Flight Report: DISCOVER-AQ Science Flight #9

From: KEFD To: KEFD

Start: 09/26/13 16:35 Z Finish: 09/26/13 23:00 Z

Flight Times: 6.4 hours

Log Number: 13P201 PI: James Crawford

Funding Source: Hal Maring - NASA - SMD Radiation Science Program

Official report logged at:
https://airbornescience.nasa.gov/flight_reports/P-3_Orion_09_26_13

Flight	Date	Duration	Cumulative Hours	DISCOVER-AQ Hours remaining
Total Allocated				100
ECF	8/27/13	2.3	2.3	97.7
PCF	8/28/13	2.1	4.4	95.6
Transit	9/2/13	3.9	8.3	91.7
Science Flight - 1	9/4/13	8.0	16.3	83.7
Science Flight - 2	9/6/13	7.9	24.2	75.8
Science Flight - 3	9/11/13	8.2	32.4	67.6
Science Flight - 4	9/12/13	8.0	40.4	59.6
Science Flight - 5	9/13/13	7.9	48.3	51.7
Science Flight - 6	9/14/13	8.0	56.3	43.7
Aborted Flight	9/18/13	1.1	57.4	42.6
ECF	9/18/13	1.1	58.5	41.5
Science Flight - 7	9/24/13	7.9	66.4	33.6
Science Flight - 8	9/25/13	8.5	74.9	25.1
Science Flight - 9	9/26/13	6.4	81.3	18.7

Comments: This was the ninth and final science flight for DISCOVER-AQ. The Fedexed part from Dallas arrived at 0830 and was picked up directly from the Fedex office. NASA-8 arrived with the other relay just as powered was restored to the P-3B. While the part they delivered was not needed, their effort was just as appreciated. The P-3B crew worked diligently to make the repair and the investigators used generator power for warm-up. This enabled a take-off just before noon and provided time for two full circuits. During this flight, flow was to the northwest, with higher ozone levels in that sector. Ozone from the previous day had been so high that ozone was not titrated over the city the night before, with overnight values as high as 60 ppbv in some locations. After seeing the highest ozone values (120 ppbv) on the boundary layer run from West Houston to Conroe, the plane returned to this area after the second circuit. The seventeenth spiral was conducted over NW Harris County and a low pass was made

further to the NW of the normal track, showing high ozone (120 ppbv) exiting the Houston area between the NW Harris and Conroe monitoring sites.