

ACLOUD Flight #23 - Polar 6 - 20170625

Mission PI P6: Mario Mech

Objectives: The main goal of the flight was a study of the boundary layer structure and energy fluxes north from Svalbard during warm air advection. The focus was on the profiles of vertical fluxes of heat, humidity, momentum and on radiation fluxes.

Crew:

Polar 6	
PI	Mario Mech
Basis Data Acq.	Cristina Sans i Col
ALABAMA	Franziska Köllner
A + TG	Oliver Eppers
CVI	Stephan Mertes
PMS	Dmitry Chechin

Flight times:

Polar 6	
Take off	11:03 UTC
Touch down	16:56 UTC

Important remarks:

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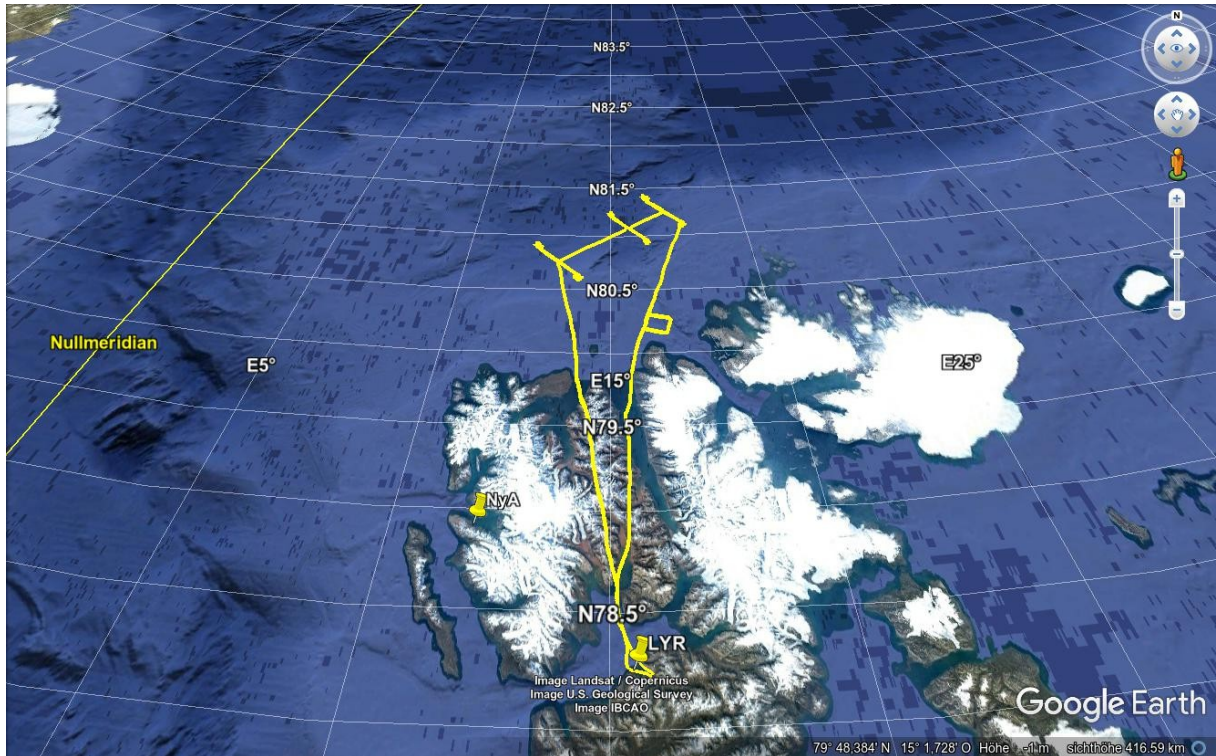
Weather situation as observed during the flight (compare to forecast):

See report of Polar 5.

Overview:

See report of Polar 5.

Flight track and pattern:



Left: Pictures from cloud or ice

Instrument Status:

Polar 6	
Basis data acquisition	
Nose Boom	
PHIPS	
SID-3	
CIP	
PIP	
ALABAMA	
CVI	
CVI UHSAS	
CVI ???	
AWI SP2	
AWI UHSAS	
CO/CO2/O3	

Problem with CVI inlet: CVI inlet heating is not working. When the inlet freezes it does not operate at its full functionality.

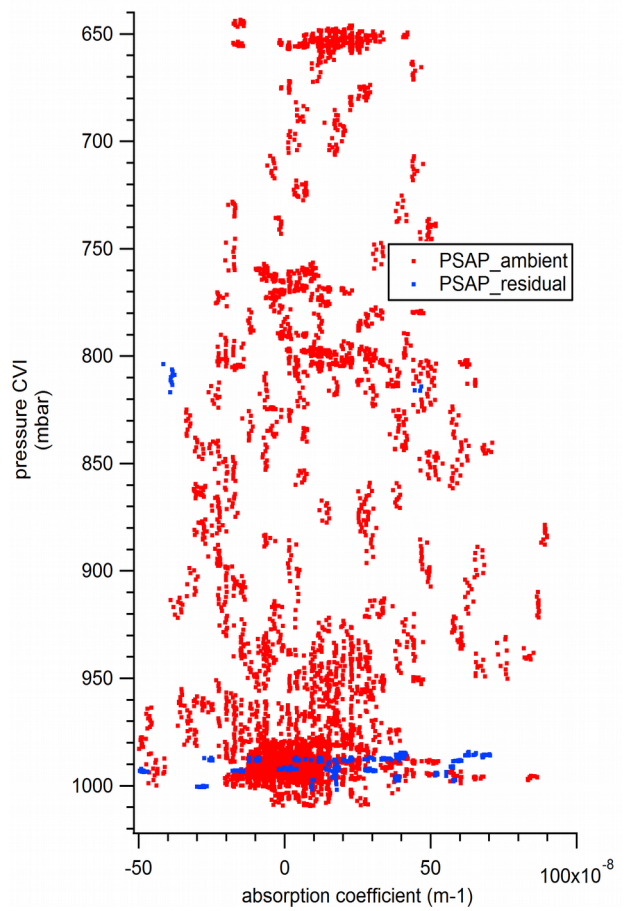
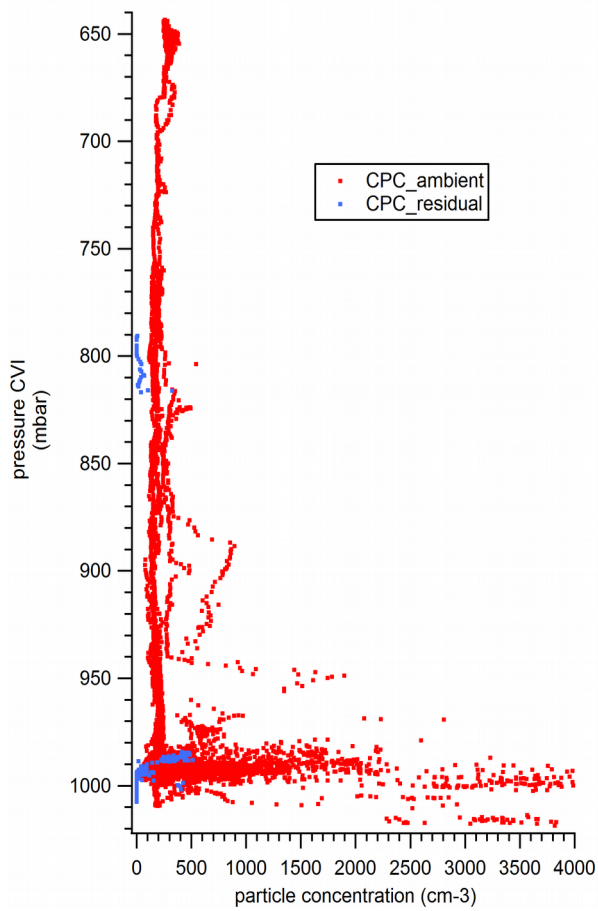
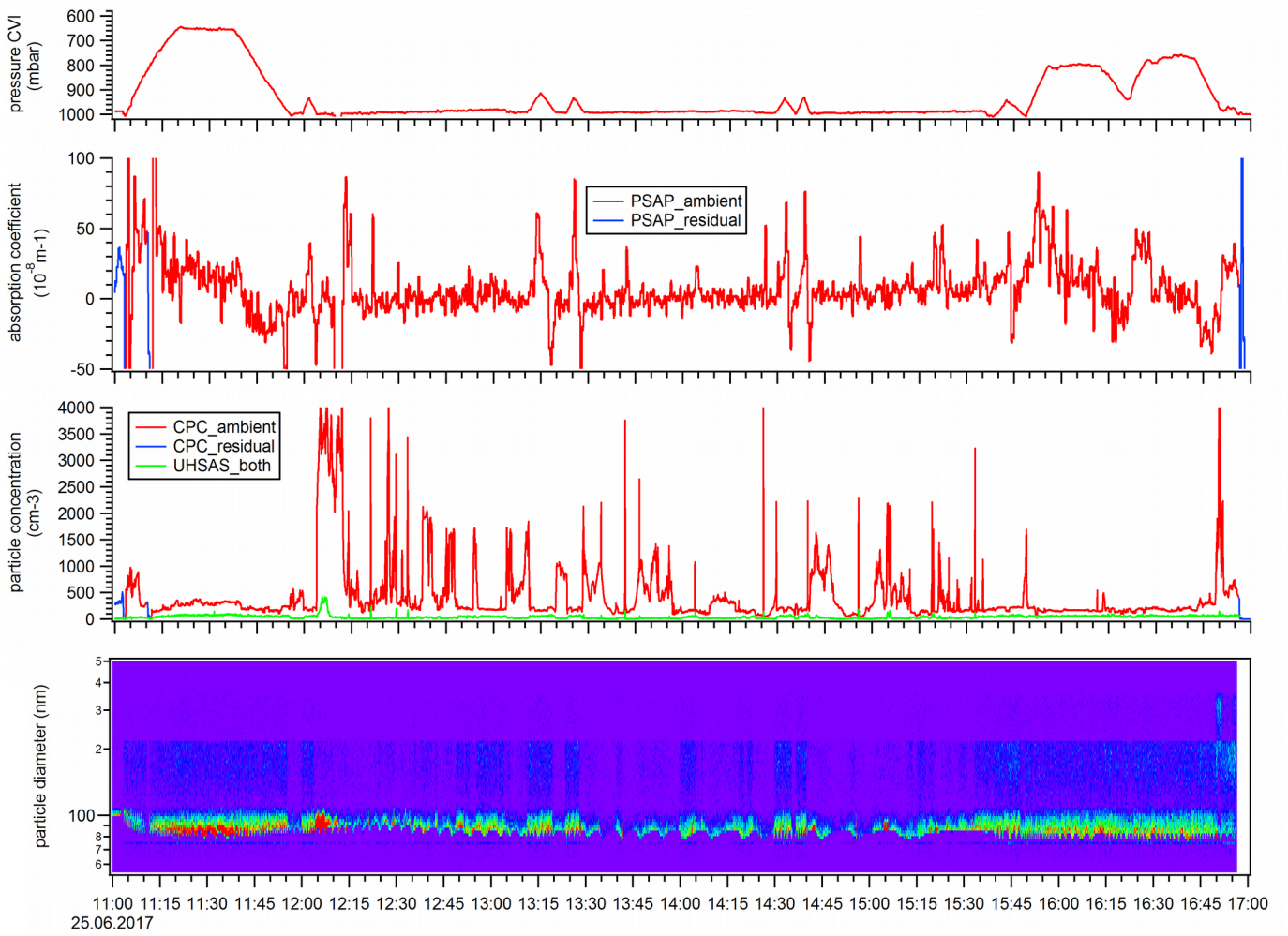
Detailed Flight Logs (Name of author... more than one is possible):

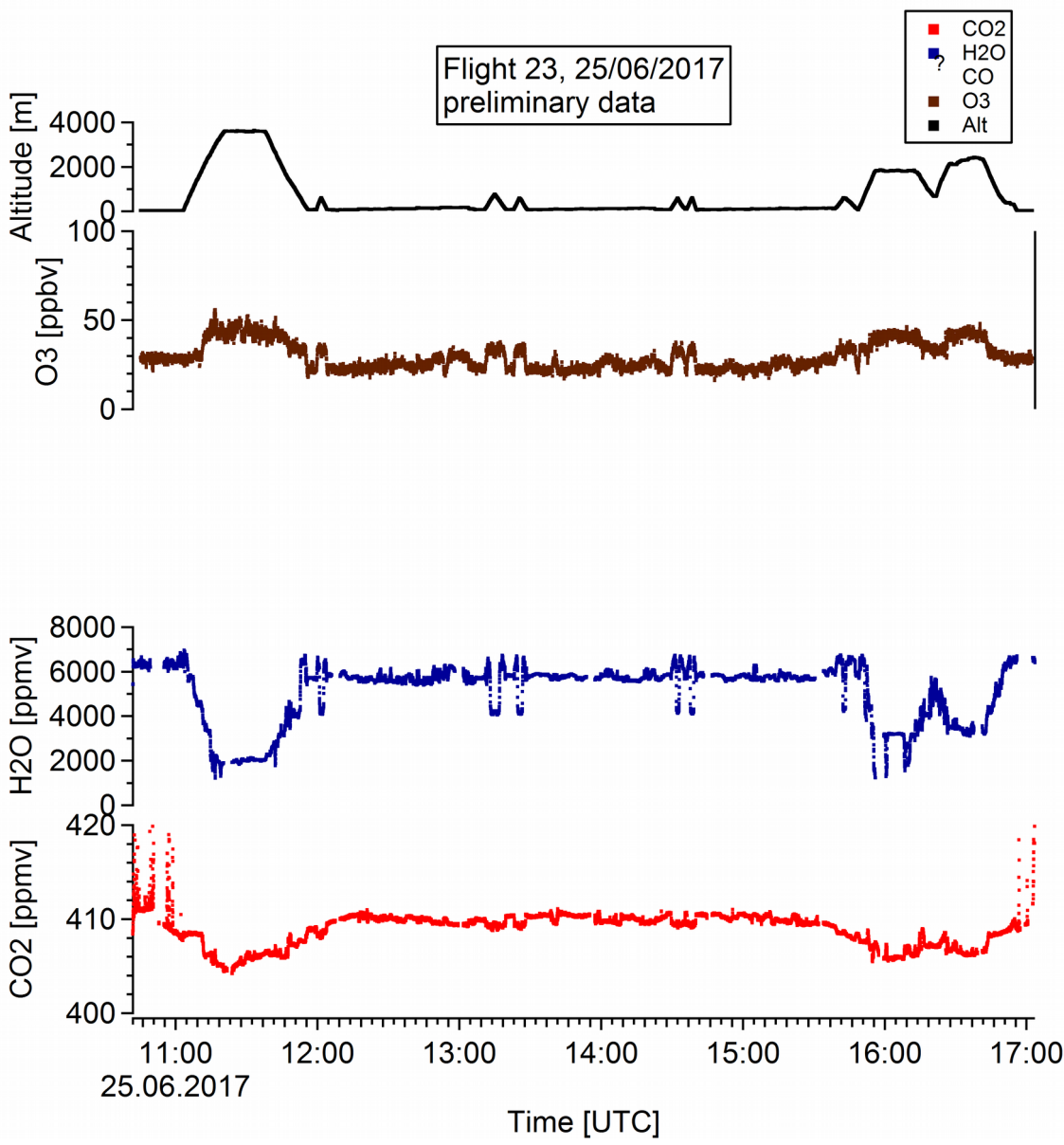
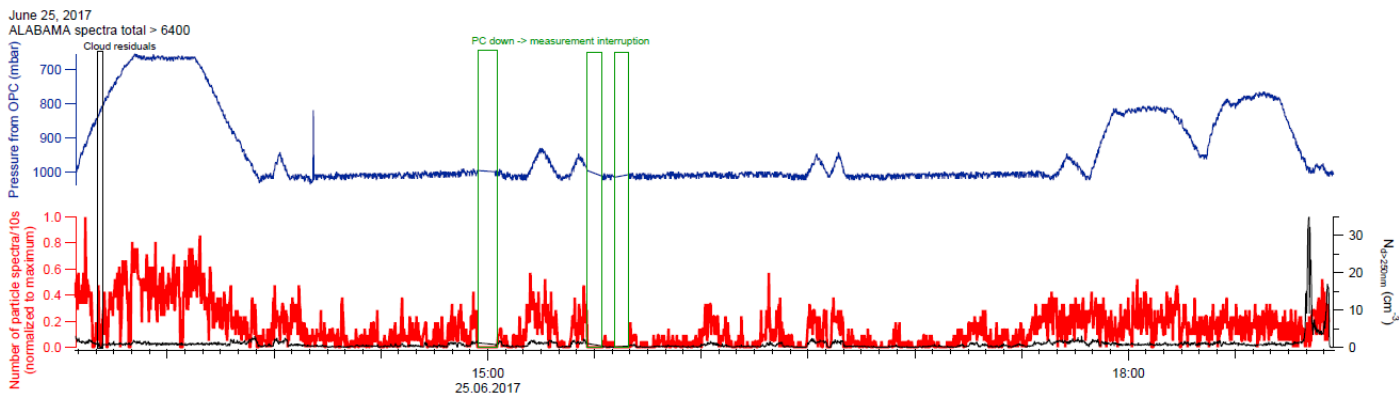
Mario Mech (times UTC)

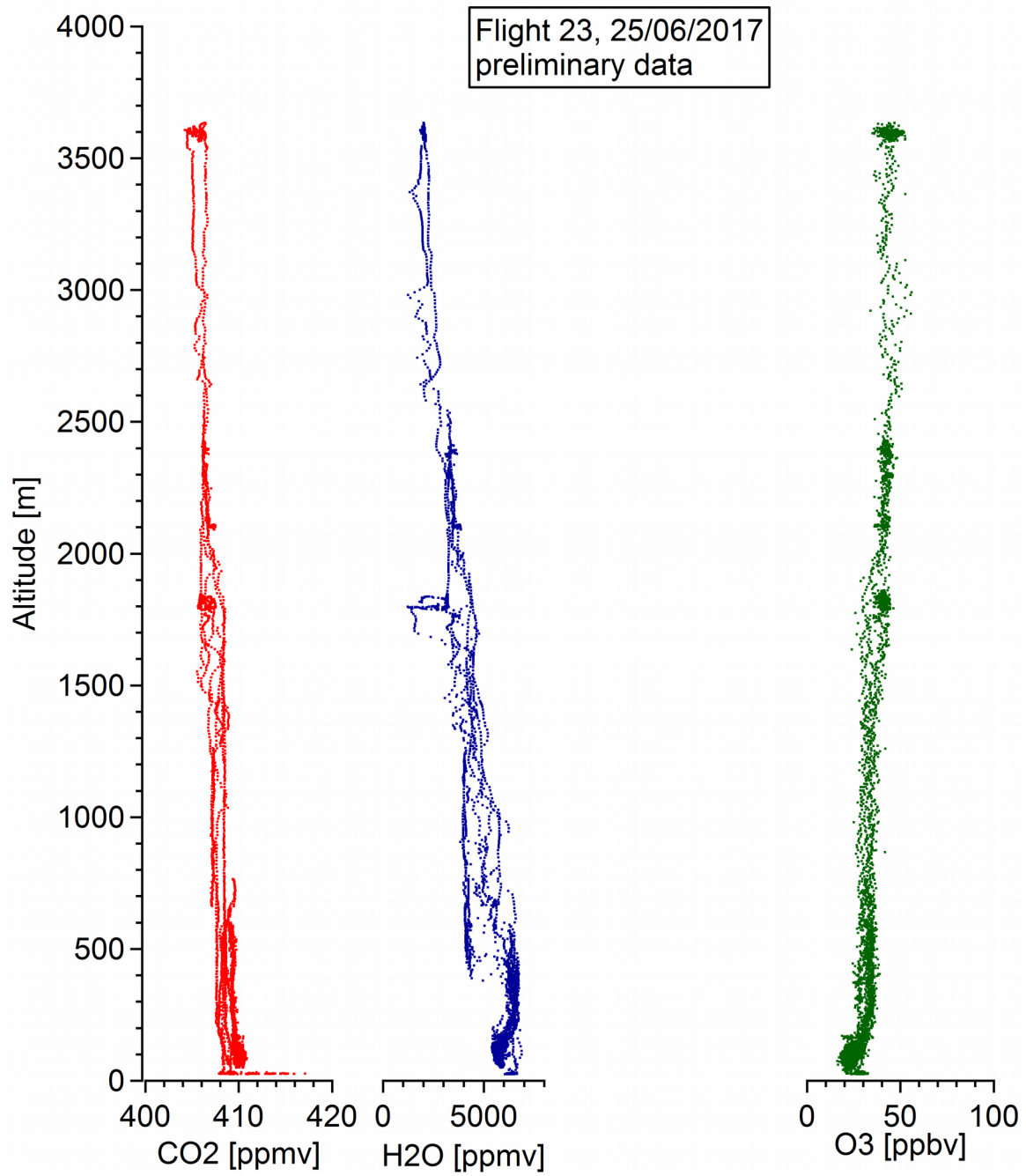
11:03 take off

11:04 windy during take off
11:20 12000 ft
11:33 only few low level clouds ahead
11:38 descend to 200 ft
11:53 no low and mid level clouds; some cirrus present
11:57 BL at 600 ft
12:01 climb to 2000 ft for temp - levels will be flown on 200, 250, 300, 400, and
500 ft
12:02 descend to 200 ft
12:09 200 ft leg S2 to S3
12:21 250 ft S3 to S2
12:23 polar bear
12:32 300 ft S2 to S3
12:44 400 ft S3 to S2
12:54 500 ft S2 to S3
13:11 at S1 starting saw tooth to 2500 ft at 5000 ft/min
13:15 2500 ft and down
13:23 climb to 2000 ft for temp - levels will be flown on 200, 250, 300, 350, and
400 ft
13:30 200 ft S5 to S6
13:41 250 ft S6 to S5
13:52 300 ft S5 to S6
14:04 350 ft S6 to S5
14:08 hazy to the West
14:18 400 ft S5 to S6
14:30 climb to 2000 ft for temp - levels will be flown on 200, 250, 300, 350, and
400 ft - BL at 300 ft
14:36 200 ft S8 to S9
14:50 sea ice cover seems to be more closed
14:56 250 ft S9 to S8
14:58 more cirrus appears to be North
15:06 300 ft S8 to S9
15:17 350 ft S9 to S8
15:28 400 ft S8 to S9
15:37 heading home
15:39 saw tothing to Svalbard up to 2000 ft
15:49 climb to 6000 ft for radiation pattern
15:52 clouds in 2000 ft ahead
15:57 start of radiation pattern
16:12 radiation pattern done
16:56 touch down

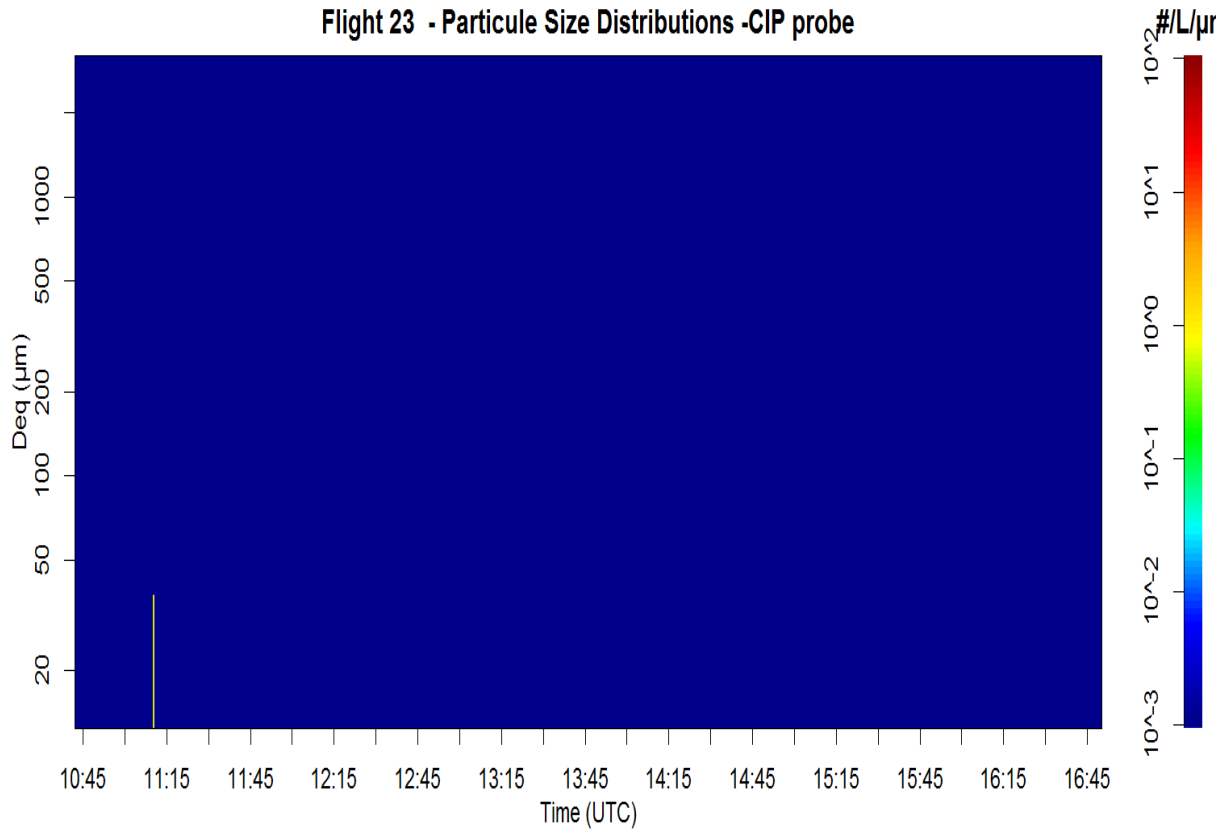
Quicklooks:







Flight 23 - Particulate Size Distributions -CIP probe



Flight 23 - 20170625 - LaMP Preliminary quicklook

