

ER-2 #809 08/27/13

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

Flight Number: 13-9058

Payload Configuration: SEAC4RS

Nav Data Collected: Yes

Total Flight Time: 7.2 hours

Submitted by: Timothy Moes on 08/27/13

Flight Segments:

From:	EFD	To:	EFD
Date:	08/27/13		
Flight Time:	7.2 hours		
Log Number:	132301	PI:	Kent Shiffer
Funding Source:	Hal Maring - NASA - SMD - ESD Radiation Science Program		
Purpose of Flight:	Science		
Comments:	Objectives were primarily North American Monsoon and radiation studies. A number of vertical profiles were completed during the mission. AirMISP was known in-op prior to the flight. All other instruments report nominal operation. Aircraft came back 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	

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 08/27/13 Science Report

Mission: SEAC4RS

Mission Summary:

Flight Report – SEAC4RS ER-2, August 27, 2013 (Science flight #7)

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

Purpose of flight: A flight to study NAM structure on generally N-S flight path to Iowa.

Take-off: 11:58 local (Central DST) (UTC start = 16:58, UTC end =00:10 Aug. 28)

Duration: 7.2 hrs

Notes: ER-2 went North toward Iowa looking to characterize structure and water injections into the NAM anticyclone. It turned out that an MCS over the Great Lakes region had injected water and ice into the tropopause region the night before and into the morning. Water vapor enhancements of 30-60 ppmv were detected in a ~1.5 km thick layer with a top at 15 km pressure altitude, presumably this layer was a plume from the MCS. Flight track was adjusted on the return path, because of marginal conditions for remote sensing near two of the targeted AERONET sites. A total of 6 vertical descents/ascent were flown, three of which sampled the MCS plume. Communication between ER-2 flight scientist, ground pilot and pilot was excellent. Overall a very successful NAM/MCS flight.

Aircraft and instruments: Issues with Iridium link appear to be resolved. AirMSPI was not operating for this flight. All other instruments appear to have worked nominally. Aircraft ready to go for science flight on August 30, 2013.

Images:

Figure1: Flight tracks (planned in dark blue and flown in light blue)



[Read more](#)

Figure2: Altitude vs time plot for science flight #7, August 27, 2013.



[Read more](#)

Submitted by: Jens Redemann on 08/29/13

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