

Happy Family
Aug 3, 2007

Objectives:

1. Fly up and meet the WB57 in transit to Costa Rica
2. Coordinate with the 57 and ER-2 to underfly both aircraft on the way to San Jose
3. Do race tracks with the ER-2 in nearby cirrus
4. Descend and fly over Panama
5. Spiral over Native trailer
6. Connect to Cloudsat track, underfly the satellite
7. Return to San Jose
8. Avoid lightening and turbulence

Takeoff 7:00 am (all times local – add 6 hrs to get GMT)

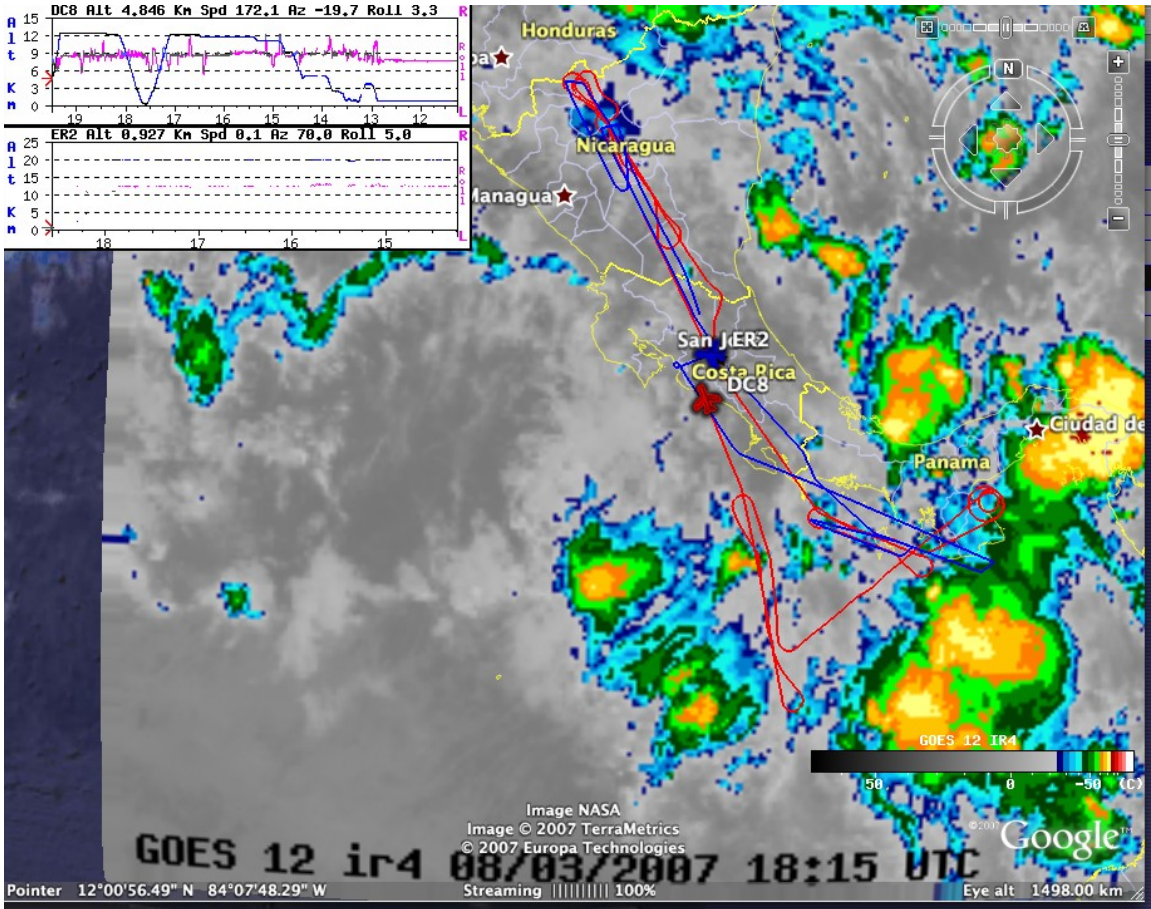
Everybody powered up.

Takeoff near 6:52 am. North we could observe pollution backed up against the mountains on the Caribbean side. We stayed at 12 kf crossing the border to Nicaragua. 7:10 descended to 1 kf. ATC ordered us to 3 kf due to poor communications with ground. Climbed over terrain to 5 kf.. Xchat not working again.

Arrived early at WB rendezvous – tried extending our line in to Honduras but could not get permission to go further north. Ozone measured about 36 ppb, CO 97. Layers of cirrus reported at 14-15 km above the aircraft. 7:47 – Xchat now working. Did several race tracks along flight track at 15kf and 30kf before ascending to 36kf when WB arrived. Followed WB down to San Jose. We then moved to a race track south of Panama since our planned race was in a convective region. Saw some elevated CO values - flew into cirrus IWC 0.02, O3 55ppb, CO 100ppbv. Left racetrack after 1.5 loops – some confusion with ground recommendations. Descended over the NATIVE trailer (7° 45'N, 80° 15'W). Flew low over Panama highlands back to race track and then to CC intercept point then turned north west along track. Convective systems developing along track. Saw 100 to 200 μ particles at 39 kf on turn along 8° N along CC track – went very near a turret (photo below) – some bumps. Turned around and went back down track to 5°15'N then turned back north. Cloudsat passed over at 1:10 local exactly while we were over a precipitating system – dropped a sonde at the same time (bullseye!). All instruments functioned well – MMS may have had a pressure altitude problem. RTM actually worked on aircraft but GOES updates are too infrequent.

Returned to SJ 1:41 PM. Good flight.

- Mark Schoeberl



Track of the DC-8 for this flight (red).



Nicaraguan land we were flying over at 1000 ft (Photo at 13:17 AM GMT).



Haloe around sun in thin cirrus on route with 57 back to SJ (15.04 GMT).



Panama landscape during boundary layer run near the Native Trailer (17:36 GMT)



Turret punching upward off RHS of aircraft as we crossed convective systems along the Cloudsat track (18:33GMT)