



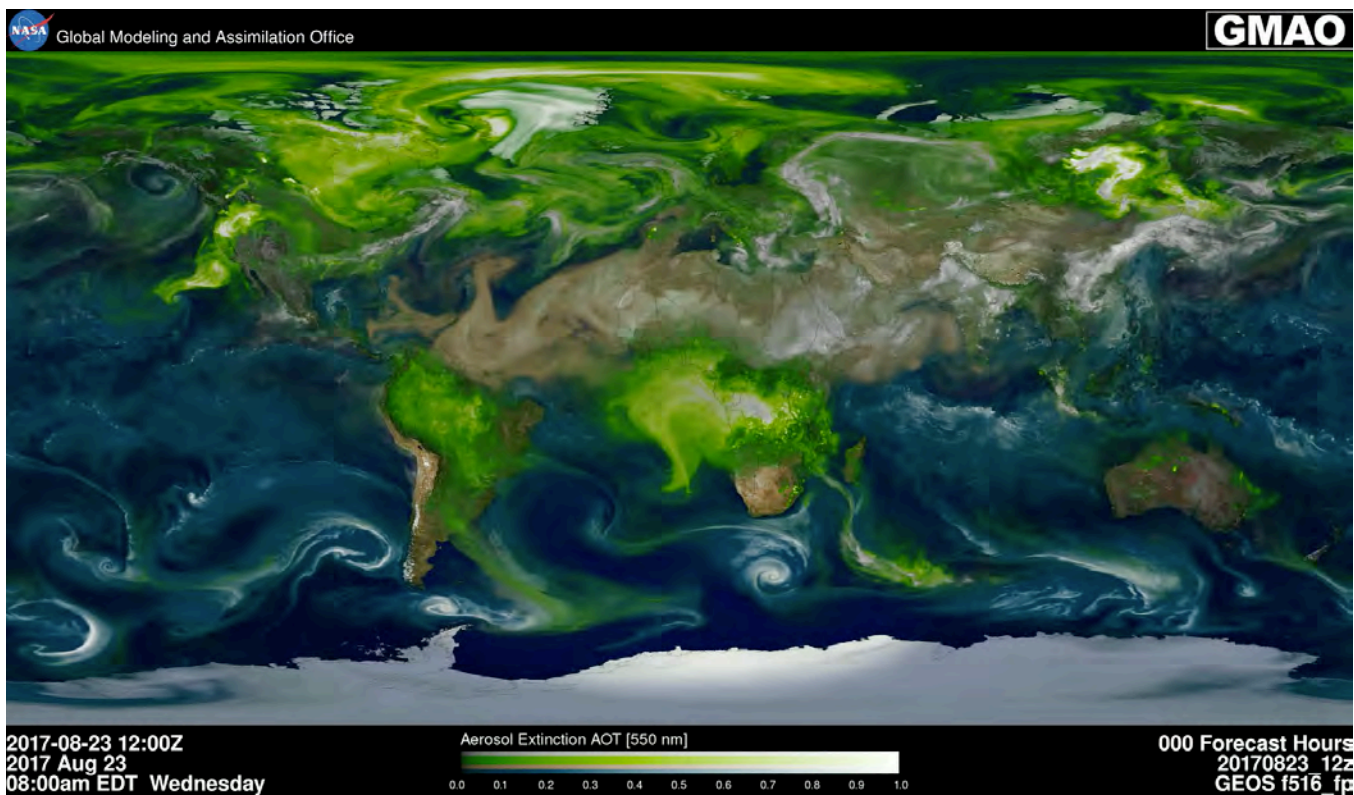
ORACLES Forecast Briefing

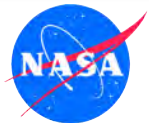
Aerosols

Thursday, 24 August 2017

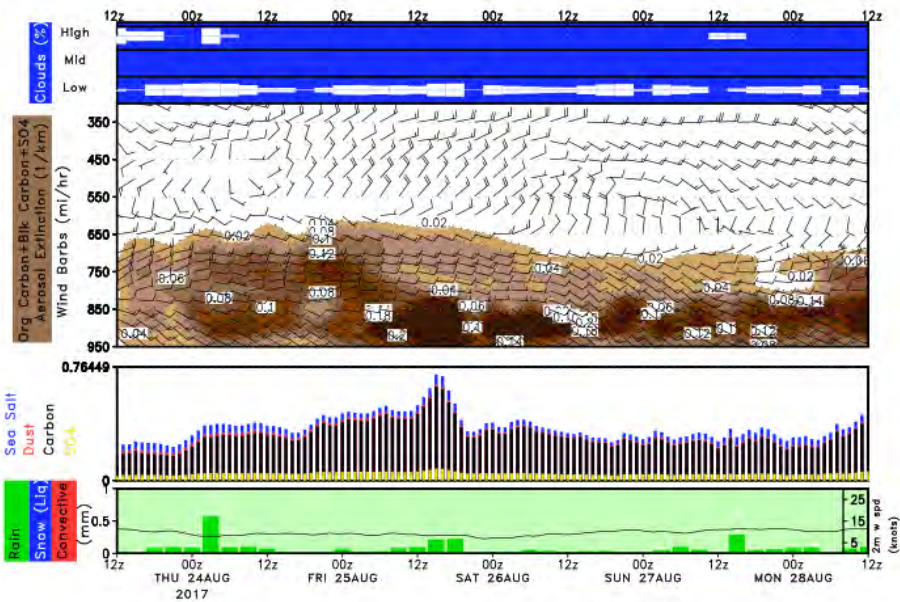


The Aerosol Week

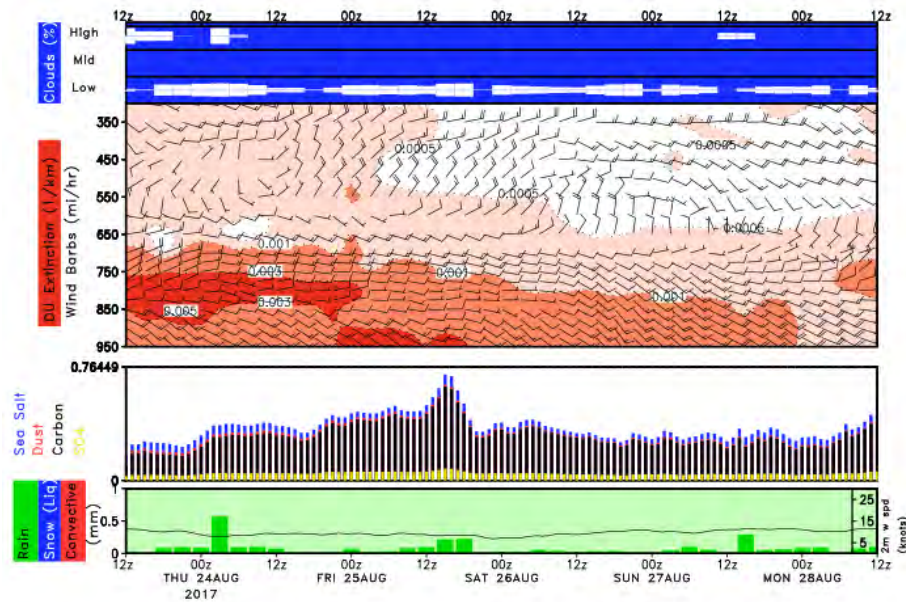




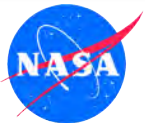
Ascension (OC+BC+SO4 & Dust)



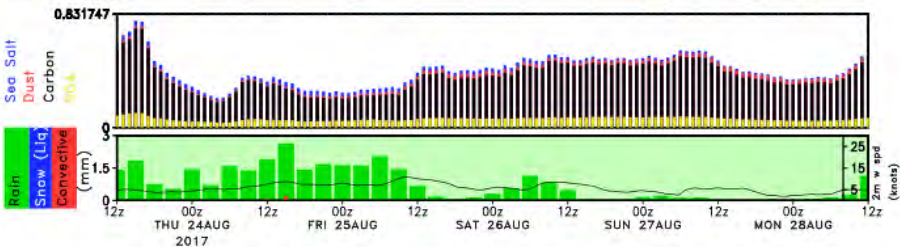
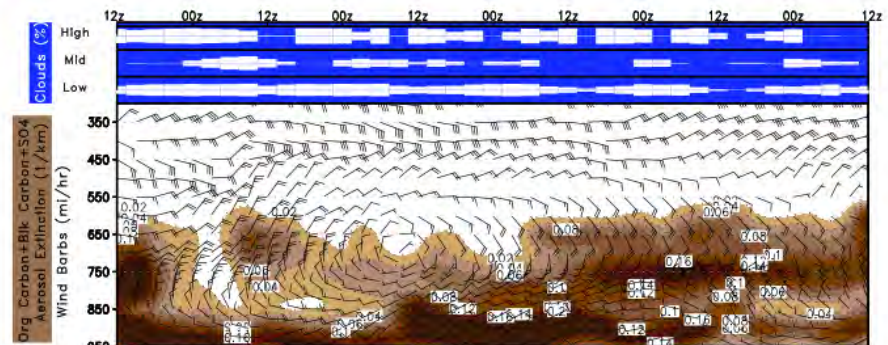
LAT = -8.0 , LON = -14.4, Location = ORACLES_Ascension_Island, Fcst_init = 20170823



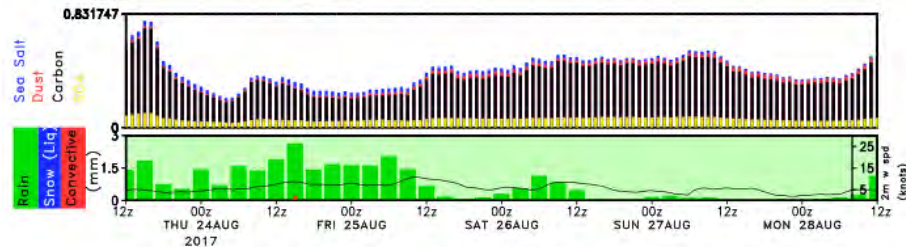
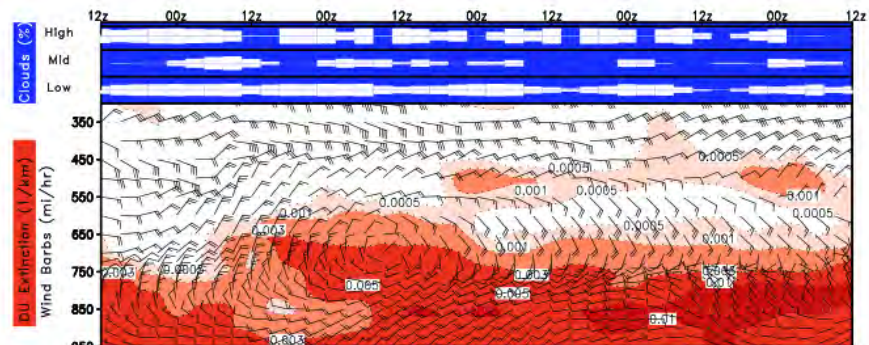
LAT = -8.0 , LON = -14.4, Location = ORACLES_Ascension_Island, Fcst_init = 20170823



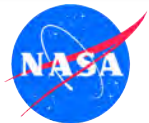
São Tomé (OC+BC+SO4 & Dust)



LAT = 0.3 , LON = 6.6, Location = ORACLES_Sao_Tome_e_Principe, Fcst_init = 20170823

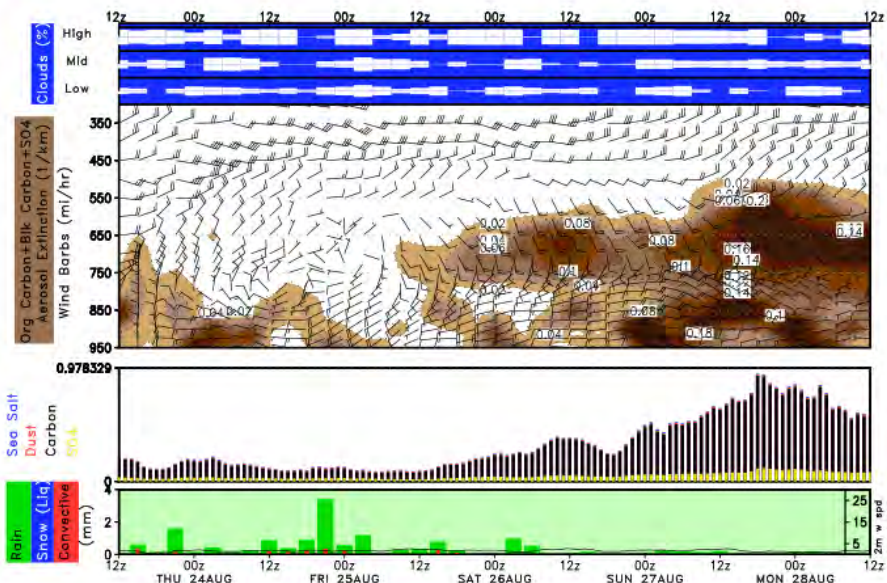


LAT = 0.3 , LON = 6.6, Location = ORACLES_Sao_Tome_e_Principe, Fcst_init = 20170823

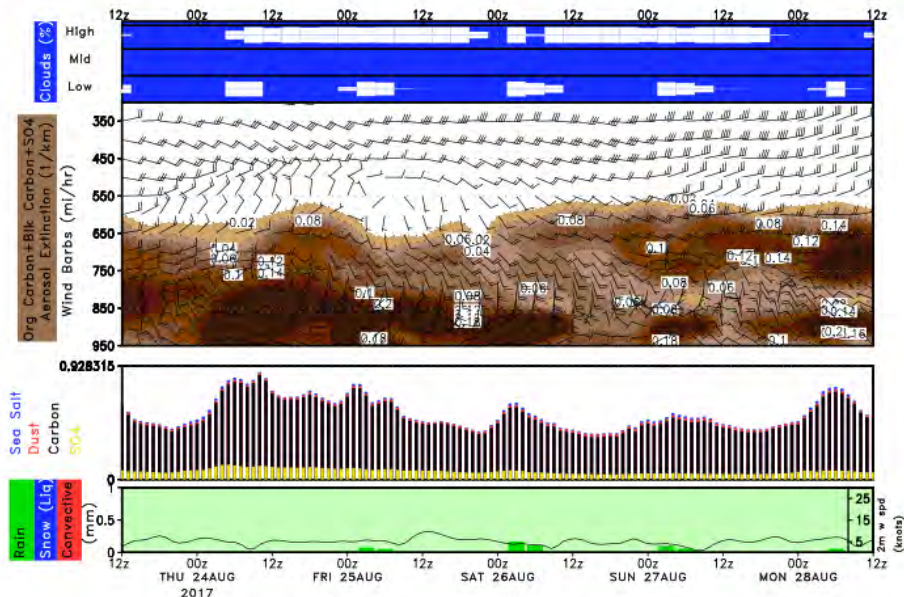


Lope Gabon 0.2S

Luanda 8.8S



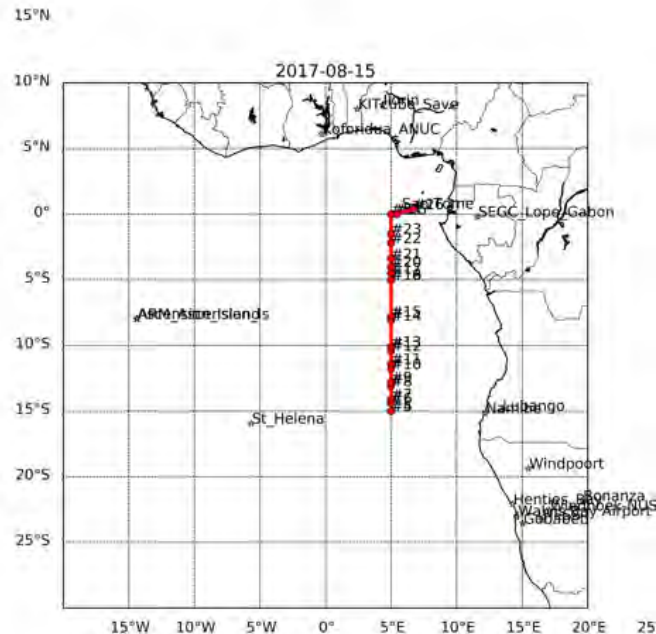
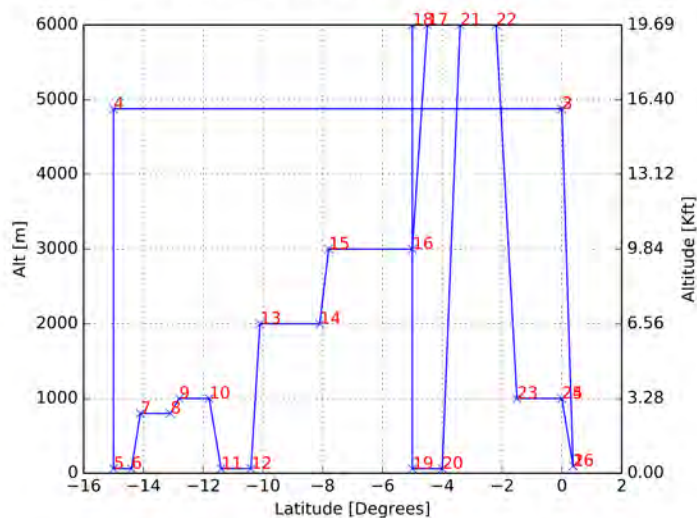
LAT = -0.2 , LON = 11.6, Location = ORACLES_SEGC_Lope_Gabon, Fcst_init = 20170823



LAT = -8.8 , LON = 13.2, Location = ORACLES_Luanda, Fcst_init = 20170823

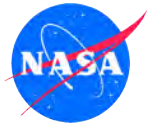


Altitude vs. Latitude for P3 on 2017-08-15



Flight Day (Routine Flight?)

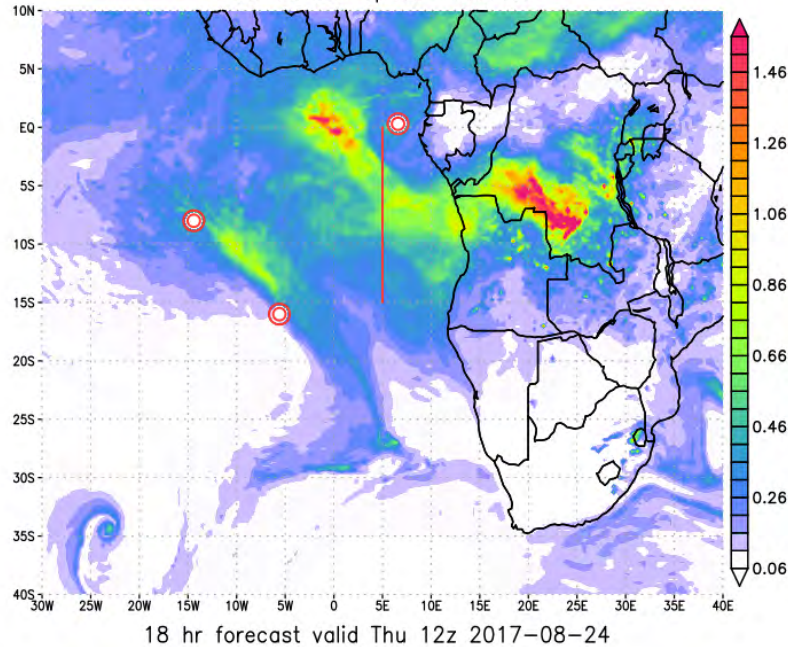
THURSDAY, 24 AUGUST 2017



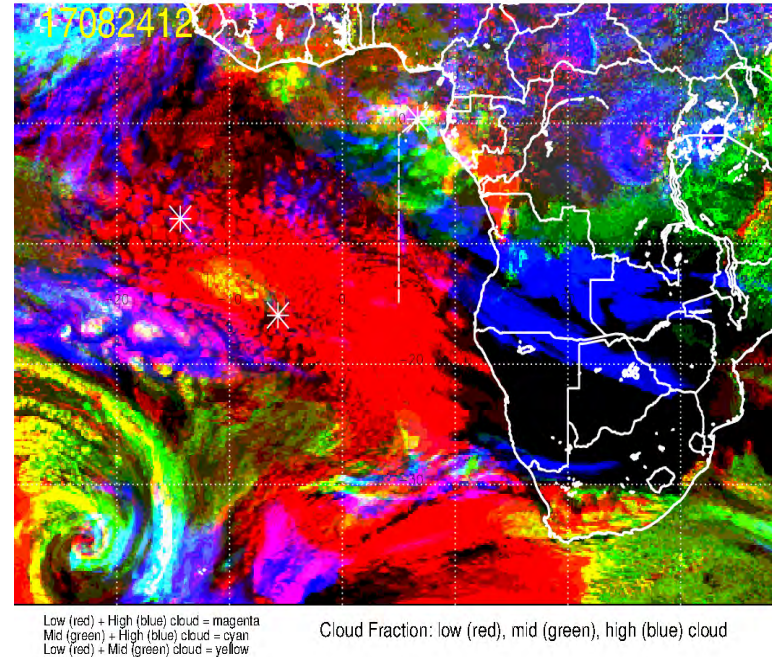
Thursday, 24 August 2017 12Z

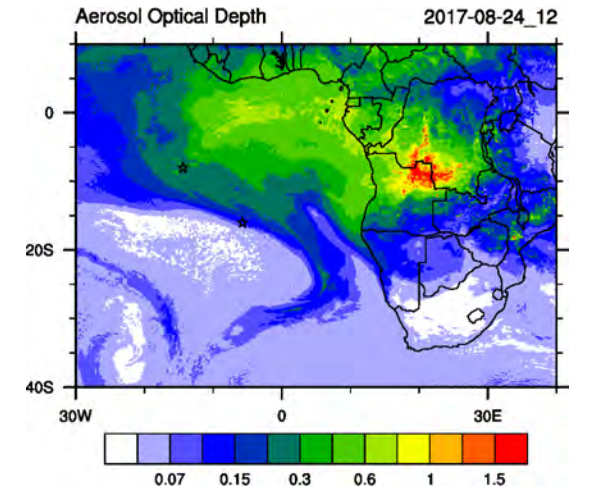
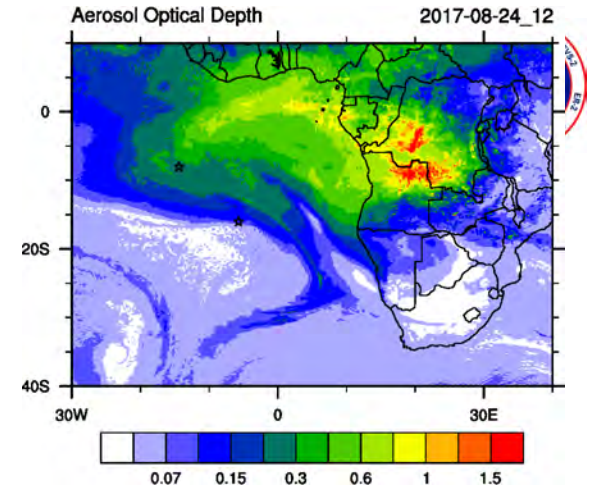
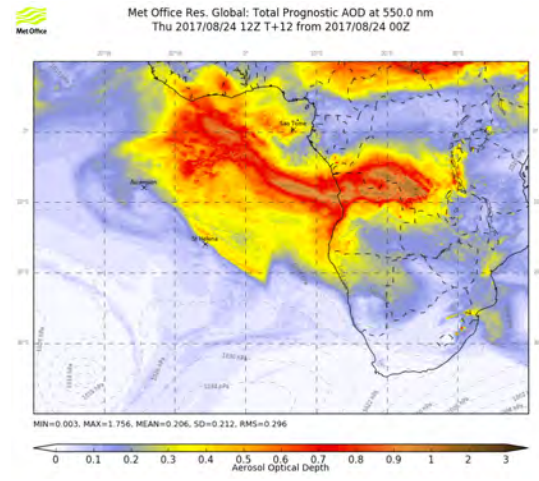
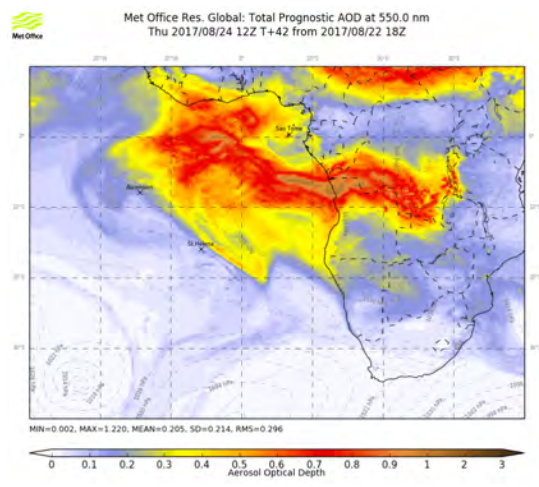
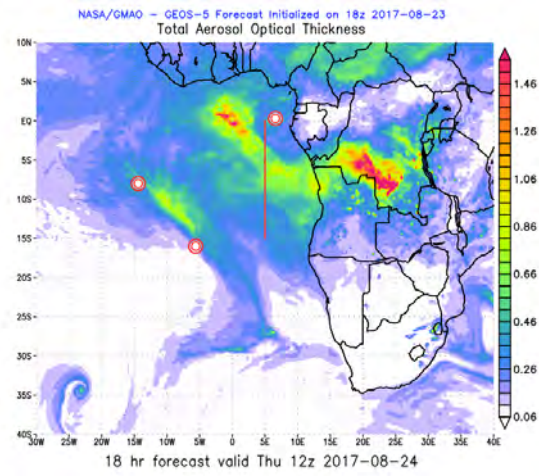
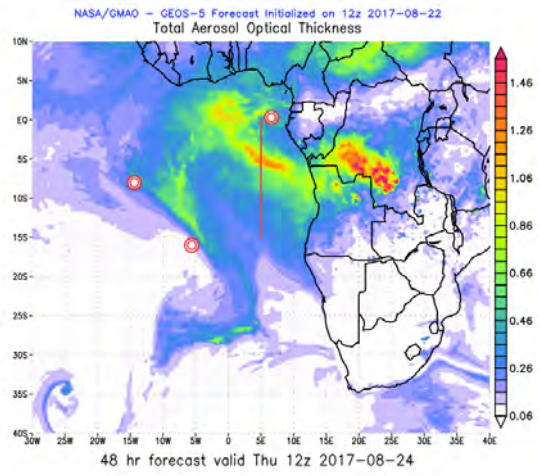


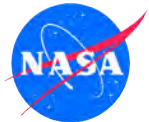
NASA/GMAO - GEOS-5 Forecast Initialized on 18z 2017-08-23
Total Aerosol Optical Thickness



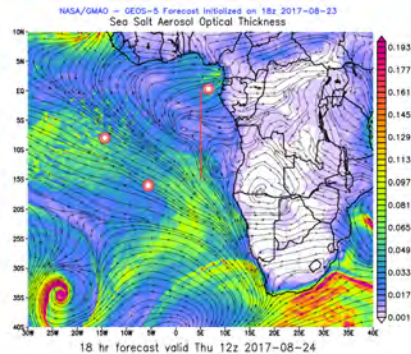
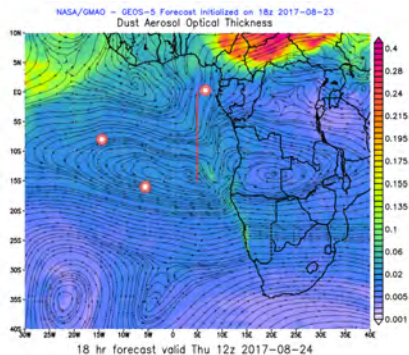
17082412, 024 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF



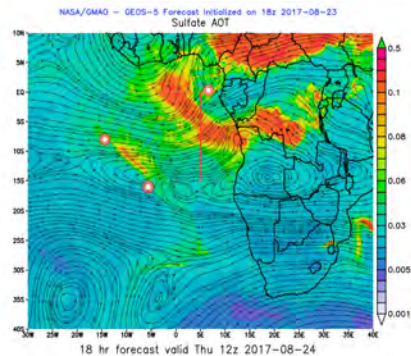
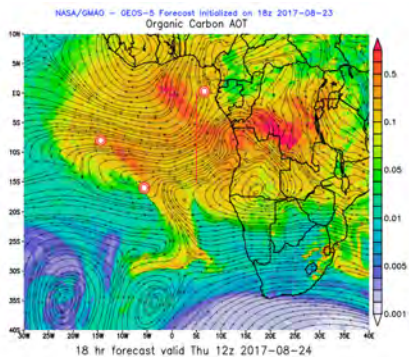
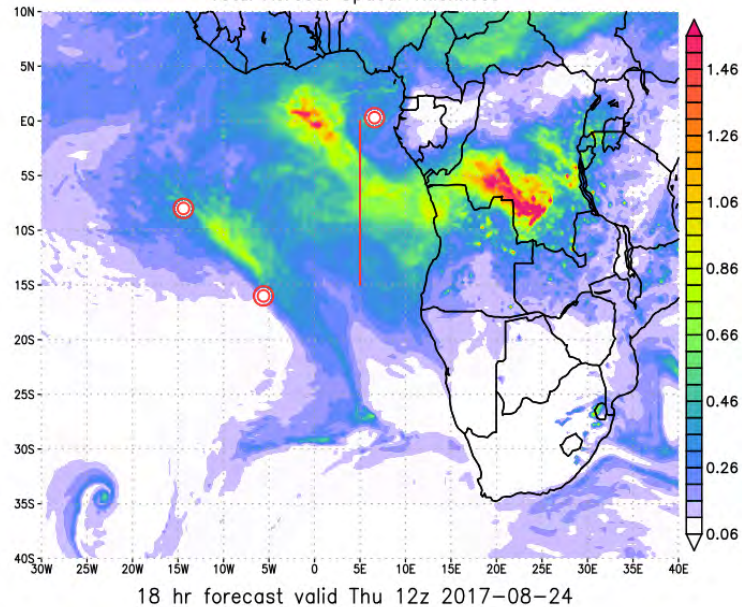


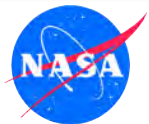


Thursday, 24 August 2017 12Z



NASA/GMAO - GEOS-5 Forecast Initialized on 18z 2017-08-23
Total Aerosol Optical Thickness



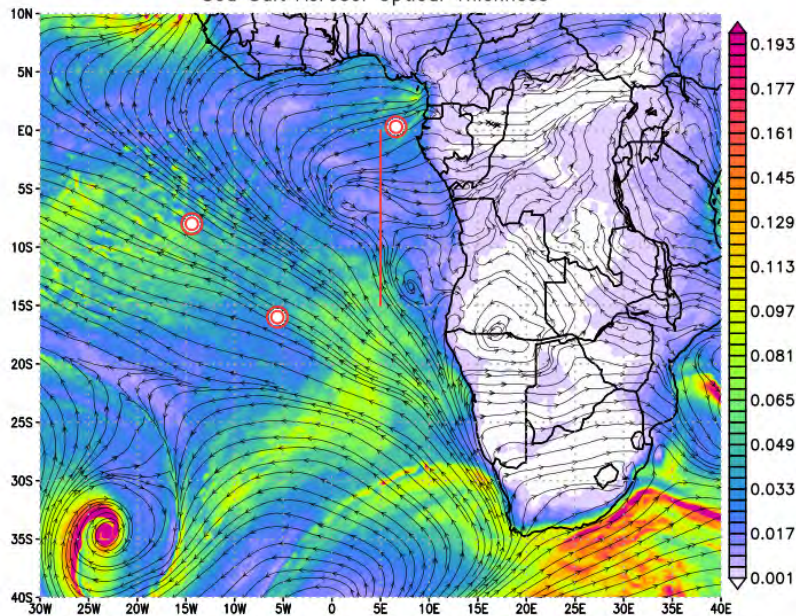


24 Aug 2017 12 Z

Sea Salt and OC

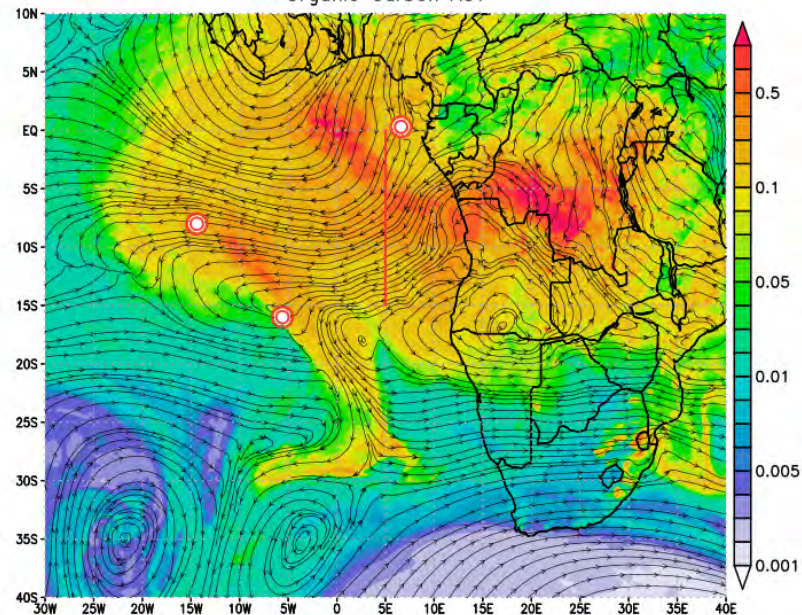


NASA/GMAO - GEOS-5 Forecast Initialized on 18z 2017-08-23
Sea Salt Aerosol Optical Thickness

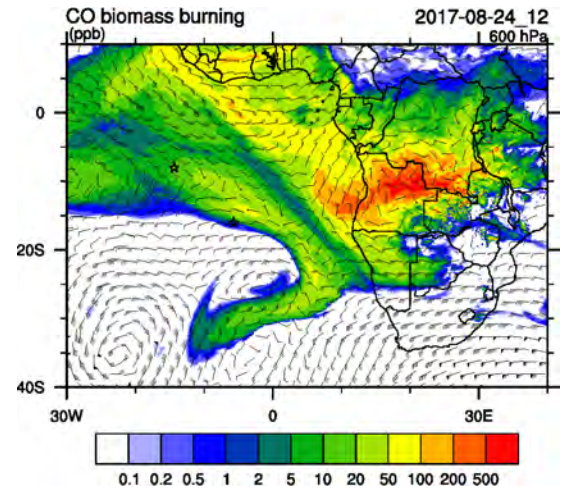
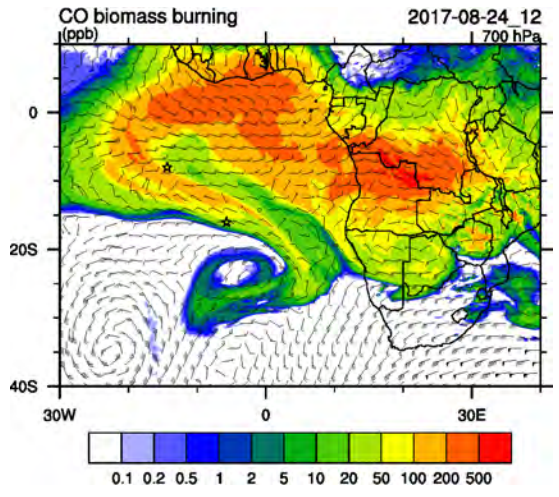
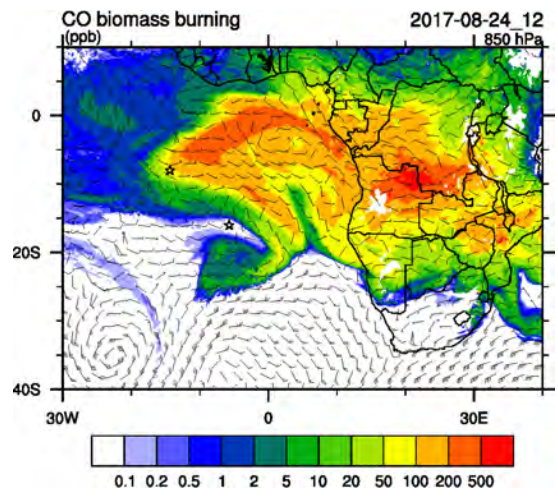
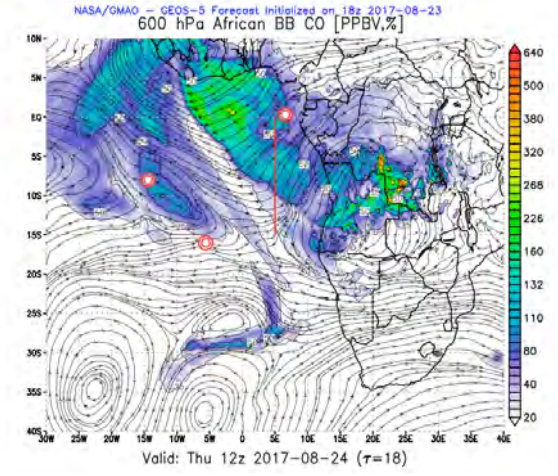
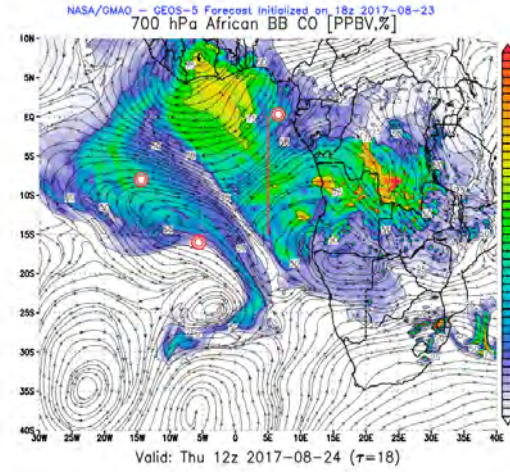
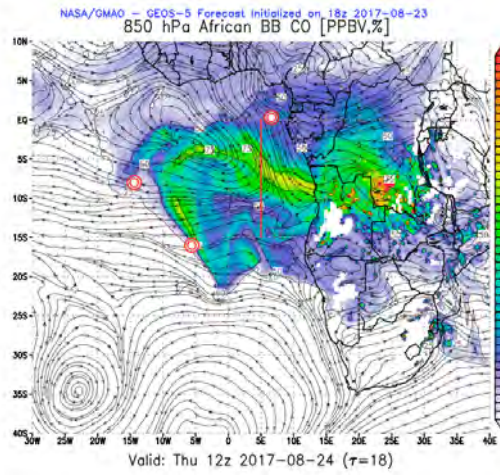


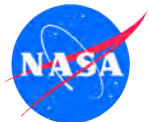
18 hr forecast valid Thu 12z 2017-08-24

NASA/GMAO - GEOS-5 Forecast Initialized on 18z 2017-08-23
Organic Carbon AOT



18 hr forecast valid Thu 12z 2017-08-24





Cross sections – 5 E at 15 Z



S-N at 5E

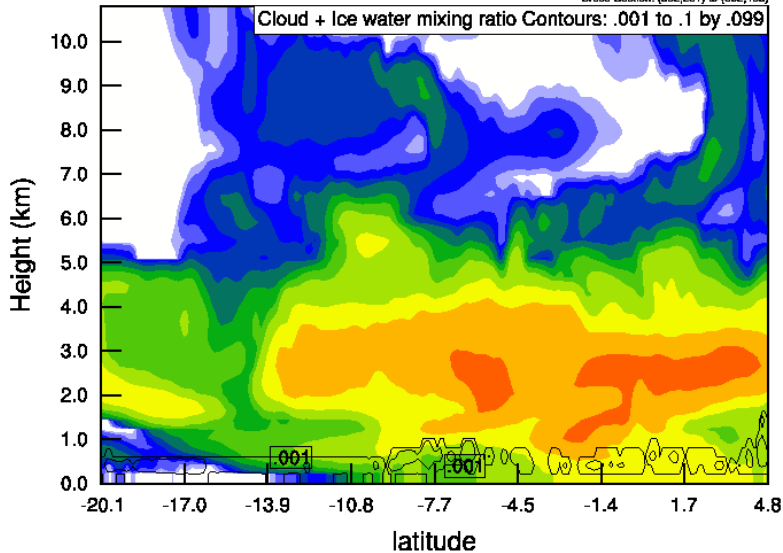
Init: 2017-08-20_00:00:00
Valid: 2017-08-24_15:00:00

S-N at 5E

Init: 2017-08-20_00:00:00
Valid: 2017-08-24_15:00:00

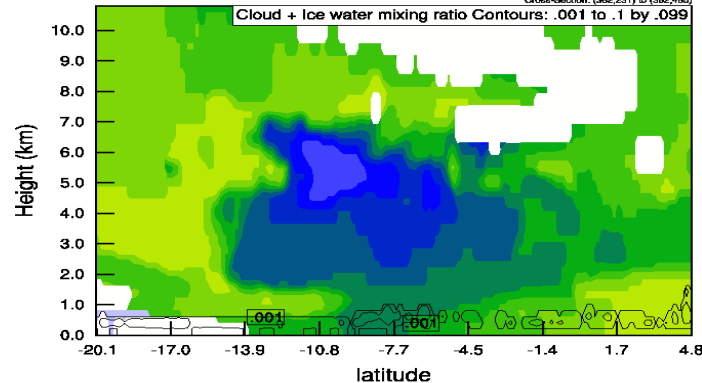
CO biomass burning (ppb)
Cloud + Ice water mixing ratio (g/kg)
Mslh

Cross-Section: (382,231) to (382,485)

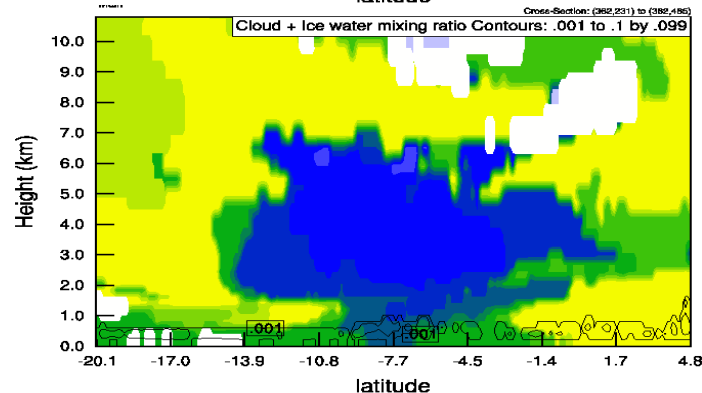


Biomass burning Age Distribution Mean (days)
Cloud + Ice water mixing ratio (g/kg)
Mslh

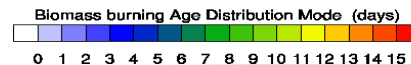
Cross-Section: (382,231) to (382,485)

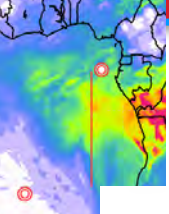


Mean
BB age

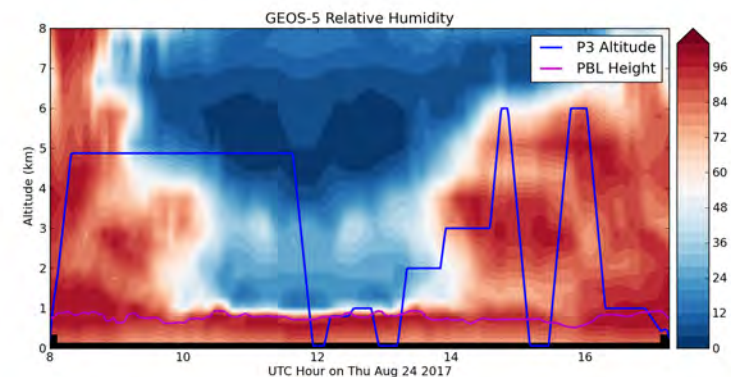
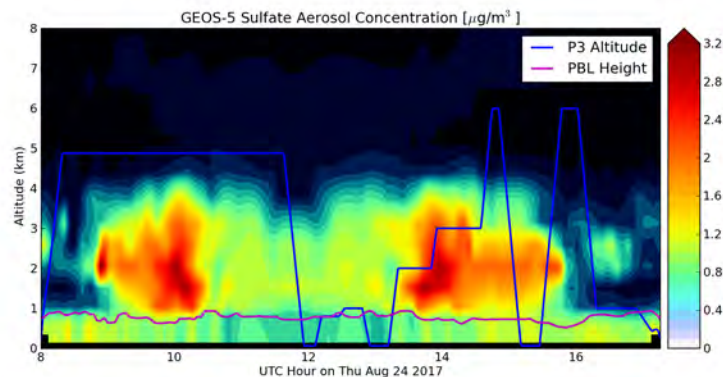
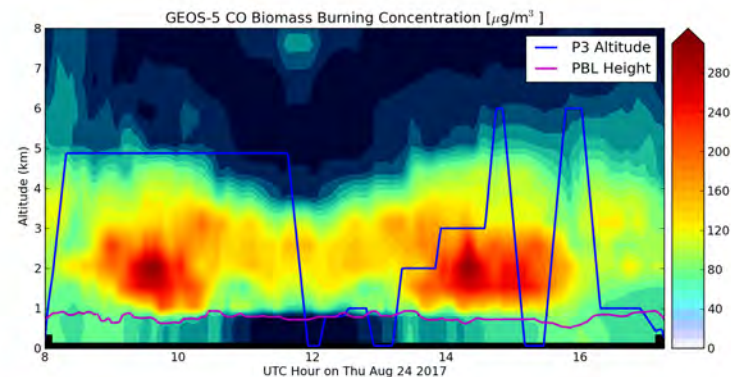
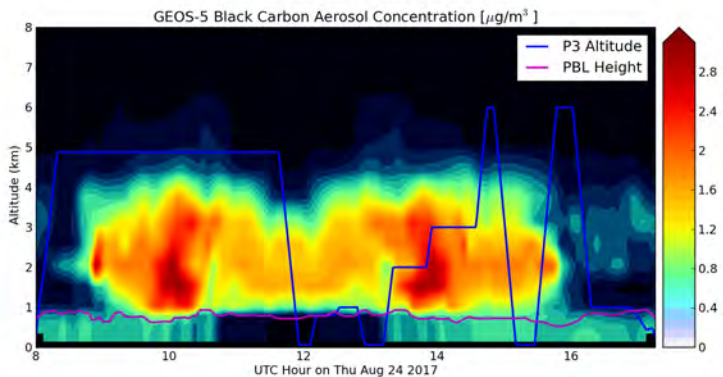


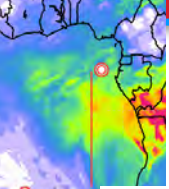
Mode
BB age



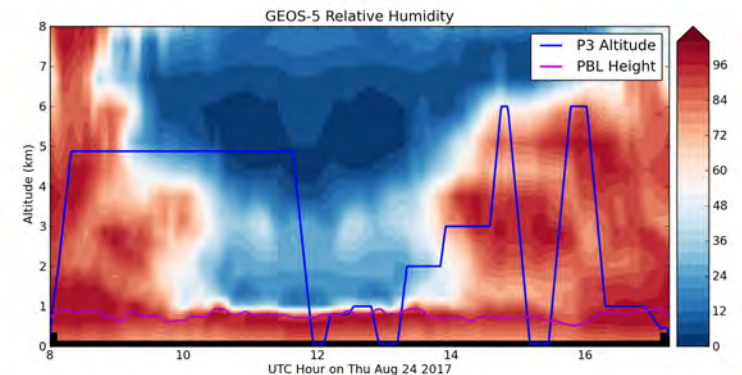
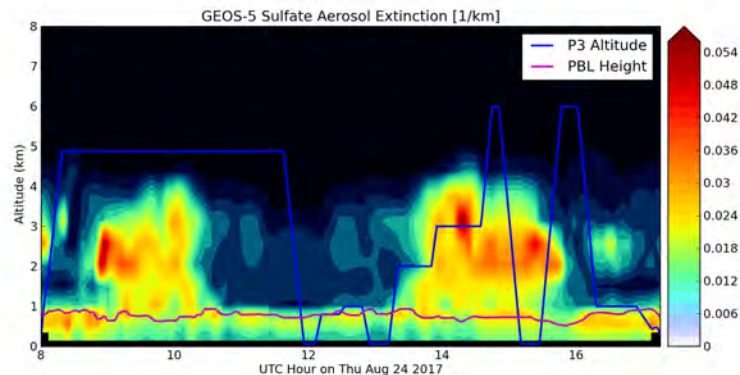
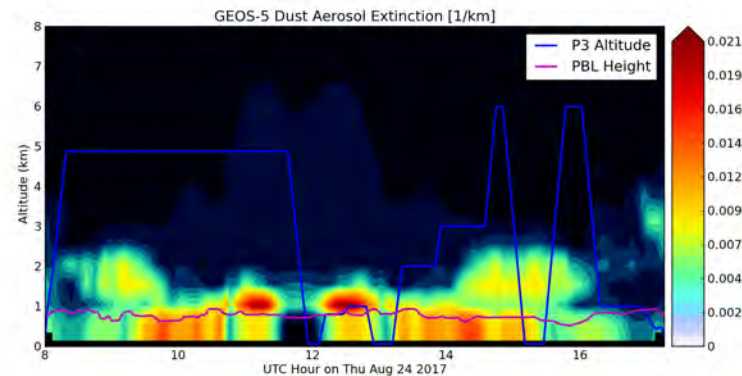
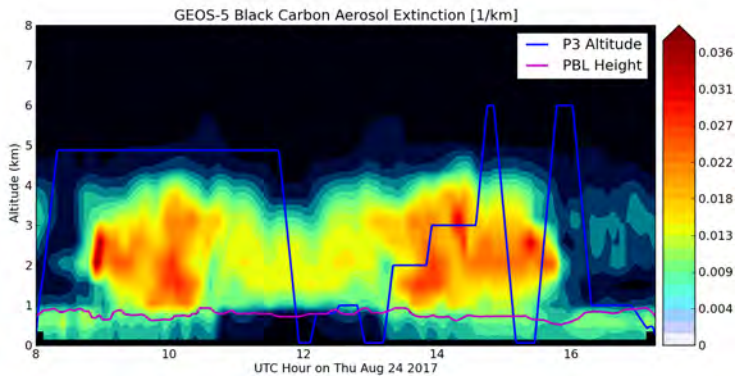


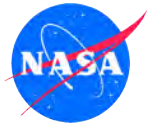
Thu 24 August 2017 (Concentration)





Thu 24 August 2017 (Extinction)





No Fly Day

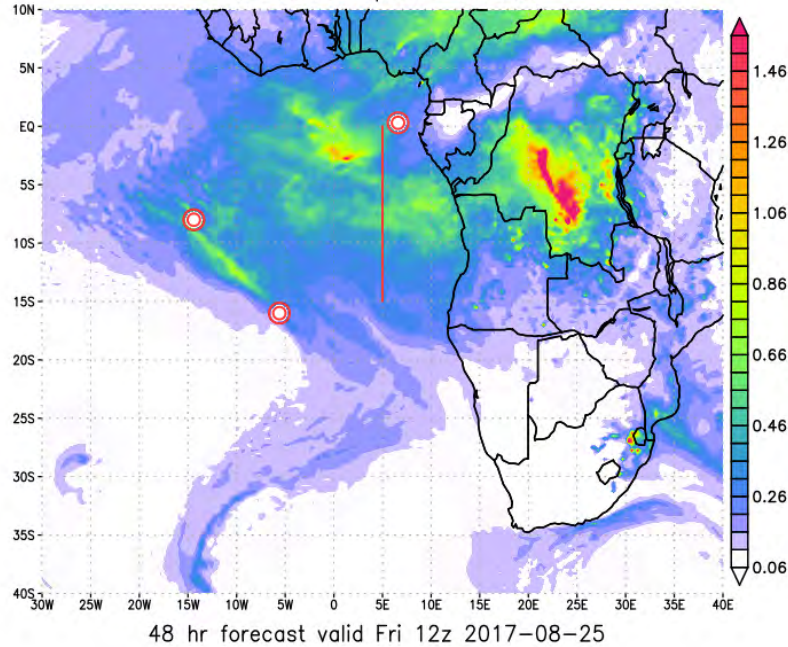
FRIDAY, 25 AUGUST 2017



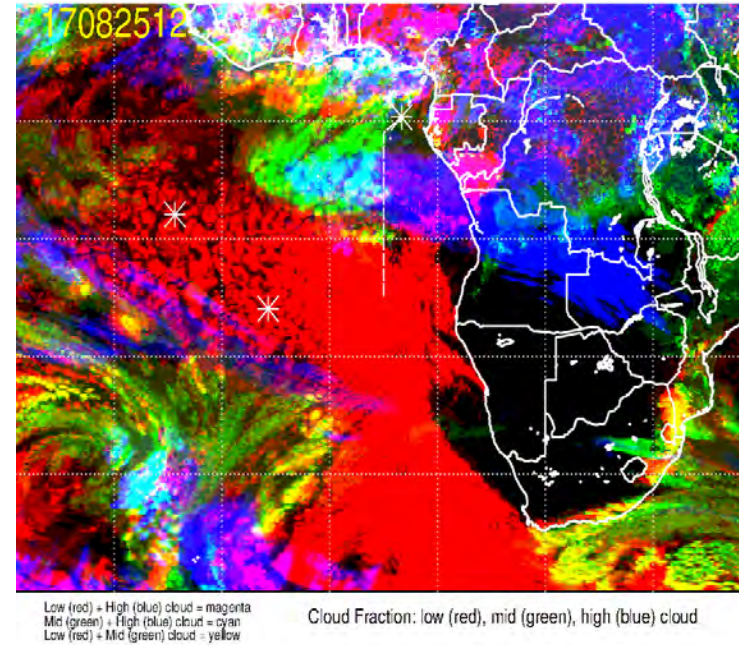
Friday 25 Aug 2017 12Z



NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-23
Total Aerosol Optical Thickness

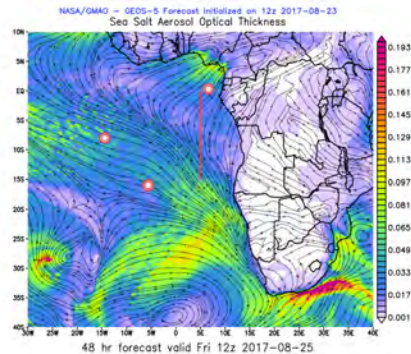
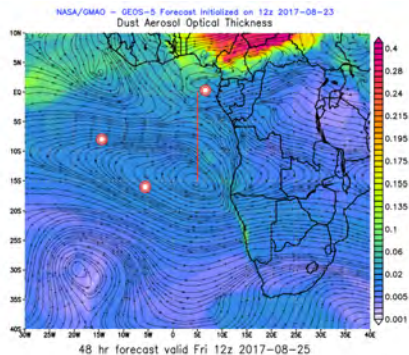


17082512, 048 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF

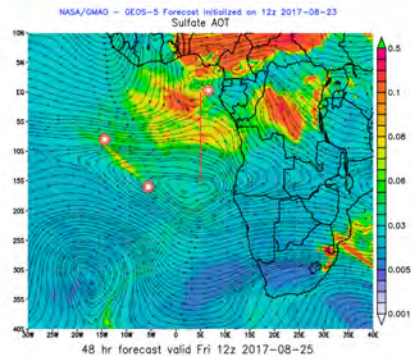
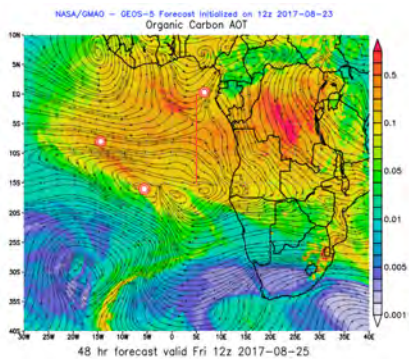
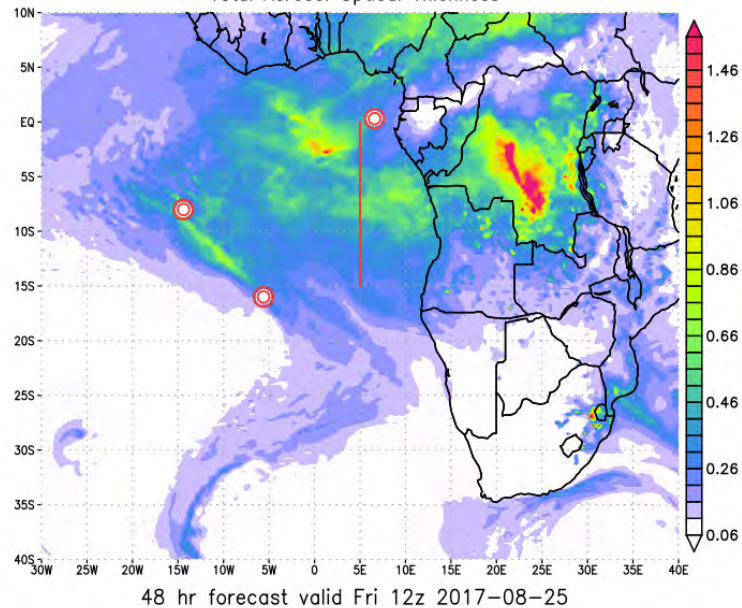


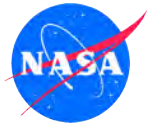


Friday 25 Aug 2017 12Z



NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-23
Total Aerosol Optical Thickness

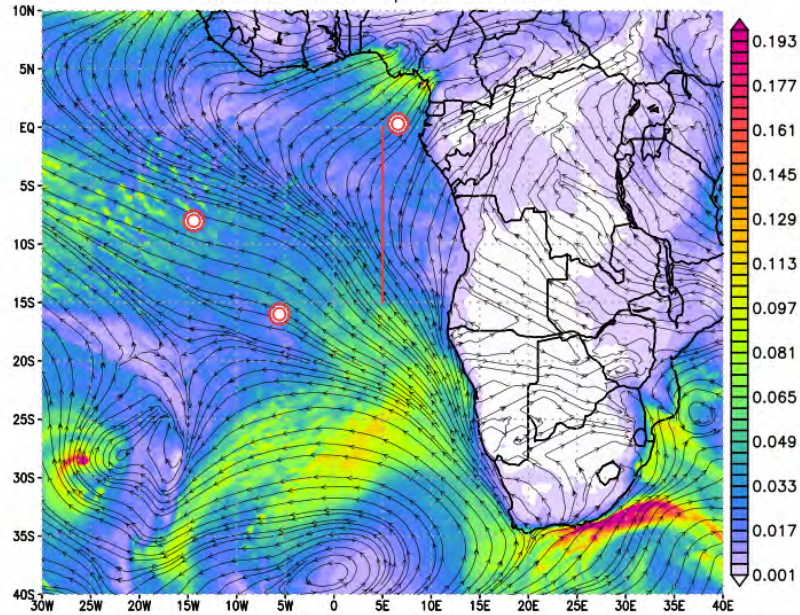




Friday 25 Aug 2017 12Z

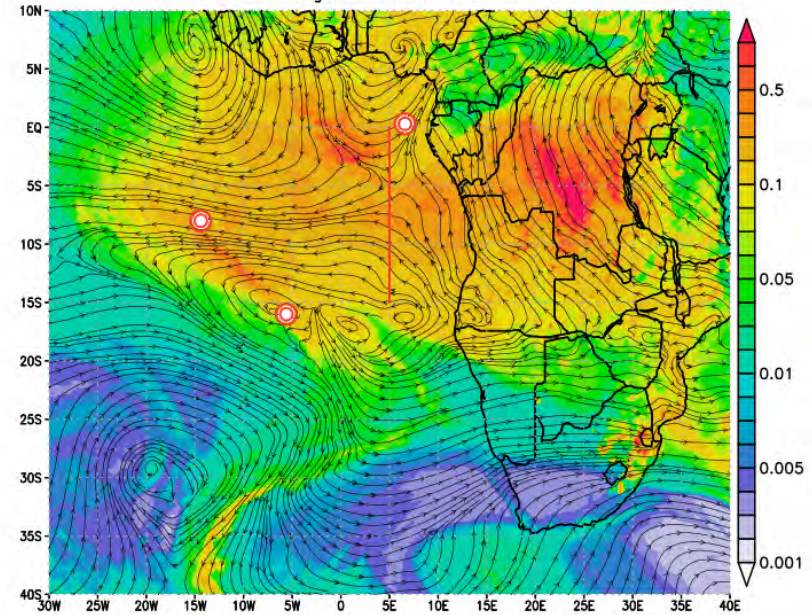


NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-23
Sea Salt Aerosol Optical Thickness

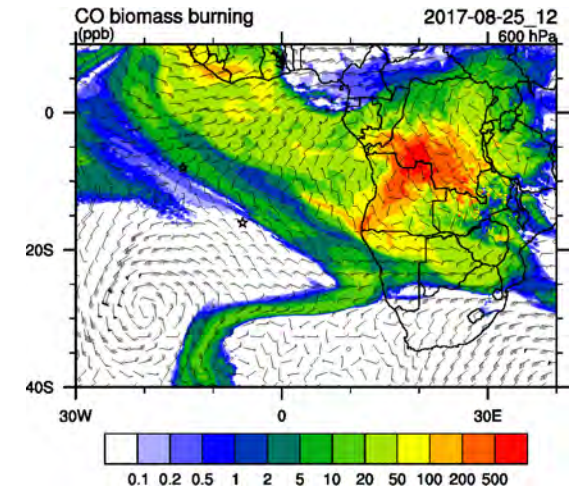
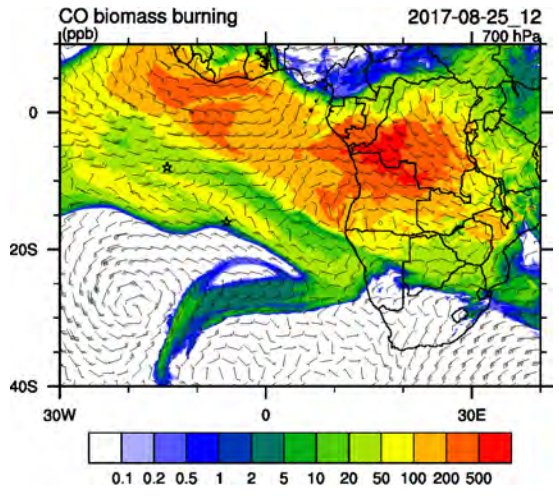
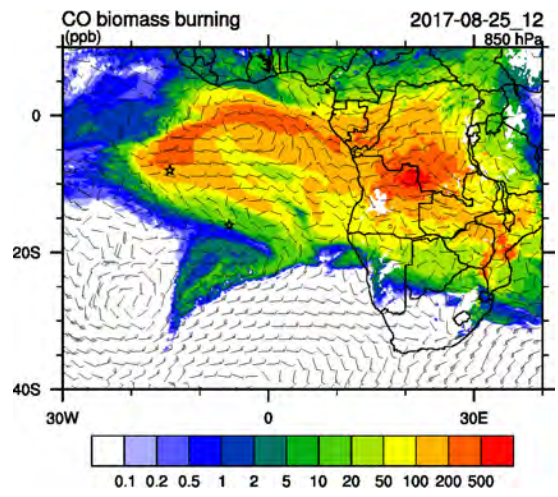
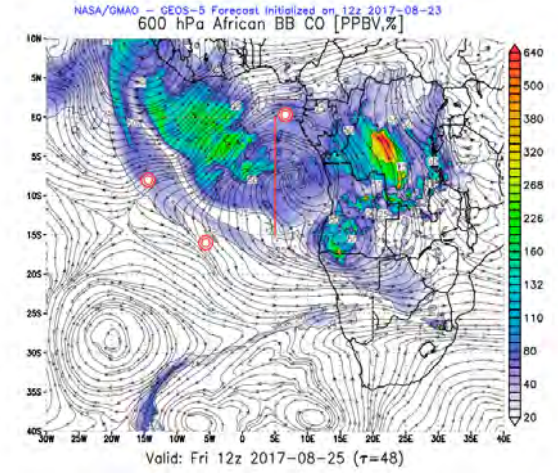
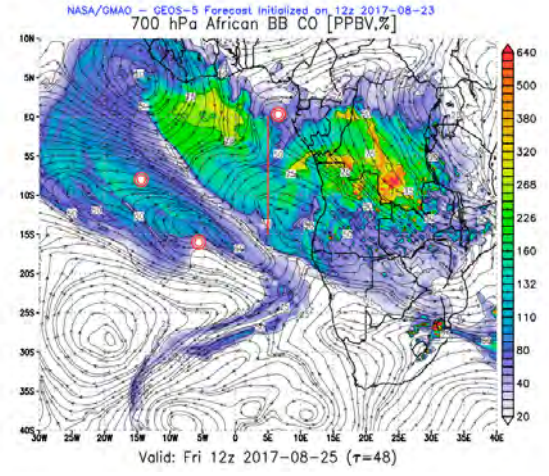
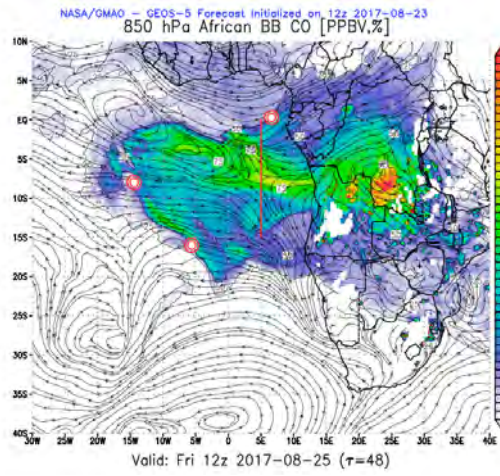


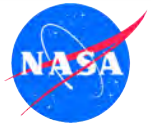
48 hr forecast valid Fri 12z 2017-08-25

NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-23
Organic Carbon AOT



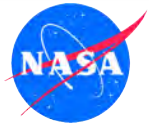
48 hr forecast valid Fri 12z 2017-08-25





Fly Day (TBD)

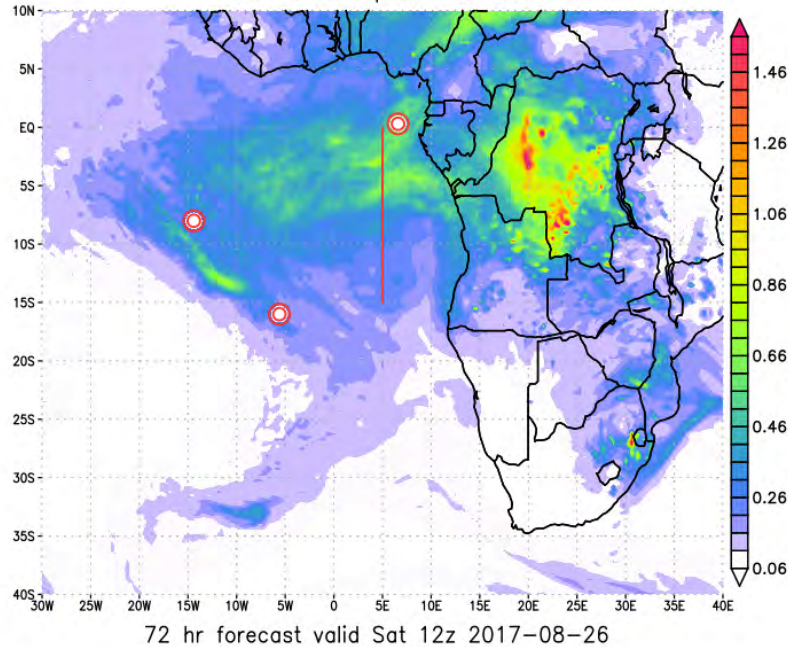
SATURDAY, 26 AUGUST 2017



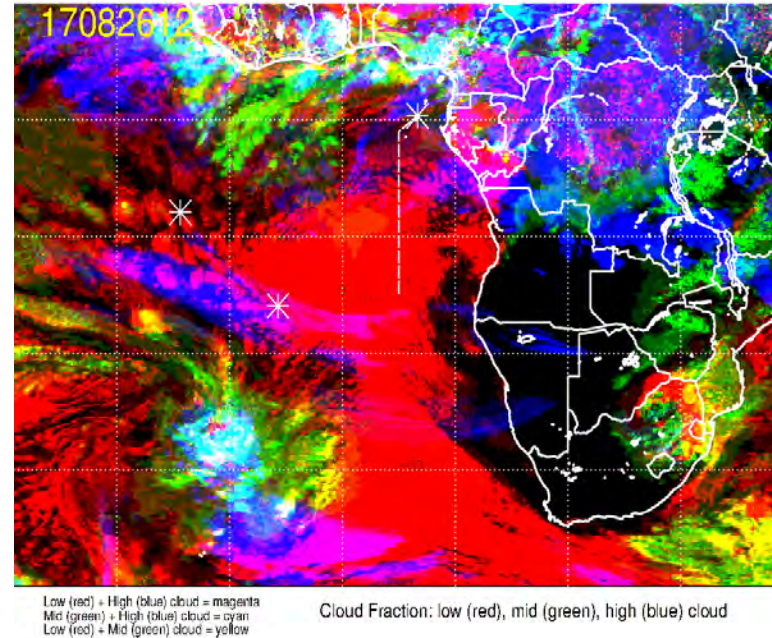
Saturday, 26 Aug 2017 12Z

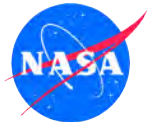


NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-23
Total Aerosol Optical Thickness

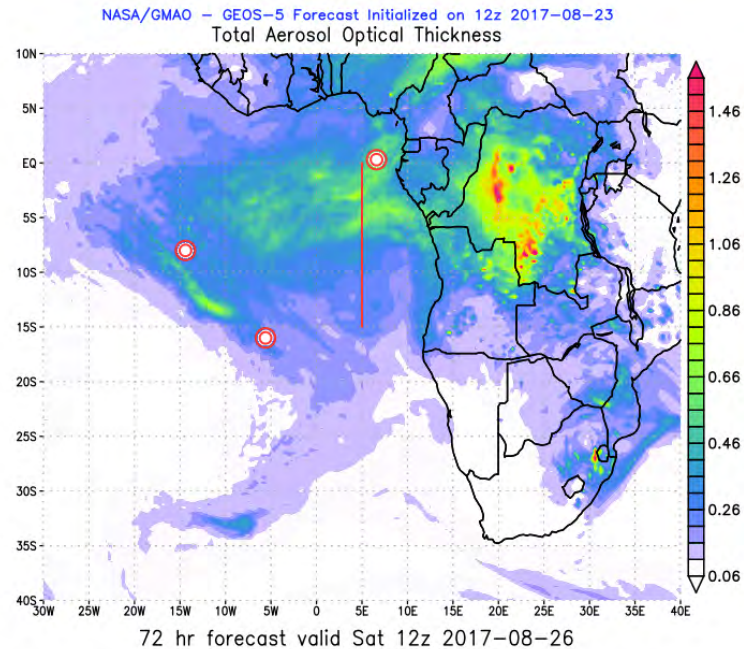
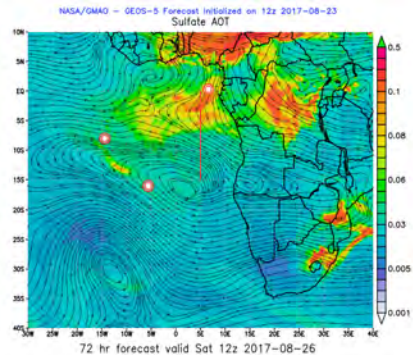
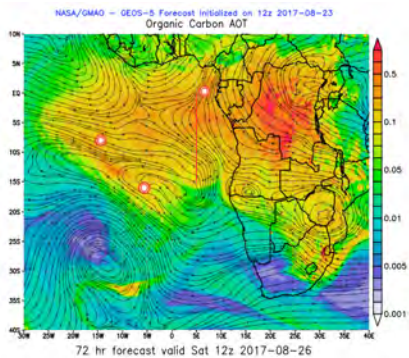
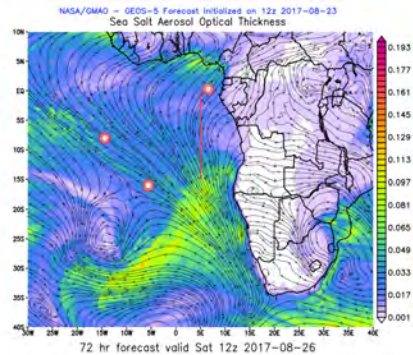
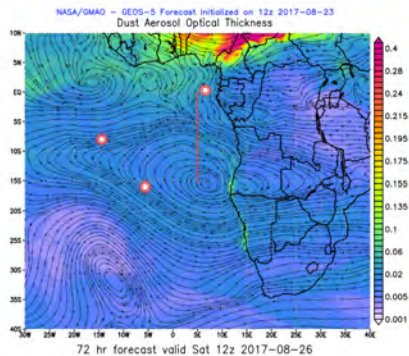


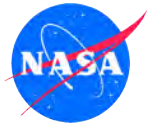
17082612, 072 hour forecast for Cloud Fraction (low, mid, and high cloud) - ECMWF





Saturday, 26 Aug 2017 12Z

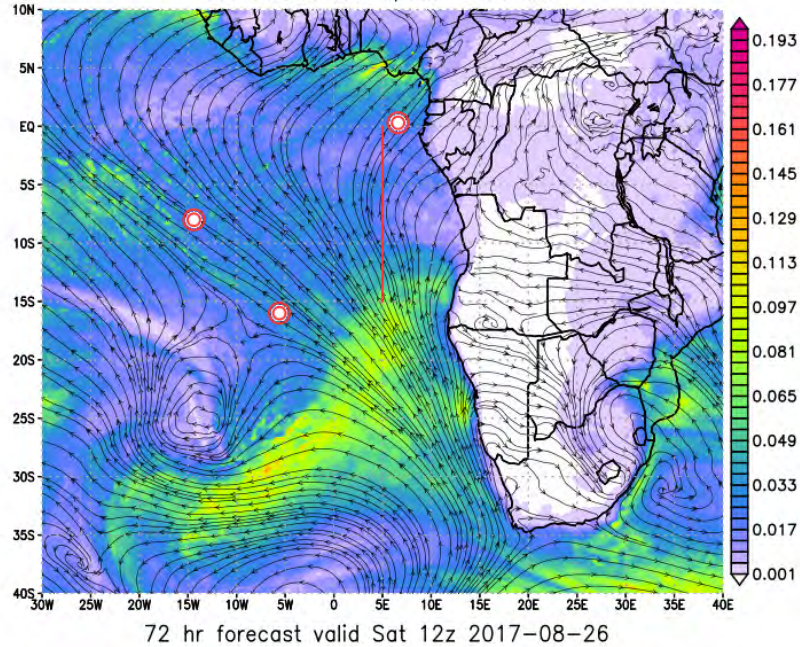




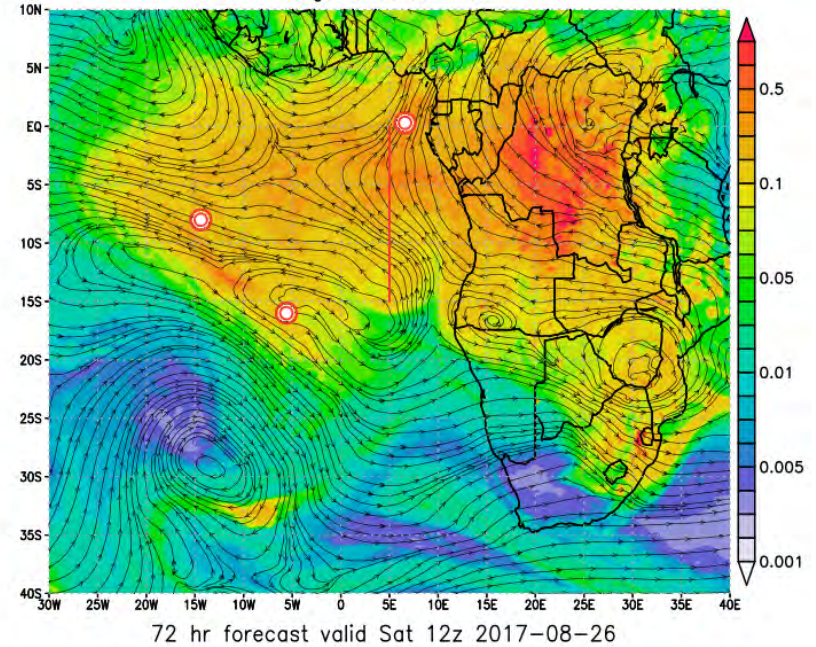
Saturday, 26 Aug 2017 12Z

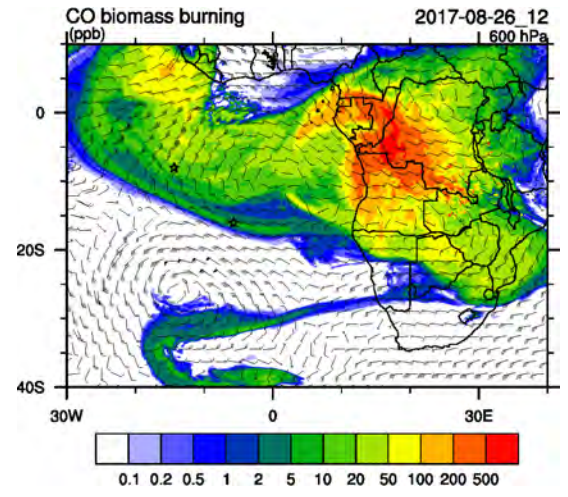
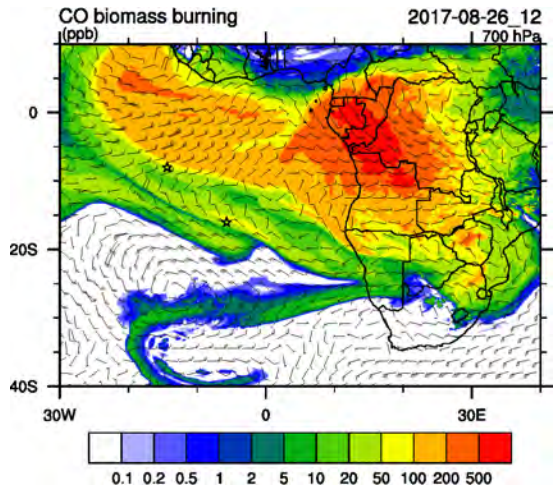
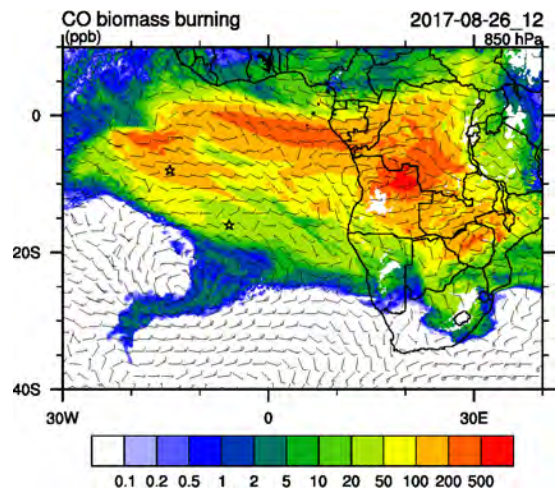
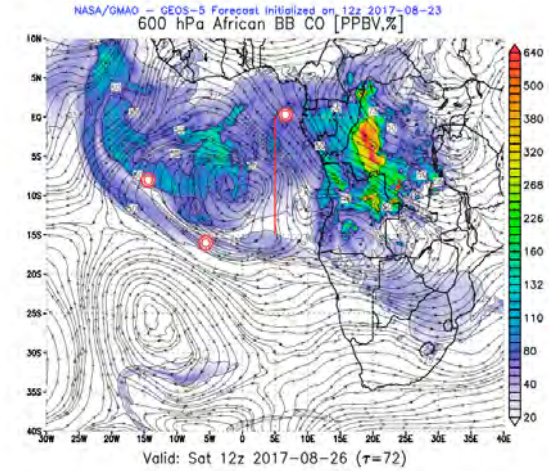
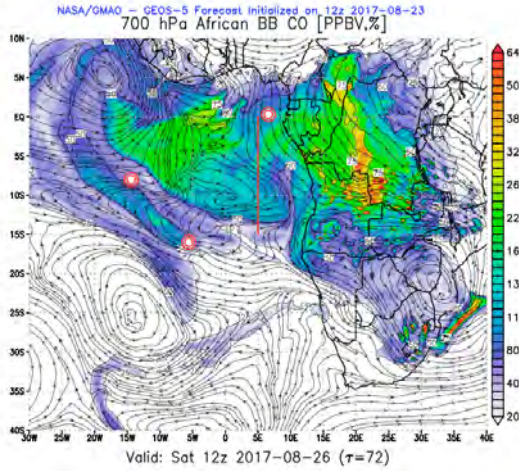
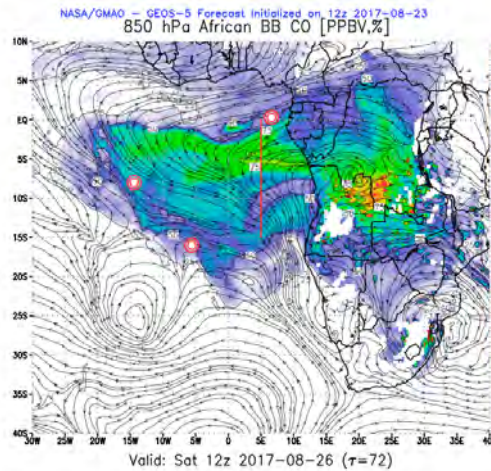


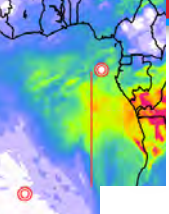
NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-23
Sea Salt Aerosol Optical Thickness



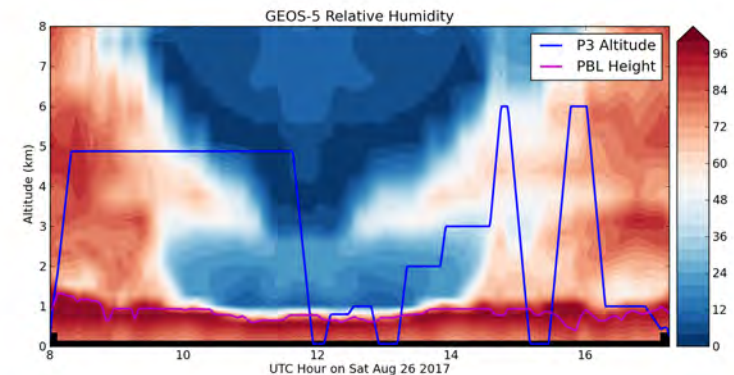
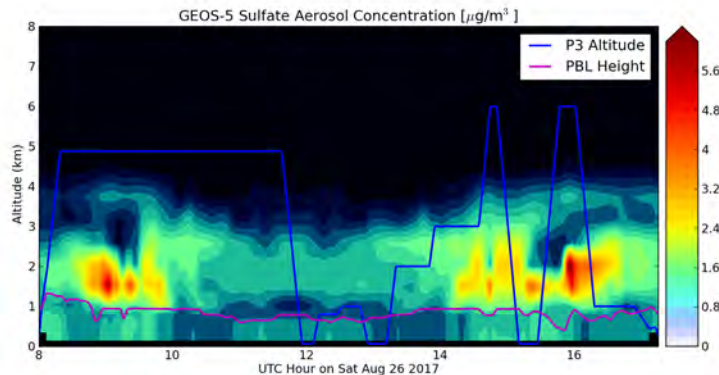
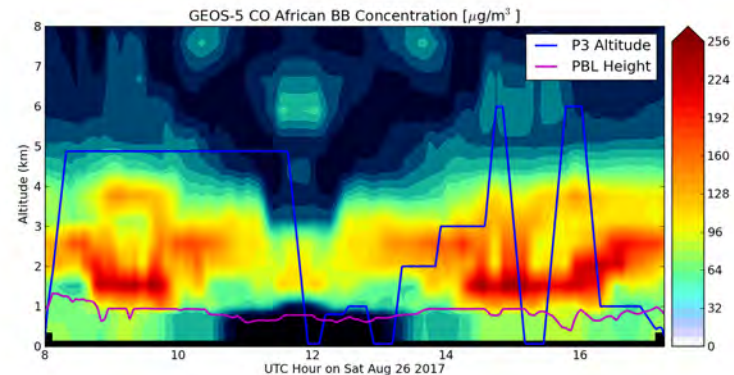
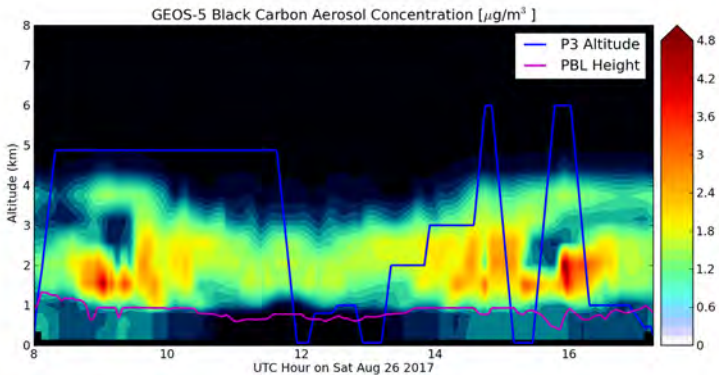
NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-23
Organic Carbon AOT

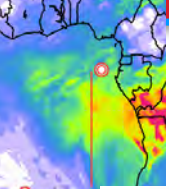




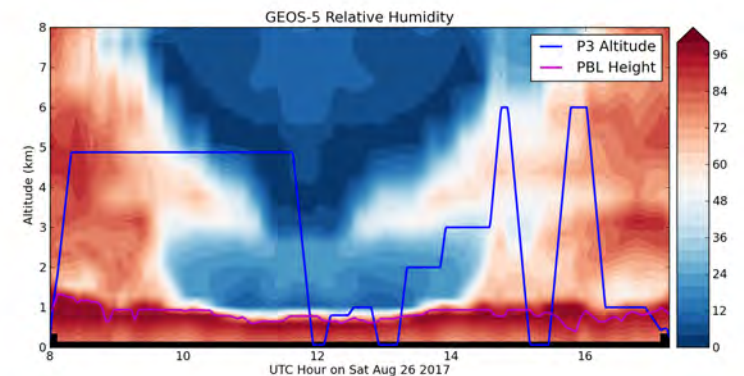
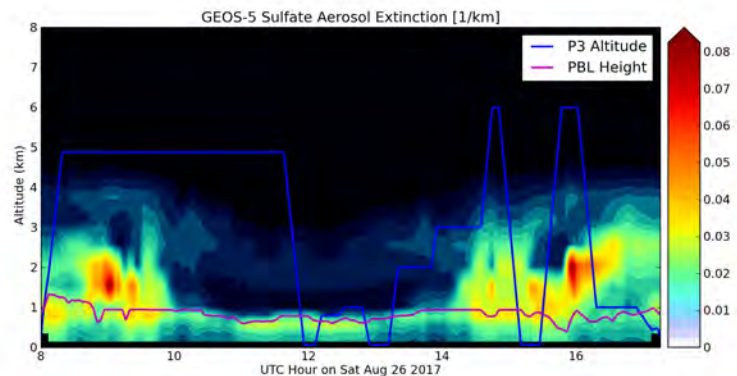
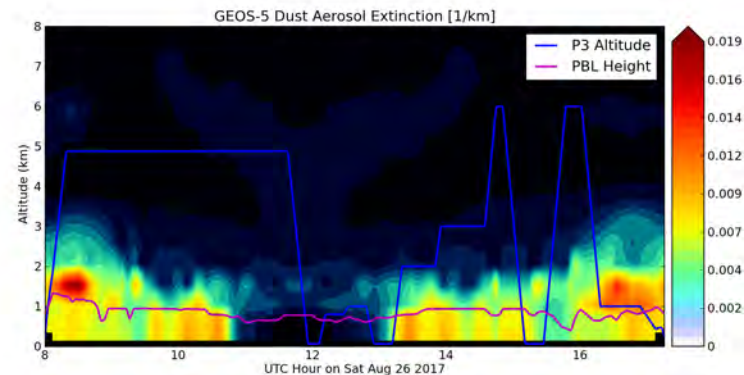
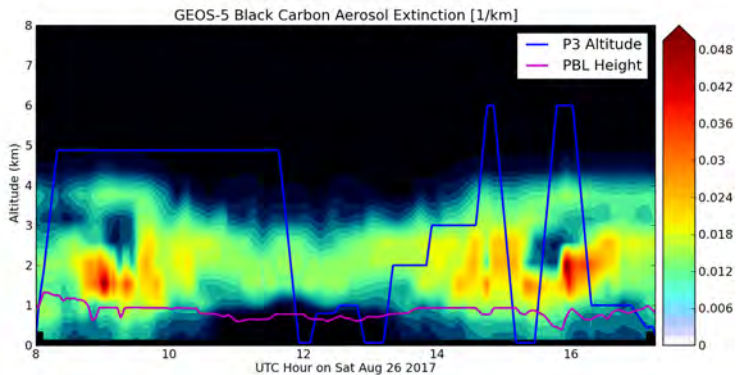


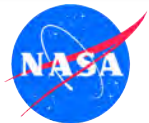
Sat 26 August 2017 12Z (Concentration)





Sat 26 August 2017 12Z (Extinction)

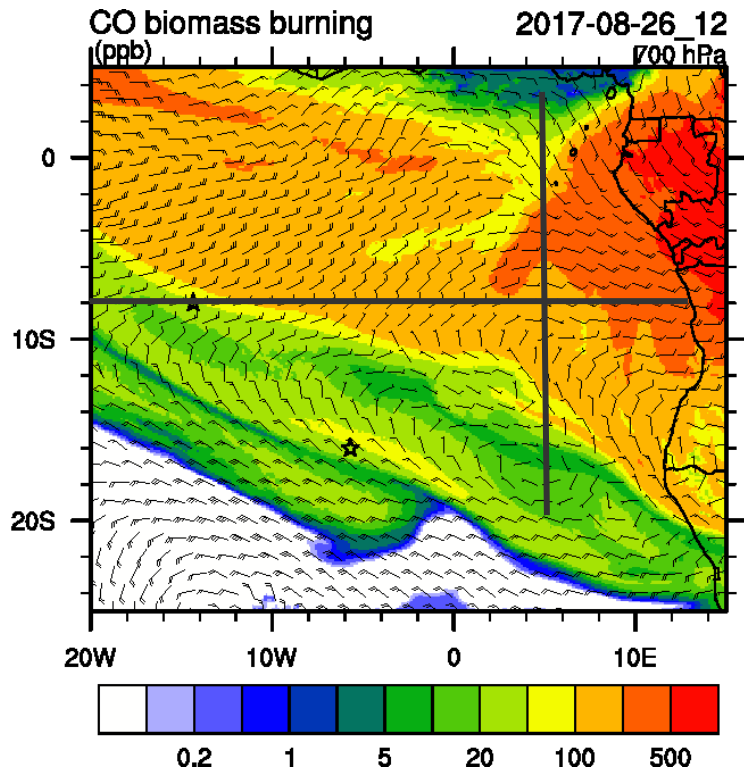




Cross sections – 5 E and 8 S at 12 Z

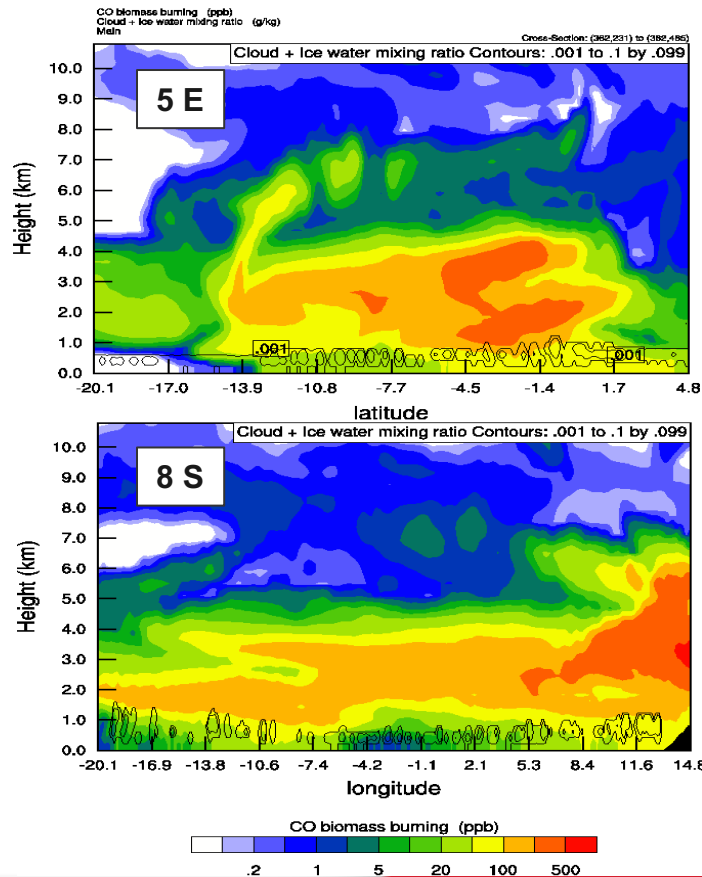


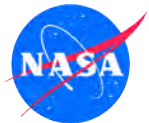
CO from BB at 700 mb



S-N at 5E

Init: 2017-08-26_00:00:00
Valid: 2017-08-26_12:00:00

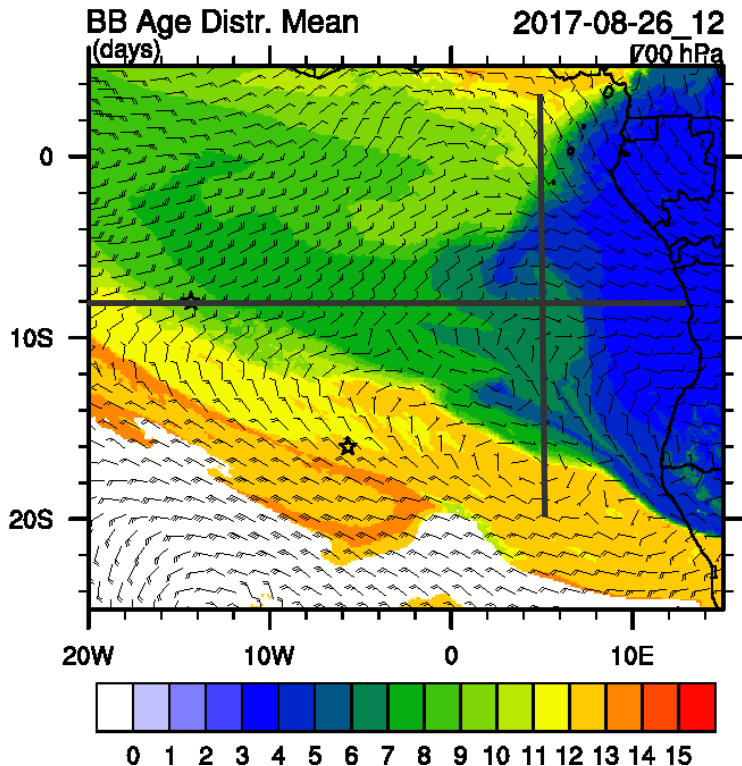




Cross sections – 5 E and 8 S at 12 Z

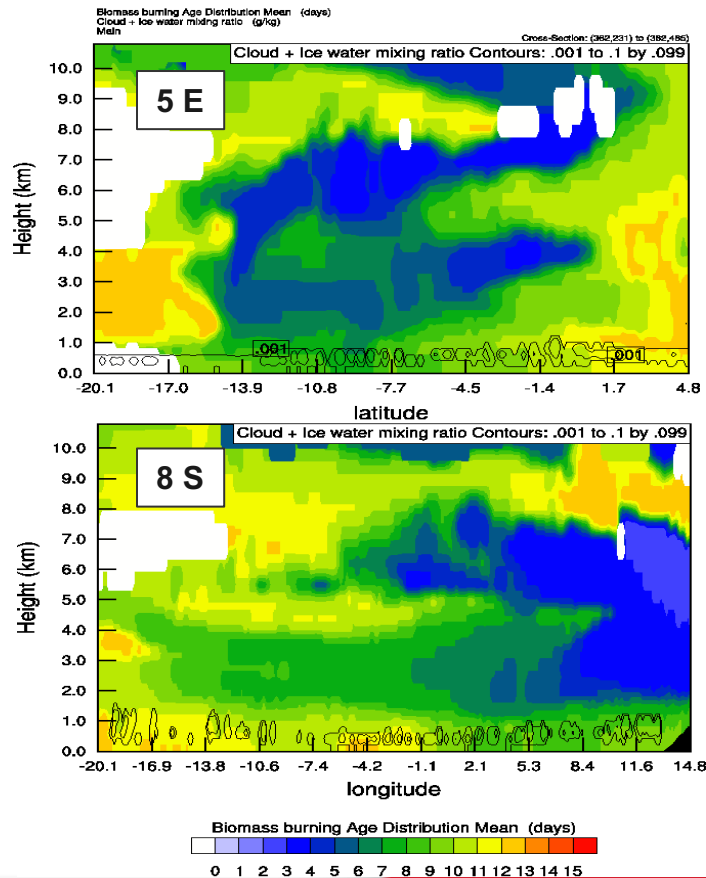


BB age mean at 700 mb

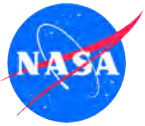


S-N at 5E

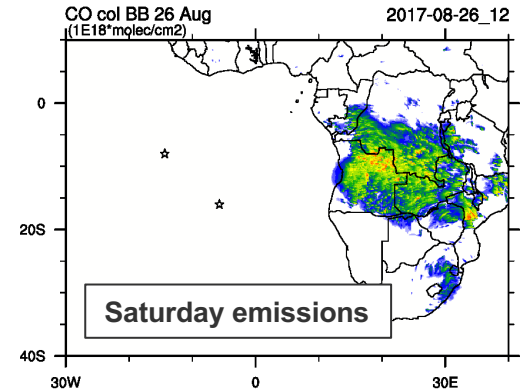
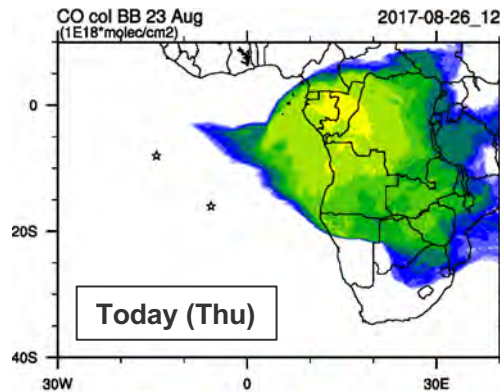
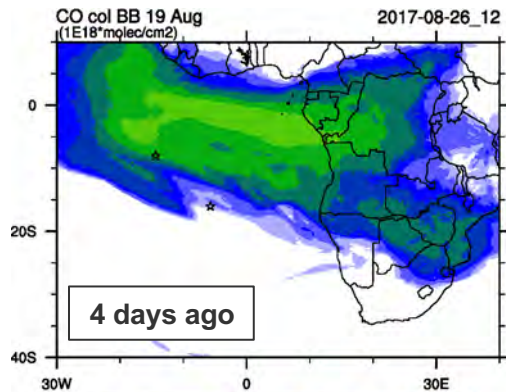
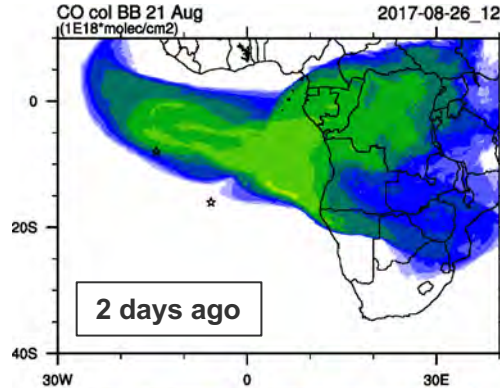
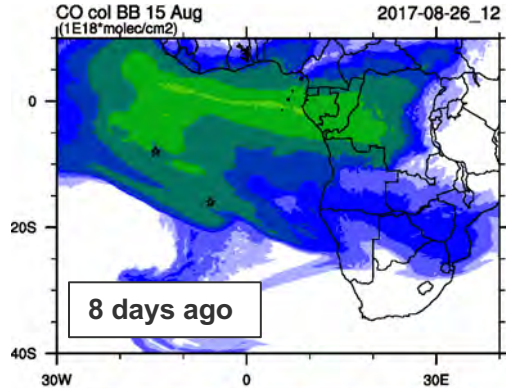
Init: 2017-08-26_00:00:00
Valid: 2017-08-26_12:00:00



Mean
BB age

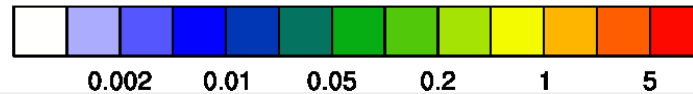


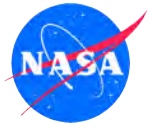
Following BB aerosols – 12 Z



Maps show the **location** and **concentration** of BB aerosols on Sat 26th 12 Z emitted in different days.

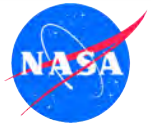
There is no addition of aerosols emitted in other days in this maps





No Fly Day

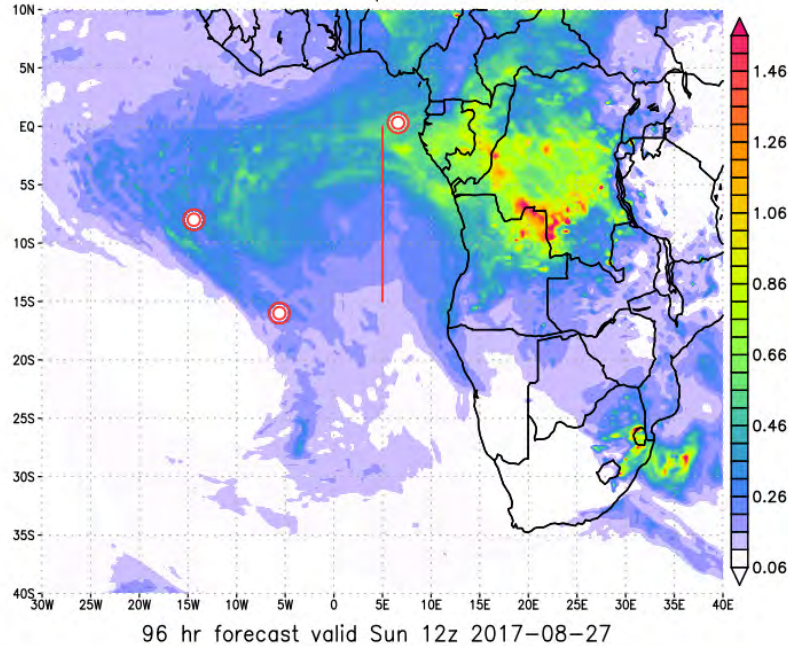
SUNDAY, 27 AUGUST 2017



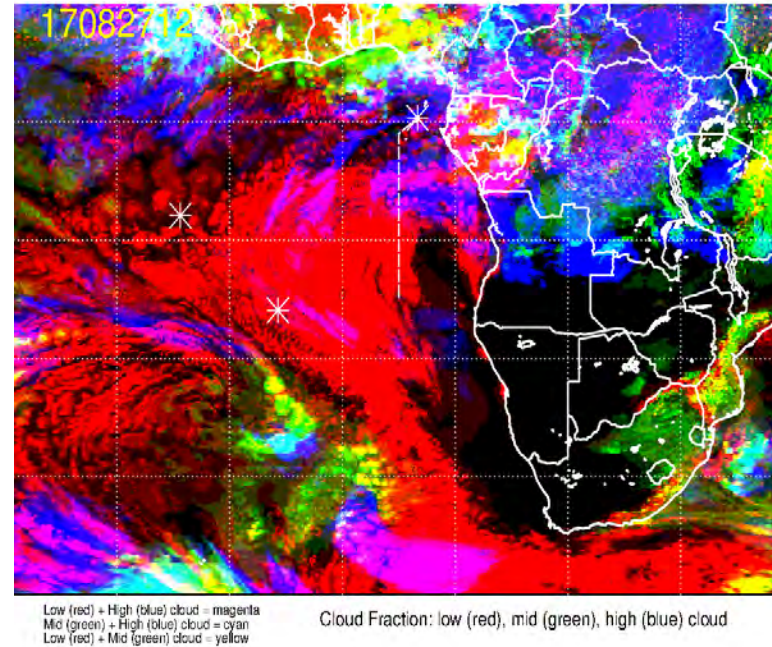
Sunday 27 August 2017 12Z

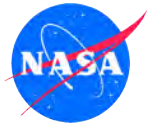


NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-23
Total Aerosol Optical Thickness

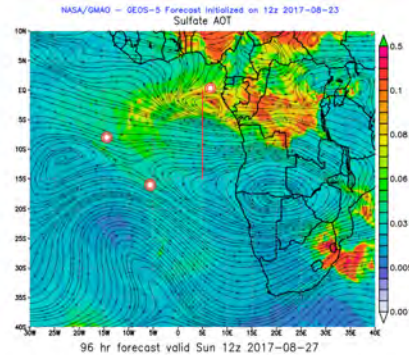
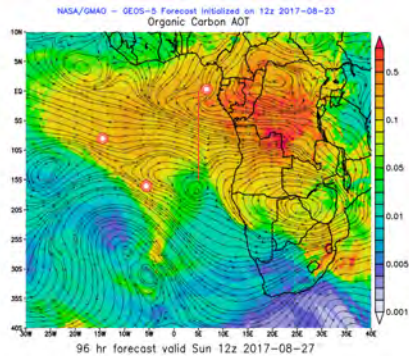
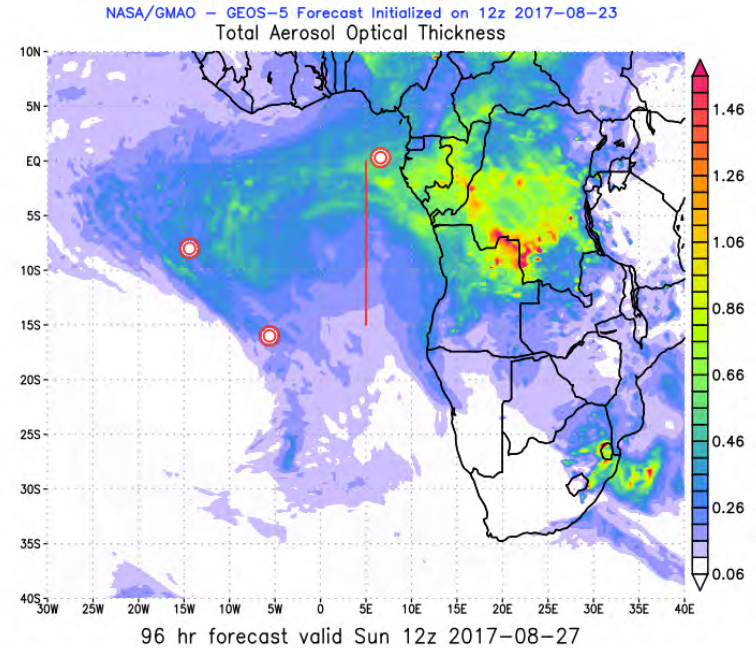
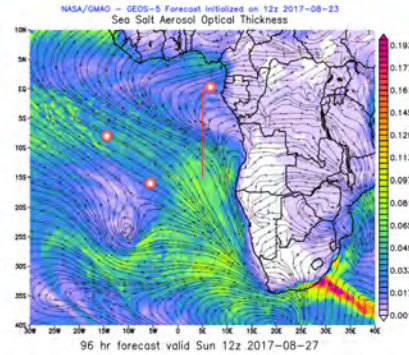
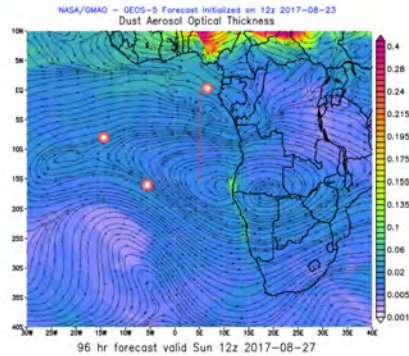


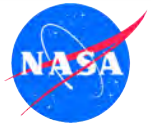
17082712, 096 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF





Sunday 27 August 2017 12Z

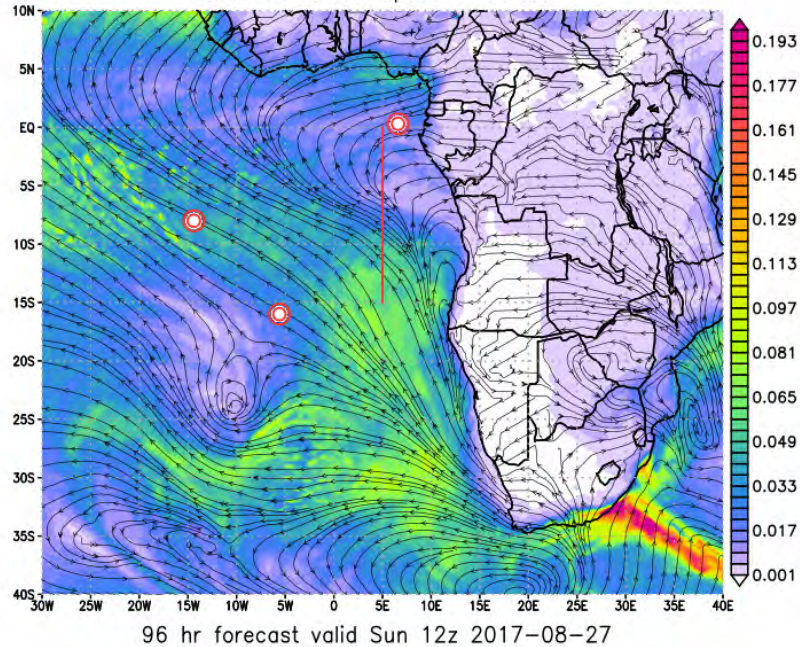




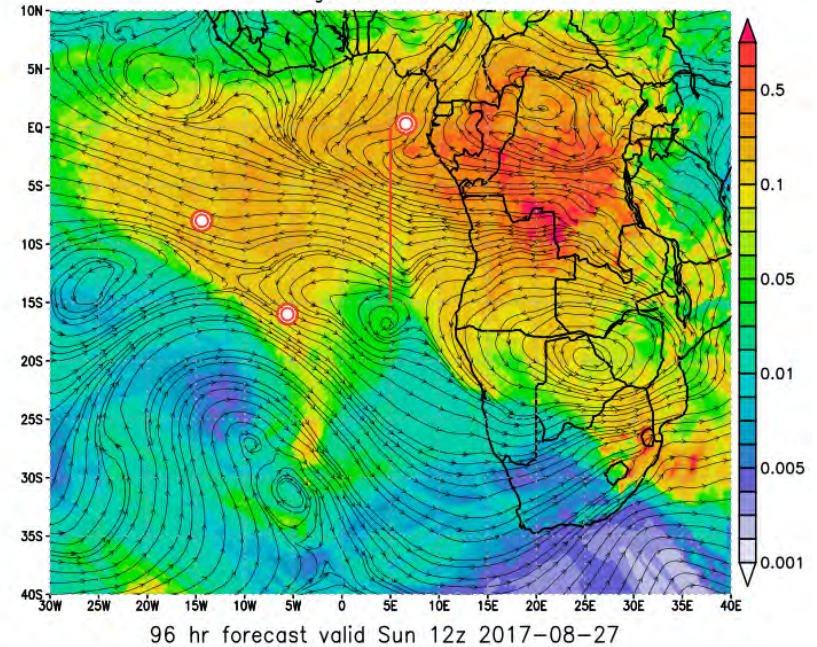
Sunday 27 August 2017 12Z

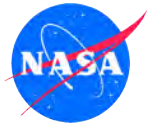


NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-23
Sea Salt Aerosol Optical Thickness



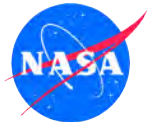
NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-23
Organic Carbon AOT





Fly Day (TBD)

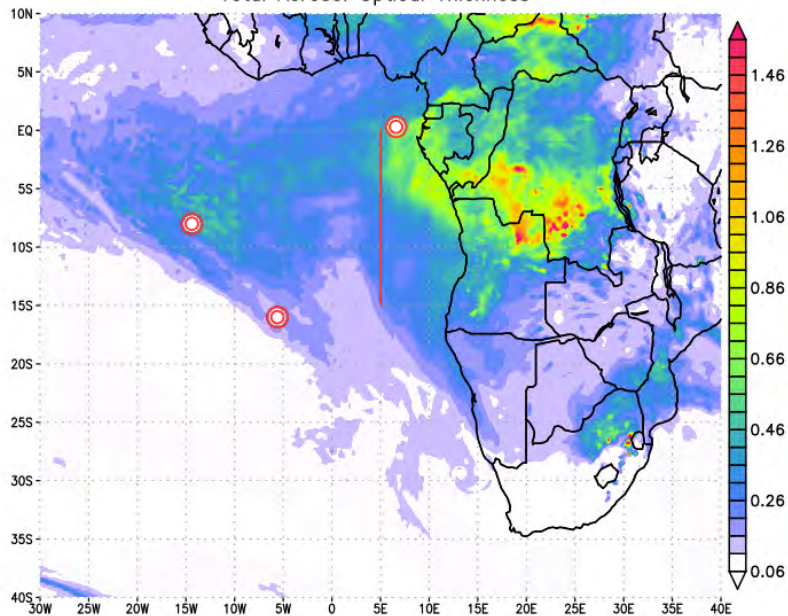
MONDAY, 28 AUGUST 2017



Monday 28 August 2017 12Z

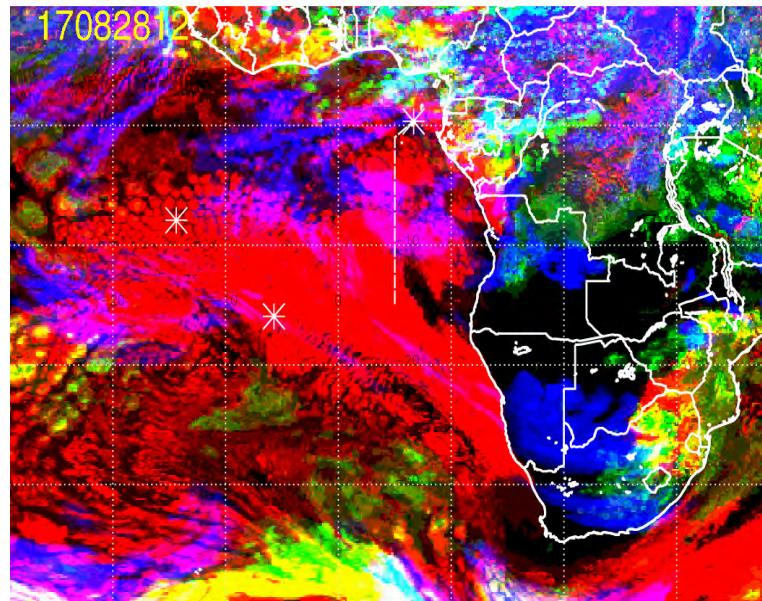


NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-23
Total Aerosol Optical Thickness



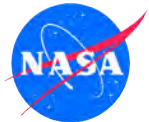
120 hr forecast valid Mon 12z 2017-08-28

17082812, 120 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF

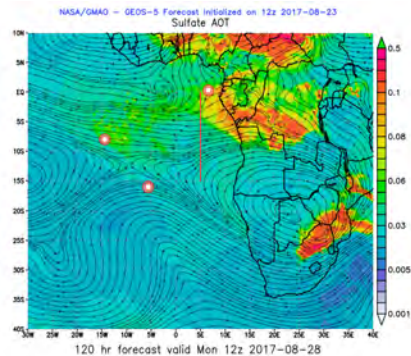
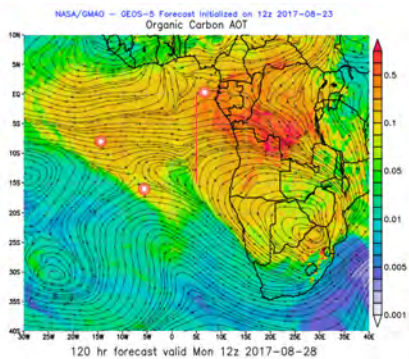
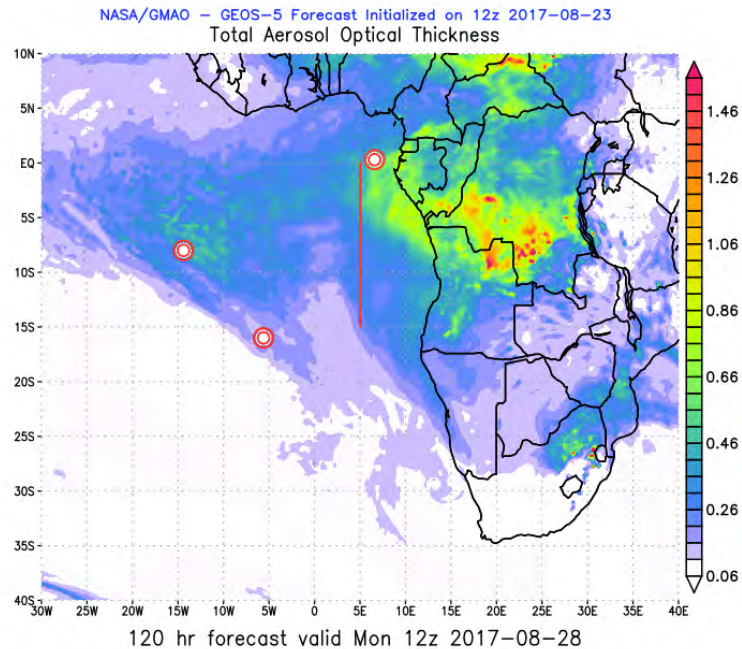
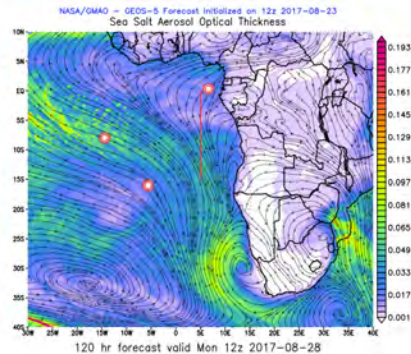
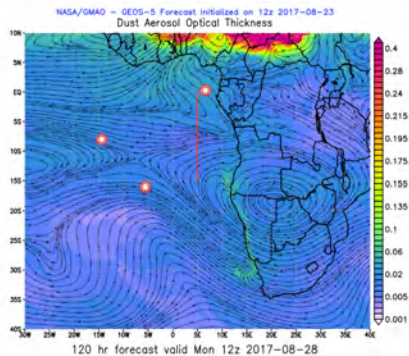


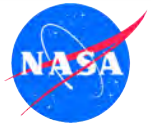
Low (red) + High (blue) cloud = magenta
Mid (green) + High (blue) cloud = cyan
Low (red) + Mid (green) cloud = yellow

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



Monday 28 August 2017 12Z

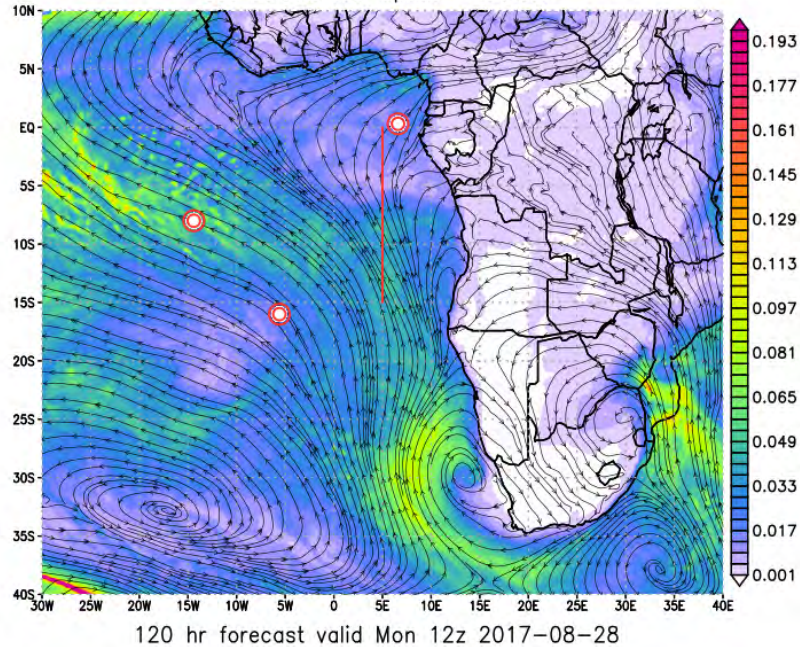




Monday 28 August 2017 12Z



NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-23
Sea Salt Aerosol Optical Thickness



NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-23
Organic Carbon AOT

