

Flight Report 12/13/02
Flight Type: Test Flight

Flight Plan: 40 minute sun run to test solar instruments followed by a return to Dryden to test lidars. A radiosonde will be launched over Dryden.

Flight Report: Significant cirrus on climb out to 35 kf, all instruments operating. Broke through the cirrus near 39kf. Good sun run – cirrus was below the aircraft until we turned east after waypoint 4. Good data taken by LAABS and GAMS. Cirrus hampered upward viewing lidars as we moved east. Near Las Vegas cirrus cleared away for both nadir and zenith viewing. Ozone and aerosol measurements were taken by both DIAL and AROTAL. As is usual during test flights there were a number of small glitches in computer software and optical alignment. In situ instruments performed well. Overall, it was a successful test flight.

Mark Schoeberl

Status Report
Instrument – PI

DIAPER (in situ aerosols) -Anderson
Few minor problems but overall in good shape.

FastOz – Owens
Everything worked

DIAL (Lidar ozone and aerosol above and below the AC) –Browell
Frosty windows and reflections off zenith window – minor problems. Got data during the flight.

DACOM/DLH (in situ trace gases and open path water vapor) –Diskin
Mixed flight. Dacom had a rough start but was okay at the end.

PANTHER (in situ PAN and other trace gases) -Elkins
Mixed flight. 4/6 channels worked. Problems with 486 channels.

MTP (microwave temperature profiler) -Mahoney
No problems

AROTAL (Lidar ozone, aerosols and temperature above the AC) -McGee/ Hostetler
Good flight – got ozone and temperature data. Solved some problems.
Some crashes of the aerosol computer although they took data.

GAMS/LAABS (solar occultation ozone, aerosols and oxygen A band) –Pitts
Everything worked – good flight

DIAS (Direct beam solar irradiance) –Shetter
Worked great.

FCAS/NMAS (in situ aerosols) –Reeves
NMAS had one dead channel.

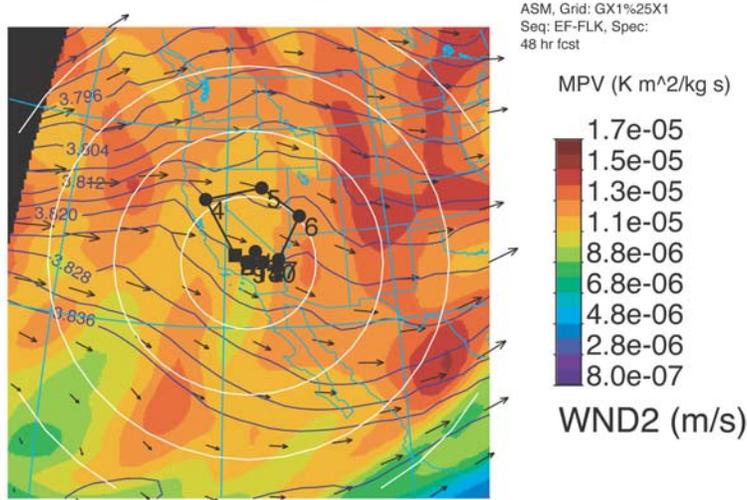
AATS-14 (sun photometer) –Russell
No Problems

Differential GPS – Muellerschoen
Worked well using Iridium phone

ICATS
Ozone drop out – but all okay.

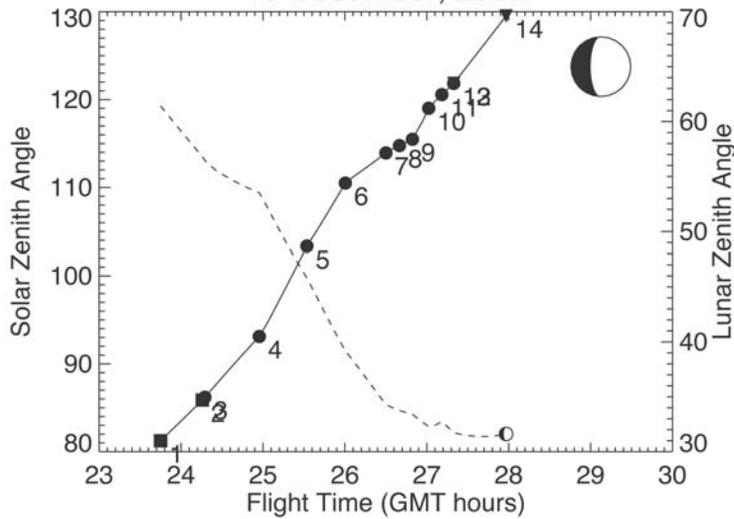
Plots (flight plan, solar zenith angles, rel. humidity)

00 UTC on 14 December, 2002 on the 430.0 K surface

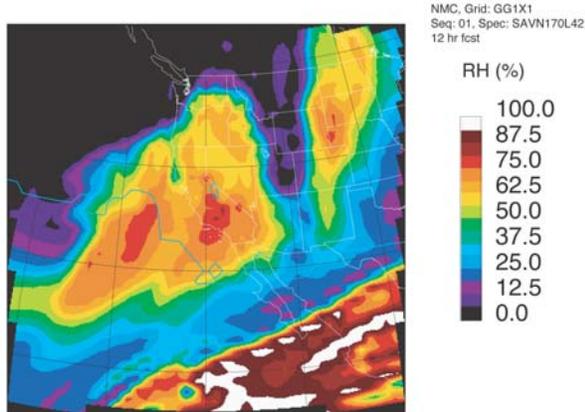


MNST ($\times 1.00E+05 J/kg^{-1}$)

13 December, 2002



00 UTC on 14 December, 2002 on the 178.7 mb surface



at 178.7 mb
PTRP (mb)