AVE Flight for June 11, 2005

Takeoff:	1100LT (1600 UT)
Nominal Duration:	5.2 hrs
Landing	1610 LT (2110 UT)

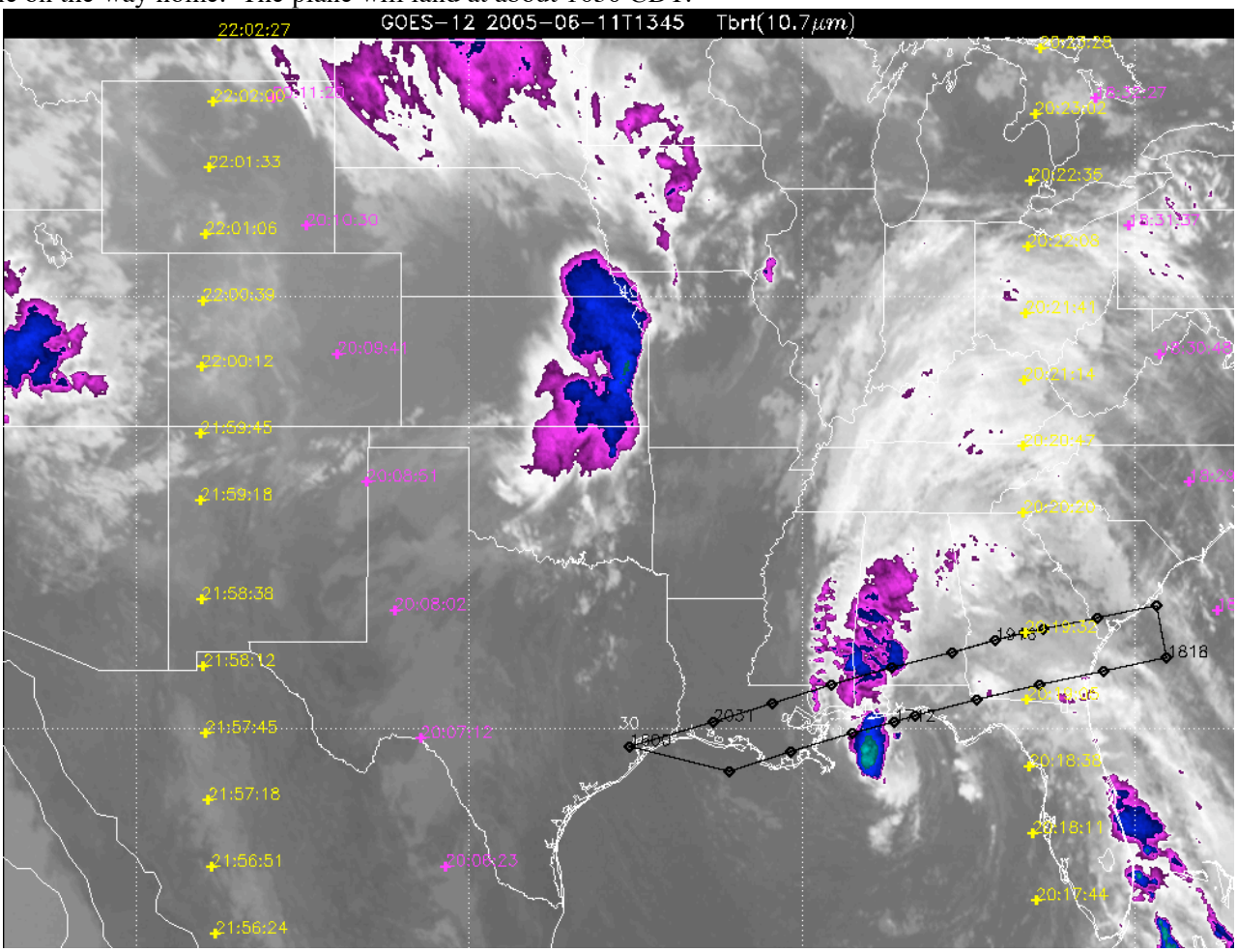
AVE Flight Objective:

Provide: 1) remote sensing observations for OMI scanning observational points in a longitudinal profile from West to East, 2) overflight of the center of a tropical cyclone, and 3) deep vertical profile of trace gases at HIRDLS observation point.

Specific objectives:

- Provide cloud top flight along two Aura OMI cross-scan lines to optimize sampling by remote sensing instruments (CAFS, CPL, SHIS, and ACAM)
- Fly to the Aura HIRDLS observation point and profile down to FL410 enroute to EFD
- OMI Overpass will occur at **1836 UT.** HIRDLS overpass on next orbit at **2019 UT**

Flight Profile: The plane will takeoff at 1100 CDT (1600 UT), fly ESE and pick up the Aura-OMI swath south of Louisiana (see IR GOES image below). The 57 will probably get up to about 58,000 feet and hold at that altitude. The 57 will continue eastward and overfly the center of tropical cyclone Arlene at about 1215 CDT (1215 UT). The plane will continue eastward along the OMI swath to the nadir track of Aura out over the Atlantic. The plane will turn northward at about 1318 CDT, parallel the Aura track for a short leg, and then turn westward back towards Houston. The plane will dip down to about 41,000 feet over southern Georgia on the way back to Houston that is coincident with a HIRDLS observation point. The plane will come back to maximum altitude over Mississippi and pass back over Arlene on the way home. The plane will land at about 1630 CDT.



GOES IR image with the WB-57F track overlayed as the black line. The GOES image is for 8:45 AM CDT local time. The colors indicate cloud top temperatures. Blues/purples show the higher clouds (30-40,000 feet). The center of tropical storm Arlene should be very close to the WB-57F track as we pass over it. HIRDLS observation points and times are in yellow, and the Aura sub-orbital points are in magenta. Image from NASA/ARC L. Pfister.