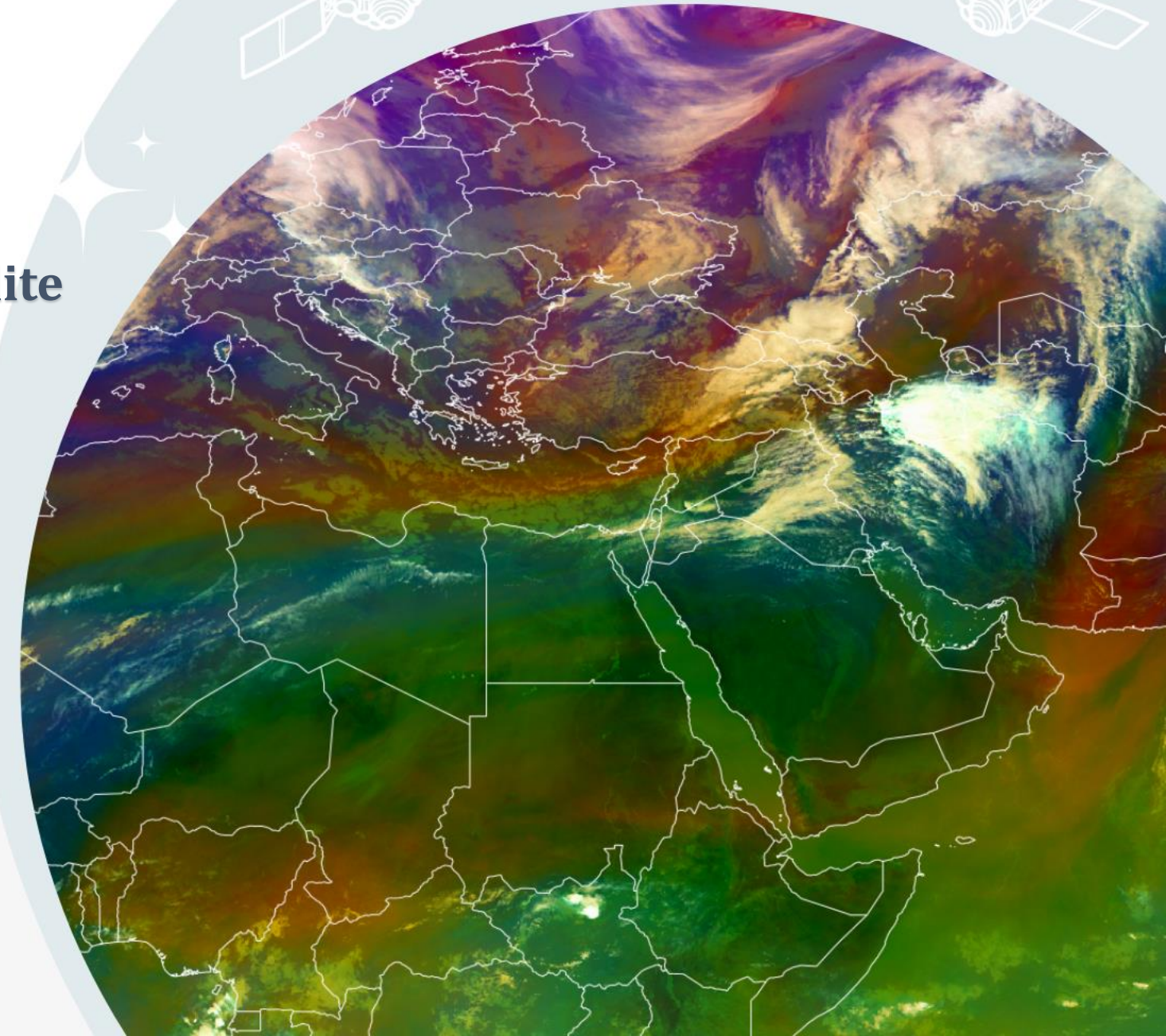
RGB Practical
Meteosat, MODES and Sentinel Satellite



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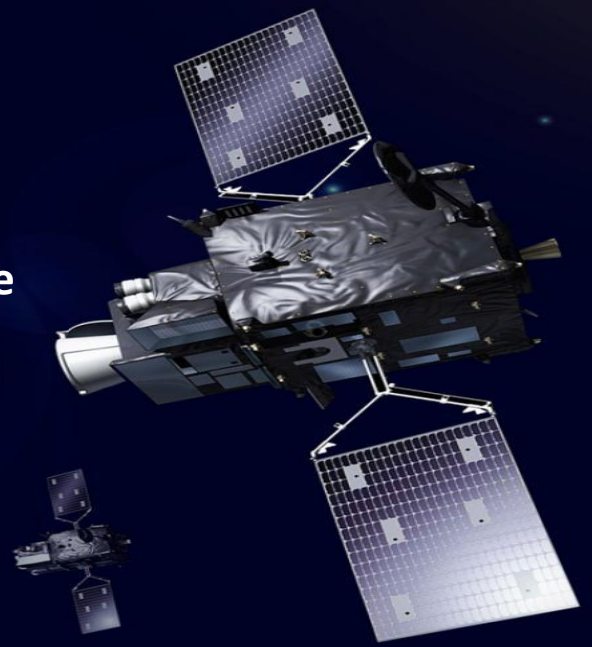
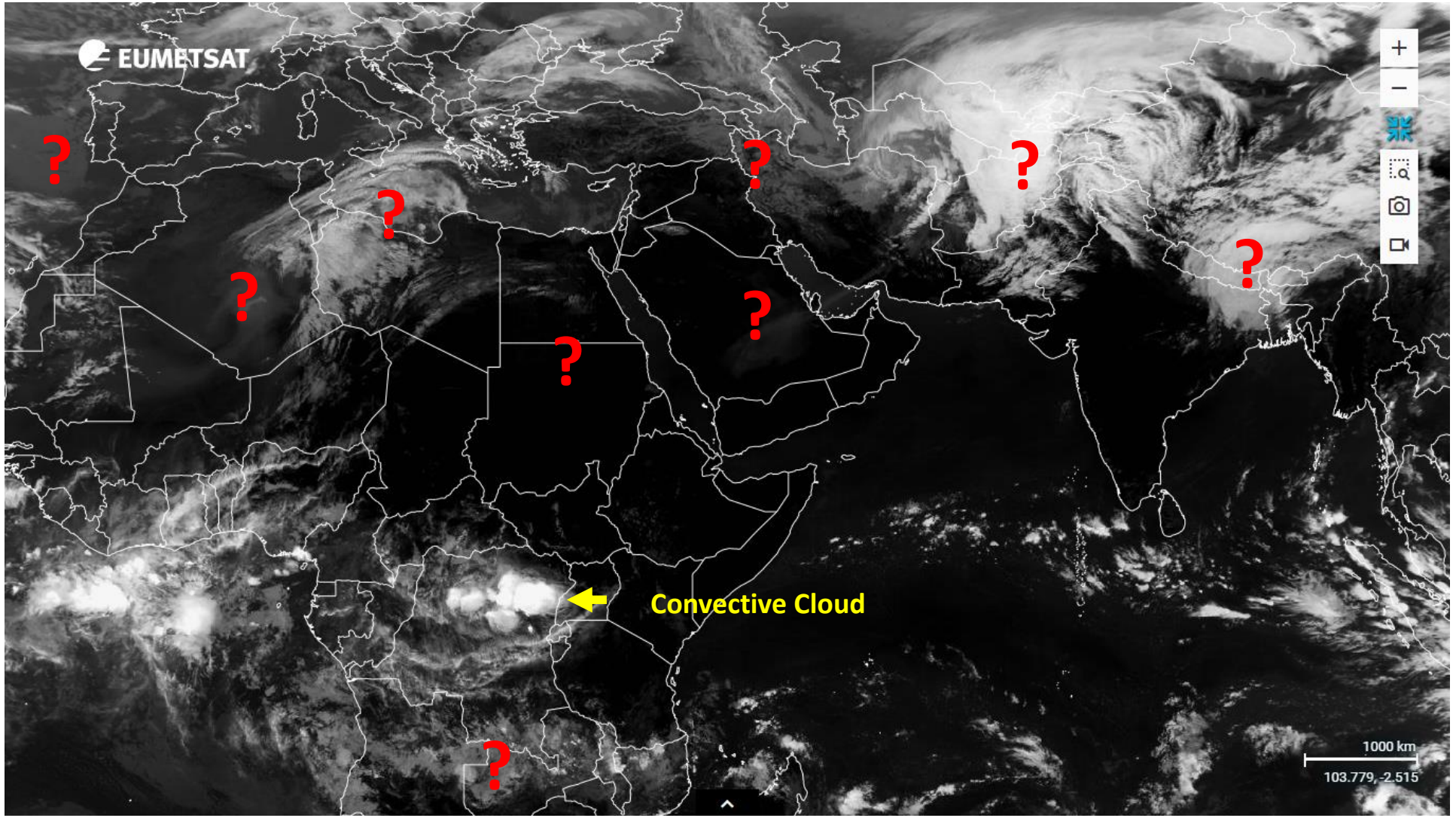
Contents :

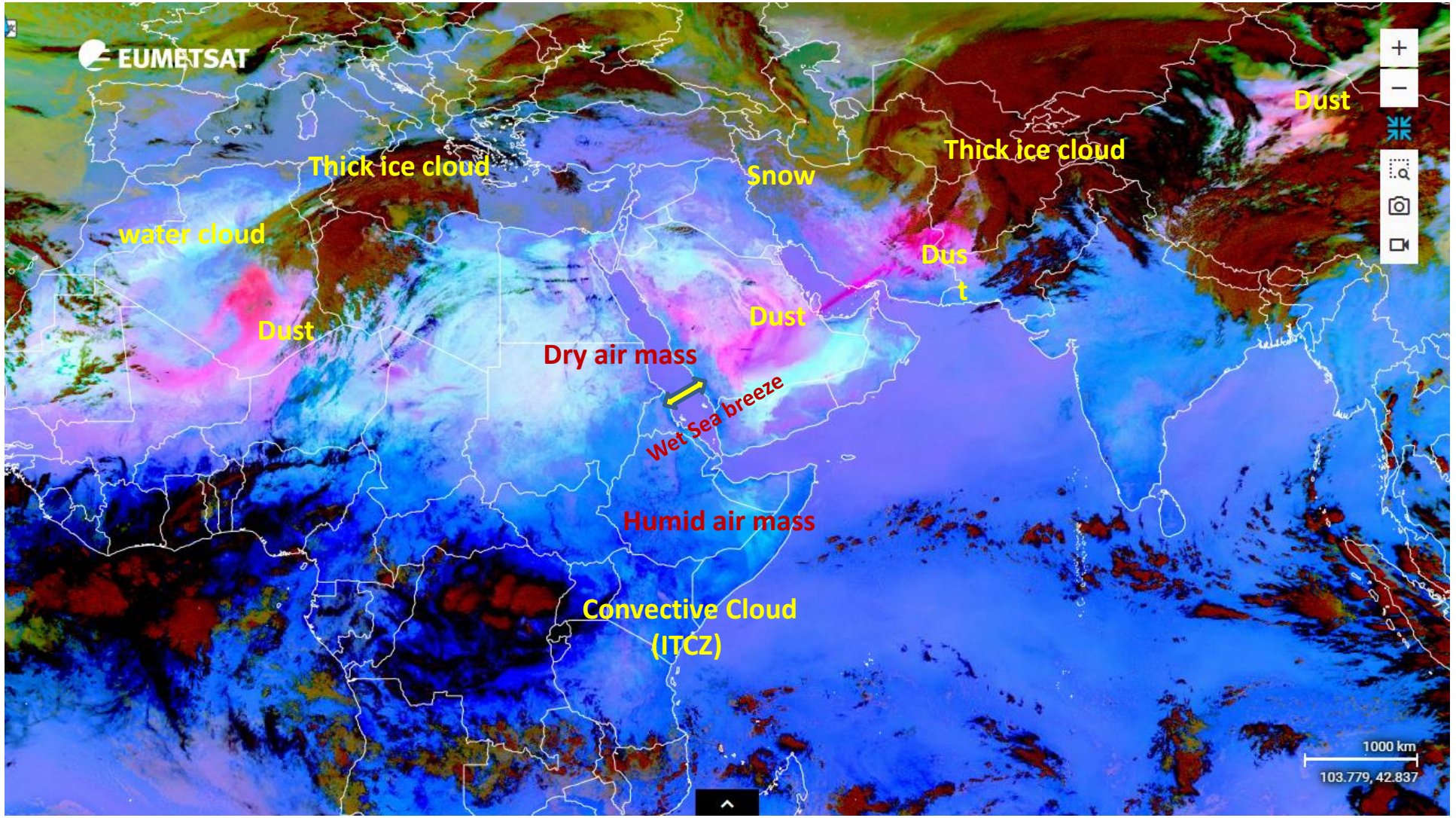
- Some Important points to be aware about when you look at satellite RGB images
- Short case study to look at different spatial resolution images from MODES (Terra and Aqua) and Sentinel satellites



One channel 10.8 IR

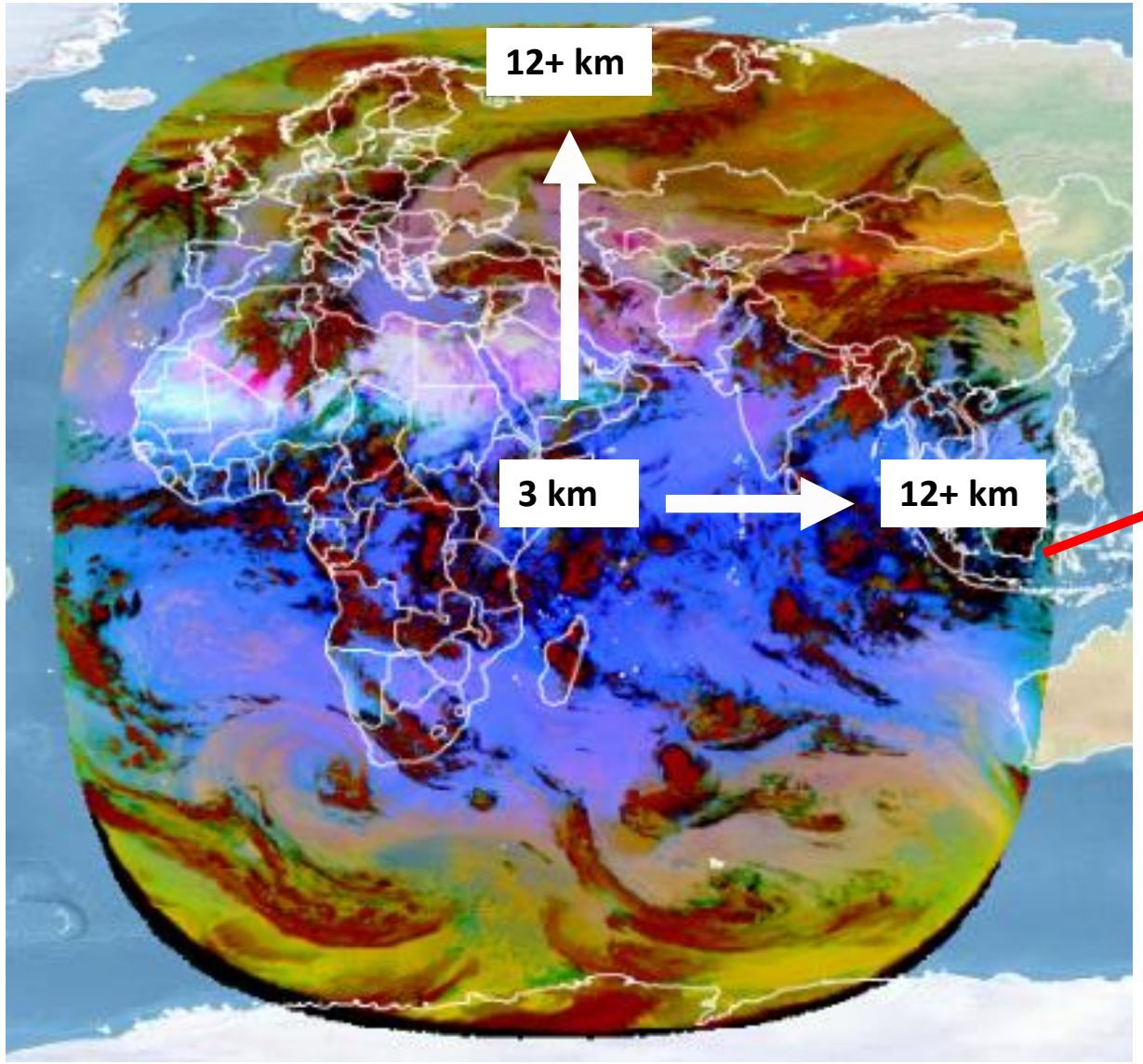


Dust RGB

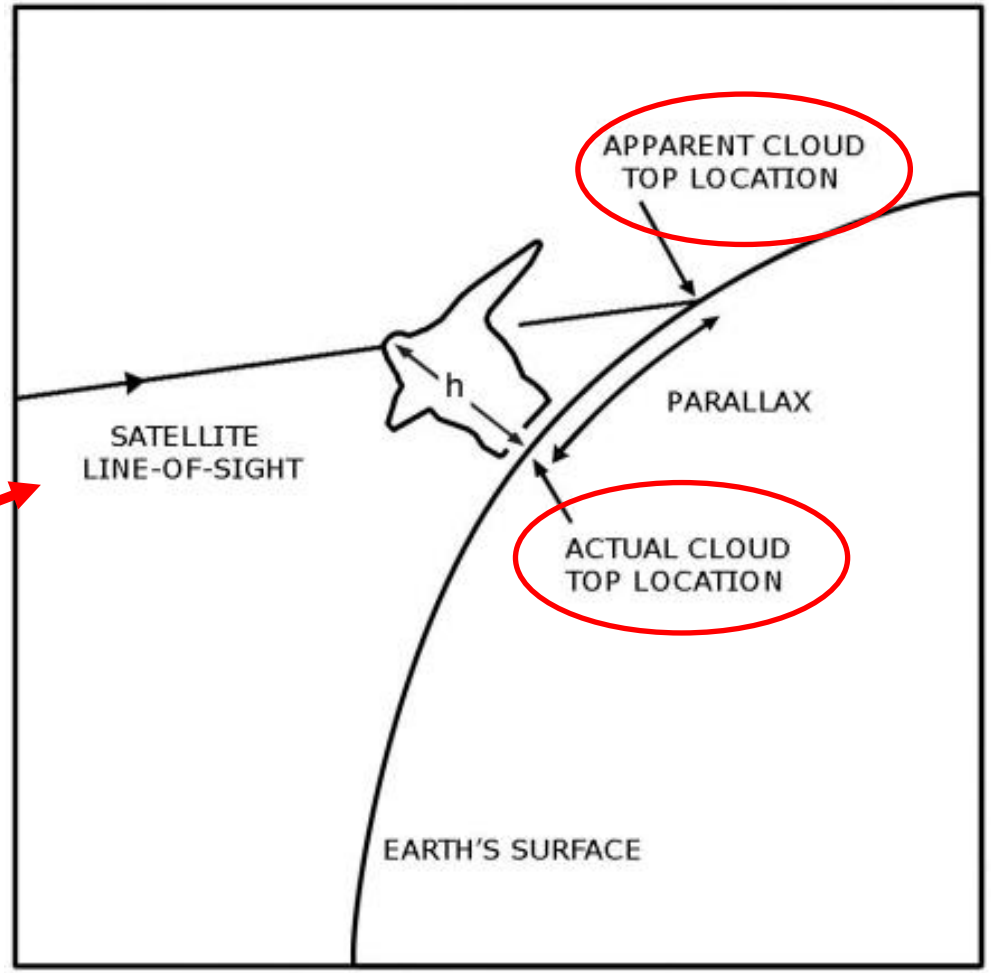

EUMETSAT
Thick ice cloud
Snow
Thick ice cloud
Dust
water cloud
Dus
t
Dust
Dust
Dry air mass
Wet Sea breeze
Humid air mass
Convective Cloud
(ITCZ)
1000 km
103.779, 42.837

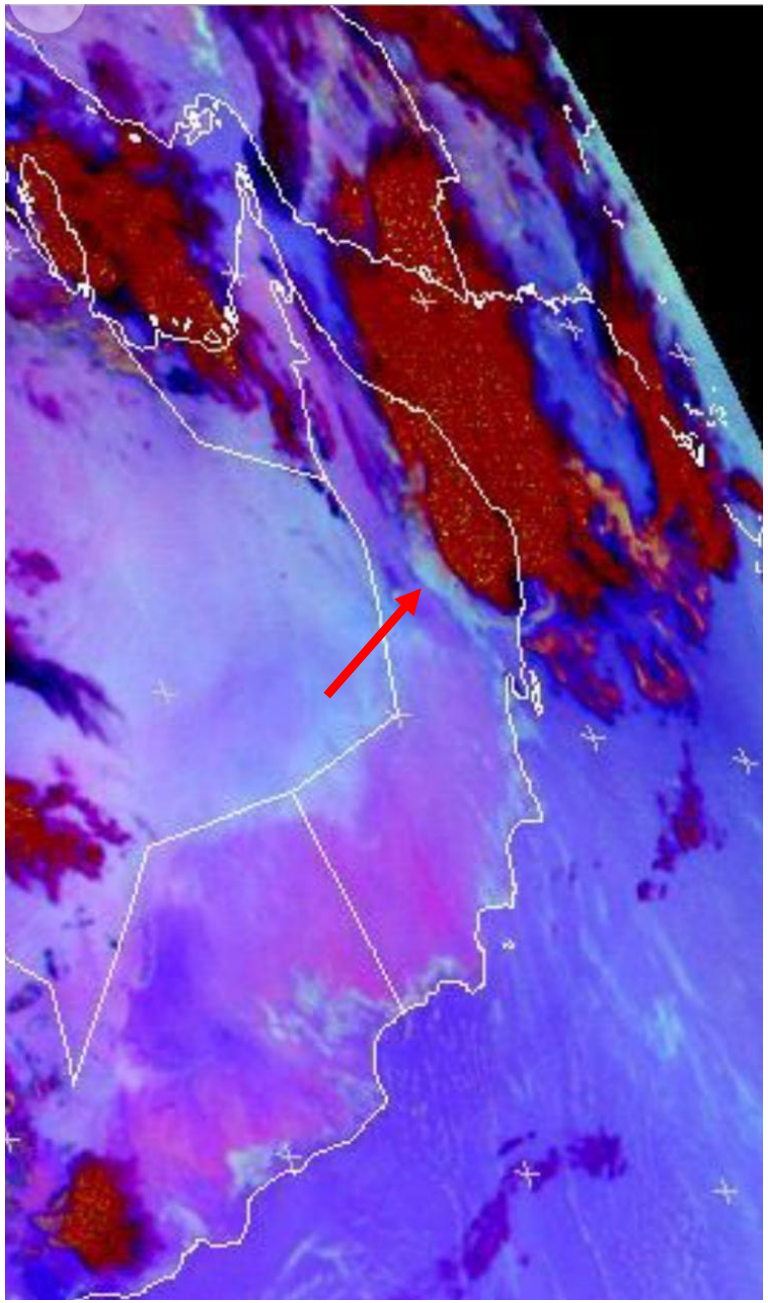
Some Important points to be aware about when you look at satellite images and RGBs

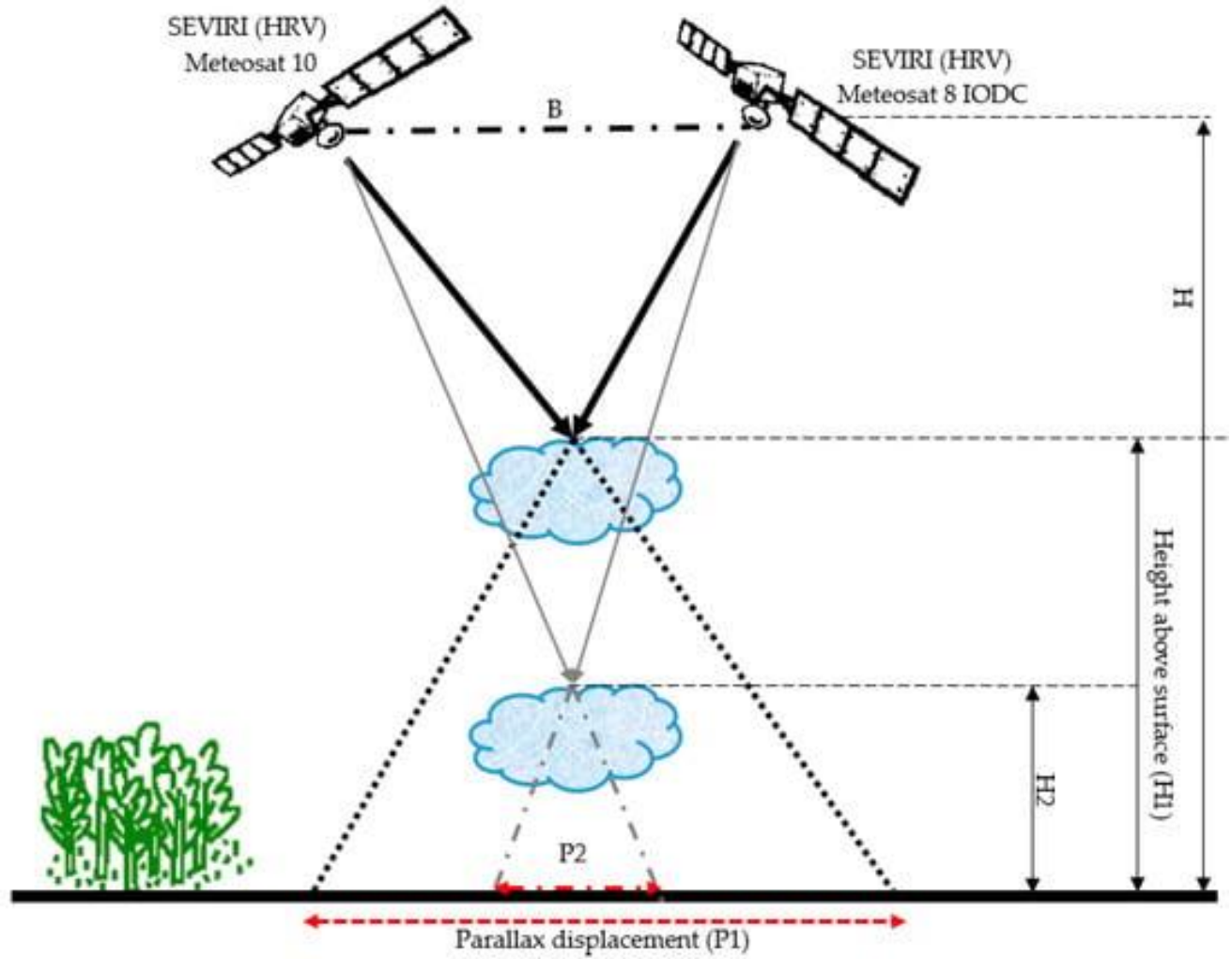
Spatial Resolution



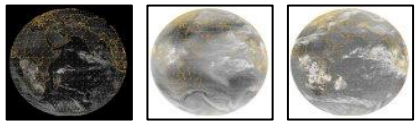
Parallax Error



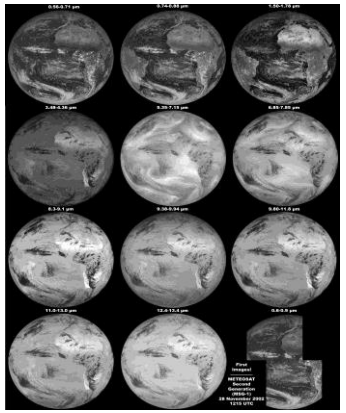



SEVIRI (HRV)
Meteosat 10
SEVIRI (HRV)
Meteosat 8 IODC
B
H
Height above surface (H1)
H2
P2
Parallax displacement (P1)

THANKS TO EUMETSAT!!

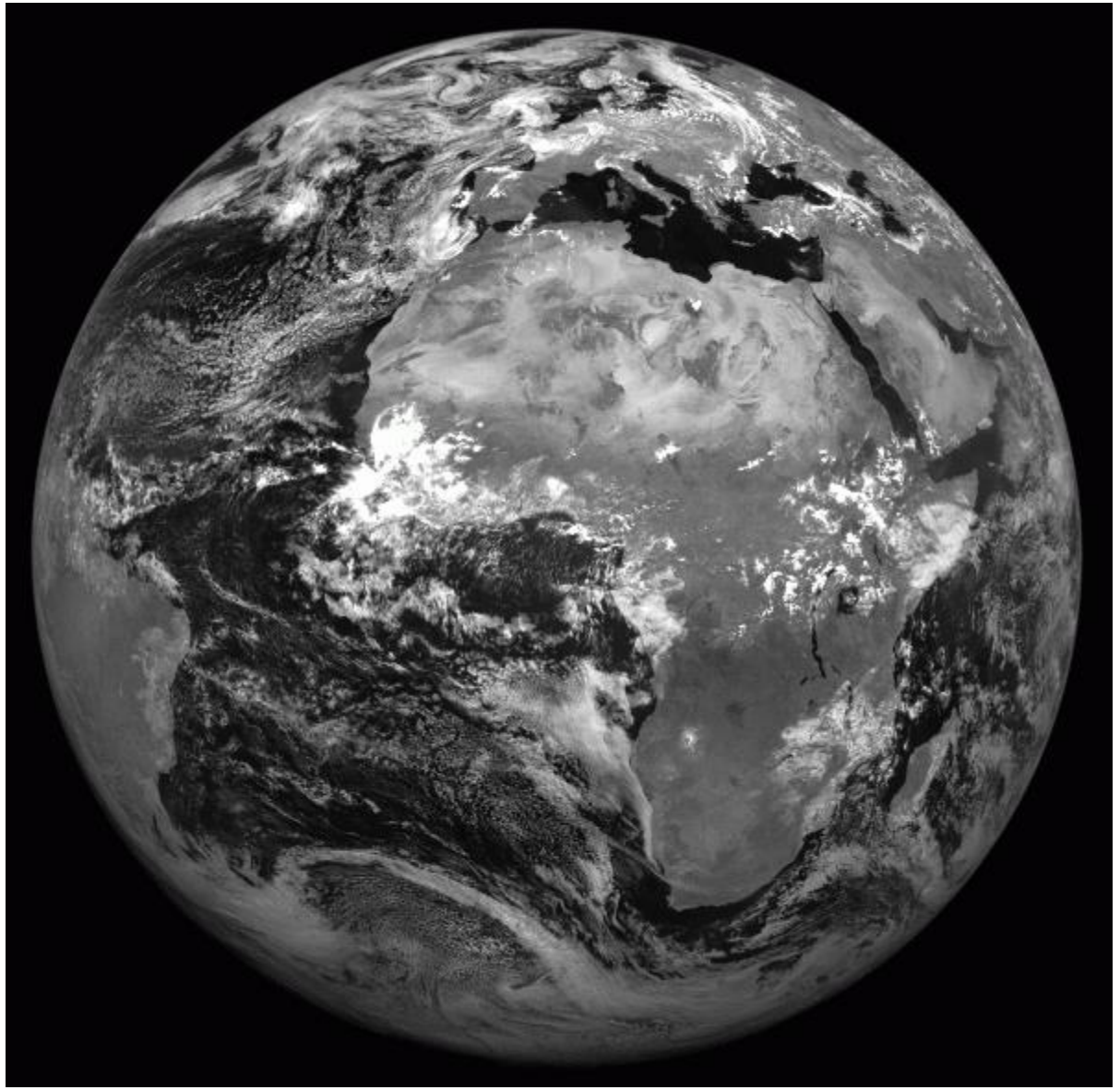


Meteosat 7
3 Channels



Meteosat 8
12 Channels

Meteosat 9
12 Channels



Let us see that !

https://www.eumetsat.int/

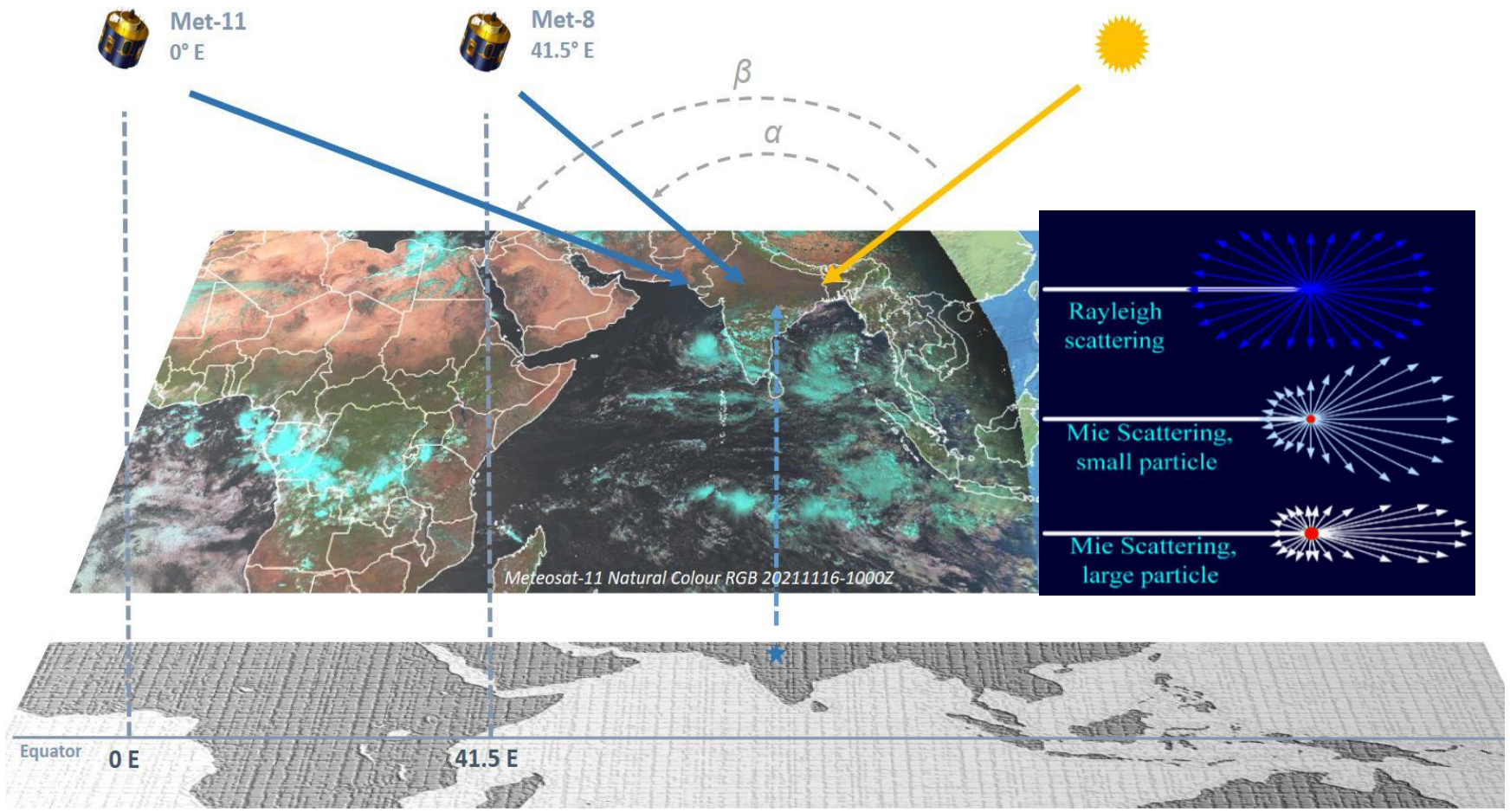
https://worldview.earthdata.nasa.gov/

Sun angle and forward scattering

Let us see that !

https://view.eumetsat.int/productviewer?v=default

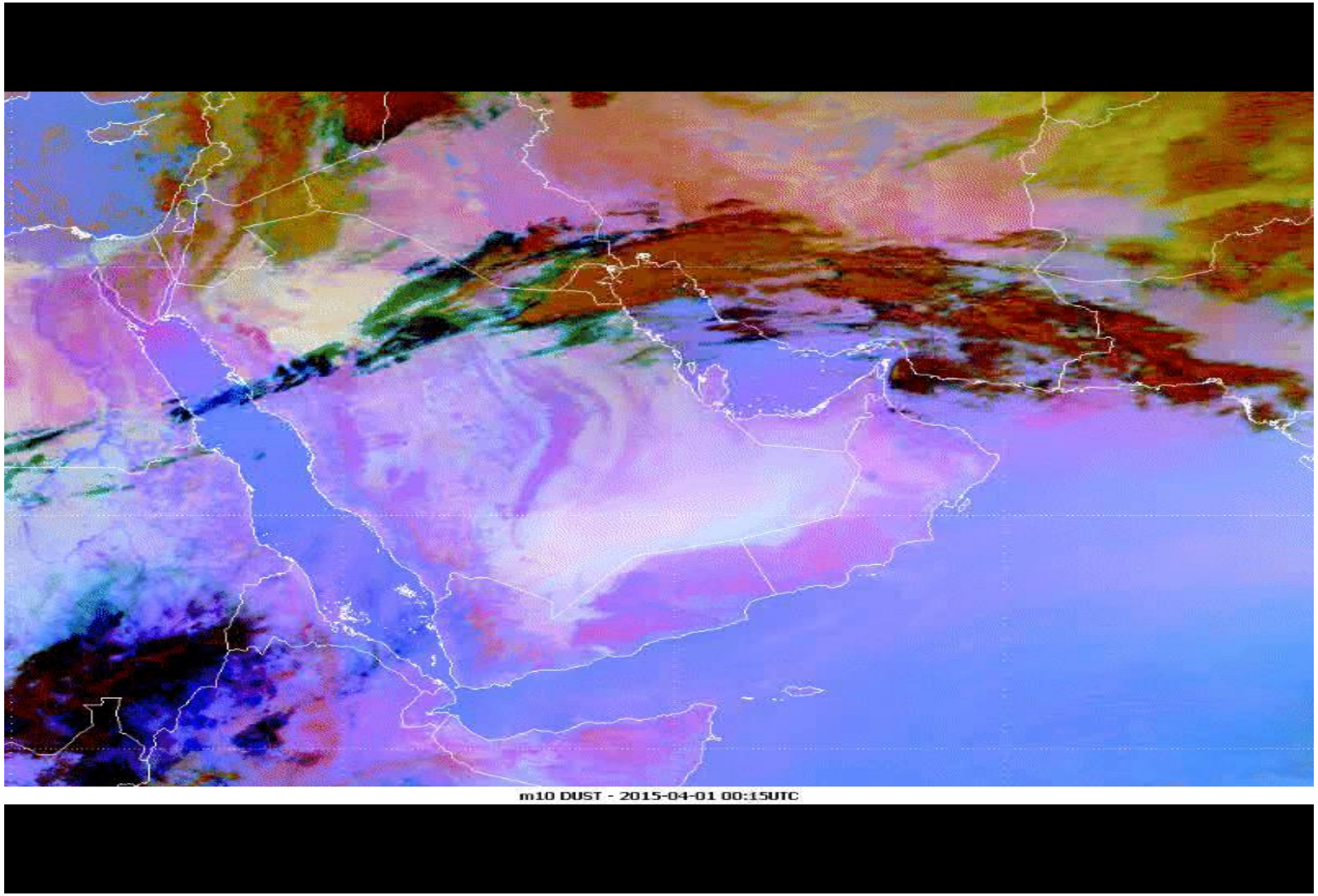
2022 May 19 02 : 45 UTC



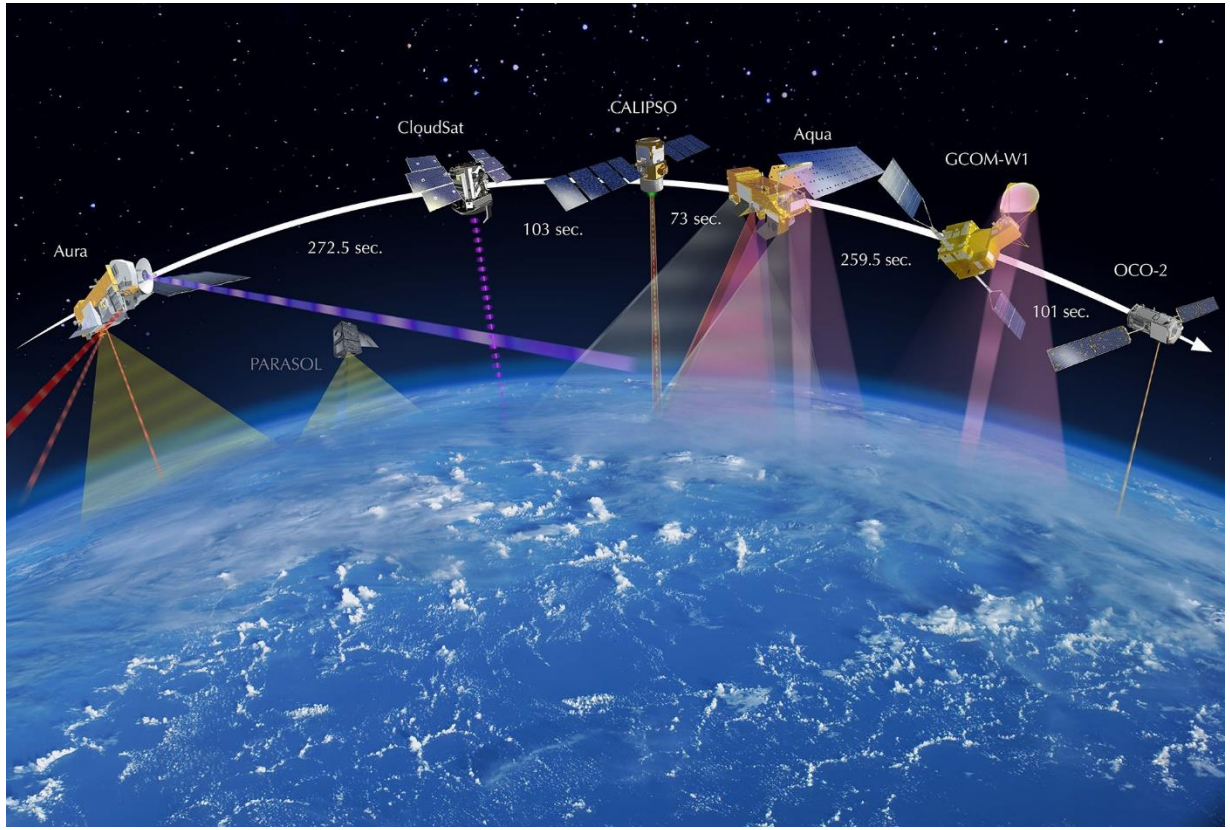
During several days around mid-November 2021 a layer of haze was covering large part of India stretching into the Arabian Sea.

https://www.eumetsat.int/haze-over-india

Dust RGB/ Dust Storm 2015



Use other data and products to verify your analysis!



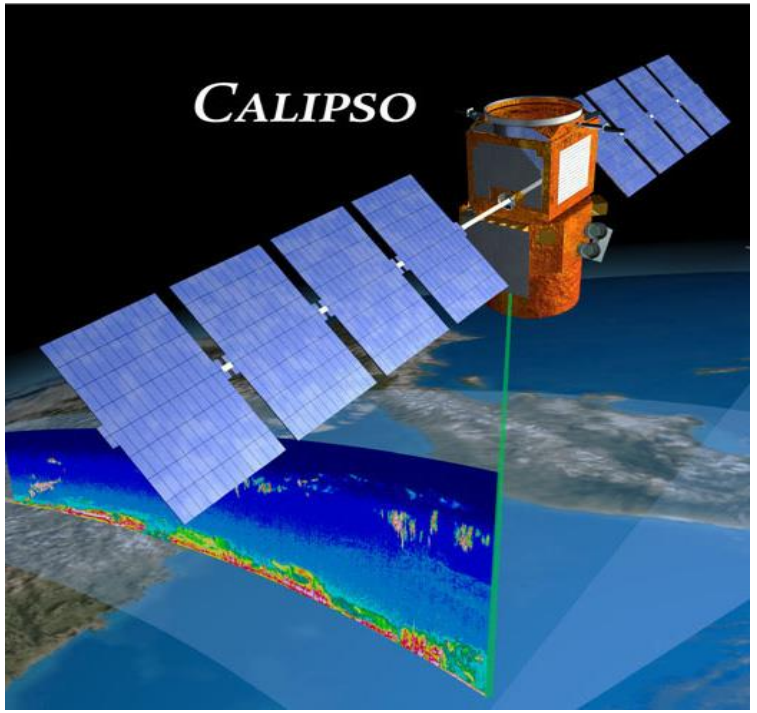
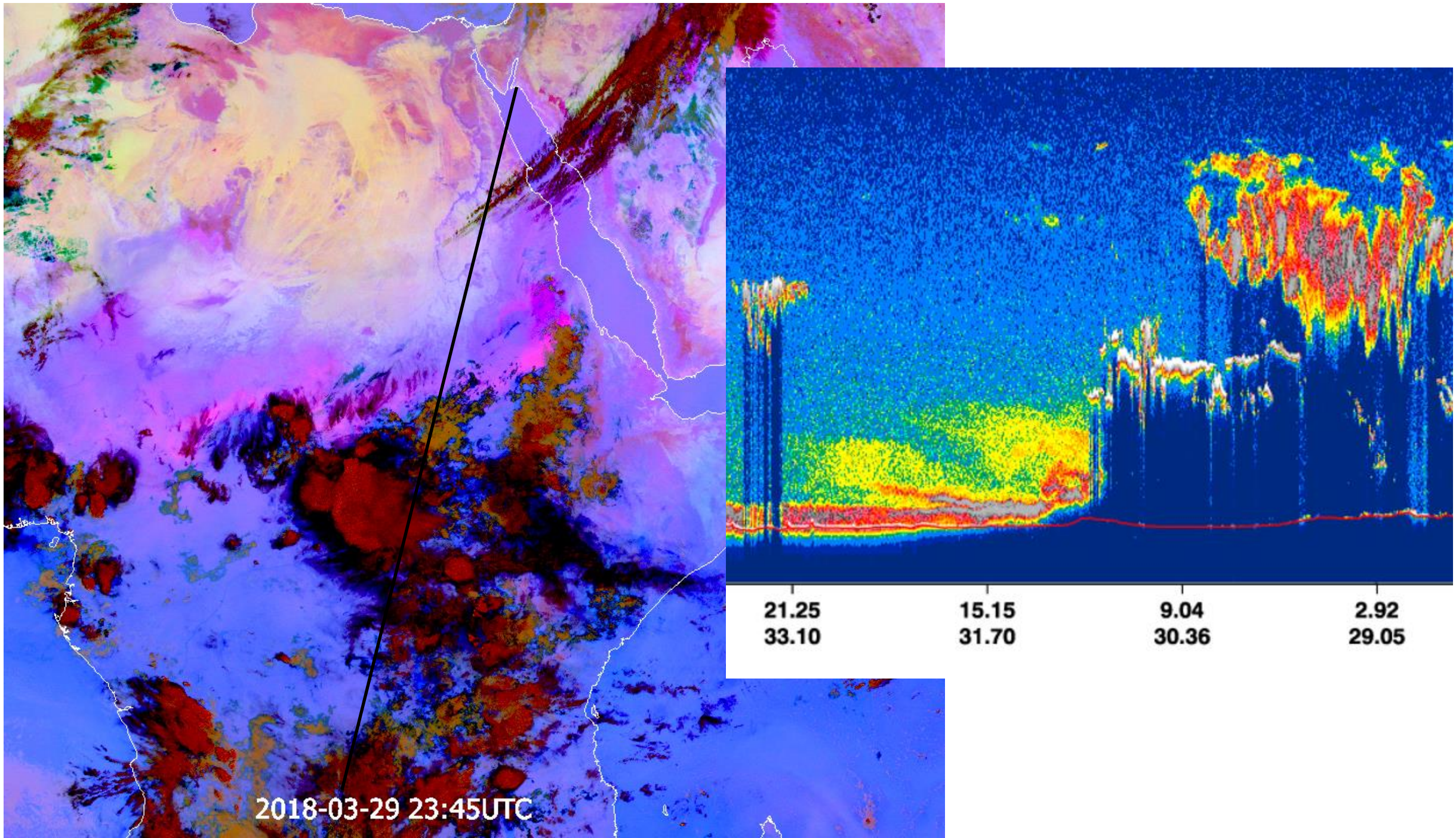
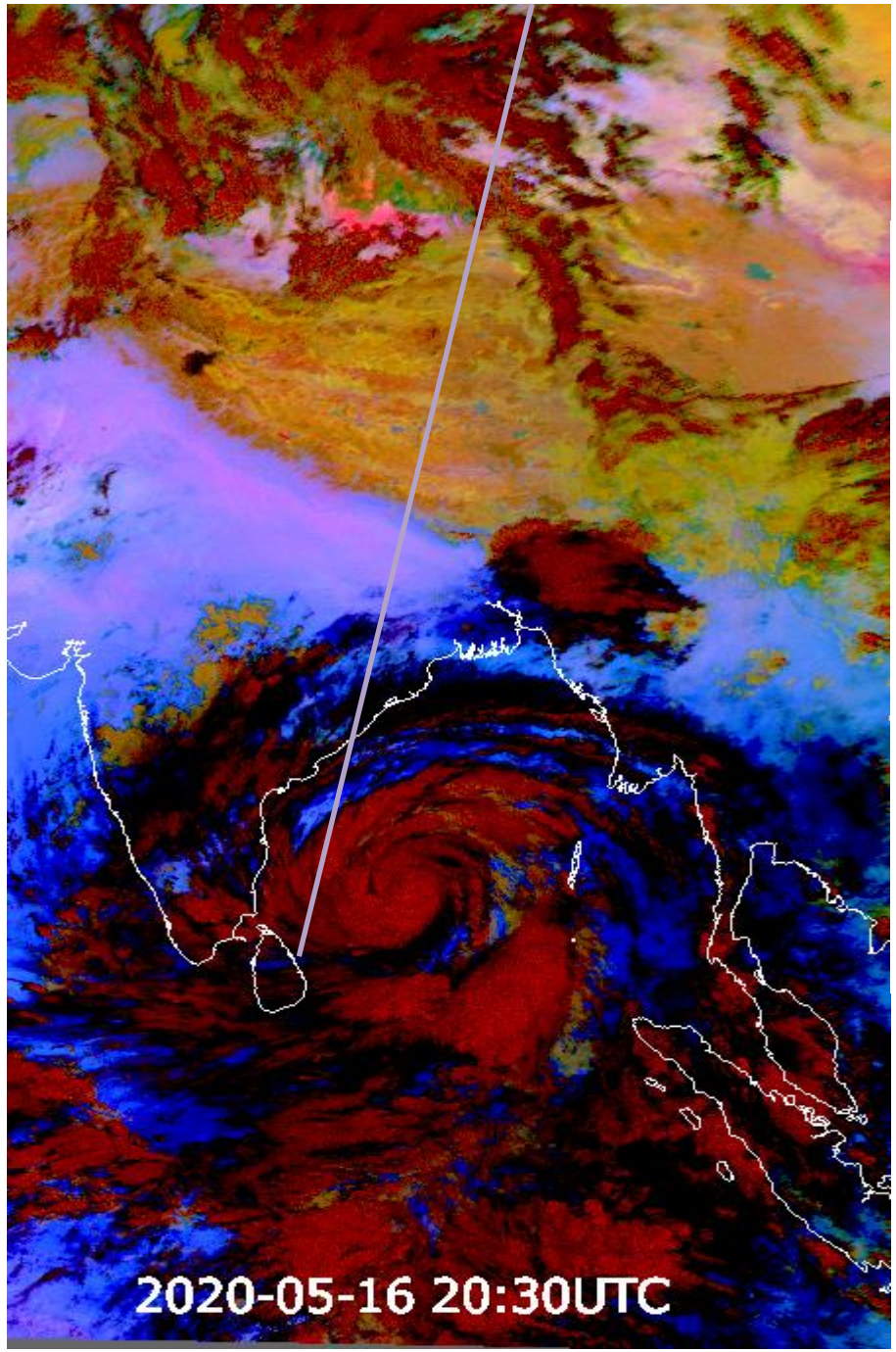
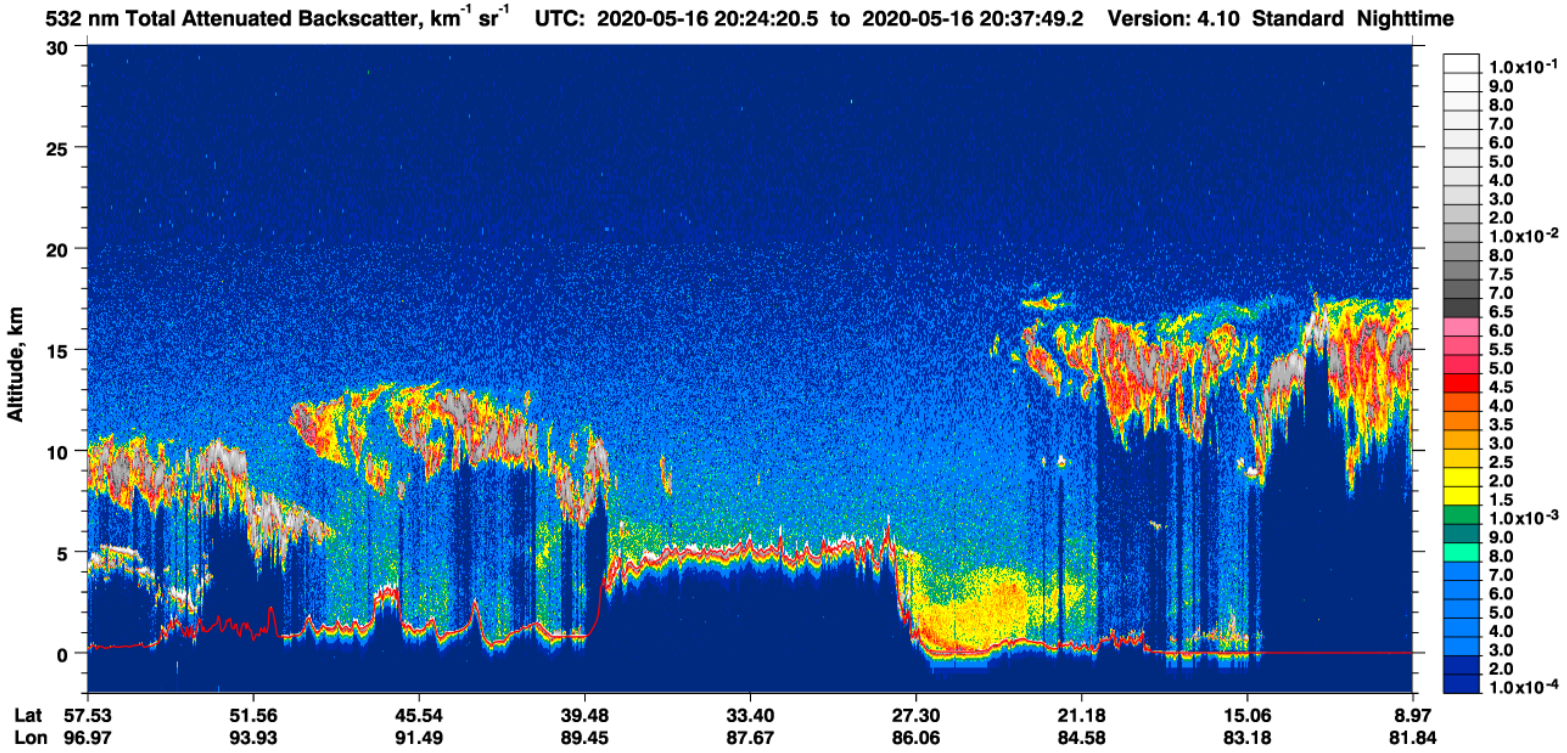


Image above: The CALIPSO spacecraft uses an innovative lidar and imaging system to reveal the secrets of clouds and aerosols. **NASA**

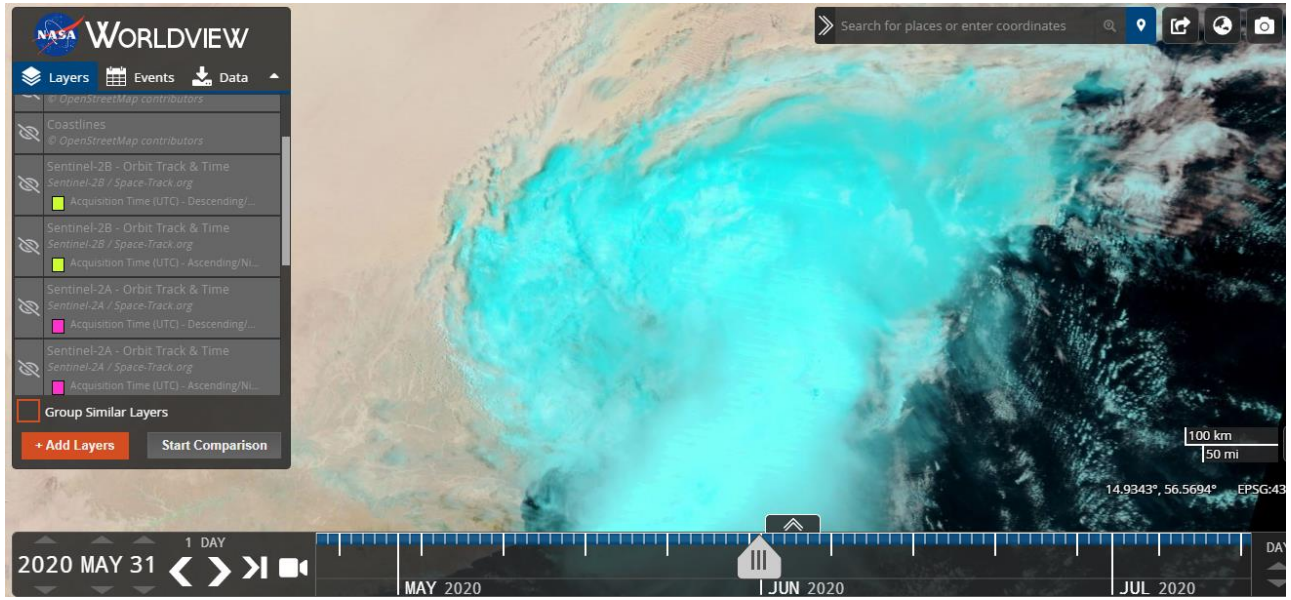

2018-03-29 23:45UTC
21.25
33.10
15.15
31.70
9.04
30.36
2.92
29.05

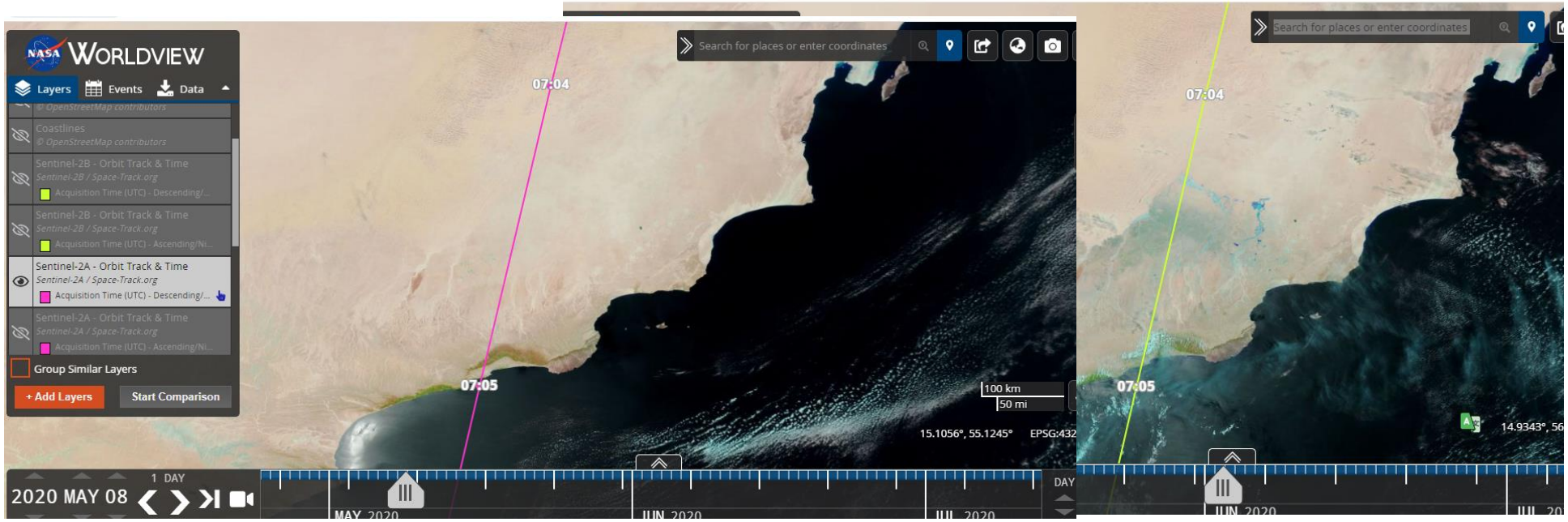

2020-05-16 20:30UTC


532 nm Total Attenuated Backscatter, km-1 sr-1 UTC: 2020-05-16 20:24:20.5 to 2020-05-16 20:37:49.2 Version: 4.10 Standard Nighttime
Altitude, km
30
25
20
15
10
5
0
Lat 57.53 51.56 45.54 39.48 33.40 27.30 21.18 15.06 8.97
Lon 96.97 93.93 91.49 89.45 87.67 86.06 84.58 83.18 81.84
1.0x10-1
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0x10-2
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0x10-3
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0x10-4

https://worldview.earthdata.nasa.gov/

https://apps.sentinel-hub.com/eo-browser/





THANK YOU