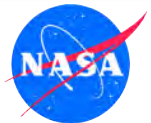




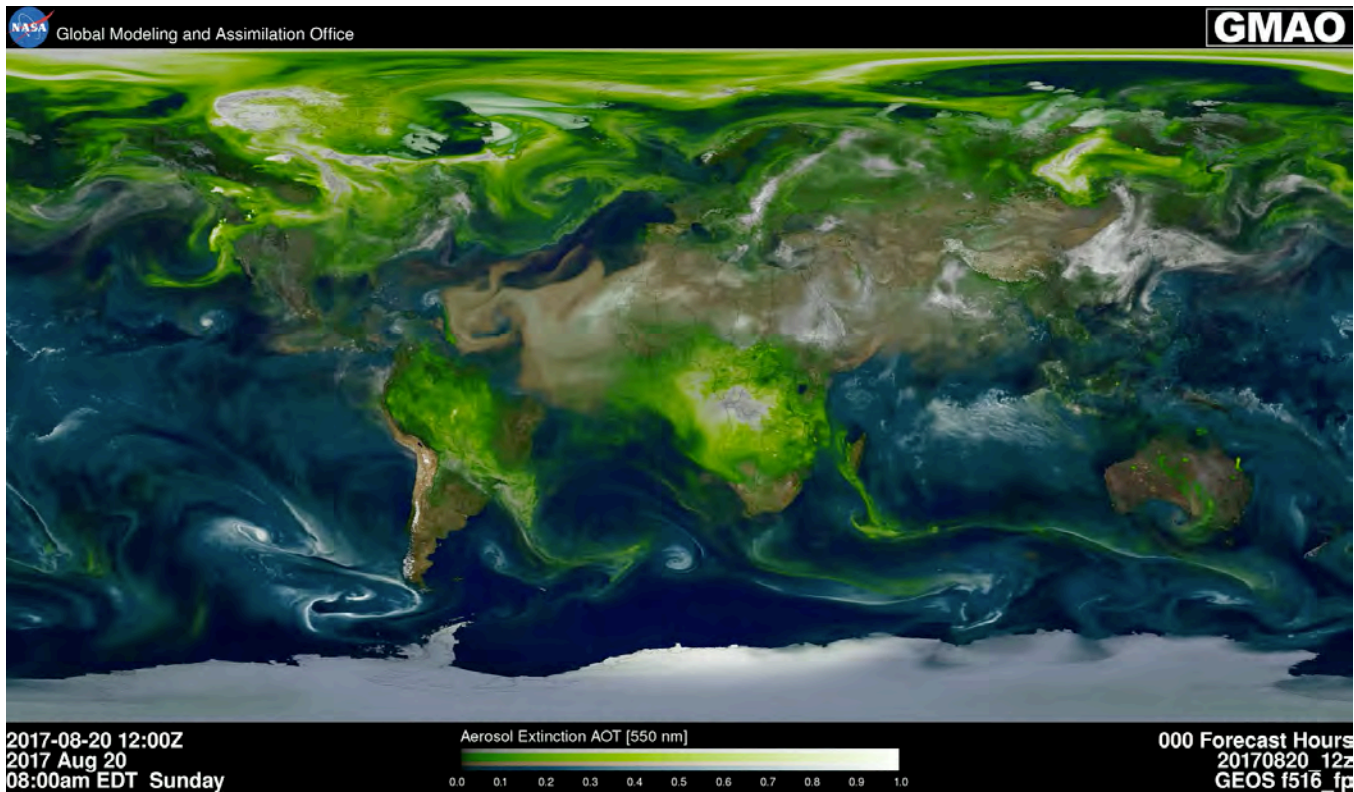
ORACLES Forecast Briefing

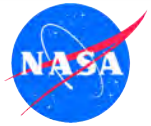
Aerosols

Monday, 21 August 2017



The Aerosol Week

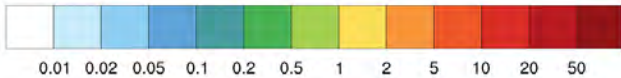
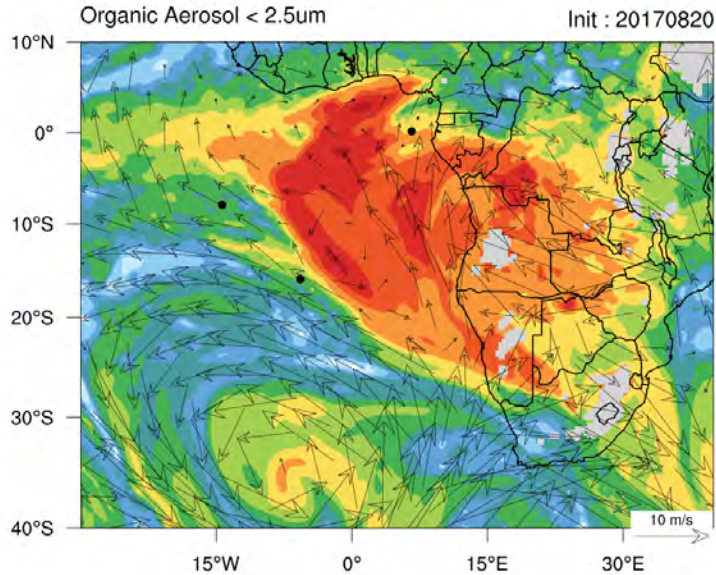




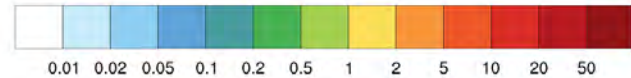
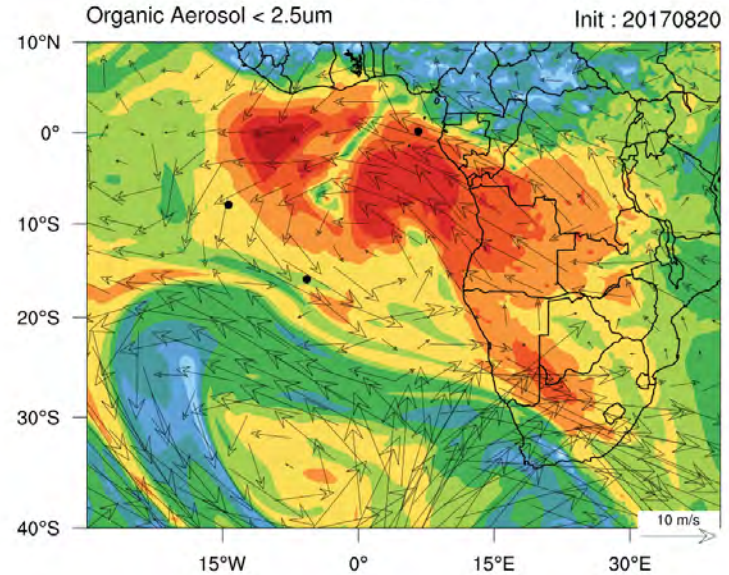
Organic Aerosol forecast

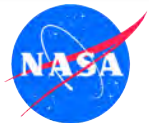


OA-2017-08-22_00Z-850mb

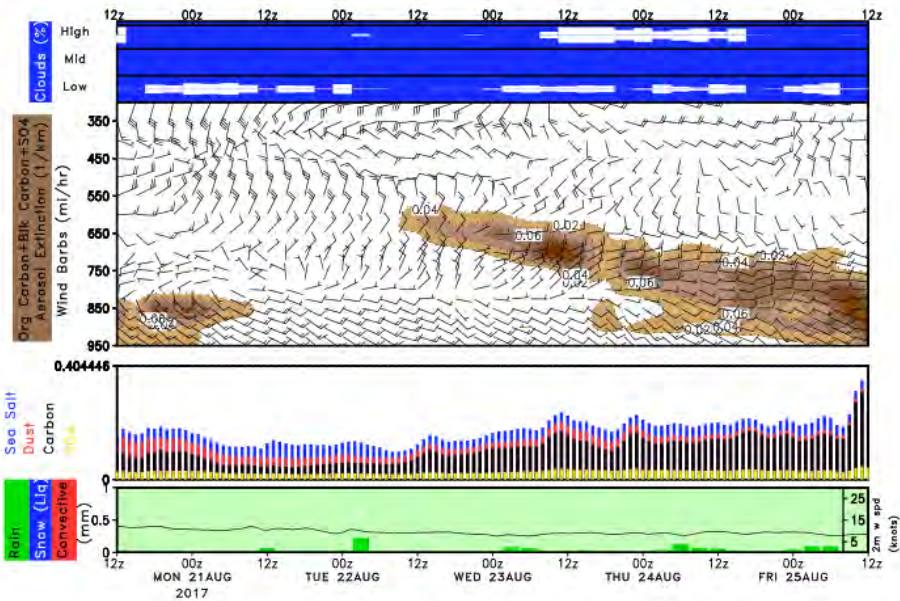


OA-2017-08-22_00Z-700mb

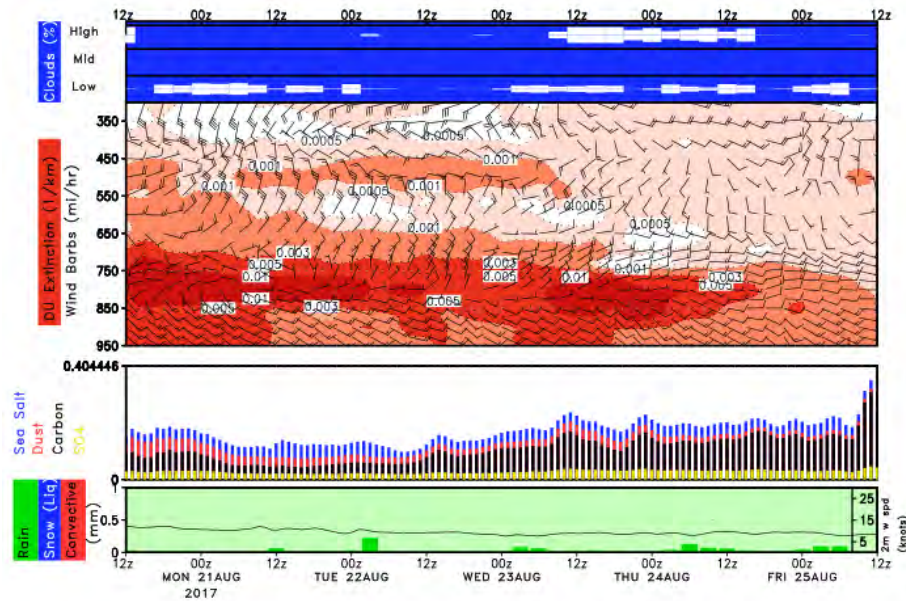




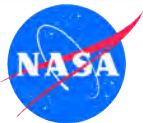
Ascension (OC+BC+SO4 & Dust)



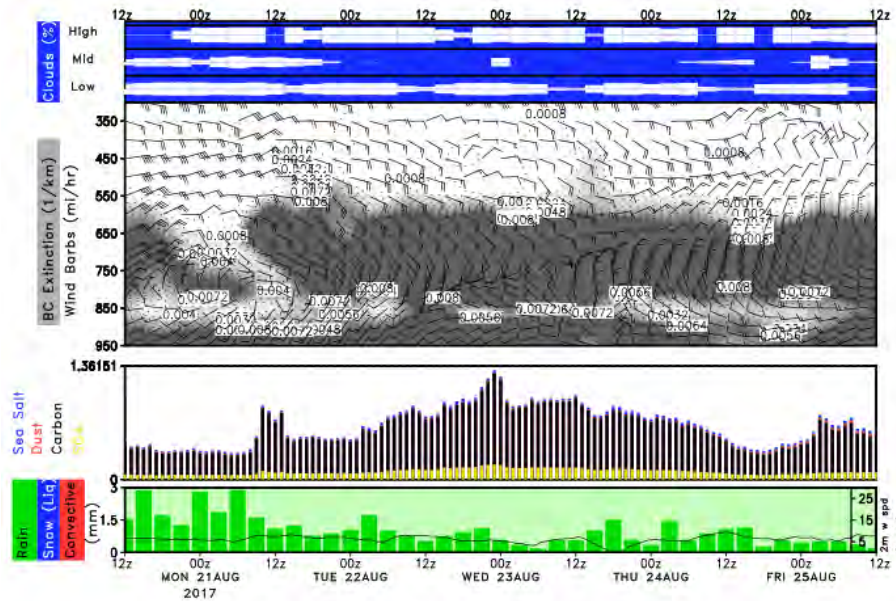
LAT = -8.0 , LON = -14.4, Location = ORACLES_Ascension_Island, Fcst_init = 20170820



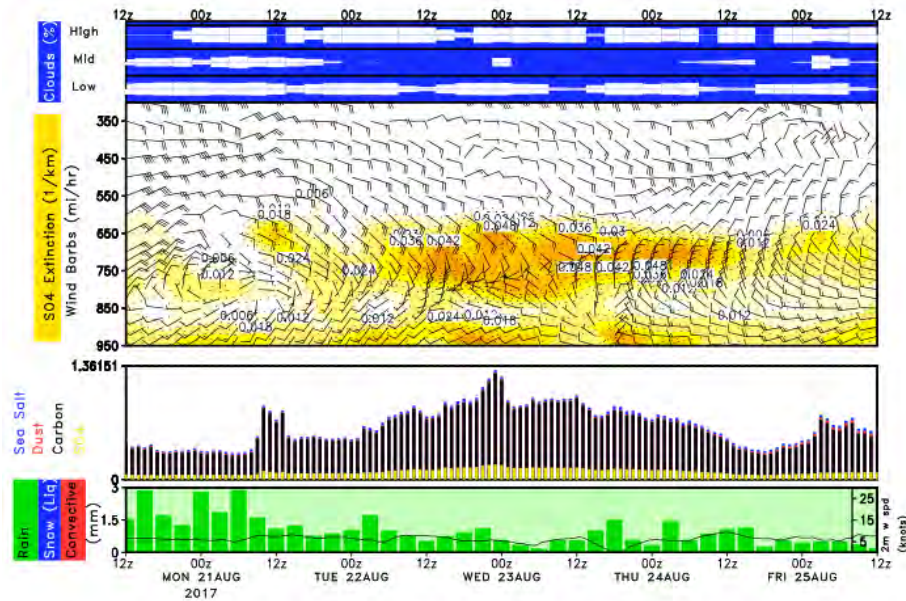
LAT = -8.0 , LON = -14.4, Location = ORACLES_Ascension_Island, Fcst_init = 20170820



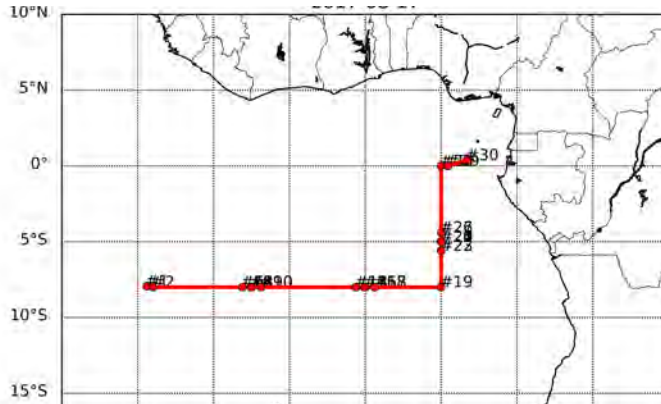
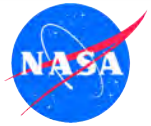
São Tomé (BC & SO₄)



LAT = 0.3 , LON = 6.6, Location = ORACLES_Sao_Tome_e_Principe, Fcst_init = 20170820



LAT = 0.3 , LON = 6.6, Location = ORACLES_Sao_Tome_e_Principe, Fcst_init = 20170820

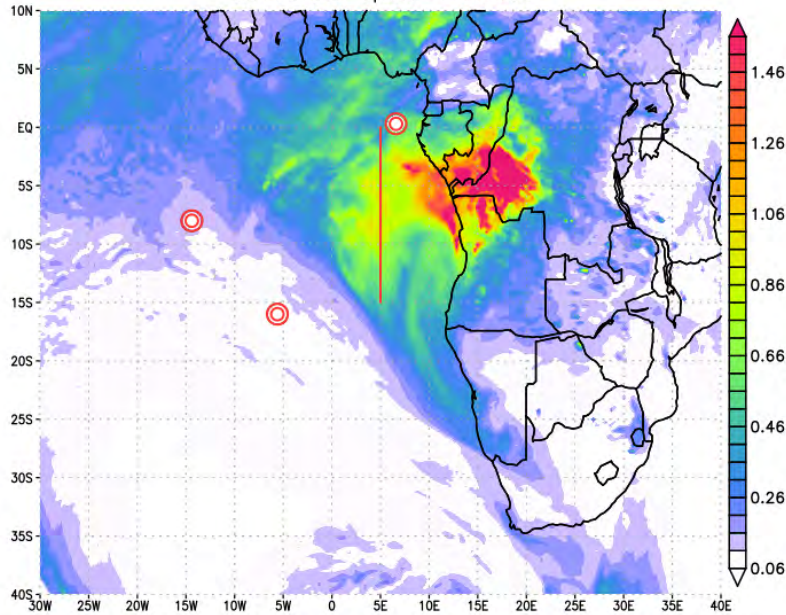


Flight Day (Return from Ascension)

MONDAY, 21 AUGUST 2017

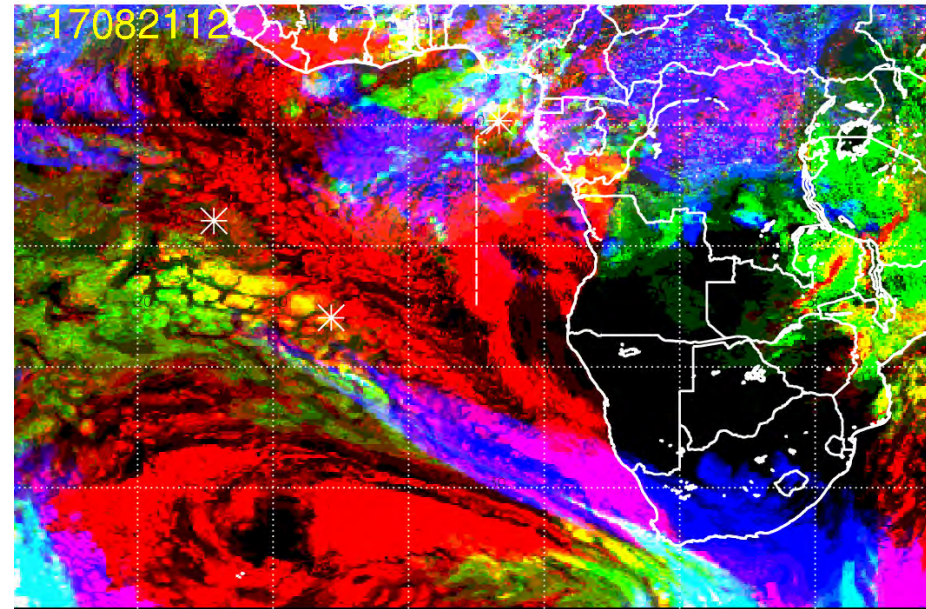
Monday 21 Aug 2017 12Z

NASA/GMAO – GEOS-5 Forecast Initialized on 18z 2017-08-20
Total Aerosol Optical Thickness



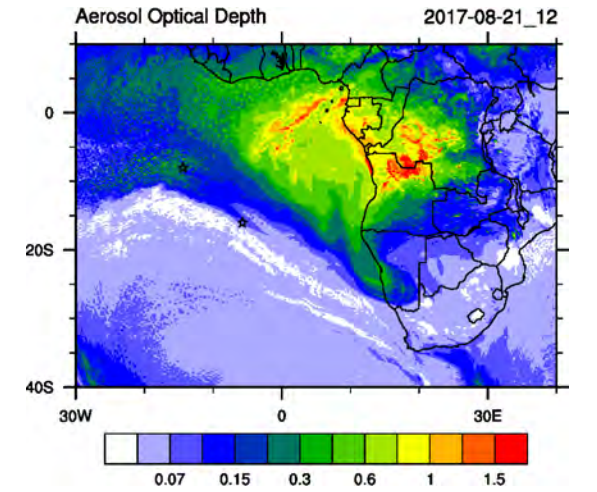
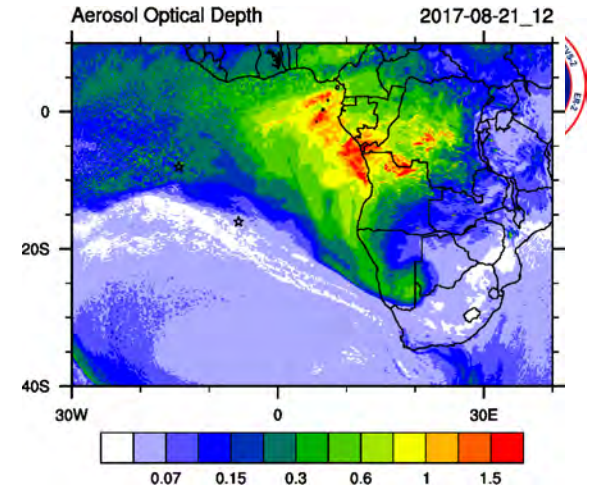
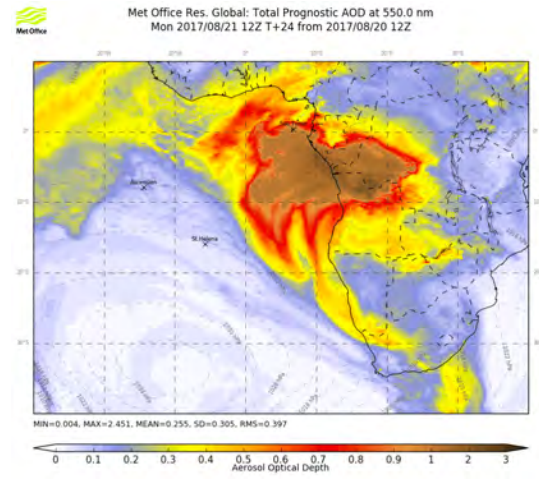
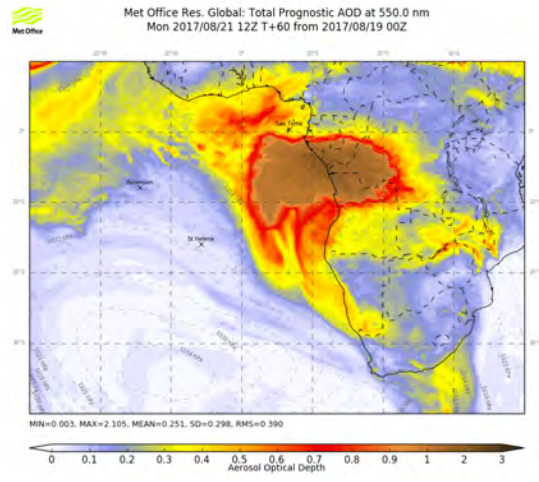
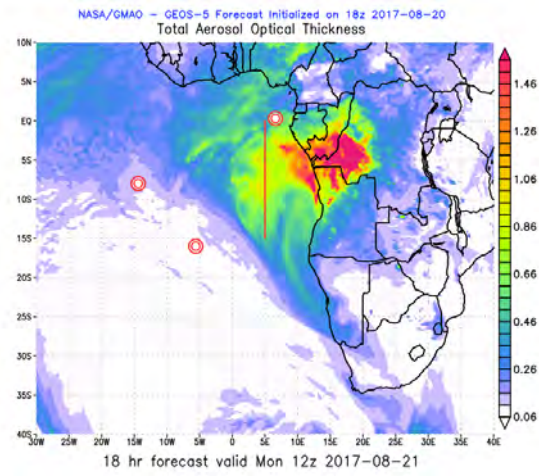
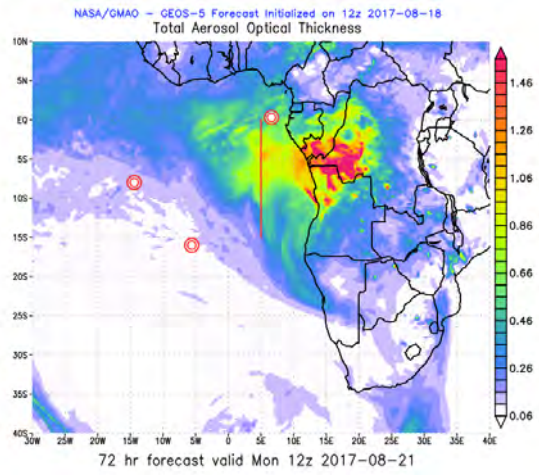
18 hr forecast valid Mon 12z 2017-08-21

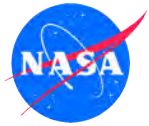
17082112, 024 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF



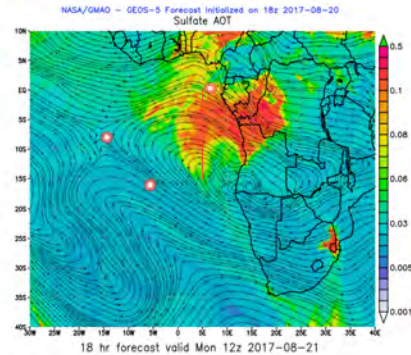
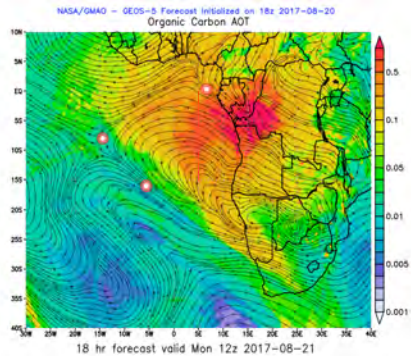
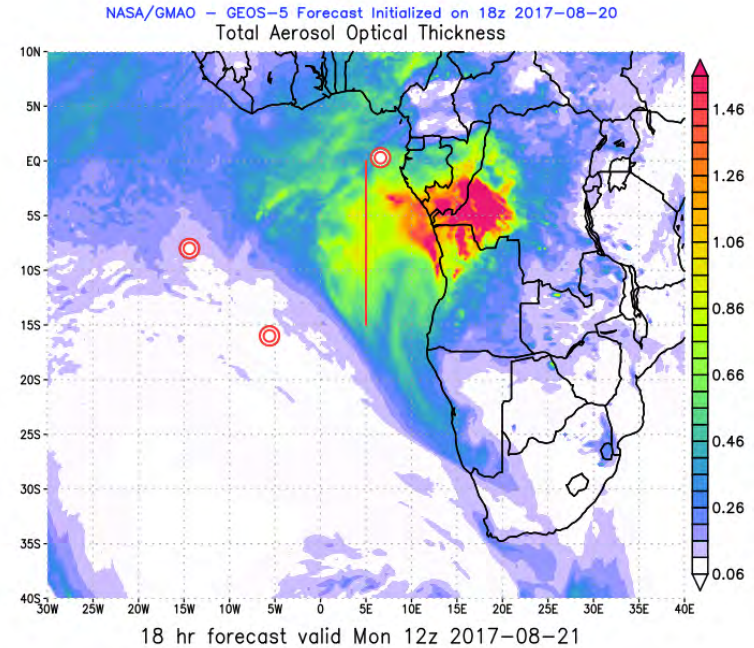
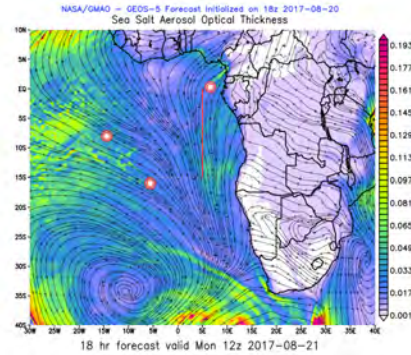
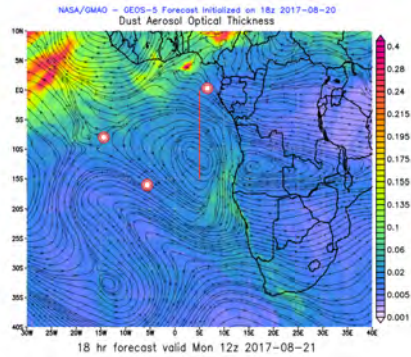
Low (red) + High (blue) cloud = magenta
Mid (green) + High (blue) cloud = cyan
Low (red) + Mid (green) cloud = yellow

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



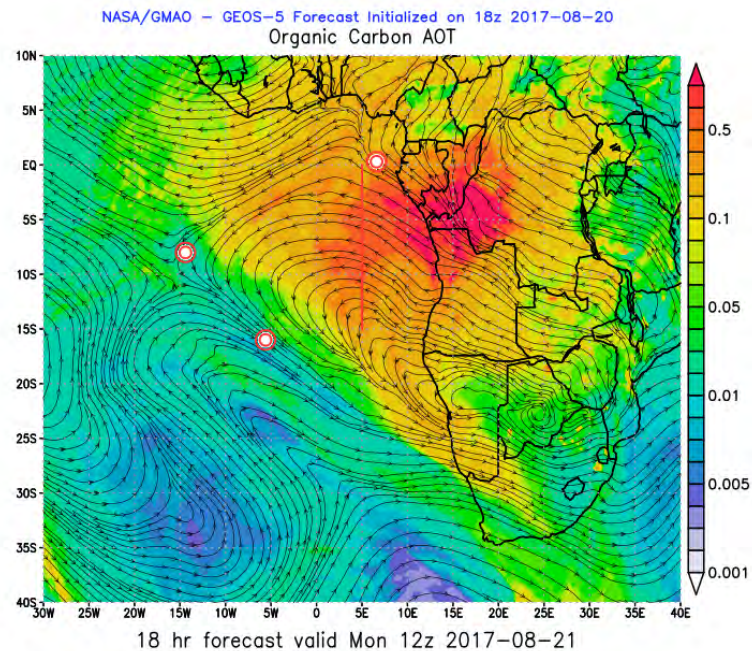
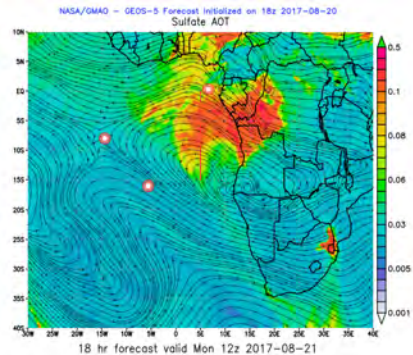
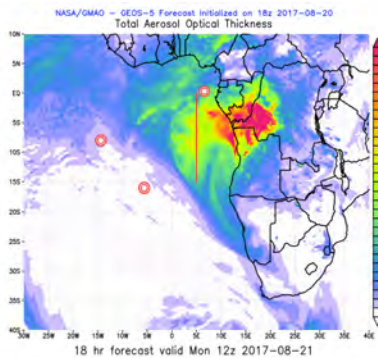
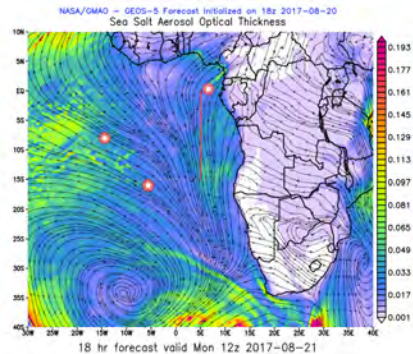
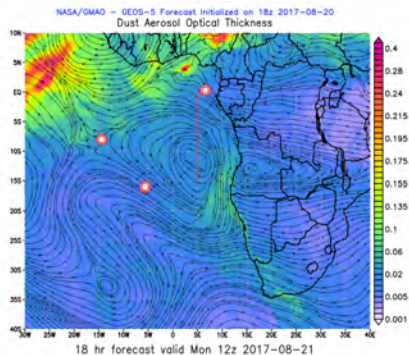


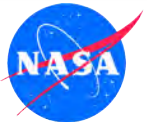
Monday 21 Aug 2017 12Z



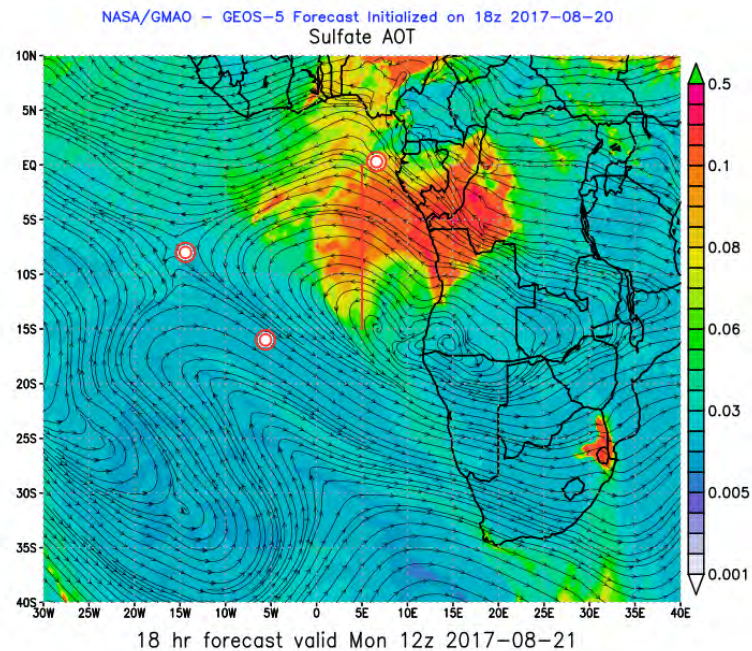
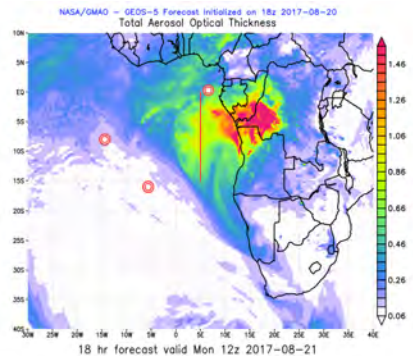
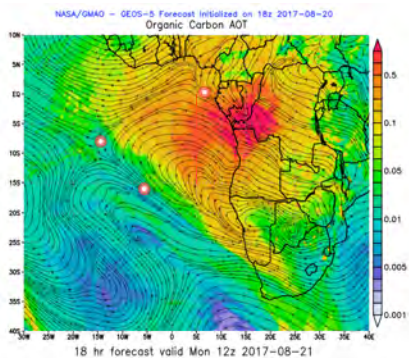
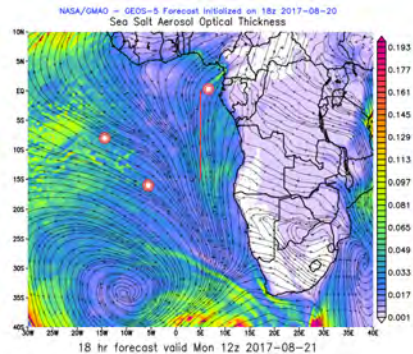
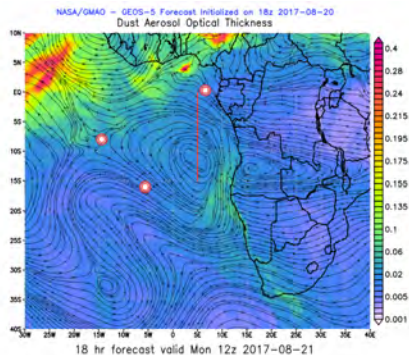


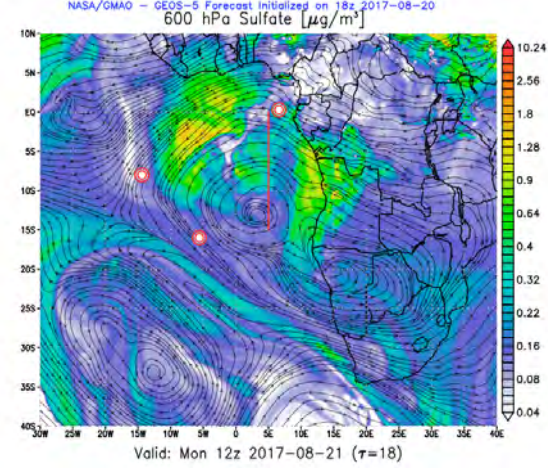
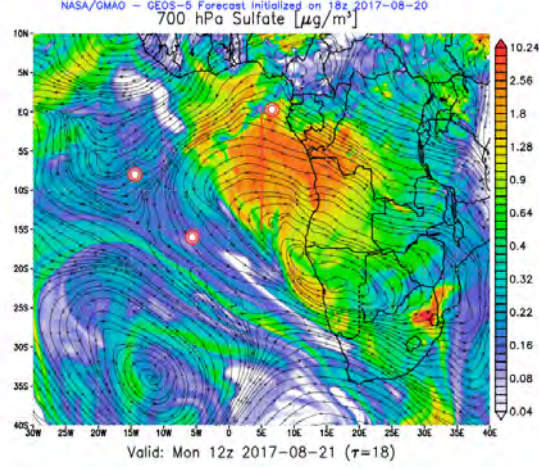
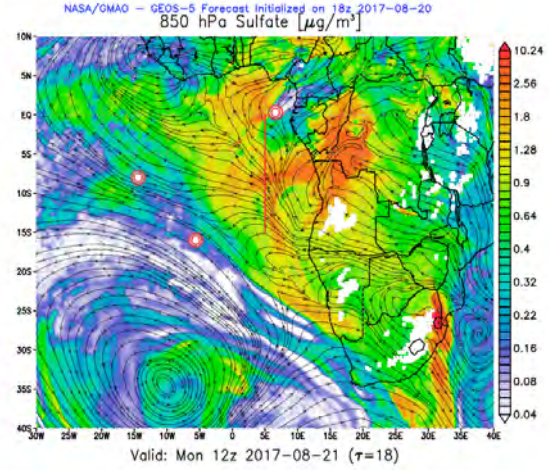
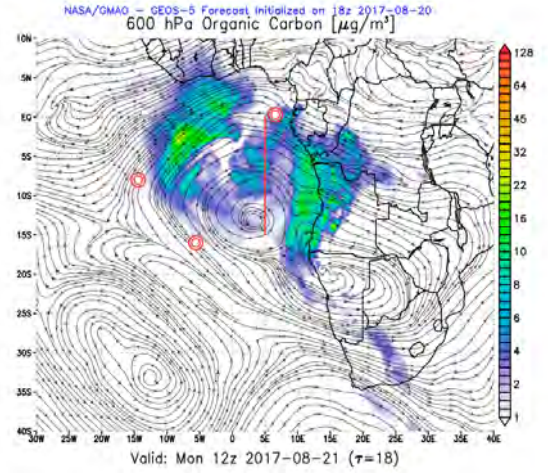
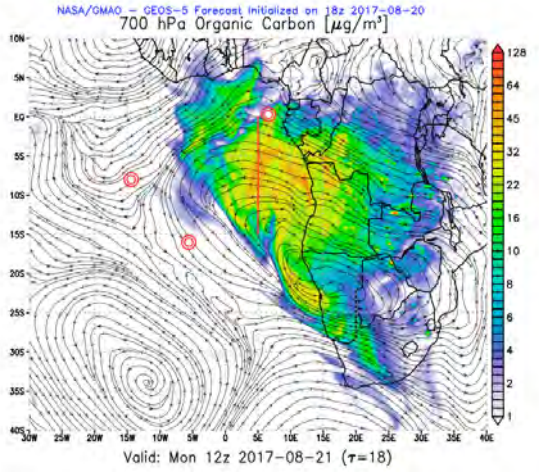
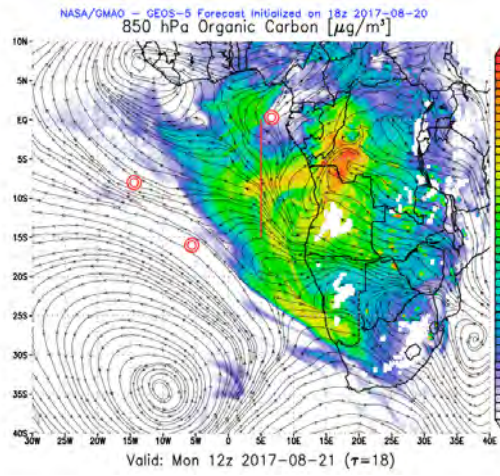
Monday 21 Aug 2017 12Z



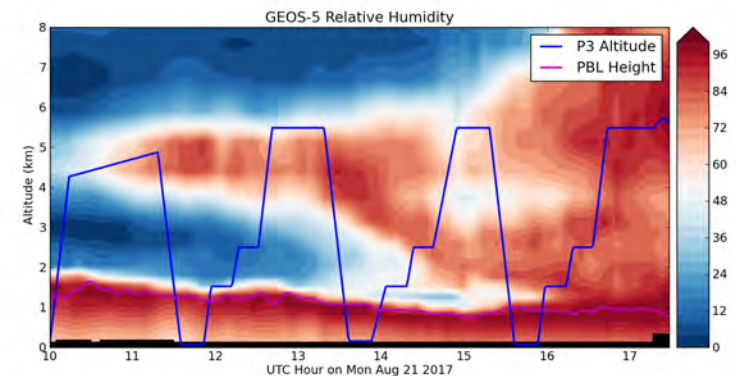
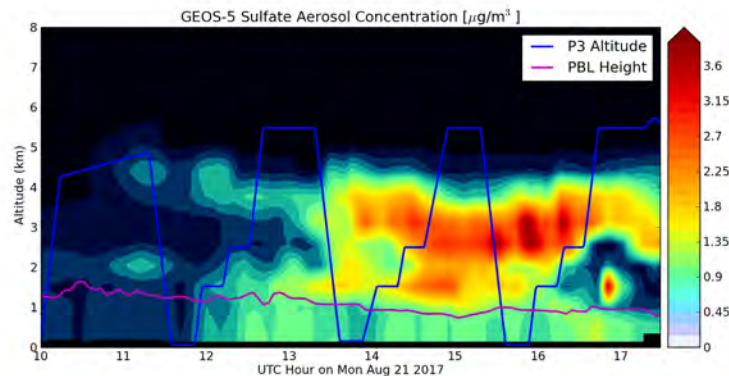
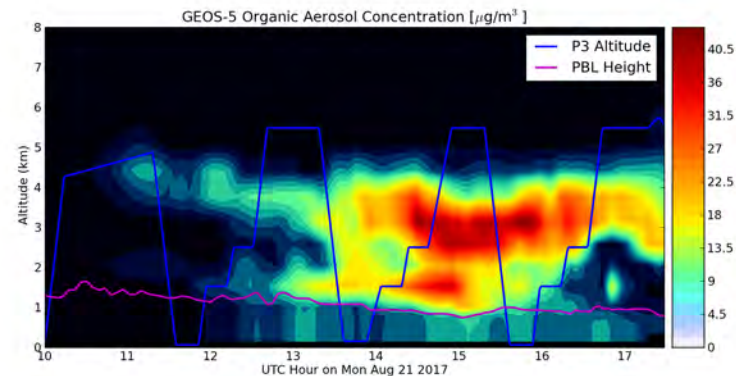
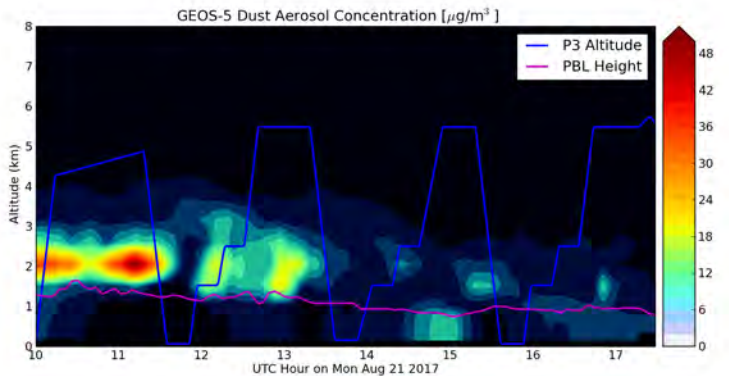
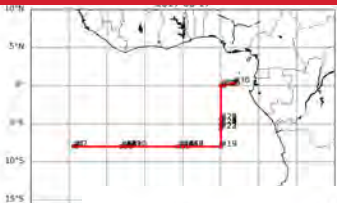


Monday 21 Aug 2017 12Z

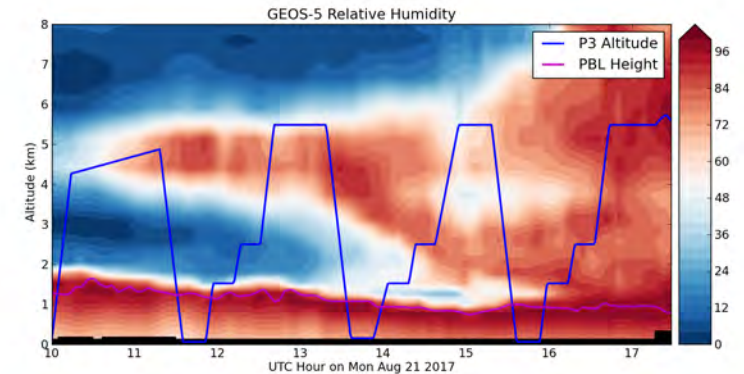
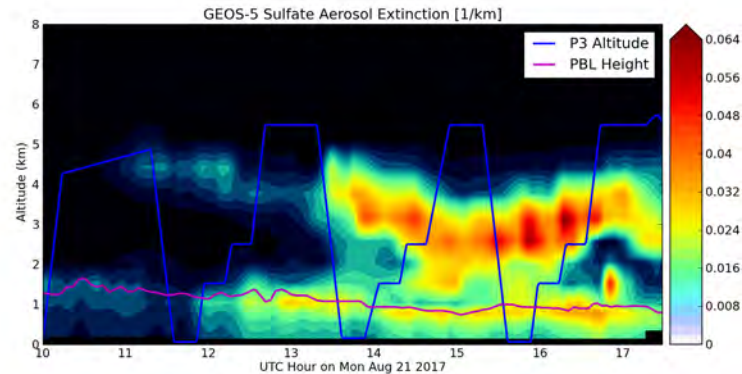
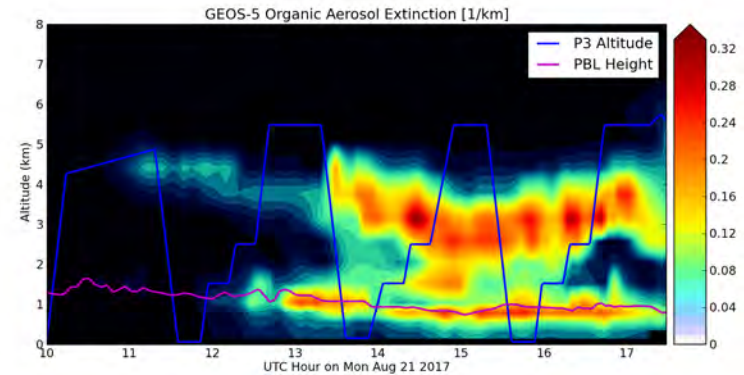
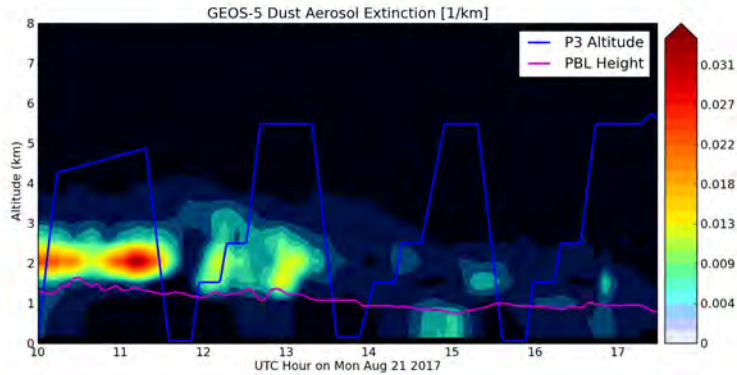




Mon 21 Aug 2017 (Concentration)



Mon 21 Aug 2017 (Extinction)



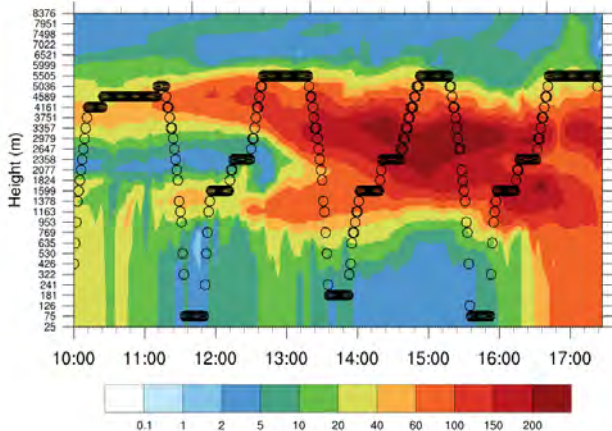


Along flight curtains - WRF-Chem



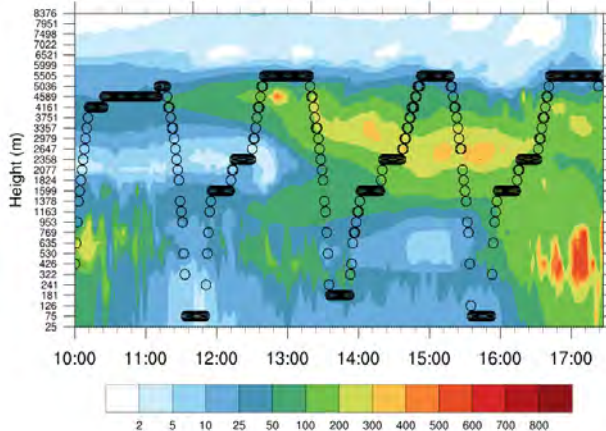
PM2.5

Flight 20170821-pm25 init20170820



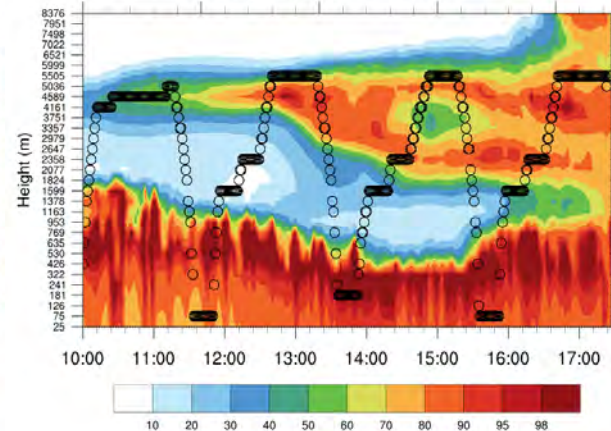
Aerosol extinction

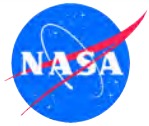
Flight 20170821-ext init20170820



Relative humidity

Flight 20170821-rh init20170820



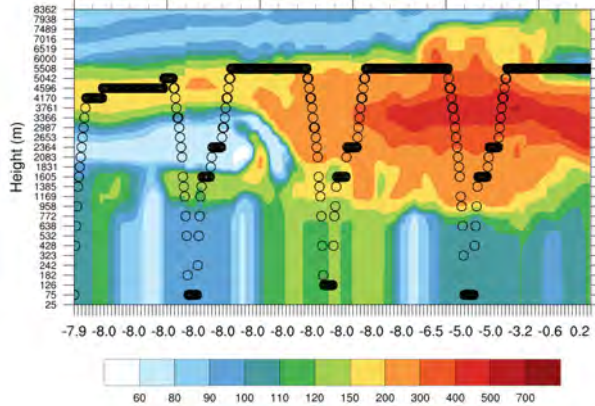


Along flight curtains - WRF-Chem



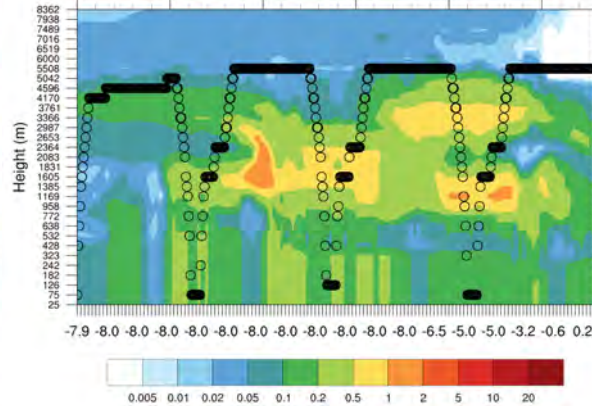
Carbon monoxide

Flight 20170821-co init20170819



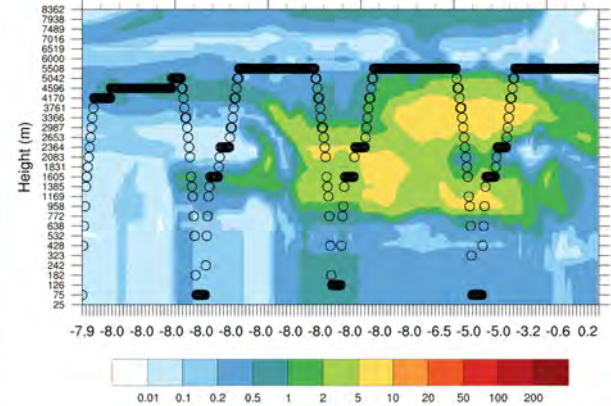
Black carbon

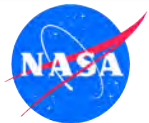
Flight 20170821-bc init20170819



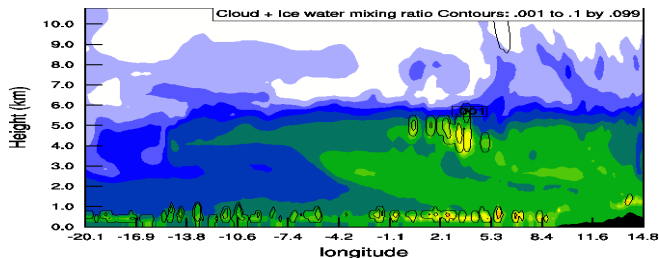
Dust

Flight 20170821-oin-coarse init20170819

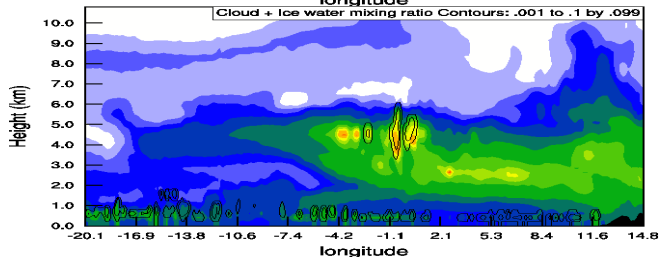




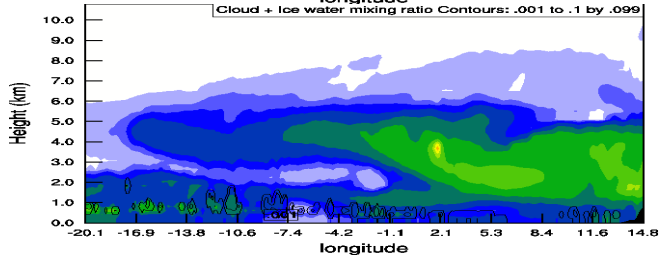
Aerosol cross sections – Mon 21 12Z



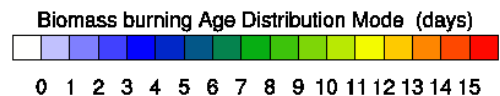
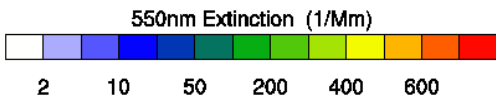
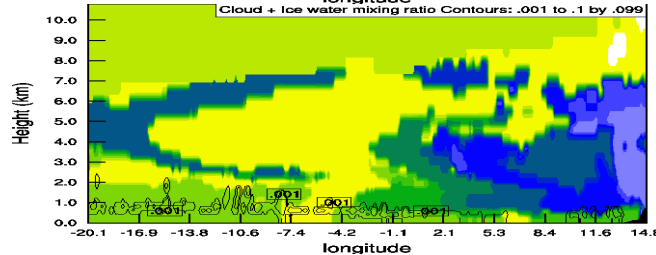
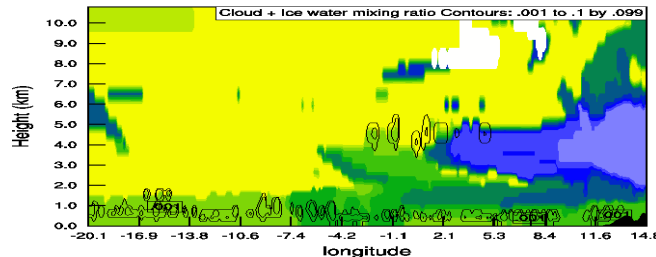
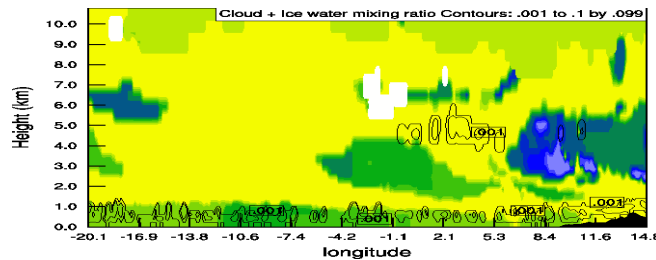
Equator

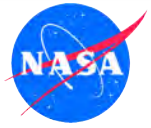


5 S



10 S





No Fly Day (Hard Down)

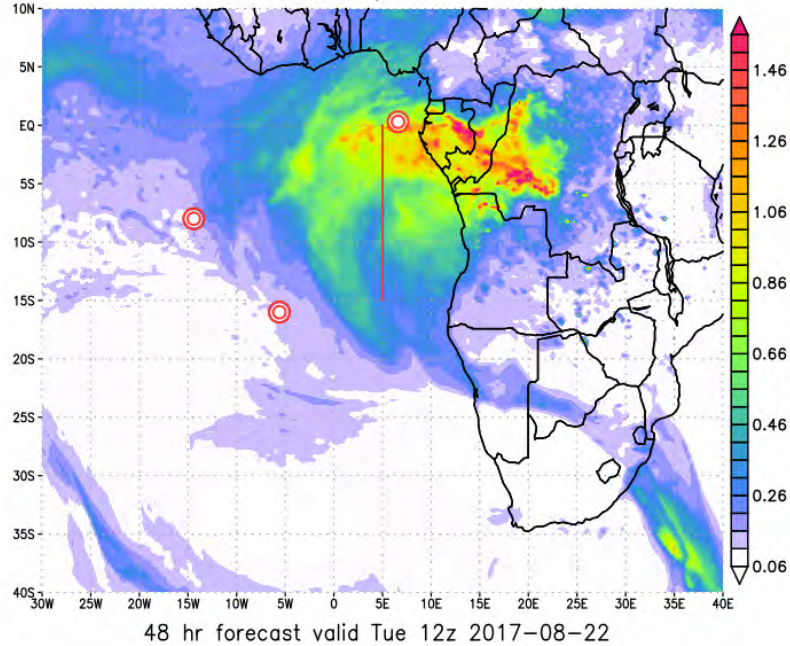
TUESDAY, 22 AUGUST 2017



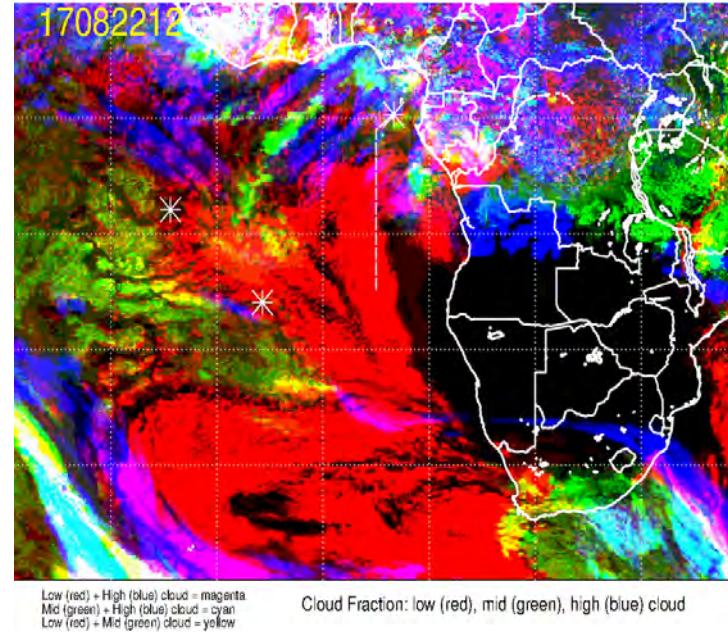
Tuesday 22 Aug 2017 12Z



NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-20
Total Aerosol Optical Thickness

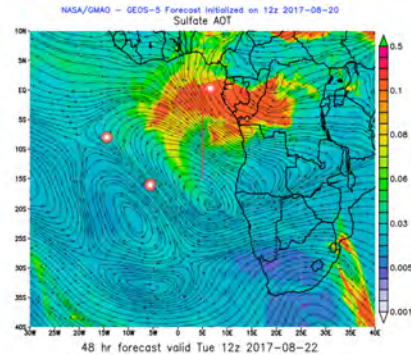
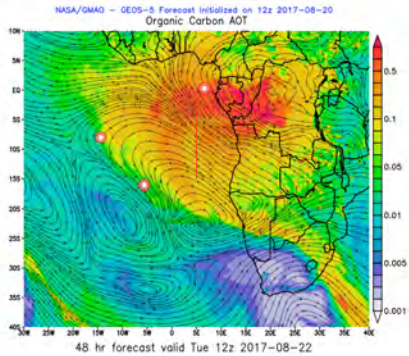
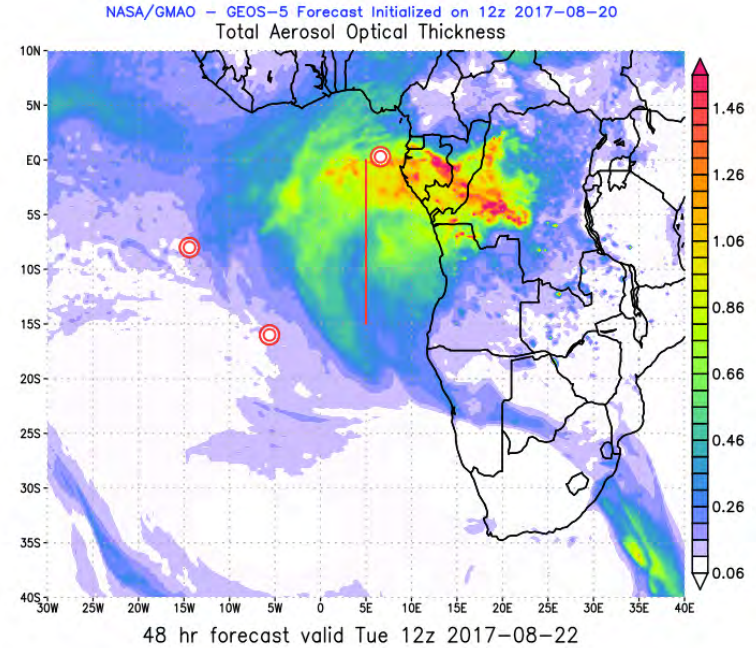
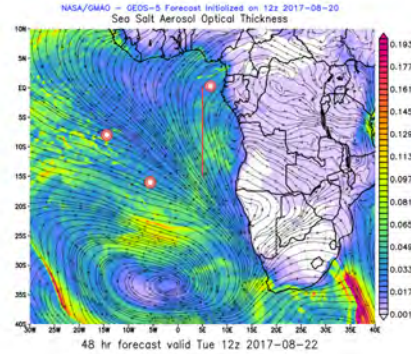
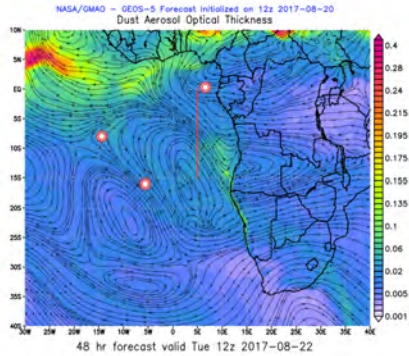


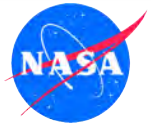
17082212, 048 hour forecast for Cloud Fraction (low, mid, and high cloud) - ECMWF





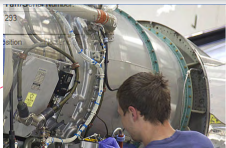
Tuesday 22 Aug 2017 12Z





No Fly Day (Repairs)

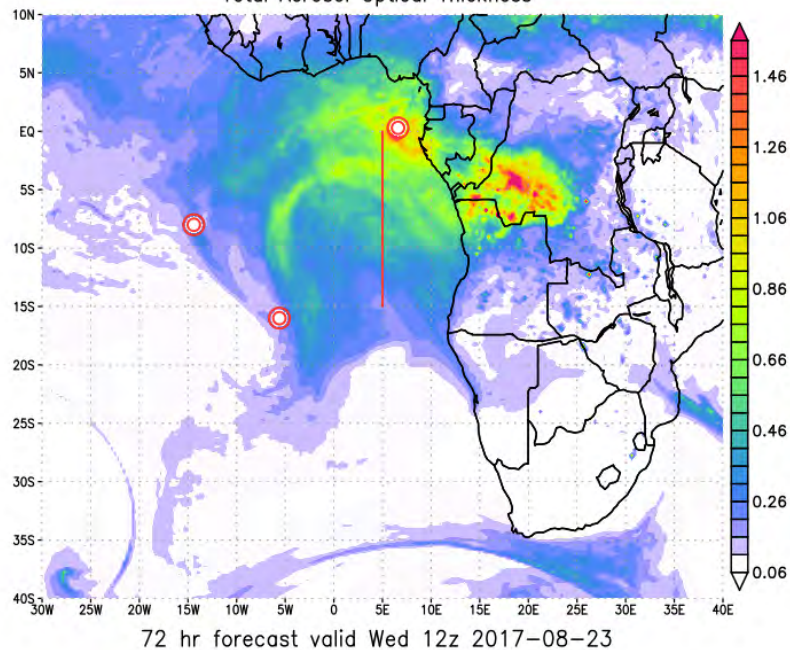
WEDNESDAY, 23 AUGUST 2017



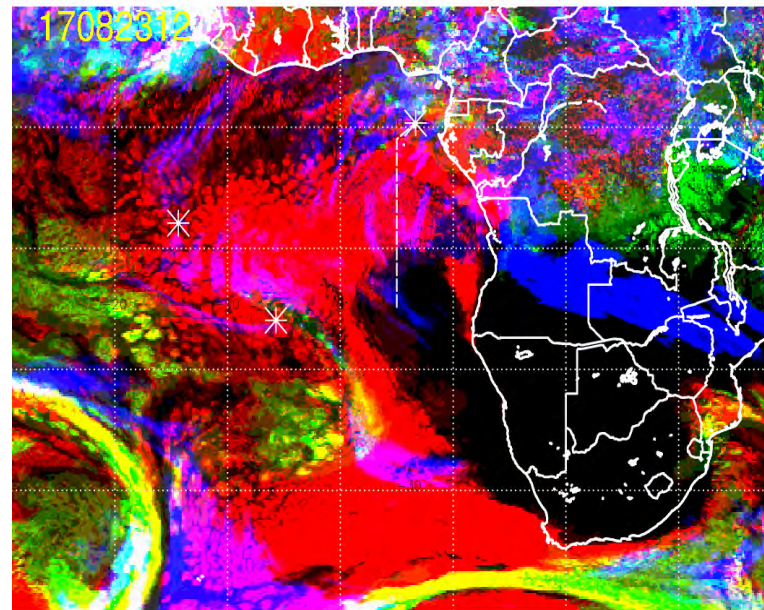
Wed 23 Aug 2017 12Z



NASA/GMAO – GEOS-5 Forecast Initialized on 12z 2017-08-20
Total Aerosol Optical Thickness

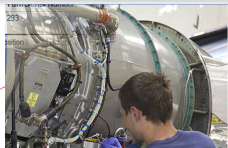


17082312, 072 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF

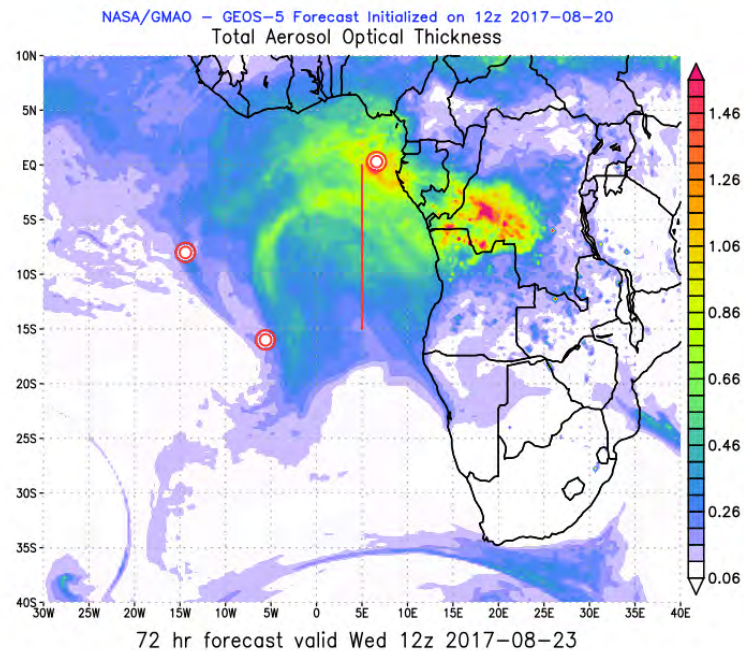
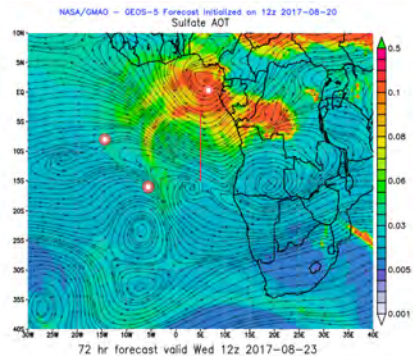
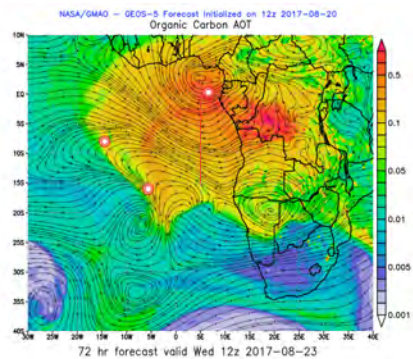
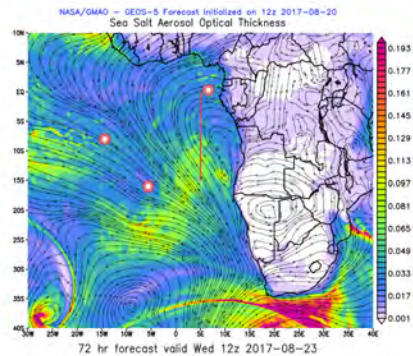
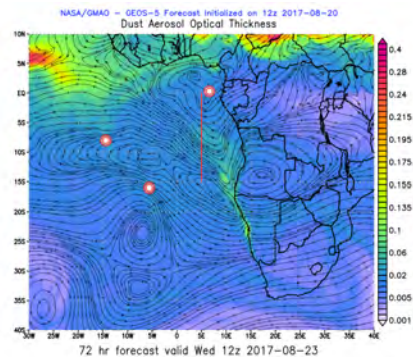


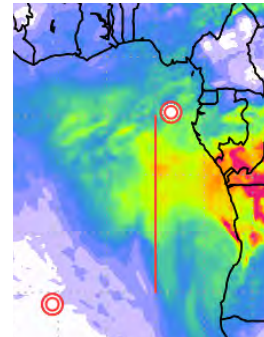
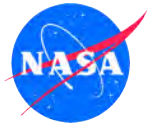
Low (red) + High (blue) cloud = magenta
Mid (green) + High (blue) cloud = cyan
Low (red) + Mid (green) cloud = yellow

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



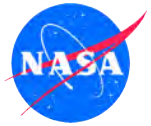
Wed 23 Aug 2017 12Z





Flight Day (Routine Flight?)

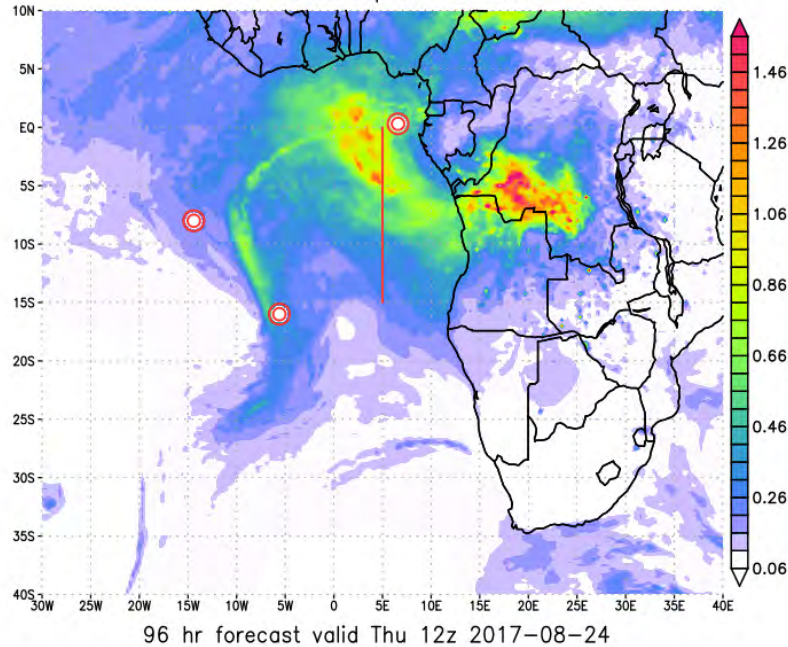
THURSDAY, 24 AUGUST 2017



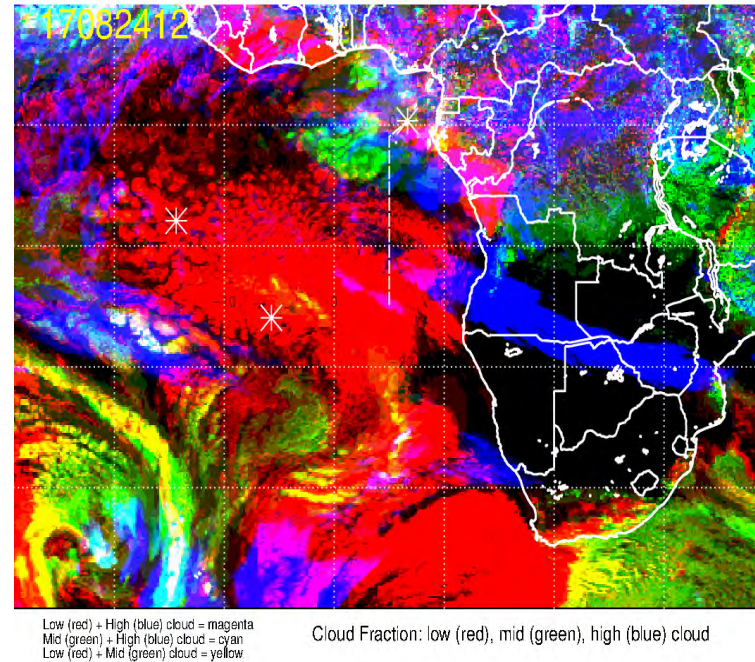
Thursday, 24 August 2017 12Z

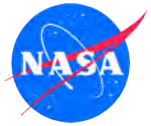


NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-20
Total Aerosol Optical Thickness



17082412, 096 hour forecast for Cloud Fraction (low, mid, and high cloud) -- ECMWF

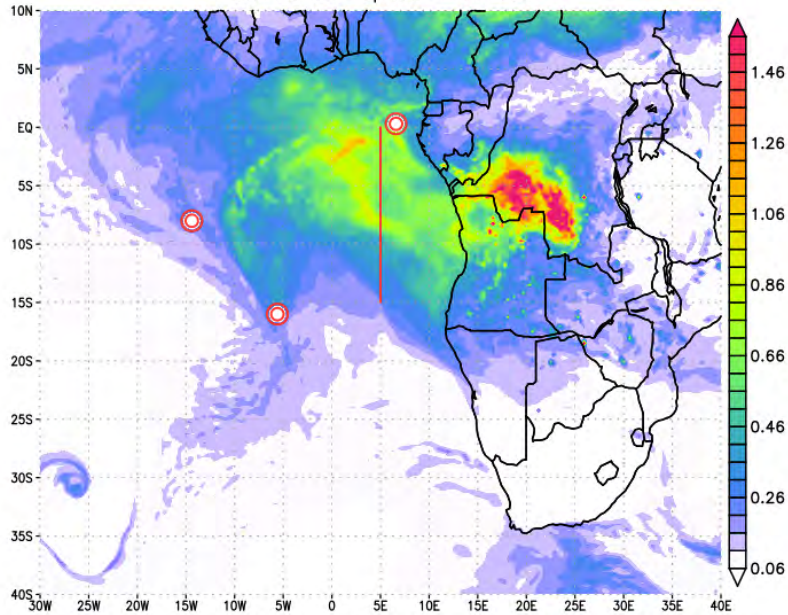




Thursday, 24 August 2017 12Z

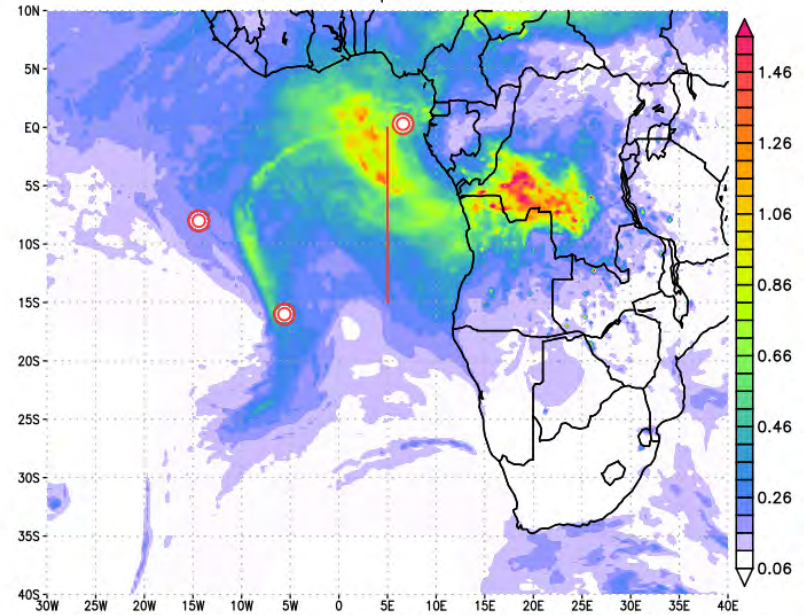


NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-19
Total Aerosol Optical Thickness

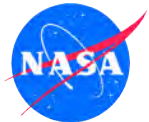


120 hr forecast valid Thu 12z 2017-08-24

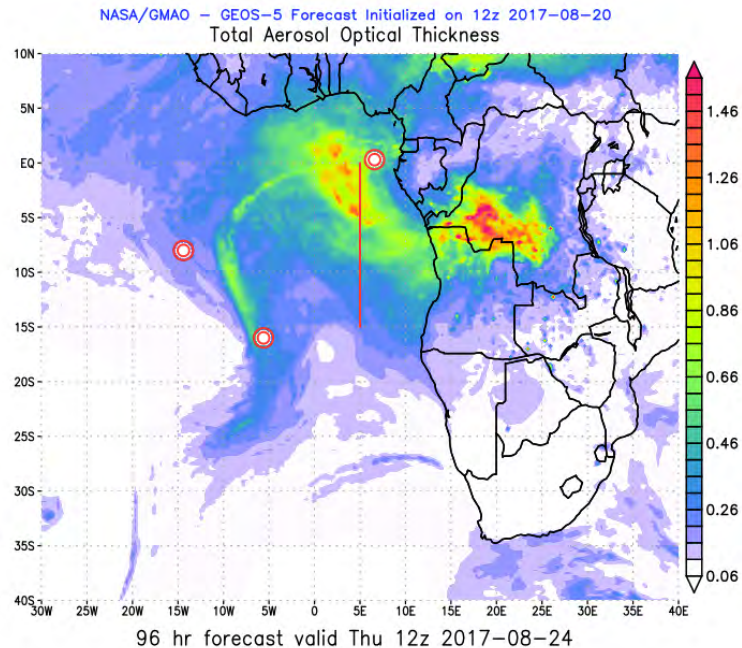
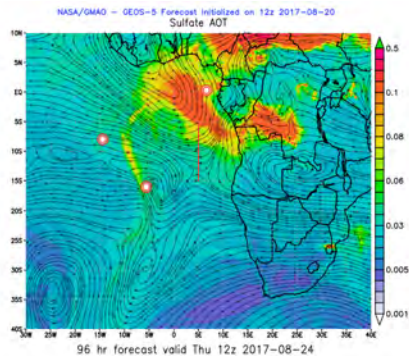
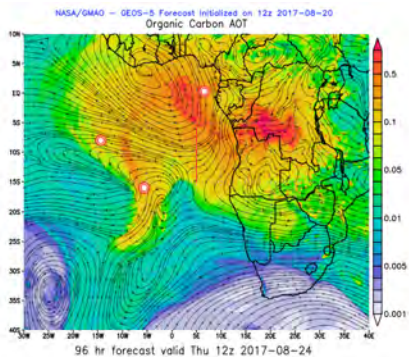
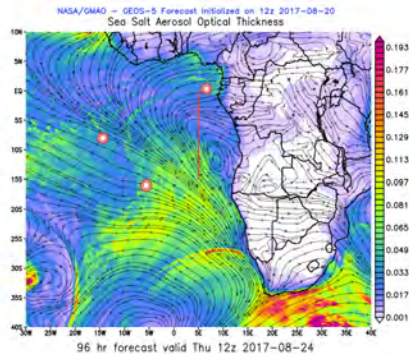
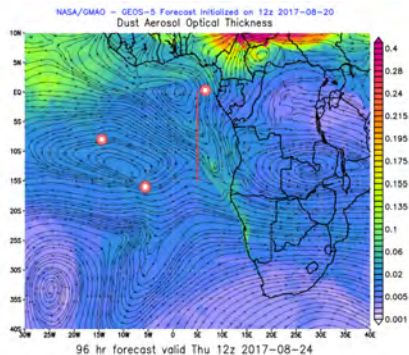
NASA/GMAO - GEOS-5 Forecast Initialized on 12z 2017-08-20
Total Aerosol Optical Thickness

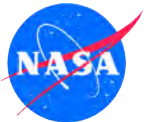


96 hr forecast valid Thu 12z 2017-08-24

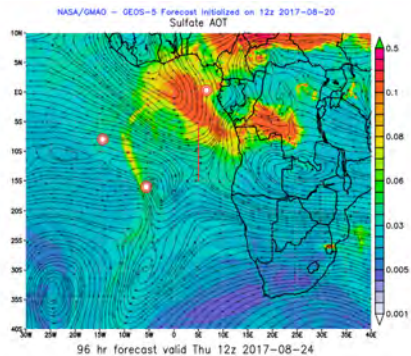
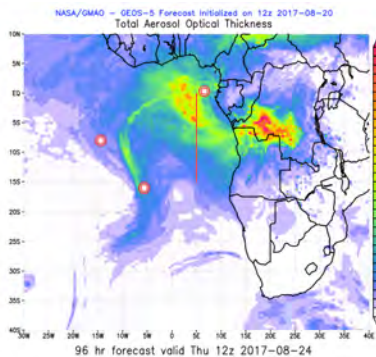
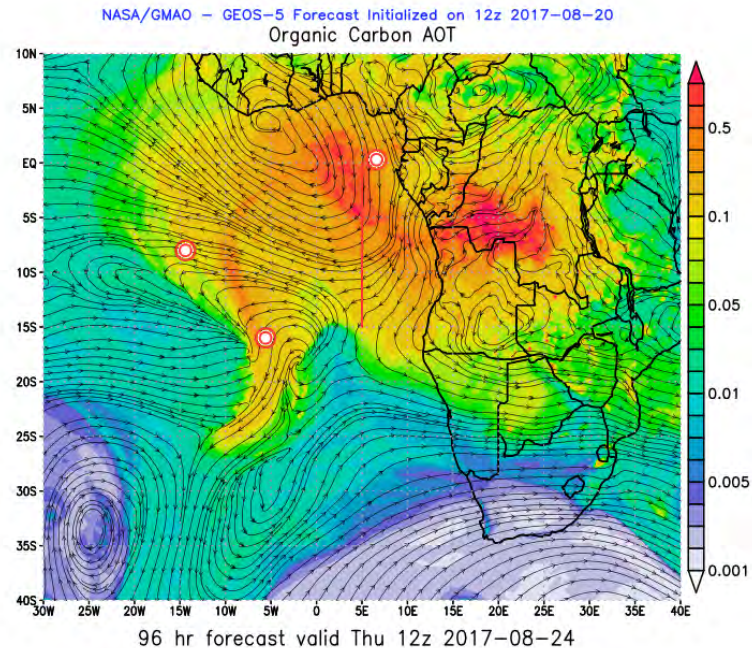
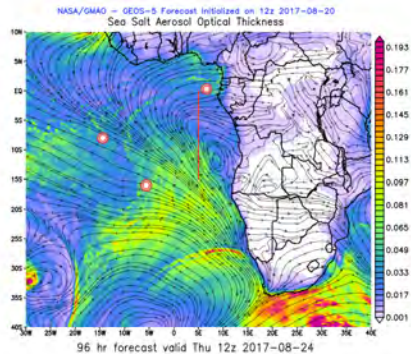
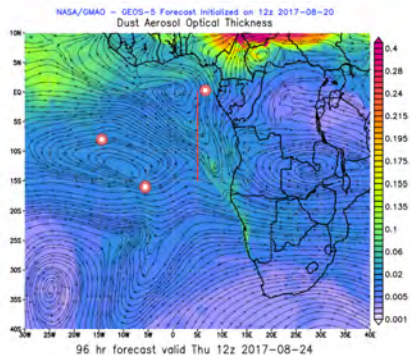


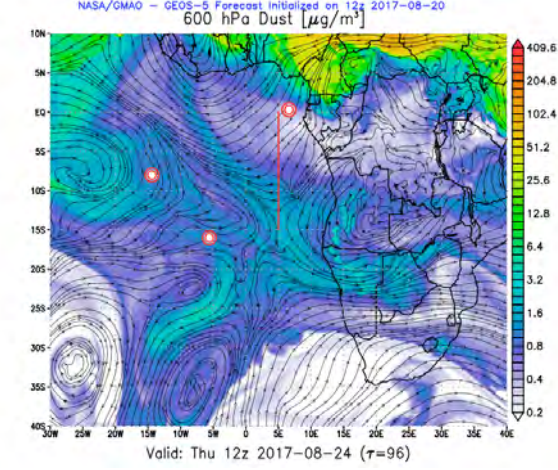
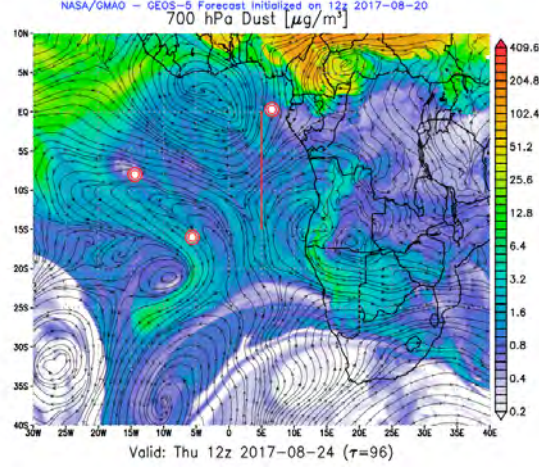
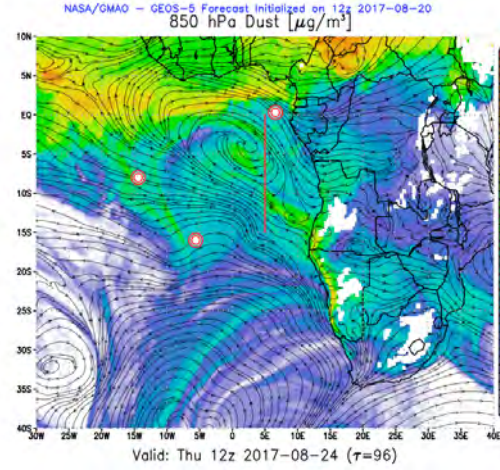
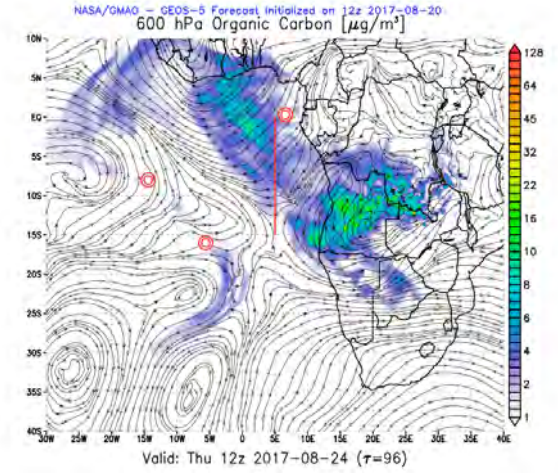
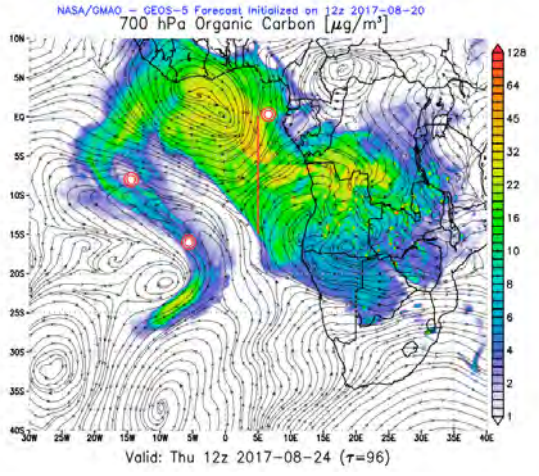
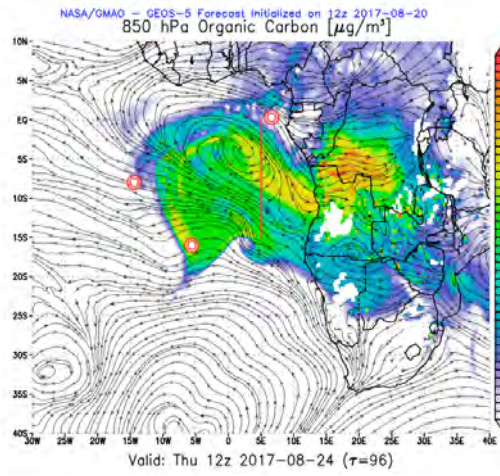
Thursday, 24 August 2017 12Z

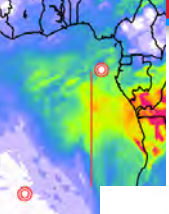




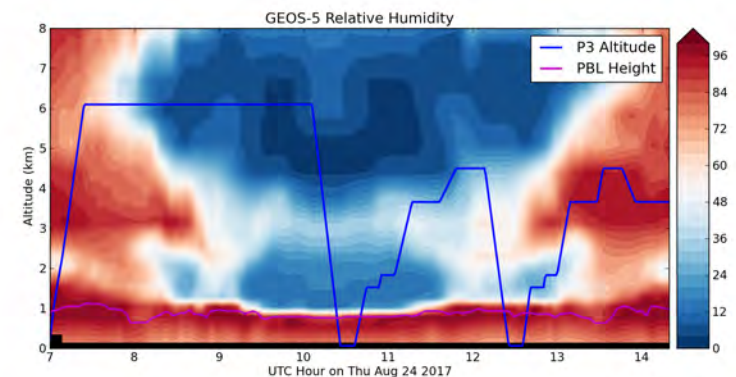
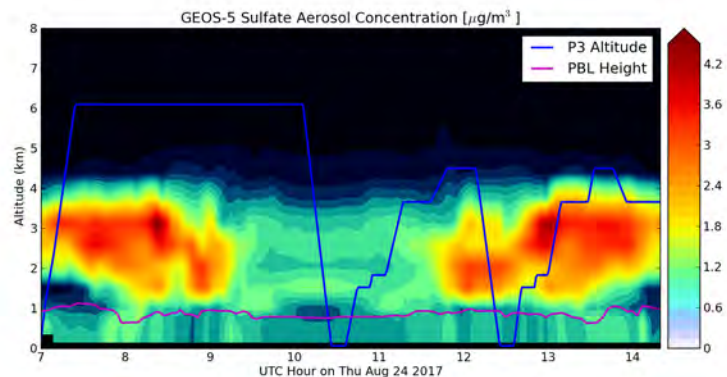
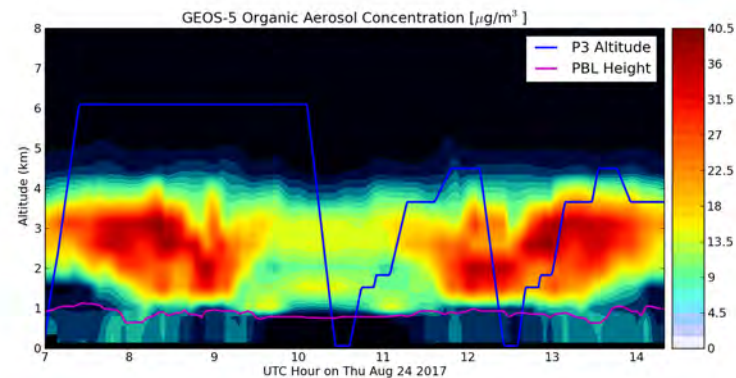
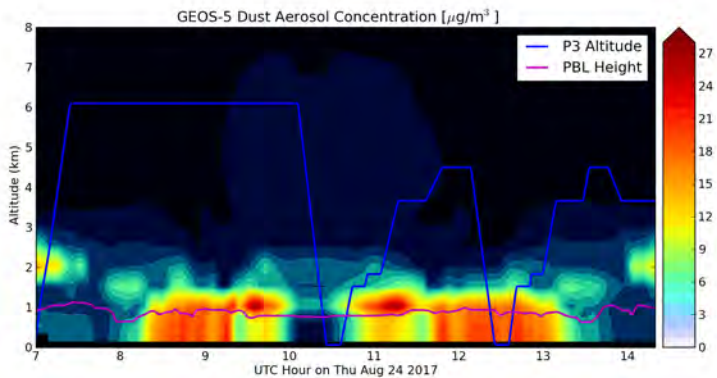
Thursday, 24 August 2017 12Z

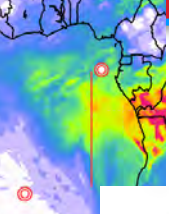






Thu 24 August 2017 12Z (Concentration)





Thu 24 August 2017 12Z (Extinction)

