



Interagency Aviation Information Bulletin



No. IA IB 19-04

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Subject: NASA FIREX-AQ Missions

Area of Concern: Air Tactical Operations - July 23- September 30, 2019

Distribution: All Aviation Activities

Discussion: NASA and NOAA will be conducting airborne research on the chemistry and physics of wildfire smoke between 23 July and 30 September 2019 as part of the Fire Influence on Regional to Global Environments Experiment - Air Quality (FIREX-AQ) campaign. Aircraft involved in the study include NASA's instrumented DC-8-72 and two NOAA Twin Otters. The objective of this research is to fly through fire plumes to collect samples of wildfire smoke at various ranges and altitudes from the fire.

Aircraft:

NASA DC-8-72:

Flight ID (Call sign): NASA817

Registration: N817NA

Equipment: 3 x VHF-AM radios, TDFM-136 VHF-FM, AFF, ADS-B out,
Automatic flight following.

Maximum airspeed while inside the bounds of a TFR ~200 KIAS



NOAA Twin Otters:

Flight ID (Call sign): NOAA46 "MET Otter" (5 hr. max duration)

Registration: N46NA

Equipment: VHF-AM, Automatic Flight Following

Flight ID (Call sign): NOAA48 "CHEM Otter" (~2.5 hr. max duration)

Registration: N48NA

Equipment: VHF-AM, Automatic Flight Following



Flight Schedule

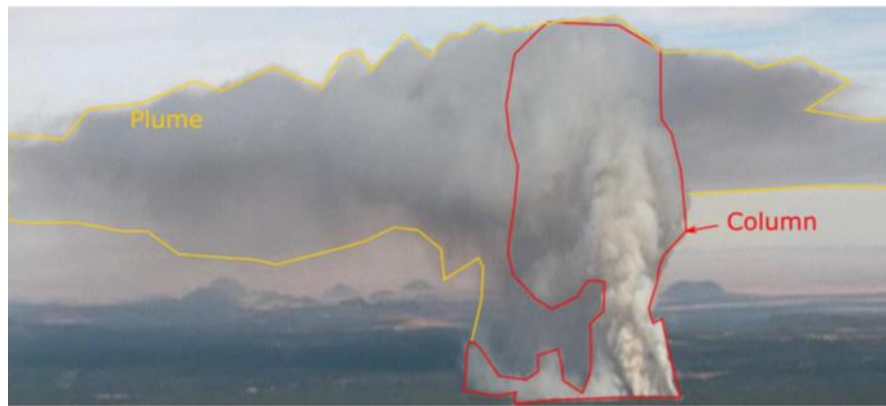
The NASA DC-8 is planning on 3-5 missions per week, with a sortie duration of 5-8 hours.

The Twin Otters may fly twice a day, with variable sortie duration.

Flight Procedures:

All flight requests into a fire area are subject to approval from the Incident Aerial Supervisor who has the responsibility for managing aerial firefighting resources within the [Fire Traffic Area](#) (FTA) or Temporary Flight Restriction (TFR). All NASA and NOAA aircraft will establish communication using the FTA procedures to state intentions and request instructions for entry into the TFR/ FTA. NASA and NOAA aircraft are not sequenced with fire aircraft.

- DC-8 Aircraft
 - The preferred altitude for the NASA DC-8 is at 2000 feet above the ceiling of the TFR. However, requests to fly near or through the plume of the fire or at altitudes as low 1,000 AGL within a Temporary Flight Restriction (TFR) are possible by this aircraft.
 - The Aerial Supervisor should route the DC-8 outside of the FTA to re-enter at the assigned altitude level for the lower pass.
- Twin Otter flights will remain clear of the TFR, but must follow standard clearance and communication protocols before entering the Fire Traffic Area (FTA)



The DC-8 will remain well clear of the convection column, but may sample the plume. This is subject to terrain clearance, VFR inflight visibility and cloud distances requirements. The Twin Otters will not be flying in the plume of the fire, but will be near the fire. The Twin Otters will remain clear of the TFR.

Coordination Procedures: The NASA FIREX-AQ flight coordinator, Stan Kubota, will communicate and coordinate with the National Airspace Coordinator (NAC) regarding NASA FIREX-AQ flights.

- The NASA FIREX-AQ flight coordinator will not directly communicate with local dispatch centers or GACCs unless authorized by the NAC.
- The NAC will advise the NASA FIREX-AQ flight coordinator of which fires may be likely candidates for flights.
- The NAC will initially contact the GACC where the fire is located and provide a briefing on the NASA and NOAA flights.
- The NAC will contact the local dispatch center directly and provide a briefing on NASA and NOAA flights, flight procedures, communications, etc.
- The NAC must confirm the fire air-to-air or air tactics frequencies are utilized by the Aerial Supervisor, to ensure the NASA/NOAA aircraft can communicate with the Aerial Supervisor.

- The NASA and NOAA aircraft will be visible on AFF as “NASA 817”, “NOAA 46” and “NOAA 48” however; GACC’s and Dispatch Centers WILL NOT provide active flight tracking/following of the NASA and NOAA aircraft.

Limitations: aerial supervisors, Incident Commanders and the NAC may halt FIREX-AQ access to a TFR and the FTA if they believe the FIREX-AQ flights will negatively affect fire operations. The first priority is to ensure the safety of all personnel on an incident. "

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