Flight Scientist Report
Friday 03/18/2022 ACTIVATE RF141

Flight Type: Statistical Survey Flight
Flight Route: KLFI ATLIC ZIBUT 3654N06900W ZIBUT ATLIC KLFI
Special Notes: Lots of fog in the morning that prevented an earlier flight (it was planned as a 2 flight day initially). But waiting for fog dissipation made this a one flight day with takeoff closer to 11 am ET.

King Air
Pilot report ():

Flight scientist report (Shingler):

KLFI ATLIC ZIBUT 3654N06900W ZIBUT ATLIC KLFI

Morning flight was DELAYED from 0830 to 1100 due to fog at KLFI.

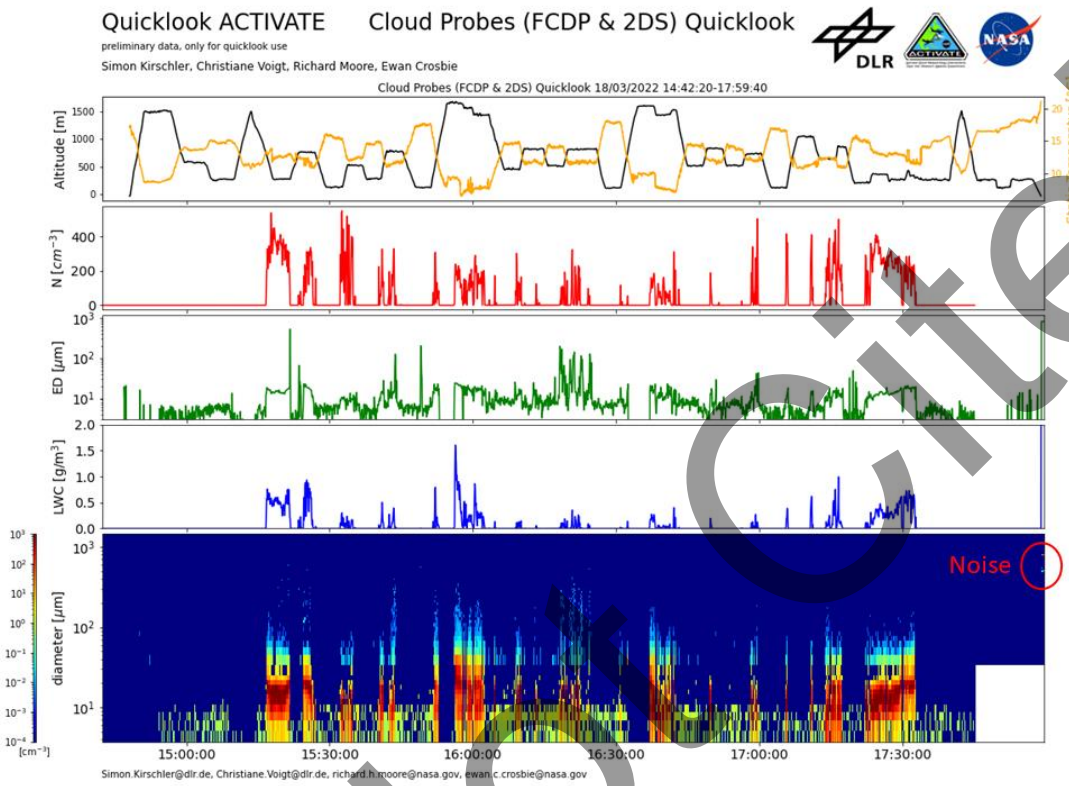
Light scattering near the coast, with a very low fatus layer growing slowly along the route up to about 2kft. Around ZIBUT the clouds became more shallow cu with tops ranging from 3-6kft. Clouds were better classified as shallow cu just inside of ZIBUT with tops around 2.5kft. Shortly thereafter the stratified deck returned with tops around 3.5kft. Some aerosol aloft at 22kft and above on return in.

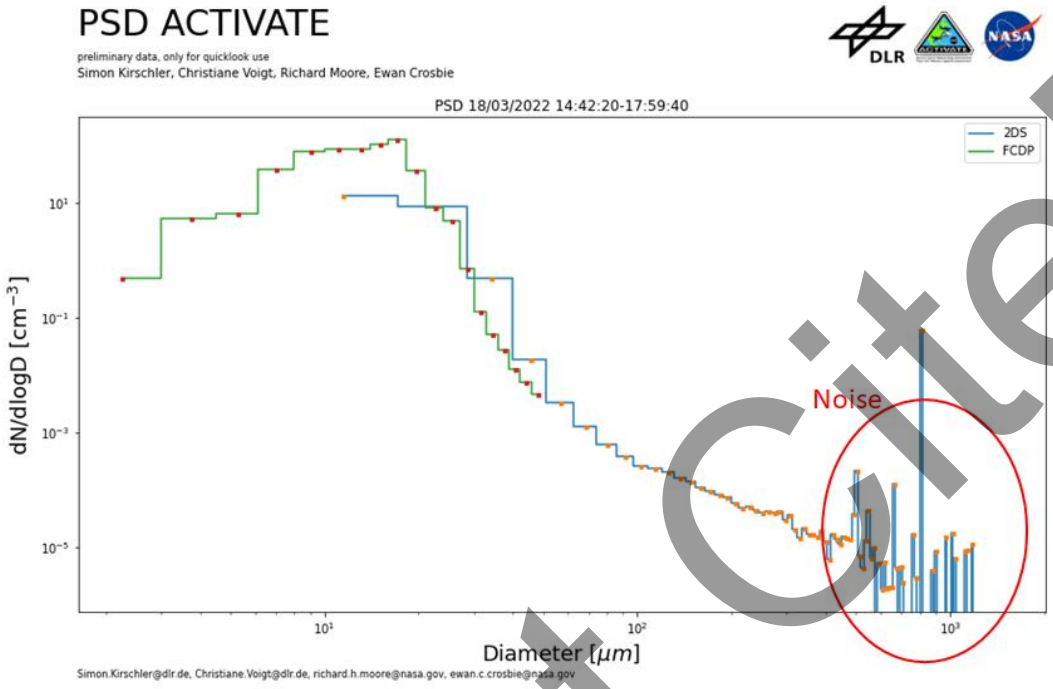
3 SONDES
ZIBUT
TURN (dropped late)
COAST

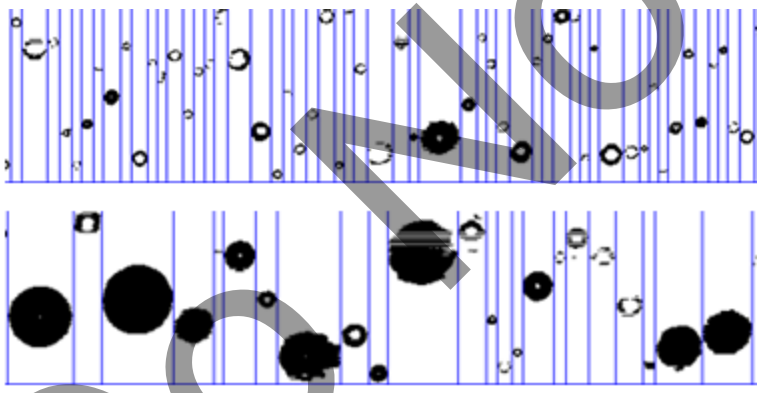
Falcon
Pilot report (Baxley):
HU-25 coordinated flight with UC-12; Baxley/Elder, Crosbie/Winstead KLFI ATLIC ZIBUT 3654N06900W ZIBUT ATLIC KLFI (turned ~20nm early due to running APU to keep the cabin cool). Weather as expected, mission flown as briefed, no anomalies noted. Low clouds west of ZIBUT required HU-25 to remain at/above 1000' during that portion of the flight.

Flight scientist report (Crosbie):
Stat survey ZIBUT-East. Fog and low stratus covered the coastal region extending to the SST gradient associated with the Gulf Stream. Further east, the cloud base and cloud tops rose significantly. In that region, the cloud was more broken and there were patches of more extensive cloud separated by more clear regions. In the low stratus region, clouds were initially too low to reach at 1000ft, but tops rose steadily allowing for in-cloud sampling but no sub-

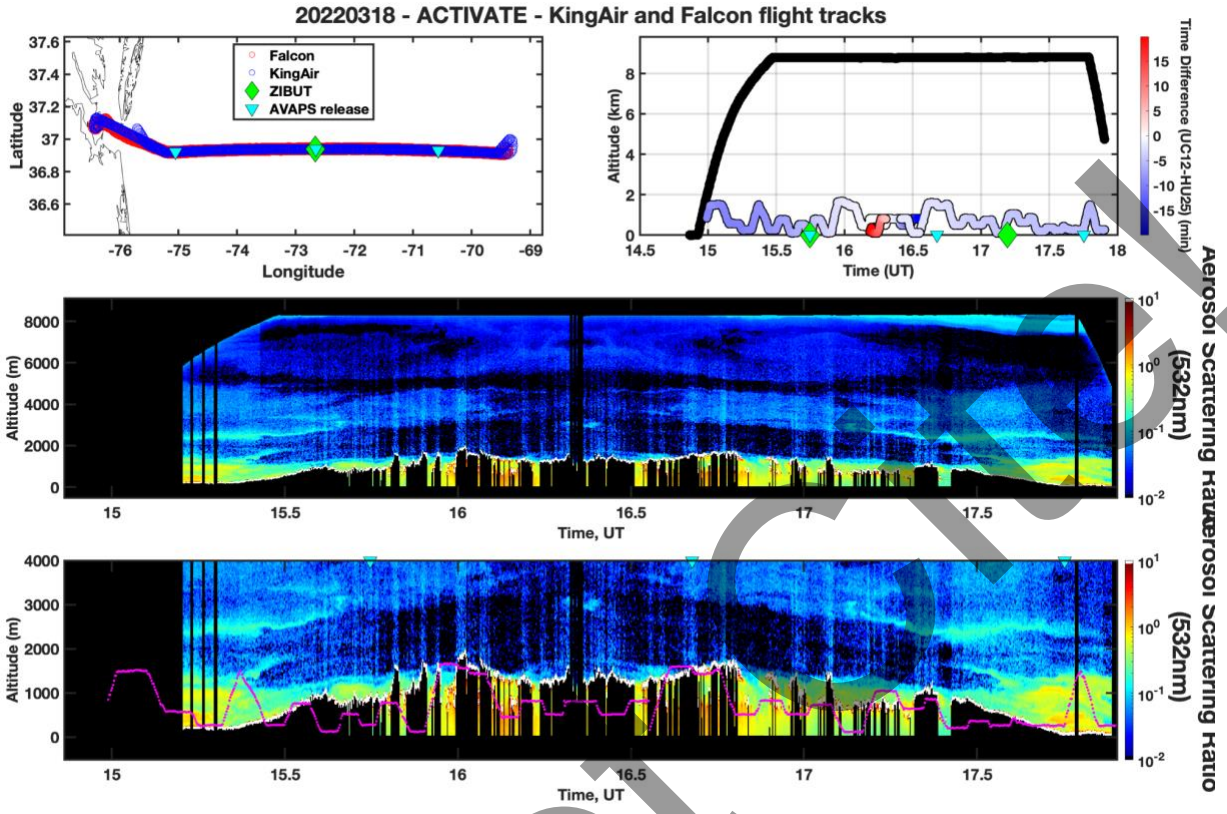
cloud clear air data. Once the bases rose this was possible and there was also more depth to the clouds.


Quicklook ACTIVATE
Cloud Probes (FCDP & 2DS) Quicklook
preliminary data, only for quicklook use
Simon Kirschler, Christiane Voigt, Richard Moore, Ewan Crosbie
Cloud Probes (FCDP & 2DS) Quicklook 18/03/2022 14:42:20-17:59:40
Altitude [m]
Static Temperatur [°C]
N [cm⁻³]
ED [µm]
LWC [g/m³]
diameter [µm]
[cm⁻³]
Noise
15:00:00
15:30:00
16:00:00
16:30:00
17:00:00
17:30:00
Simon.Kirschler@dlr.de, Christiane.Voigt@dlr.de, richard.h.moore@nasa.gov, ewan.c.crosbie@nasa.gov



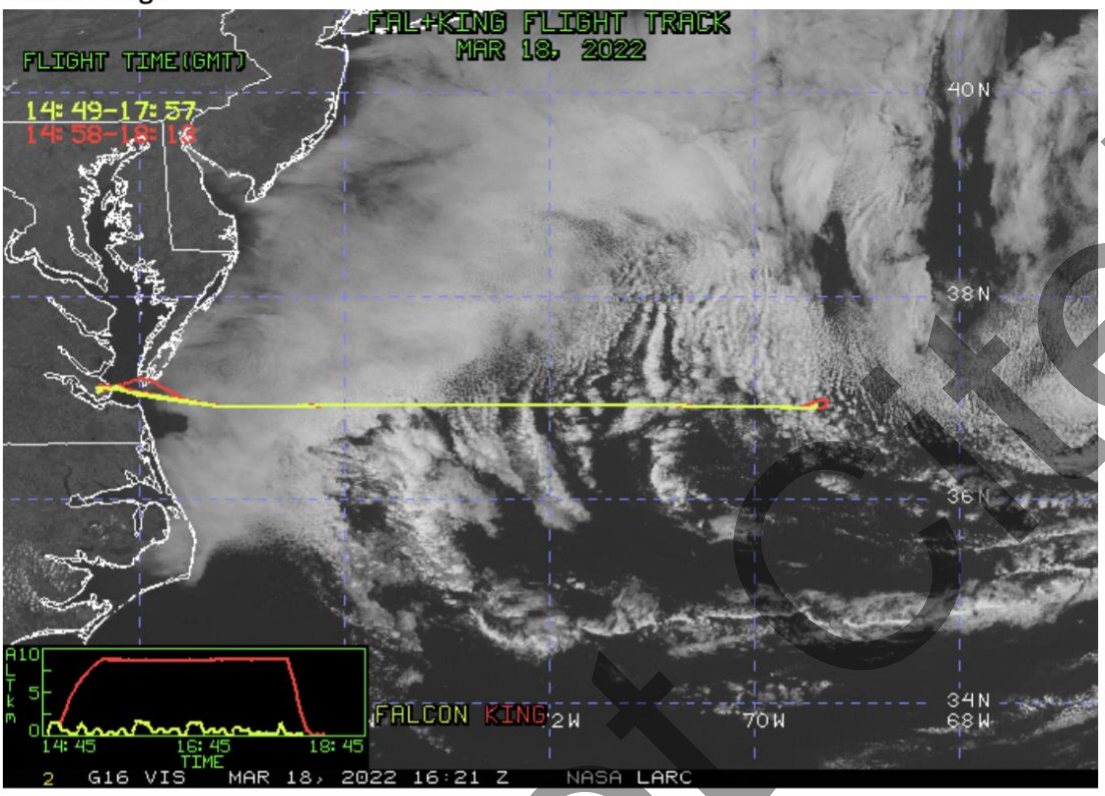


Only pure liquid clouds with Precip.

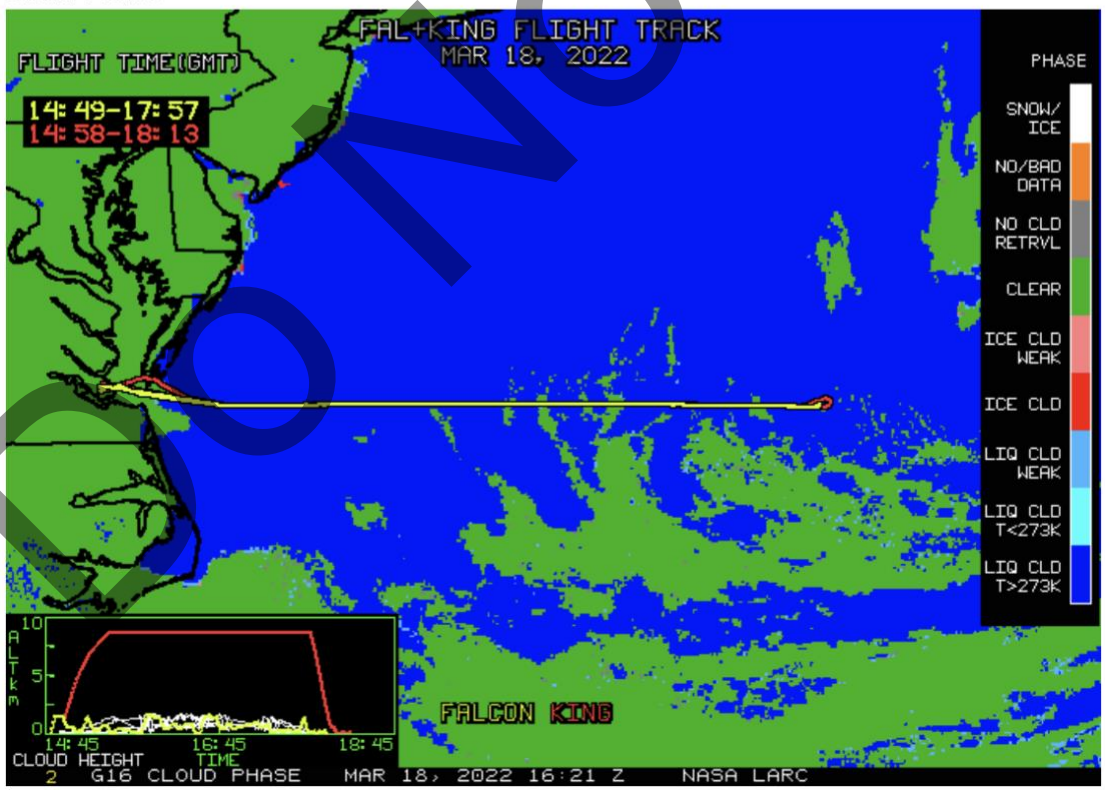

20220318 - ACTIVATE - KingAir and Falcon flight tracks
Falcon
KingAir
ZIBUT
AVAPS release
Latitude
Longitude
Altitude (km)
Time (UT)
Time Difference (UC12-HU25) (min)
Altitude (m)
Time, UT
Aerosol Scattering Ratio (532nm)

NASA-LaRC Clouds Group GOES-16 Quicklook Images for Flight 141, 16:21 UTC Mar 18, 2022

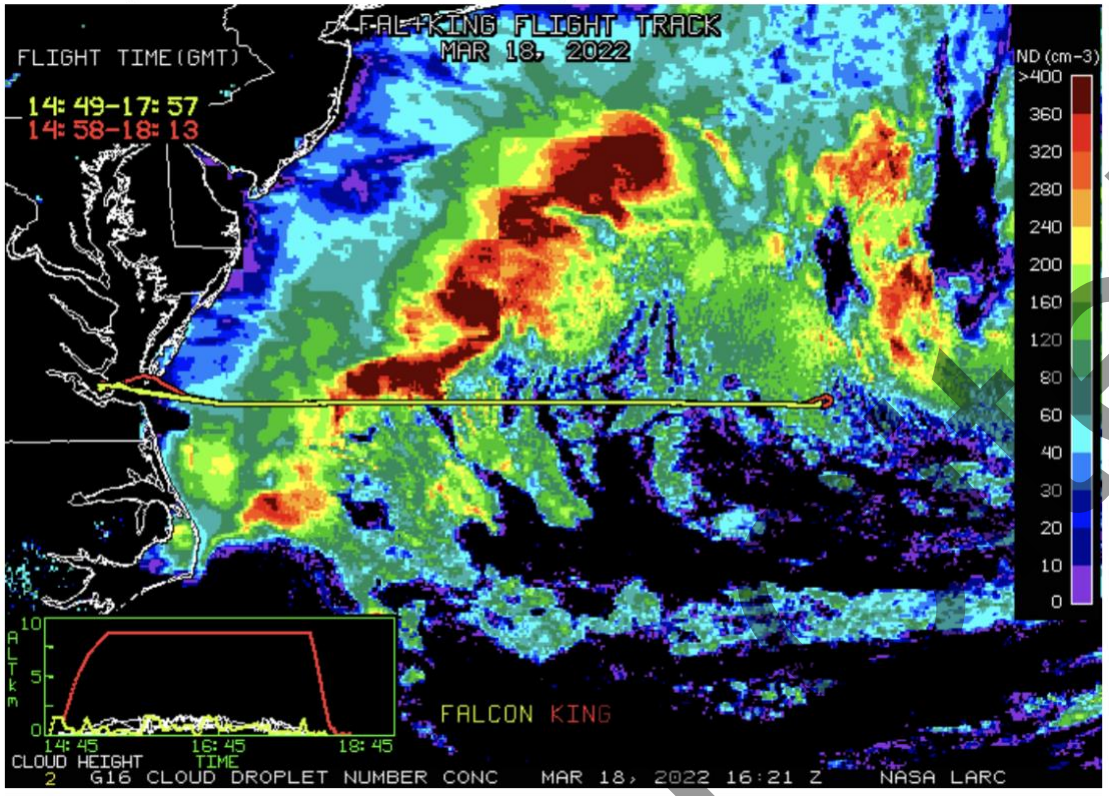
Visible Image



Cloud Phase



Cloud Droplet Number Concentration (cm-3)



Cloud-Top Height (Kft-ASL)