

CHARACTERISTICS SEVER STORM OVER EGYPT

Fathi Mohamed El-ashmawy

(Egyptian Meteorological Authority) P.O Box: 11784:Koubry El-quobba Cairo ,Egypt
e-mail address met1558@yahoo.co.uk

1- INTRODUCTION

Egypt located in north east of Africa Dust storm phenomenon over Egypt is considered to be most striking weather hazard ,dust ,sand are raised from the ground by strong southerly wind or south west coming from west Africa toward east parallel to the coast of the Mediterranean to depending on meteorological conditions &state of soil including the size of the particles .we discuss the meteorological conditions which causes dust &sand storm s over Egypt and general patterns of

2-Types of storms

There are three types of dust storms that affect over north Africa & middle east

A- Sahara depression (desert cyclone) formed in the lee side of Atlas Mount. Range during spring

* El-Tantawy (1969) showed that when north air cross the mount . Is initially, cyclonically carved the air flow on the leeside of the mountain , It be camas highly disturbed indicated the genesis growth of cyclonic circulation

B- winter type Caused by steeping of the pressure gradient with southerly winds in front of deep extra tropical cyclones invading or forming of the east mediate this type occurs mostly in winter.

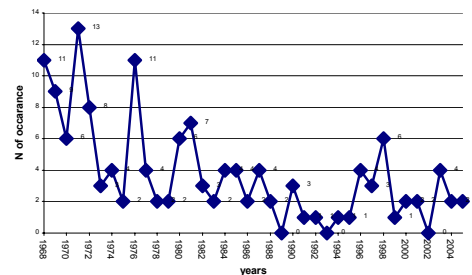
3- cold front type

Caused by steeping of the pressure gradient winds in cold air in the rear of cold fronts associated with deep extra tropical cyclones

** Since El-fandy (1940) to Zohdy (1985) passing by Adel (1970) ,El shahawi (1978) and many others show that the abnormal with desert depressions in north Africa have attracted the attention of many meteorologists .

In the present work , I started by describing the synoptic situation of the case of dust storm under consideration synoptic charts for the area is given with discussion of features & some parameters & and jet stream also investigated .

Number of occurrence of sandstorm over Cairo during the period 1968-2005



3-RESULTS AND CONCLUSIONS

After investigate the synoptic charts surface and upper air levels we can restricts the reasons of sand storms over North Africa and Egypt by the following

In winter cold and dry southerly winds associate deep depressions remains extends to upper levels about 1-2 days .In spring the area of north Africa affected with desert depressions more in March and April normal of occurrence of sand storm over Cairo about one per month and west of Egypt two per month

In spring dry and strong southwesterly winds tends to occur over a strong baroclinic zone extending from west to east parallel the southern Mediterranean coast . The features ,which specify the Khamsin weather associated with desert depressions El-Tantawy (1969) can be summarized as follows :-

- Pronounced rise of temperature (about 8 c above normal)
- Pronounced fall of dew point(about 6.5 c below normal)
- Strong southerly wind that cause rising sand and sand storm ,
- Active cloud formations ,rainfall and sometime thunderstorm associated with a cold frontal passage .

References

- 1- El fendi,M.G (1940)
The formation of depression of the type
Q.j.roy,MET ., no 286,vol.26,pp.323-336
- 2- El-Tantawy ,A.L(1964)The role of jet
stream in the development of desert
depression ‘, WMO ,Tech.Note .No .64
- 3-Fredric sanders ,johnr.Gyakum (1980)
Synoptic-dynamic climatology of the
Bom’
- 4- Zohdy (1971) ,1985
“ On the inter action between
extratropical disturbance over Africa
from sat.picture’ Met .res bul Cairo ,
vol.3,no.1,pp87-100
- 5-Dr Elshawy 1978