

Flight Report – SEAC4RS ER-2, September 6, 2013

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Purpose of flight: The science goals for this flight were to: 1) to acquire AirMSPI data coincident with MISR on Terra, 2) perform a vertical profile for in situ instruments at the DOE ARM SGP site, 3) perform profiling dips to study the NAM, and 4) overfly AERONET sites along the principal planes to evaluate polarimeter aerosol retrievals.

Pilot: Denis Steele

Takeoff: 11:12 CDT

Duration: 8.0 hours

Notes:

ER-2 flew first toward west Texas to setup for the underflight of Terra MISR. The ER-2 flew along the Terra track and was well coordinated with MISR along this track. The conditions were mostly cloud free with only a small cumulus clouds present along this portion of the track. The ER-2 then descended to 41 kft en route to the SGP site for a profile over this site. After reaching the site, the ER-2 then ascended and turned west to set up for the SW-NE leg for the NAM sampling. Along this SW-NE leg, the aircraft performed four more dips. The leg toward the NE was shortened slightly to make sure the total flight length was not more than 8 hours. In addition, the leg over the Bondville AERONET site was also removed for the same purpose. The aircraft then proceeded southwest and flew over AERONET sites at Mingo, MO and Upper Buffalo, AK. Skies were cloudfree over Mingo, but patchy cirrus clouds were present over Upper Buffalo. The aircraft then returned to Ellington.

Aircraft and instruments: All instruments appear to have worked nominally as far as limited in-flight and quick-look analyses showed. INMARSAT worked well during this flight. All instruments are ready for the next flight.

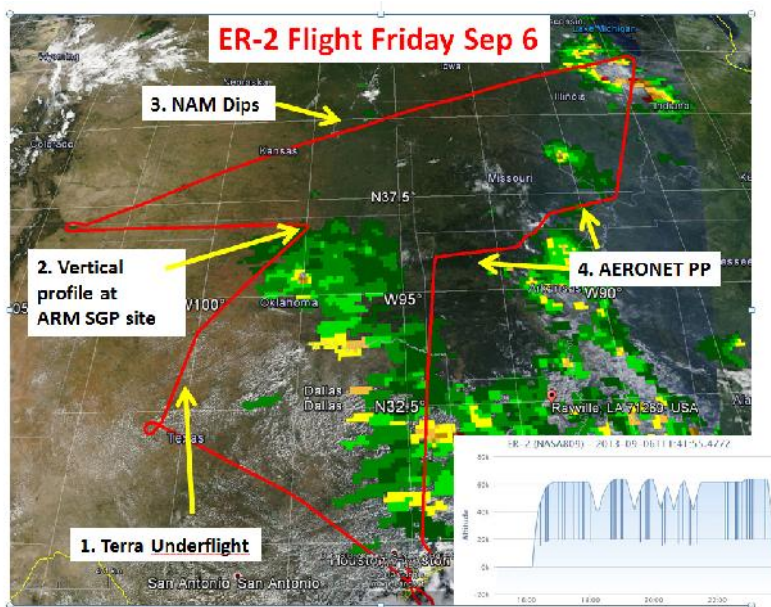


Figure 1. Flight track of ER-2 overlaid on Aqua MODIS image showing clouds and color-coded AOT values. Inset shows the altitude profile of the ER-2.