

Flight Scientist Report
Monday 08/17/2020 ACTIVATE RF24

Flight Type: Statistical Survey Flight – ZIBUT then NNW
Flight Route: KLFI FUMES OUTES HOBOH 36.6/-71.833333 38.716667/-72.3 36.6/-
71.833333 HOBOH OUTES FUMES KLFI KFAF KLFI

Special Notes:

The cloud conditions validated during the morning discussions and the original flight plan was executed.

Smoke plume aloft this flight

Both aircraft were delayed on taxi and were held due to airforce activity (push for F22 landings).

There was scatter clouds on the way out to OUTES and consistent scattered clouds between OUTES and ZIBUT. The northern leg had a stratus cloud deck on the way out and back.

Overall coordination of the aircraft was good. HU25 did hedge ~1-2 nm along the track to stay within clouds at times. The UC12 was lagging behind the HU25 on the return by about 15 nm.

HU25 did not have fuel to extend for extra fly overs at KLFI for AERONET and MPL comparisons. UC12 did extended leg over KLFI and then returned to KLI. This leg looked good as it was a straight and level over the site. It took approximately an extra 20 min to extend and then descend to land.

Delayed the post flight briefing by 45 min due to delayed take and longer flight.

Post Flight Debrief:

Yasky: Started out late getting things; pulled external air delayed a bit. Biggest delay due to F22s to land. Multiple layers, areas of broken clouds and clear air regions. Flew over lidar site at 1kft. Aircraft is good. Wasted 500lbs on ground and before takeoff. 3.5 hours landed at 1400lbs.

Luke Delaney: GoPro had issues during the flight. Started out at 25kft and extended to 28kft. Need to get a crab angle limit.

King Air

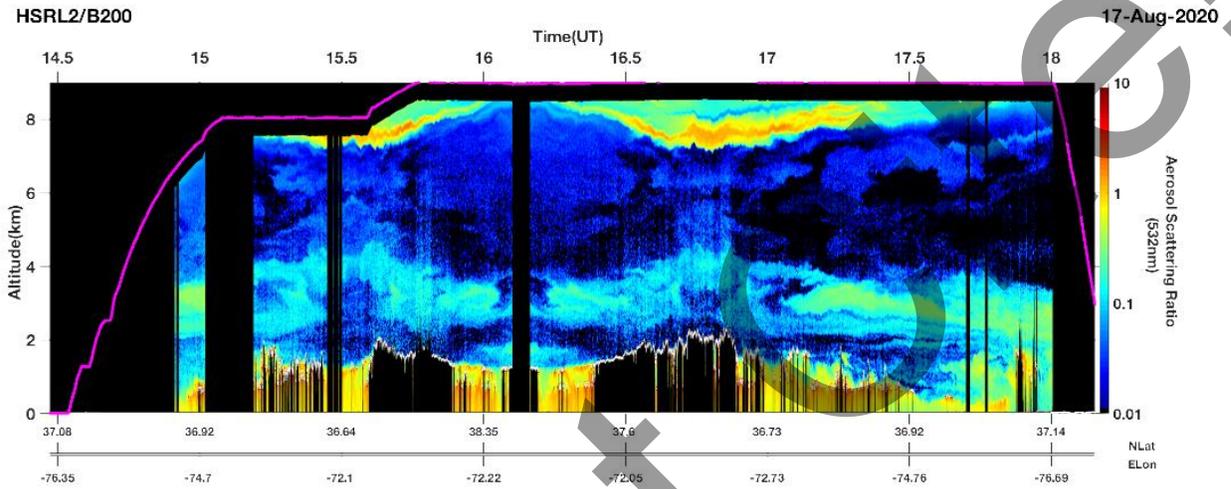
Taylor: camera up front had issues. Need to check settings on GoPro before next flight.

Applanix had some issues on startup. Smoke layer centered at 25kft on middle of northern leg.

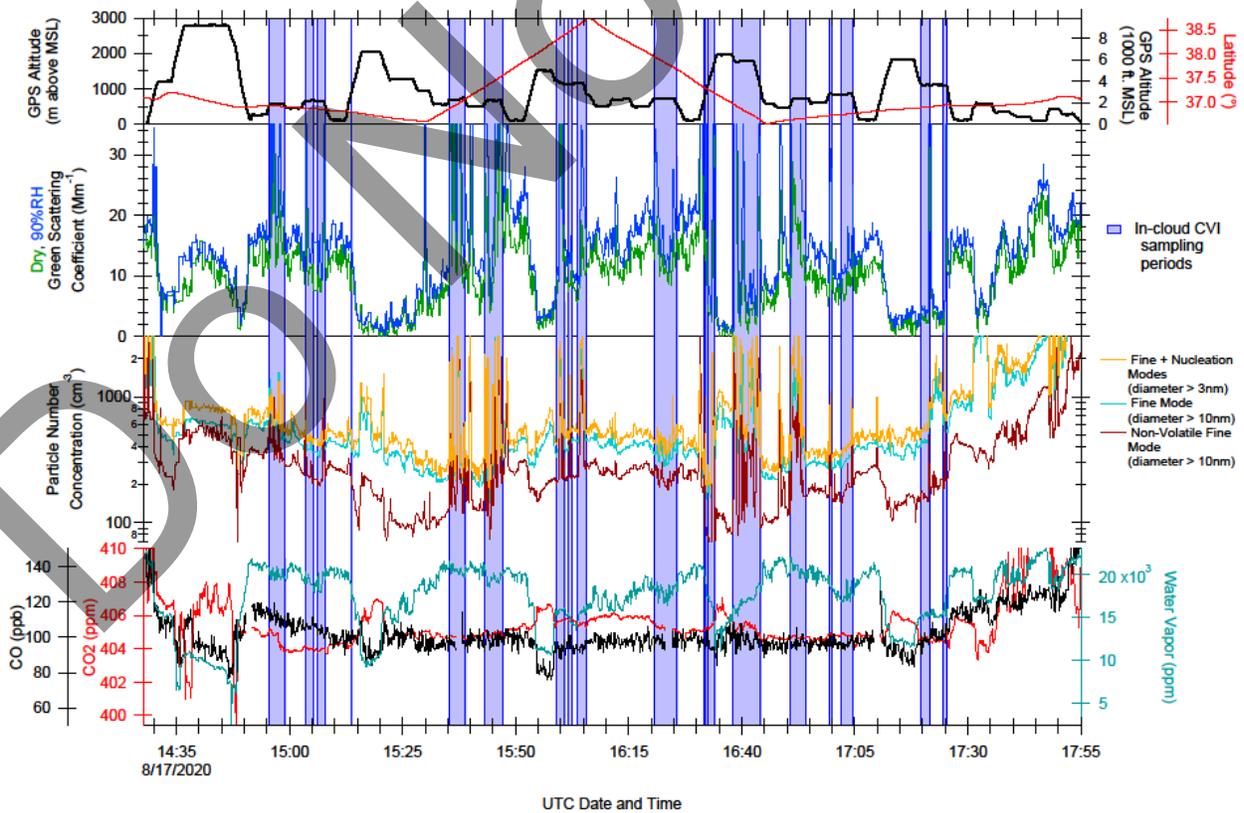
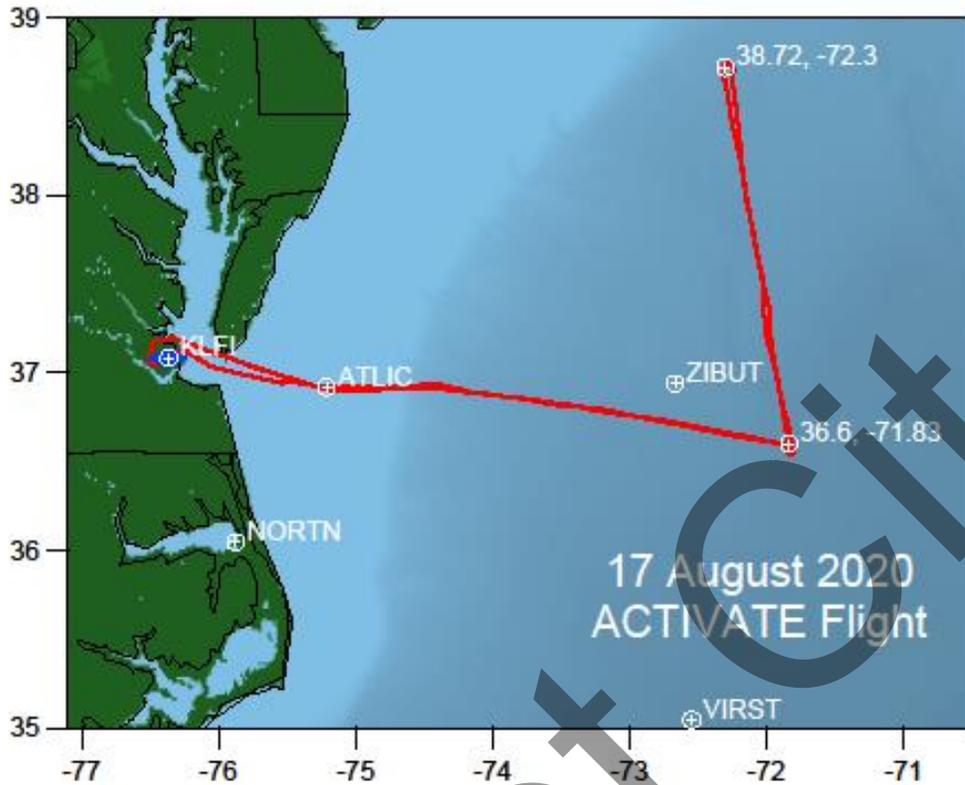
Falcon

Ewan: No squawks. Good day for statistical surveys (4) and (1) clear module.

Eddie: Display from forward camera not available – need to investigate. CPC had issues for first 20mins. Wet scattering was better than before. Need to run tests tomorrow on nephs to do some calibrations. Otherwise all worked well.



Rich Moore Quicklook Images:



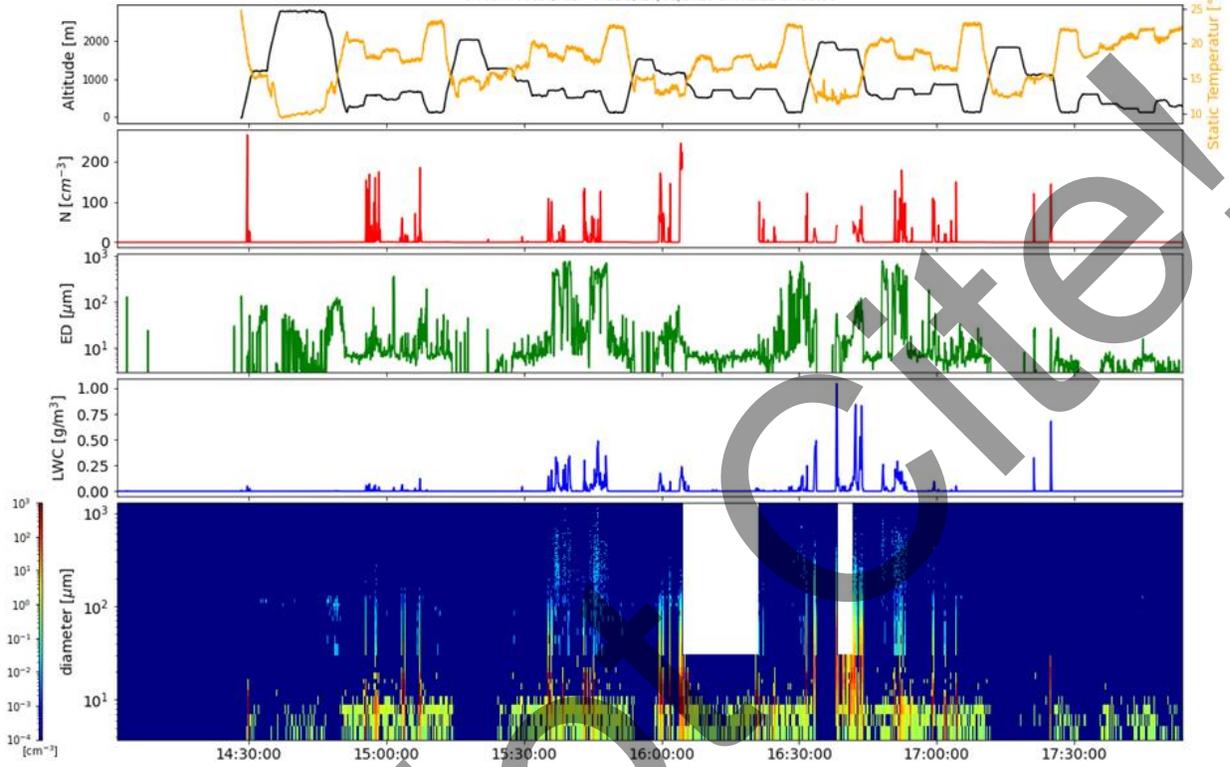
Quicklook ACTIVATE Cloud Probes (FCDP & 2DS)

preliminary data, only for quicklook use

Simon Kirschler, Raphael Märkl, Christiane Voigt, Richard Moore, Ewan Crosbie



Cloud Probes (FCDP & 2DS) 17/08/2020 14:01:11-17:53:38

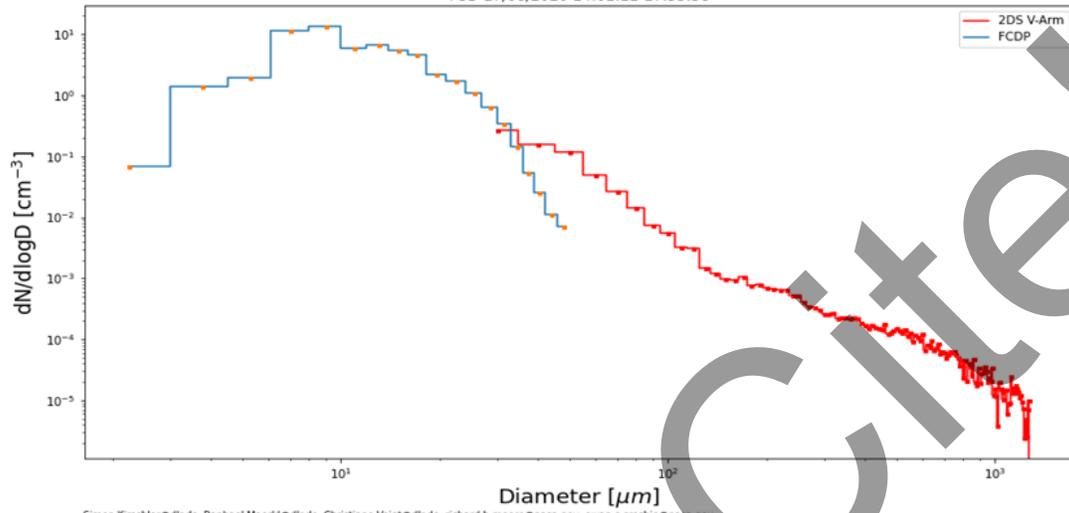


PSD ACTIVATE

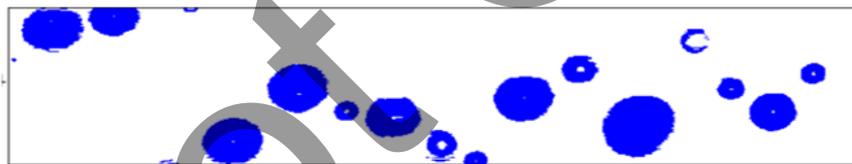
preliminary data, only for quicklook use
Simon Kirschler, Raphael Märkl, Christiane Voigt, Richard Moore, Ewan Crosbie



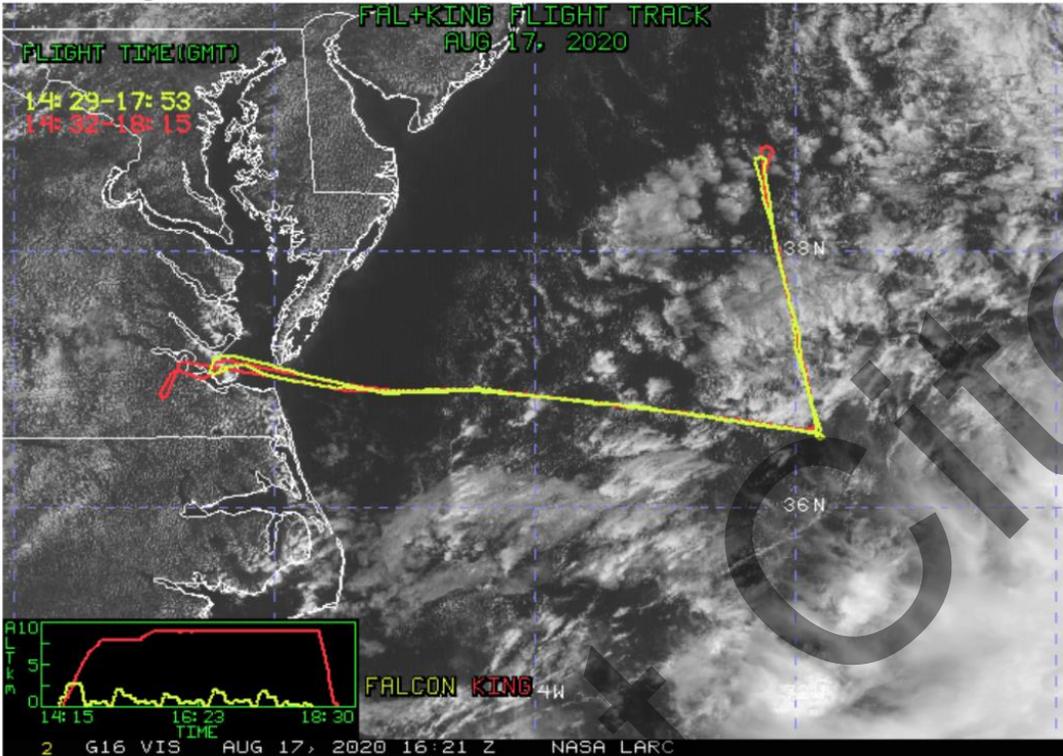
PSD 17/08/2020 14:01:11-17:53:38



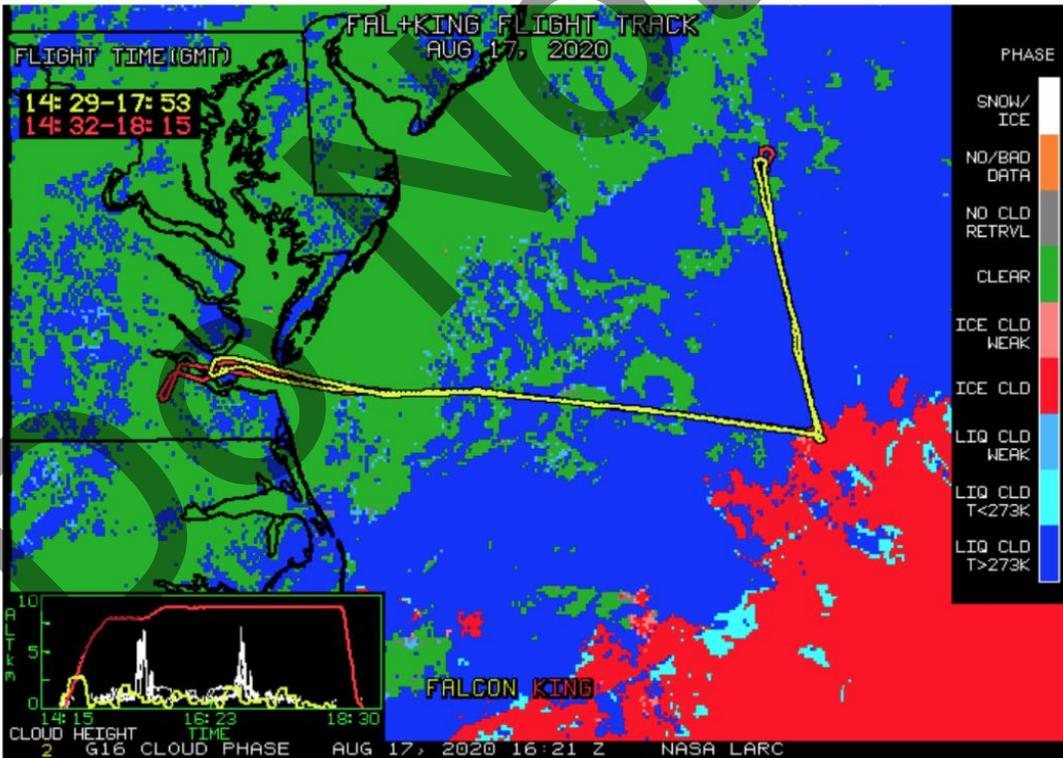
RF24 all liquid clouds



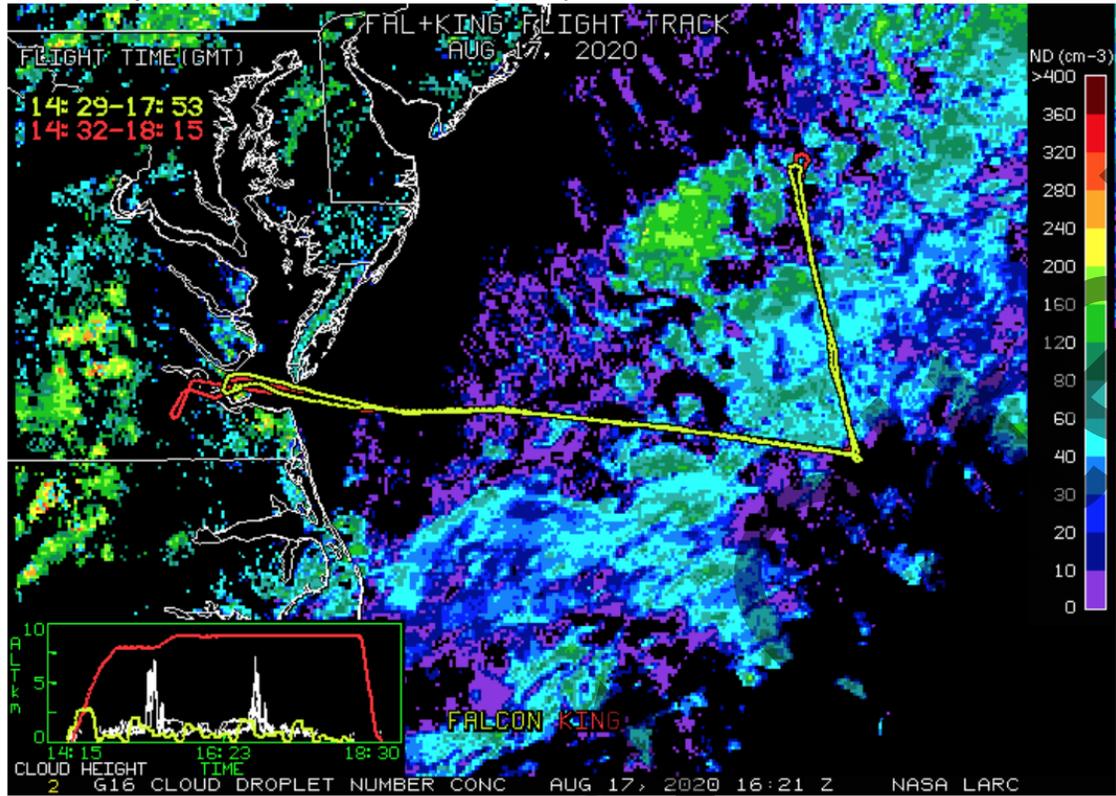
NASA-LaRC Clouds Group GOES-16 Quicklook Images for Flight 24, 16:21 UTC Aug 17, 2020
Visible Image



Cloud Phase



Cloud Droplet Number Concentration (cm⁻³)



Cloud-Top Height (Kft-ASL)

