

## P-3 Orion 09/02/17

**Aircraft:** [P-3 Orion - WFF](#) (See full schedule)

**Flight Number:** Transit Flight #1/Science

**Payload Configuration:** ORACLES

**Nav Data Collected:** No

**Archive Data:** [20170902](#) (82 binary files; 39 image files; 24 archive (plain-text) files)

**Total Flight Time:** 8.7 hours

**Submitted by:** Mike Cropper on 09/06/17

### Flight Segments:

<b>From:</b>	FPST	<b>To:</b>	FHAW
<b>Start:</b>	09/02/17 09:05 Z	<b>Finish:</b>	09/02/17 17:48 Z
<b>Flight Time:</b>	8.7 hours		
<b>Log Number:</b>	<a href="#">17P001</a>	<b>PI:</b>	Jens Redemann
<b>Funding Source:</b>	Hal Maring - NASA - SMD - ESD Radiation Science Program		
<b>Purpose of Flight:</b>	Transit		

### Flight Hour Summary:

	<b>17P001</b>
<b>Flight Hours Approved in SOFRS</b>	179.5
<b>Total Used</b>	154.9
<b>Total Remaining</b>	24.6

### 17P001 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
<a href="#">07/15/17</a>	Airworthiness Test Flight	Check	1.2	1.2	178.3	
<a href="#">07/16/17</a>	Project Test Flight #1	Check	4	5.2	174.3	
<a href="#">07/17/17</a>	Project Test Flight #2	Check	3.1	8.3	171.2	
<a href="#">08/01/17</a>	Transit Flight #1	Transit	6.2	14.5	165	
<a href="#">08/07/17</a>	Transit Flight #2	Transit	10.1	24.6	154.9	
<a href="#">08/09/17</a>	Transit Flight #3/Science	Transit	7.8	32.4	147.1	
<a href="#">08/12/17</a>	Science Flight #1	Science	8.5	40.9	138.6	
<a href="#">08/13/17</a>	Science Flight #2	Science	9.1	50	129.5	
<a href="#">08/15/17</a>	Science Flight #3	Science	9.2	59.2	120.3	
<a href="#">08/17/17</a>	Science Flight #4	Science	9.1	68.3	111.2	
<a href="#">08/18/17</a>	Science Flight #5	Science	5.5	73.8	105.7	
<a href="#">08/19/17</a>	Science Flight #6	Science	2.2	76	103.5	0
<a href="#">08/21/17</a>	Science Flight #7	Science	8.3	84.3	95.2	0
<a href="#">08/24/17</a>	Science Flight #8	Science	9.4	93.7	85.8	0
<a href="#">08/26/17</a>	Science Flight #9	Science	9.7	103.4	76.1	0
<a href="#">08/28/17</a>	Science Flight #10	Science	9.5	112.9	66.6	0
<a href="#">08/30/17</a>	Science Flight #11	Science	8.9	121.8	57.7	0
<a href="#">08/31/17</a>	Science Flight #12	Science	8.3	130.1	49.4	0
<a href="#">09/02/17</a>	Transit Flight #1/Science	Transit	8.7	138.8	40.7	
<a href="#">09/03/17</a>	Transit Flight #2	Transit	9.7	148.5	31	
<a href="#">09/04/17</a>	Transit Flight #3	Transit	5.9	154.4	25.1	
<a href="#">09/04/17</a>	Transit Flight #4	Transit	0.5	154.9	24.6	

*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:**

## **ORACLES - P-3 Orion 09/02/17 Science Report**

**Mission:** ORACLES

**Mission Summary:**

This was a science flight that was also the first Transit leg from Sao Tome island to Ascension Island. Several objectives were accomplished on this flight:

- Got a 4STAR "AeroNet-like" sky-scans below layers of dust plus smoke, then sampled the smoke layer in-situ. Also got vertically-resolved curtain from HSRL. The goal is to test AeroNet retrieval of column absorption/SSA and different methods of attributing column absorption to dust and carbonaceous aerosol.
- Sampled smoke aerosol in northern end of study area to see if it is chemically/optically different than smoke to the south. Expect that aerosol in northern area more influenced by wet convection; southern area aerosol more influenced by dry convection.
- Plume sampled along 5E on Aug 30, then re-sampled (per forward trajectories) on Aug 31 is expected to be just NE of ASI on 2 Sept. On approach to Ascension Island we re-sampled this aerosol to add to "Lagrangian"/aging study.
- Included 10min leg in-cloud for HiGEAR to check for droplet shatter in CVI.

See attached full flight report for more details.

**File:**

 [PRF13\\_Y17\\_0902\\_FlightScienceReport.pdf](#)

**Submitted by:** Sarah Doherty on 09/11/17

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