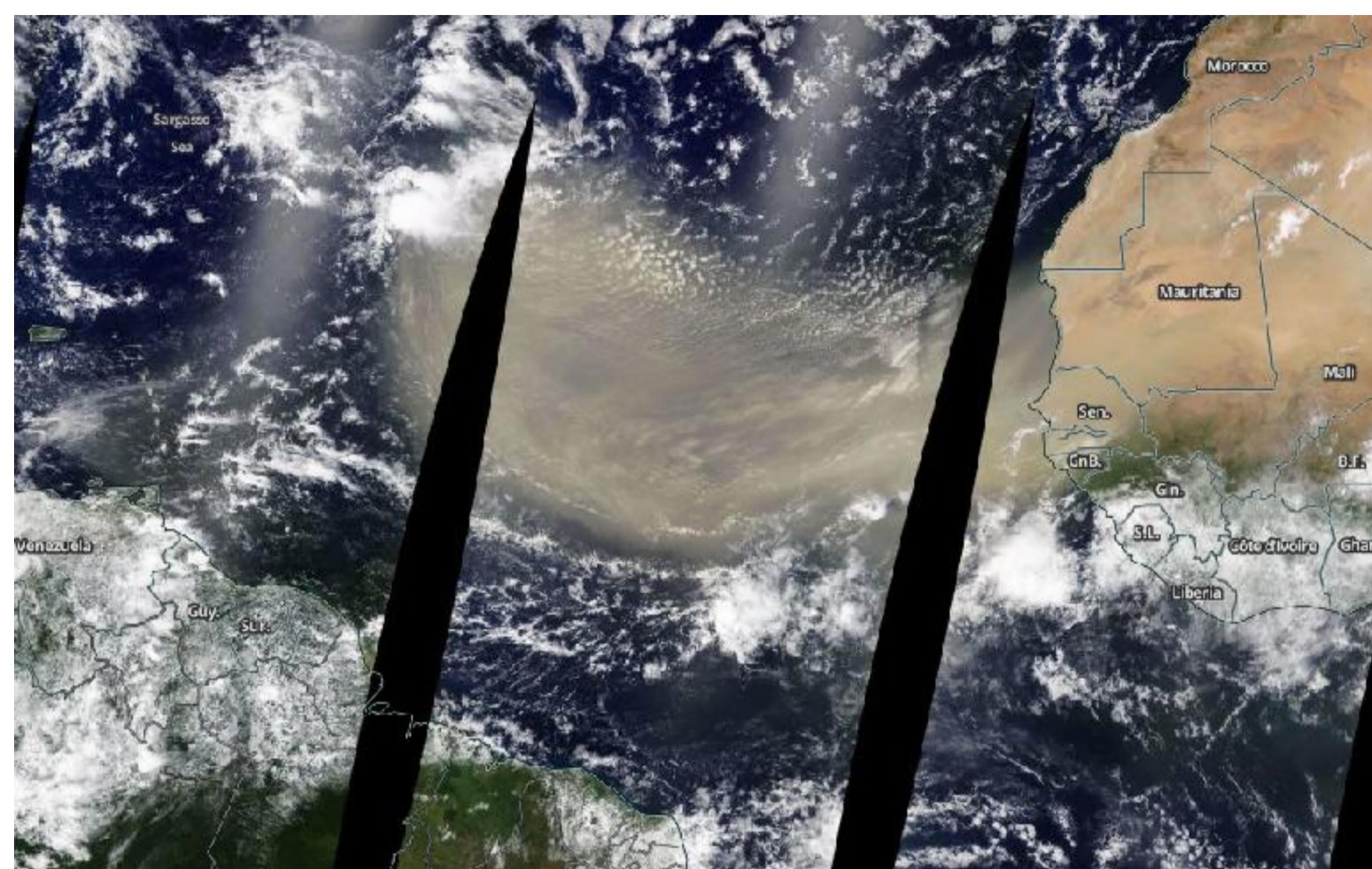


CAVEAT: The Dust Report is an informal ad hoc commentary that focuses on interesting African dust events. These reports should not be regarded as definitive statements on these events or their possible impacts. Joseph M. Prospero

The dust continues to pour off the coast of West Africa. A huge coherent plume extends to 55W. I have seldom seen such a broad, dense, coherent dust plume in my decades of satellite perusals. This is the MODIS product of today, 19 June at mid-day.

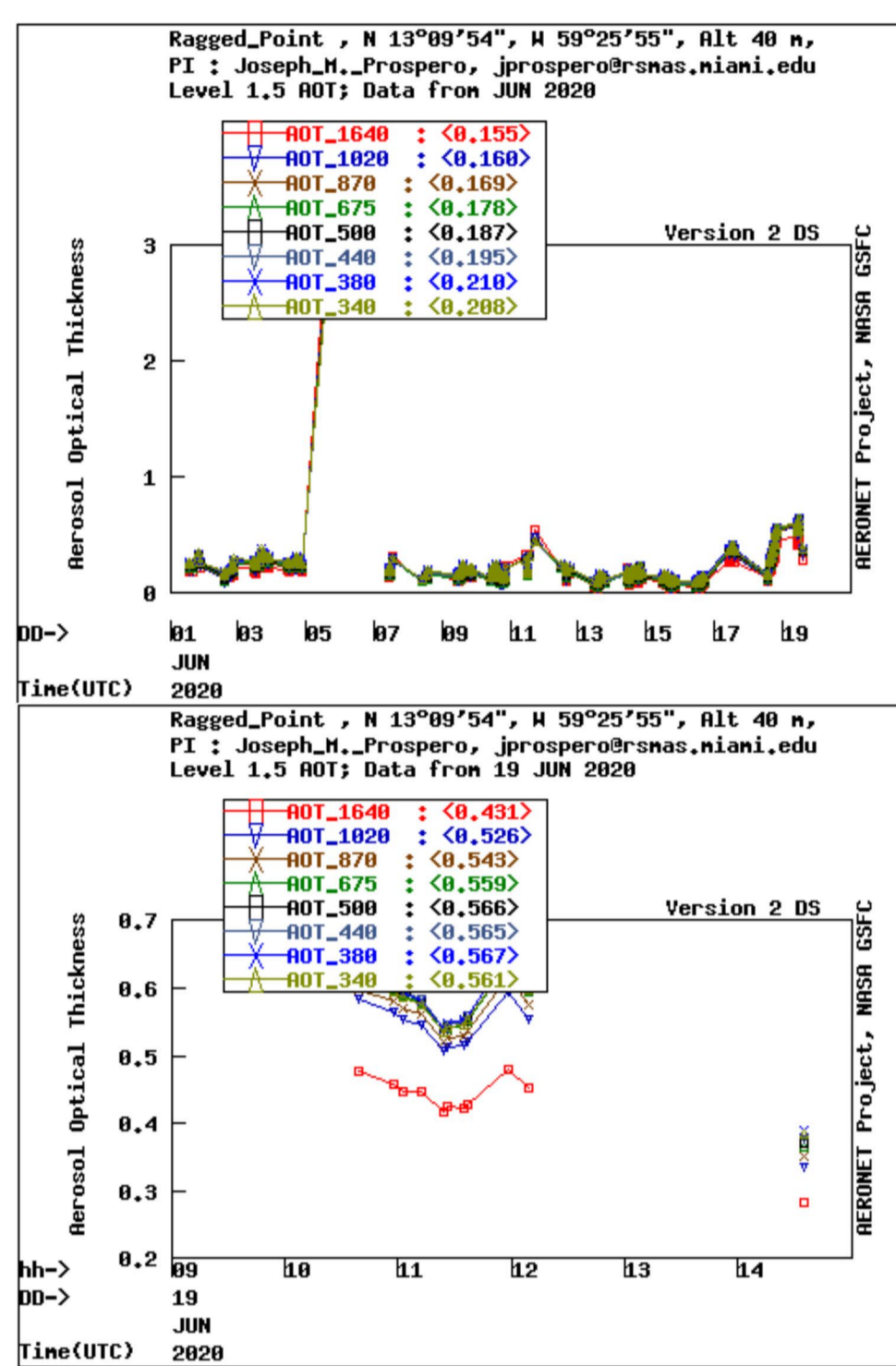
[https://worldview.earthdata.nasa.gov/?v=-177.03000203105853,-57.383170249643754,96.31929211796546,77.51185902441888&t=2020-06-19-T12%3A00%3A00Z&l=MODIS_Terra_Aerosol\(hidden\),MODIS_Aqua_Aerosol\(hidden\),Reference_Labels,Reference_Features,Coastlines,VIIRS_SNPP_CorrectedReflectance_TrueColor\(hidden\),MODIS_Aqua_CorrectedReflectance_TrueColor\(hidden\),MODIS_Terra_CorrectedReflectance_TrueColor](https://worldview.earthdata.nasa.gov/?v=-177.03000203105853,-57.383170249643754,96.31929211796546,77.51185902441888&t=2020-06-19-T12%3A00%3A00Z&l=MODIS_Terra_Aerosol(hidden),MODIS_Aqua_Aerosol(hidden),Reference_Labels,Reference_Features,Coastlines,VIIRS_SNPP_CorrectedReflectance_TrueColor(hidden),MODIS_Aqua_CorrectedReflectance_TrueColor(hidden),MODIS_Terra_CorrectedReflectance_TrueColor)



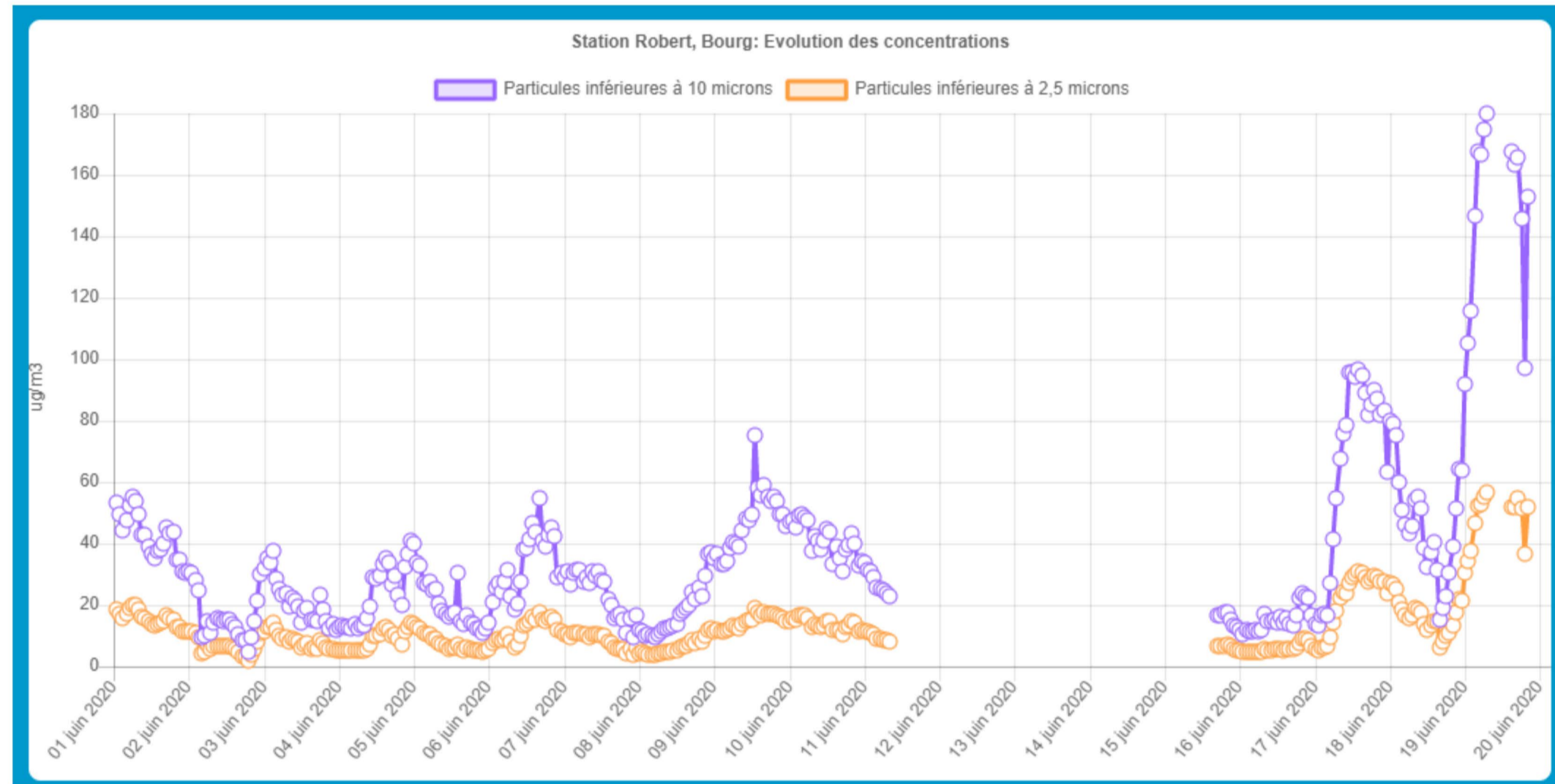
The GOES East loop is rather impressive.

https://www.star.nesdis.noaa.gov/GOES/sector_band.php?sat=G16§or=taw&band=GEOCOLOR&length=72

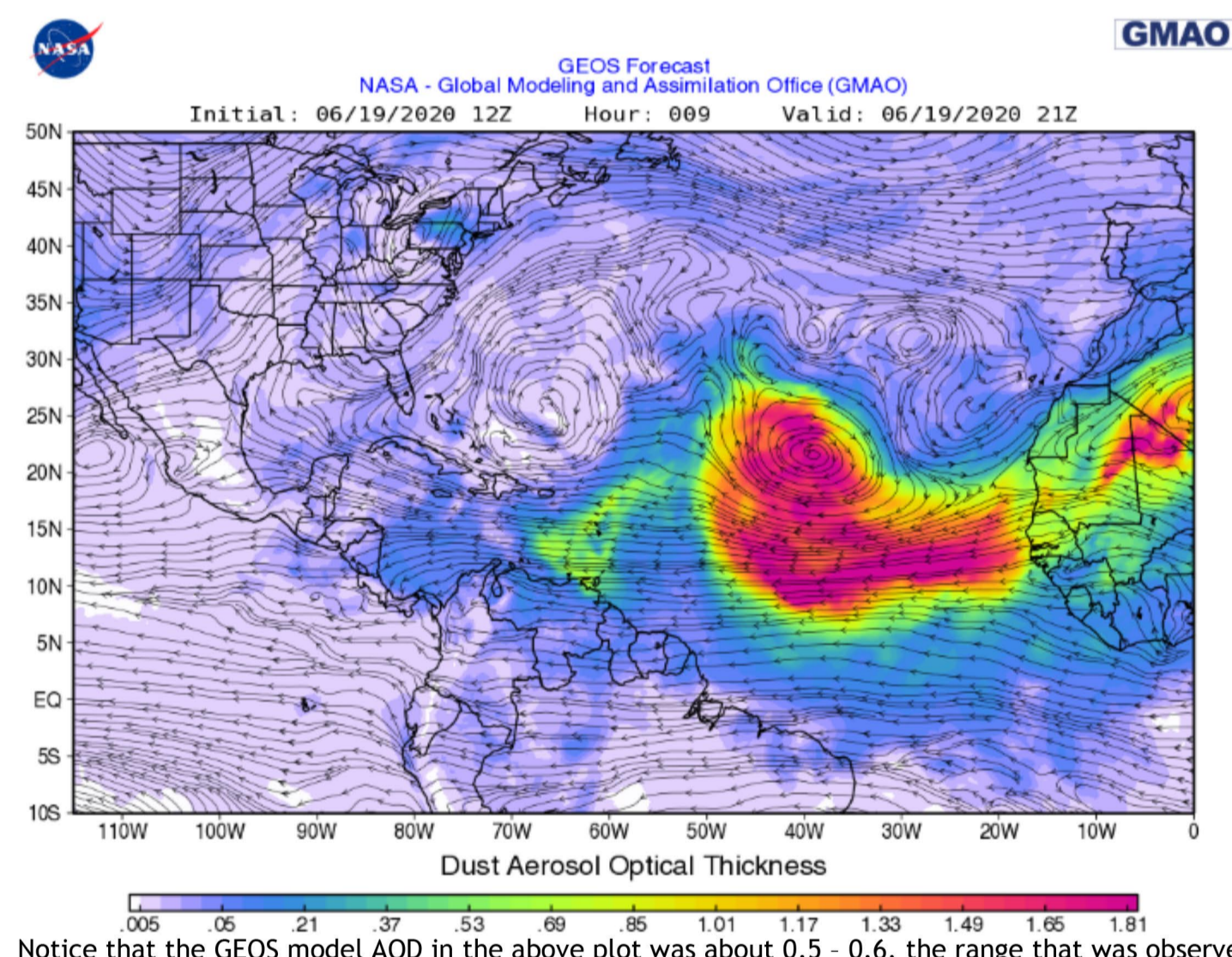
Today (19 June, 2020) the AOD at Barbados reached 0.6 (at 500nm). This is one of the highest in recent years. The Angstrom exponent is essentially zero. Note that the dust front has not yet arrived at Barbados. Tomorrow will be rather interesting.



The dust event has already had a dramatic impact on PM2.5 and PM10, with worse yet to come. Below is the hourly record of PM2.5 and PM10 from an air quality station on Martinique. This site is on the east coast of the island. It is not impacted by any local sources except sea salt aerosol. PM10 reached 180 ug/m3 on 19 June. I think that this is a record for this site, based on my casual observations over past years. I will look into this more closely in the coming days. Note also the very high values of PM2.5.

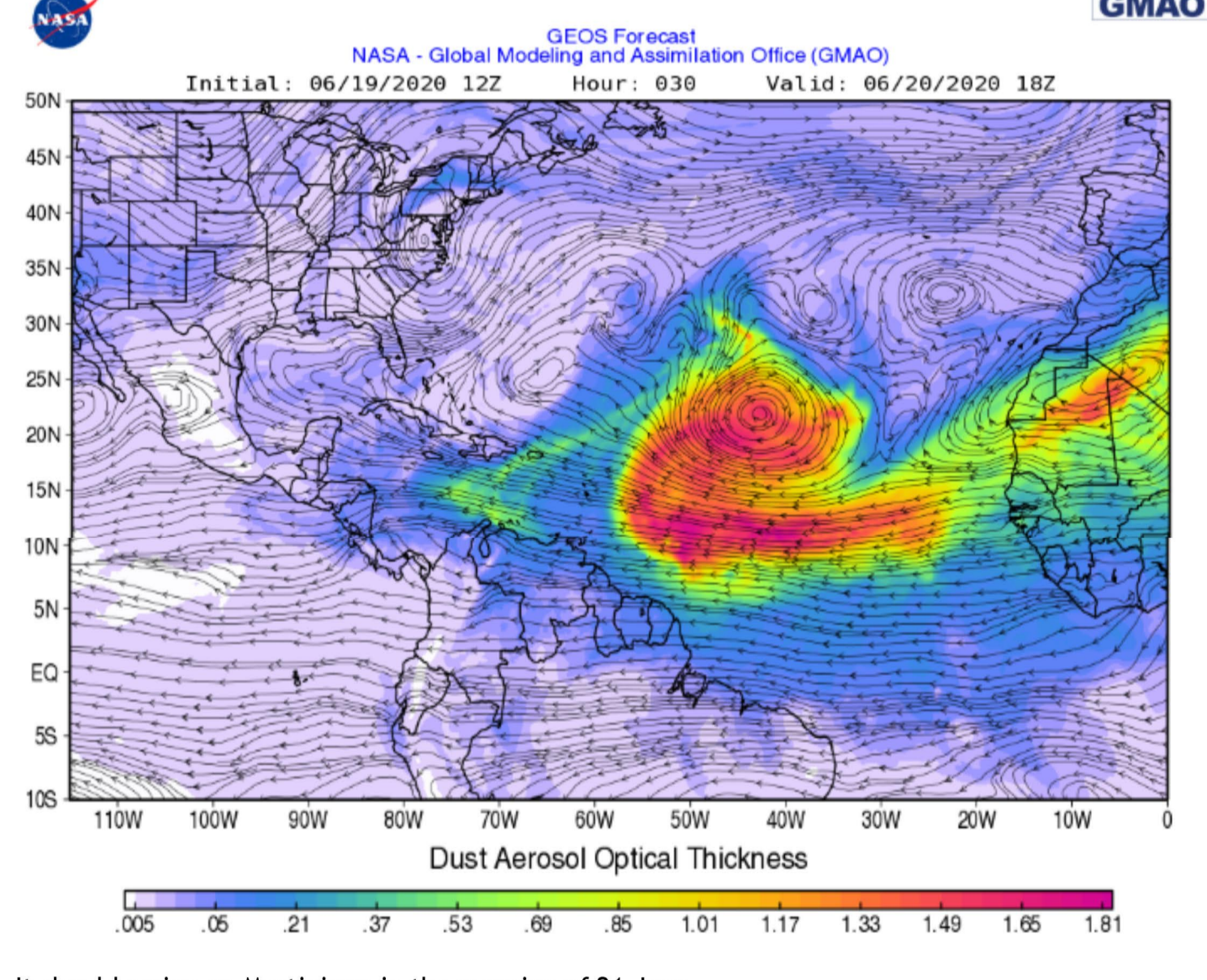


This is the NASA GEOS dust product for 19 June at 21Z. The high PM values measured at Martinique are clearly driven by the green blob of relatively light dust over the windward island.

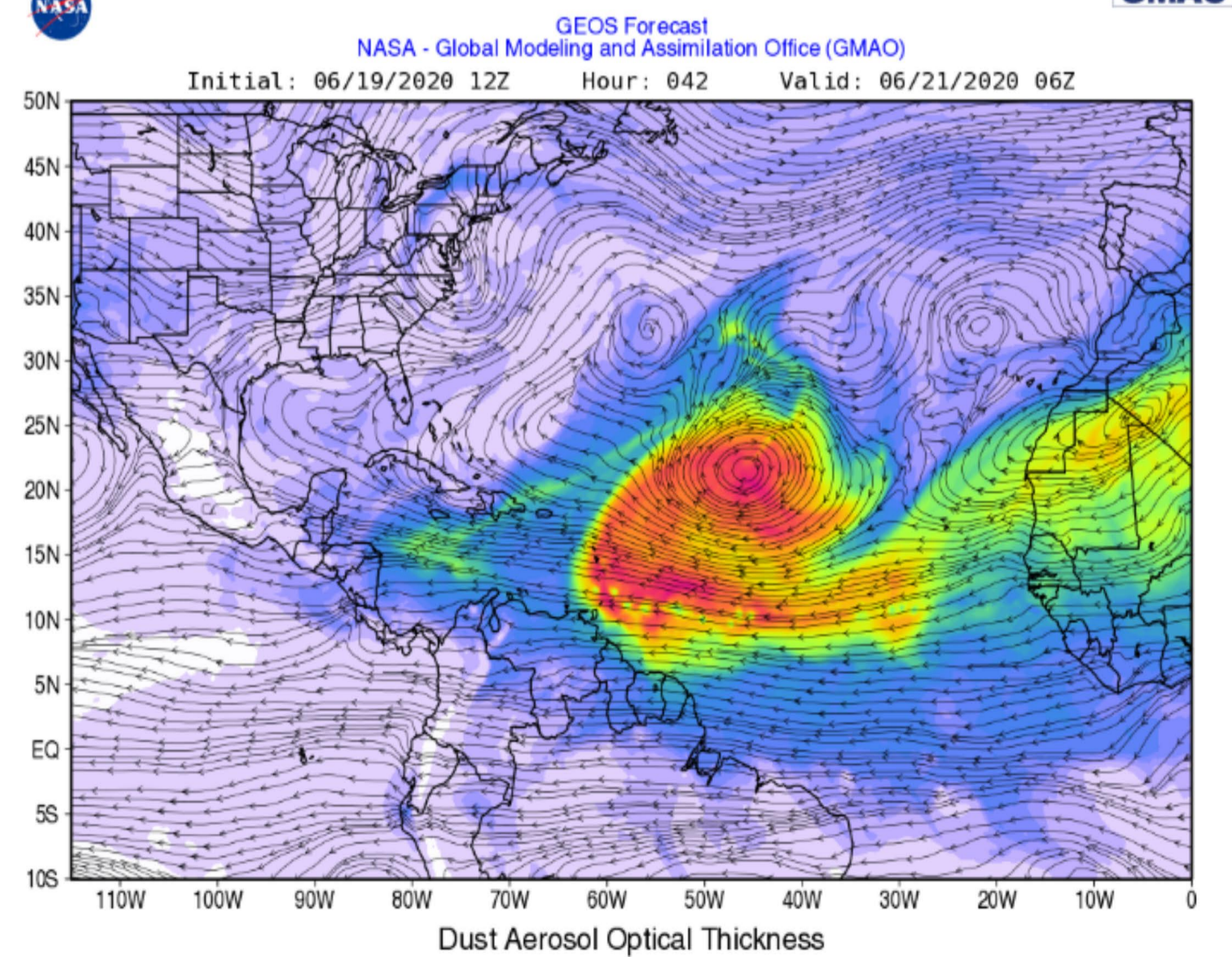


Notice that the GEOS model AOD in the above plot was about 0.5 - 0.6, the range that was observed on the ground at Barbados in the plots at the top of this page.

The model shows the main dust front hitting Barbados tomorrow afternoon.



It should arrive on Martinique in the morning of 21 June.



The model suggests that the AOD will be well above one. I do not recall seeing extended periods with such a high value at Barbados. I will check on this later as this event progresses.