Flight Scientist Report
Wednesday 02/02/2022 ACTIVATE RF116

Flight Type: Statistical Survey Flight
Flight Route: KLFI-ECG-OXANA-3200N07120W-OXANA-ECG-KLFI
Special Notes: Had some Falcon maintenance work in morning so that is why there was a single flight this day in the afternoon.

King Air

Pilot report (Wusk):
Single Flight day due to late Mx action on HU yesterday and fog at KLFI this morning. Fog cleared by 1:30 scheduled take-off time. Flight planned as ECG OXANA 32N07120W. Nominal Take-off although still dealing with LFI TWR communications challenges. Take-off Rwy 08. Good ATC turn to ECG. Ops normal through flight. Coordinated early turn due to HU fuel needs and KLFI weather changing. Turn point changed to 3230N07146W. Sondes dropped at OXANA, Turn Point, 1/2 way back, and just off shore. Weather at KLFI down to 200' and ~1/2 vis. Both aircraft succeeded in completing RNAV 08 approaches to mins to land. Aircraft coincidence was good for the entire flight.

Flight scientist report (Seaman):

Summary: The second sortie on 2/2/2022 for the B200. Statistical survey joint flight with the HU25 Falcon.

QNC(s): Shane Seaman.

HSRL-2: nominal operation.

RSP: nominal operation.

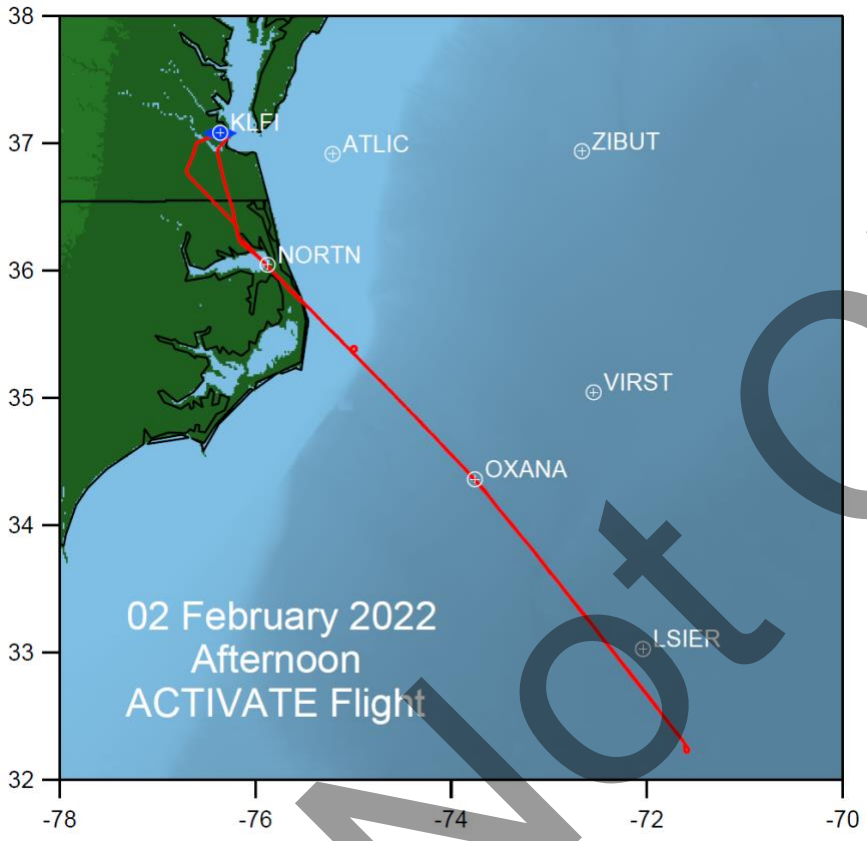
Cameras: nominal operation.

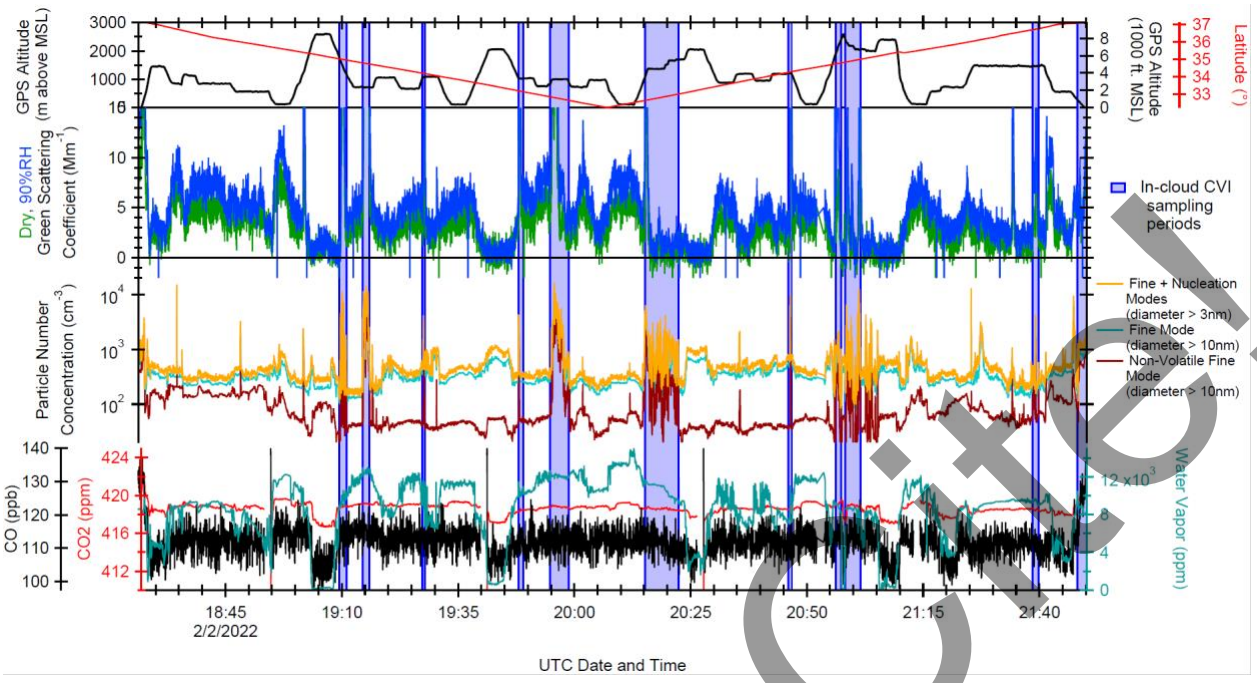
Sondes: A total of 4 sondes were dropped.

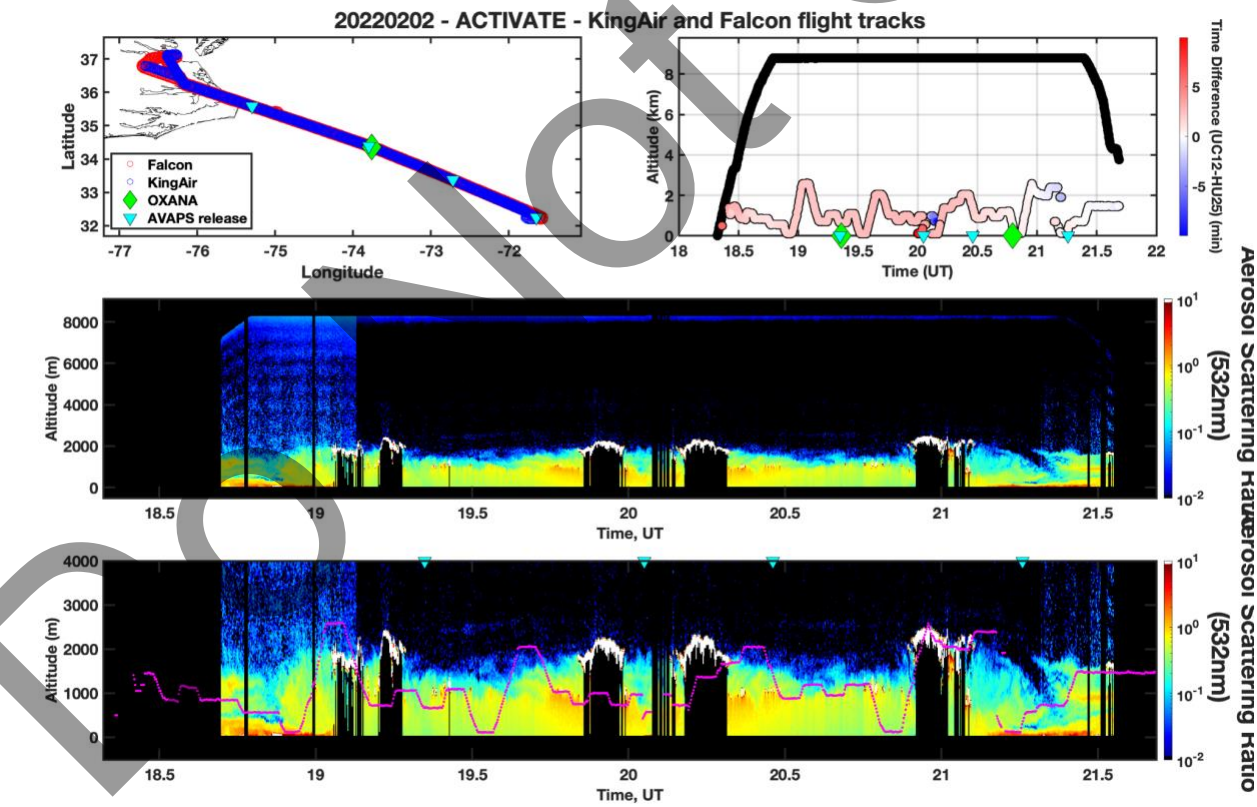
Falcon

Pilot report (Baxley):
Thorson/Baxley, Crosbie/Winstead KLFI-ECG-OXANA-3200N07120W-OXANA-ECG-KLFI (turned short of southern most point by ~20 nmi due to inclement weather at landing required additional fuel reserves). Science flight for HU-25, flown with UC-12, always within 10 minutes of each other and frequently well less than 5 minutes apart. Large sections with clouds, other sections without clouds. One of the science equipment and UPS lost power after landing, no other indications occurred.

Flight scientist report (Crosbie):
Stat survey OXANA-SE. Mix of ShCu, some deeper cells with showers and a possible cold pool crossing near MINALT. Clouds were organized in lines and clusters with the first encountered lying over the GS edge. PBL top was as high as 8000 with a decoupled structure. At the top of deeper cells, there was a pronounced outflow veil near the inversion.

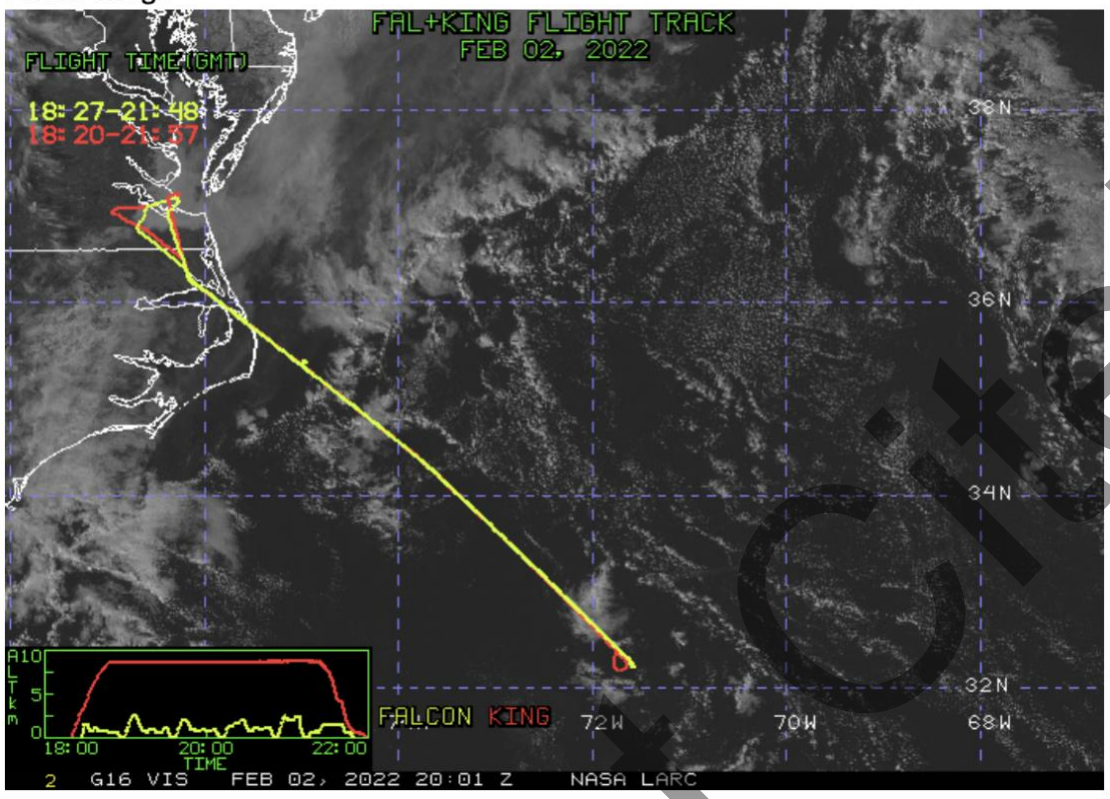



GPS Altitude (m above MSL)
Dry, 90%RH Green Scattering Coefficient (Mm-1)
Particle Number Concentration (cm-3)
CO (ppb)
CO2 (ppm)
GPS Altitude (1000 ft. MSL)
Latitude (°)
Water Vapor (ppm)
In-cloud CVI sampling periods
Fine + Nucleation Modes (diameter > 3nm)
Fine Mode (diameter > 10nm)
Non-Volatile Fine Mode (diameter > 10nm)
18:45
2/2/2022
19:10
19:35
20:00
20:25
20:50
21:15
21:40
UTC Date and Time

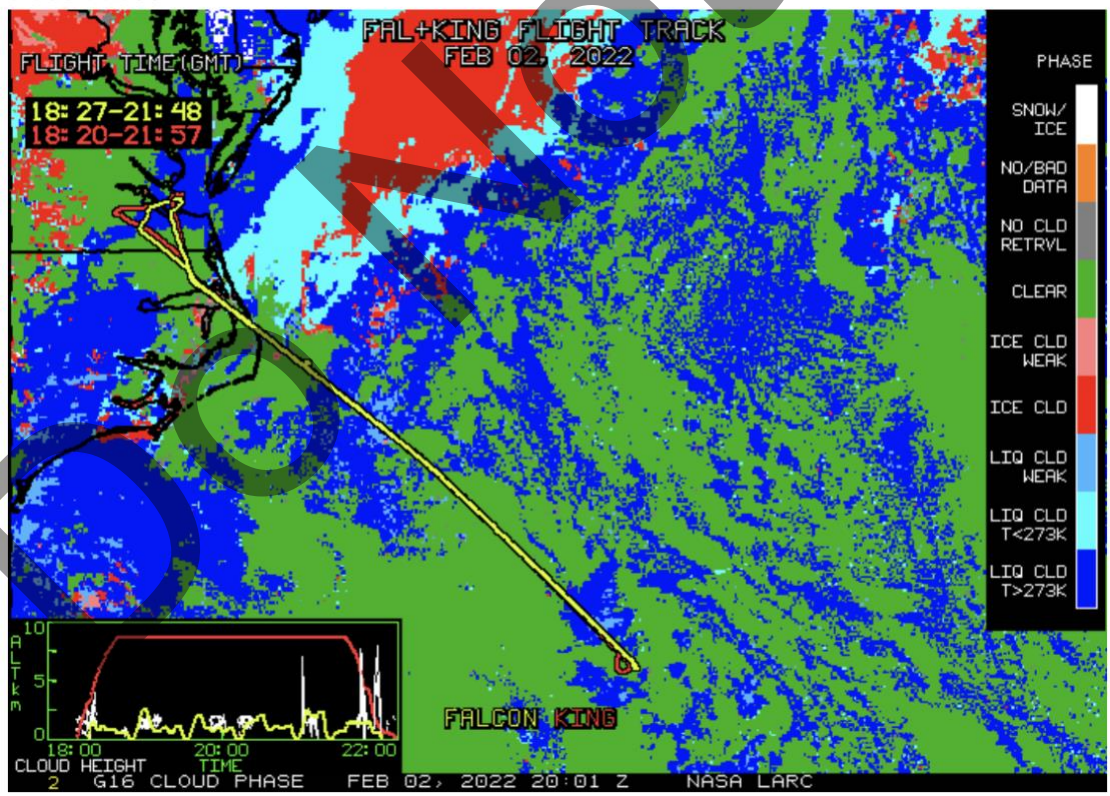

20220202 - ACTIVATE - KingAir and Falcon flight tracks
Latitude
Longitude
Falcon
KingAir
OXANA
AVAPS release
Altitude (km)
Time (UT)
Time Difference (UC12-HU25) (min)
Altitude (m)
Time, UT
Aerosol Scattering Ratio (532nm)

NASA-LaRC Clouds Group GOES-16 Quicklook Images for Flight 116, 20:01 UTC Feb 02, 2022

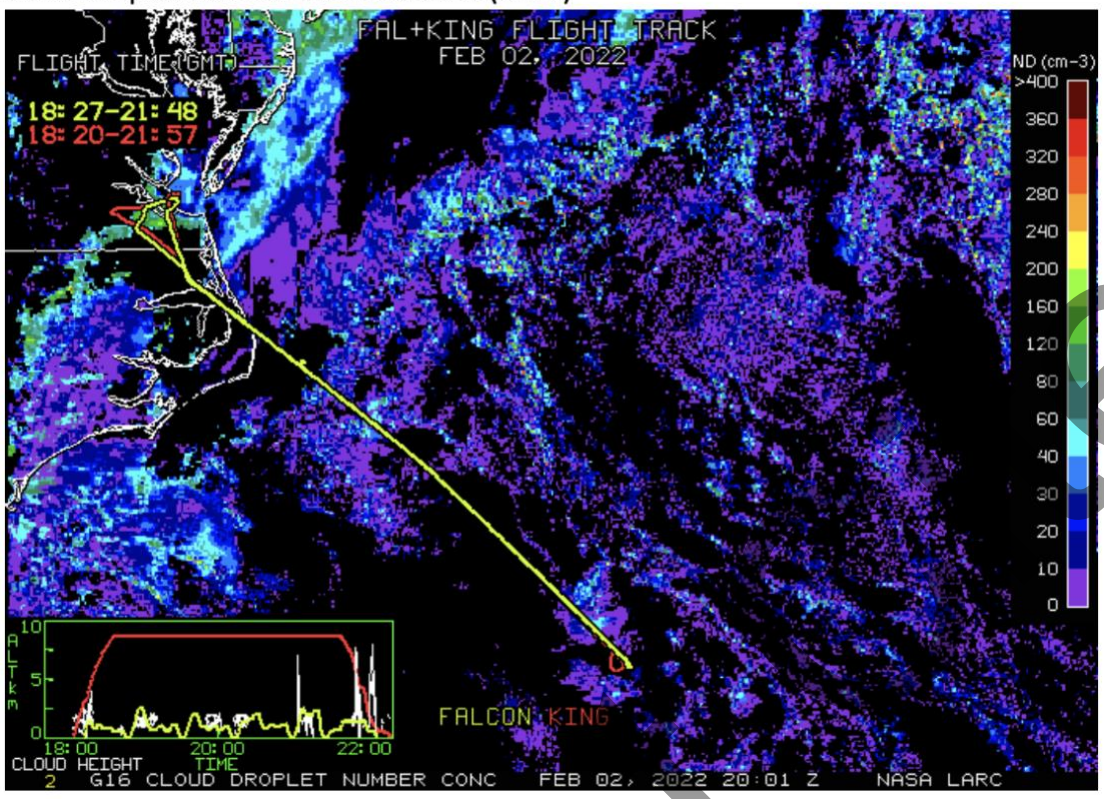
Visible Image



Cloud Phase



Cloud Droplet Number Concentration (cm-3)



Cloud-Top Height (Kft-ASL)