

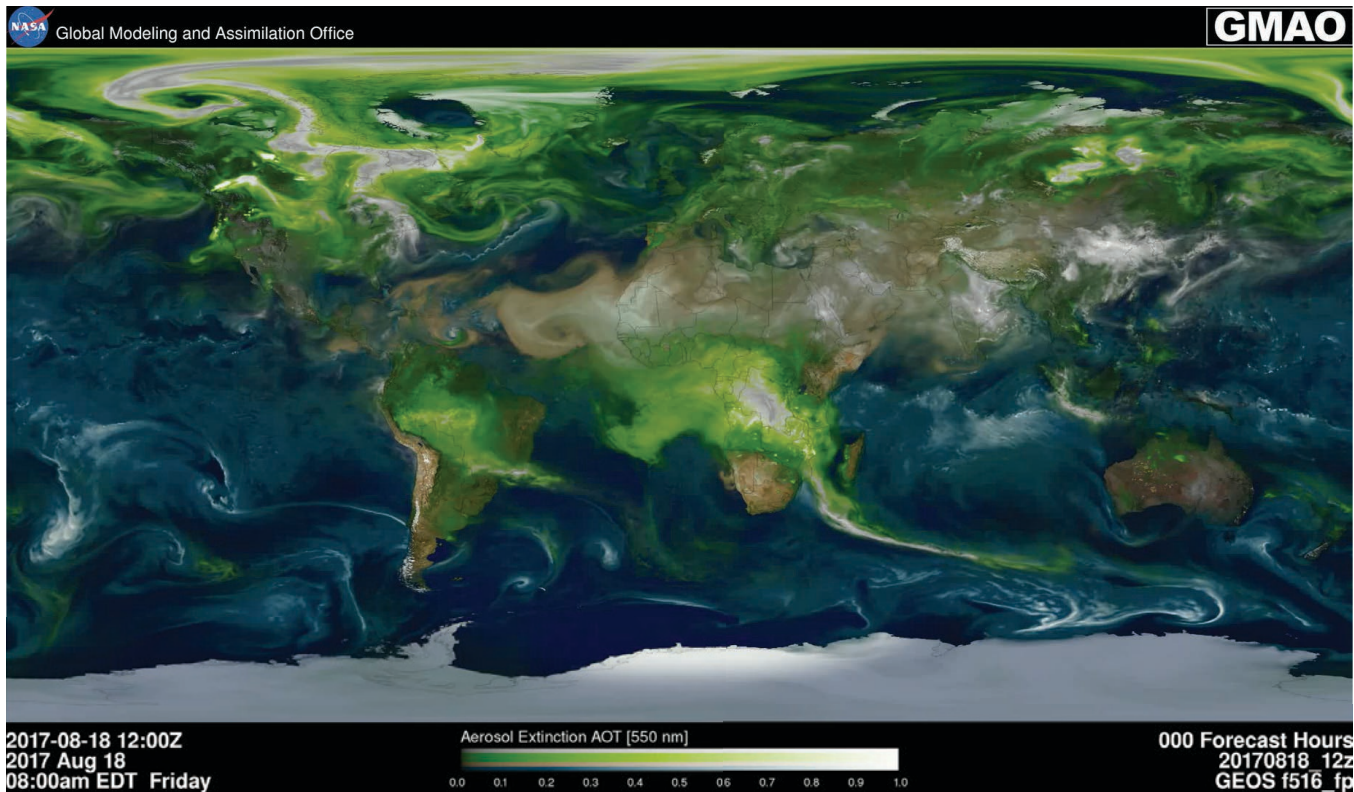


# ORACLES Forecast Briefing

Aerosols  
19 August 2017

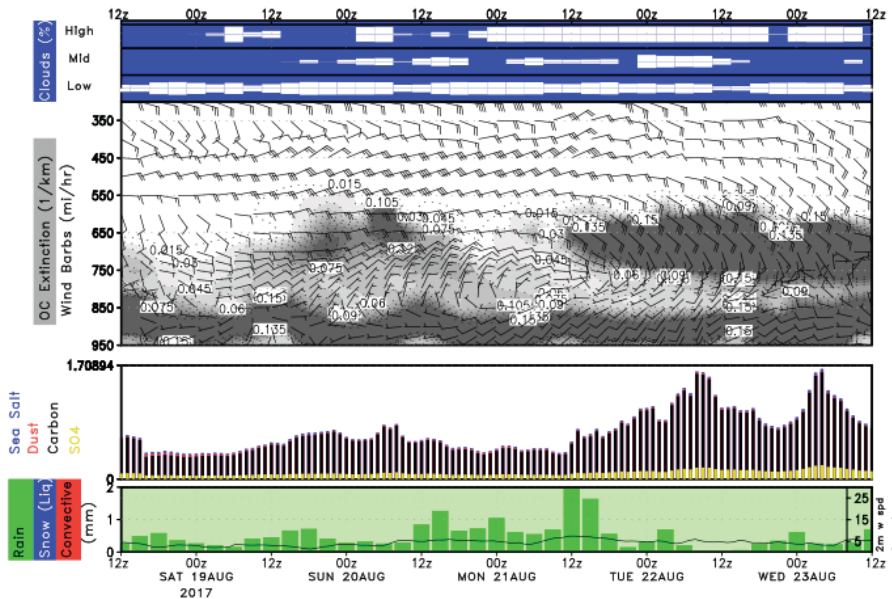


# The Aerosol Week

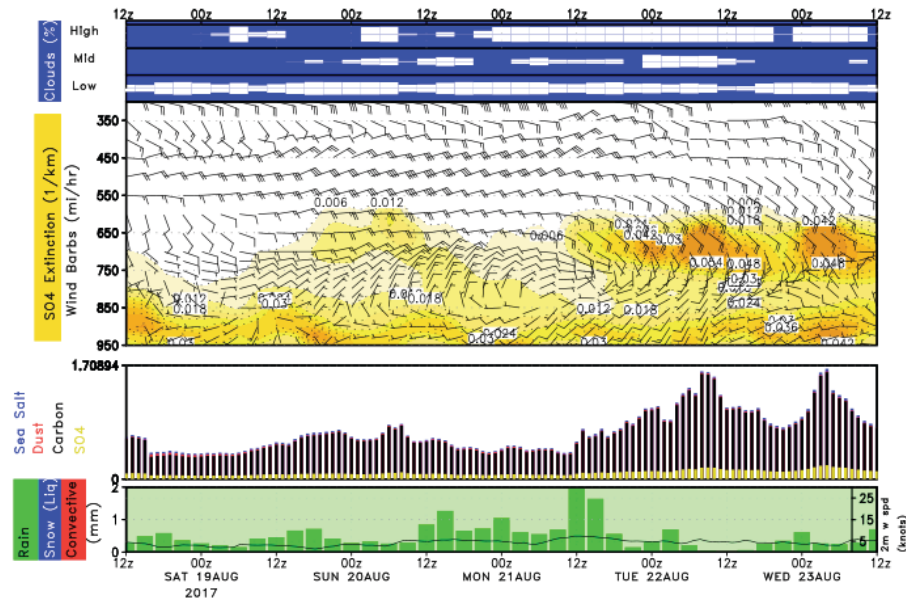




# São Tomé (OC+BC+SO<sub>4</sub>)



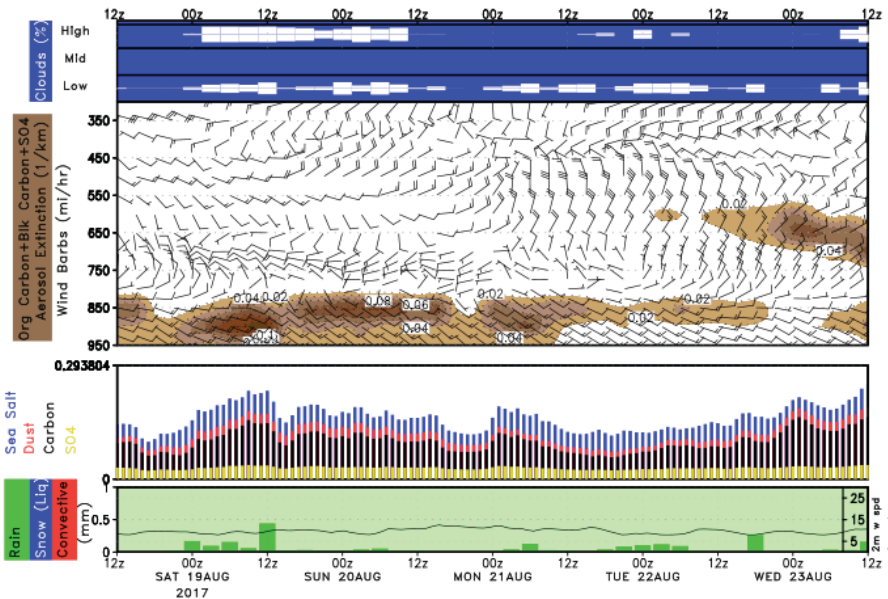
LAT = 0.3 , LON = 6.6, Location = ORACLES\_Sao\_Tome\_e\_Principe, Fcst\_init = 20170818



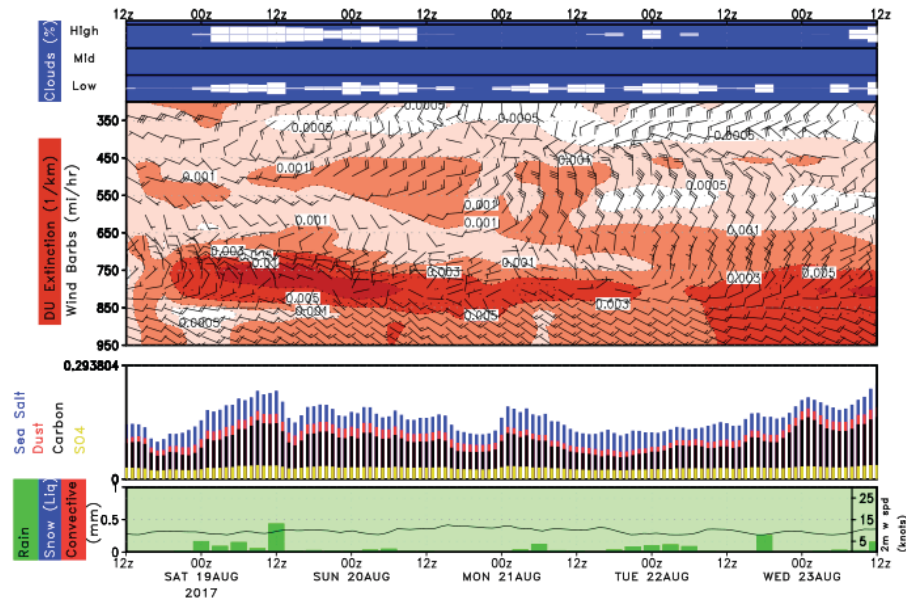
LAT = 0.3 , LON = 6.6, Location = ORACLES\_Sao\_Tome\_e\_Principe, Fcst\_init = 20170818



# Ascension (OC+BC+SO<sub>4</sub>)

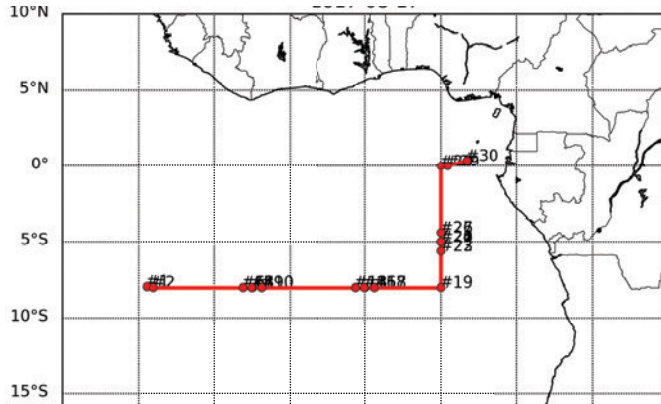


LAT = -8.0 , LON = -14.4, Location = ORACLES\_Ascension\_Island, Fcst\_init = 20170818



LAT = -8.0 , LON = -14.4, Location = ORACLES\_Ascension\_Island, Fcst\_init = 20170818





**Flight Day (Return from Ascension)**

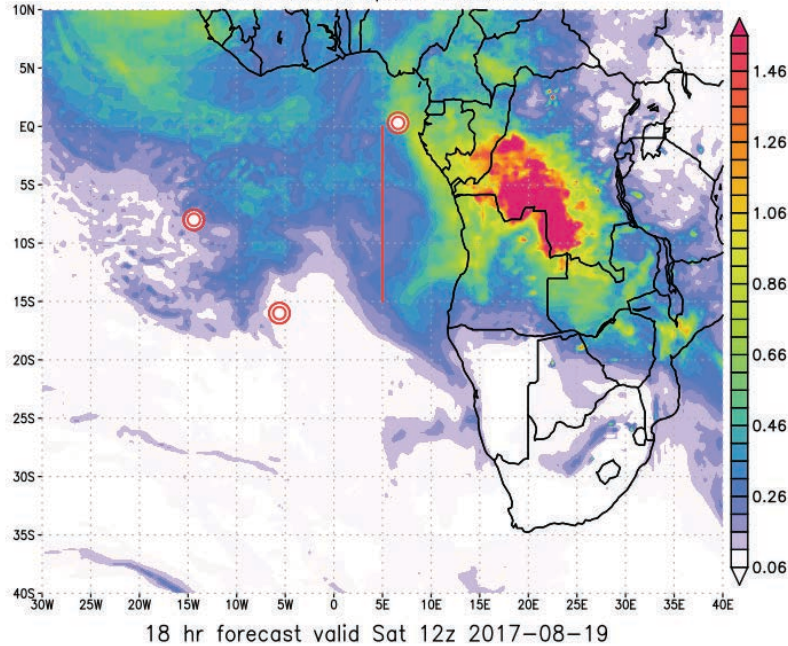
**SATURDAY, 19 AUGUST 2017**



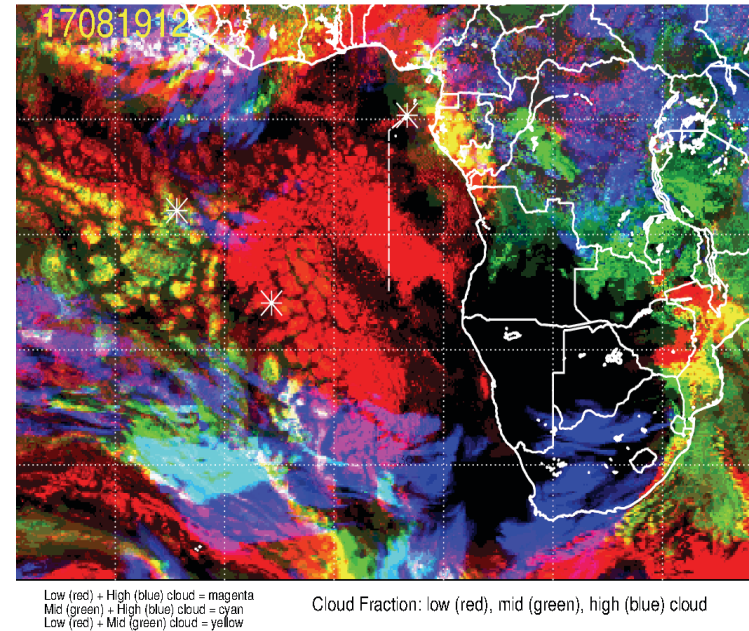
# Sat 19 Aug 2017 12Z

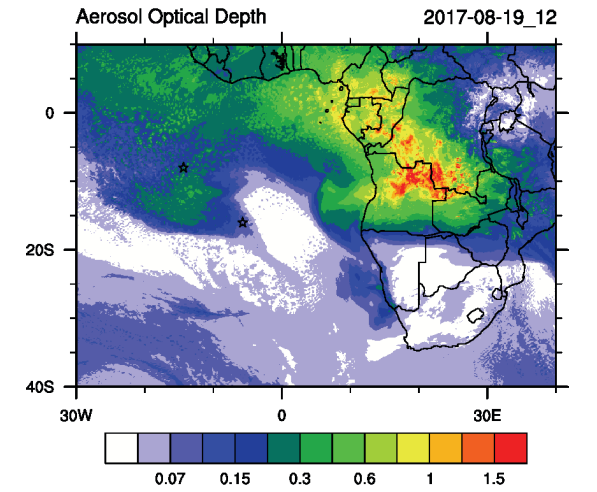
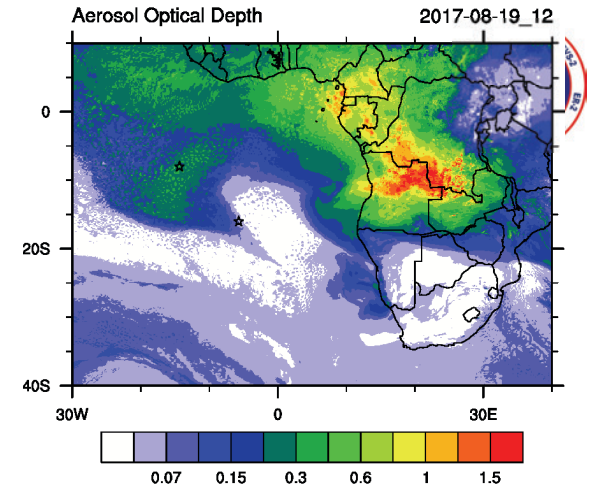
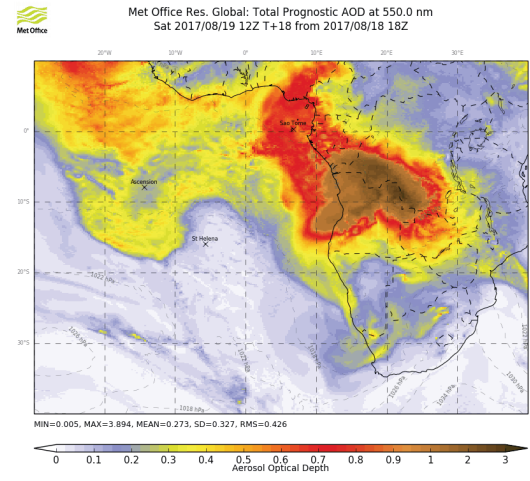
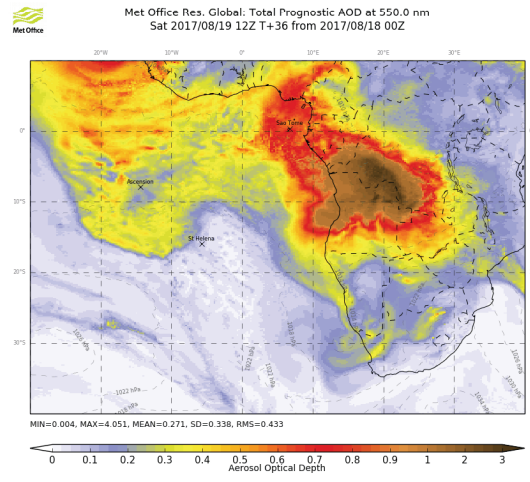
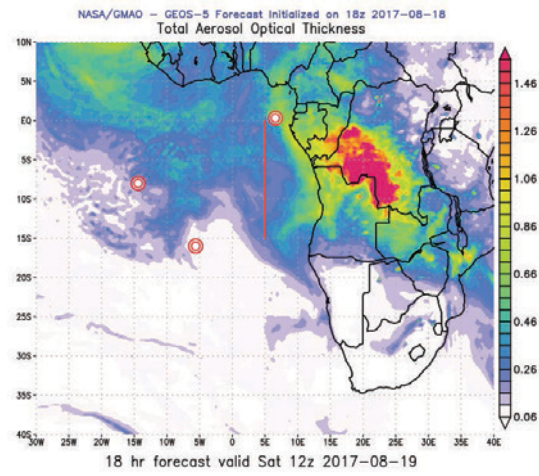
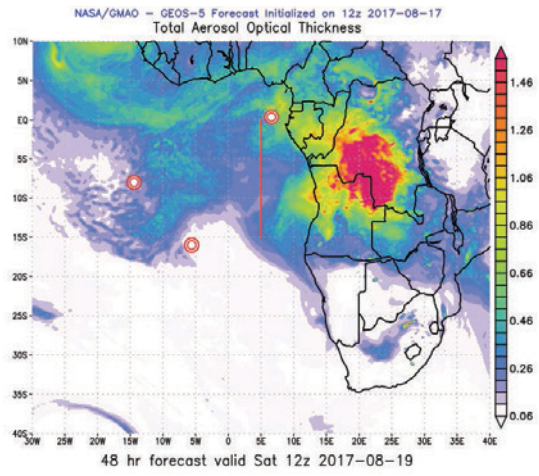


NASA/GMAO - GEOS-5 Forecast Initialized on 18z 2017-08-18  
Total Aerosol Optical Thickness



17081912, 024 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF

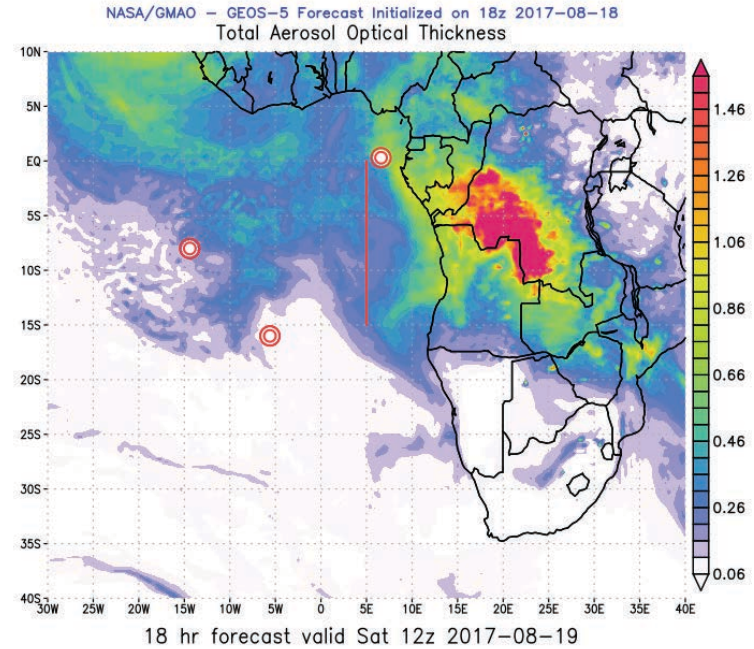
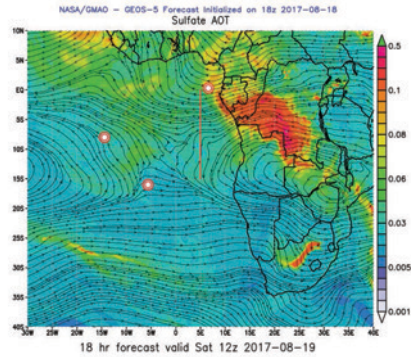
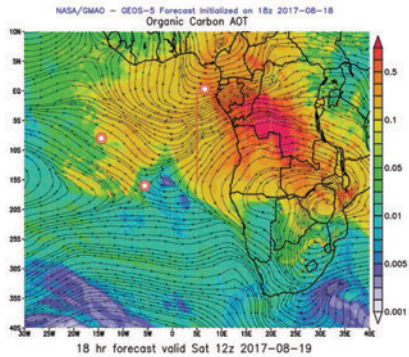
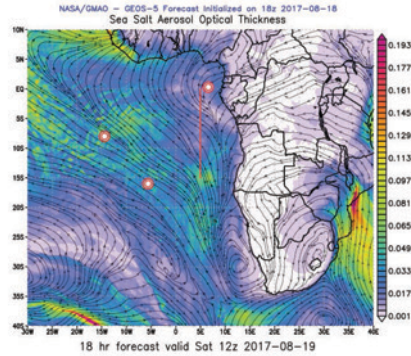
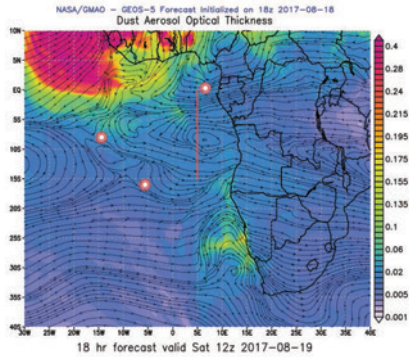


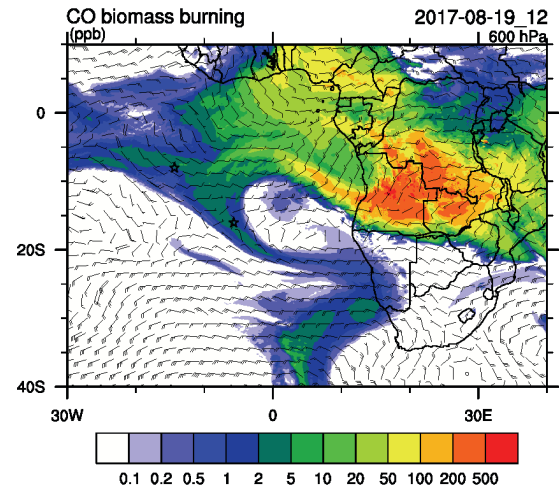
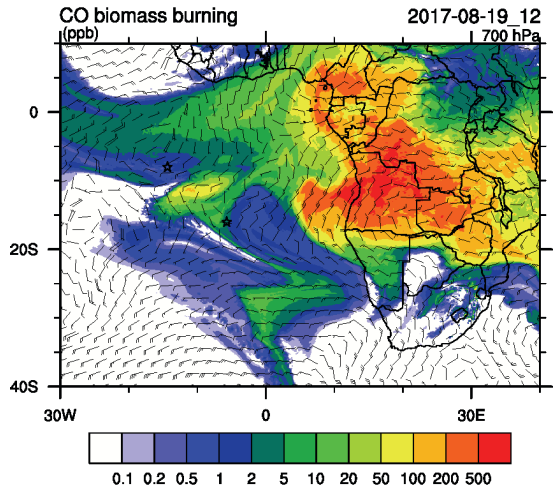
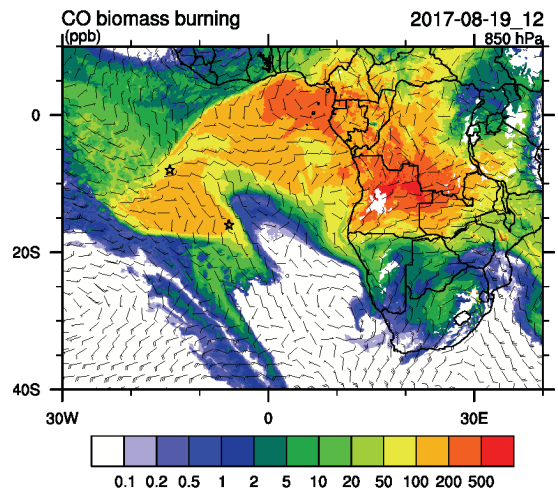
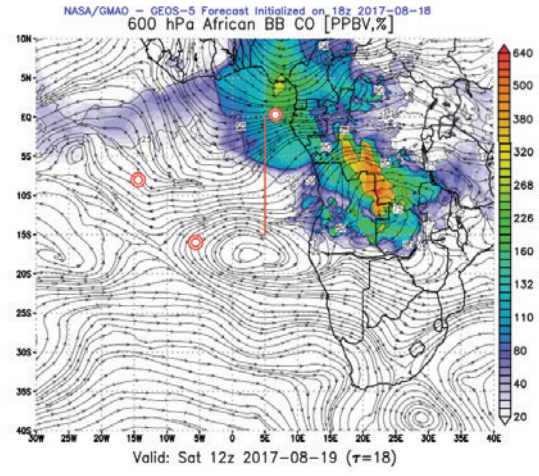
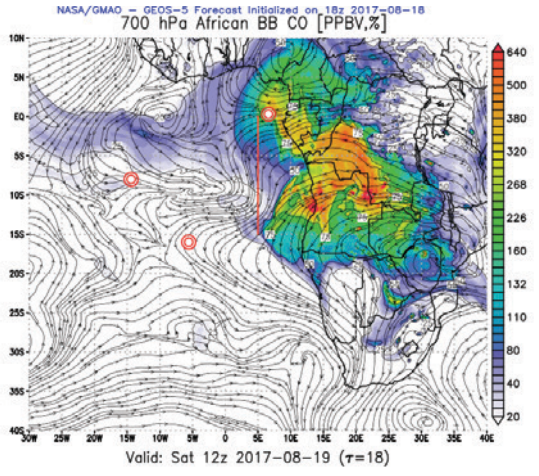
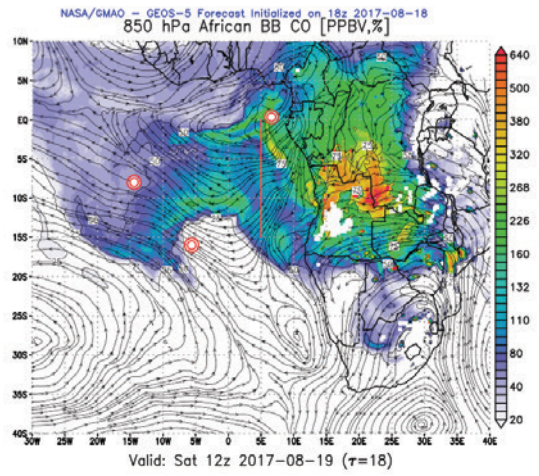




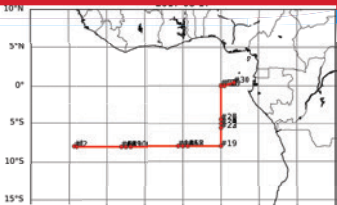


# Sat 19 Aug 2017 12Z

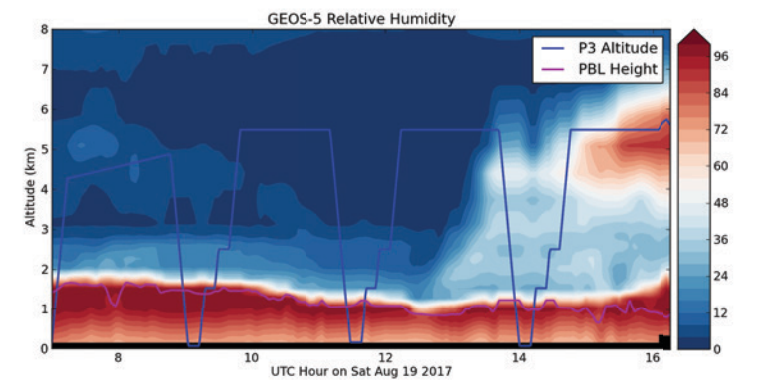
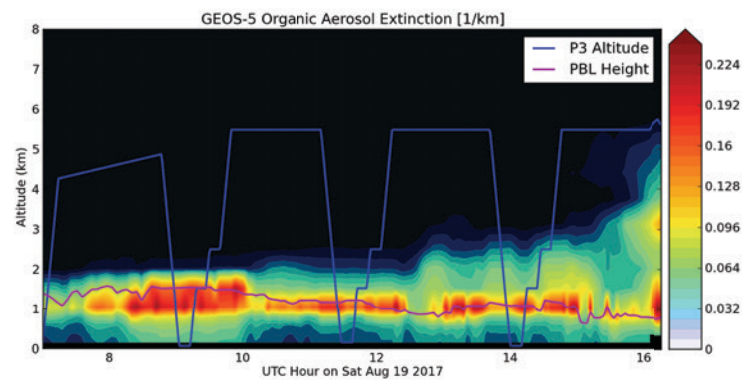
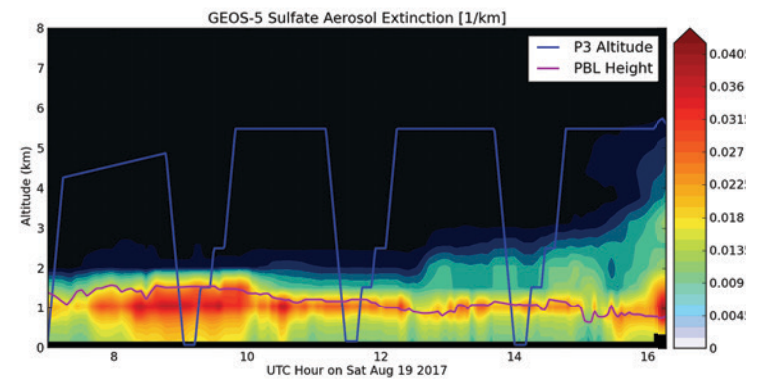
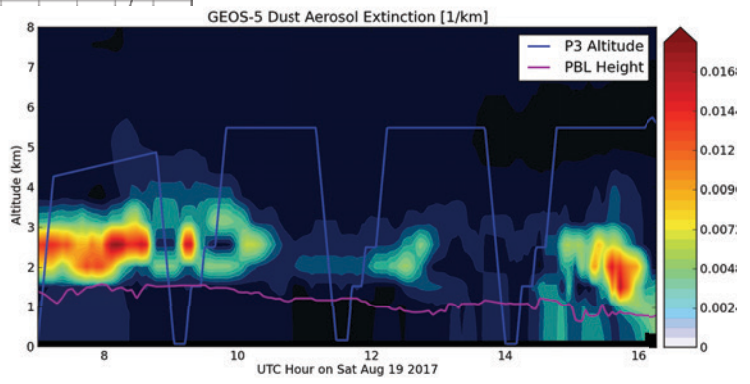






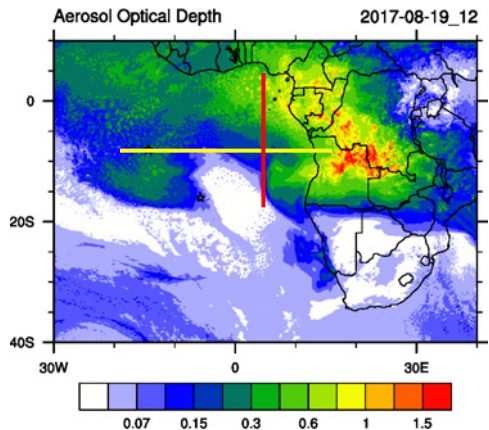


# Sat 19 Aug 2017 12Z





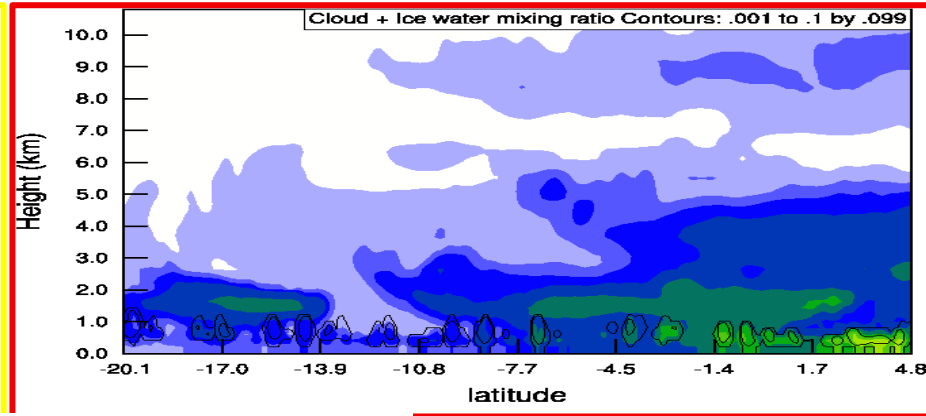
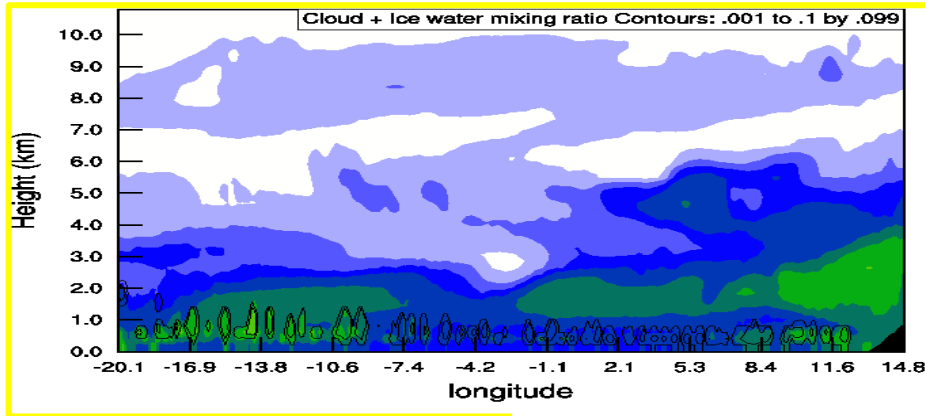
Today  
Sat 19<sup>th</sup>  
12Z



Cross sections:

Along 8 S

Along 5 W





**No Fly Day**

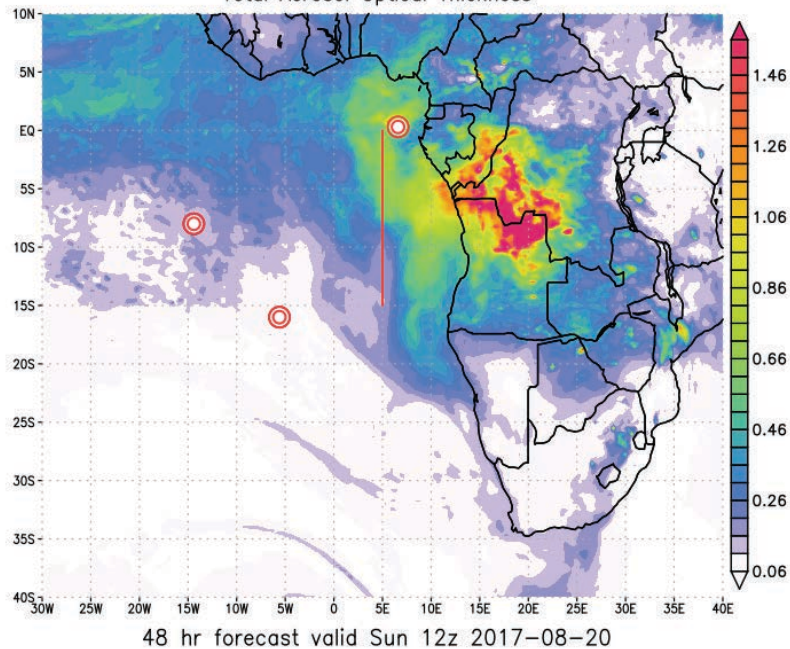
**SUNDAY, 20 AUGUST 2017**



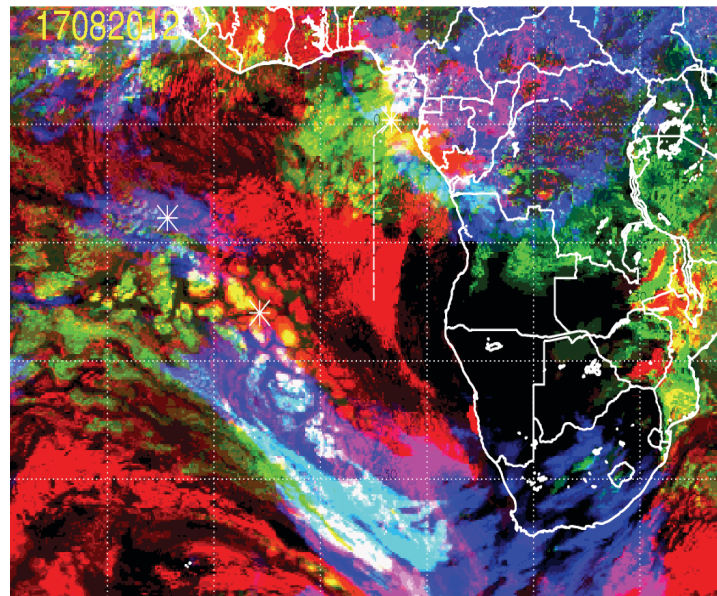
# Sun 20 Aug 2017 12Z



NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-18  
Total Aerosol Optical Thickness



17082012, 048 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF



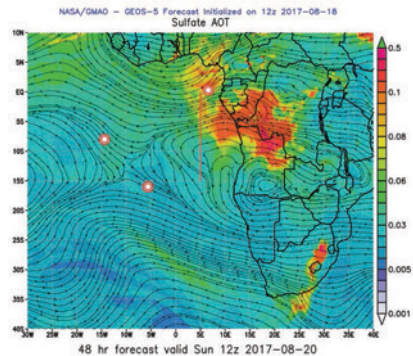
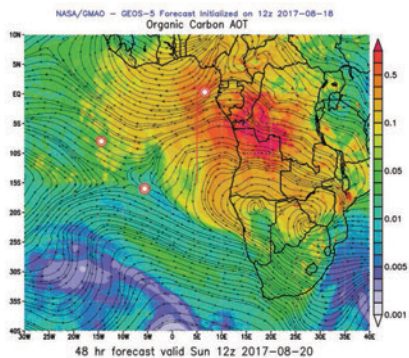
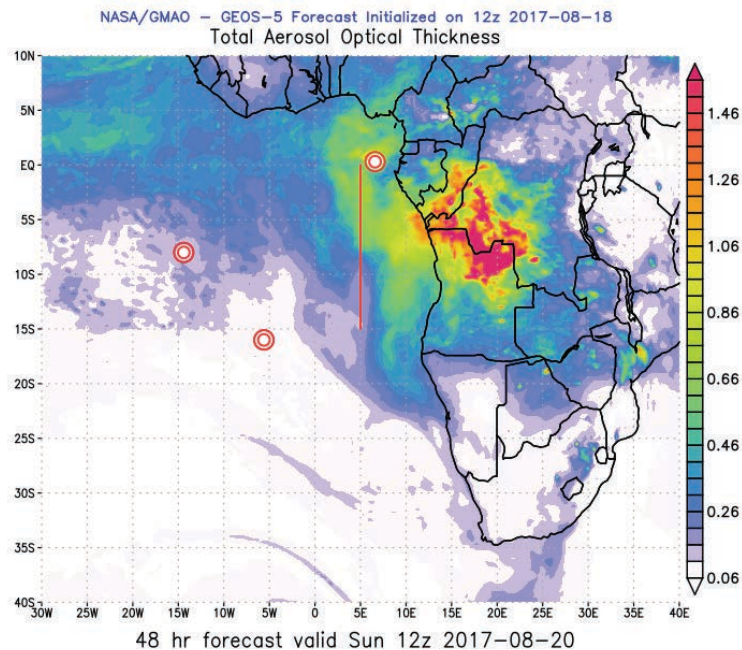
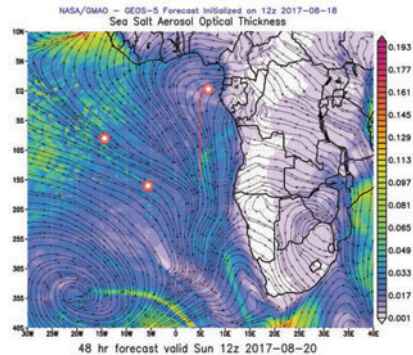
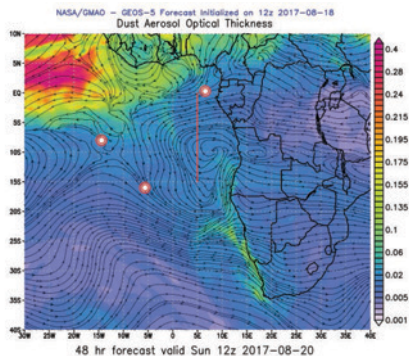
Low (red) + High (blue) cloud = magenta  
Mid (green) + High (blue) cloud = cyan  
Low (red) + Mid (green) cloud = yellow

Cloud Fraction: low (red), mid (green), high (blue) cloud

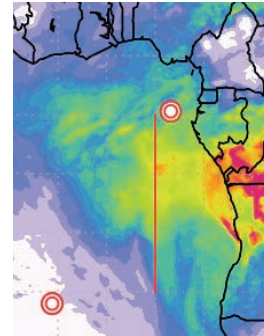




# Sunday 20 Aug 2017 12Z







Flight Day (Routine Flight, planned)

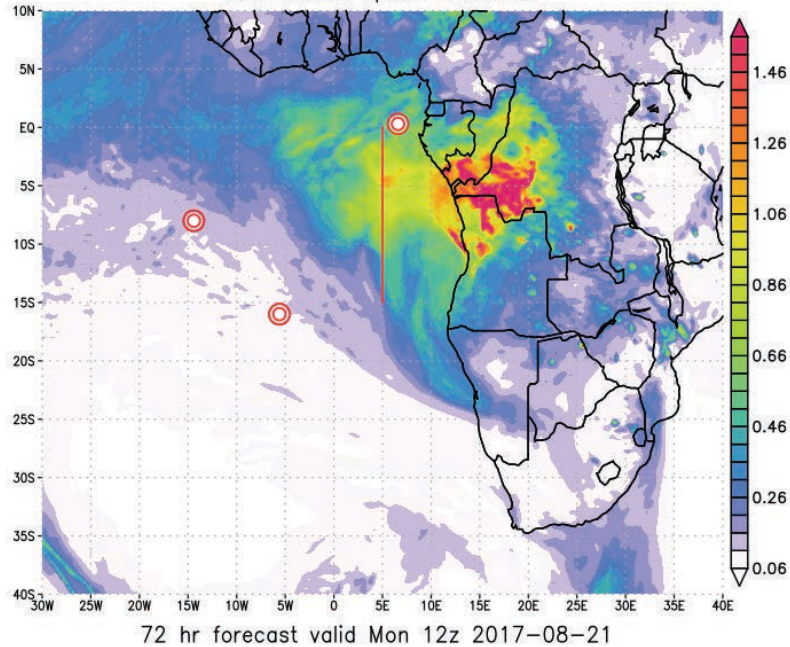
**MONDAY 21 AUGUST 2017**



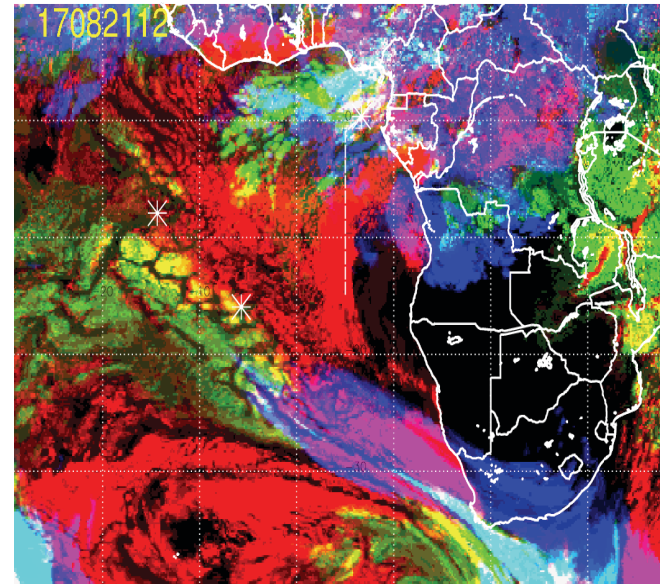
# Monday, 21 August 2017 12Z



NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-18  
Total Aerosol Optical Thickness

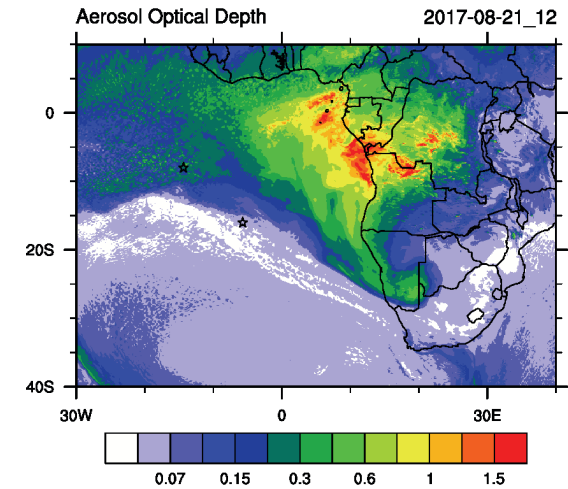
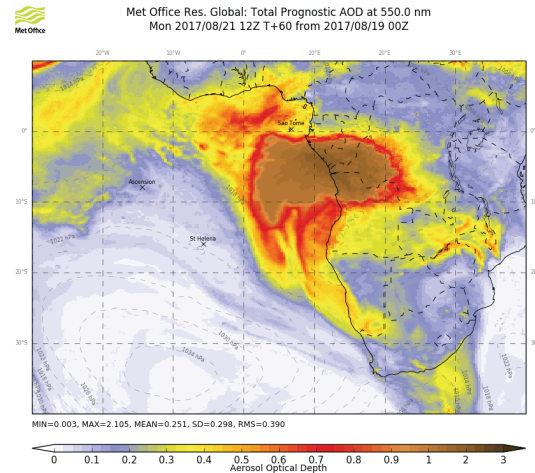
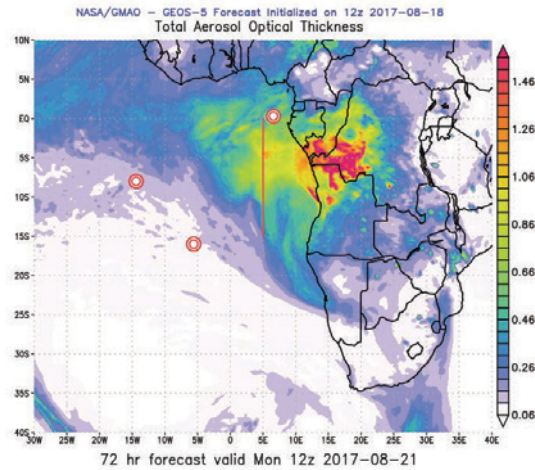
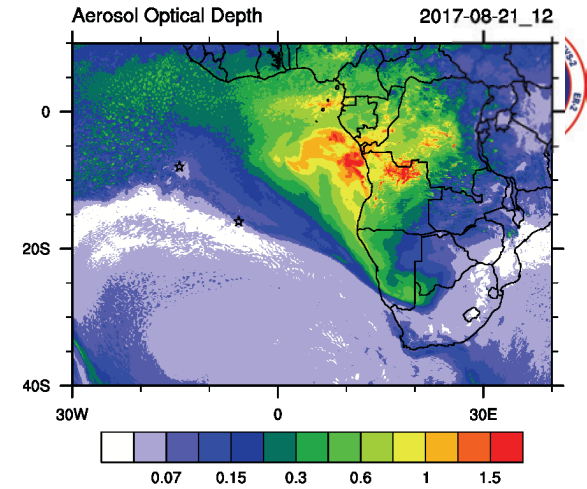
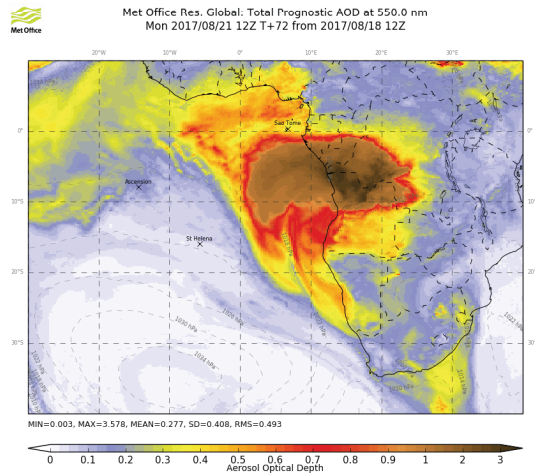
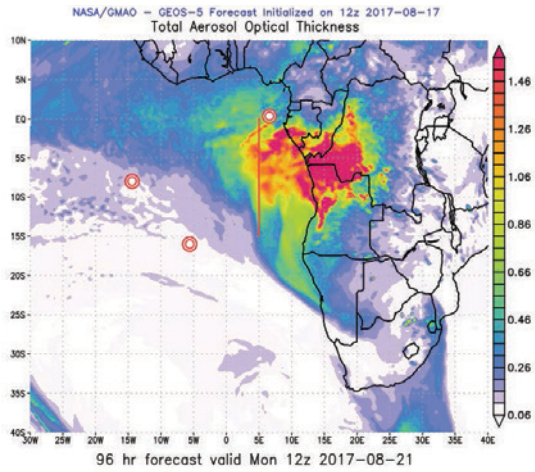


17082112, 072 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF



Low (red) + High (blue) cloud = magenta  
Mid (green) + High (blue) cloud = cyan  
Low (red) + Mid (green) cloud = yellow

Cloud Fraction: low (red), mid (green), high (blue) cloud





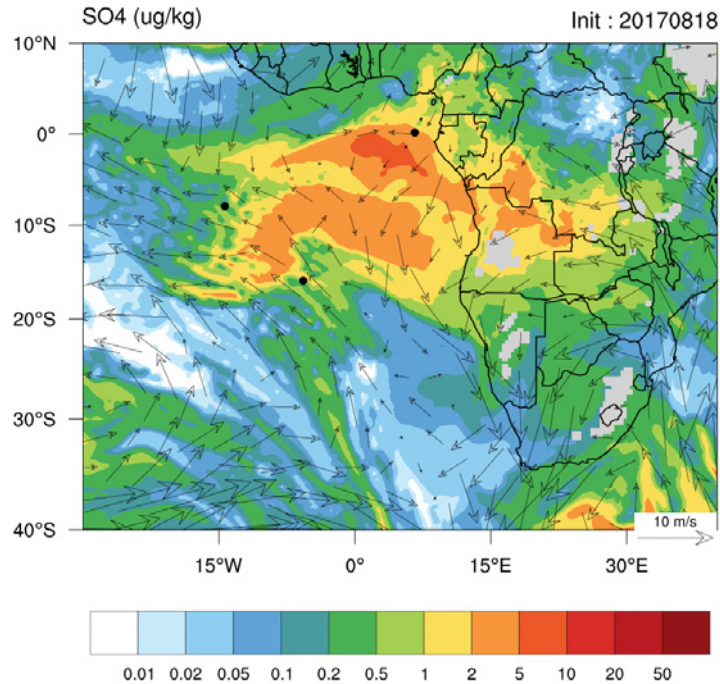


# Sulfate plume development

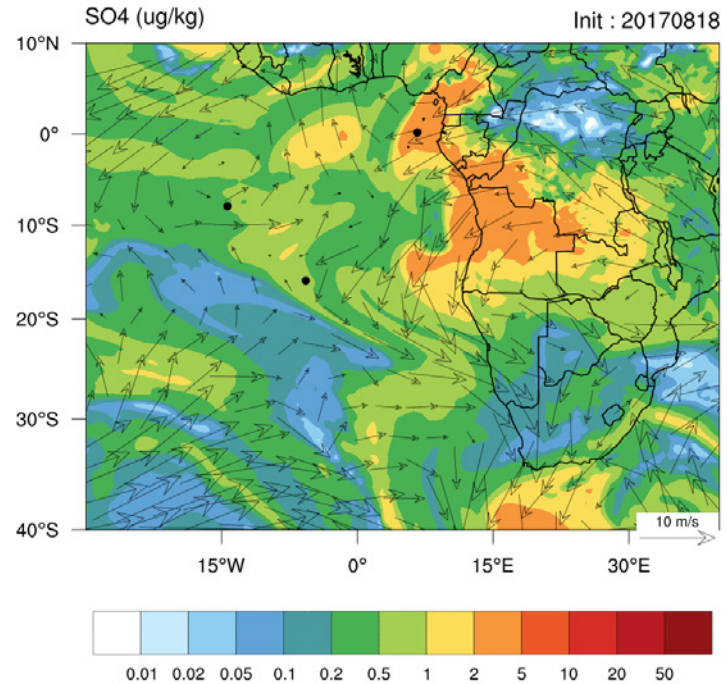
## Saturday to Monday



SO4-2017-08-19\_12Z-850mb

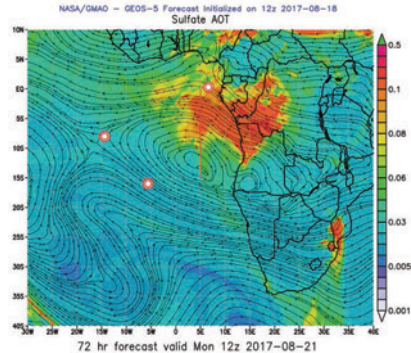
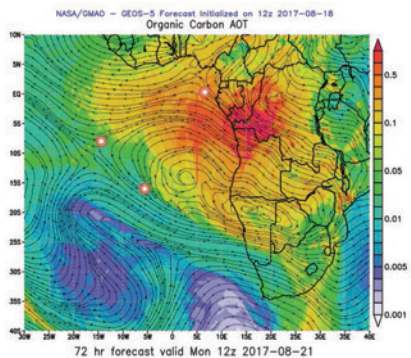
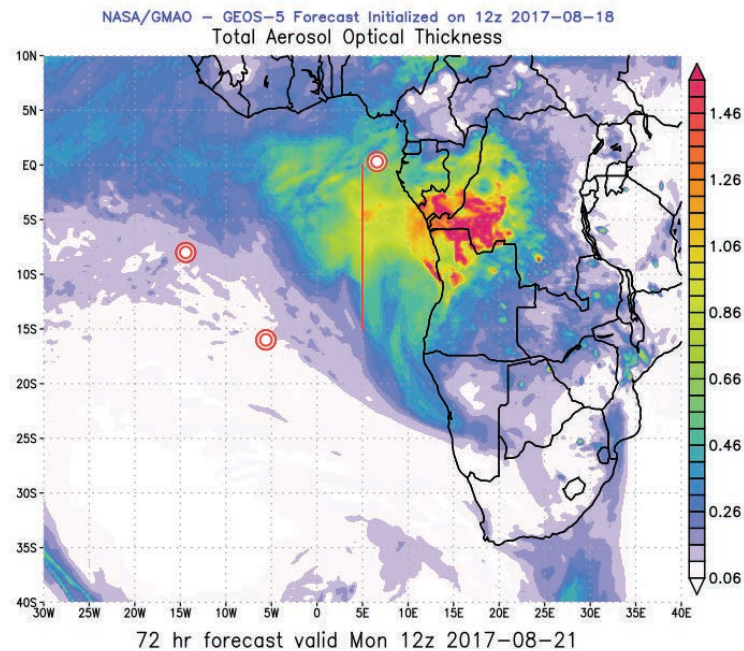
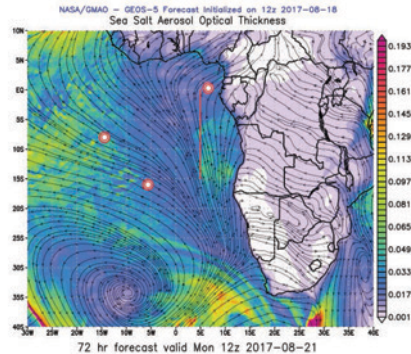
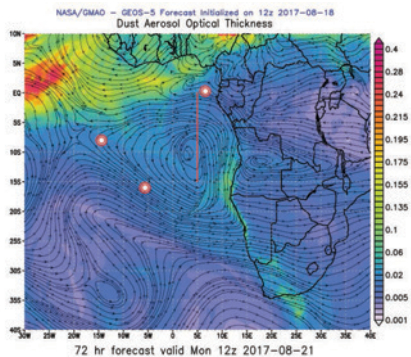


SO4-2017-08-19\_12Z-700mb





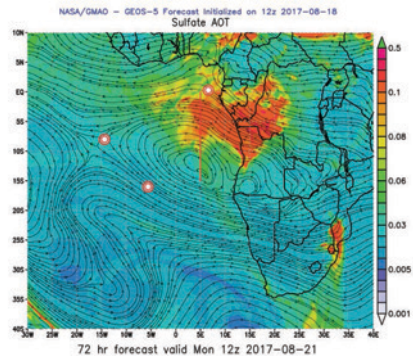
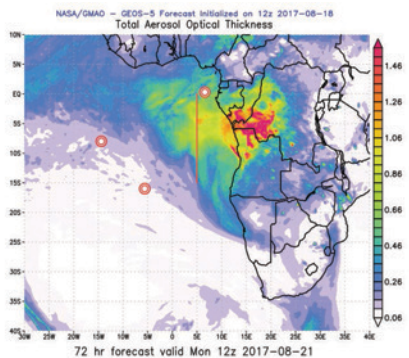
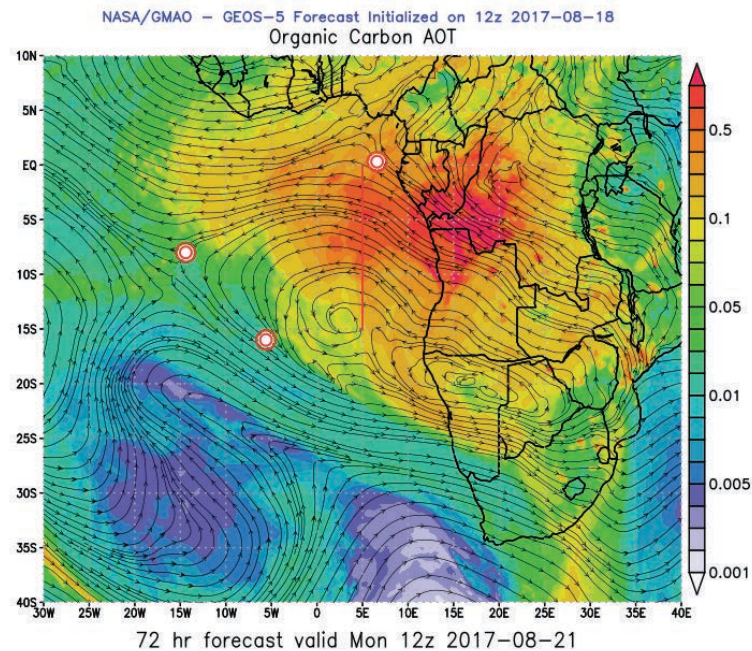
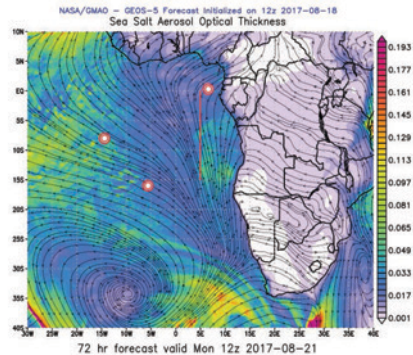
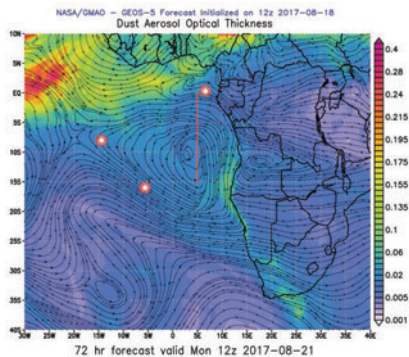
# Monday, 21 August 2017 12Z







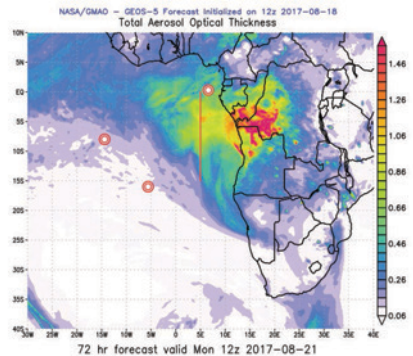
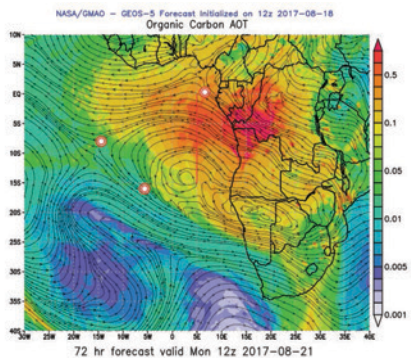
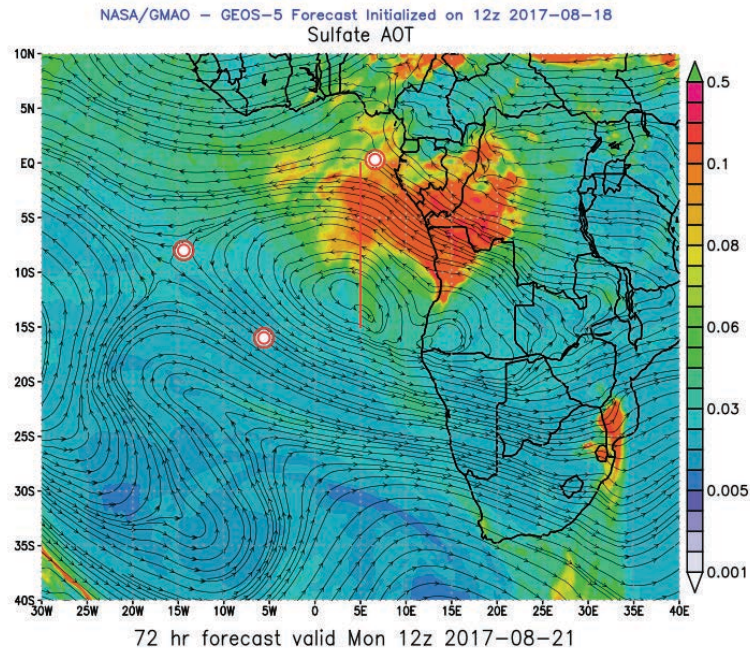
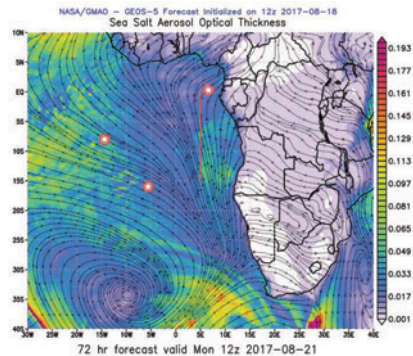
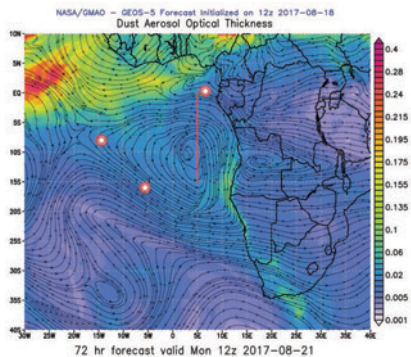
# Monday, 21 August 2017 12Z



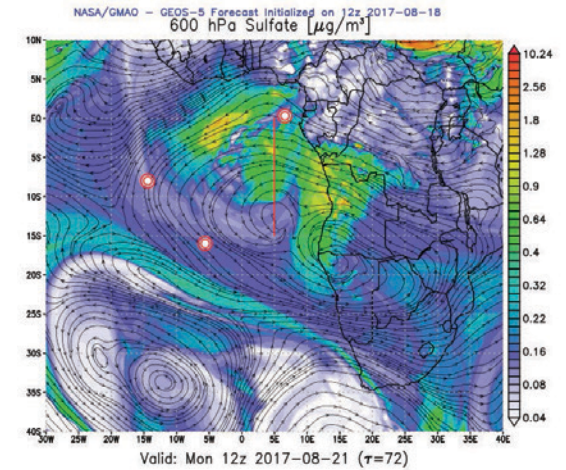
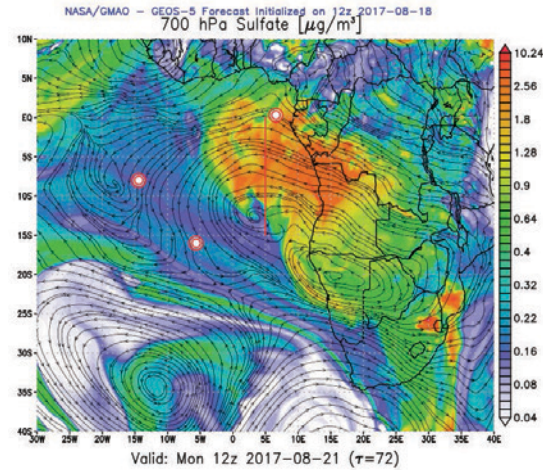
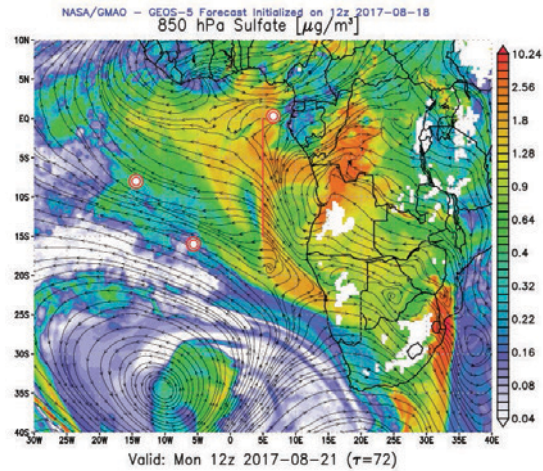
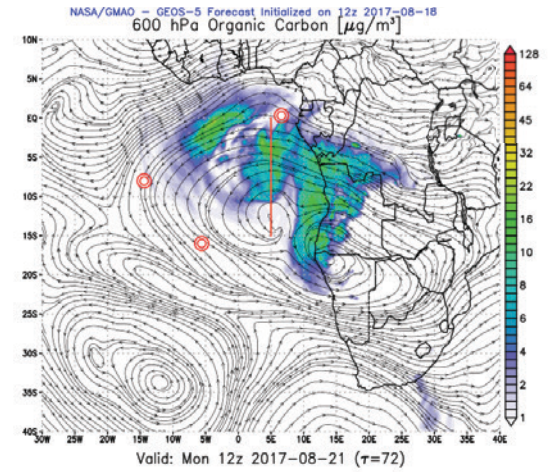
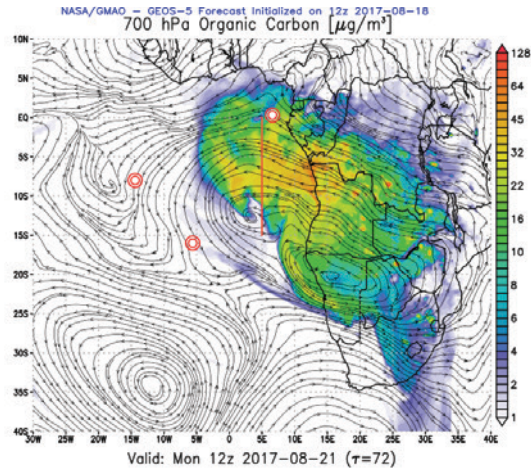
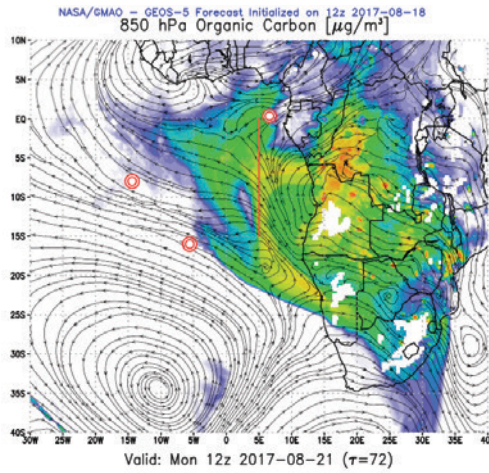




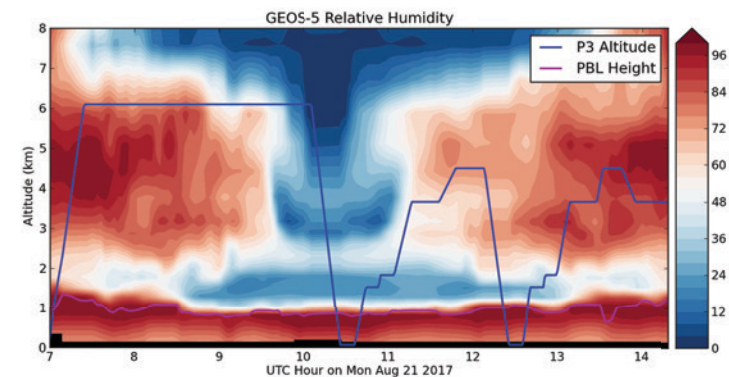
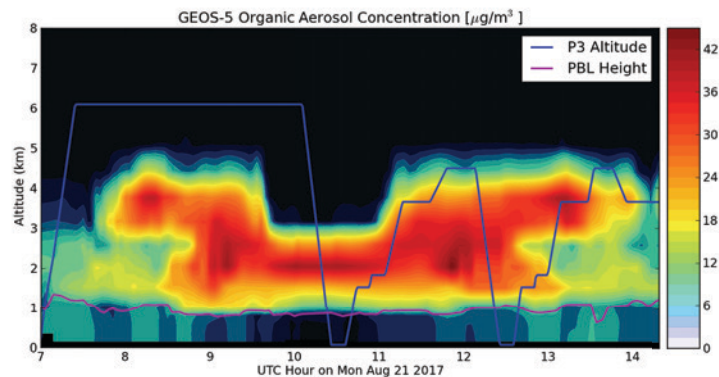
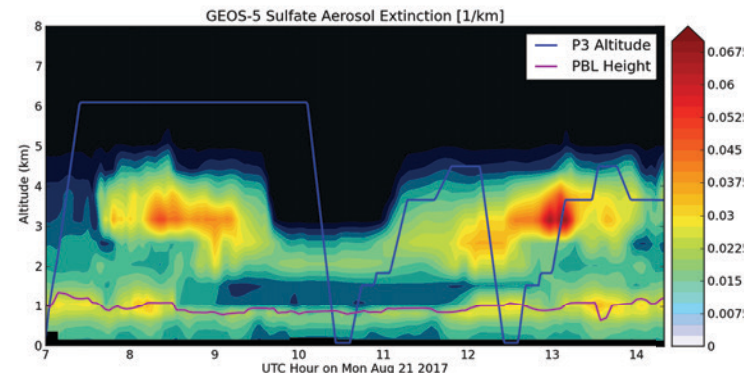
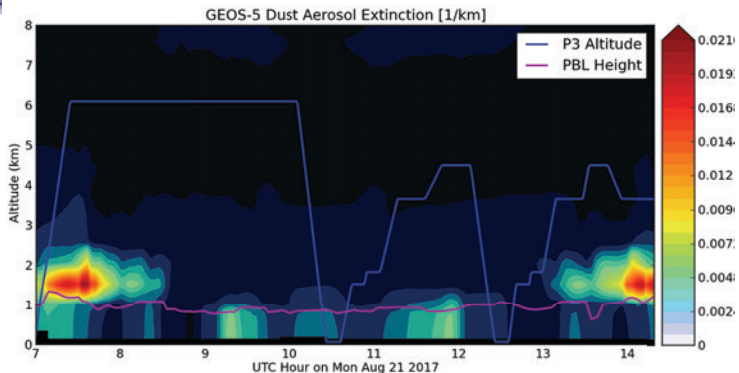
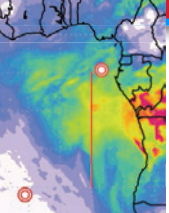
# Monday, 21 August 2017 12Z





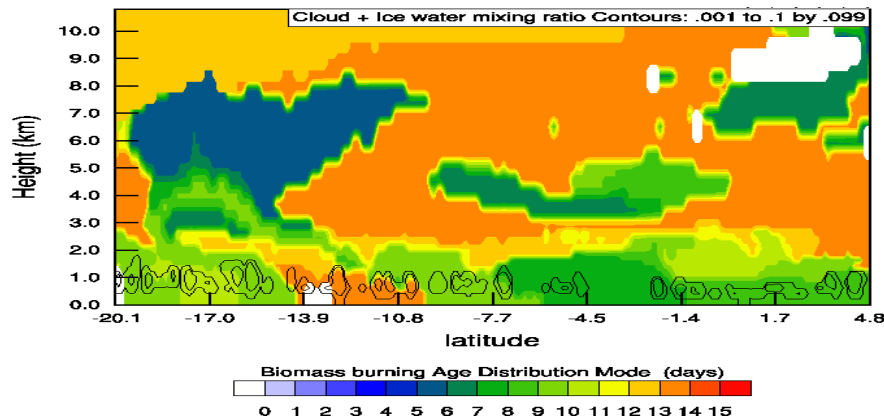
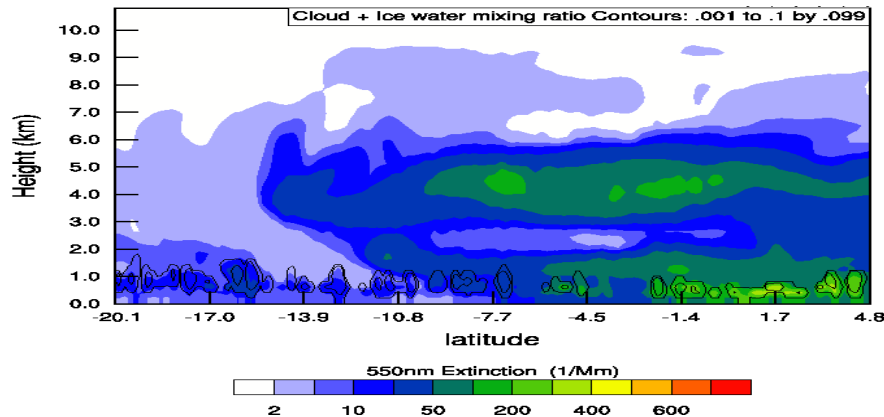
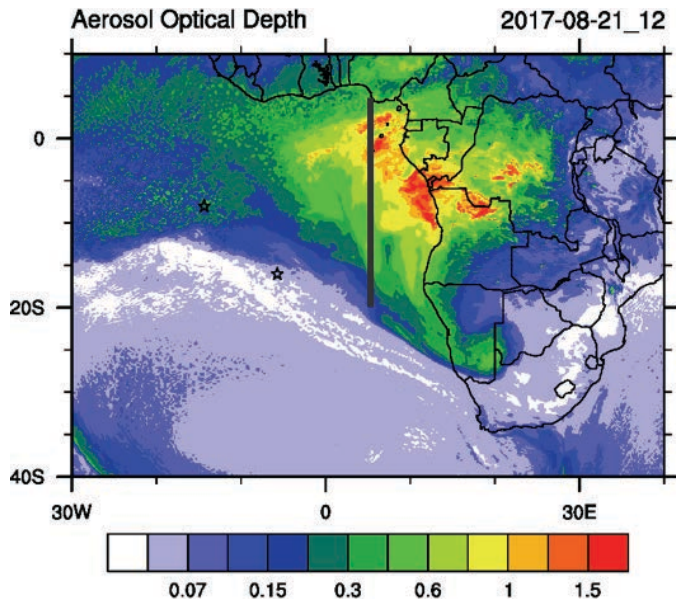


# Monday, 21 August 2017 12Z





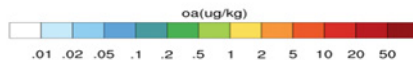
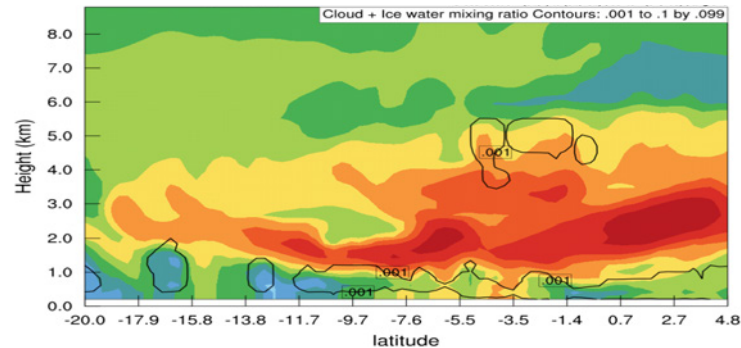
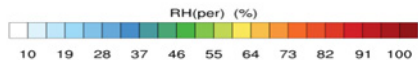
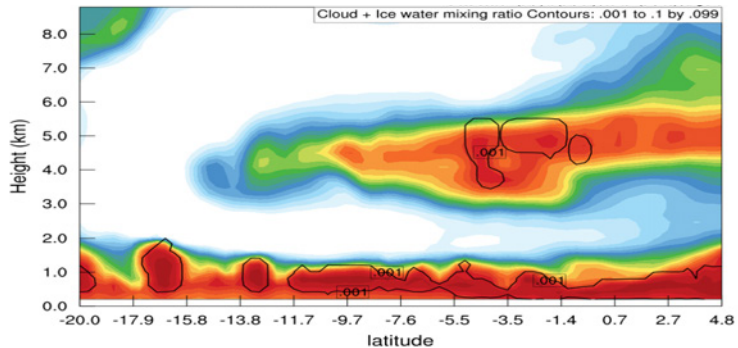
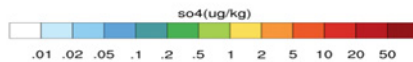
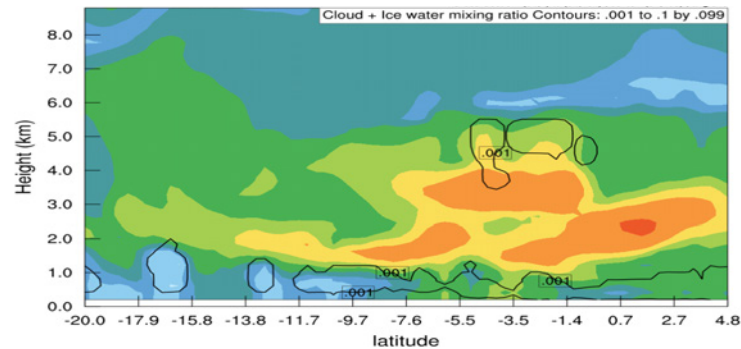
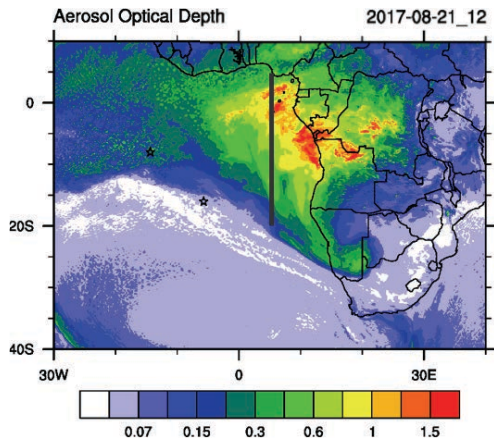
# Cross sections at 5 W – 12 Z







# Cross sections at 5 W – 12 Z





**No Fly Day**

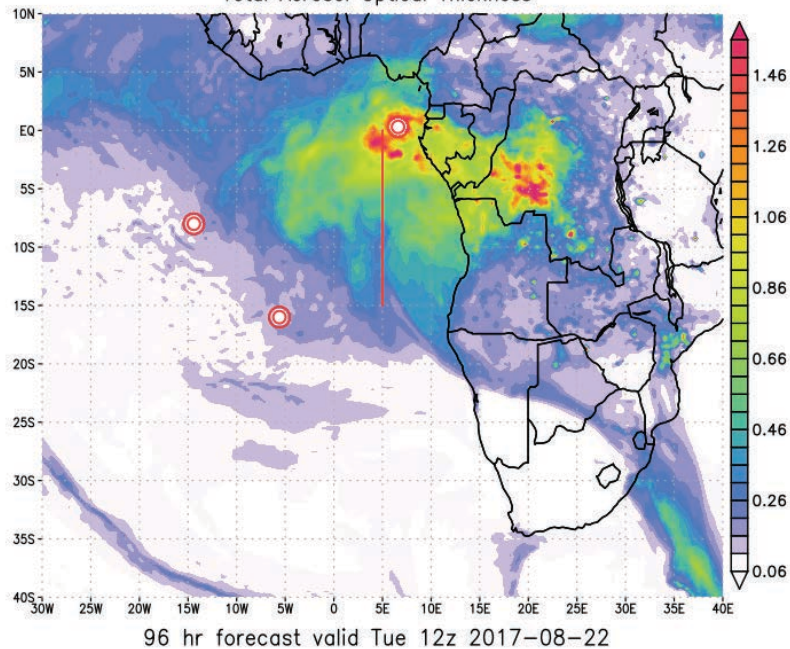
**TUESDAY, 22 AUGUST 2017**



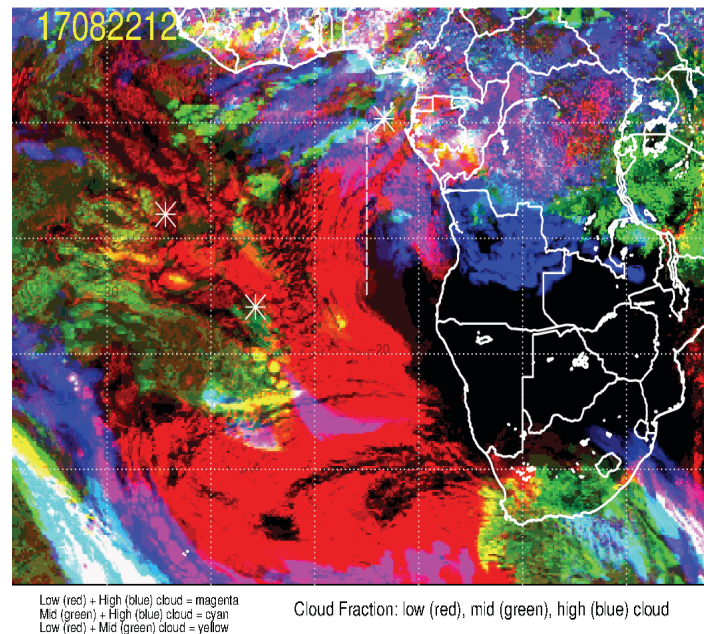
# Tuesday 22 Aug 2017 12Z



NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-18  
Total Aerosol Optical Thickness



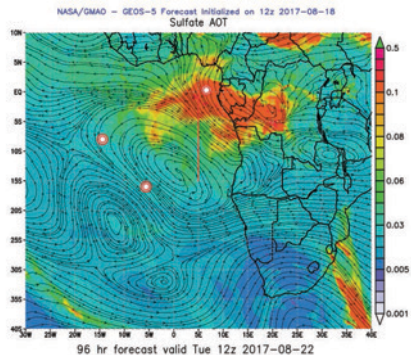
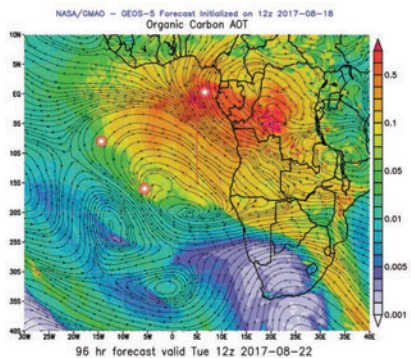
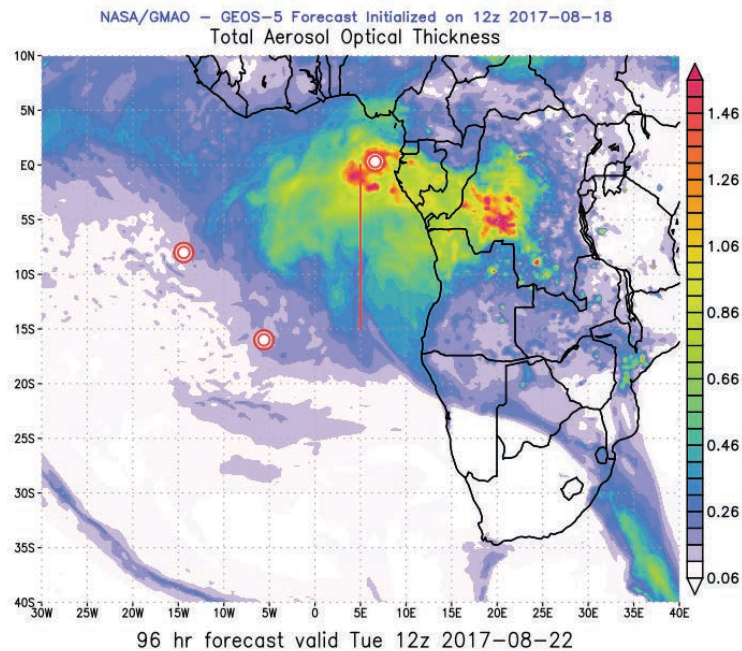
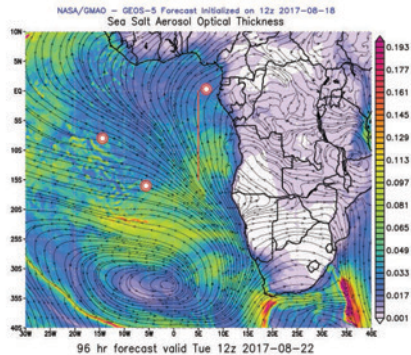
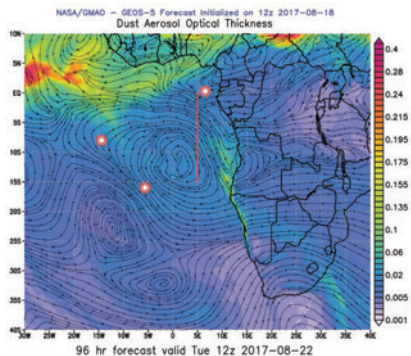
17082212, 096 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF







# Tuesday 22 Aug 2017 12Z



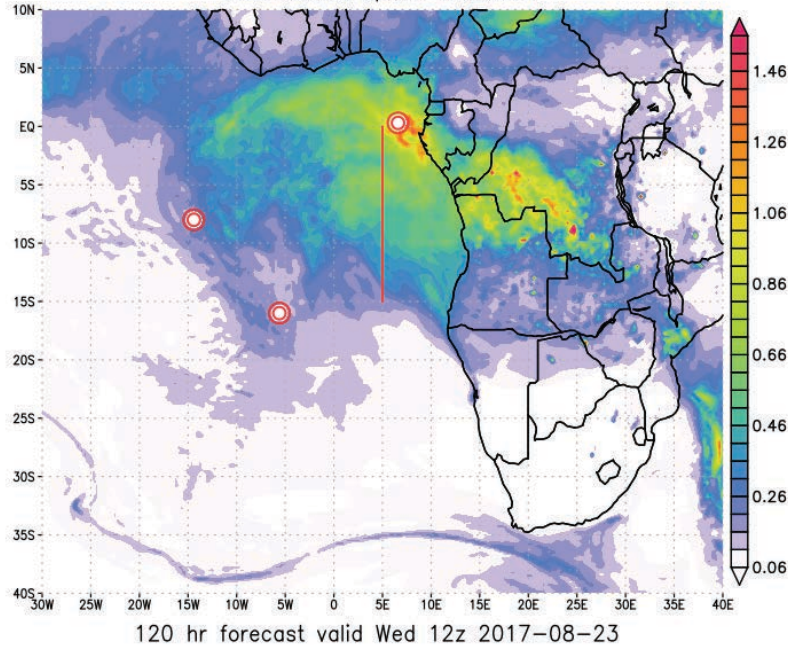




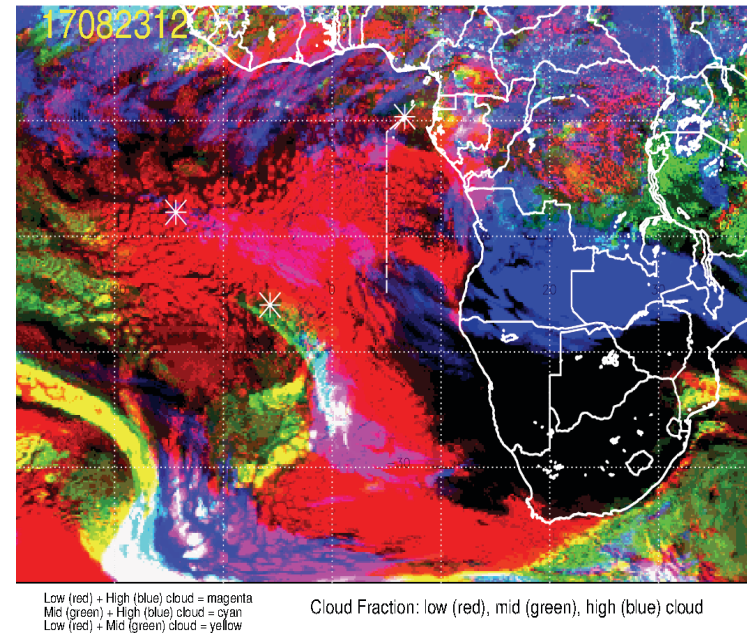
# Wednesday, 23 August 2017 12Z



NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-18  
Total Aerosol Optical Thickness



17082312, 120 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF







# Wednesday, 23 August 2017 12Z

