

Flight Scientist Report
Monday 01/24/2022 ACTIVATE RF109

Flight Type: Statistical Survey Flight
Flight Route: KLF I ECG OXANA 3221N07214W OXANA ECG KLF I
Special Notes: First of two flights on this day.

King Air

Pilot report (Sandeen):

Morning and afternoon cooperative flights with HU-25. Morning route of flight: KLF I ECG OXANA 3221N/07214W OXANA ECG KLF I. Afternoon Route of Flight: KLF I ECG OXANA 3230N/7530W. Weather clear with winds calm (around 6 knots or less) for 08 runway operations. B200 took off second during first flight (delayed slightly due to temporary tower operations) and took off first during second flight. Uneventful climb to FL280, except that in first flight was held at FL270 until passing outer banks. Positioning with HU-25 was maintained within 10 minutes through duration of science collection until approx. Very clear air at altitude, with a single cirrus section for about 30 seconds encountered during return of second flight. 4x dropsondes each flight. Flight level winds were generally a crosswind component, creating head/tailwind depending on specific heading/route chosen. Maintained FL280 altitude until ECG/Elizabeth City.

Flight scientist report (Shingler):

Shallow scattered cu with tops reaching 5-6kft along the route until just before the turn point. Coordination was maintained throughout the whole flight.

Dropped 4 sondes
OXANA
TURN
1/2 TURN/OXANA
COAST

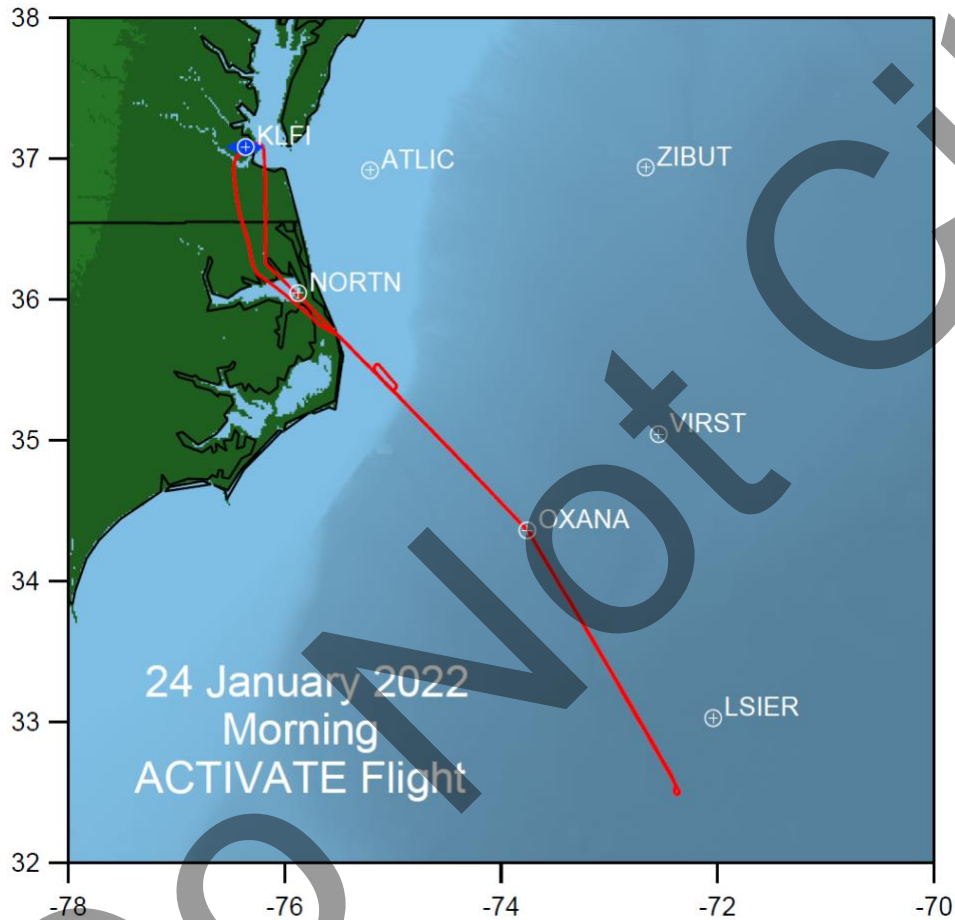
Falcon

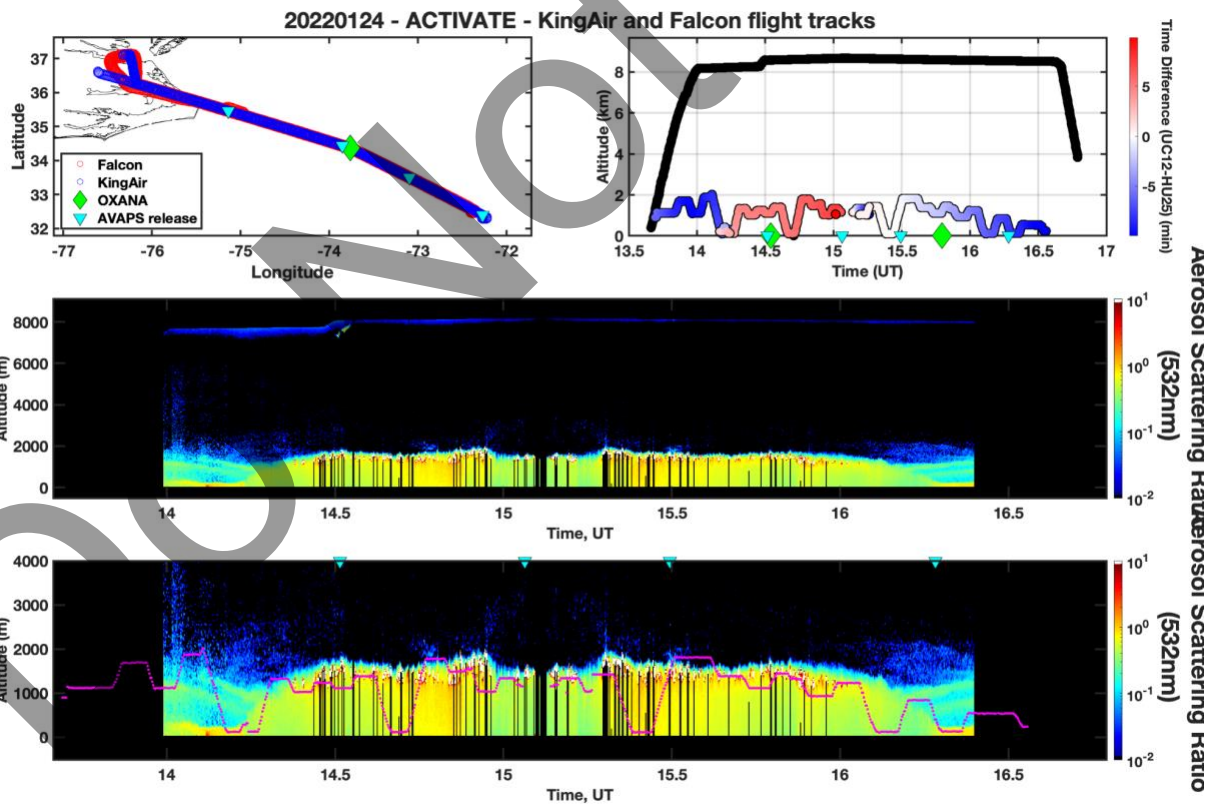
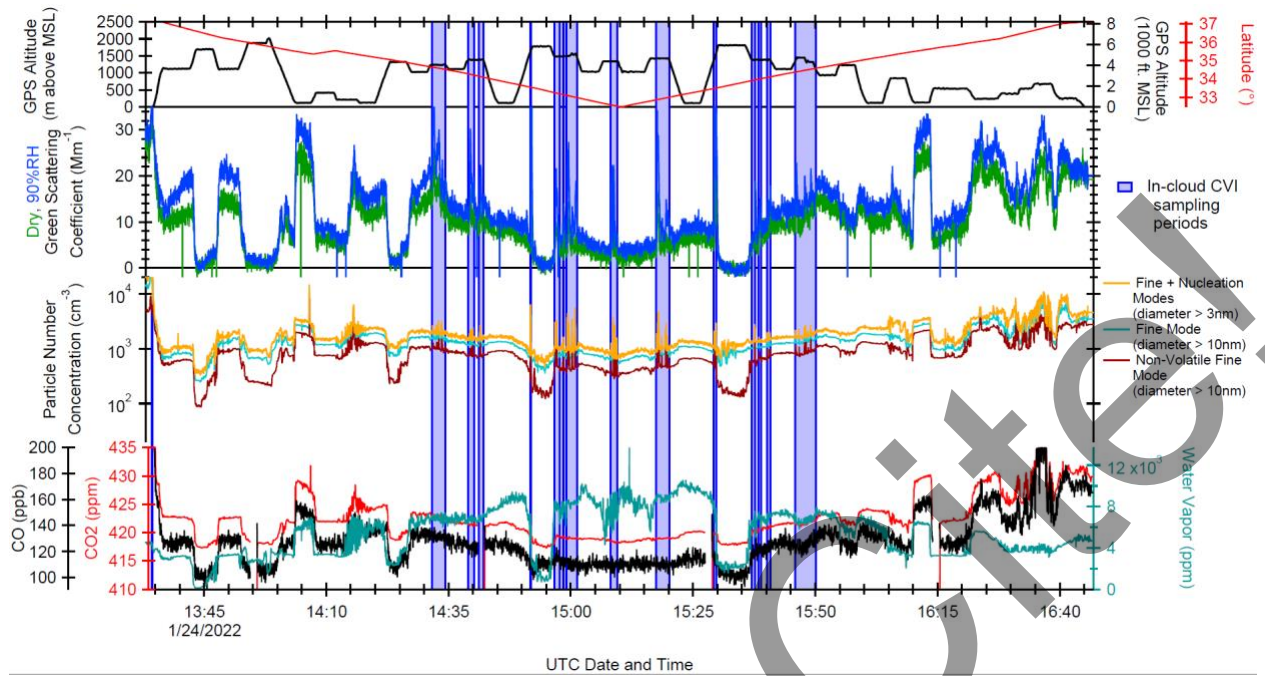
Pilot report (Slover):

Flight amended during brief, then as planned to KLF I ECG OXANA 3221N07214W OXANA ECG KLF I. Statistical survey flight. Clear much of way to OXANA. Clouds generally from 3-5.5K MSL. No precipitation.

Flight scientist report (Crosbie):

Stat survey OXANA – SE. Clear conditions over land, thin clouds developed offshore just before OXANA, clouds had a high base and remained scattered through the flight. There was a clearing in the scattered clouds near the far turnpoint. There was a sharp gradient in the PBL height offshore especially once over warmer water where it rapidly deepened and was topped with small cumulus-like clouds. The clouds remained constrained to a thin layer with no precipitation observed

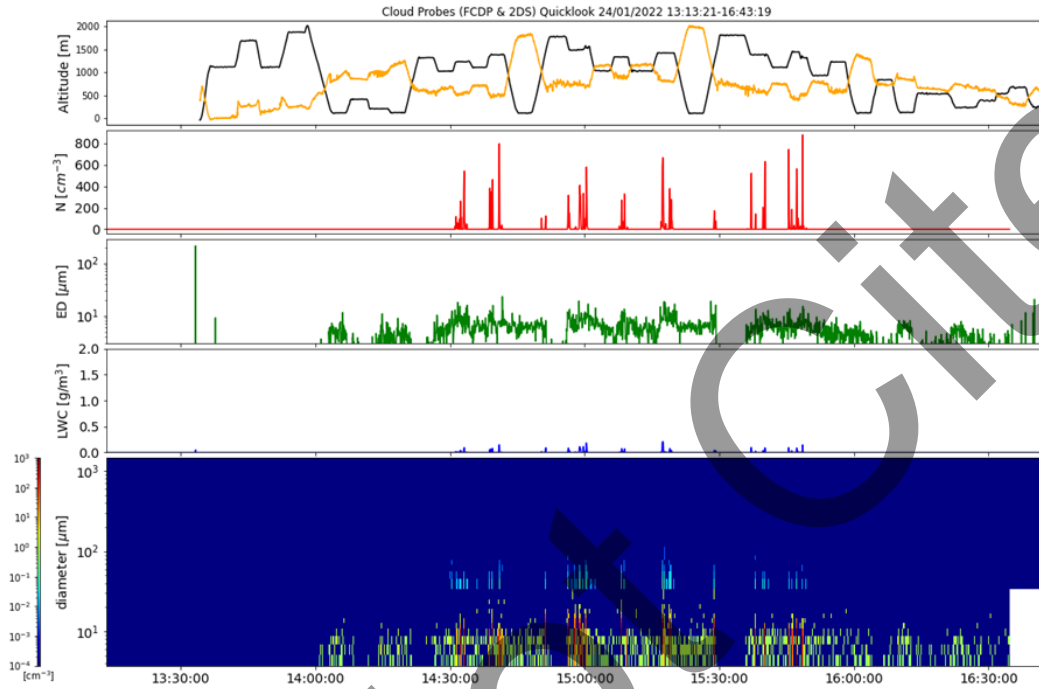




Quicklook ACTIVATE Cloud Probes (FCDP & 2DS) Quicklook

preliminary data, only for quicklook use

Simon Kirschler, Christiane Voigt, Richard Moore, Ewan Crosbie

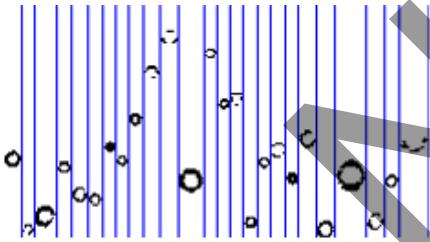
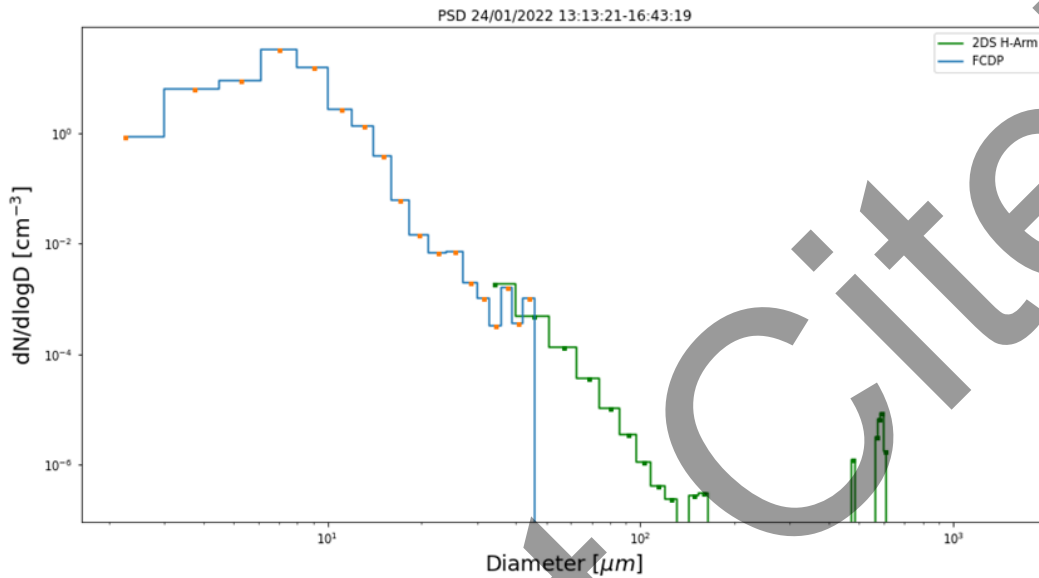


Simon.Kirschler@dlr.de, Christiane.Voigt@dlr.de, richard.h.moore@nasa.gov, ewan.c.crosbie@nasa.gov

Do Not Cite!

PSD ACTIVATE

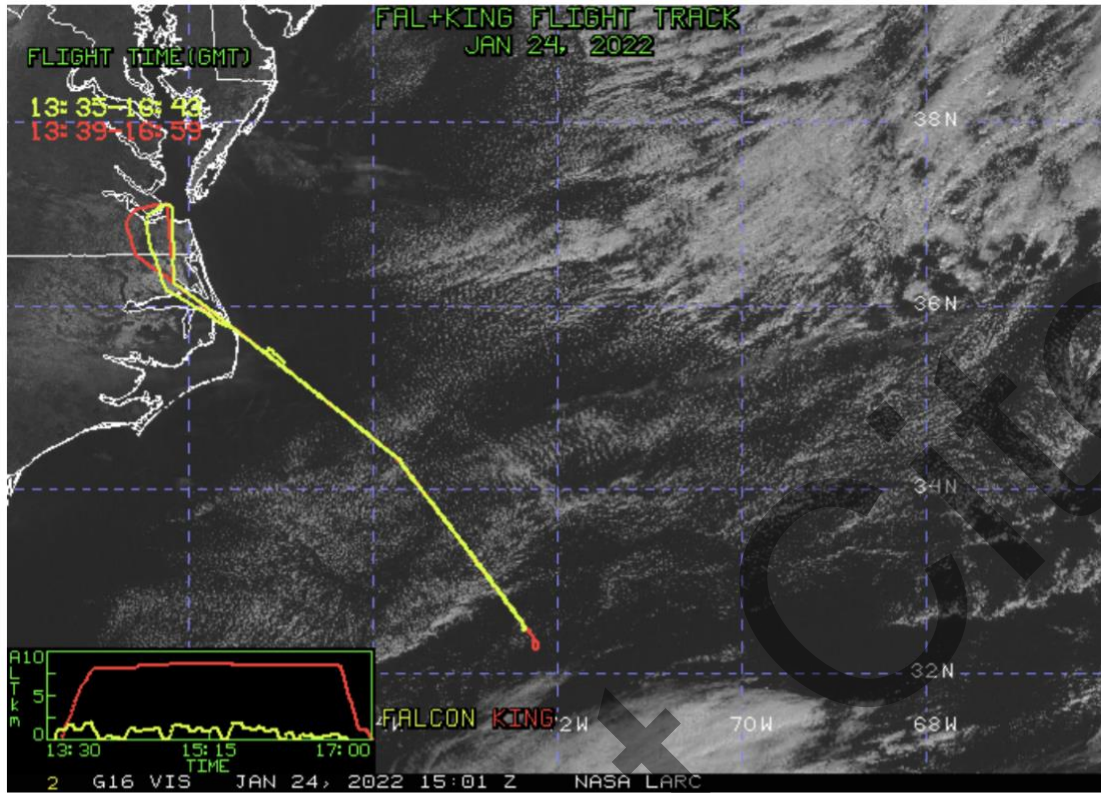
preliminary data, only for quicklook use
Simon Kirschler, Christiane Voigt, Richard Moore, Ewan Crosbie



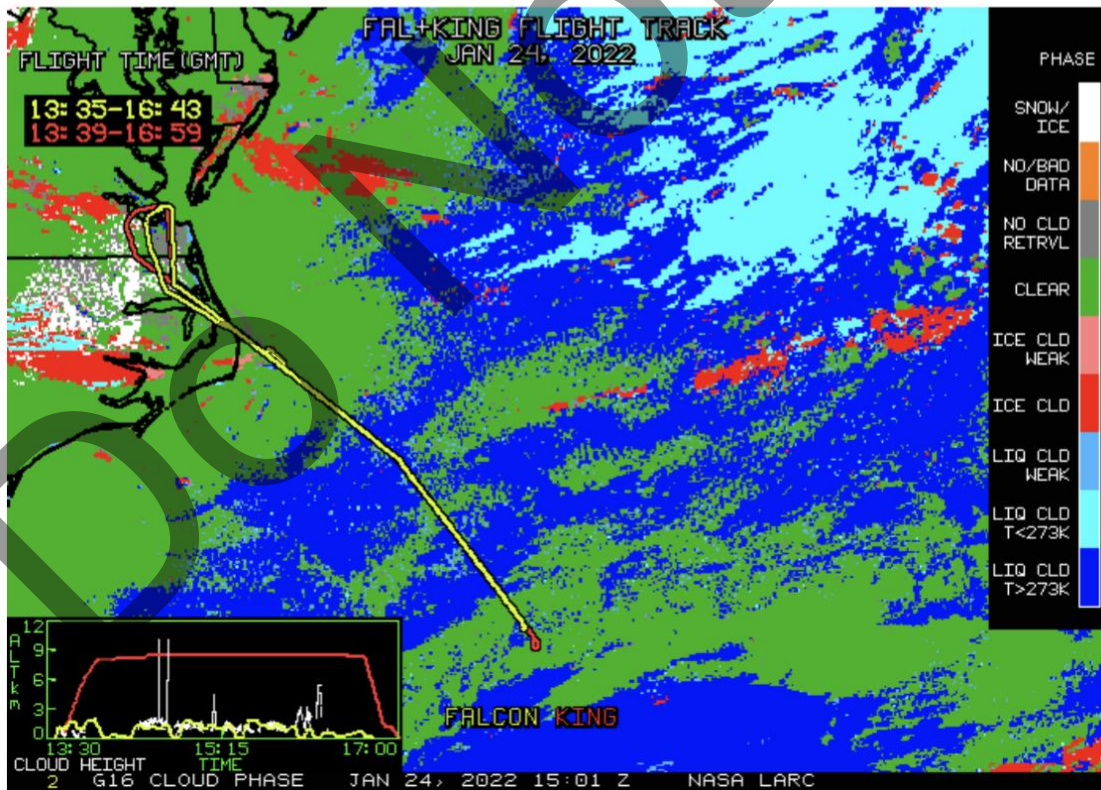
Only pure liquid clouds with no Precip.

NASA-LaRC Clouds Group GOES-16 Quicklook Images for Flight 109, 15:01 UTC Jan 24, 2022

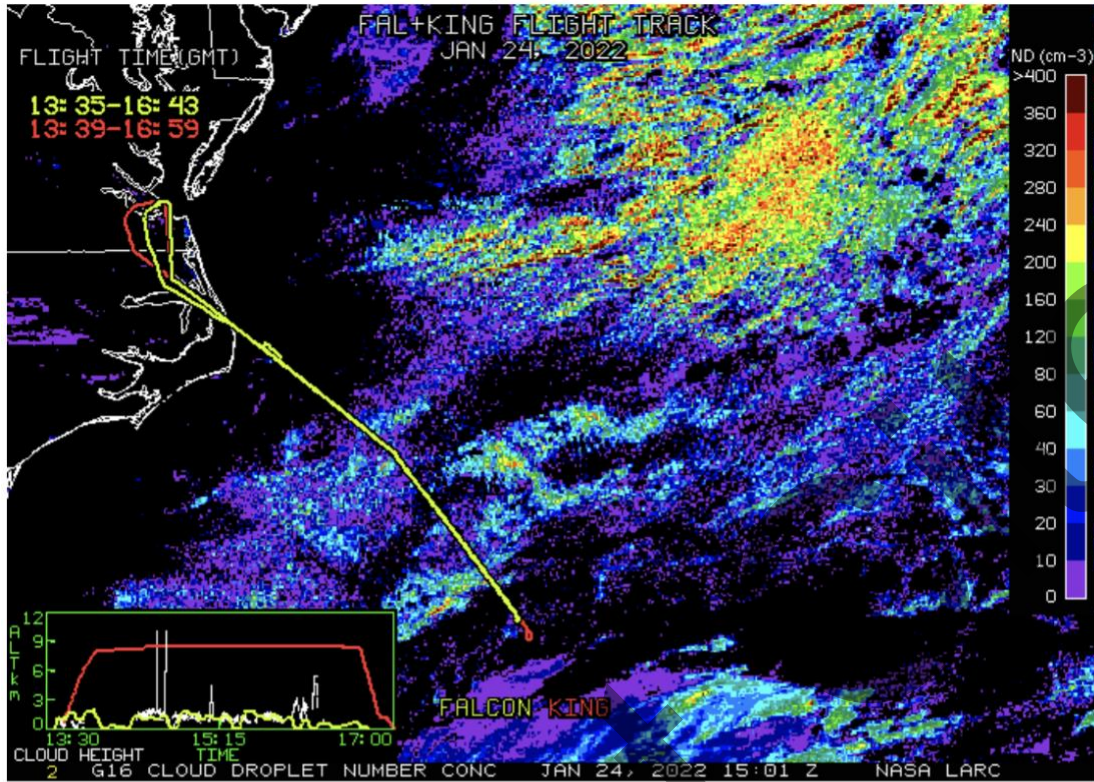
Visible Image



Cloud Phase



Cloud Droplet Number Concentration (cm-3)



Cloud-Top Height (Kft-ASL)

