

**Jetstream-31 (J31) Flight Report for INTEX-ITCT
Flight 22 - 7 August 2004**

Terra MISR local mode in coordination with DC-8 and Ron Brown, & its sonde

Cabin Crew: Eilers, Selkirk, Livingston, Pommier, Schmid.

Overview

This was the 16th J31 flight out of Pease. Goals focused on measuring AOD and fluxes Terra MISR local mode in coordination with DC-8 and Ron Brown, & its sonde. All goals were met.

J31 and its instruments performed well.

Flight Path, Timing, and Measurements

Flight path is shown in Figure 1 below. Take off at 1322 UT.

Overflew broken cloud fields en route to Ron Brown. Adjusted orientation on planned L-pattern and spiral point based on Ci situation. Radioed to DC-8 so they can adjust accordingly.

After the new orientation was established enough time for L's at 5000 ft and 200 ft with Ron Brown at apex.

500 nm AOD ~0.1 at Ron Brown (very clear).

1521-1546 concentric spiral 200 ft -23 kft (with DC-8 descending), cloud-free.

Ron Brown sonde released 15:35 UT ~ time of MISR local mode.

RTB with level leg above open water and broken cloud fields.

Touchdown at 1629 UT.

Instrument status

AATS-14; OK

POS: OK.

Nav/Met: OK

SSFR:OK

J-31 Flight 22, 7 August

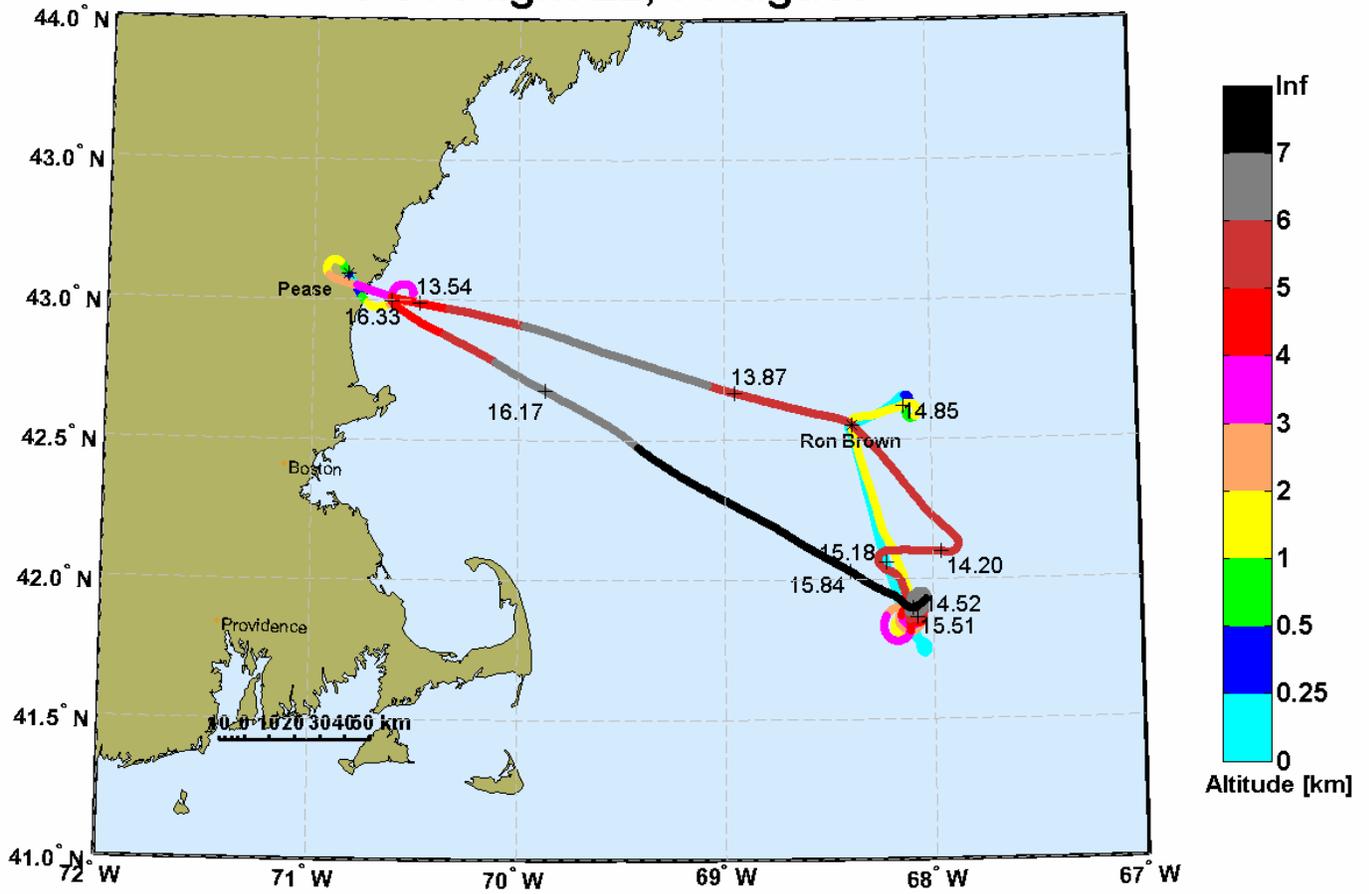


Figure 1. Flight track of J-31, Flight 22, August 7, 2004. Concentric spiral with DC-8 is at southernmost location of track.

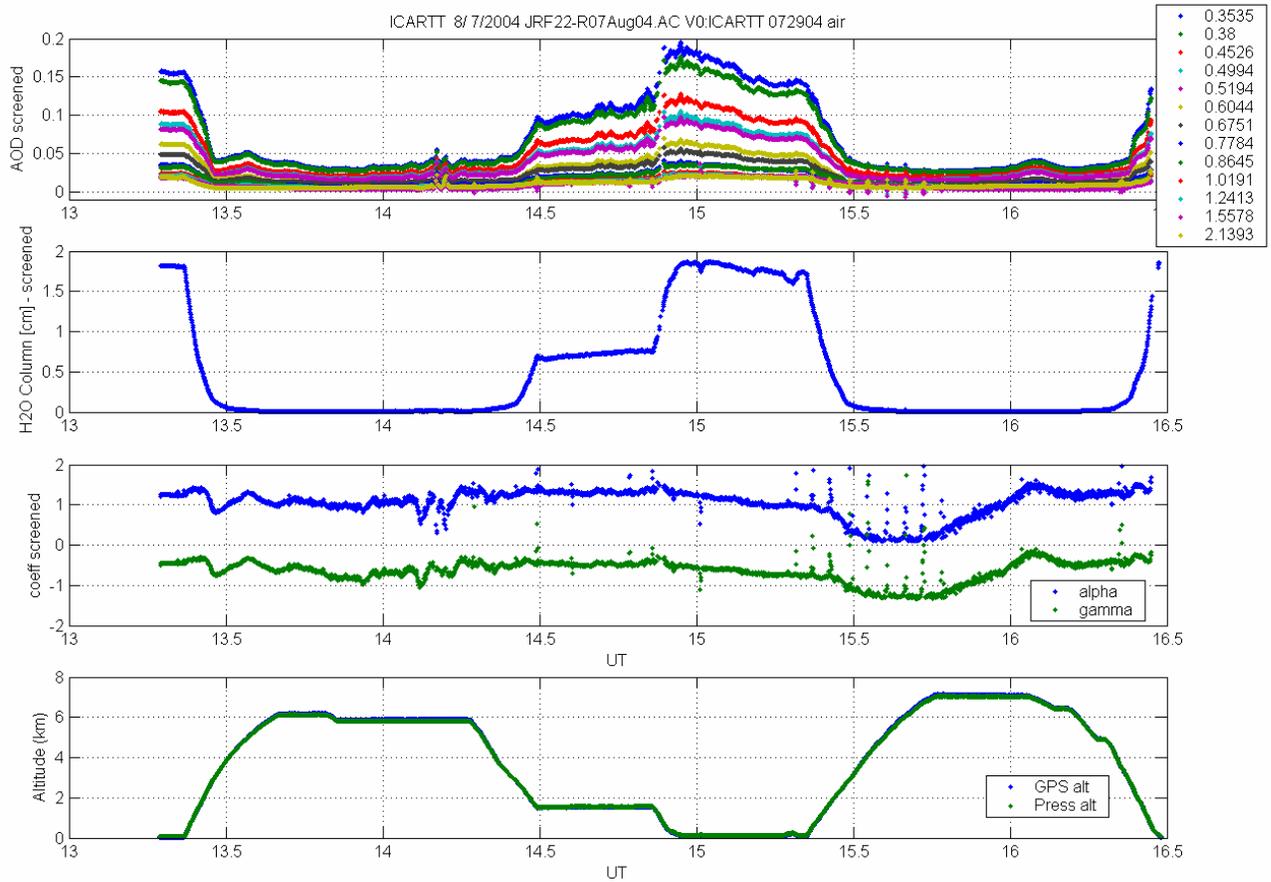


Figure 2. Time series of AATS-14 retrieved AOD, water vapor column, spectral coefficients and flight altitude for J-31 Flight 22, August 7, 2004.

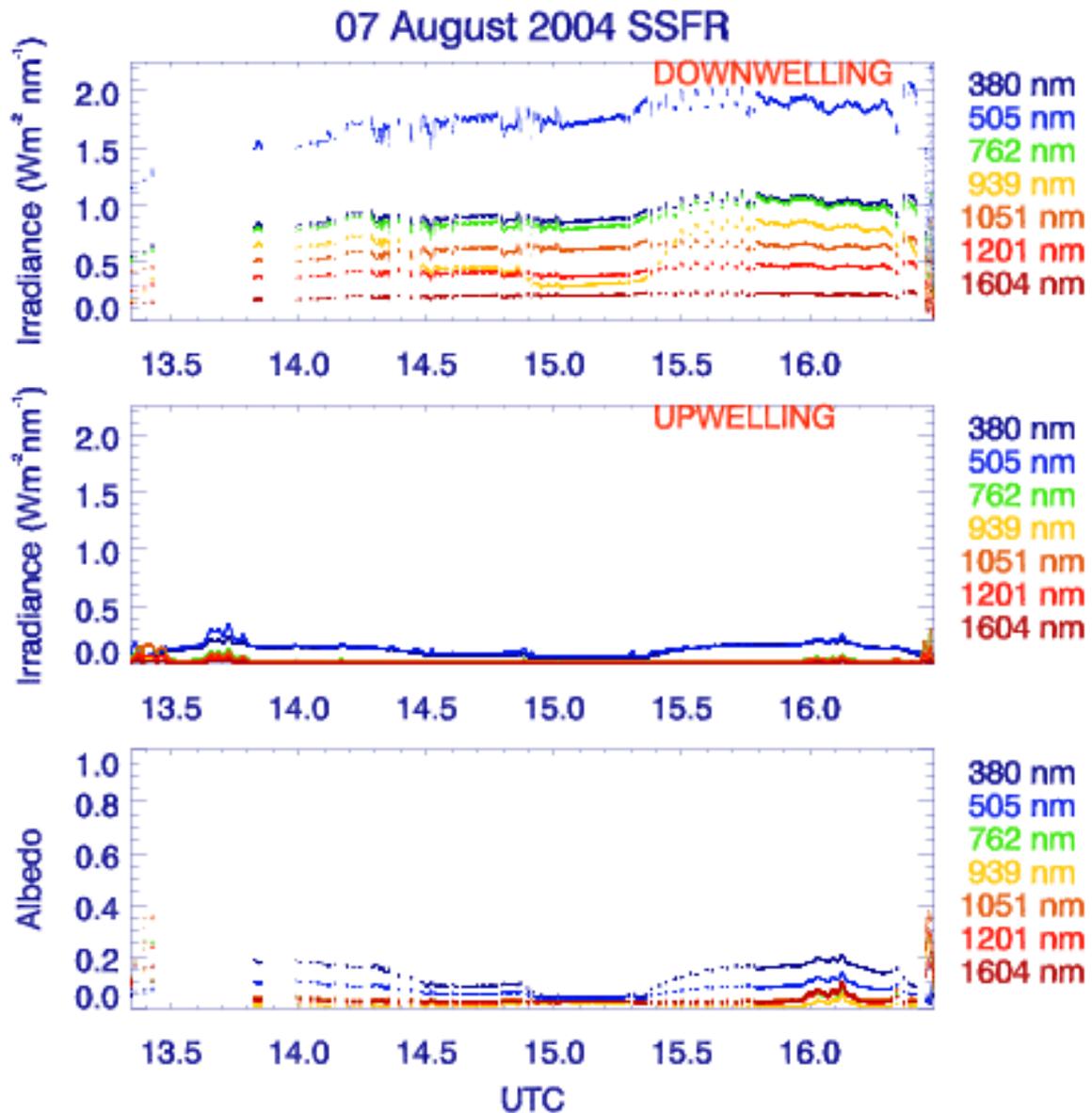


Figure 3. Time series of SSFR-measured downwelling and upwelling irradiance and albedo for J31 Flight 22, Aug 7, 2004. The downwelling (and albedo) has been filtered to remove data when the aircraft attitude deviated by more than 3% from level. The fact that J31 was in a spiral for some of the flight produces the speckled pattern in the downwelling and albedo time series.