

Flight Report: DISCOVER-AQ Science Flight #2

From: KPMD To: KPMD

Start: 01/18/13 15:48 Z Finish: 01/18/13 23:21 Z

Flight Time: 7.6 hours

Log Number: 13P201 PI: James Crawford

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

Official report logged at:

[http://airbornescience.nasa.gov/flight\\_reports/P-3 Orion 01 18 13](http://airbornescience.nasa.gov/flight_reports/P-3_Orion_01_18_13)

Flight	Date	Duration	Cumulative Hours	DISCOVER-AQ Hours remaining	PODEX Hours remaining
<i>Total Allocated</i>				100	21
ECF	1/10/13	1.1	1.1	98.9	21
ECF -2	1/10/13	0.6	1.7	98.3	21
PCF	1/10/13	2.1	3.8	96.2	21
Transit	1/14/13	8.3	12.1	87.9	21
Science Flight - 1	1/16/13	8.4	20.5	79.5	21
Science Flight - 2	1/18/13	7.6	28.1	71.9	21

Comments: This was the second science flight for DISCOVER-AQ with forecasted code Orange conditions for PM2.5 in the southern San Joaquin Valley. Some reports of fog in Hanford were reported in the early morning (depth of 600 feet), but fog dissipated rapidly after sunrise and had no impact on the flight. As in the previous flight, aerosol and trace gas pollution was restricted to altitudes below 1800 feet with substantial gradients down to the surface, especially early in the day. To allow time for the missed approaches on all three circuits, profiles were reduced from 10,500 feet to 8500 feet for this flight. Timing of each circuit was about 2:15. Combined with 15 minutes to enter and leave the valley, future flights are expected to have about 30 minutes of extra time for sampling. This time may be used to sample the relatively unmonitored southwestern portion of the valley at the end of future DISCOVER-AQ flights.