

Flight Report for 8-6-2007

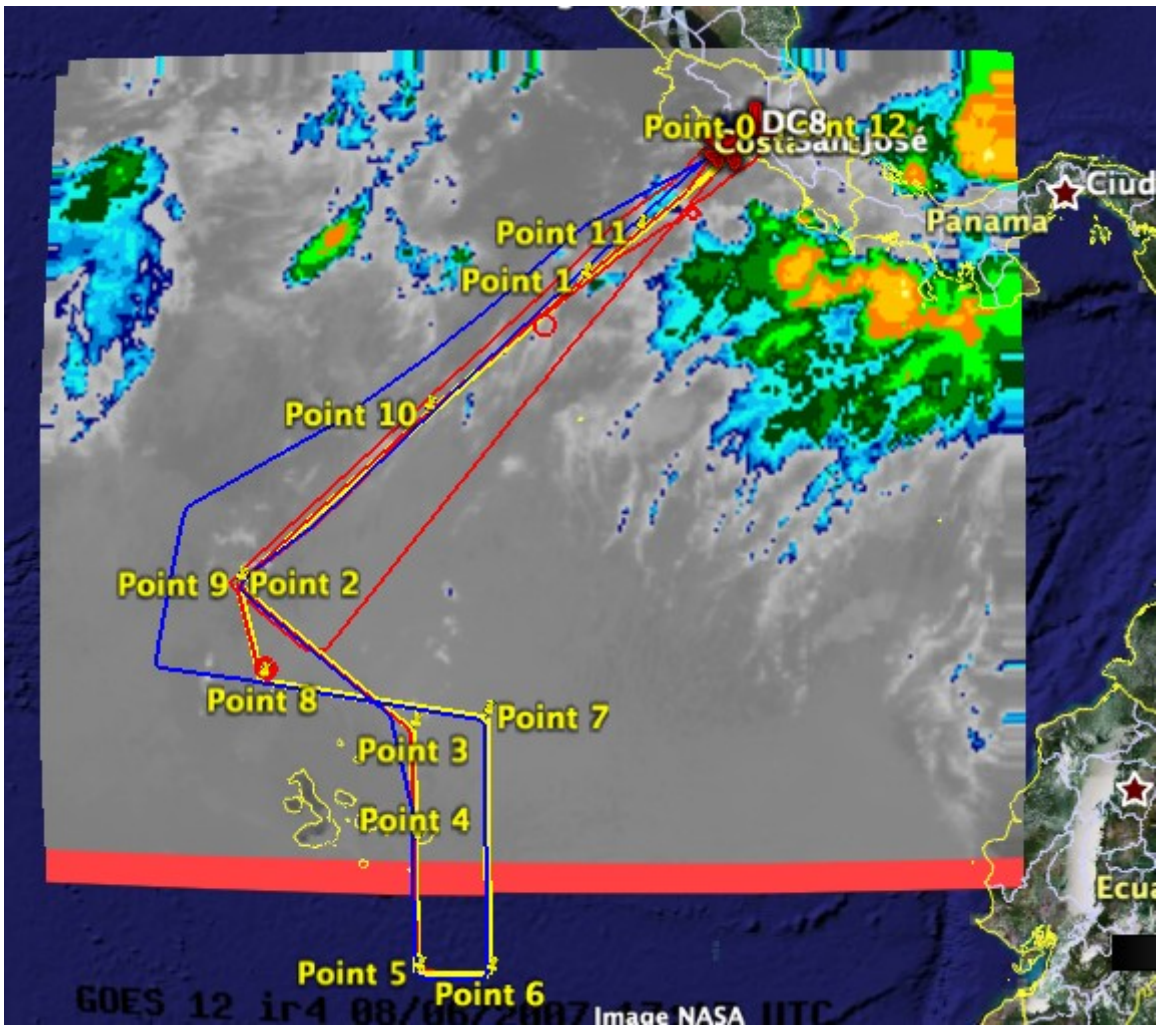
Pilot: ?

Takeoff 1145. GMT

Experimenters status: Everything green

Ozone layer was observed by Dial below the aircraft at about 8 km so we spiraled down through the layer. Descended to BL off Costa Rica found high levels of SO₂. Ascended slowly and proceeded along track – saw some cirrus above – looped to let ER-2 catch up. Subvisible cirrus in and out on way to southbound turn observed by DIAL, patchy. Flew at different levels on the way out 30, 32 and 36 kf, We noticed that subvisible cirrus thickened above a convective region. Observed an aerosol layer at 8kf near Galapagos – descended into layer - biomass burning material from South America apparently – low ozone 24 ppbv, small amounts of HNO₃, Small SO₂, CO 133 O₃ 33 ppb. We were held up in our descent by ATC. Descended to top of stratus, CO 70, O₃ 28. Porpoise in and out of stratus along flight leg. Turned west to fly through broken stratus produced by Karman vortex being shed by Galapagos island. We continued to porpoise through the stratus layers along track until we reached the MLS point. We then spiraled up to 36 kf. Passed through layer of HCN and particles at 10 kf, higher CO (139). Turned east flew back at 36 kf – because we were crossing flight lanes ATC would not let us porpoise through this layer All instruments worked well on this flight!

Landed 19: 03 GMT



Flight track for DC-8 (red) and ER-2 (blue) and WB57 (darker red)



View of San Jose at climb out



Halo observed as we were flying through cirrus on the way to Galapagos 12:52 GMT



Aerosol layer (~8000 ft) observed near the Galapagos 15:02 GMT



Karman vortex produced in the lee of the Galapagos observed as we are spiraling up. Note cirrus train over the islands 16:41 GMT