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## Flight Report

<b>Aircraft :</b>	N426NA P-3B Orion
<b>Operating Site(s) From / To :</b>	KWAL/KWAL
<b>Flight Date :</b>	7/29/2011
<b>Flight Number :</b>	1095
<b>Take Off Time :</b>	<b>Local / GMT</b> <b>1048/1448</b>
<b>Landing Time :</b>	<b>Local / GMT</b> <b>1843/2243</b>
<b>Flight Time :</b>	7.9
<b>Flt Request # / PI:</b>	11P201 Dr. Jim Crawford (NASA LaRC) N/A [ ]
<b>Purpose of Flight(s) :</b>	Data [x] Ferry [] Functional Check [] Other []
<b>Aircraft Status:</b>	Up [x] Down [ ]
<b>Sensor Payload :</b>	DISCOVER-AQ mission configuration
<b>Comments :</b>	<ul style="list-style-type: none"><li>Fourteenth and final science flight of the DISCOVER-AQ campaign. Flight was successful. Please see mission science report for further science updates.</li></ul>

SUBMITTED BY: Rick McKee \_\_\_\_\_

DATE: 7/29/2011 \_\_\_\_\_

## Flight Hours Flown

<b>Flight</b>	<b>Date</b>	<b>Aircraft Flight #</b>	<b>Data Flight#</b>	<b>Duration (hr)</b>	<b>Remaining Hours*</b>
<i>Total Allocated</i>	6/26/2011				100
FCF	6/26/2011	1069		.8	100
DISCOVER-AQ ECF	6/26/2011	1069		1.6	98.4
PPF	6/26/2011	1069		1.1	98.4
PCF #1	6/28/2011	1074		2.6	95.8
Media Event Flight	6/28/2011	1074		.8	95.8
ECF #2	6/29/2011	1077		.9	94.9
PCF #2	6/30/2011	1079		2.8	92.1
Science Flight 1	7/01/2011	1080	#1	7.3	84.8
Science Flight 2	7/02/2011	1081	#2	7.7	77.1
Science Flight 3	7/05/2011	1073	#3	8.0	69.1
Science Flight 4	7/10/2011	1083	#4	7.6	61.5
Science Flight 5	7/11/2011	1071	#5	5.5	56.0
Science Flight 6	7/14/2011	1071	#6	8.1	47.9
Science Flight 7	7/16/2011	1087	#7	5.6	42.3
Science Flight 8	7/20/2011	1088	#8	7.7	34.6
Science Flight 9	7/21/2011	1089	#9	7.7	26.9
Science Flight 10	7/22/2011	1091	#10	7.9	19
Science Flight 11	7/26/2011	1092	#11	7.4	11.6
Science Flight 12	7/27/2011	1093	#12	7.7	3.9
Flight Hours Added	7/28/2011				16
Total remaining					19.9
Science Flight 13	7/28/2011	1094	#13	7.8	12.1
Science Flight 14	7/29/2011	1095	#14	7.9	4.2

Comments: Conditions for this final flight were anticipated to be relatively polluted with clear skies. While this expectation was ultimately borne out with code orange conditions over 3 of the 6 profile sites, pollution ramped up slowly only to reach nonattainment late in the day. By 5pm, only one site on the Eastern Shore (Millington) had gone code orange. To finish the campaign, dual highway runs were conducted at low altitude passing north along the Baltimore-Washington Parkway to UMBC and south along I-95 and then repeated to allow for a series of four low altitude transects to compare the two roadways and assess the representativeness of individual sampling runs along the same path. During these sampling transects, the PTR-MS instrument was modified to provide high temporal resolution measurements of aromatics to assess traffic emission signatures.