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## Flight Report

<b>Aircraft :</b>	NASA 528 (LaRC UC-12)
<b>Operating Site(s) From / To :</b>	KFAF (Felker) -KFAF
<b>Flight Date :</b>	7/20/2011
<b>Flight Number :</b>	HSRL R277 F/A/B (DISCOVER AQ 8A/B ) And a Ferry Flight (KFAF to KPHF) prior to research
<b>Take Off Time :</b>	F: 1239 Z KFAF A: 1329 Z KPHF B: 1755 Z KPHF
<b>Landing Time :</b>	F: 1245 Z KPHF A: 1721 Z KPHF B: 2149 Z KFAF
<b>Flight Time :</b>	F: 0.1 A: 3.9 hours B: 3.9 hours      7.9 hours Total
<b>Flt Request # / PI:</b>	11B-201 SOFRS      11-087 LaRC
<b>Purpose of Flight :</b>	Data <input type="checkbox"/> Ferry <input type="checkbox"/> Functional Check <input type="checkbox"/> Other <input checked="" type="checkbox"/>
<b>Aircraft Status:</b>	Up <input checked="" type="checkbox"/> Down <input type="checkbox"/>
<b>Sensor Payload :</b>	DISCOVER-AQ (HSRL & ACAM)
<b>Comments :</b>	Discover AQ Research Flights with HSRL & ACAM. Aircraft based at KFAF due to KLF1 runway closure. (Ferry hop from FAF to PHF required for fuel).FL260, good ATC coordination. Weather was hot and hazy with some scatter cloud build ups later in the afternoon. HSRL had some intermittent issue during the flight but was able to complete the mission. Next flight tentatively scheduled for 21 July 2011.

**SUBMITTED BY Mike Wusk      DATE: 7/20/11**

## Flight Hours Summary

Flight	Date	Aircraft Flight #	Data Flight#	Duration (hr)	Running Total(hr)	Remaining Hours*
						100.00
KLFI-KLFI	6/25/11	11-066	ICF	1.7	1.7	98.3
KLFI-KLFI	7/01/11	11-070	1A	4.3	6.0	94.0
KLFI-KLFI	7/01/11	11-070	1B	3.4	9.4	90.6
KLFI-KLFI	7/2/11	11-071	2A	4.0	13.4	86.6
KLFI-KLFI	7/2/11	11-071	2B	3.6	17.0	83.0
KLFI-KLFI	7/5/11	11-072	3A	4.0	21.0	79.0
KLFI-KLFI	7/5/11	11-072	3B	3.9	24.9	75.1
KFAF-KPHF	7/10/11	11-079	4F	0.1	25.0	75.0
KPHF-KPHF	7/10/11	11-079	4A	3.9	28.9	71.1
KPHF-KFAF	7/10/11	11-079	4B	3.8	32.7	67.3
KFAF-KPHF	7/11/11	11-080	5F	0.1	32.8	67.2
KPHF-KPHF	7/11/11	11-080	5A	3.8	36.6	63.4
KPHF-KFAF	7/11/11	11-080	5B	3.9	40.5	59.5
KFAF-KPHF	7/14/11	11-081	6F	0.1	40.6	59.4
KPHF-KPHF	7/14/11	11-081	6A	4.0	44.6	55.4
KPHF-KFAF	7/14/11	11-081	6B	4.1	48.7	51.3
KFAF-KPHF	7/16/11	11-083	7F	0.2	48.9	51.1
KPHF-KFAF	7/16/11	11-083	7B	3.8	52.7	47.3
KFAF-KPHF	7/19/11	11-086	ICF-F	0.1	52.8	47.2
KPHF-KFAF	7/19/11	11-086	ICF	1.5	54.3	45.7
KFAF-KPHF	7/20/11	11-087	8F	.1	54.4	45.6
KPHF-KPHF	7/20/11	11-087	8A	3.9	58.3	41.7
KPHF-KFAF	7/20/11	11-087	8B	3.9	62.2	37.8

# Flight Notes

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**Flight Name: R-277a**

**Date: 7/20/2011**

**Personnel: Kagey, Wusk, Obland**

**Take Off Time: 13:29 UTC**

- First flight of day for DISCOVER-AQ. Hot, humid conditions today, very hazy.
- Most of system is nominal at startup.
- 13:39 UTC ACAM activated.
- 13:42 UTC ACAM receiving packets.
- 14:03 UTC finished first set of cals.
- 14:49 UTC Between now and 15:54 UTC, I was troubleshooting a problem with the laser spectral purity. Data will be absent until 15:54 UTC. Note that during this time we lost Applanix data for ACAM.
- 15:07 UTC 3 cameras off for pass over Aberdeen.
- 15:10 UTC 2 cameras on for pass over Aberdeen. Leaving Canon camera off while I troubleshoot spectral purity.
- 15:54 UTC Laser and HSRL are operating nominally.
- 16:02 UTC 3 cameras off for pass over Aberdeen.
- 16:08 UTC 3 cameras back on.
- 16:14 UTC System still operating normally.
- 16:39 UTC 3 cameras off for pass over Aberdeen.
- 16:44 UTC 3 cameras back on.
- 16:57 UTC Finished with second set of cals.

**Flight Name: R-277b**

**Date: 7/20/2011**

**Personnel: Kagey, Wusk, Obland**

**Take Off Time: 17:55 UTC**

- Second flight of day for DISCOVER-AQ.
- 18:04 UTC ACAM is on and receiving packets.
- 18:32 UTC Finished first set of cals.
- 19:12 UTC We have been flying just above a thin but very visible brown haze layer. I can see it right near the top of our digitizer signals.
- 19:38 UTC 3 cameras off for pass over Aberdeen.
- 19:43 UTC 3 cameras back on.
- 20:09 UTC Briefly shuttered laser for aircraft passing underneath of us.
- 20:36 UTC 3 cameras off for pass over Aberdeen.

- 20:40 UTC 3 cameras back on.
- 21:10 UTC We are coming under substantial cirrus now. It has been patchy throughout the flight and has become steadily more prevalent above us as the flight has progressed.
- 21:13 UTC 3 cameras off for pass over Aberdeen.
- 21:17 UTC 3 cameras back on.