

ACAM Flight Report – California Deployment

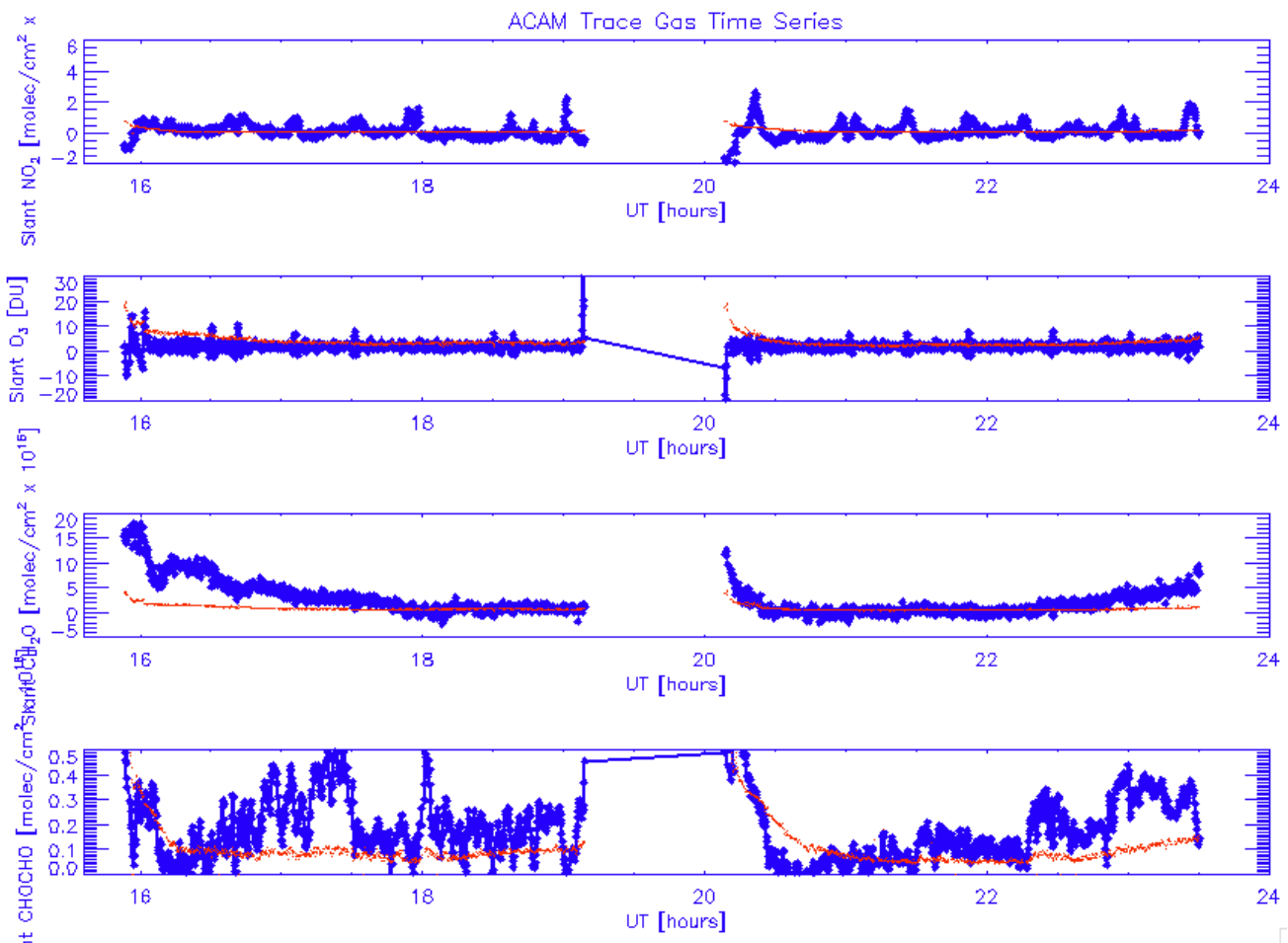
Date of operation: 01/21/2013

Operations and instrument status

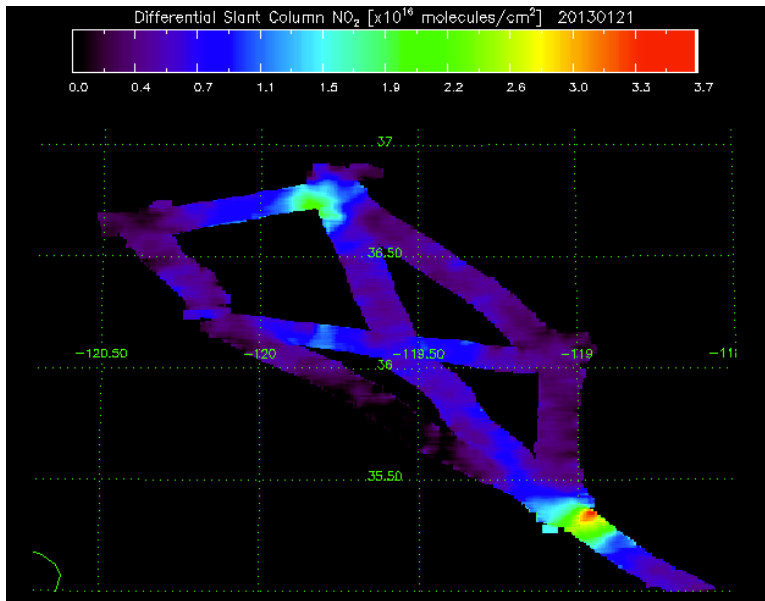
The instrument experienced a scan mirror failure on the first flight, all data was collected at one scan mirror angle close to nadir. Instrument operations were normal for the second flight. It is not clear at this point whether the failure was temperature or power system related (or a combination of both). The instrument operated normally during post-flight ground tests. Adjustments were made to the pre-flight warm-up procedure and to the scan pattern to reduce stress on the system for flight day 5 (Jan. 22nd).

Science Summary

Trace gas measurements are shown below as differential slant column values relative to a minimum solar zenith angle reference. Observations today were amazingly similar to yesterday with the same NO_2 hot spots seen in the Bakersfield and Fresno area in the afternoon at $\sim 1/2$ the levels seen on previous days due to the decrease in traffic on the weekend. All other locations show relatively low levels. Some early enhancements in CH_2O are also observed very similar to the data from the 20th.

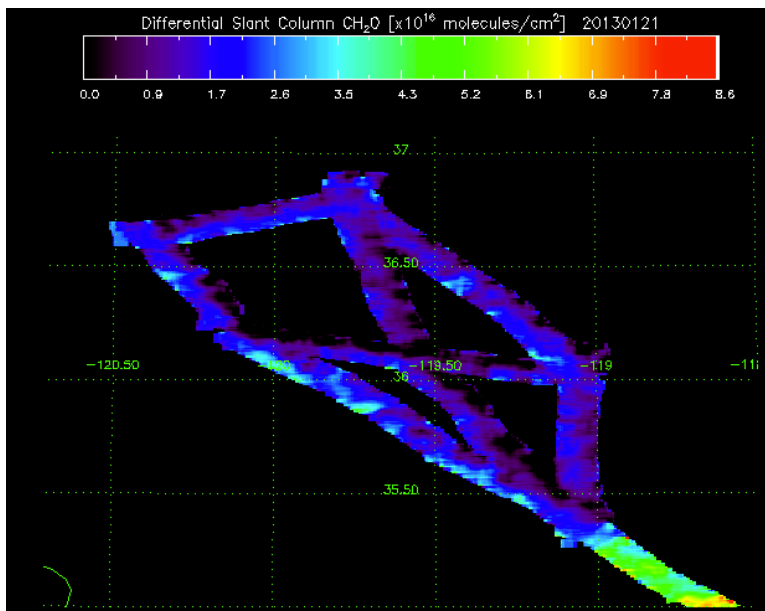


Time series plots of NO_2 , O_3 , CH_2 and CH_2O_2

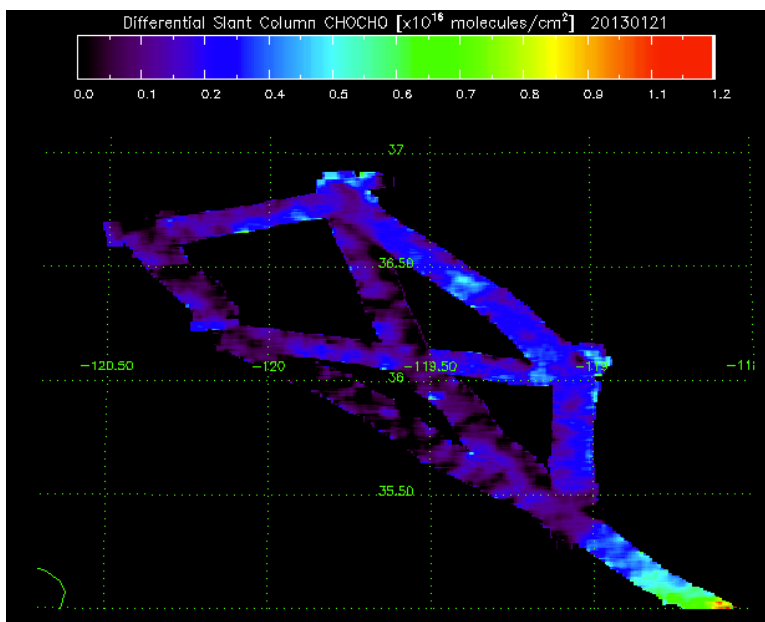


Afternoon flight with
normal mirror pattern

NO_2



CH_2O



OCHCHO