



Dust Forecast for United Arab Emirates

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Dubai Air Navigation Services

**Casablanca
17-20 Nov 2014**



Musandam

Ras Al Khaimah Airport

Sharjah Airport

Dubai Airport

Fujairah Airport

AL Maktoum Airport

Abu Dhabi Airport

Al Dhafra Airport

Al Ain Airport

Al Buraym Al Batinah North

Al Batinah South

Muscat

United Arab Emirates

Qatar

| MONTH | OMAA | OMDB | OMFJ |
|-------|------|------|------|
| JAN | 1 | 1 | 1 |
| FEB | 5 | 2 | 2 |
| MAR | 5 | 3 | 1 |
| APR | 3 | - | 1 |
| MAY | 2 | - | - |
| JUN | - | - | 1 |
| JUL | - | 4 | - |
| AUG | - | 2 | - |
| SEP | 2 | 1 | - |
| OCT | 1 | 1 | - |
| NOV | 1 | 1 | 1 |
| DEC | - | 1 | - |
| TOTAL | 20 | 16 | 7 |

Number of sandstorm for three airports from 2000 to 2010

Types of Dust in UAE:

Advection dust.

Local dust.

Advection and local dust.

Tools used for forecasting dust:

WRF models.

satellite images (MSG dust).

Ground observation.

Recently Barcelona Dust Forecast Center (dust.aemet.es).

Factors we use to forecast dust:

Wind speed (15-20KT).

Wind direction.

Instability.

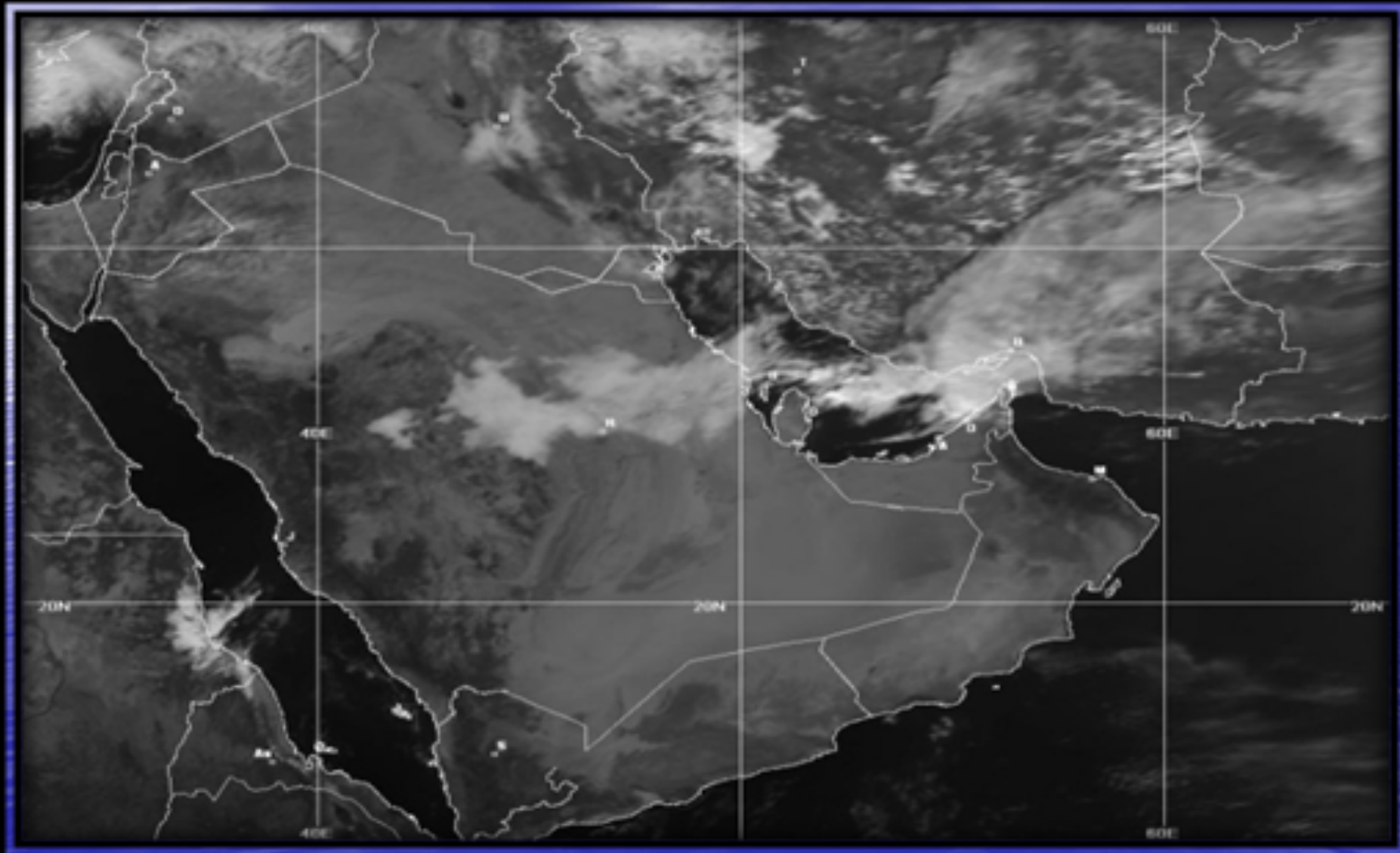
Type of Season winter or summer.

Amount of rain (precipitation).

Regional weather.

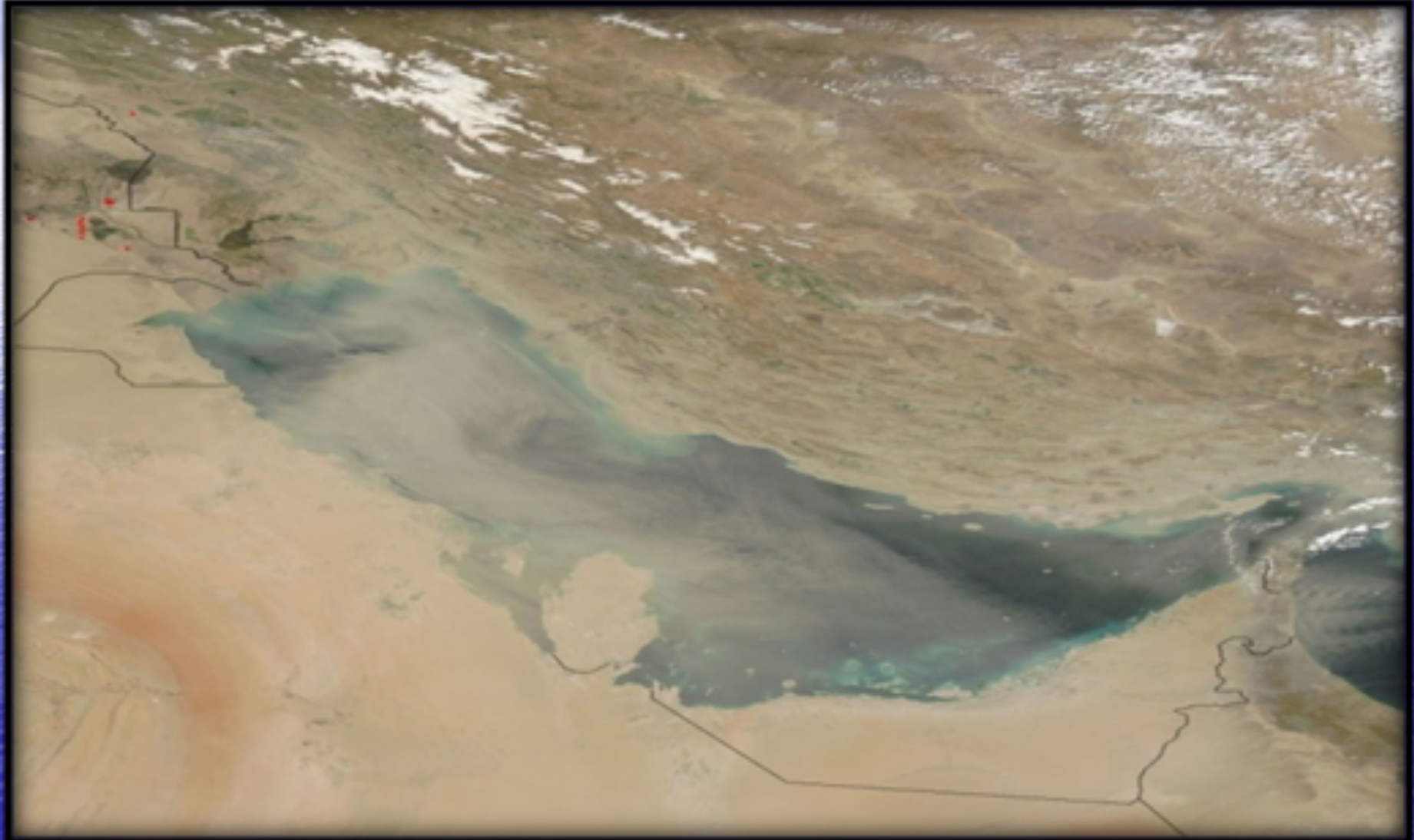
Sources of dust over UAE

Squall Line

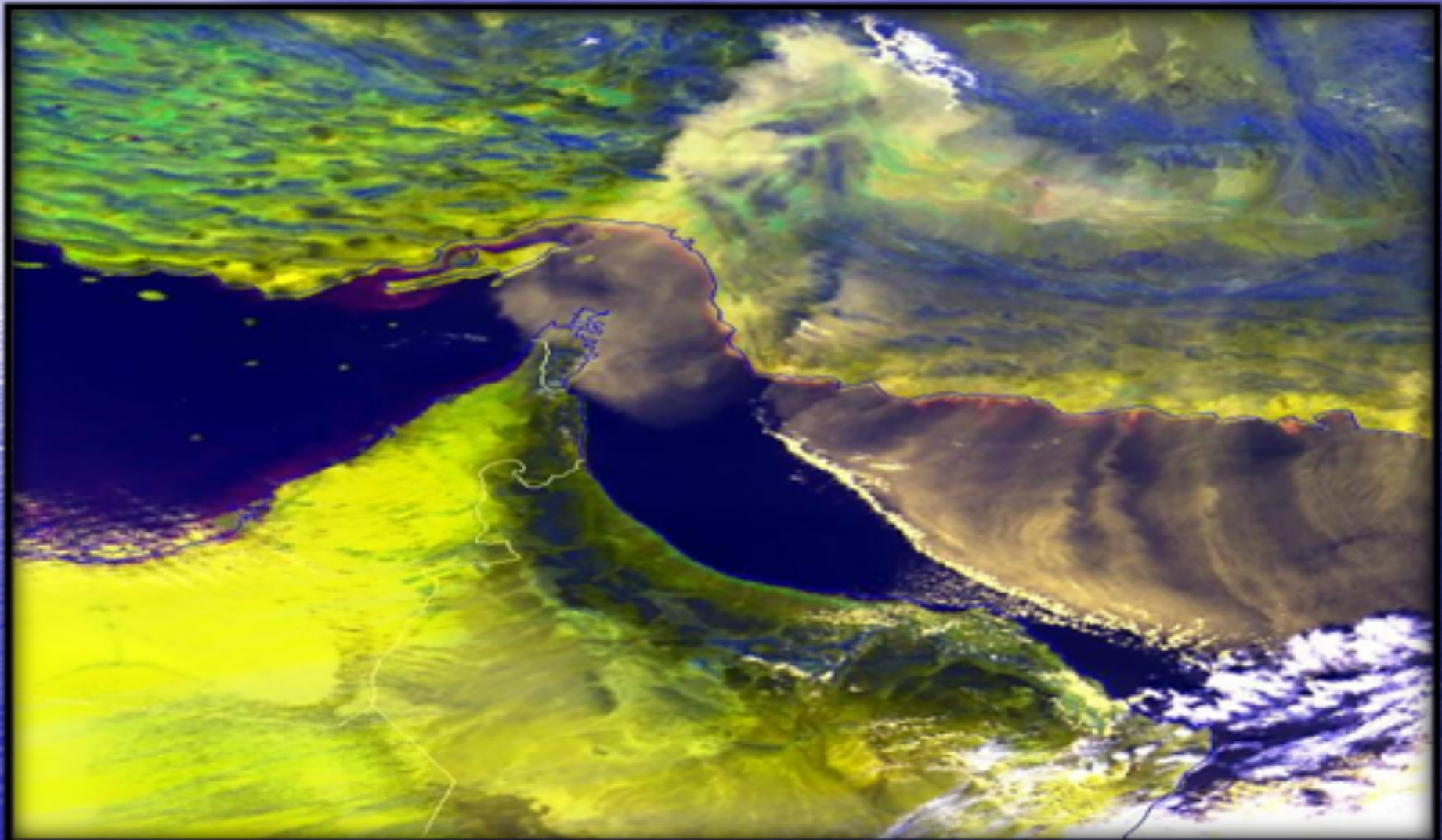


Sources of dust over UAE

Northwesterly "Shamal"

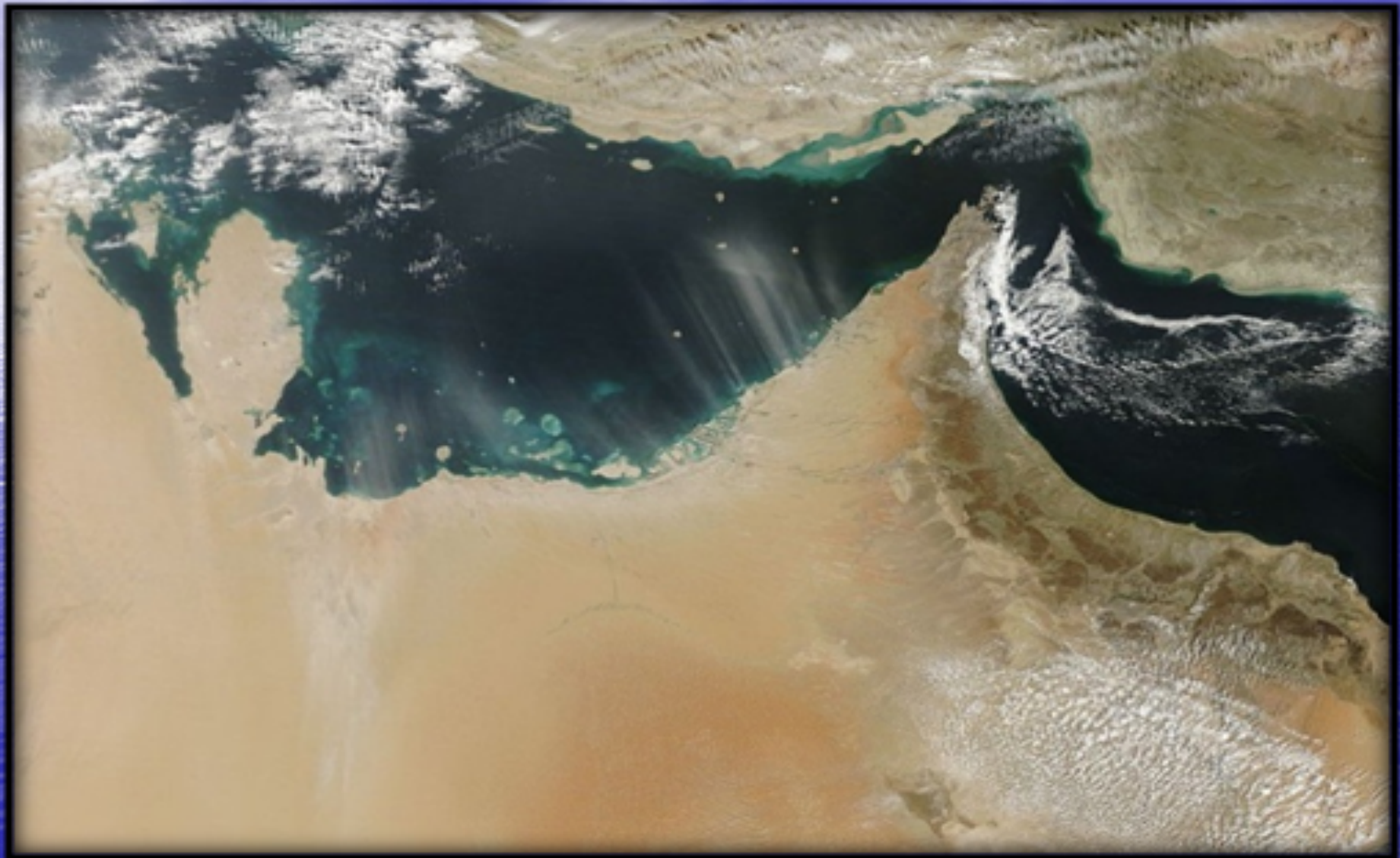


Sources of dust over UAE Northeast or (Nashi)

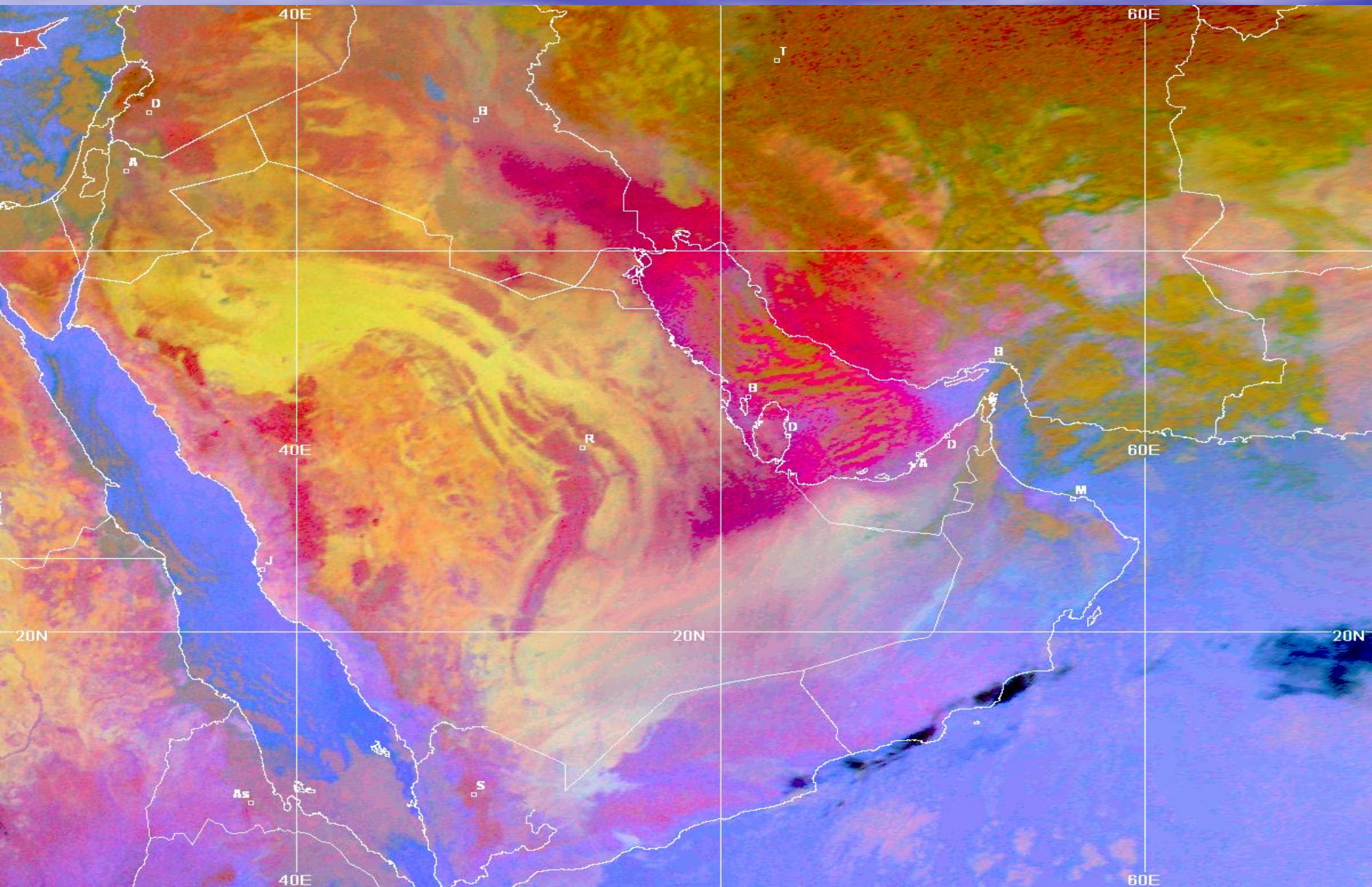


Sources of dust over UAE

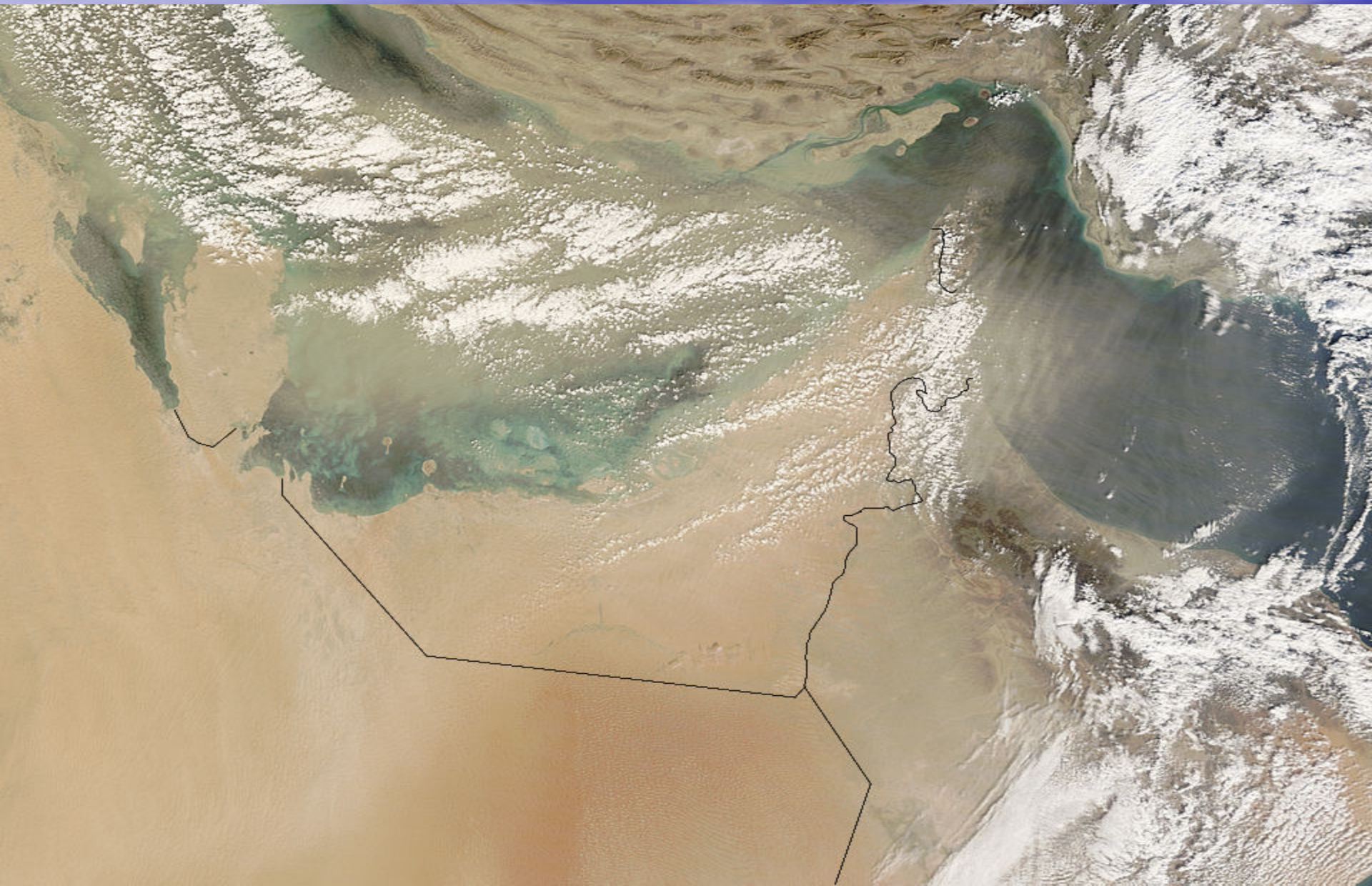
Southerly wind



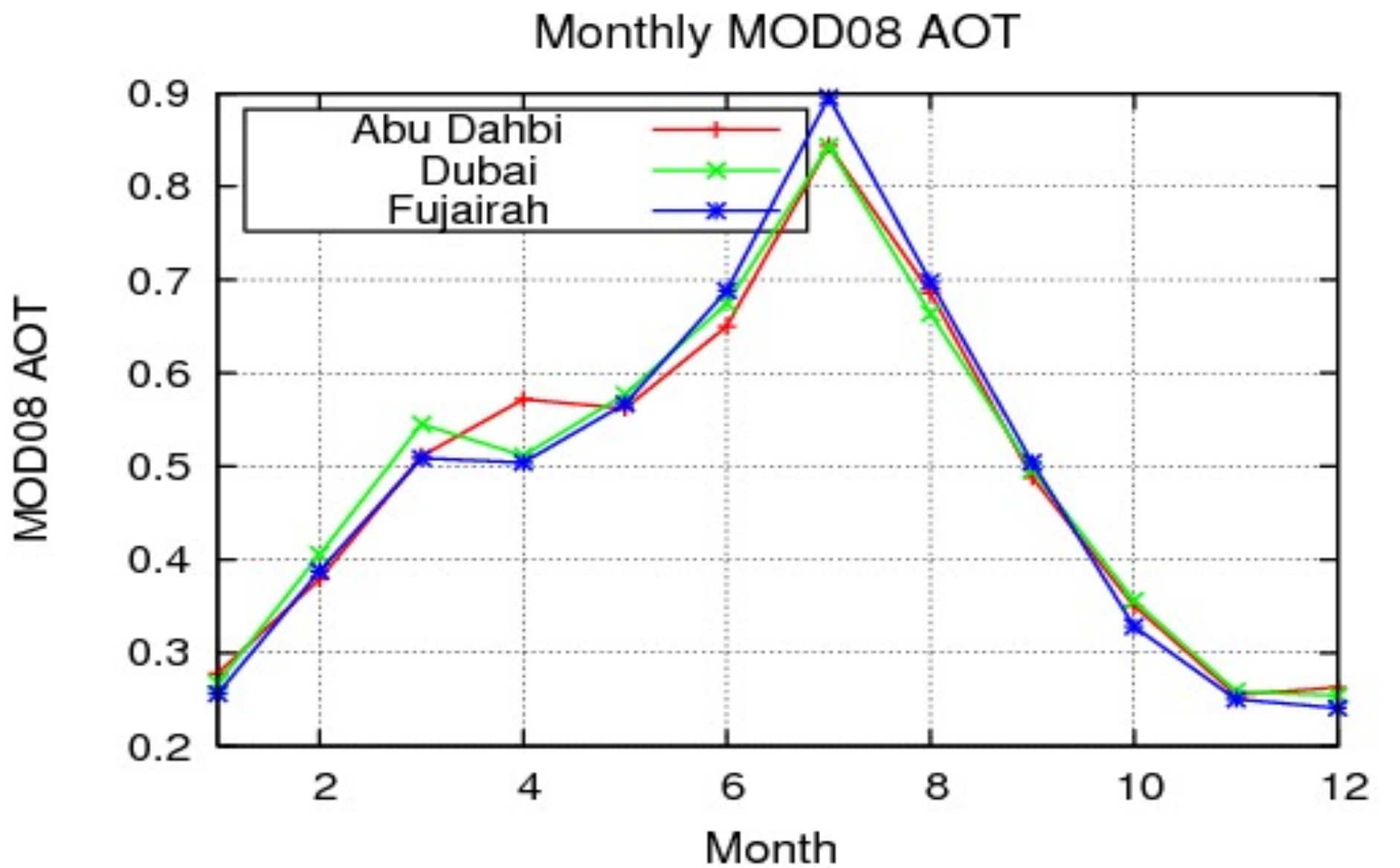
01-02-2008 AT 04:00Z



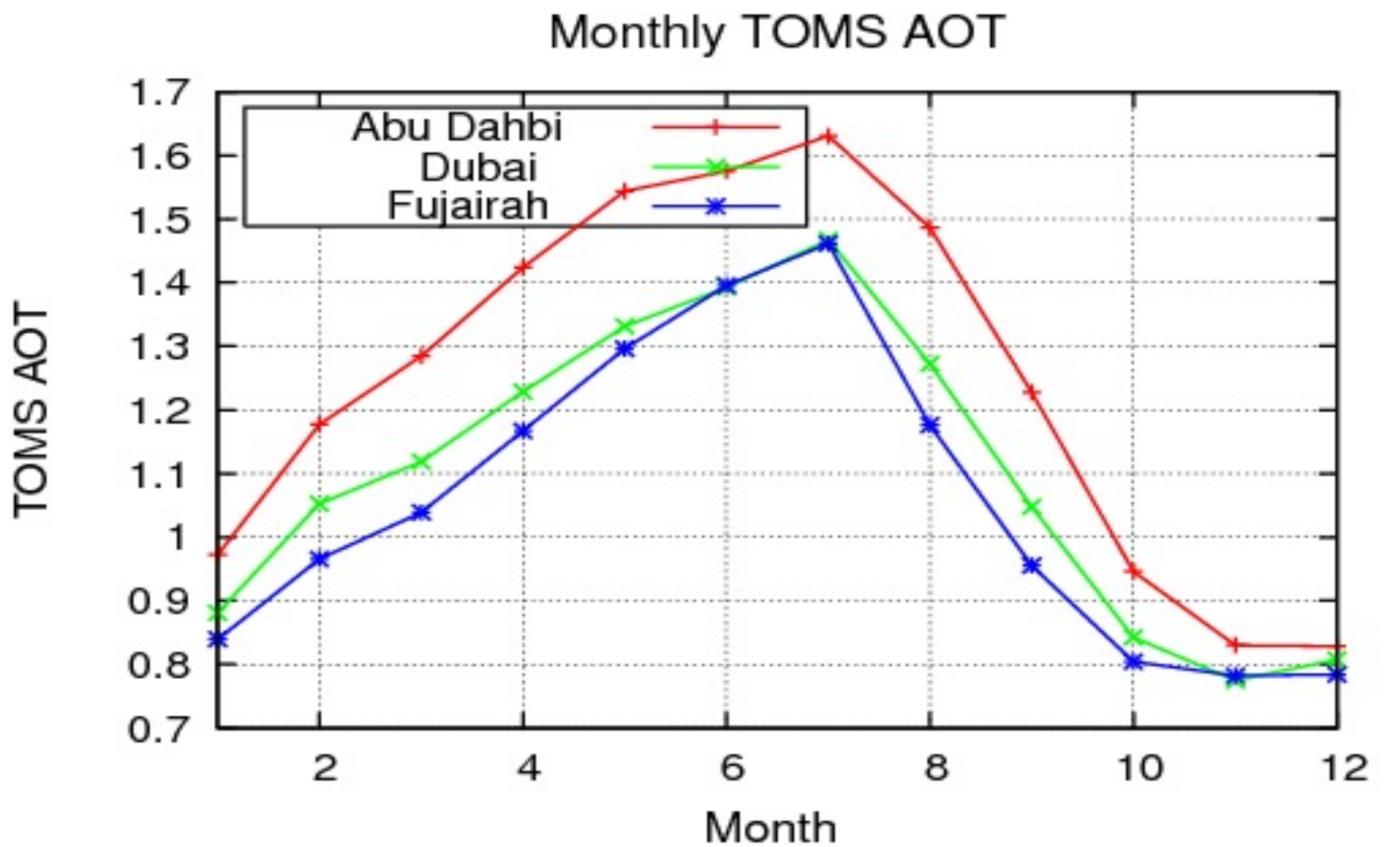
01-02-2008 AT 07:16Z



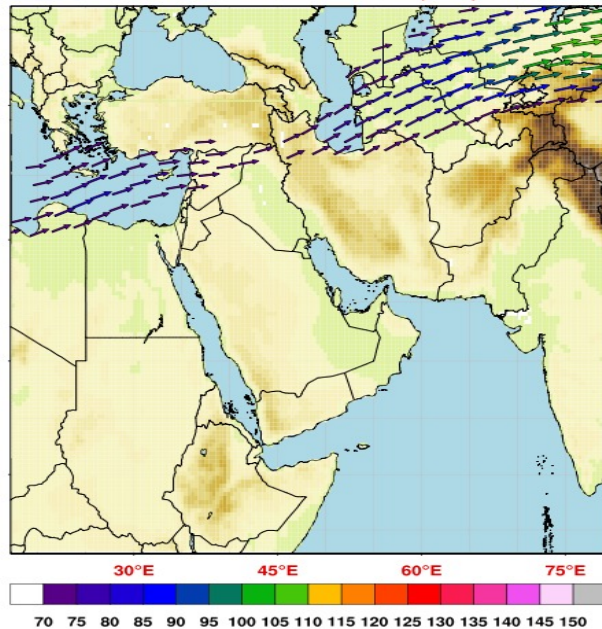
Monthly MOD08 for Abu Dhabi, Dubai and Fujairah



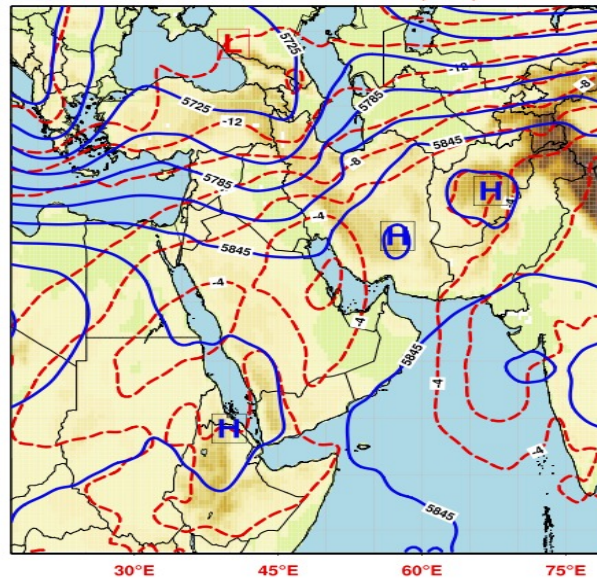
Monthly TOMS for Abu Dhabi, Dubai and Fujairah



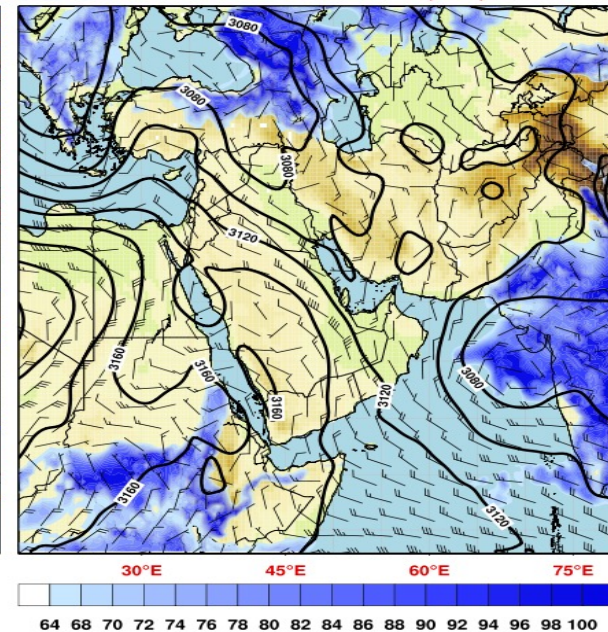
250 hPa Wind-Jet Stream Valid for: Tuesday 11 Jun, 2013 at: 12UTC
Based on: 06/10/2013 (12:00)



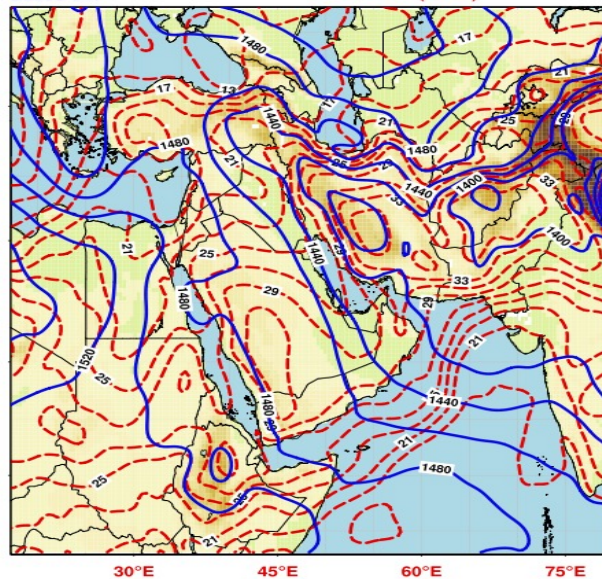
500 hPa GEOP/TEMP Valid for: Tuesday 11 Jun, 2013 at: 12UTC
Based on: 06/10/2013 (12:00)



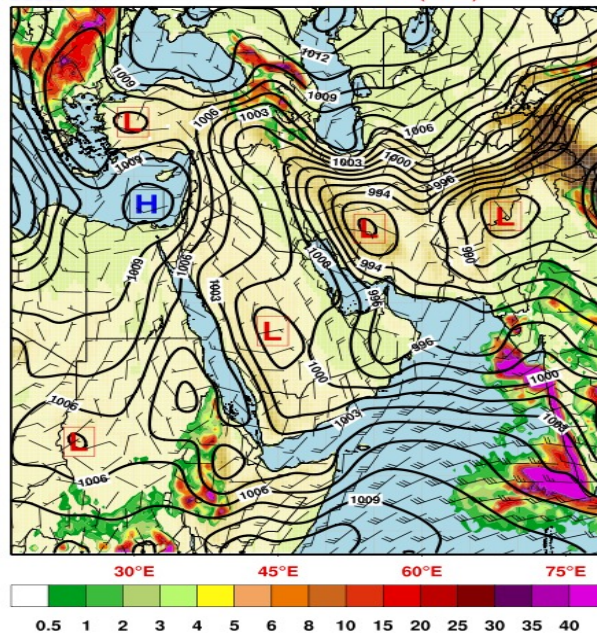
700 hPa GEOP/WIND/RH Valid for: Tuesday 11 Jun, 2013 at: 12UTC
Based on: 06/10/2013 (12:00)



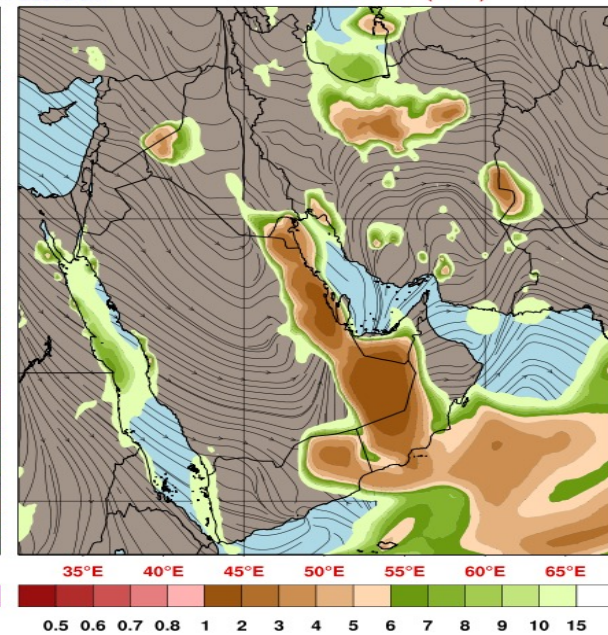
850 hPa GEOP/TEMP Valid for: Tuesday 11 Jun, 2013 at: 12UTC
Based on: 06/10/2013 (12:00)



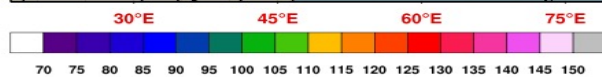
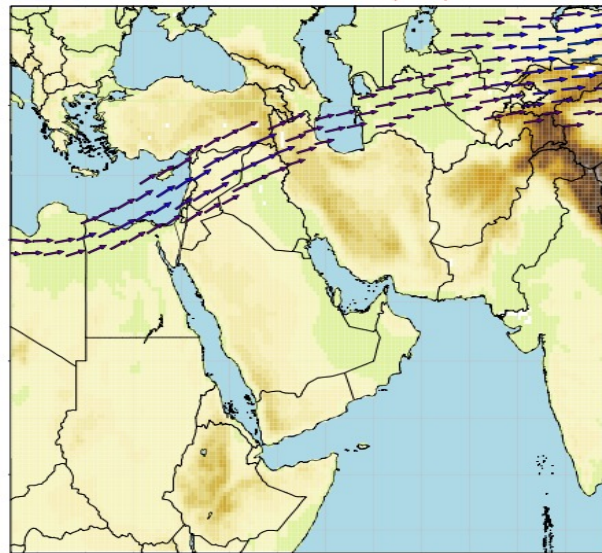
MSLP/Wind/24h Rain Valid for: Tuesday 11 Jun, 2013 at: 12UTC
Based on: 06/10/2013 (12:00)



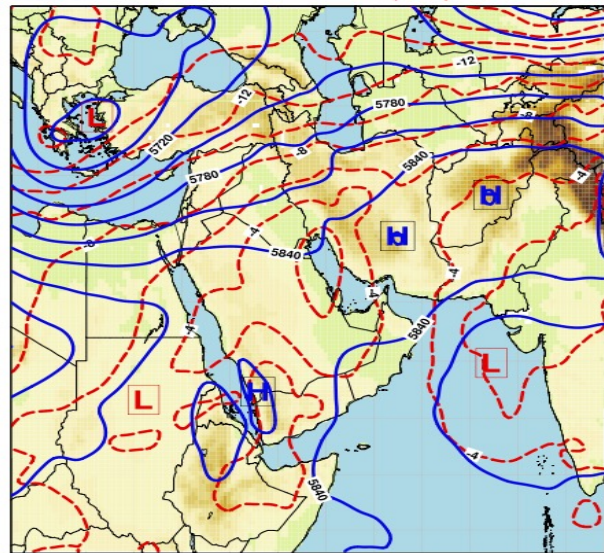
Visibility due to dust Valid for: Tuesday 11 Jun, 2013 at: 12UTC
Based on: 06/10/2013 (12:00)



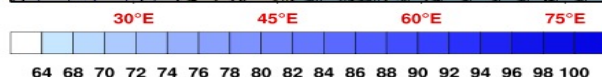
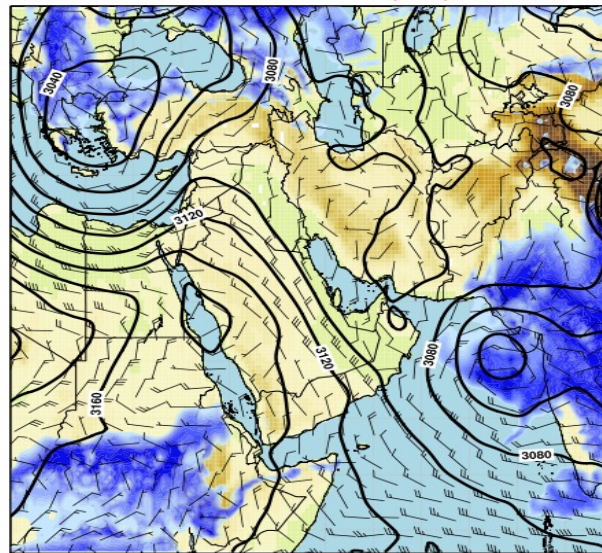
250 hPa Wind-Jet Stream Valid for: Wednesday 12 Jun, 2013 at: 12UTC
Based on: 06/11/2013 (00:00)



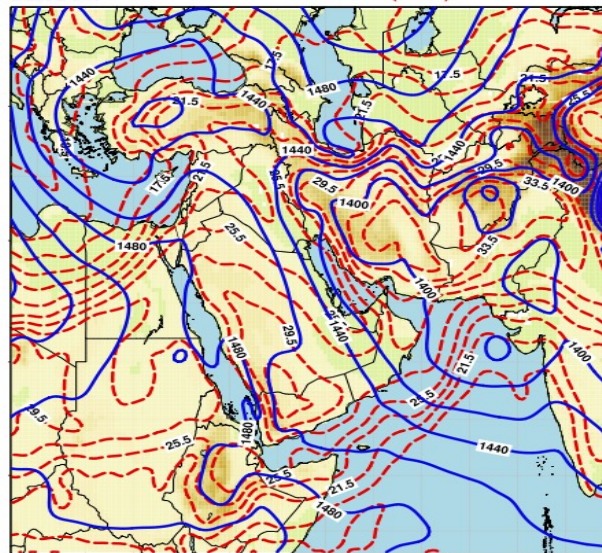
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Based on: 06/11/2013 (00:00)



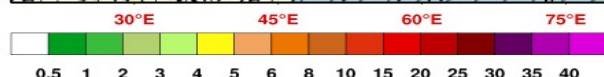
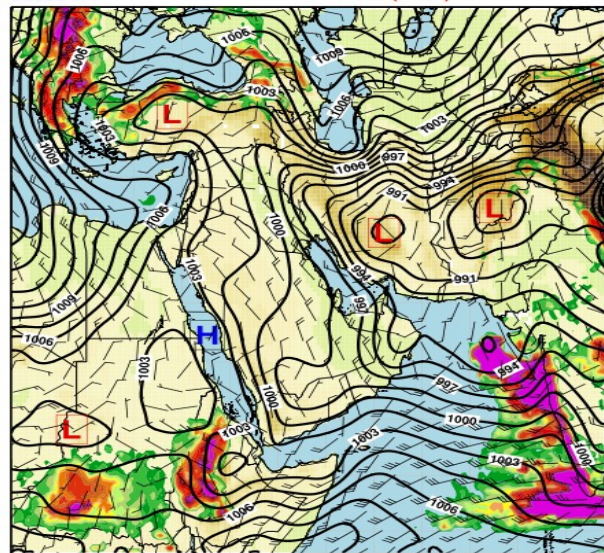
700 hPa GEOP/WIND/RH Valid for: Wednesday 12 Jun, 2013 at: 12UTC
Based on: 06/11/2013 (00:00)



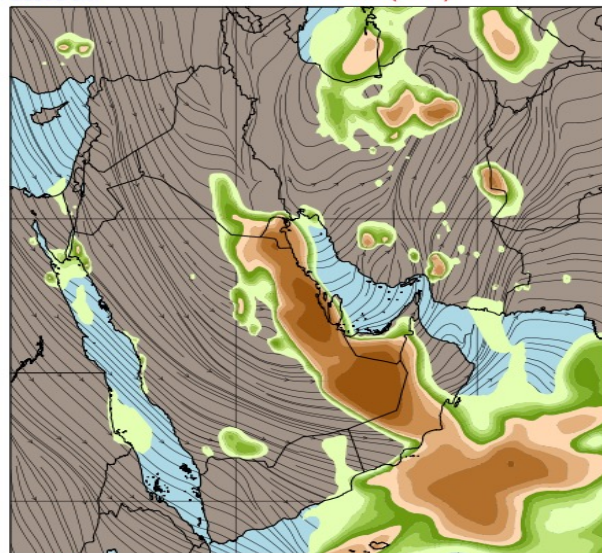
850 hPa GEOP/TEMP Valid for: Wednesday 12 Jun, 2013 at: 12UTC
Based on: 06/11/2013 (00:00)



MSLP/Wind/24h Rain Valid for: Wednesday 12 Jun, 2013 at: 12UTC
Based on: 06/11/2013 (00:00)



Visibility due to dust Valid for: Wednesday 12 Jun, 2013 at: 12UTC
Based on: 06/11/2013 (00:00)



The background is a solid blue gradient. On the left side, there is a bright, glowing sun that creates a lens flare effect across the middle of the image. The top of the image features wispy, white clouds against a slightly darker blue sky.

Thank You