4·0	29	0·2	1	0·2	30	7·2
Bahariya	1019·4	+1·1	28·0	+ 1·9	37·0	5	10·7	- 0·8	5·6	28	tr.	1	tr.	30	6·0
Farafra	1020·3	—	26·9	+ 0·9	36·0	5	9·6	+ 0·4	3·7	29	0	0	0	—	10·6
Dakhla	1018·3	+0·4	28·5	+ 0·1	36·3	5	10·6	- 1·7	4·4	29	0	0	0	—	10·1
Kharga	1016·0	-0·7	30·1	+ 1·5	37·0	6	12·3	- 1·0	7·4	29	0	0	0	—	7·4
Suez	1018·8	+2·0	26·6	0·0	33·0	19	11·7	- 3·7	8·6	27	tr.	3	tr.	24, 29, 30	6·3
Tor*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	1016·1	+0·9	26·9	+ 1·7	31·0	4	14·3	- 1·3	11·7	24	0	0	0	—	11·2
Quseir	1016·4	+1·2	26·6	+ 1·1	31·2	5	18·1	- 1·7	11·2	29	0	0	0	—	16·0

* Drops are taken into consideration.

TABLE C.—Miscellaneous Weather Phenomena

November 1956

Stations	NUMBER OF DAYS OF OCCURRENCE					
	Rain Showers	Thunder- storm	Fog	Mist Sandrising distrising	Dust or Sand Storm	Gales
	(a)	(b)	(c)	(d)	(e)	(f)
Sallum	0	0	1	1	0	0
Sidi-Barrani	5	1	4	0	1	0
Mersa Matruh	7	0	2	1	1	0
Alexandria (A)	5	0	6	2	0	0
Port Said (A) *	—	—	—	—	—	—
El-Arish *	—	—	—	—	—	—
<hr/>						
Cairo (A) *	—	—	—	—	—	—
Almaza (A) *	—	—	—	—	—	—
<hr/>						
Minya (A)	0	0	0	1	0	0
Assiut (A)	0	0	0	0	0	0
Luxor (A) *	—	—	—	—	—	—
<hr/>						
Niwa	1	0	0	0	0	0
<hr/>						
Hurghada	0	0	0	0	0	0
<hr/>						
Aswan	0	0	0	0	0	0

(a) Number of days in which rainfall is 0·1 mm. or more within 24 hours from 0600 U.T. to 0600 U.T. next day.

(b) Number of days of thunderstorm heard within station.

(c) Number of days of Fog in which visibility is less than 1000 metres.

(d) Number of days of mist or sandrising or dustrising in which visibility is more than 1000 metres and less than 2000 metres.

(e) Number of days of sandstorms in which visibility is less than 1000 metres.

(f) Number of days of gales in which wind velocity is equal or more than 34 knots.

UPPER AIR DATA**TABLE D.—Radio sonde Data. Average Monthly Values.****Cairo Aerodrome. 1500 U.T. November 1956**

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 1400 U.T.		Highest	Lowest	Readings at 1400 U.T.		Highest	Lowest
	N	Mean			N	Mean		
Surface	12	1009	1011	1007	12	27·6	31·0	20·0
1000	12	147	165	131	12	24·4	30·3	19·3
850	12	1550	1577	1496	12	13·8	19·6	06·5
700	12	3149	3193	3076	12	04·3	08·6	— 1·4
600	12	4387	4445	4300	12	— 2·8	1·8	— 8·2
500	12	5804	5881	5696	12	— 12·5	— 9·6	— 17·7
400	12	7468	7567	7330	12	— 25·3	— 21·5	— 29·3
300	10	9483	9612	9311	10	— 42·2	— 37·8	— 45·3
200	10	12124	12270	11944	10	— 58·4	— 55·5	— 61·8
150	7	13880	14041	13728	7	— 61·1	— 58·3	— 64·7
100	5	16325	16504	16202	5	— 64·1	— 60·5	— 67·5
60	—	—	—	—	—	—	—	—

N = Number of observations of specified pressure surfaces.

N.B. Observations from 19th. to 30th.

UPPER AIR DATA**TABLE D.—Radio sonde Data. Average Monthly Values.****M. Matruh, Aerodrome. November 1956**

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 1500 U.T.		Highest	Lowest	Readings at 1500 U.T.		Highest	Lowest
	N	Mean			N	Mean		
Surface	11	1014	1017	1008	11	19·7	22·0	16·8
1000	11	148	176	98	11	19·1	21·9	16·0
850	11	1525	1557	1477	11	11·0	16·3	05·5
700	11	3120	3175	3068	11	2·4	6·6	— 4·2
600	11	4346	4421	4292	11	— 1·1	0·0	— 7·6
500	11	5750	5847	5627	11	— 14·8	— 10·2	— 22·7
400	11	7400	7520	7221	11	— 26·9	— 23·0	— 29·5
300	11	9413	9569	9209	11	— 41·6	— 38·2	— 45·8
200	11	12055	12275	11870	11	— 59·8	— 53·8	— 64·5
150	10	13822	14017	13660	10	— 62·1	— 56·1	— 68·6
100	7	16329	16450	16183	7	— 65·0	— 60·5	— 68·8
60	—	—	—	—	—	—	—	—

N = Number of observations of specified pressure surfaces.

N.B. Observations from 20th. to 30th.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Cairo Aerodrome.—1400 U.T.—November 1956

Constant Pressure Surface mb.	Wind between specified ranges of direction 000—360														Calm	Total No. of observ. N	Mean Scale wind speed										
	345—014		015—044		045—074		075—104		105—134		135—164		165—194		195—224		225—254		255—284		285—314						
	n ₁	(ff)m	n ₂	(ff)m	n ₃	(ff)m	n ₄	(ff)m	n ₅	(ff)m	n ₆	(ff)m	n ₇	(ff)m	n ₈	(ff)m	n ₉	(ff)m	n ₁₀	(ff)m	n ₁₁	(ff)m	n ₁₂	(ff)m			
Surface ...	2	9	3	6	1	6	1	7	1	10	—	—	—	—	—	2	5	—	—	—	2	9	0	12	7		
1000	2	9	3	6	1	6	1	7	1	10	—	—	—	—	—	2	5	—	—	—	2	9	0	12	7		
850	1	9	—	—	—	—	—	—	—	—	2	8	—	—	1	8	3	10	2	9	1	11	1	11	1	12	9
700	—	—	1	5	—	—	—	—	—	—	1	8	—	—	1	17	4	15	4	17	—	—	—	0	11	14	
600	1	17	—	—	—	—	—	—	—	—	—	1	12	1	14	5	30	3	30	—	—	—	—	0	11	26	
500	1	17	—	—	—	—	—	—	—	—	—	—	—	1	22	4	34	5	38	—	—	—	—	0	11	33	
400	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	56	7	49	—	—	1	17	0	11	42	
300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	61	5	58	1	20	—	—	0	9	55	
200	1	42	—	—	—	—	—	—	—	—	—	—	—	—	—	1	77	2	88	1	89	—	—	0	5	77	
150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			

Notes: n₁, n₂, etc. = Number of occurrence of wind direction from the specified ranges.

(ff)m = Mean scalar wind speed (regardless of direction).

N = Total number of observations from all direction including calms.

N.B. Observations from 19th to 30th.

TABLE E.—Rawin Data

Frequency wind ranges and mean scalar wind speeds
M. Matrouh Aerodrome 1500 U.T.—November 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000—360												Calm	Total No. of Obs. N	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						
	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					
Surface	3	10	2	6	1	9	2	8	—	—	1	4	—	—	1	20	—	—	—	—	1	14	0	11	10		
1000	2	8	1	8	1	10	1	7	1	6	—	—	—	—	1	25	—	—	—	—	1	13	1	13	0	9	11
850	—	—	—	—	—	—	—	—	—	—	—	—	1	68	2	8	—	—	3	15	3	11	—	—	0	9	18
700	—	—	—	—	—	—	—	—	—	—	—	—	2	32	3	17	4	22	1	16	—	—	0	10	22	—	—
600	—	—	—	—	—	—	—	—	—	—	—	—	—	5	25	4	26	1	22	—	—	0	10	25	—	—	
500	—	—	—	—	—	—	—	—	—	—	—	—	1	57	6	40	3	24	—	—	—	—	0	10	37	—	—
400	—	—	—	—	—	—	—	—	—	—	—	—	1	90	7	57	1	25	—	—	—	—	0	9	57	—	—
300	—	—	—	—	—	—	—	—	—	—	—	—	—	6	62	1	45	1	26	—	—	0	8	56	—	—	
200	—	—	—	—	—	—	—	—	—	—	—	—	—	5	83	2	76	1	32	—	—	0	8	75	—	—	
150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

Notes : n1, n2,....., etc. = Number of occurrence of wind direction from the specified ranges.

(ff)m = Mean scalar wind speed (regardless of direction).

N = Total number of observation from all directions including calms.

N.B. Observations from 20th. to 30th.

TABLE F.—Miscellaneous Data

Cairo Aerodrome—November, 1956

Day	Time U.T.	Freezing level						Highest Wind Speed				Tropopause		
		Lowest			Highest			Height	PPPP	ddd	fff	Height	PPPP	TTT
		GGgg	Height	PPPP	TdTdTa	Height	PPPP	TdTdTa						
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—
19	1425	4050	628	—	—	—	—	—	12000	206	290	105	—	—
20	1400	4350	606	—	—	—	—	—	10000	284	290	063	13091	174
21	1430	4650	586	—	—	—	—	—	10650	257	270	118	—	—
22	1400	4540	593	—	—	—	—	—	8000	—	270	065	—	—
23	1400	4420	600	—	—	—	—	—	11500	224	260	085	—	—
24	1330	4250	612	—	—	—	—	—	12750	185	250	092	—	—
25	1330	3700	652	—	—	—	—	—	8150	360	270	044	—	—
26	1345	3280	687	—	—	—	—	—	12400	188	260	103	12150	196
27	1400	2850	723	—	—	—	—	—	9300	301	240	064	15490	114
28	1400	3330	682	-15.2	—	3650	-15.4	—	12650	180	260	048	15580	112
29	1330	3400	672	—	—	—	—	—	15300	115	260	095	13420	158
30	1400	2520	666	-6.7	—	—	—	—	—	—	—	—	—	—
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Highest	...	—	4650	586	—	—	—	—	10650	257	270	118	15580	112
Lowest	...	—	2850	723	—	—	—	—	8150	360	270	044	12150	196

Notes.—GGgg is the actual time of release of balloon to the nearest universal (time).

PPPP is the pressure in whole millibars (eg. 1027.7 mb. PPPP 1028).

TTT and TdTdTd are the temperature dew point in tenths of degrees celsius (centigrade) eg 28.16 will be entered 281. For temperatures below 0.C add 50 to the absolute value of temperature eg.-076 will be entered 507.

ddd is wind direction in whole degrees east of the true north. For calm winds enter 000 for ddd and fff.

fff is Wind speed in Knots. Heights are in geopotential metres above M.S.L.

TABLE F.—Miscellaneous Data
M. Matruh Aerodrome—November 1956

Day	Time UT.	Freezing Level								Highest Wind Speed				Tropopause		
		Lowest				Highest										
		GGgg	Height	PPPP	TdTdTd	Height	PPPP	TdTdTd	Height	PPPP	ddd	fff	Height	PPPP	TTT	
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
20	1400	4230	0614	—	—	—	—	—	—	0174	250	087	15500	0192	-12·5	
21	1500	3930	0637	-10·4	—	—	—	—	13100	0087	250	087	13280	0186	-18·8	
22	1400	4400	0600	—	—	—	—	—	17100	0163	250	100	12660	0184	-15·3	
23	1400	3670	0657	-13·0	—	—	—	—	12750	0174	250	125	12100	0202	-10·0	
24	1400	3670	0657	-7·8	—	—	—	—	13100	0168	240	130	12000	0202	-10·7	
25	1400	3310	0682	—	—	—	—	—	14200	0137	270	130	10620	0246	-6·5	
26	1400	2140	0786	-6·9	2700	0734	—	—	12700	0174	250	103	11750	0203	-14·5	
27	1400	2470	0753	-3·2	—	—	—	—	16950	0087	280	040	11070	0225	-3·8	
28	1500	3350	0685	—	—	—	—	—	6500	0149	300	016	11560	0214	-8·0	
29	1400	3630	0654	—	—	—	—	—	—	—	—	—	11380	0220	-7·3	
30	1530	3270	0682	-3·4	—	—	—	—	7800	0376	220	096	12120	0197	-12·5	
31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Highest	—	4400	0600	—	—	—	—	—	13100	0168	240	—	15500	0192	-12·5	
Lowest	—	2140	0786	-6·9	—	—	—	—	14200	0137	270	—	10620	0246	-6·5	
									6500	0449	300	016				

Note.—GGgg is the actual time of release of balloon to the nearest universal (time).

PPPP is the pressure in whole millibars (eg. 1·027 m.b. PPPP 1028).

TTT and TdTdTd are the temperature and dew point in tenths of degrees celscuis (centigrade) eg. 28.1 °C. will be entered 281. For temperature below 0 °C. add 50 to the absolute value of temperature eg. -0.7°C. will be entered 507.

ddd is wind direction in whole degrees east of the true north. For calm winds enter 000 for ddd and fff.

fff is wind speed in knot. Heights are in geopotential metres above M.S.L.

AGRO-METEOROLOGICAL DATA—GIZA

**TABLE G.—Air Temperature, Humidity, Rainfall, Sunshine Duration,
Wind Speed and Piche Evaporation**

November 1956

Max. temp. at 2 metres	... ... ... ... ... ... ... ... ...	35·2 °C on 5
Min. temp. at 2 metres	... ... ... ... ... ... ... ... ...	6·7 °C on 28
Min. temp. at 5 cms. over dry soil	... ... ... ... ... ... ... ... ...	3·7 °C on 28
Min. temp. at 5 cms. over wet soil	... ... ... ... ... ... ... ... ...	4·9 °C on 28
Min. temp. at 5 cms. over grass	... ... ... ... ... ... ... ... ...	2·8 °C on 28
Min. Relative Humidity at 2 metres	... ... ... ... ... ... ... ... ...	11% on 5
Max. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ... ...	14·6 mm. on 6
Min. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ... ...	4·0 mm. on 5
Mean daily temp. at 2 metres	... ... ... ... ... ... ... ... ...	17·5 °C.
Mean day-time temp. at 2 metres	... ... ... ... ... ... ... ... ...	21 °C.
Mean night-time temp. at 2 metres	... ... ... ... ... ... ... ... ...	16 °C.
Mean Relative Humidity at 2 metres	... ... ... ... ... ... ... ... ...	75%
Mean Absolute Humidity at 2 metres	... ... ... ... ... ... ... ... ...	10·3 mm.
Mean day-time wind speed at 2 metres	... ... ... ... ... ... ... ... ...	2·8 m/sec.
Mean night-time wind speed at 2 metres	... ... ... ... ... ... ... ... ...	1·1 m/sec.
Mean Piche Evaporation at 120 cm.	... ... ... ... ... ... ... ... ...	7·6 cm ³ .
Total Rainfall	... ... ... ... ... ... ... ... ...	Traces.
Sunshine Duration	... ... ... ... ... ... ... ... ...	244 hours. (76% of Possible hours)

TABLE H.—Extreme Soil Temperature

Giza—November 1956

Extreme Soil Temp.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Depth in cm.	0·3		5		10		20		50		100		200	
Dry Soil ...	50·0	6·5	32·0	14·5	26·5	16·5	25·5	19·5	26·5	22·5	27·5	24·5	27·5	26·0
Wet Soil ...	29·0	8·0	23·0	10·5	21·0	13·0	20·5	15·5	21·0	18·0	22·5	20·0	23·0	21·5
Grass	25·5	11·0	21·5	14·0	20·5	14·5	22·5	17·0	22·0	19·0	23·0	21·0	—	—

TABLE I.—Amount of Solar + Sky Radiation in Cal. per cm².

Giza—November 1956

Solar+Sky Radiation.	DATE														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
432	371	428	451	409	389	332	227	196	394	399	359	373	380	376	368
DATE															
Solar+Sky Radiation.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	326	327	348	328	336	272	313	330	240	367	285	354	323	266	—

Monthly Total = 10299

TABLE J.—Duration in Hours of Temperature at 2 Metres Height Above Certain Levels in °C.

Giza—November 1956

	DATE																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Duration above 0°C	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	—	
" " 5°C	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	—	
" " 10°C	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	—	
" " 15°C	19	18	14	15	18	23	15	12	18	17	16	16	16	15	16	16	16	15	16	16	19	12	14	23	13	10	13	11	15	—	
" " 20°C	10	10	10	9	13	13	8	4	3	8	6	6	9	9	9	10	10	9	10	12	11	8	8	9	6	5	5	4	5	8	—
" " 25°C	0	2	6	6	8	5	0	0	0	0	0	0	0	0	0	0	3	5	7	7	5	3	5	0	0	0	0	0	0	0	—
" " 30°C	0	0	3	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	—	
" " 35°C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	—	
" " 40°C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	—	

NOTES

TABLE G.

(a) Air temperature and humidity are measured by ventilated dry and wet-bulb thermometers freely exposed in Louvered Stevenson Screen of the Egyptian type. Thermometer bulbs are at 210 cms. above ground (approximately 2m.) Maximum (mercury) and minimum (alcohol) thermometers are exposed in the same screen for the 2m. values. The minimum thermometers for the 5cm. heights are of the alcohol type freely exposed in the open air on wood supports.

The daily mean values of air temperatures are computed from the formula 1/4 (values at 0800+1400+2000+Minimum.)

The day-time mean air temperature is computed graphically from the record of a thermograph exposed in the screen, for the period sunrise to sunset. The night mean is similarly obtained for the period sunset to sunrise.

(b) In computing relative humidity Aspirations—Psychrometer tables of the Preussischen Meteorological Institut - 1927 are used, corrections for wind speed are applied. The mean relative humidity is computed from the formula 1/2 (values at 0800+1400-Local time).

(c) Absolute humidity is expressed by vapour pressure in units of mms. of mercury. The mean value is calculated from the formula 1/3 (values at 0800+1400+2000 L.T.).

(d) Rainfall is measured by ordinary rain gauge; the height of its rim is 40 cm. above ground. Tr. stands from trace (i.e amounts of rain less than 0.1 mm.).

(e) The mean wind speed by day is computed from the total run of air during the period 0800 to 1800 L.T., as indicated by the counter of an ordinary cup anemometer freely exposed at a height of 2 metres above ground.

The mean wind speed at night is similarly computed for the period 1800 to 0800 L.T.

(f) Evaporation is measured by a piche tube freely exposed in the open air ; the evaporation disc has a diameter of 3cms, white in colour and at a height of 120 cms, above dry soil.

The Piche is read at 0800 L.T. daily in millimetres, the daily values given are for the 24 hours beginning at 0800 L.T.

TABLE H.

Soil temperature is measured by mercury thermometers, the values given are to be nearest $\frac{1}{2}$ °C.

TABLE I.

Instrument used for the measurement of solar and sky radiation (global radiation) is the (Rabitzch Actinograph).

Cairo. 29/4/1957.

M. F. TAHA
Director General
Meteorological Department



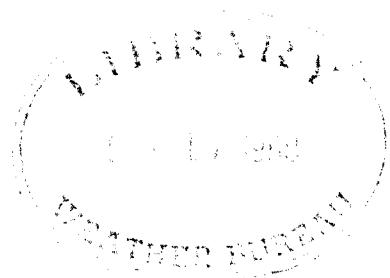
REPUBLIC OF EGYPT

MINISTRY OF WAR

METEOROLOGICAL DEPARTMENT

MONTHLY WEATHER REPORT

December 1956



GOVERNMENT PRESS CAIRO
1957

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* NOTE

Climatological data for Port Said, El-Ar sh, and Luxor (A) are not included in this report as a result of the destruction of meteorological instruments or interruption of observations by the Anglo-French-Israeli agression on Egypt.

GENERAL SUMMARY OF WEATHER CONDITIONS

December 1956

Generally cold and rainy in the north with absolute rainfall records.
Three remarkable cold fronts.

The main features were.

(a) Frequent rain most of the month in the North, heavy in particular on the 6th, 9th and from the 17th till the 20th with absolute rainfall records.

(b) Three remarkable cold fronts.

General description of weather.

At the beginning of the month an active cold front traversed the northern coast Southwards and was followed by cold weather which was experienced most of the month over Lower Egypt, both 3rd and 4th weeks over Upper Egypt.

For the month as a whole the barometric pressure was above normal, maximum temperature was below normal, minimum temperature was above normal Middle Egypt and Red Sea districts, below normal elsewhere.

The monthly rainfall exceeded highly its normal over most of the districts. Rainfall was however about normal Lower Egypt, slightly below normal Red Sea.

The mean daily relative humidity was 73.7 % Giza, 65.0 % Alexandria (Kom el-Nadra) and 57.2 % Helwan.

Pressure and Wind.

The monthly barometric pressure distribution over Egypt showed four pronounced oscillations. Apart from the peaks of these oscillations the barometric pressure continued below normal most of the corresponding four periods viz (1st-7th), (17th-20th), (23d-25th) and (27th-29th).

The 1st pressure fall was due to rapid transit of a shallow coastal secondary depression during the first two days of the month, followed by the formation of shallow secondaries over East Mediterranean and Asia Minor from 3rd. till 7th.

The northern extension of the Sudan Monsoon Low during the periods (17th-20th) and (27th-29th) caused the 2nd and 4th pressure falls, while the SE extension of the central Mediterranean Low pressure system during period (23rd-25th) caused the 3rd pressure fall.

Apart from the above four periods, the barometric pressure was above normal as a result of the intensification of the Siberian and Atlantic anticyclones extending towards East Mediterranean.

The prevailing winds over Lower and Middle Egypt were moderate/fresh W/NW more than half of the month. Otherwise winds veered to light/moderate NE/E for occasional short periods or backed to moderate/fresh S/W at the rear of shallow secondaries over East Mediterranean, and in advance of the SE trough of the central Mediterranean complex Low. Gales were reported at Mersa Matruh on the 19th, Sidi Barrani on both 19th and 20th. Over Upper Egypt light/moderate N/NW winds prevailed most of the month.

Temperature.

On the 1st an active cold front traversed the west coast and was followed by a cold period that continued most of the month over Lower Egypt third and fourth weeks elsewhere. Accordingly maximum temperatures fell gradually at its rear and reached its 1st minimum on the 6th over Lower Egypt and on the 8th over Upper Egypt.

Three more consecutive active cold waves were experienced afterwards. Corresponding minimum temperatures reached their Lower extent round 11th, 14th and 19th over Lower Egypt and round 11th, 15th and 20th over Upper Egypt.

The coldest wave over Lower Egypt was associated with the passage of the last cold front. Alexandria on the 18th reported a maximum temperature of 14°C. i.e. (6·5°C below normal) while Cairo (Ezbekiya) on the 20th reported 11 °C. i.e. (10·5°C below normal).

Minimum temperature changes appeared as reflections of the corresponding maximum temperature changes.

Precipitation.

Rain was frequent most of the first three weeks as well as the last three days over Lower Egypt.

Rain was particularly heavy and continuous on the 6th, 9th and between 17th and 20th over the north coast where most of the meteorological Stations recorded more than 10 mm. fall.

The maximum rainfall amounts at Stations in the following table are records for months of December.

Station	Rainfall mm.	Record Since year	Date	Station	Rainfall mm.	Record Since year	Date
Damietta ...	29.4	1930	6/12/56	Zagazig ...	12.0	1913	6/12/56
Mansura ...	22.0	1927	6/12/56	Sallum ...	37.2	1919	6/12/56
Tanta ...	19.0	1927	6/12/56				

Miscellaneous Weather Phenomena.

(a) Thunderstorms were reported at Sallum and Mersa Matruh on the 19th and at Sidi Barrani on the 18th.

(b) Sand Storms were reported at Mersa Matruh on the 1st, at Hurghada on the 10th, adu at Aswan on 26th and 29th.

(c) Few occasions of fog and mist patches were observed at scattered parts of Lower and Middle Egypt.

(d) Few occasions of rising Sand and rising dust were observed over the Western parts of the North Coast, Western desert and Upper Egypt.

TABLE A.—Condensed Climatological data
December 1956

DISTRICTS	M.S.L. Barometric Pressure 0600 UT.		Temperature						Rainfall	
			Maximum temp.		Minimum temp.		Max.+ Min. 2			
	1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.	1956	Diff. F. Nor.
	mb.	mb.	°C.	°C.	°C.	°C.	°C.	°C.	mm.	mm.
1. Mediterranean ...	1019·4	+1·3	18·3	— 1·3	10·5	—0·6	14·4	—1·0	92	+55
2. Lower Egypt ...	1019·0	+0·1	19·9	— 1·8	8·5	—0·4	14·2	—1·1	39	+21
3. Middle Egypt ...	1019·8	+0·7	19·6	— 1·4	9·6	+0·2	14·6	—0·6	16	+12
4. Upper Egypt ...	1019·4	+0·4	22·1	— 1·1	8·4	—0·3	15·2	—0·7	1	0
5. Western Desert ...	1020·1	+0·1	21·1	— 1·2	8·0	+1·3	14·6	0·0	6	+ 5
6. Red Sea ...	1018·4	+0·8	21·9	— 1·0	11·3	—1·5	16·6	—1·2	drops	— 1

TABLE B.—Climatological Data

December 1956

Stations	M.S.L. Pressure 0600 U.T.		T E M P E R A T U R E								Rainfall			24 hours Evap.	
	Maximum. Temp.				Minimum. Temp.				Total Rainfall		Number of days of rain*	Max. Rainfall in one day	Date		
	Mean	Dev. from Normal	Mean	Dev. from Normal	Absolute Max.	Date	Mean	Dev. from Normal	Absolute Minimum	Date					
	mb.	mb.	° ^o	° ^o	° ^o		° ^o	° ^o	° ^o		mm.				
Salloum	1019.9	—	18.7	— 0.5	28.2	1	10.4	+ 1.0	8.4	30	133.9	14	37.2	17	5.9
Sidi-Barrani ...	1019.1	—	17.7	— 1.8	29.1	1	9.7	— 0.5	6.1	14	106.1	21	33.6	19	4.1
Mersa Matruh (A)	1019.5	+ 1.2	18.1	+ 0.6	29.0	1	9.6	— 0.4	5.5	12	76.2	16	24.4	17	4.9
El Dabaa	1019.2	—	18.3	— 1.4	27.8	1	9.6	+ 0.1	5.4	30	87.0	15	14.0	17	3.7
Kom-el-Nadora ...	1019.5	+ 0.9	18.8	— 2.0	26.2	2	12.7	— 0.1	7.4	20	107.1	23	20.1	30	5.5
Alexandria (A) ...	1019.1	—	18.8	— 1.3	24.4	2	10.9	— 0.3	4.2	12	67.8	22	10.9	18	3.7
Damietta	1019.1	+ 1.6	18.0	— 2.5	24.2	3	9.3	— 1.3	4.6	27	100.9	15	29.4	6	2.1
Port-Said (A)* ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
El Arish*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Damanhour	1019.2	+ 0.4	19.5	— 1.9	27.8	2	9.3	— 0.4	5.4	12	49.3	23	16.8	6	1.7
Mansura	1019.2	+ 0.6	20.0	— 1.4	29.8	2	9.5	+ 0.1	5.5	13	39.3	9	22.0	6	1.5
Tanta	—	—	19.8	— 2.6	29.4	2	6.6	— 1.4	1.6	12	29.1	9	19.0	6	1.4
Shebin-El-Kom ...	1019.4	+ 0.3	19.8	— 1.8	28.6	2	10.3	+ 1.2	5.6	12	23.3	8	13.6	6	2.4
Zagazig	1018.2	— 1.0	20.4	— 1.2	28.0	2	6.7	— 1.5	3.0	12.21	21.5	5	12.0	6	1.8
Ismailia	1019.5	—	21.5	— 0.0	33.8	2	9.6	— 0.4	5.7	13	10.8	4	9.8	6	3.4
Cairo (A)	1019.5	—	19.2	— 1.0	30.0	1	10.1	— 0.1	6.0	12.18	12.0	5	9.0	6	4.2
Almaza (A) ...	1019.5	+ 0.7	19.5	— 1.3	29.9	1	10.2	— 0.0	5.4	12	13.5	6	9.8	6	3.5
Ezbekiya	—	—	20.6	— 1.0	30.0	1.2	9.8	+ 0.1	6.5	21	17.7	5	9.0	6	3.4
Giza	1019.9	+ 0.8	19.7	— 1.7	31.0	1	8.3	+ 0.6	3.2	13	16.2	6	12.0	6	—
Helwan	1020.0	+ 0.5	18.7	— 1.7	31.1	1	10.3	+ 0.1	5.4	11	11.7	4	6.4	6	4.3
Fayoum	1020.3	+ 0.8	19.5	— 2.6	30.3	1	8.6	+ 0.3	4.2	21.27	7.9	6	3.3	19	2.0
Minya (A)	1020.0	+ 0.6	21.2	— 0.5	33.2	2	6.7	— 0.3	1.5	21	tr.	4	tr.	6, 18, 19, 26	6.0
Asyout (A)	1020.1	+ 1.1	21.2	— 0.8	33.5	2	8.7	+ 0.4	3.6	11	tr.	1	tr.	29	5.9
Nag-Hamadi ...	1019.1	+ 0.3	22.9	— 0.5	34.4	3	7.8	+ 0.2	4.6	12.22	1.0	1	1.0	29	2.5
Qena	1019.4	+ 0.7	23.0	— 1.3	33.3	2	8.0	— 1.0	2.8	22	0	0	0	—	2.9
Luxor (A)*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Aswan	1017.8	— 0.5	25.0	— 0.7	37.0	3	10.8	— 1.2	4.2	22	0	0	0	—	10.8
Siwa	1020.6	+ 0.3	18.8	— 2.5	30.0	1	8.2	+ 2.9	2.7	30	11.3	8	5.4	6	4.8
Bahariya	1020.6	+ 0.2	20.6	— 0.7	33.4	2	7.7	+ 1.2	1.2	27	2.1	5	2.1	6	3.6
Farafra	1022.0	—	20.5	— 1.2	32.1	1	7.2	+ 1.8	0.0	27	0	0	0	—	7.3
Dakhla	1020.9	+ 0.6	21.6	— 1.3	33.0	1	6.9	+ 0.2	2.0	22.30	0	0	0	—	6.9
Kharga	1018.4	— 0.7	23.3	— 0.2	38.2	3	9.1	+ 0.9	3.3	21	3.0	1	3.0	29	5.0
Suez	1019.8	+ 1.1	20.7	— 1.2	30.2	2	7.4	— 3.3	3.2	13.18	15.0	4	6.0	20	4.0
Tor*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hurghada	1017.8	+ 0.9	22.2	— 0.3	29.5	3	11.6	+ 0.2	6.7	21	tr.	2	tr.	14.29	11.6
Quseir	1017.5	+ 0.3	22.9	— 1.5	29.4	3	14.8	— 1.3	9.3	21	0	0	0	—	14.0

* Drops are taken into consideration.

TABLE C.—Miscellaneous Weather Phenomena

December 1956

Stations	NUMBER OF DAYS OF OCCURRENCE					
	Rain Showers	Thunder-storm	Fog	Mist Sandrising dustrising	Dust or Sand Storm	Gales
	(a)	(b)	(c)	(d)	(e)	(f)
Sallum	11	1	0	0	0	0
Sidi-Barrani	17	1	0	1	0	2
Mersa Matruh	14	1	0	0	1	1
Alexandria (A)	22	0	1	2	0	0
Port Said (A) *	—	—	—	—	—	—
El-Arish *	—	—	—	—	—	—
Cairo (A) *	3	0	0	0	0	0
Almaza (A) *	6	0	0	0	0	0
Minya (A)	0	0	5	0	0	0
Assiut (A)	0	0	2	0	0	0
Luxor (A) *	—	—	—	—	—	—
Siwa	5	0	0	0	0	0
Hurghada	2	0	0	0	1	0
Aswan	0	0	0	0	2	0

(a) Number of days in which rainfall is 0·1 mm. or more within 24 hours from 0600 U.T. to 0600 U.T. next day.

(b) Number of days of thunderstorm heard within station.

(c) Number of days of Fog in which visibility is less than 1000 metres.

(d) Number of days of mist or sandrising or dustrising in which visibility is more than 1000 metres and less than 2000 metres.

(e) Number of days of sandstorms in which visibility is less than 1000 metres.

(f) Number of days of gales in which wind velocity is equal or more than 34 knots.

UPPER AIR DATA**TABLE D.—Radio sonde Data. Average Monthly Values.****Cairo Aerodrome. 1500 U.T. December 1956**

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 1500 U.T.		Highest	Lowest	Readings at 1500 U.T.		Highest	Lowest
	N	Mean			N	Mean		
Surface	28	1011	1017	1003	28	17·9	27·2	10·5
1000	28	162	213	95	28	17·1	26·9	10·3
850	28	1523	1567	1435	28	6·8	21·4	1·4
700	28	3094	3188	2991	28	— 1·9	10·4	— 10·3
600	28	4302	4473	4174	28	— 8·0	0·0	— 16·4
500	27	5674	5828	5514	27	— 19·6	— 13·0	— 26·6
400	26	7305	7793	7098	26	— 31·4	— 24·3	— 39·5
300	25	9288	9821	9045	25	— 44·4	— 37·8	— 50·8
200	18	11888	12134	11675	18	— 52·0	— 47·8	— 59·4
150	13	13714	13959	13507	13	— 58·3	— 54·0	— 66·8
100	12	16222	16432	16056	12	— 63·5	— 59·2	— 69·0
60	—	—	—	—	—	—	—	—

N = Number of observations of specified pressure surfaces.

N.B. Observations from 19th. to 30th.

UPPER AIR DATA**TABLE D.—Radio sonde Data. Average Monthly Values.****M. Matruh, Aerodrome. December 1956**

Pressure Surface mb.	Heights of pressure Surfaces G.P.M.				Temperature °C			
	Readings at 1500 U.T.		Highest	Lowest	Readings at 1500 U.T.		Highest	Lowest
	N	Mean			N	Mean		
Surface	27	1017	1024	1008	27	15·2	24·3	11·5
1000	27	171	230	099	27	14·2	23·8	10·0
850	27	1520	1562	1469	26	04·7	19·7	— 1·1
700	27	3078	3166	3010	26	— 4·6	4·7	— 8·6
600	26	4280	4403	4192	26	— 10·7	— 3·0	— 15·6
500	25	5656	5807	5539	25	— 20·1	— 12·7	— 25·9
400	25	7273	7460	7133	25	— 32·0	— 25·0	— 38·5
300	21	9256	9482	9072	21	— 42·5	— 37·4	— 50·2
200	12	11879	12114	11390	12	— 55·2	— 50·0	— 59·8
150	10	13702	13903	13509	10	— 59·3	— 55·0	— 64·1
100	8	16193	16377	16022	8	— 64·2	— 60·2	— 69·0
60	—	—	—	—	—	—	—	—

N = Number of observations of specified pressure surfaces.

N.B. Observations from 20th. to 30th.

TABLE E.—Rawin Data
Frequency wind ranges and mean scalar wind speeds
Cairo Aerodrome.—1500 U.T.—December 1956

Constant Pressure Surface mb.	Wind between specified ranges of direction 000—360													Calm	Total No. of observ. N	Mean Scale wind speed											
	345—014		015—044		045—074		075—104		105—134		135—164		165—194		195—224		225—254		255—284		285—314						
	n ₁	(ff)m	n ₂	(ff)m	n ₃	(ff)m	n ₄	(ff)m	n ₅	(ff)m	n ₆	(ff)m	n ₇	(ff)m	n ₈	(ff)m	n ₉	(ff)m	n ₁₀	(ff)m	n ₁₁	(ff)m	n ₁₂	(ff)m			
Surface	3	8	3	6	6	9	1	9	1	6	—	—	—	—	1	9	2	12	3	8	2	4	6	9	0	28	8
1000	3	8	3	6	6	9	1	9	1	6	—	—	—	—	1	9	2	12	3	8	2	4	6	9	0	28	8
850	2	13	1	6	3	12	—	—	—	—	3	9	—	—	4	13	1	11	3	19	7	12	3	12	0	27	12
700	1	6	1	8	—	—	—	—	—	—	—	—	—	—	6	22	8	22	4	16	3	10	3	13	0	26	18
600	2	5	—	—	—	—	—	—	—	—	—	—	—	—	5	33	7	27	9	21	1	8	3	21	0	27	23
500	2	14	—	—	—	—	—	—	—	—	—	—	—	—	3	39	7	34	10	34	3	31	—	—	0	25	33
400	—	—	1	16	—	—	—	—	—	—	—	—	—	—	1	65	11	52	6	62	2	40	—	—	0	21	52
300	—	—	—	—	1	14	—	—	—	—	—	—	—	—	9	62	8	79	—	—	—	—	—	—	0	18	67
200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	77	4	85	1	85	—	—	—	—	0	8	82
150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

Notes: n₁, n₂, . . . etc. = Number of occurrence of wind direction from the specified ranges.

(ff)m = Mean scalar wind speed (regardless of direction).

N = Total number of observations from all direction including calms.

TABLE E.—Rawin Data
Frequency wind oranges and mean scalar wind speeds
M. Matrouh Aerodrome 1500 U.T.—November 1956

Constant Pressure Surfaces mb.	Wind between specified ranges of direction 000—360													Calm	Total No. of Obs. N	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						
	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					
Surface	5	8	3	12	—	—	1	11	—	—	2	6	—	—	1	19	4	10	3	8	3	8	4	7	1	27	9
1000	5	8	2	10	—	—	—	—	1	7	1	9	1	7	1	20	—	—	2	18	5	9	3	11	0	21	10
850	3	7	1	8	—	—	—	—	1	5	2	8	—	—	1	29	1	15	5	14	4	13	3	12	0	21	12
700	1	17	—	—	—	—	—	—	—	—	—	—	1	9	6	24	7	26	3	13	3	7	0	21	20		
600	2	6	—	—	—	—	—	—	—	—	—	—	1	39	5	37	7	27	3	21	2	9	0	20	25		
500	1	8	—	—	—	—	—	—	—	—	—	—	2	62	10	38	2	32	2	22	1	24	0	18	36		
400	—	—	—	—	—	—	—	—	—	—	—	—	1	36	2	94	6	58	4	55	3	24	2	22	0	18	51
300	—	—	—	—	—	—	—	—	—	—	—	—	3	55	4	73	1	50	2	40	1	19	0	11	55		
200	—	—	—	—	—	—	—	—	—	—	—	—	1	96	4	95	1	100	1	59	—	—	0	7	91		
150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			

Notes: n1, n2, etc. = Number of occurrence of wind direction from the specified ranges.

(ff)m = Mean scalar wind speed (regardless of direction).

N = Total number of observation from all directions including calms.

TABLE F.—Miscellaneous Data

Cairo Aerodrome—December, 1956

Day	Time U.T.	Freezing level						Highest Wind Speed				Tropopause		
		Lowest			Highest			Height	PPPP	ddd	fff	Height	PPPP	TTT
		GGgg	Height	PPPP	TdTdTd	Height	PPPP	TdTdTd						
1	1400	3850	645	523	—	—	—	—	—	—	—	—	—	—
2	1400	4470	600	596	—	—	—	6400	556	230	041	—	—	—
3	1400	3700	656	568	—	—	—	11200	230	240	063	—	—	—
4	1345	3600	660	588	—	—	—	7400	375	250	073	16430	100	-69.0
5	1330	3400	674	526	—	—	—	6100	544	260	077	15650	110	-73.2
6	1500	3050	703	000	—	—	—	4700	576	220	073	—	—	—
7	1400	2530	750	605	—	—	—	7400	395	260	113	15050	122	-65.6
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	1330	1740	830	519	2700	736	—	6750	433	270	030	—	—	—
12	1400	2520	753	—	—	—	—	12700	—	250	086	—	—	—
13	1330	2150	788	900	—	—	—	11050	225	250	077	15870	106	-58.6
14	1400	1970	806	543	2500	755	—	12100	193	240	056	11600	206	-58.5
15	1500	2900	720	—	—	—	—	13500	154	240	058	13400	156	-55.1
16	1345	2610	744	—	—	—	—	12400	—	270	039	—	—	—
17	1400	2400	764	—	—	—	—	10600	—	260	045	—	—	—
18	1400	1910	807	525	—	—	—	11100	188	240	089	9310	290	-52.6
19	1345	1700	825	540	—	—	—	7700	365	210	070	10300	248	-53.0
20	1345	2270	767	524	—	—	—	10400	215	280	087	16400	096	-62.6
21	1345	2140	788	507	—	—	—	9150	300	280	111	—	—	—
22	1345	2560	750	—	—	—	—	10350	257	290	148	11150	228	-55.4
23	1345	3280	688	—	—	—	—	9800	—	270	116	—	—	—
24	1345	3180	694	064	—	—	—	8900	321	250	103	10900	238	-56.2
25	1345	2460	756	633	—	—	—	9100	308	250	077	10060	266	-50.3
26	1430	2520	750	—	—	—	—	9500	282	290	080	—	—	—
27	1345	3000	711	634	—	—	—	12300	188	260	120	10630	246	-56.6
28	1330	2840	724	—	—	—	—	11600	207	270	132	11360	216	-58.2
29	1330	2450	753	590	—	—	—	11800	200	250	140	11050	226	-54.3
30	1330	2500	752	—	—	—	—	9950	—	360	108	—	—	—
31	1345	2180	784	589	—	—	—	—	—	—	—	—	—	—
Highest	...	—	4470	600	596	—	—	10350	257	290	148	16430	100	-69.0
Lowest	...	—	1700	825	540	—	—	6750	433	270	030	9310	290	-52.6

Notes.—GGgg is the actual time of release of balloon to the nearest universal (time).

PPPP is the pressure in whole millibars (eg. 1027.7 mb. PPPP 1028).

TTT and TdTdTd are the temperature dew point in degrees calcsius (centigrade).

ddd is wind direction in whole degrees east of the true north. For calm winds enter 000 for ddd and fff.

fff is wind speed in knots. Heights are in geopotential metres above M.S.L.

Highest and Lowest values correspond to available data.

TABLE F.—Miscellaneous Data
M. Matruh Aerodrome—December 1956

Day	Time UT.	Freezing Level								Highest Wind Speed				Tropopause			Tropopause		
		Lowest				Highest													
		GGgg	Height	PPPP	TdTdTd	Height	PPPP	TdTdTd	Height	PPPP	ddd	fff	Height	PPPP	TTT	Height	PPPP	TTT	
1	1500	3840	0638	—	—	—	—	—	10700	0250	220	084	—	—	—	—	—	—	
2	1500	3700	0654	576	—	—	—	—	13100	0173	230	138	11400	0224	—56·0	—	—	—	
3	1500	3520	0666	540	—	—	—	—	13000	0174	230	108	13800	0152	—64·1	—	—	—	
4	1500	3490	0667	—	—	—	—	—	8700	0333	250	090	—	—	—	—	—	—	
5	1500	2120	0788	526	—	—	—	—	9200	0305	240	121	—	—	—	—	—	—	
6	1520	2260	0774	550	—	—	—	—	7800	0370	220	136	—	—	—	—	—	—	
7	1520	2540	0750	568	—	—	—	—	10100	—	250	110	—	—	—	—	—	—	
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
9	1800	1560	0843	506	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
10	1520	1400	0866	550	—	—	—	—	17800	—	290	088	9200	0298	—48·0	—	—	—	
11	1500	1500	0858	518	—	—	—	—	13700	—	280	075	—	—	—	—	—	—	
12	1540	2330	0770	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
13	1430	1910	0810	000	—	—	—	—	14400	—	270	070	—	—	—	—	—	—	
14	1430	1710	0830	504	—	—	—	—	2000	0803	340	011	—	—	—	—	—	—	
15	1400	2000	0804	522	—	—	—	—	15400	—	290	046	8500	0336	—43·9	—	—	—	
16	1400	2170	0783	528	—	—	—	—	5800	—	350	016	—	—	—	—	—	—	
17	1400	2110	0790	504	—	—	—	—	9600	—	250	043	—	—	—	—	—	—	
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
20	1525	2160	0780	535	—	—	—	—	—	—	—	—	8550	0325	—50·5	—	—	—	
21	1525	2130	0786	553	—	—	—	—	3000	0704	270	038	10400	0250	—52·1	—	—	—	
22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
23	1445	1680	0833	508	2160	0775	—	—	9100	0308	210	090	11300	0220	—56·5	—	—	—	
24	1410	2540	0746	598	—	—	—	—	9400	0294	240	108	10100	0264	—50·9	—	—	—	
25	1520	2370	0763	574	—	—	—	—	12700	0175	250	098	10600	0242	—52·7	16320	0098	—62·0	
26	1510	2670	0733	—	—	—	—	—	7700	0375	270	072	10600	0241	—57·3	—	—	—	
27	1405	2630	0740	580	—	—	—	—	7200	0404	260	056	9760	0273	—53·8	—	—	—	
28	1400	—	—	—	—	—	—	—	12150	0187	250	109	11180	0218	—59·2	14080	0138	—60·0	
29	1635	1730	0824	575	—	—	—	—	5800	0553	260	024	14170	0135	—60·8	15760	0104	—64·2	
30	1450	2040	0795	544	—	—	—	—	12700	0176	240	128	10450	0215	—59·0	16500	095	—66·4	
31	1430	1730	0826	—	—	—	—	—	12400	0185	280	084	12300	0186	—52·5	18620	068	—67·2	
Highest ...	—	3840	0638	—	—	—	—	—	13100	0173	230	138	14170	0135	—60·8	18620	068	—67·2	
Lowest ...	—	1400	0866	550	—	—	—	—	2000	0803	340	011	8500	0336	—43·9	14080	0138	—60·0	

Notes.—GGgg is the actual time of release of balloon to the nearest universal (time).

PPPP is the pressure in whole millibars (eg. 1027 m.b. PPPP 1028).

TTT and TdTdTd are the temperature and dew point in degrees celcius (centigrade).

ddd is wind direction in whole degrees east of the true north. For calm winds enter 000 for ddd and fff.

fff is wind speed in knots. Heights are in geopotential metres above M.S.L.

Highest and lowest values correspond to available data.

AGRO-METEOROLOGICAL DATA—GIZA

**TABLE G.—Air Temperature, Humidity, Rainfall, Sunshine Duration,
Wind Speed and Piche Evaporation**

December 1956

Max. temp. at 2 metres	... ... ... ... ... ... ... ...	31·0 °C on 1
Min. temp. at 2 metres	... ... ... ... ... ... ... ...	3·2 °C on 13
Min. temp. at 5 cms. over dry soil	... ... ... ... ... ... ... ...	—0·1 °C on 13
Min. temp. at 5 cms. over wet soil	... ... ... ... ... ... ... ...	1·0 °C on 12
Min. temp. at 5 cms. over grass	... ... ... ... ... ... ... ...	—2·0 °C on 13
Min. Relative Humidity at 2 metres	... ... ... ... ... ... ... ...	31% on 1
Max. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	16·1 mm. on 3
Min. Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	5·9 mm. on 10
Mean daily temp. at 2 metres	... ... ... ... ... ... ... ...	12·7 °C.
Mean day-time temp. at 2 metres	... ... ... ... ... ... ... ...	15 °C.
Mean night-time temp. at 2 metres	... ... ... ... ... ... ... ...	13 °C.
Mean Relative Humidity at 2 metres	... ... ... ... ... ... ... ...	84%
Mean Absolute Humidity at 2 metres	... ... ... ... ... ... ... ...	9·0 mm.
Mean day-time wind speed at 2 metres	... ... ... ... ... ... ... ...	2·5 m/sec.
Mean night-time wind speed at 2 metres	... ... ... ... ... ... ... ...	0·8 m/sec.
Mean Piche Evaporation at 120 cm.	... ... ... ... ... ... ... ...	4·0 cm ³ .
Total Rainfall	... ... ... ... ... ... ... ...	18·1 mm
Sunshine-Duration	... ... ... ... ... ... ... ...	191 hours. (60% out of Possible hours)

TABLE H.—Extreme Soil Temperature

Giza—December 1956

Extreme Soil Temp.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Depth in cm.	0·3		5		10		20		50		100		200	
Dry Soil ...	37·0	2·0	26·5	9·0	23·0	10·0	22·0	14·0	23·0	18·0	24·5	21·0	26·0	24·0
Wet Soil ...	26·5	4·5	22·0	7·0	20·0	9·5	19·0	11·0	19·0	15·0	20·0	17·0	21·5	20·0
Grass	23·0	6·5	19·5	9·5	19·0	11·0	19·5	13·0	19·5	15·5	20·5	18·0	—	—

TABLE I.—Amount of Solar + Sky Radiation in Cal. per cm².

Giza—December 1956

DATE															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
167	225	307	217	234	51	350	354	301	177	278	300	312	290	288	300
DATE															
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
285	256	308	61	321	268	264	229	225	334	333	259	176	308	316	

Monthly Total = 8191

TABLE J.—Duration in Hours of Temperature at 2 Metres Height Above Certain Levels in °C.

Giza—December 1956

NOTES

TABLE G.

(a) Air temperature and humidity are measured by ventilated dry and wet-bulb thermometers freely exposed in Louvered Stevenson Screen of the Egyptian type. Thermometer bulbs are at 210 cms. above ground (approximately 2m.) Maximum (mercury) and minimum (alcohol) thermometers are exposed in the same screen for the 2m. values. The minimum thermometers for the 5cm. heights are of the alcohol type freely exposed in the open air on wood supports.

The daily mean values of air temperatures are computed from the formula 1/4 (values at 0800+1400+2000+Minimum.)

The day-time mean air temperature is computed graphically from the record of a thermograph exposed in the screen, for the period sunrise to sunset. The night mean is similarly obtained for the period sunset to sunrise.

(b) In computing relative humidity Aspirations—Psychrometer tables of the Preussischen Meteorological Institut - 1927 are used, corrections for wind speed are applied. The mean relative humidity is computed from the formula 1/2 (values at 0800+1400-Local time).

(c) Absolute humidity is expressed by vapour pressure in units of mms. of mercury. The mean value is calculated from the formula 1/3 (values at 0800+1400+2000 L.T.).

(d) Rainfall is measured by ordinary rain gauge; the height of its rim is 40 cm. above ground. Tr. stands from trace (i.e amounts of rain less than 0.1 mm.).

(e) The mean wind speed by day is computed from the total run of air during the period 0800 to 1800 L.T., as indicated by the counter of an ordinary cup anemometer freely exposed at a height of 2 metres above ground.

The mean wind speed at night is similarly computed for the period 1800 to 0800 L.T.

(f) Evaporation is measured by a piche tube freely exposed in the open air; the evaporation disc has a diameter of 3cms. white in colour and at a height of 120 cms. above dry soil.

The Piche is read at 0800 L.T. daily in millimetres, the daily values given are for the 24 hours beginning at 0800 L.T.

TABLE H.

Soil temperature is measured by mercury thermometers, the values given are to be nearest $\frac{1}{2}$ °C.

TABLE I.

Instrument used for the measurement of solar and sky radiation (global radiation) is the (Rabitsch Actinograph).

Cairo, 20/6/1957.

M. F. TAHA
Director General
Meteorological Department