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## Flight Report

<b>Aircraft :</b>	NASA 528 (LaRC UC-12)
<b>Operating Site(s) From / To :</b>	KLFI (Langley) -KLFI
<b>Flight Date :</b>	7/05/2011
<b>Flight Number :</b>	HSRL R271 A & B (DISCOVER AQ 3A &3B)
<b>Take Off Time :</b>	A: 0903 Z B: 1347 Z
<b>Landing Time :</b>	A: 1302 Z B: 1740 Z
<b>Flight Time :</b>	A: 4.0 hours B: 3.9 hours 7.9 hours Total
<b>Flt Request # / PI:</b>	11B-201 SOFRS 11-072 LaRC
<b>Purpose of Flight :</b>	Data <input checked="" type="checkbox"/> Ferry <input type="checkbox"/> Functional Check <input type="checkbox"/> Other <input 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. FL260, ATC coordination good, Some mid level clouds to the south for the first flight, clearing conditions for the second. On the second flight, the researchers called for early termination of the DISCOVER AQ path and a made a request to fly down the bay and over the COVE site on the return to LFI, which was successfully accomplished. Next flight scheduled for 6 July 2011

**SUBMITTED BY: Mike Wusk      DATE: 7/05/11**



- Early morning flight for DISCOVER-AQ. Third day of science flights. Looking to catch development of boundary layer from after-holiday traffic.
- 08:54 UTC system startup nominal.
- 09:06 UTC System is locked.
- 09:10 UTC Aft and forward doors are open and Dage nadir camera is activated.
- 09:12 UTC ACAM activated
- 09:15 UTC ACAM is receiving packets and we are above a thin cloud layer. Forecast is for clear conditions north in the DC/Baltimore region.
- 09:42 UTC Finished first set of calibrations.
- 09:47 UTC Adjusted Canon camera to 1/50 exposure, F2.2 so that clouds show up in images.
- 09:53 UTC Adjusted Canon camera to F1.1 to see ground.
- 10:14 UTC Adjusted Canon camera to F2.0 to see ground.
- 10:43 UTC 3 cameras turned off for passing over Aberdeen.
- 10:48 UTC 3 cameras back on.
- 11:23 UTC Adjusted Canon camera to 1/100 exposure.
- 11:42 UTC 3 cameras turned off for passing over Aberdeen.
- 11:47 UTC 3 cameras back on.
- 12:22 UTC 3 cameras turned off for passing over Aberdeen.
- 12:26 UTC 3 cameras back on.
- 12:38 UTC Finished second set of cal.

**Flight Name: R-271b**

**Date: 7/5/2011**

**Personnel: Yasky, Wusk, Rogers**

**Take Off Time: 13:47 UTC**

- Second Discover-AQ flight of the day over the Baltimore/Washington region. Also includes some southern bay / ocean work for Yong at the end, and an overpass of COVE.
- 13:54z ACAM turned on.
- 13:57z ACAM receiving packets.
- 14:01z held at 18kft for traffic for a bit.
- 14:03z all systems nominal.
- 14:16z cals
- 14:18z – note we are over a powerplant just after the I2 cal. Nothing special in data except some low PBL clouds, nor anything in ACAM.
- 14:27z – on the track.
- 15:02z – been watching a slightly depolarizing layer at 4km with very little bsr associated with it just here on the north end of the track.
- 15:21z cameras not saving data – over APG.
- 15:28z – cameras back on. Took three attempts for the ACAM message to get accepted.
- 16:19z – cameras not saving data over APG.

- 16:23z – cameras saving data again.
- 16:24z – had to shutter laser briefly while over aircraft.
- 16:24z – off the discover-aq track. Cutting across pax river and getting some data over the ocean and southern bay for Yong. Hitting COVE site as well.
- 17:02:35z – see the COVE platform in the canon camera. Pretty cool.
- 17:09z cals.