

Flight Scientist Report  
Wednesday 05/18/2022 ACTIVATE RF156

Flight Type: Statistical Survey Flight  
Flight Route: KLF I ATLIC ZIBUT 36.40N/69.63W 35.01N/69.23W 33.32N/68.75W ENAPI TXKF  
Special Notes: Flight to Bermuda

### King Air

Pilot report (Wusk):

Dual aircraft sortie from Langley to Bermuda. 14,000 gross weight flight. Take-off just after the HU25. Good ATC on climb out and transit. Winds at altitude were out of the west at 50kts. Nominal clear conditions en-route. 4 Sondes dropped. ILS approach to TXKF. Crew was Thorson, Wusk, Shingler

Flight scientist report (Shingler):

KLF I ATLIC ZIBUT 36.40N/69.63W 35.01N/69.23W 33.32N/68.75W ENAPI TXKF

Stat survey on the way to Bermuda. Free of cloud out to ZIBUT but a solid aerosol layer centered around 5kft. Dust aloft from aprx 12-16kft. Clouds aloft near the turn onto the CALIPSO line up to aprx 12kft. Clear of cloud on the CALIPSO line with an aerosol layer centered at 5kft. Smoke layer still aloft from 12-16kft. No cirrus noted above along CALIPSO track except for maybe light at the southern extent. Ocean scattering enhanced in both channels, and 445nm fluorescence, on the southern end of the CALIPSO track. Light scattered shallow cu between ENAPI and Bermuda. Fair bit of cirrus at a/c altitude along final leg to Bermuda.

HU25 in nadir camera at 144916 camera time

4 SONDES dropped

ZIBUT

CALIPSO A

CALIPSO C

BERMUDA

### Falcon

Pilot report (Slover):

ACTIVATE statistical survey flight from KLF I ATLIC ZIBUT 362449N0693841W 350025N0691409W 331923N0684531W ENAPI TXKF. Flown as planned. Altitudes mostly below 6K with some clouds enroute, mostly 200 nm from Bermuda. Along the 362449N0693841W 350025N0691409W 331923N0684531W part of the track was almost entirely clear.

Flight scientist report ():

Winstead:

12:29:00 Virus filters A & B on

12:46:00 In aerosol layer

13:15:48 CPC 3776 conc dropped below cold CPC 3772. Will need to check out CPC 3776 on nonflight day tomorrow.

13:28:45 Filters A & B off

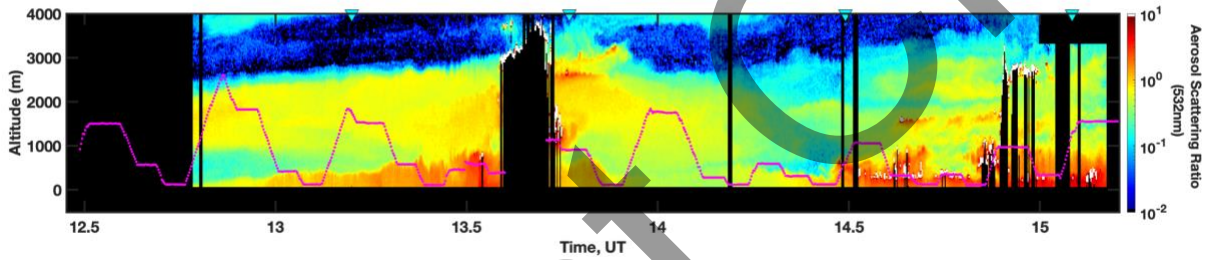
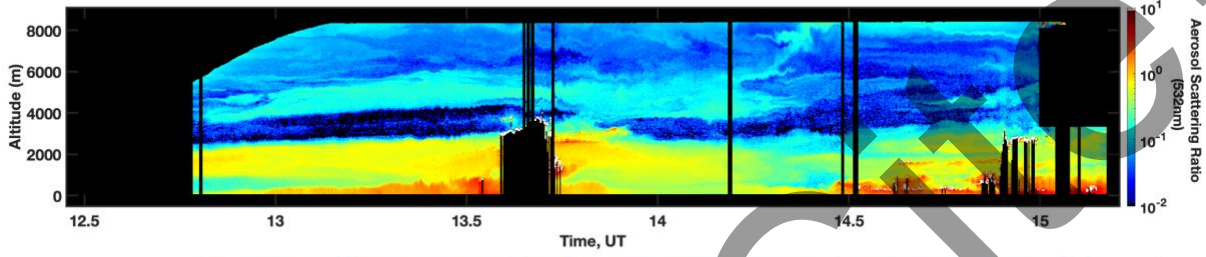
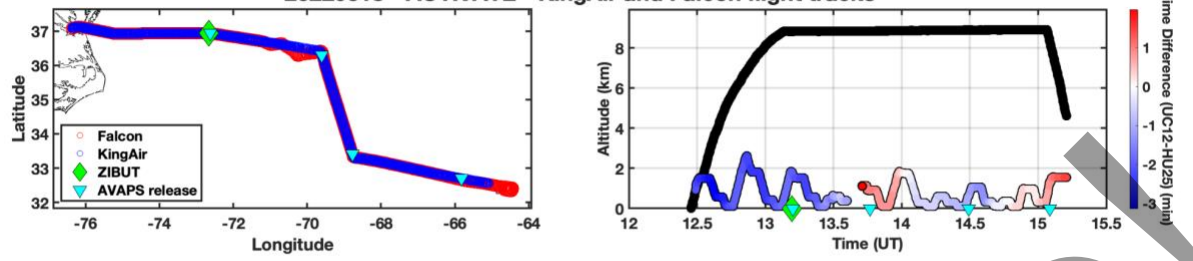
13:47:00 Filter A & B on & sample cascade impactor on

14:28:15 Filters A & B off & cascade impactor off

14:16:45 WCM & humidifier off in preparation for landing in Bermuda

Do Not Cite!

### 20220518 - ACTIVATE - KingAir and Falcon flight tracks



DO NOT

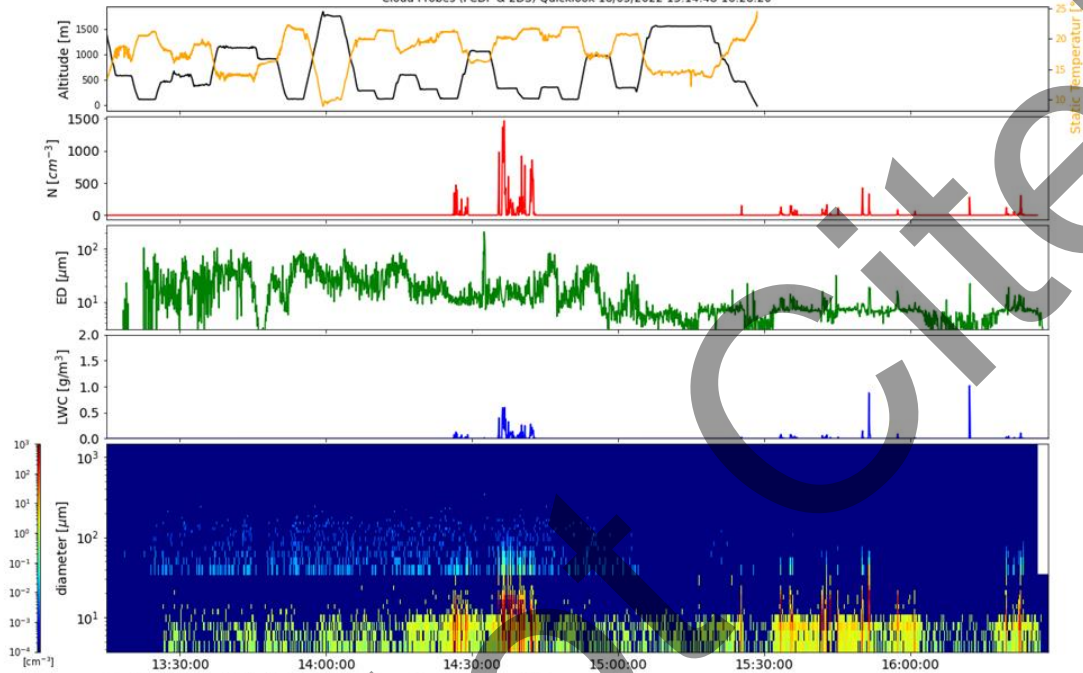
# Quicklook ACTIVATE Cloud Probes (FCDP & 2DS) Quicklook

preliminary data, only for quicklook use

Simon Kirschler, Christiane Voigt, Richard Moore, Ewan Crosbie



Cloud Probes (FCDP & 2DS) Quicklook 18/05/2022 13:14:48-16:28:20



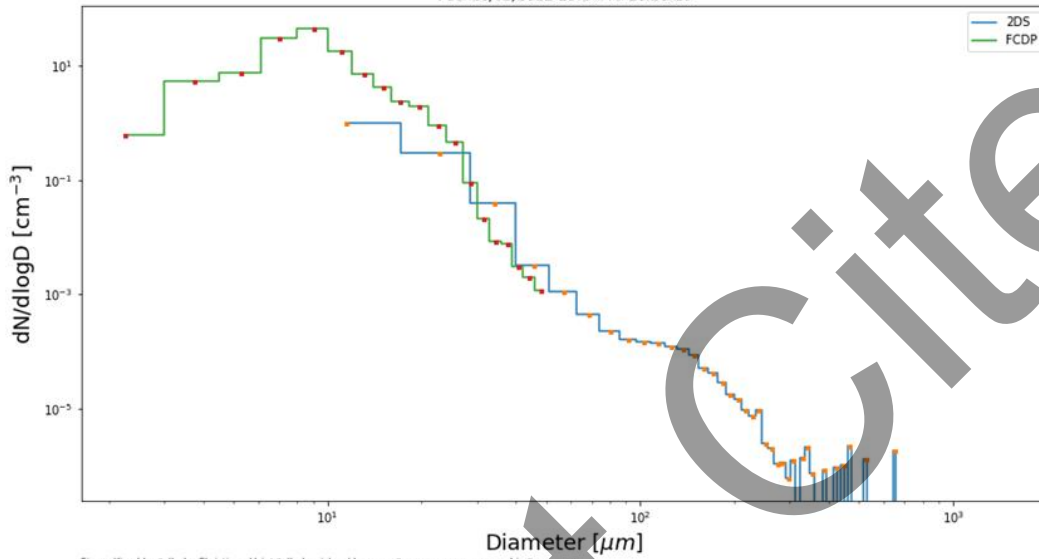
Simon.Kirschler@dlr.de, Christiane.Voigt@dlr.de, richard.h.moore@nasa.gov, ewan.c.crosbie@nasa.gov

# PSD ACTIVATE

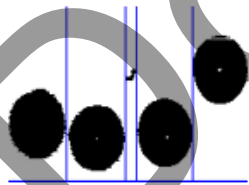
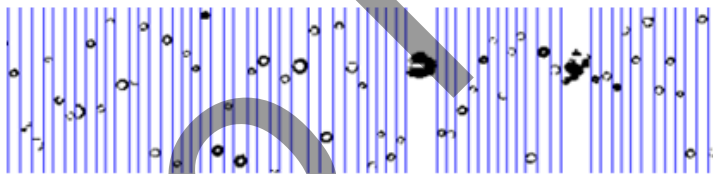
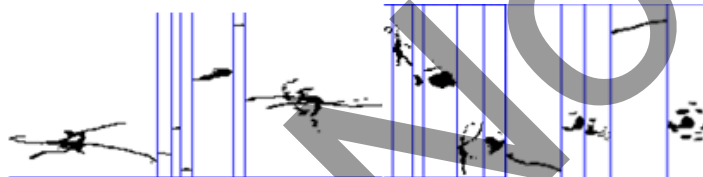
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PSD 18/05/2022 13:14:48-16:28:20

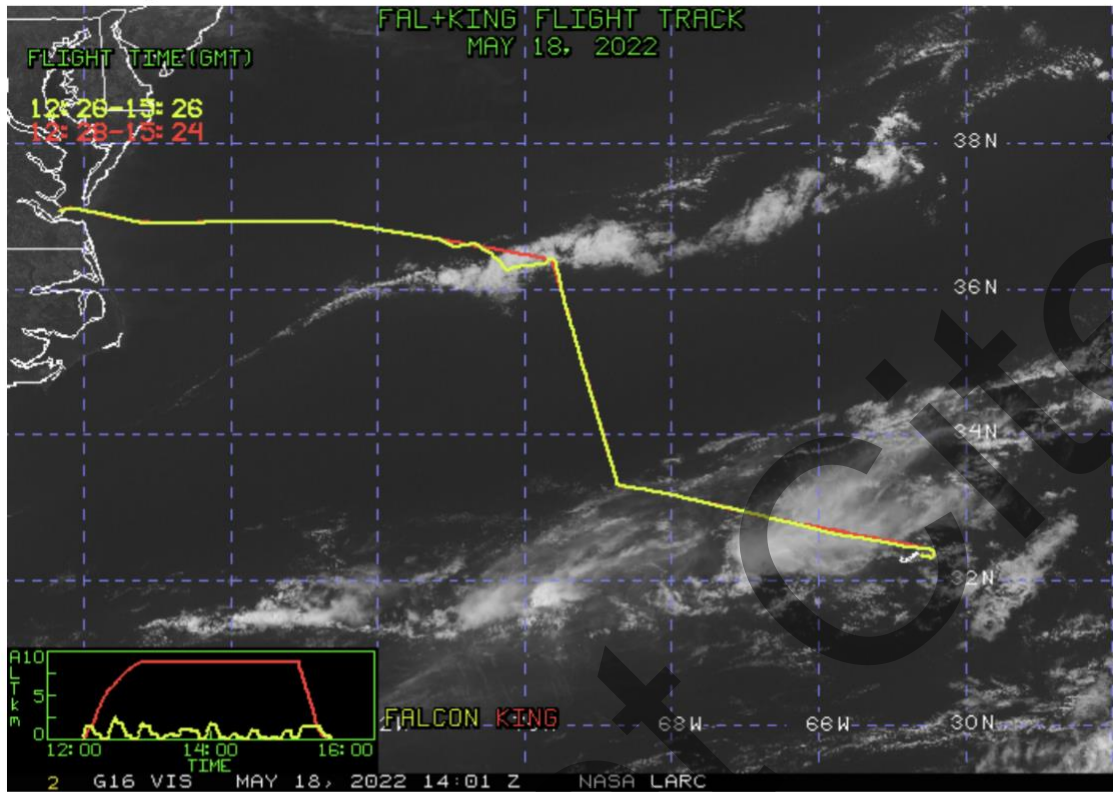


Simon.Kirschler@dlr.de, Christiane.Voigt@dlr.de, richard.h.moore@nasa.gov, ewan.c.crosbie@nasa.gov

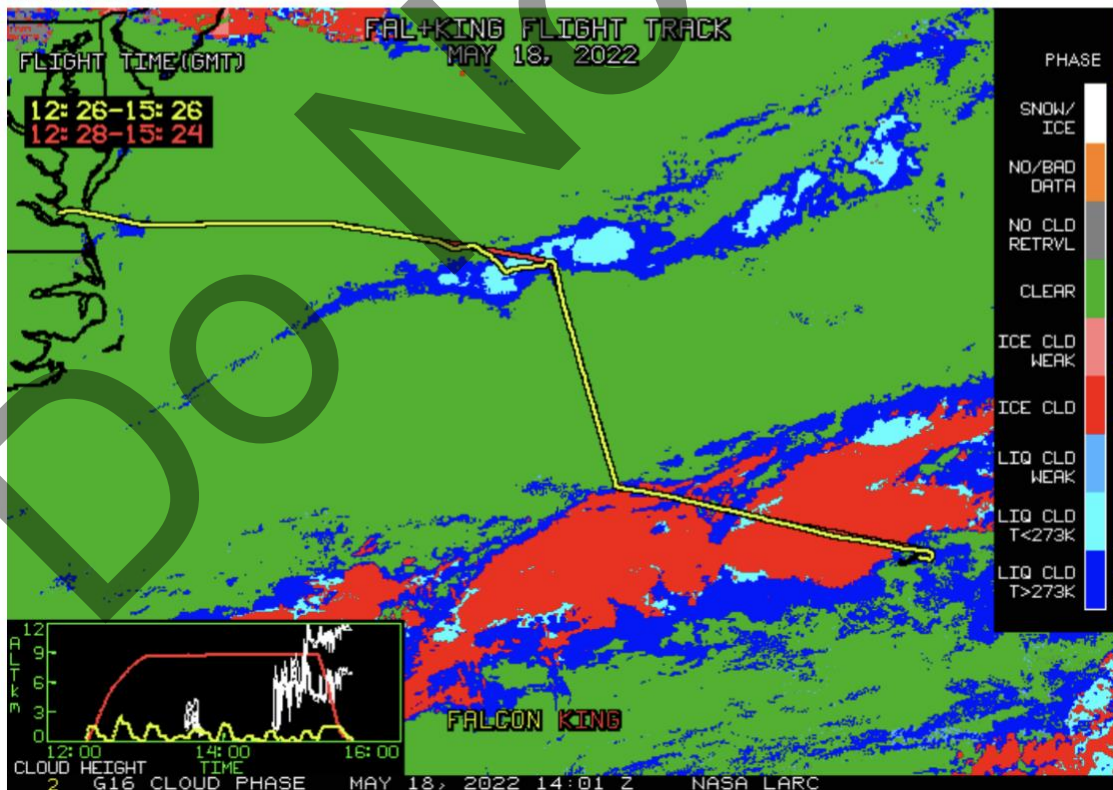


Only liquid clouds with large Bioaerosol  
and one time Precip.

NASA-LaRC Clouds Group GOES-16 Quicklook Images for Flight 156, 14:01 UTC May 18, 2022  
Visible Image

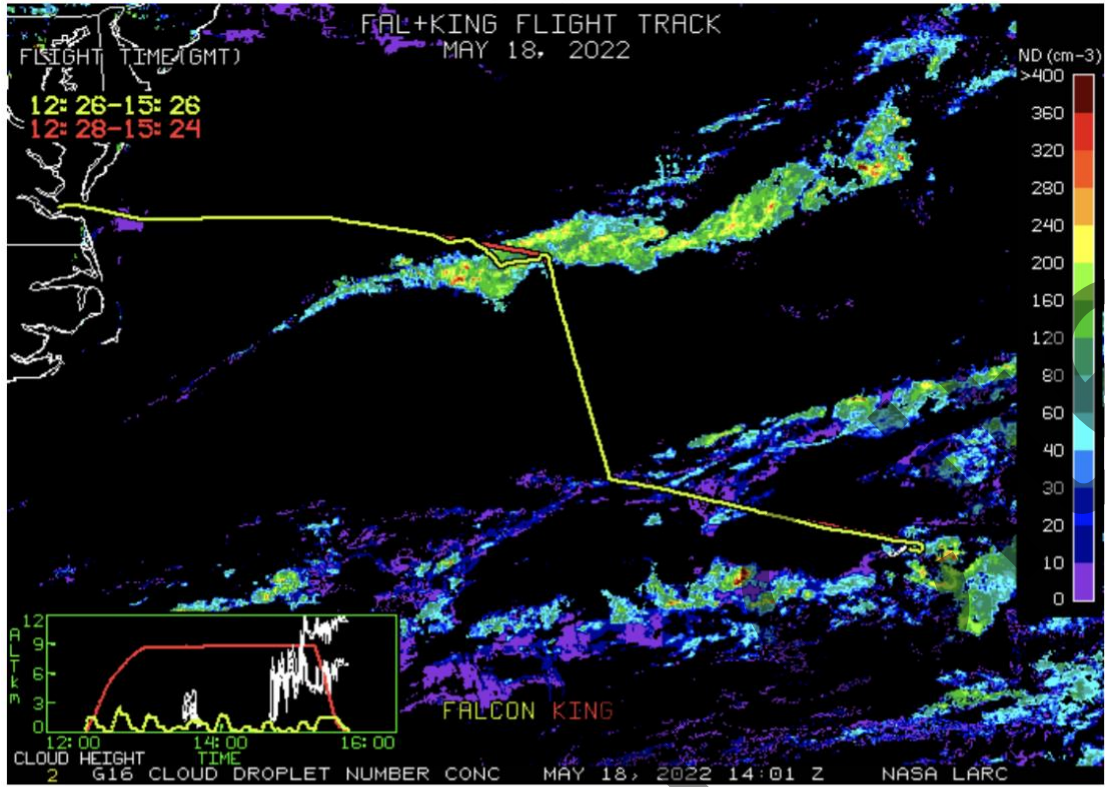


Cloud Phase





### Cloud Droplet Number Concentration (cm-3)



### Cloud-Top Height (Kft-ASL)

