

ER-2 #809 08/30/13

Aircraft: [ER-2 - AFRC #809](#) ([See full schedule](#))

Flight Number: 13-9059

Payload Configuration: SEAC4RS

Nav Data Collected: Yes

Total Flight Time: 7.4 hours

Submitted by: Timothy Moes on 08/30/13

Flight Segments:

From:	EFD	To:	EFD
Date:	08/30/13		
Flight Time:	7.4 hours		
Log Number:	132301	PI:	Kent Shiffer
Funding Source:	Hal Maring - NASA - SMD - ESD Radiation Science Program		
Purpose of Flight:	Science		
Comments:	Coordinated flight with DC-8. Science teams are analyzing their data. The aircraft returned in good shape.		

Flight Hour Summary:

	132301
Flight Hours Approved in SOFRS	166
Total Used	164.6
Total Remaining	1.4

132301 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
08/01/13	13-9048	Check	3	3	163	
08/02/13 - 08/03/13	13-9049	Science	6.5	9.5	156.5	
08/06/13 - 08/07/13	13-9050	Science	8.4	17.9	148.1	
08/08/13	13-9051	Science	7.2	25.1	140.9	
08/12/13	13-9052	Science	7.9	33	133	
08/14/13	13-9053	Science	6	39	127	
08/16/13	13-9054	Science	7.8	46.8	119.2	
08/19/13	13-9055	Science	8.1	54.9	111.1	
08/21/13	13-9056	Science	7.3	62.2	103.8	
08/23/13	13-9057	Science	7.7	69.9	96.1	
08/27/13	13-9058	Science	7.2	77.1	88.9	
08/30/13	13-9059	Science	7.4	84.5	81.5	
09/02/13	13-9060	Science	8.2	92.7	73.3	
09/04/13	13-9061	Science	8.4	101.1	64.9	
09/06/13 - 09/07/13	13-9062	Science	8	109.1	56.9	
09/09/13 - 09/10/13	13-9063	Science	8.1	117.2	48.8	
09/11/13 - 09/12/13	13-9064	Science	7.6	124.8	41.2	
09/13/13	13-9065	Science	8	132.8	33.2	
09/16/13	13-9066	Science	8	140.8	25.2	
09/18/13	13-9067	Science	7.9	148.7	17.3	
09/22/13	13-9068	Science	8.1	156.8	9.2	
09/23/13	13-9069	Science	7.8	164.6	1.4	

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

Related Science Report:

SEAC4RS - ER-2 #809 08/30/13 - 08/31/13 Science Report

Mission: SEAC4RS

Mission Summary:

Flight Report – SEAC4RS ER-2, **August 30, 2013** (Science flight #8)

Prepared by: Jens Redemann (Jens.Redemann-1@nasa.gov)

Purpose of flight: A flight to study South-East US chemistry, in close coordination with A-Train overpass and the DC-8.

Take-off: 11:48 local (Central DST) (UTC start = 16:48, UTC end =00:12 Aug. 31)

Duration: 7.4 hrs

Notes: ER-2 went ENE from Ellington towards the Centreville AERONET site and proceeded on the CALIPSO satellite ground track towards N. The first half of the leg along the satellite track had significant convection, the second half showed scattered low-level clouds. Satellite overpass occurred during ER-2 overflight of the Mingo AERONET ground site, where AOD was ~0.2 at 500nm at 19:04UT. At that point the DC-8 overflew the same location and flew a wall pattern. ER-2 then proceeded towards a location near the Ozarks (MO), where the DC-8 studied a hot spot of isoprene emissions. En route to that location, we decided to change the originally planned rosette pattern to a simple bow-tie pattern, because of convection picking up at the location and to allow time for over-flights of two other AERONET sites (Leland_HS and Centreville), which were measuring appreciable AOD of 0.4 and higher. ER-2 overflew the two AERONET sites in the principal plane and carried out one dip to 45kft en route home. Communication between ER-2 flight scientist, ground pilot and pilot was excellent. Overall a successful remote sensing focused flight to support SEUS chemistry objectives.

Aircraft and instruments: Communication with instruments via Iridium and INMARSAT was poor again. AirMSPI took good data on the way to the CALIPSO ground track, but stopped working about 2 hrs into the flight. Issue is expected to be resolved before Monday's flight. All other instruments appear to have worked nominally. Aircraft ready to go for science flight on Sept. 2, 2013.

Images:

Figure1: Flight tracks (planned and flown) of ER-2 (blue) and DC-8



[Read more](#)

Figure2: Altitude vs time plot for science flight #8, August 30, 2013.



[Read more](#)

Submitted by: Jens Redemann on 09/01/13

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