



**National Institute of
Meteorology, Tunisia**

Sand and dust storm in Tunisia

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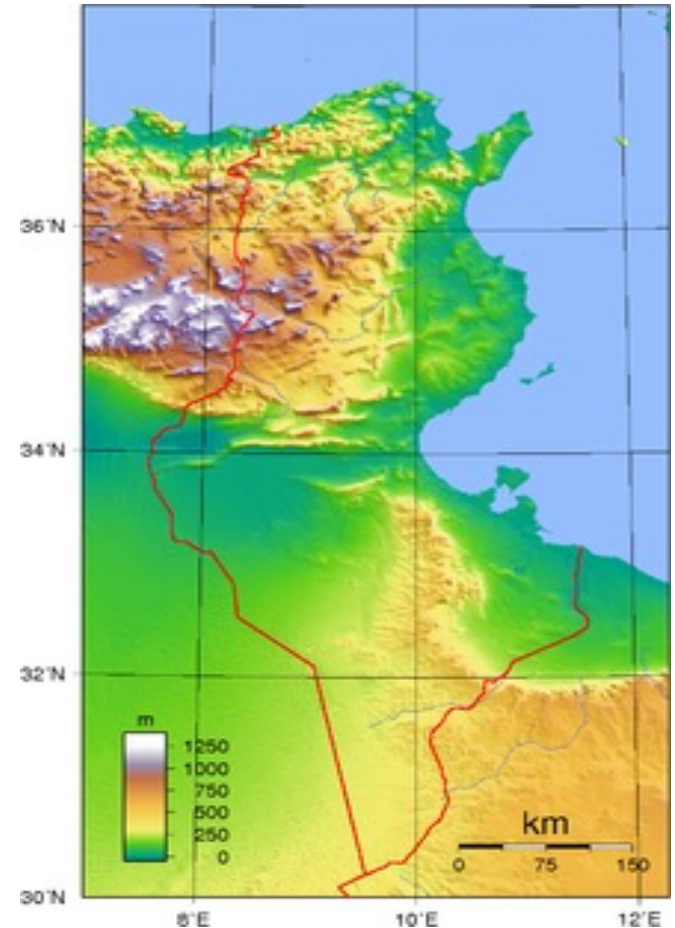
Outline

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Introduction

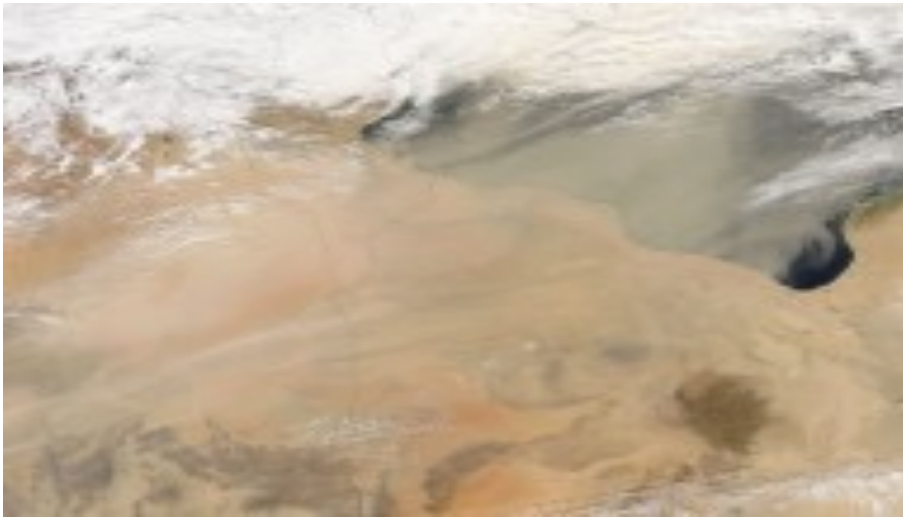
- The climate of Tunisia is divided into seven bioclimatic zones ;
- Difference between the north and the rest of the country;
- Various types of winds;





Most affected areas by the sandstorm and dust in Tunisia

- The south is the most affected region by sand storm and dust (persists many days);
- Sometimes, we observe sand or dust even in the center but it is not frequent.



**Dust Storm over Algeria
Tunisia and Libya**





Impacts on health

Reduced visibility : Problems in
air navigation and road traffic

Economic impacts
(Agriculture...)





Weather conditions causing sandstorms and dust in Tunisia



Synoptic Sand Storms



1- Low sea level pressure over the gulf of Gabes

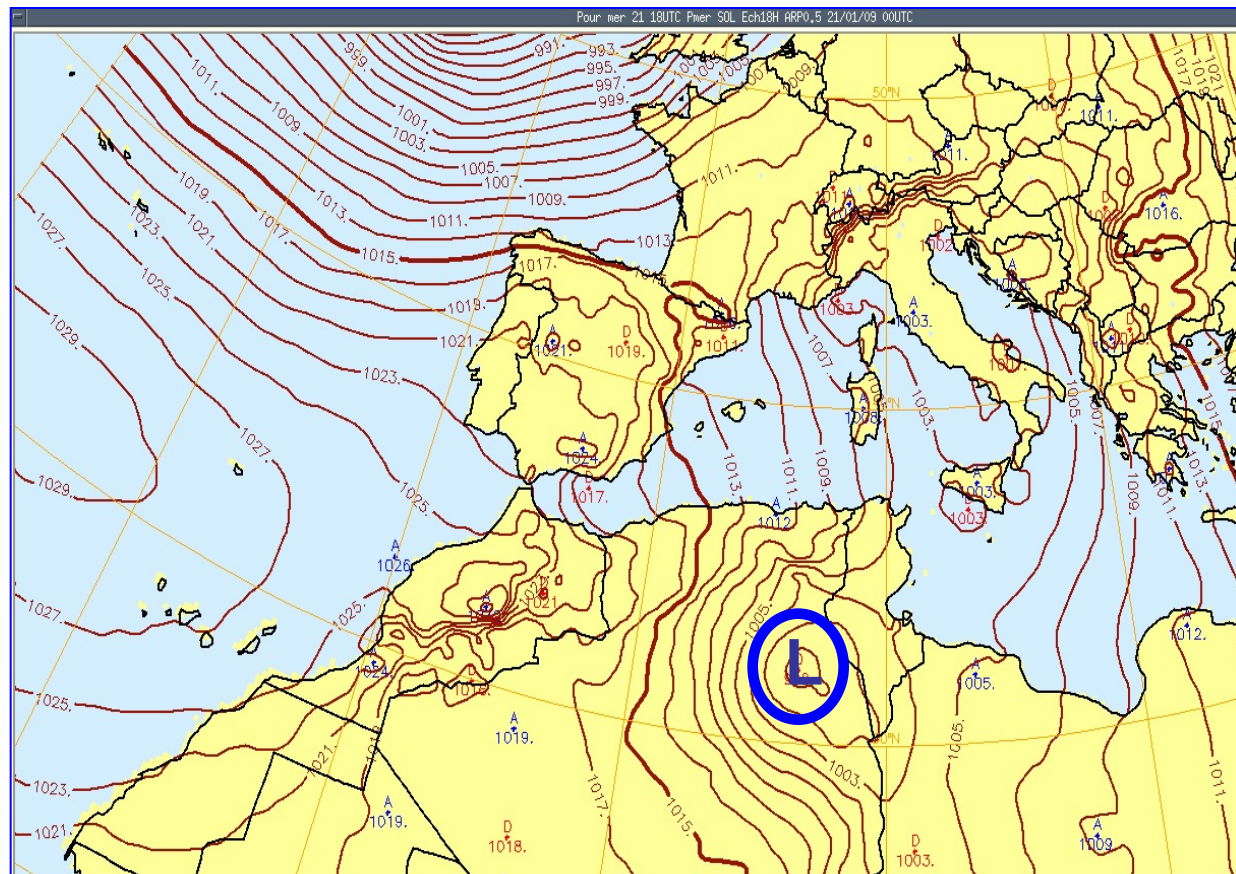
It generates a strong
Northwestern wind
with sand and dust
mainly in south east





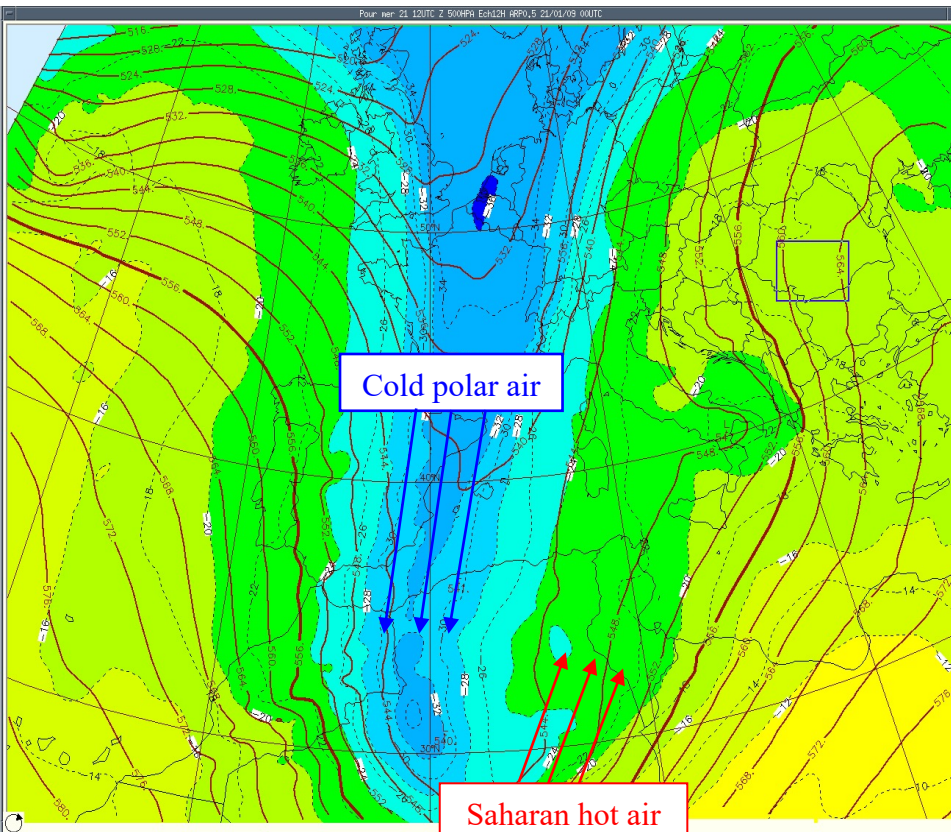
2- Low sea level pressure in the algerian sahara (extreme south east of algeria)

- Dry and hot wind (Shhili)
- The most frequent
- Sand and dust more genralised
- It persists more than to 2 days

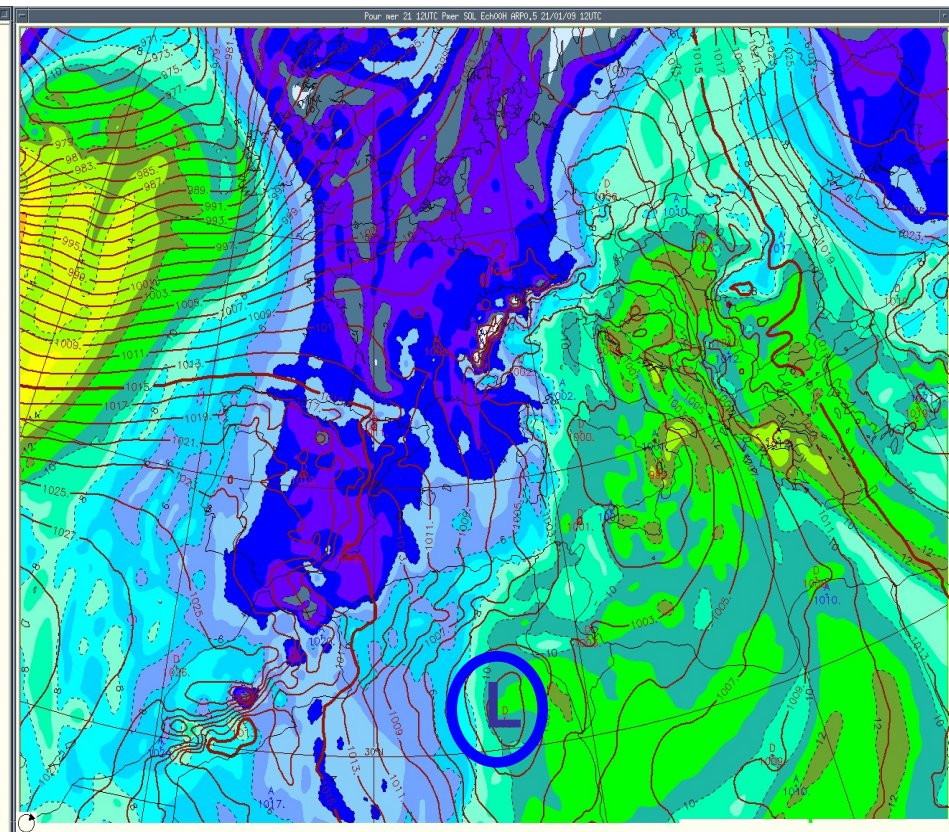




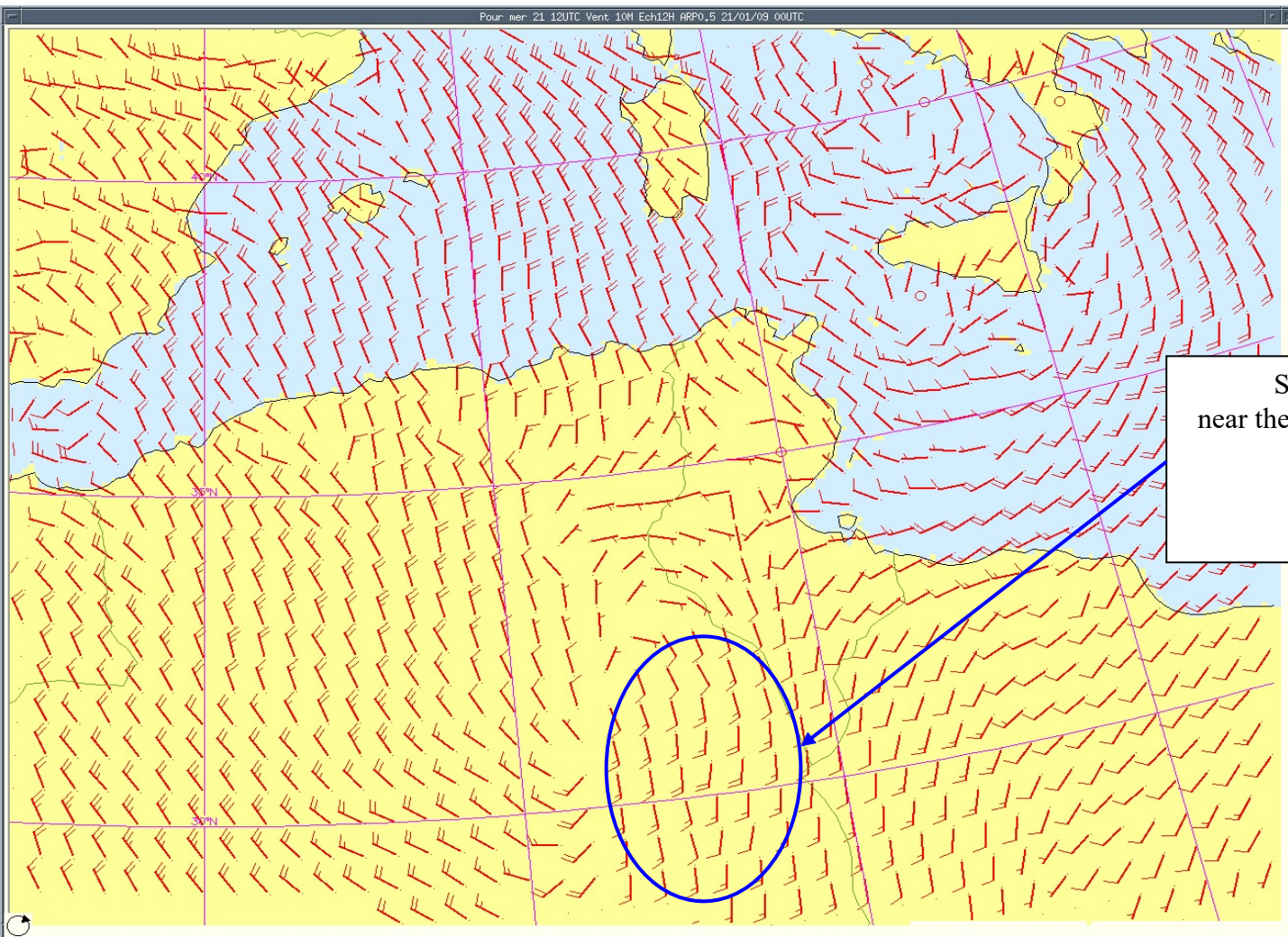
Example : Situation of January, 21st 2009



**Temperature and geopotential at
500 hPa (January the 21st at
12hTU)**



**Sea level pressure
(January the 21st at 12hTU)**



Southwestern strong wind
near the Tuniso-algerian borders and in
the algerian Sahara



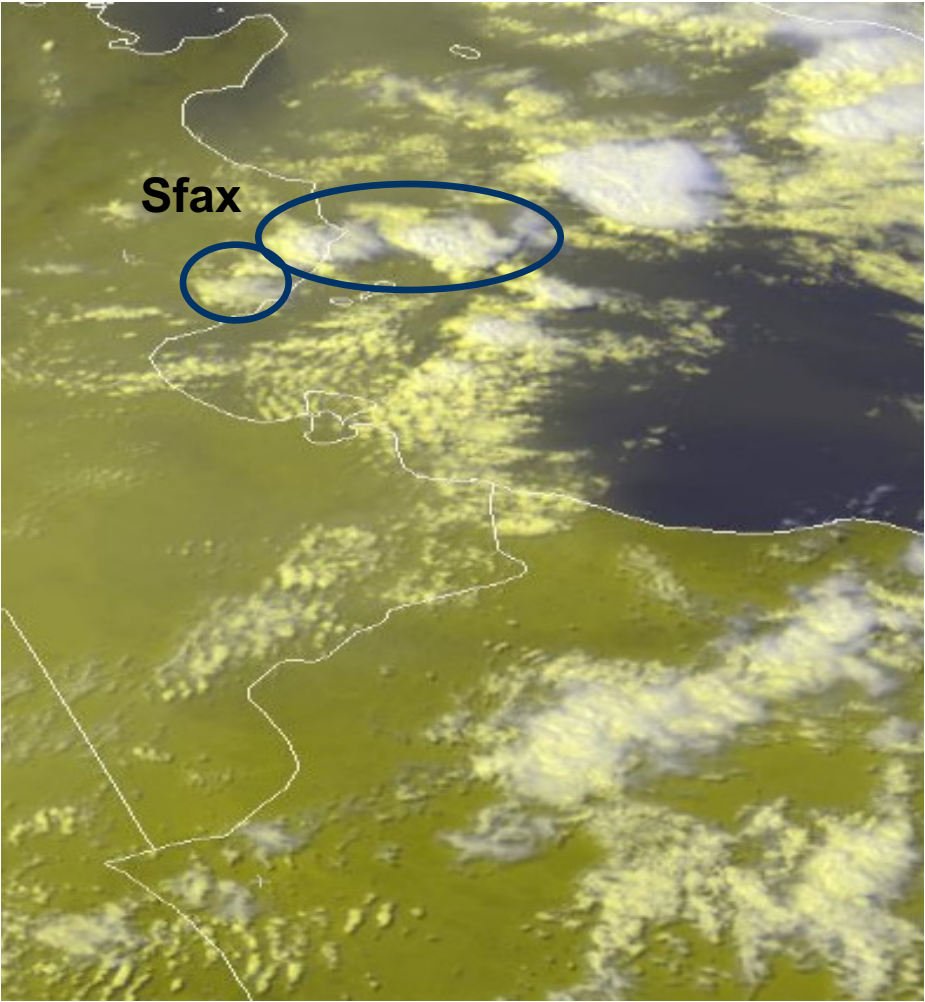
Mesoscale Sand Storms



- **Generated by thuderstorms**
 - **More frequent in fall and spring**



Example : Situation of Mai, 5th 2011 in Sfax





Picture at 14 pm (Mai 5th 2011)



Picture at 14 pm (Mai 5th 2011)



Conclusions

We have to improve sand and dust modeling.

Thank you