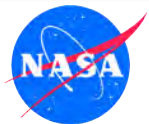




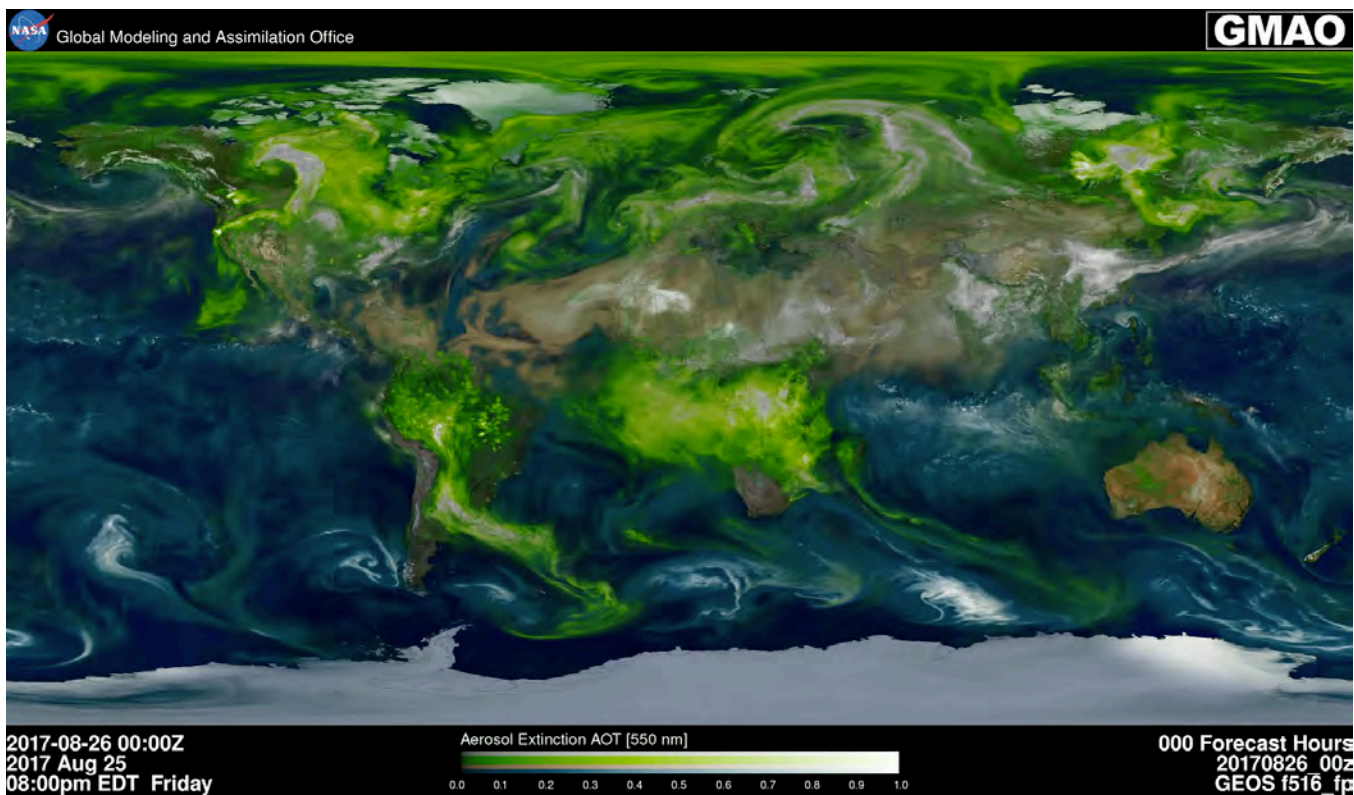
ORACLES Forecast Briefing

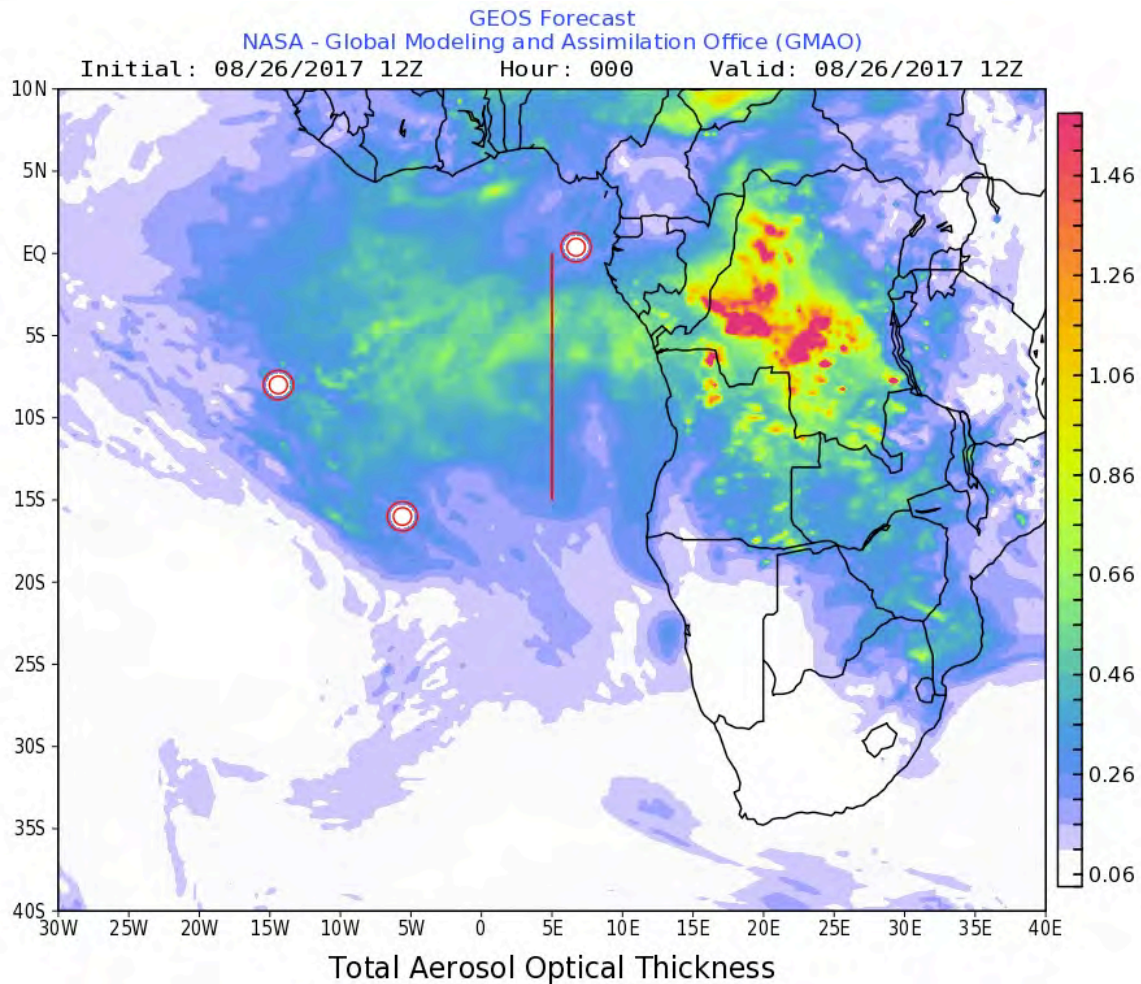
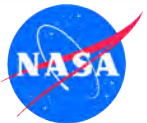
Aerosols

Sunday, 27 August 2017



The Aerosol Week

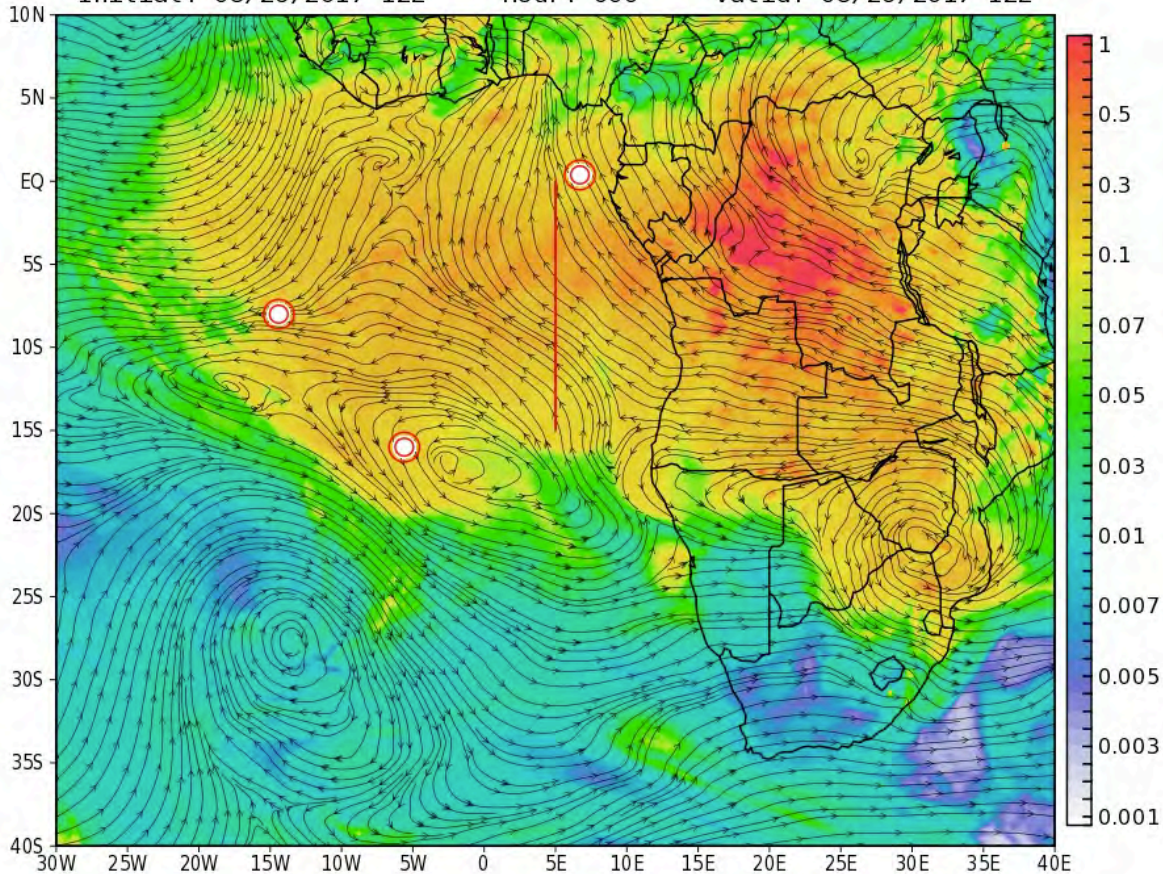




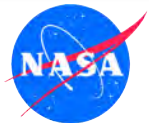


GEOS Forecast
NASA - Global Modeling and Assimilation Office (GMAO)

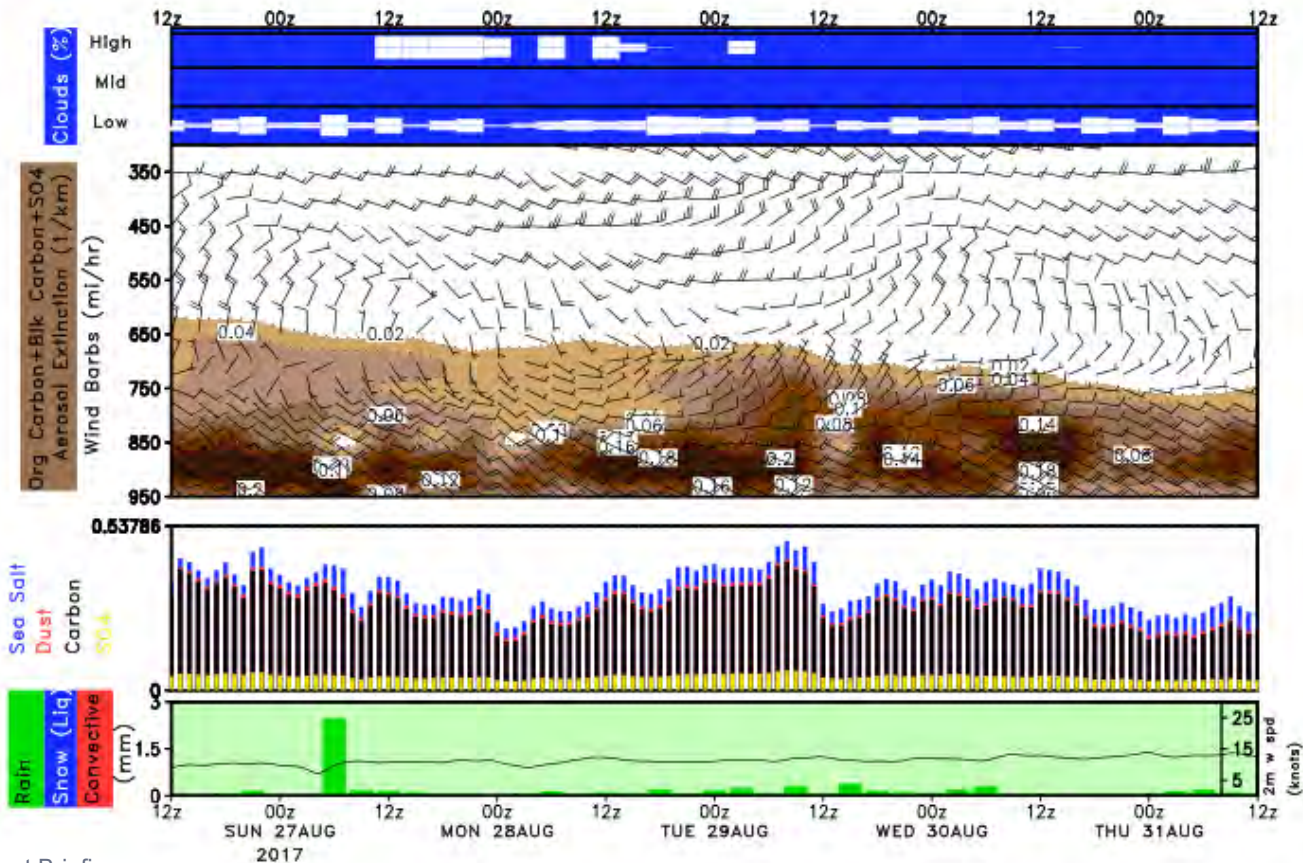
Initial: 08/26/2017 12Z Hour: 000 Valid: 08/26/2017 12Z



Organic Carbon AOT

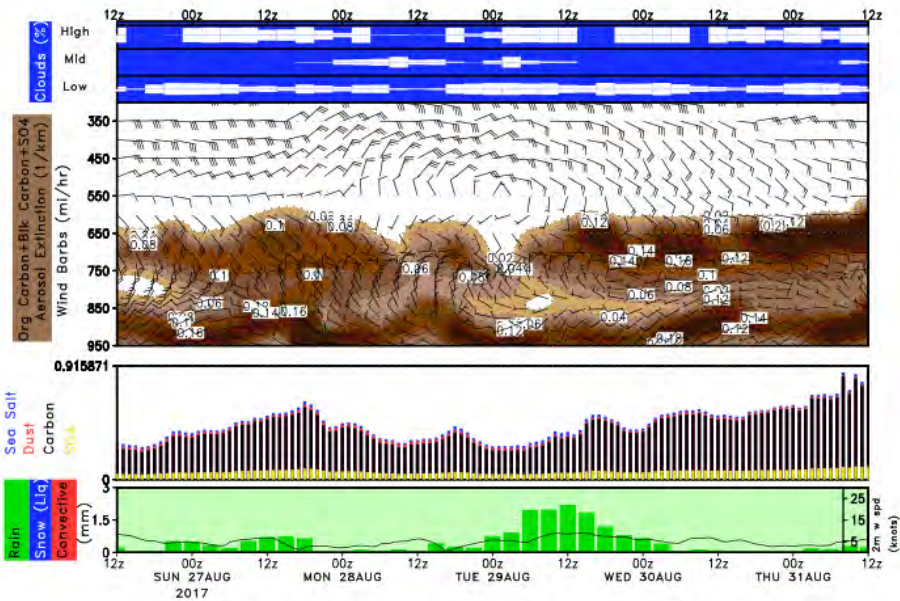


Ascension (OC+BC+S04)

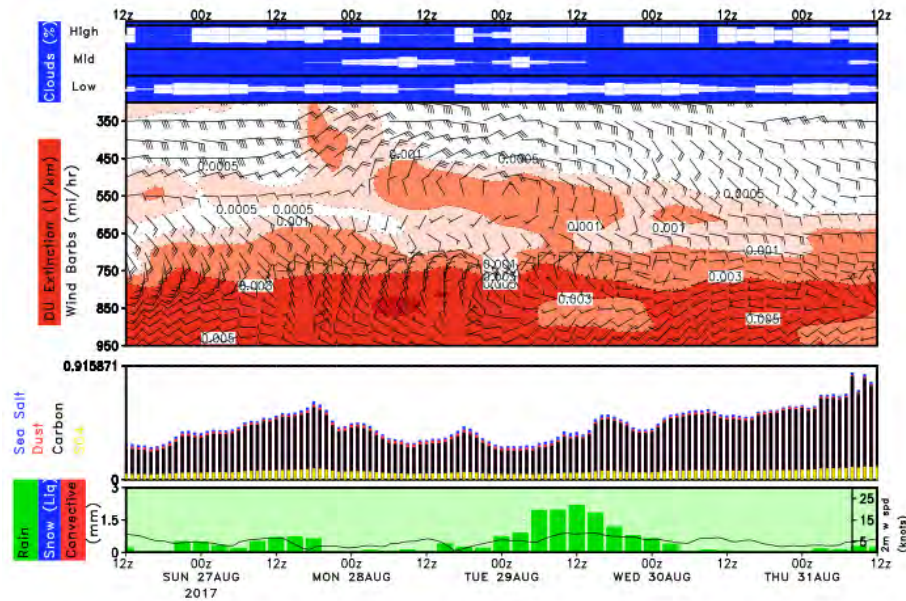




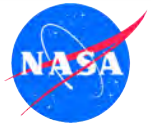
São Tomé (OC+BC+SO4 & Dust)



LAT = 0.3 , LON = 6.6, Location = ORACLES_Sao_Tome_e_Principe, Fcst_init = 20170826

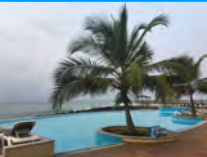


LAT = 0.3 , LON = 6.6, Location = ORACLES_Sao_Tome_e_Principe, Fcst_init = 20170826



No Fly Day

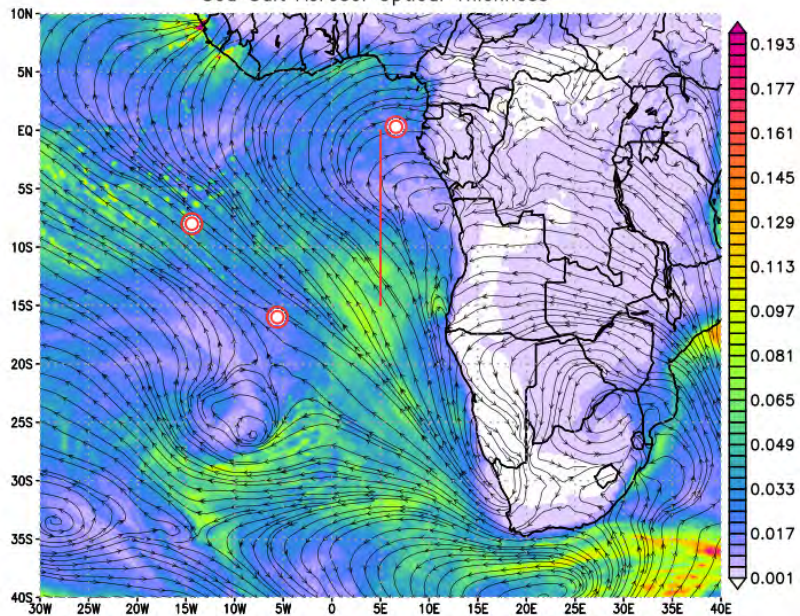
SUNDAY, 27 AUGUST 2017



Sunday 27 August 2017 12Z

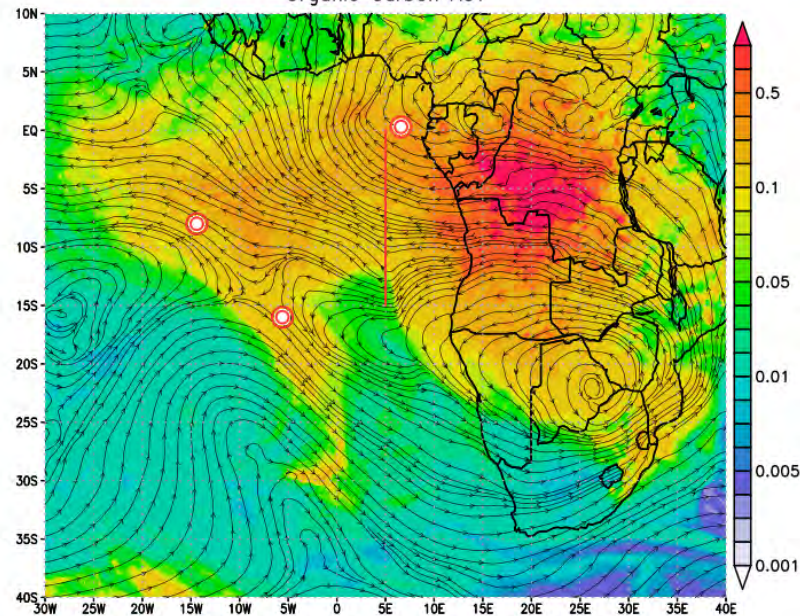


NASA/GMAO – GEOS-5 Forecast Initialized on 18z 2017-08-26
Sea Salt Aerosol Optical Thickness

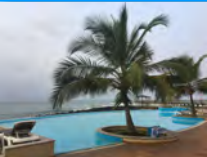


18 hr forecast valid Sun 12z 2017-08-27

NASA/GMAO – GEOS-5 Forecast Initialized on 18z 2017-08-26
Organic Carbon AOT



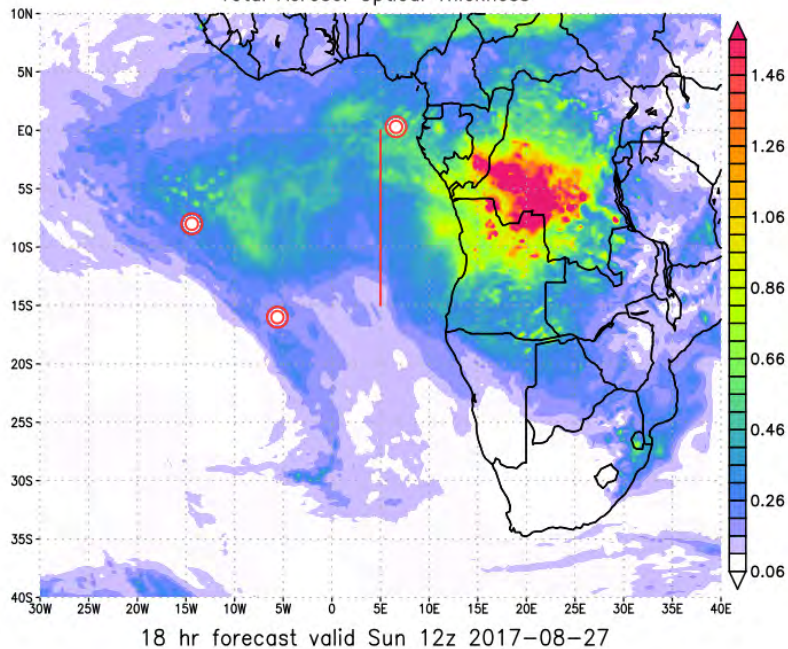
18 hr forecast valid Sun 12z 2017-08-27



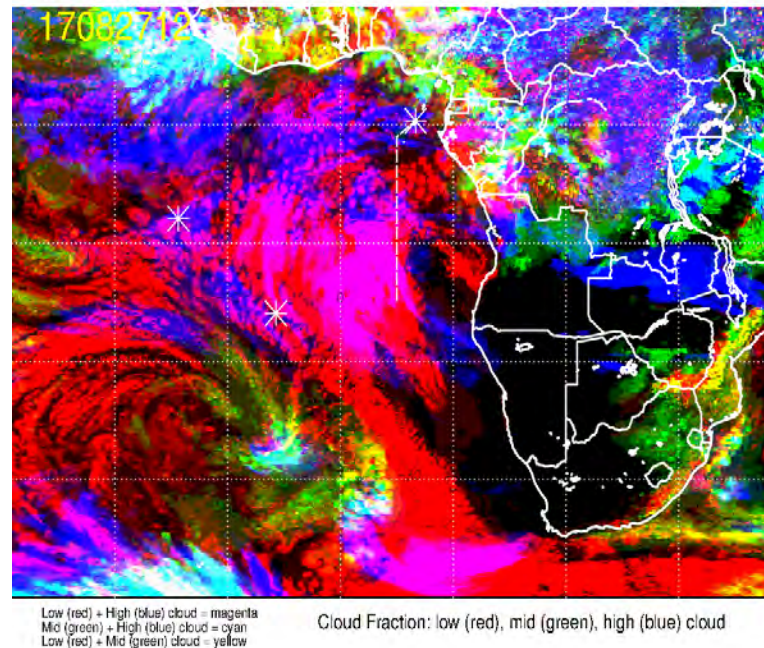
Sunday 27 August 2017 12Z



NASA/GMAO - GEOS-5 Forecast Initialized on 18z 2017-08-26
Total Aerosol Optical Thickness

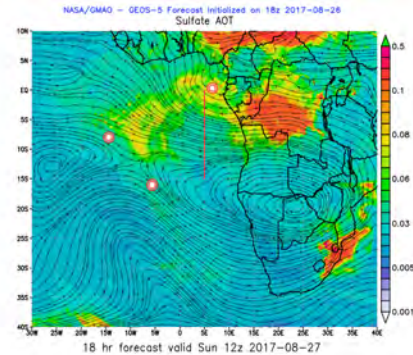
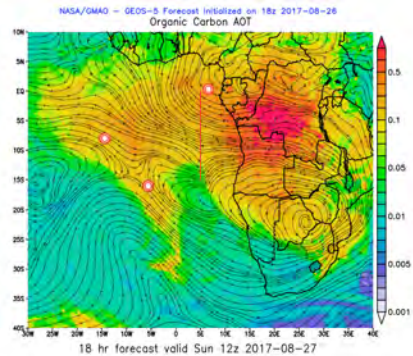
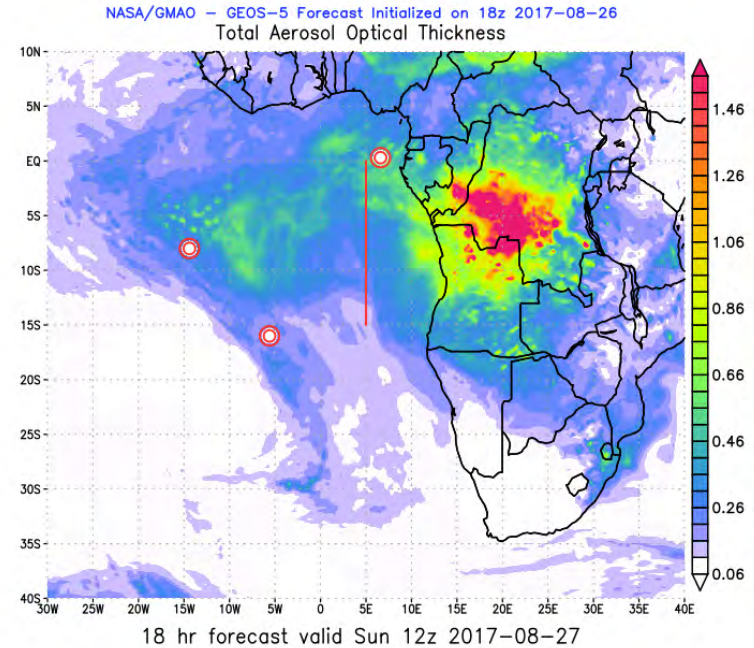
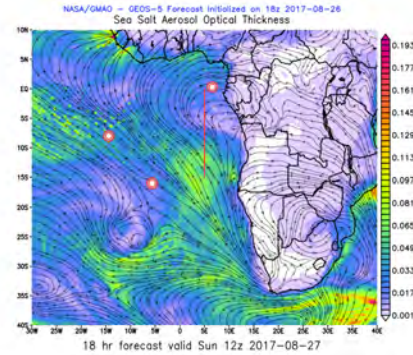
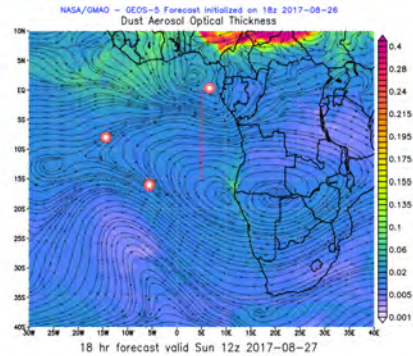


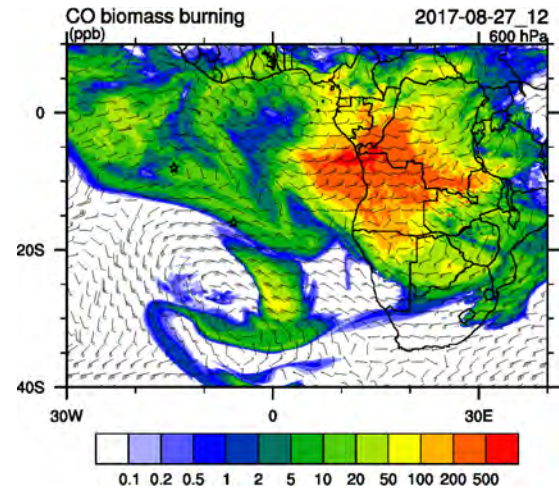
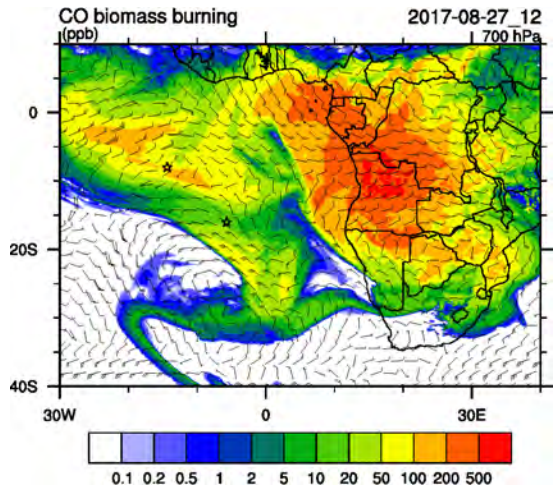
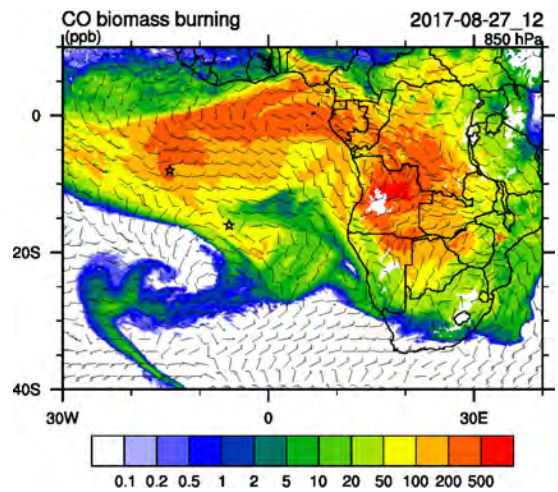
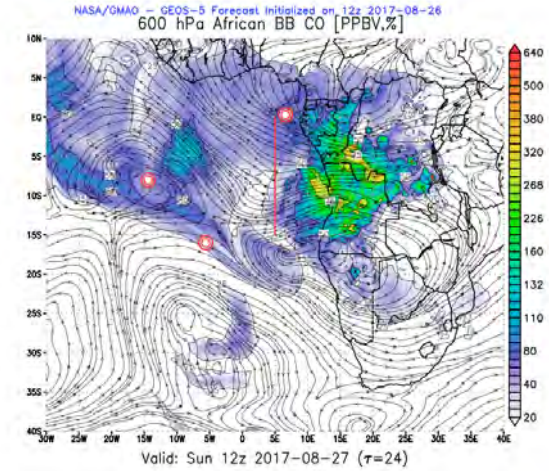
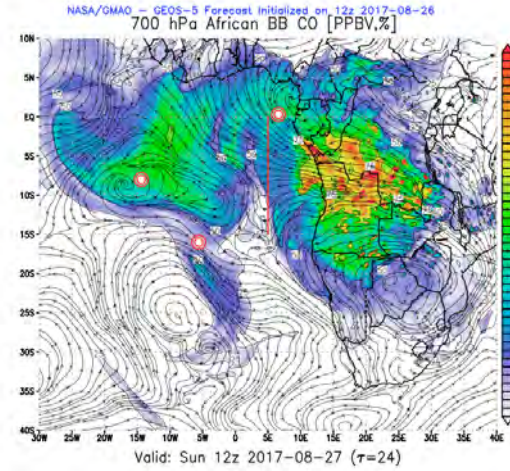
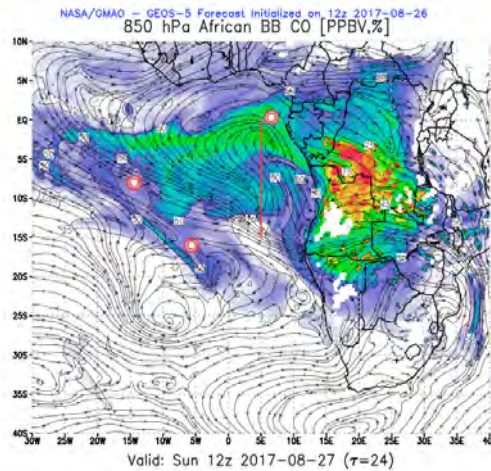
17082712, 024 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF

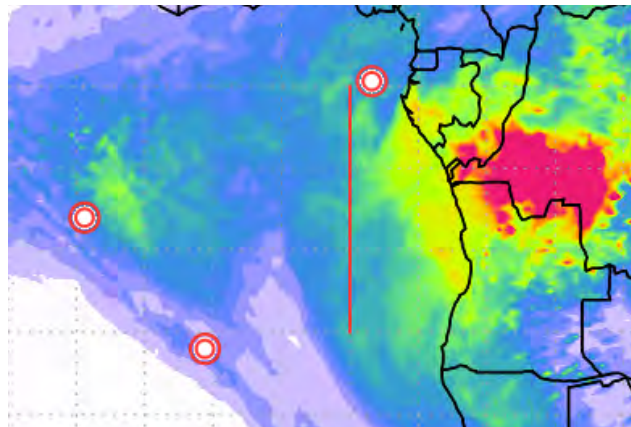
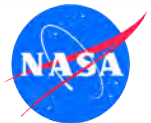




Sunday 27 August 2017 12Z



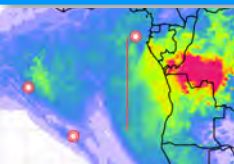




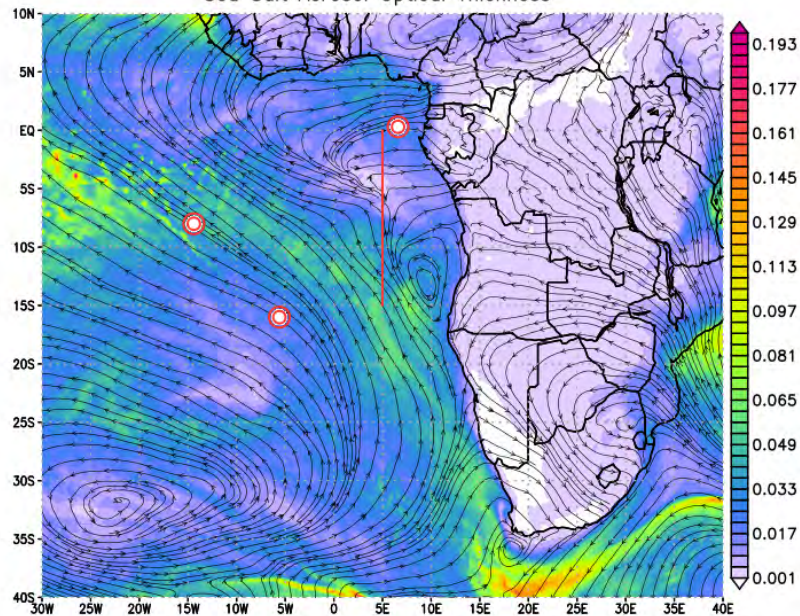
Fly Day (Routine)

MONDAY, 28 AUGUST 2017

Monday 28 August 2017 12Z

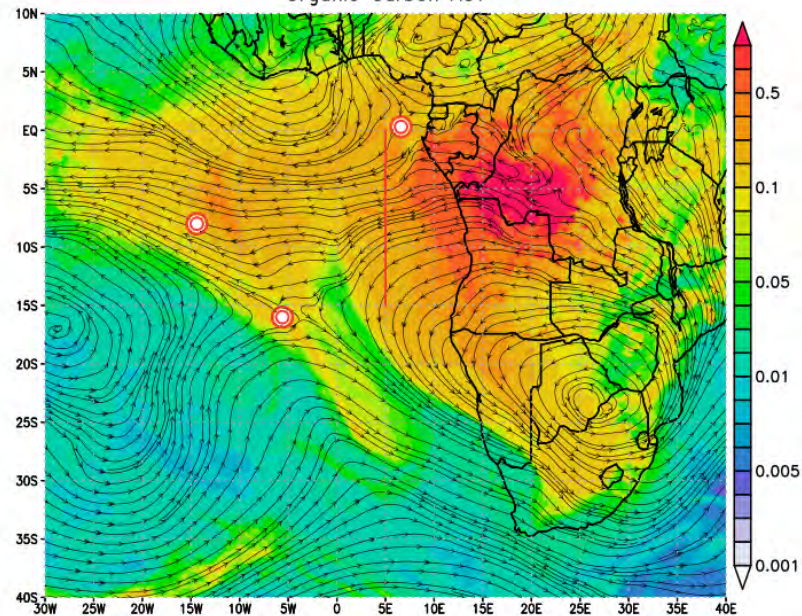


NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-26
Sea Salt Aerosol Optical Thickness

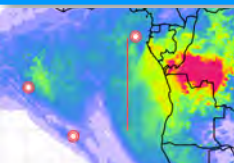


48 hr forecast valid Mon 12z 2017-08-28

NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-26
Organic Carbon AOT



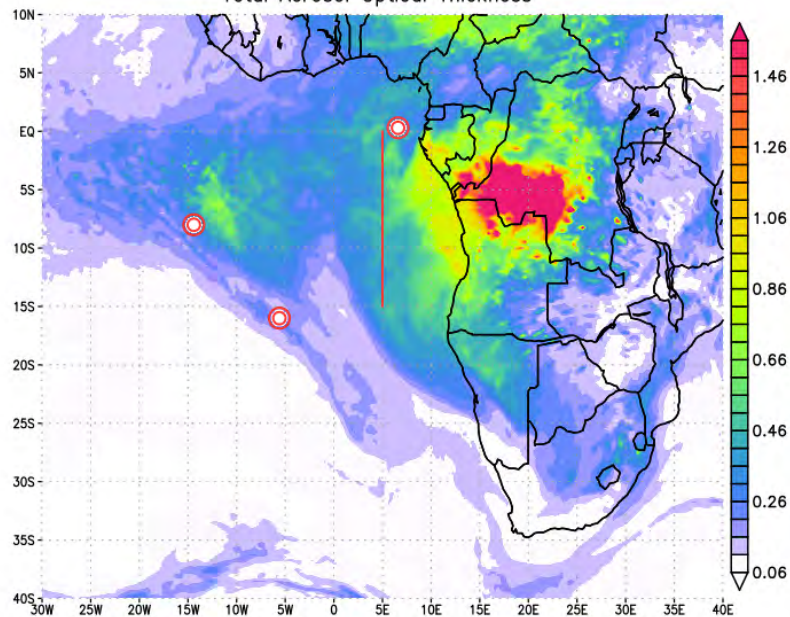
48 hr forecast valid Mon 12z 2017-08-28



Monday 28 August 2017 12Z

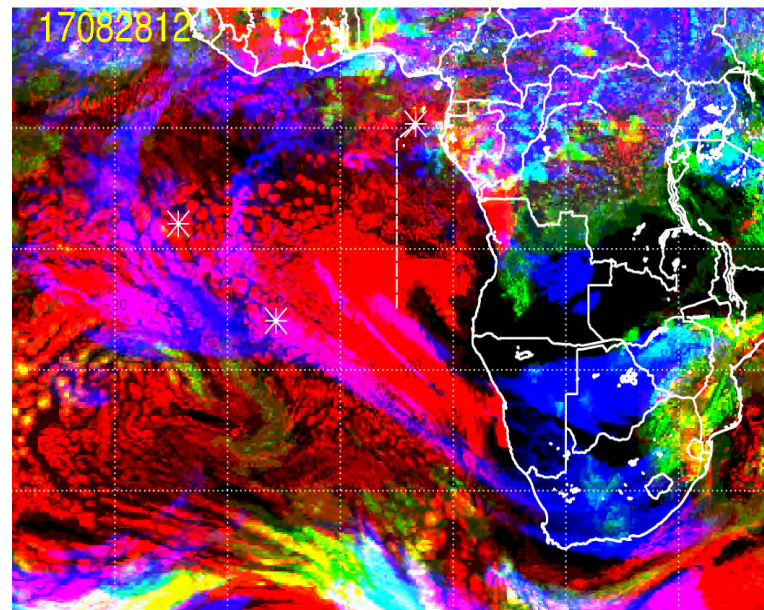


NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-26
Total Aerosol Optical Thickness



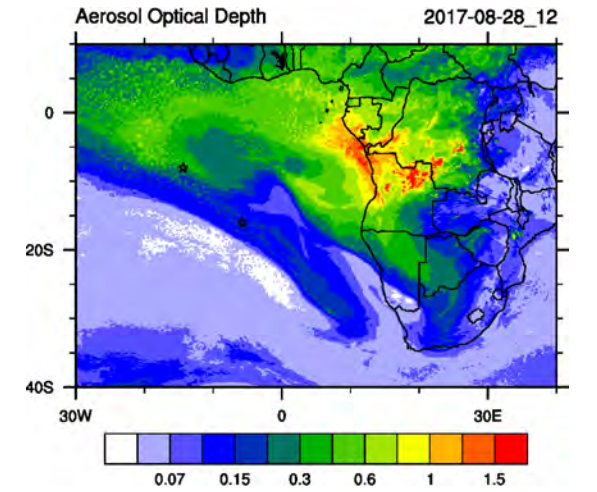
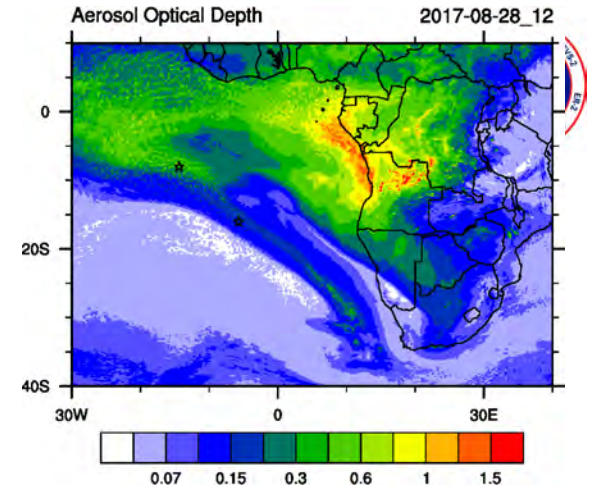
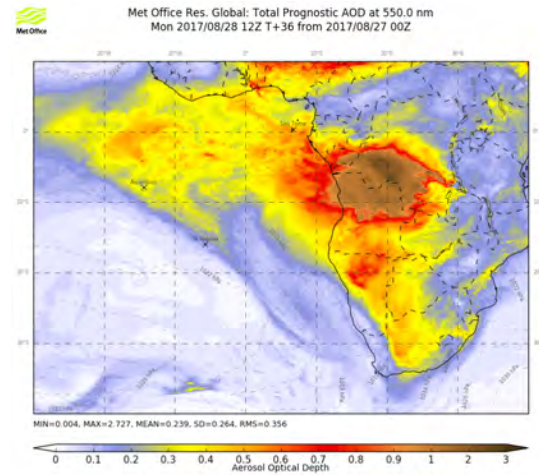
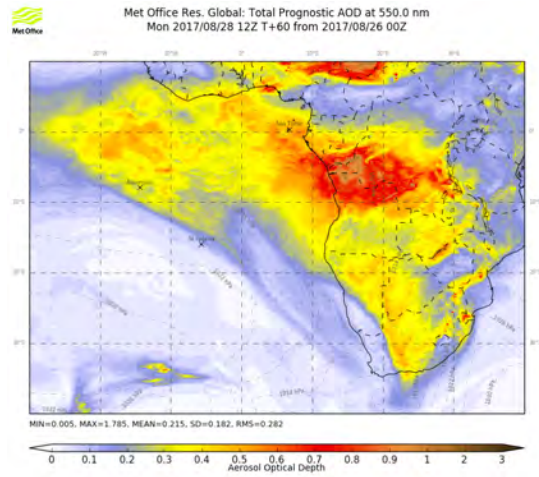
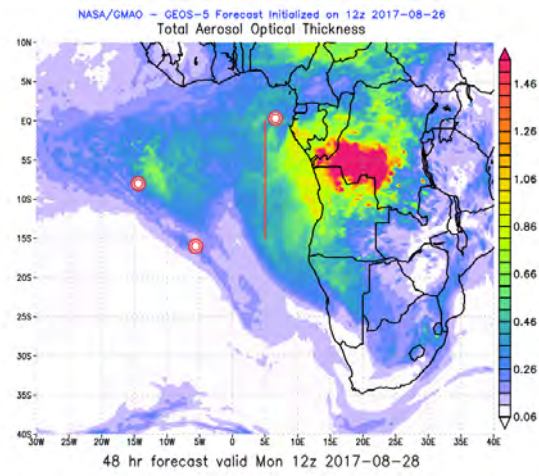
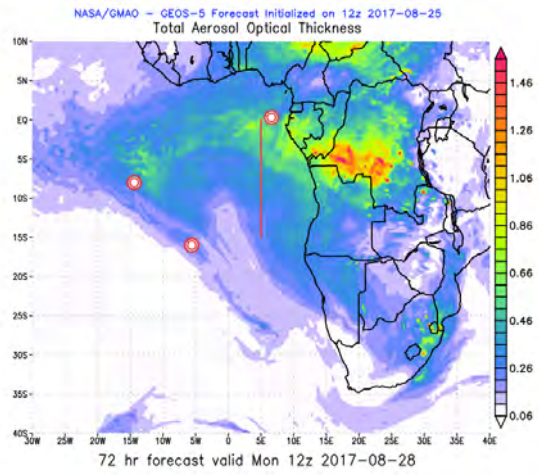
48 hr forecast valid Mon 12z 2017-08-28

17082812, 048 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF

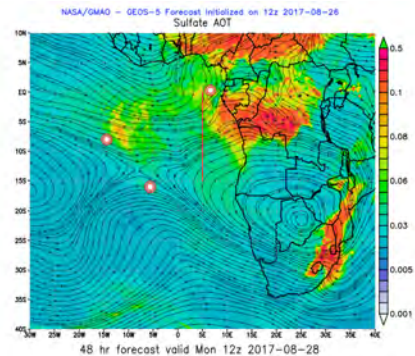
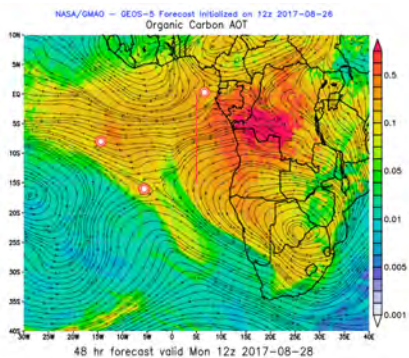
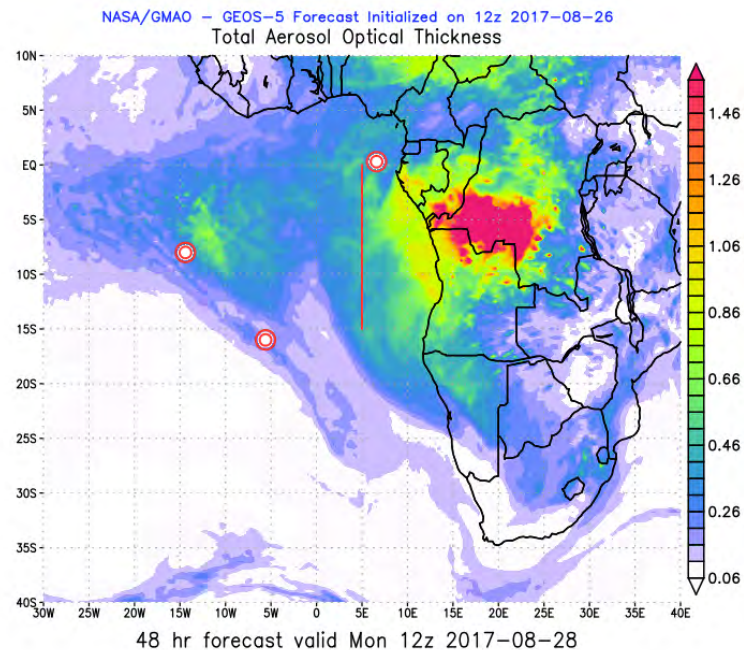
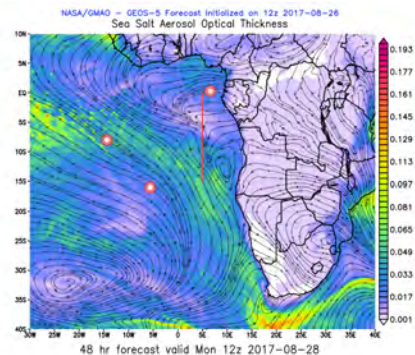
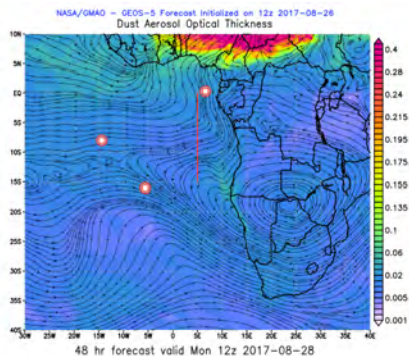
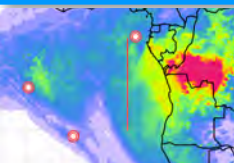


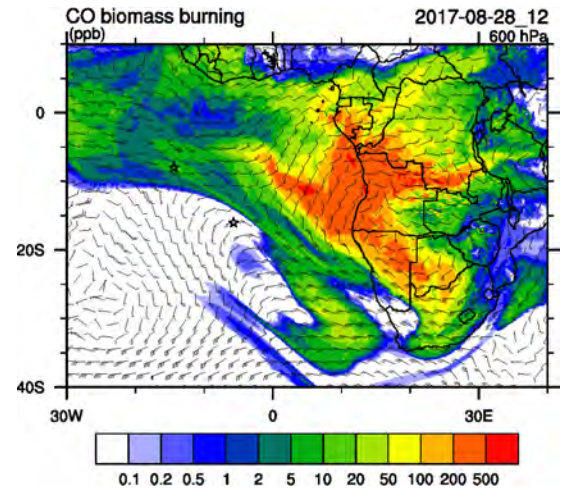
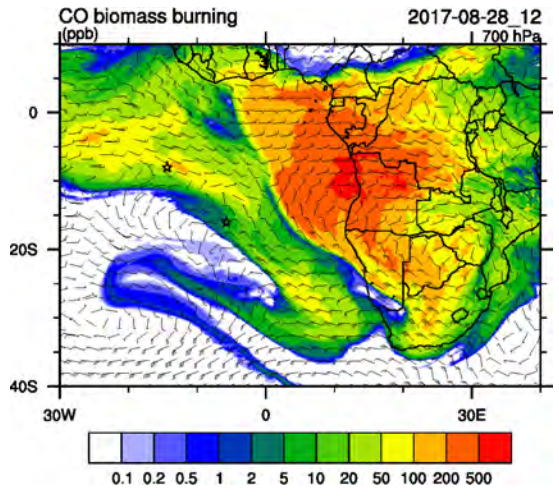
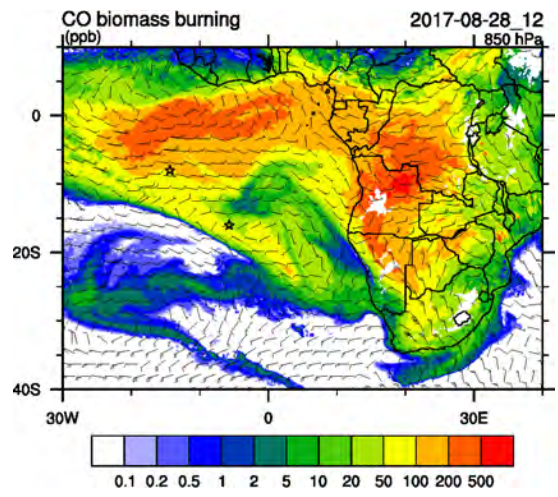
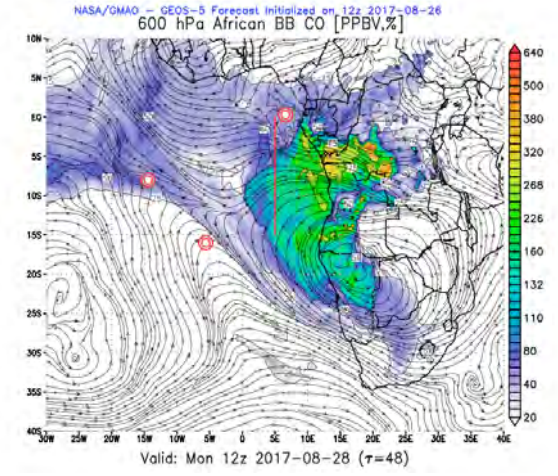
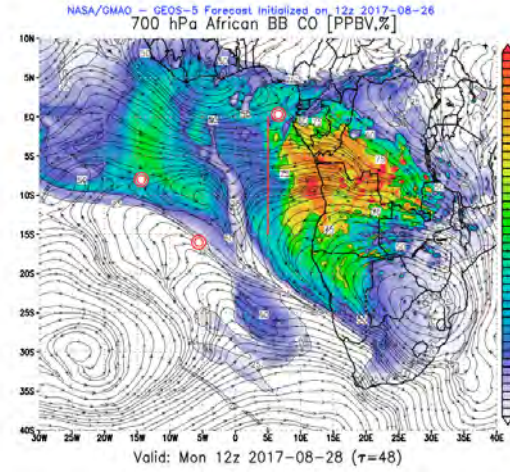
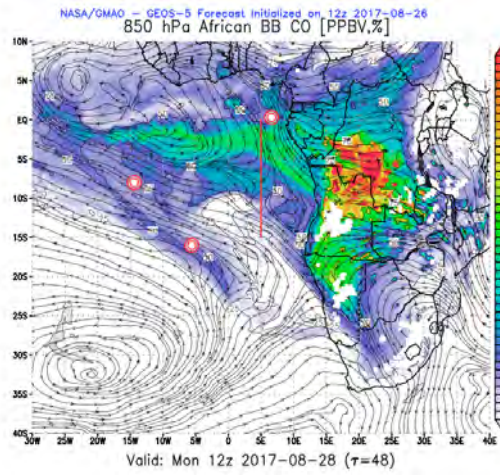
Low (red) + High (blue) cloud = magenta
Mid (green) + High (blue) cloud = cyan
Low (red) + Mid (green) cloud = yellow

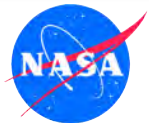
Cloud Fraction: low (red), mid (green), high (blue) cloud



Monday 28 August 2017 12Z







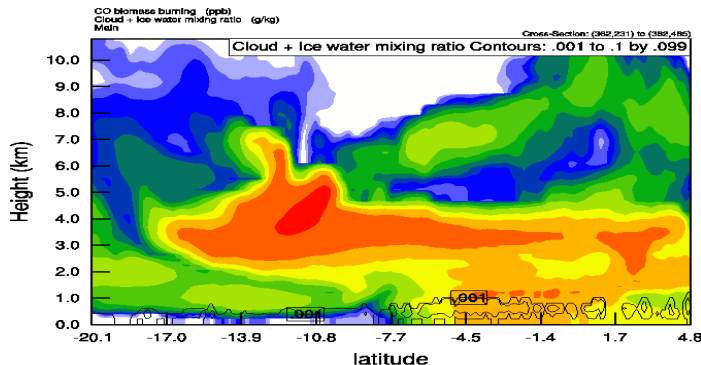
Cross sections at 8 S and 5 E

Mon 28 Aug 12 Z



S-N at 5E

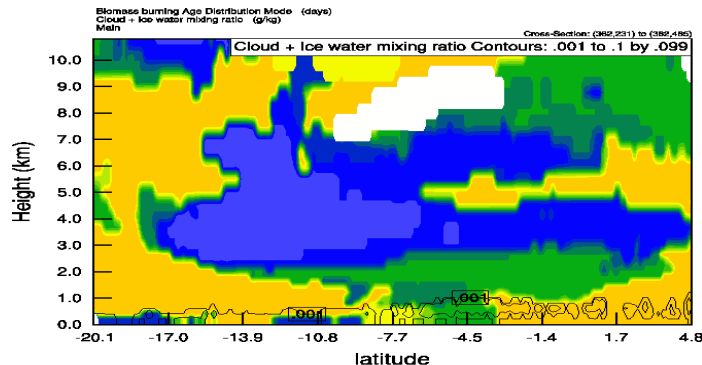
Init: 2017-08-28_00:00:00
Valid: 2017-08-28_12:00:00



5 E

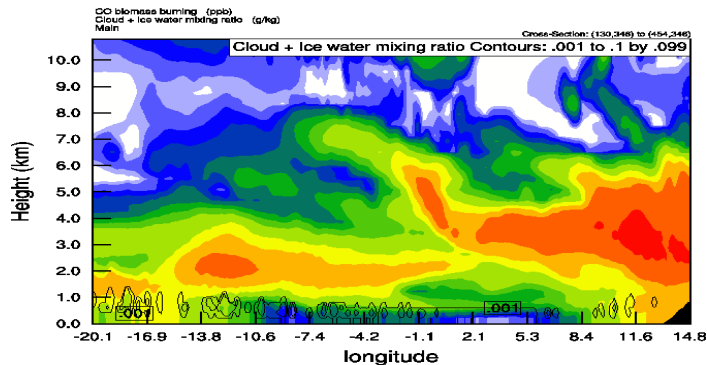
S-N at 5E

Init: 2017-08-28_00:00:00
Valid: 2017-08-28_12:00:00



W-E at 8S

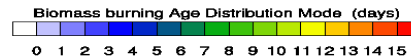
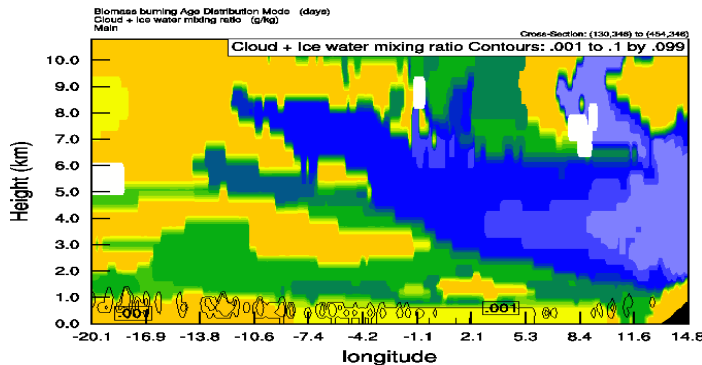
Init: 2017-08-28_00:00:00
Valid: 2017-08-28_12:00:00

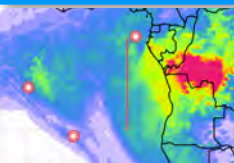


8 S

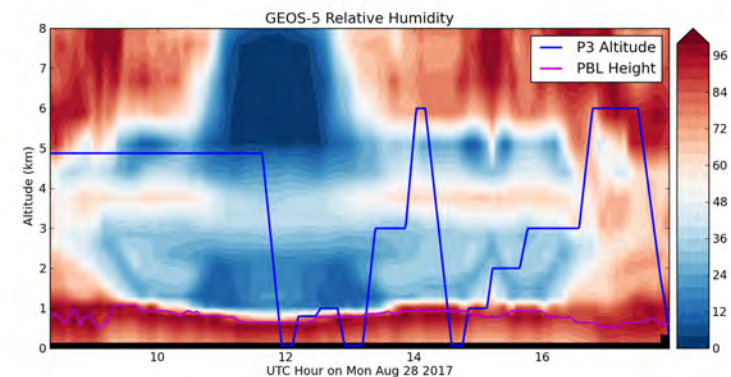
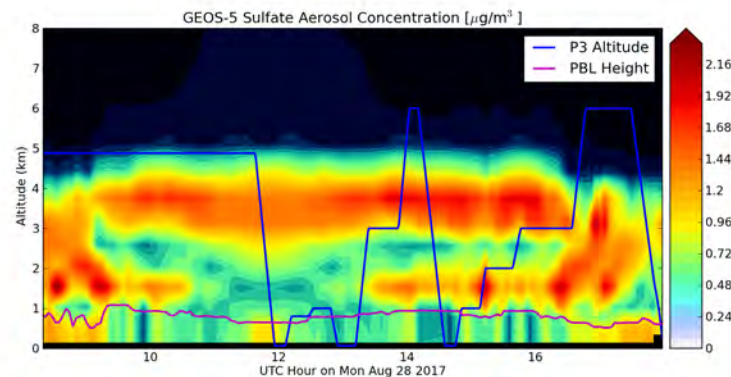
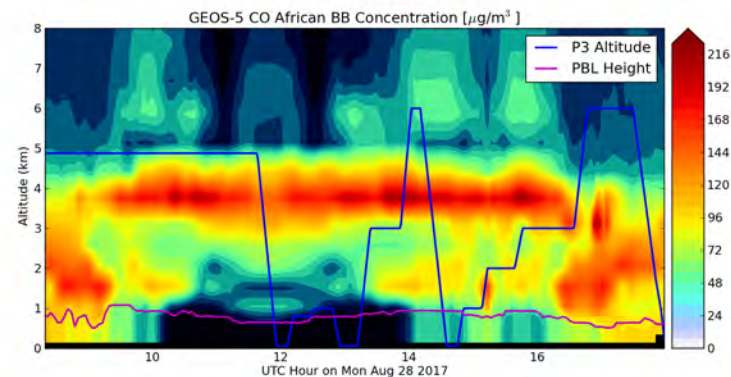
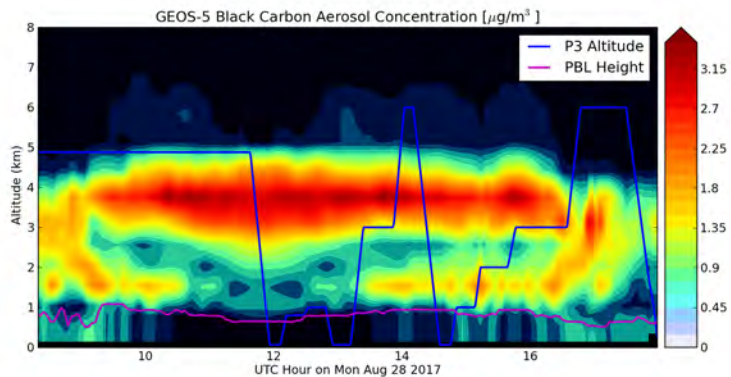
W-E at 8S

Init: 2017-08-28_00:00:00
Valid: 2017-08-28_12:00:00

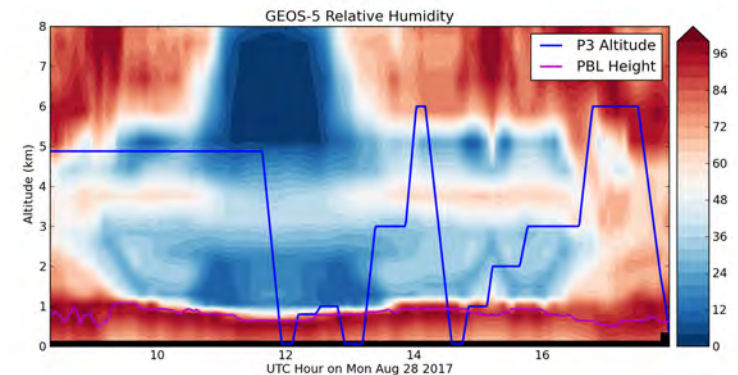
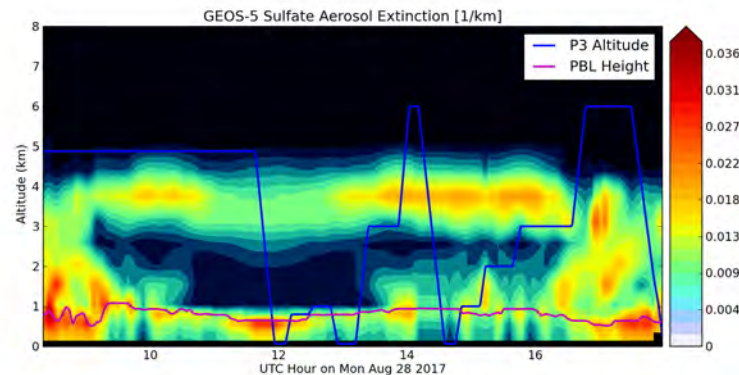
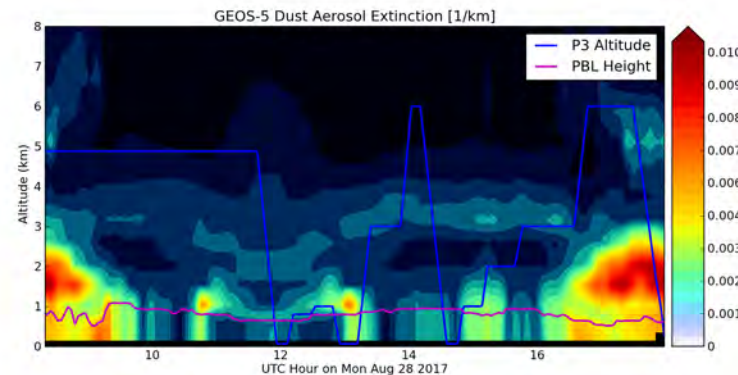
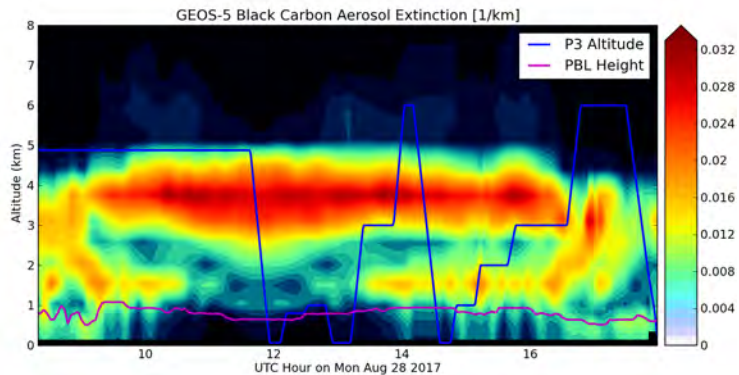
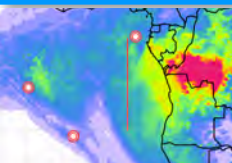


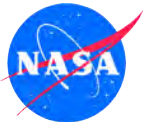


Monday 28 August 2017 (Concentration)



Monday 28 August 2017 (Extinction)



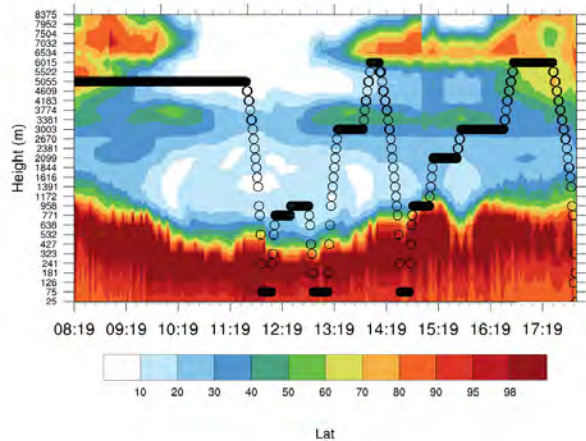


Monday 28 August 2017



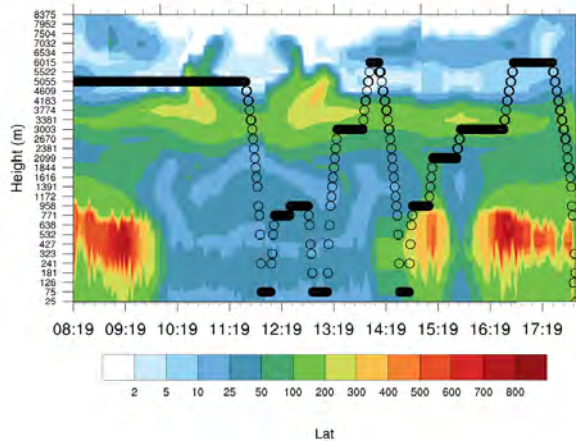
Relative humidity (%)

Flight 20170828-rh init20170826



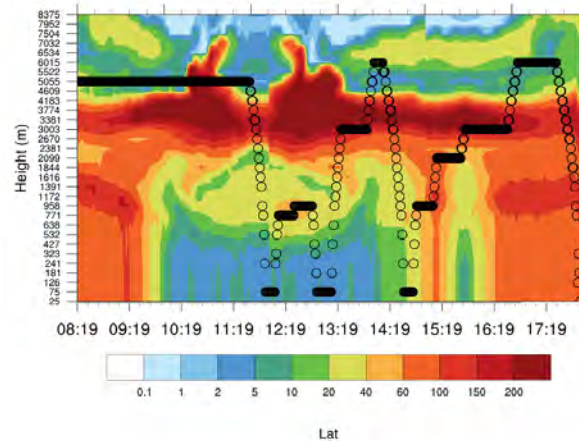
550 nm extinction (1/Mm)

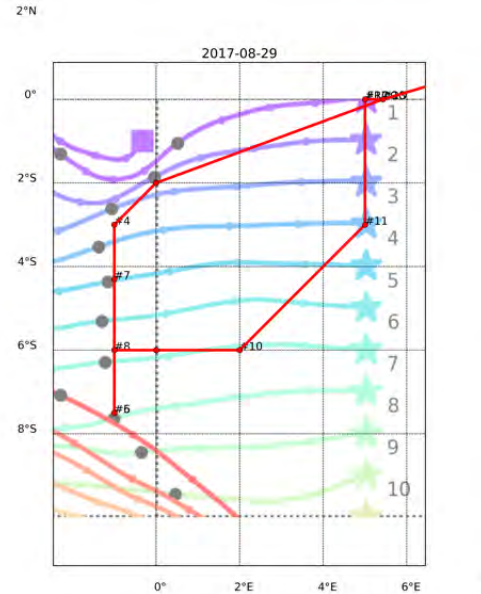
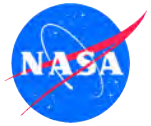
Flight 20170828-ext init20170826



PM 2.5 (ug/kg)

Flight 20170828-pm25 init20170826

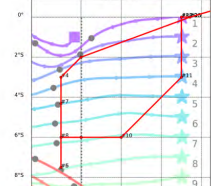




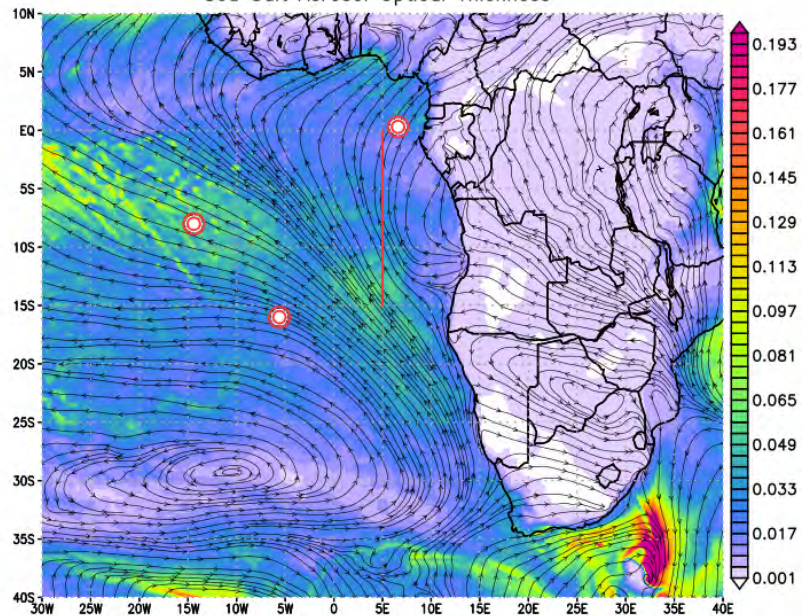
Fly Day (Flight of Opportunity)

TUESDAY, 29 AUGUST 2017

Tuesday 29 August 2017 12Z

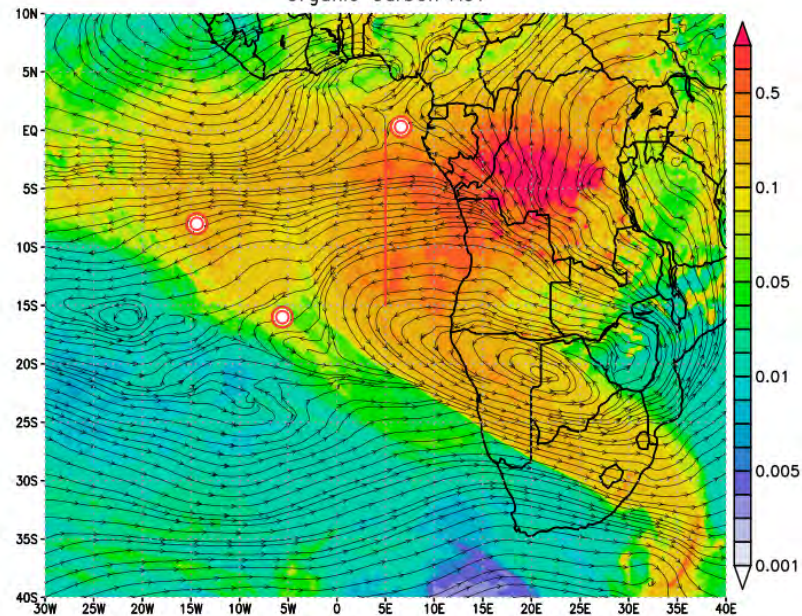


NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-26
Sea Salt Aerosol Optical Thickness



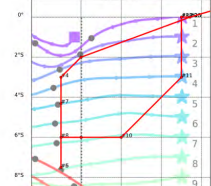
72 hr forecast valid Tue 12z 2017-08-29

NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-26
Organic Carbon AOT

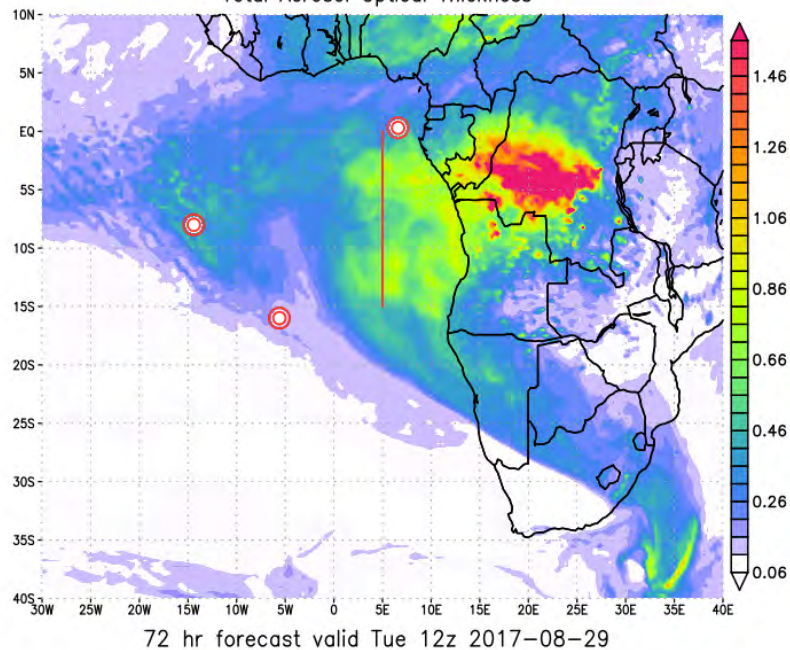


72 hr forecast valid Tue 12z 2017-08-29

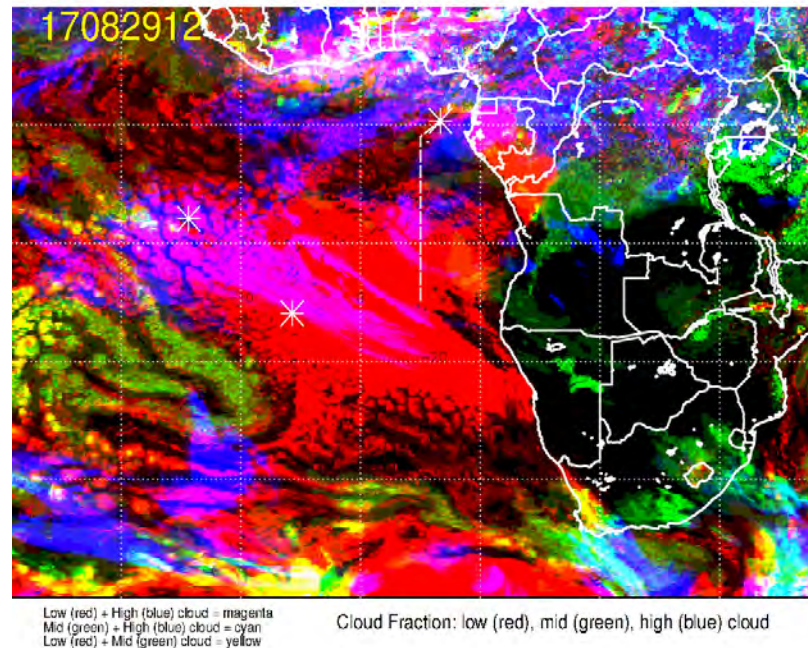
Tuesday 29 August 2017 12Z

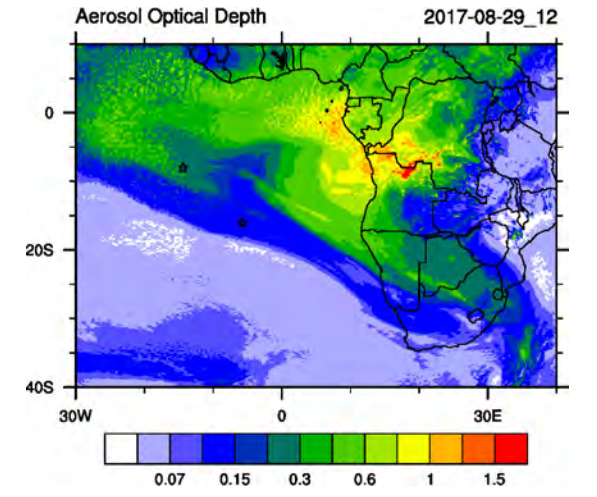
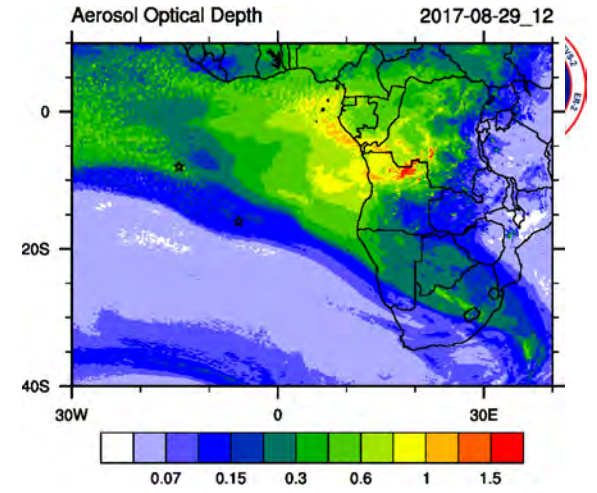
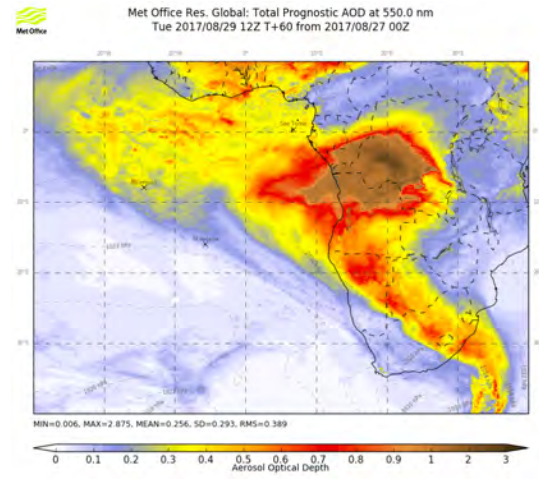
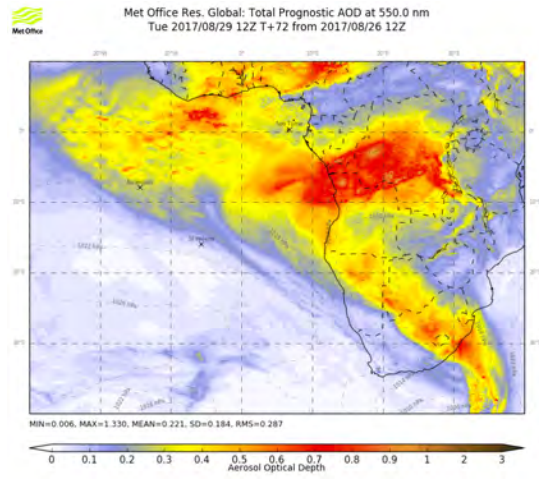
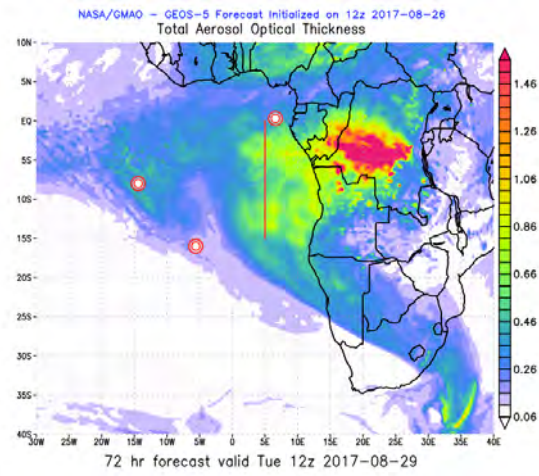
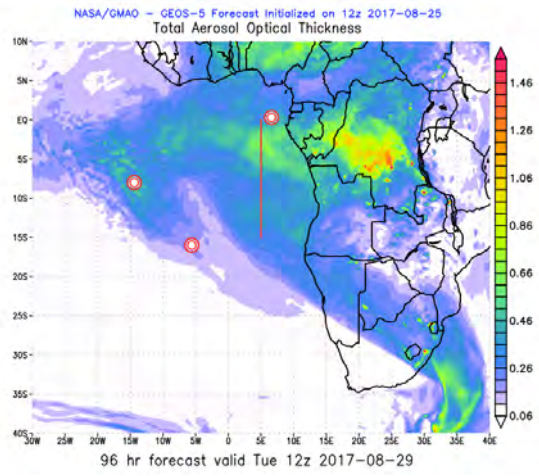


NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-26
Total Aerosol Optical Thickness

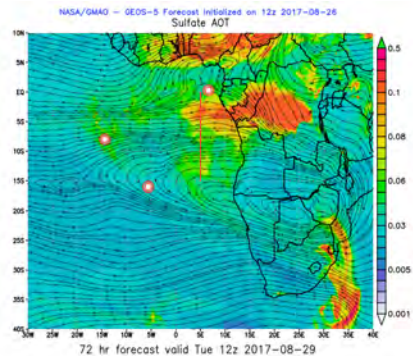
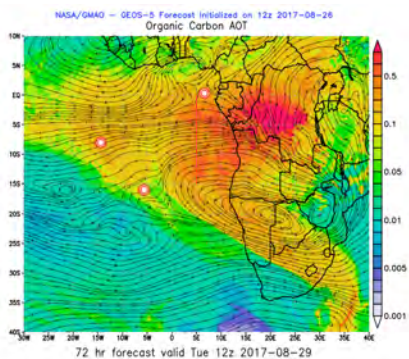
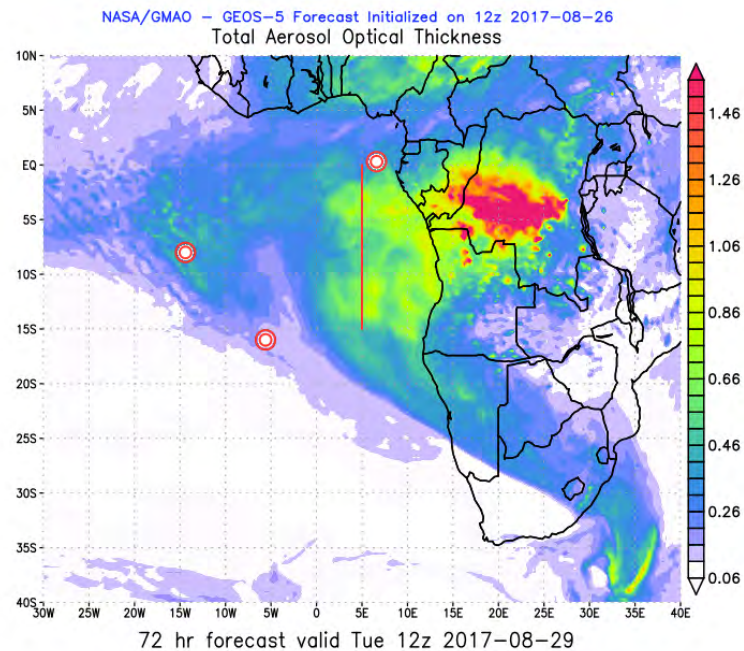
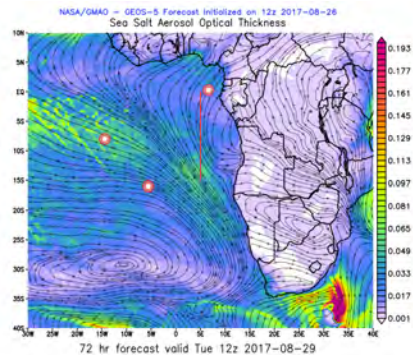
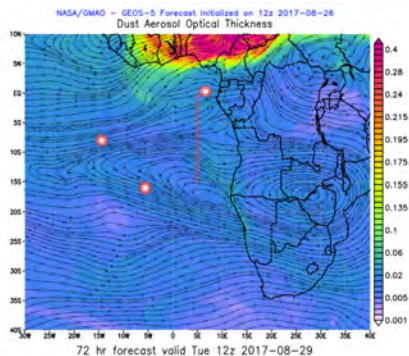
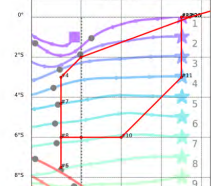


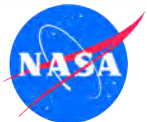
17082912, 072 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF



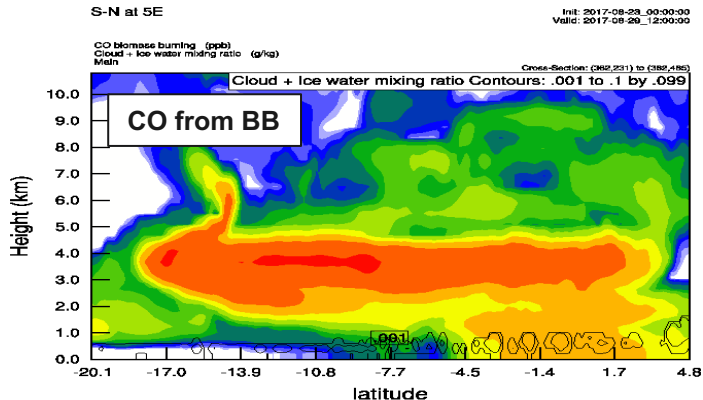


Tuesday 29 August 2017 12Z

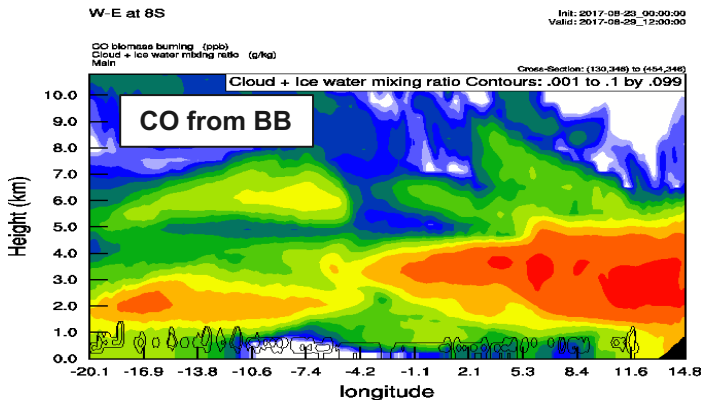
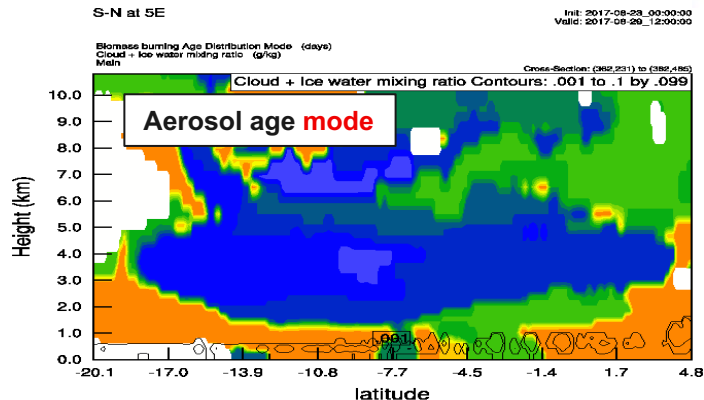




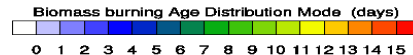
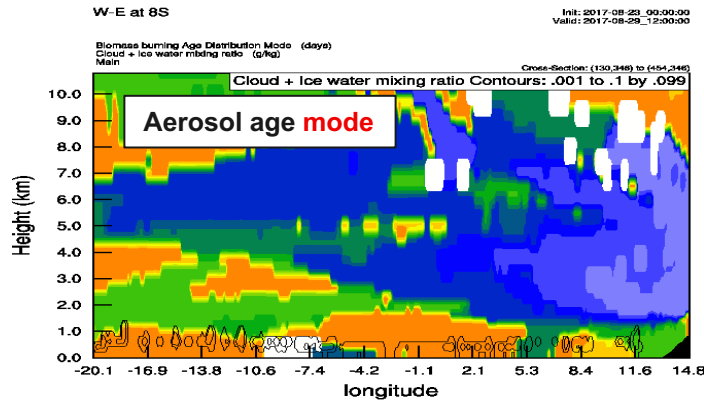
Cross sections at 8 S and 5 E Tue 29 Aug 12 Z



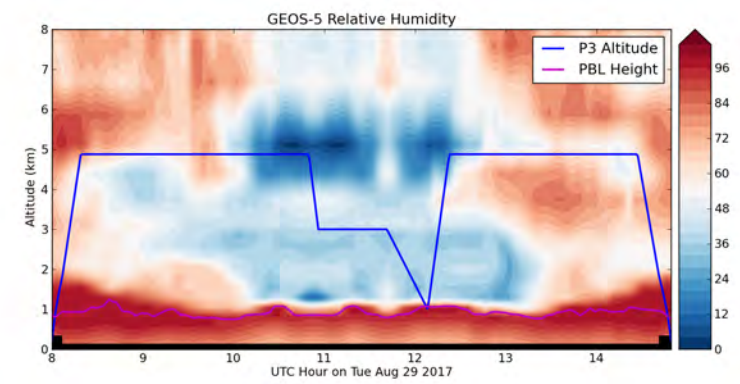
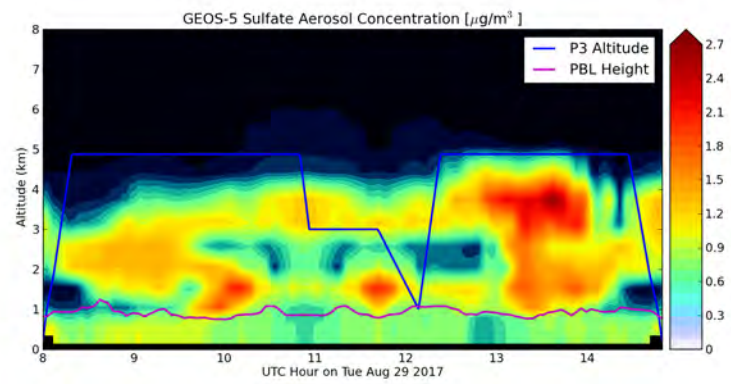
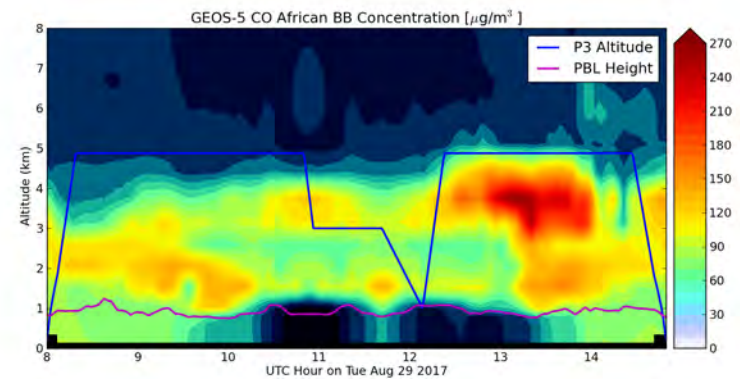
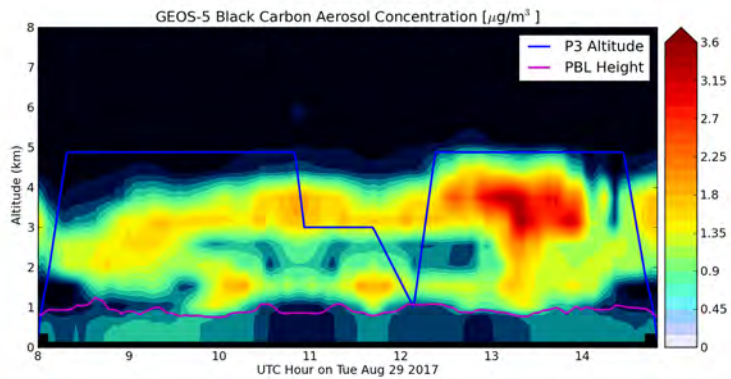
5 E



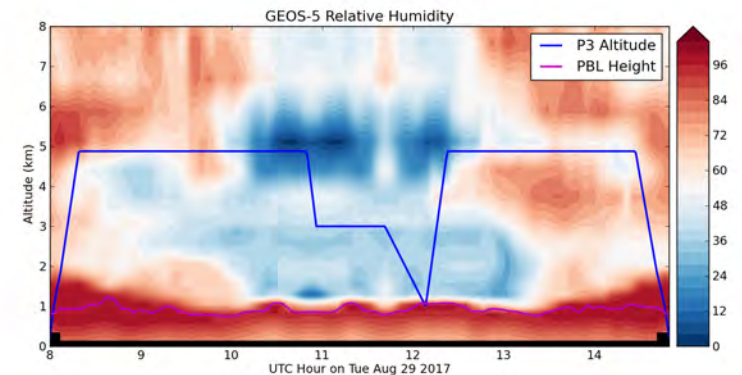
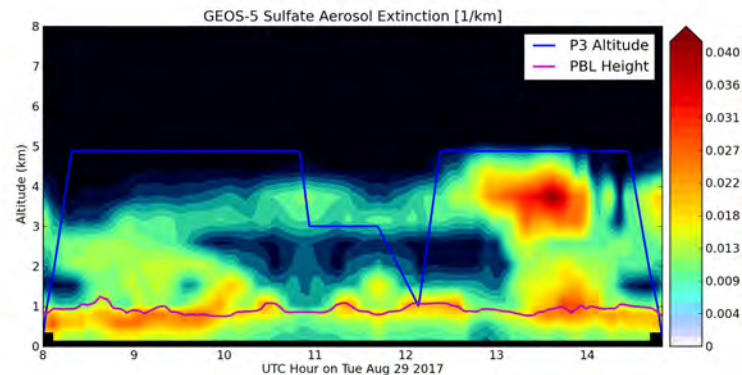
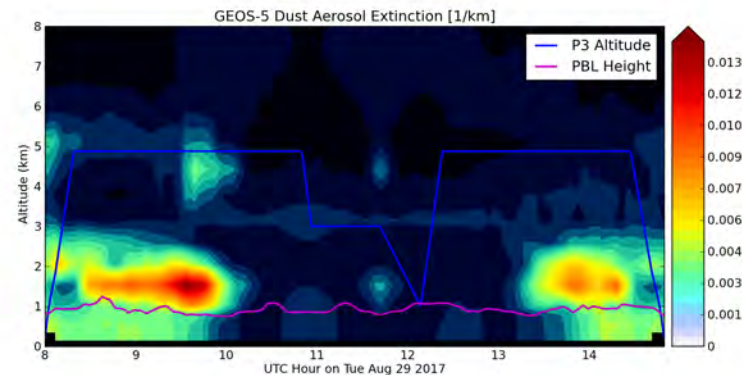
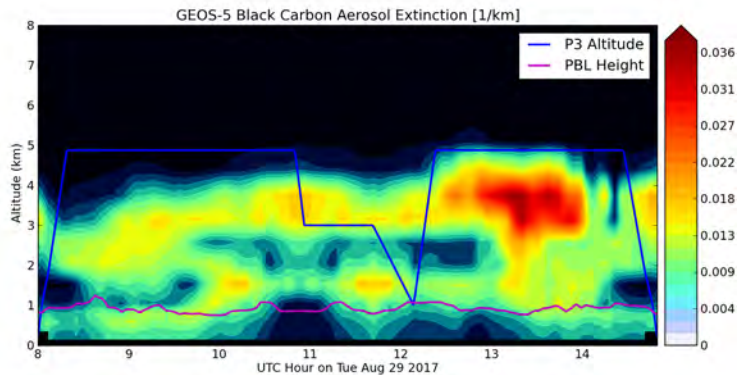
8 S



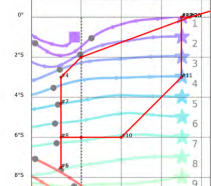
Tuesday 29 August 2017 (Concentration)



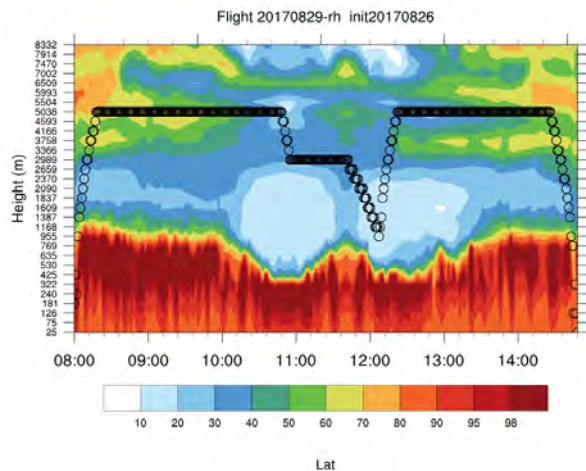
Tuesday 29 August 2017 (Extinction)



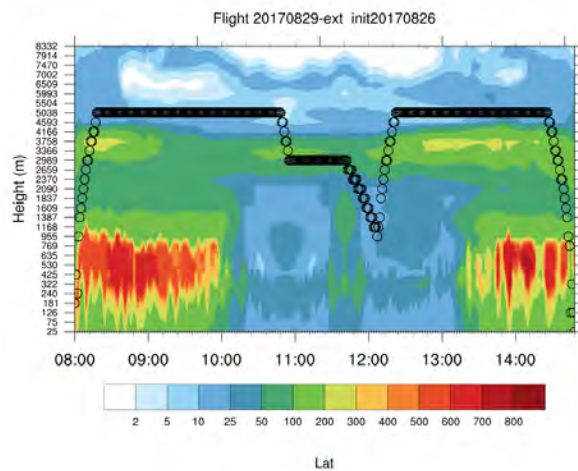
Tuesday 29 August 2017



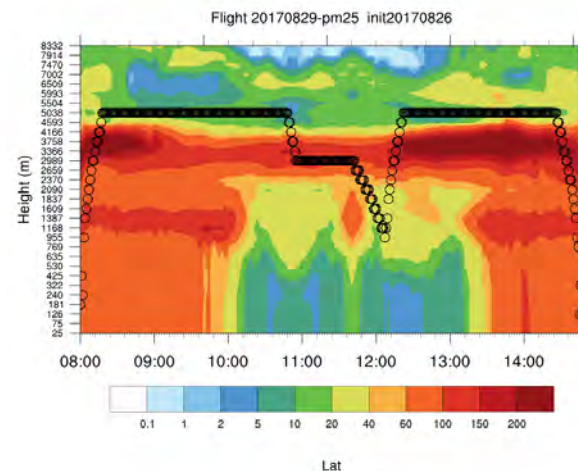
Relative humidity (%)



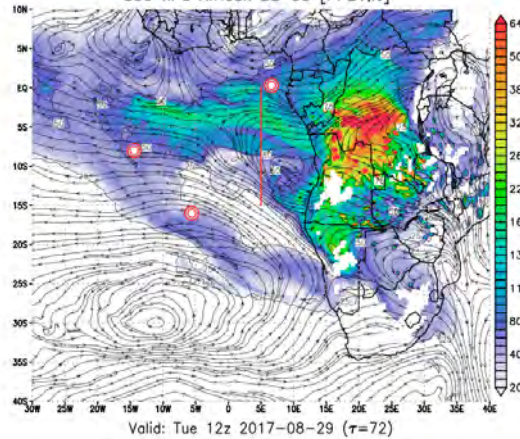
550 nm extinction (1/Mm)



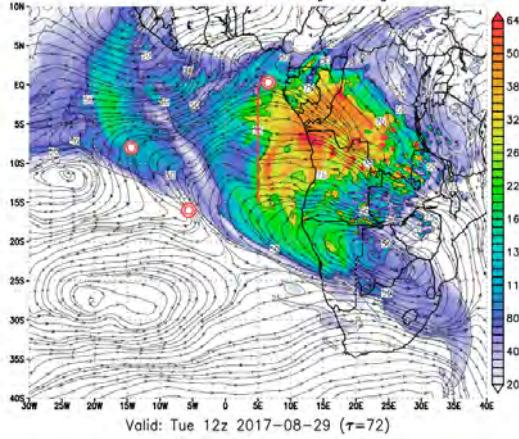
PM 2.5 (ug/kg)



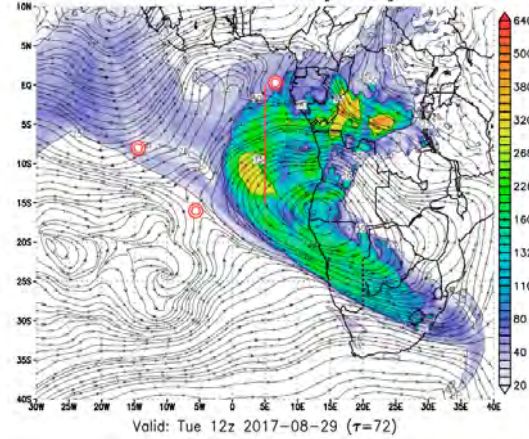
NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-26
850 hPa African BB CO [PPBV,%]



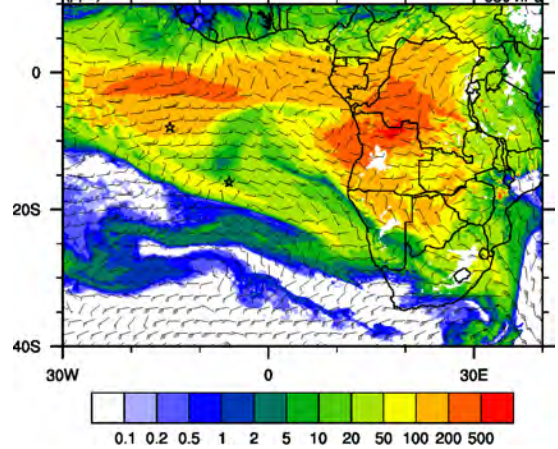
NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-26
700 hPa African BB CO [PPBV,%]



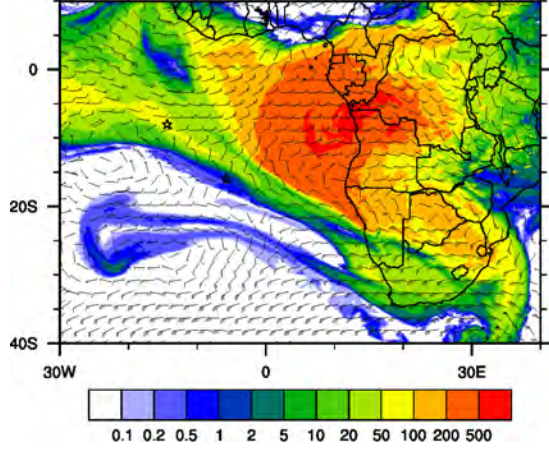
NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-26
600 hPa African BB CO [PPBV,%]



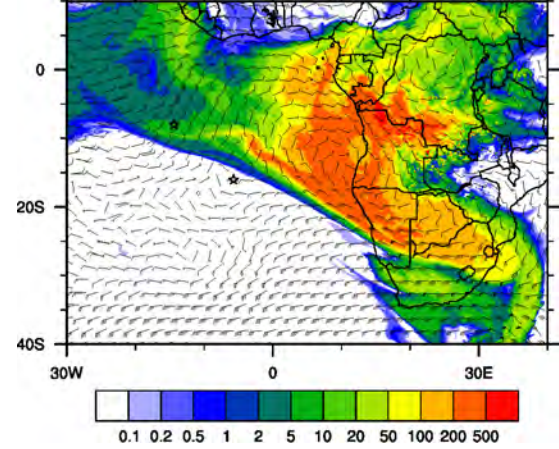
CO biomass burning (ppb) 2017-08-29 12
850 hPa

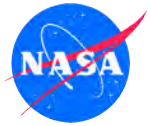


CO biomass burning (ppb) 2017-08-29 12
700 hPa



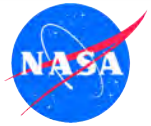
CO biomass burning (ppb) 2017-08-29 12
600 hPa





No Fly Day (TBD)

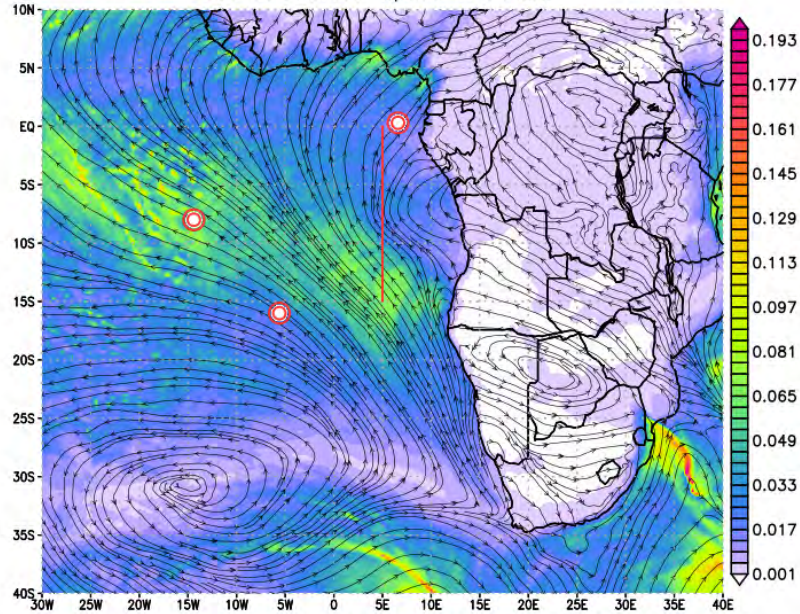
WEDNESDAY, 30 AUGUST 2017



Wed 30 August 2017 12Z

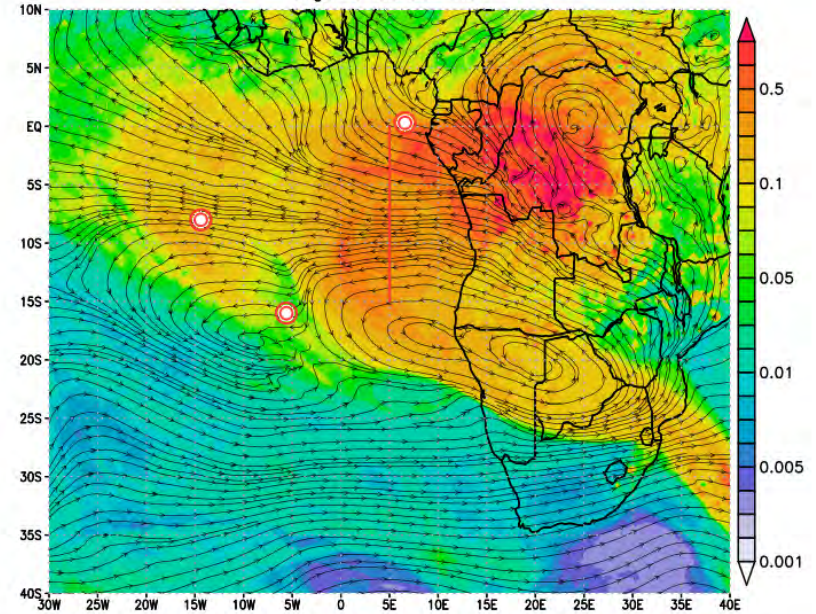


NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-26
Sea Salt Aerosol Optical Thickness

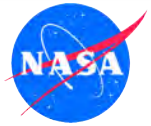


96 hr forecast valid Wed 12z 2017-08-30

NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-26
Organic Carbon AOT



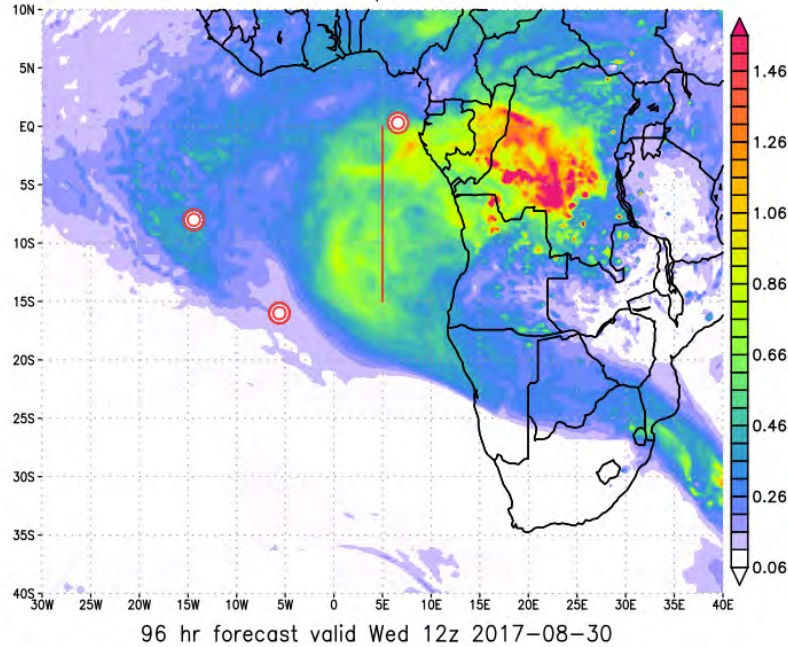
96 hr forecast valid Wed 12z 2017-08-30



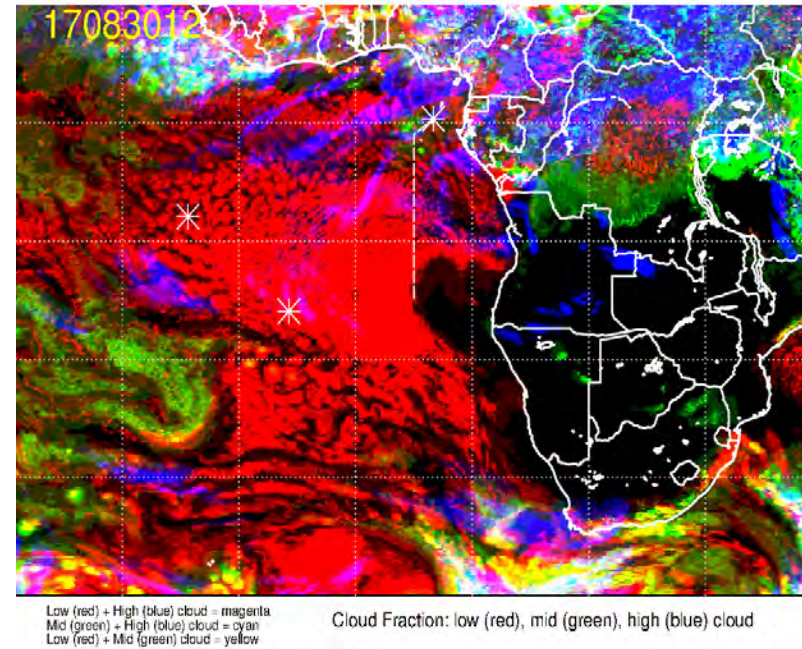
Wed 30 August 2017 12Z

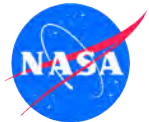


NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-26
Total Aerosol Optical Thickness

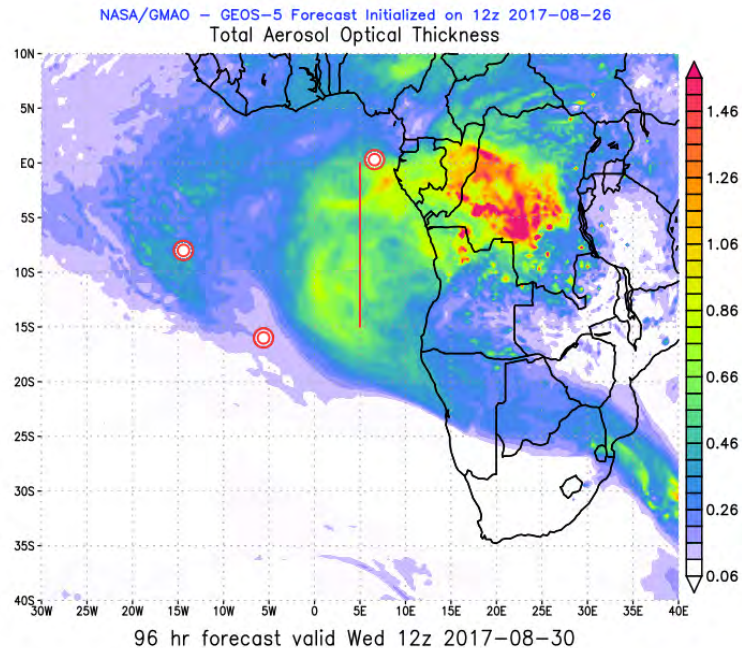
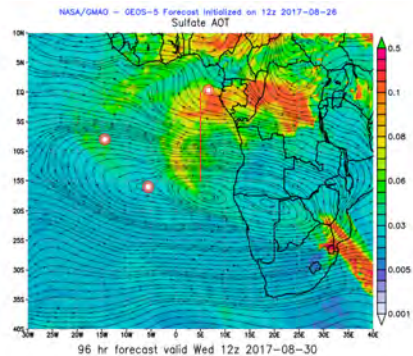
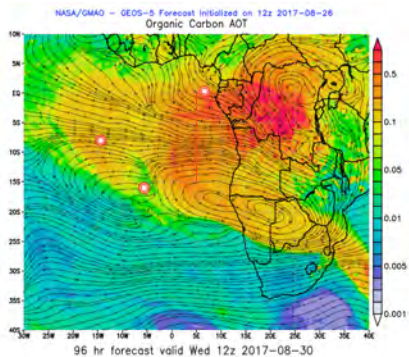
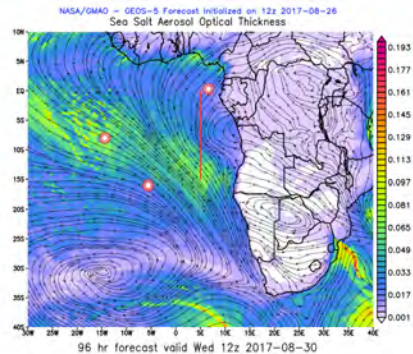
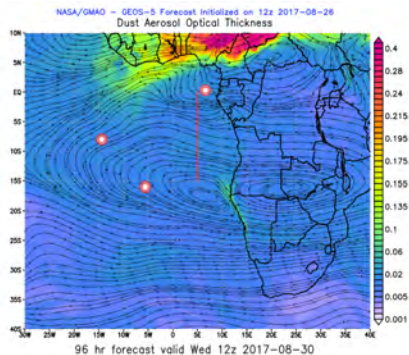


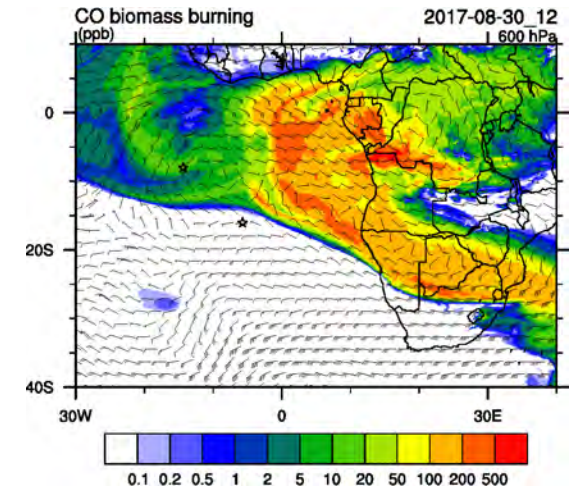
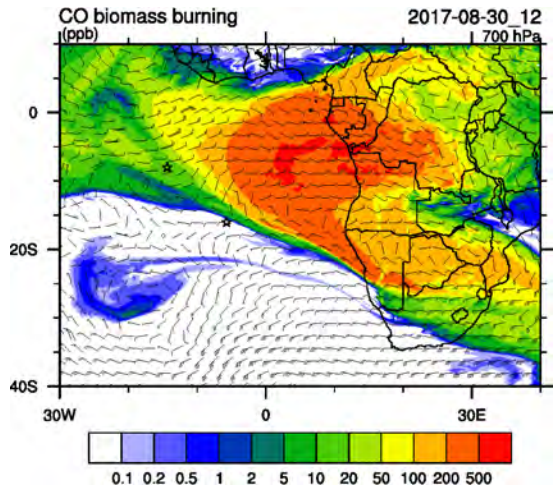
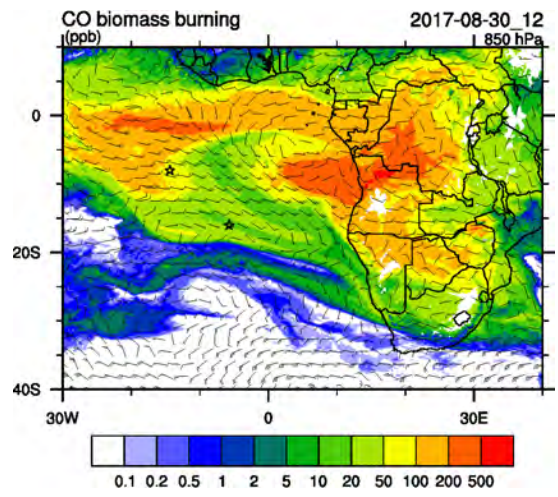
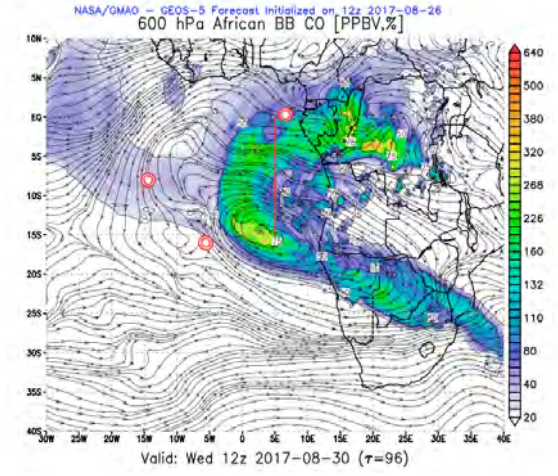
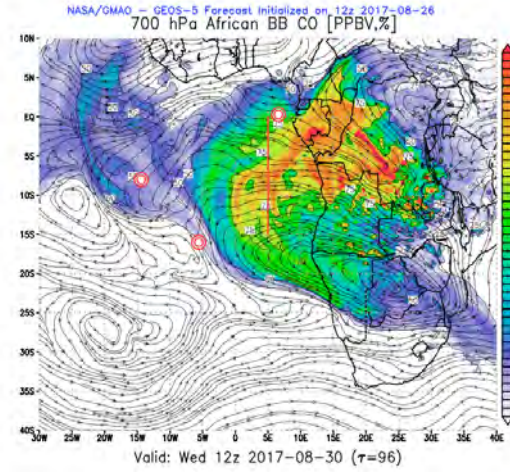
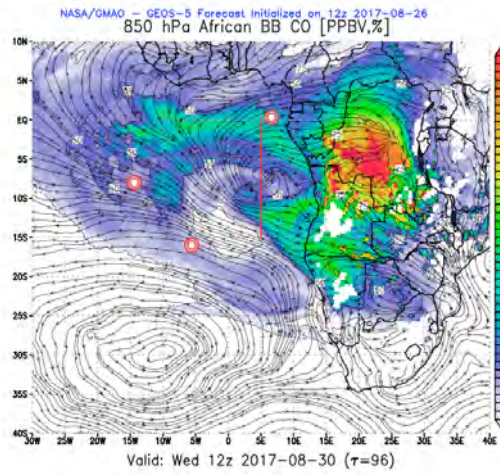
17083012, 096 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF

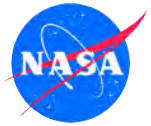




Wed 30 August 2017 12Z

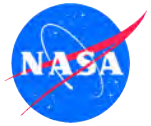






Last Fly Day (TBD)

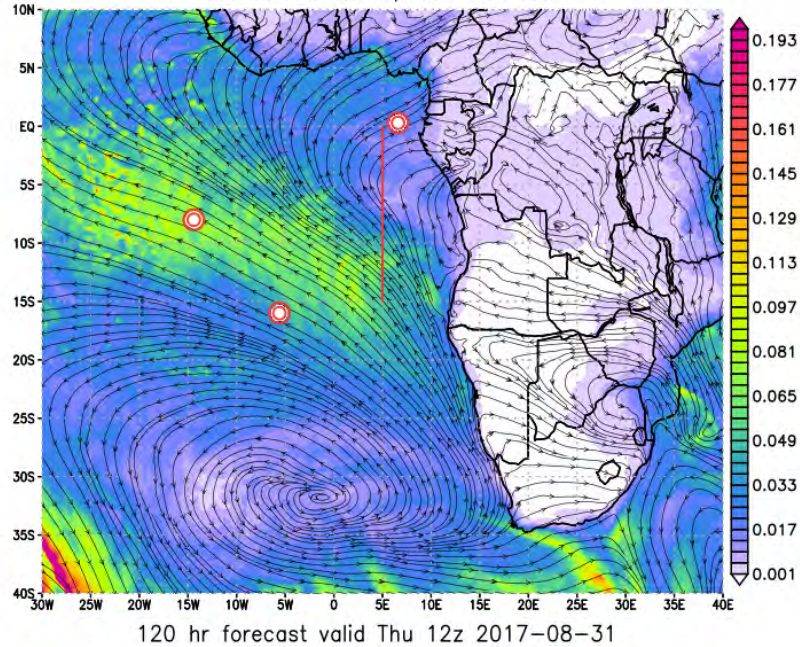
THURSDAY, 31 AUGUST 2017



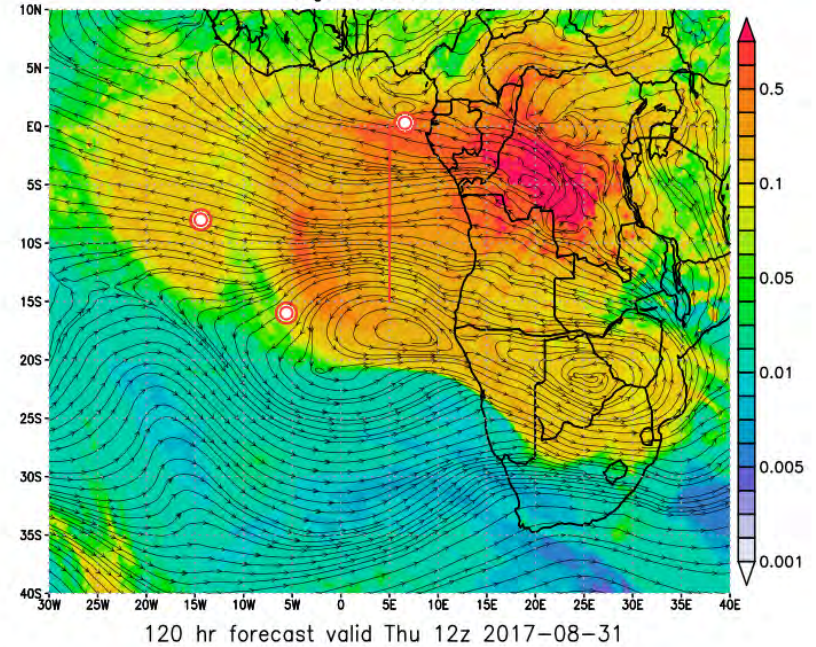
Thu 31 August 2017 12Z

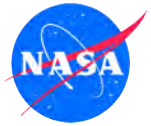


NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-26
Sea Salt Aerosol Optical Thickness



NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-26
Organic Carbon AOT

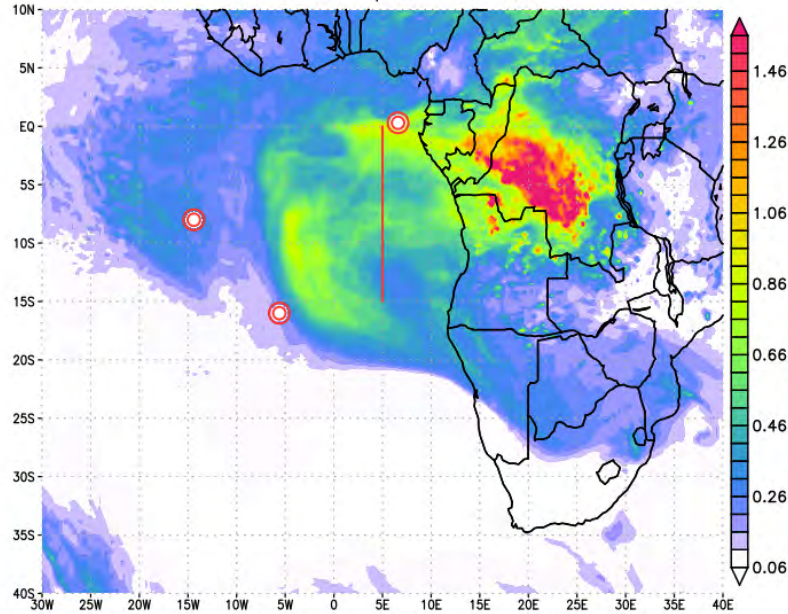




Thu 31 August 2017 12Z

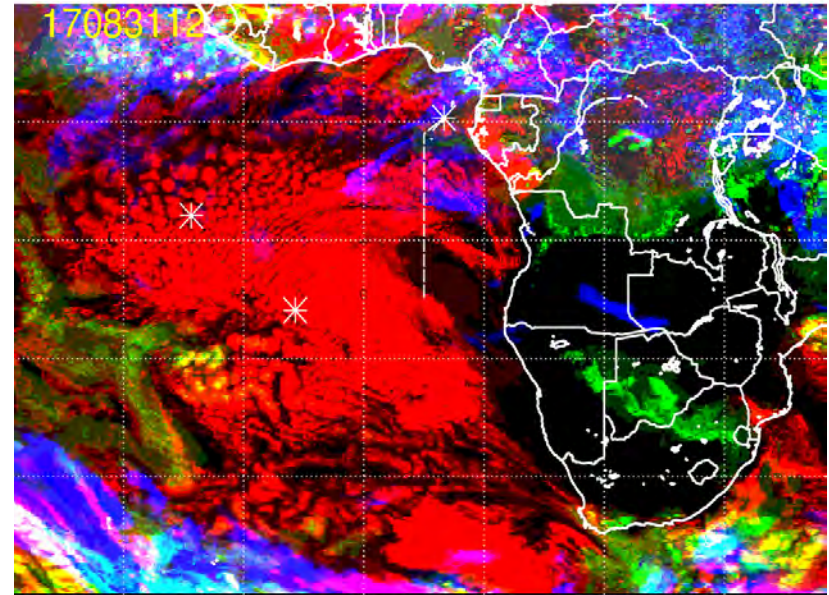


NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-26
Total Aerosol Optical Thickness



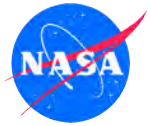
120 hr forecast valid Thu 12z 2017-08-31

17083112, 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



Thu 31 August 2017 12Z

