

ER-2 #809 09/02/13

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

Flight Number: 13-9060

Payload Configuration: SEAC4RS

Nav Data Collected: Yes

Total Flight Time: 8.2 hours

Submitted by: Timothy Moes on 09/02/13

Flight Segments:

From:	EFD	To:	EFD
Date:	09/02/13		
Flight Time:	8.2 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. eMAS was known IN-OP prior to flight. All other instruments had good indications. Inmarsat worked the entire flight for ssh logins which was very helpful. Significant science objectives were accomplished today and the aircraft is 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 09/02/13 Science Report

Mission: SEAC4RS

Mission Summary:

Flight Report – SEAC4RS ER-2, **September 2, 2013** (Science flight #9)

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

Purpose of flight: A flight to study convection over land, in close coordination with the DC-8 and SPEC LearJet.

Take-off: 10:32 local (Central DST) (UTC start = 15:32, UTC end =23:46)

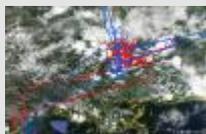
Duration: 8.2 hrs

Notes: The ER-2 went to a location near Jackson (MS), where pre-frontal convection was expected to develop during the day. Late delivery of revised flight plans to ER-2 pilots in the morning had resulted in only a small delay in the scheduled take-off time. The original ER-2 flight plan was adapted by eliminating the first bow-tie in the extended bow-tie pattern near Jackson. The ER-2 flew four bow-tie patterns, the first of which was closely coordinated with the DC-8. Towards the N of this pattern, the ER-2 remote sensing instruments observed significant Cirrus. Following the bow-tie pattern, we vectored the ER-2 on a generally E-W leg to survey potential targets for Ci outflow from the convective systems sampled by the DC-8 and SPEC LearJet. A parallel leg was then flown in close coordination (generally within 1 minute) with the DC-8 for stacked radiation/in situ comparisons. The ER-2 was then vectored to set up for a straight descent into a Ci outflow region to take in situ measurements. This descent was extended downward to 36kft, after not reaching the Ci at 41kft. Another descent/ascent was flown en route home. Communication between ER-2 flight scientist, ground pilot and pilot was excellent. Overall a successful flight to study SEAC4RS convection-related objectives.

Aircraft and instruments: Communication with instruments via Iridium and INMARSAT was good. eMAS had experienced a cooler problem the day prior to flight and was not operating on this flight. All other instruments appear to have worked nominally. Aircraft ready to go for science flight on Sept. 4, 2013.

Images:

Figure1: Flight tracks of ER-2 (blue), DC-8 (red), SPEC LearJet



[Read more](#)

Figure 2: Altitude vs time plot for science flight #9, September 2,



[Read more](#)

Submitted by: Jens Redemann on 09/03/13

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