Squawk List for flight 1905,
flown Saturday, 22 December 2001,
IMPROVE II CV-580 flight 15.
First of two flights on this day

Instruments not mentioned as having a problem are believed to have worked satisfactorily.

OVERALL LOOK-WEATHER

This flight took place as a warm front and associated rainband moved northward over Oregon State and across the Cascades. The CV-580 an abbreviated set of SW-NE legs about 70 nm long centered over the Willamette Valley west of the Oregon Cascades. The legs were flown at 18,000 and 20,000 feet before the apparent dissipation of the band caused ground control to terminate the flight with a possible resumption later as a new band approached the coast.

The cloud system was mainly glaciated though very isolated patches of low liquid water content in the form of altocumulus clouds or stratocumulus clouds encountered. The flight terminated at U-gene, Oregon.

OVERALL LOOK-INSTRUMENTATION

The CPI was not installed but back on the bench. It was believed by Charlie that the camera was the culprit, though prior to installation on the plane, the camera was working fine.
The hot wire probes did not work.

1. AIRCRAFT PARAMETERS

2. STATE PARAMETERS

Cambridge chilled mirror dewpoint (dp): Most reliable of the dewpoint measurements, though it was somewhat higher than the ambient static temperature for much of the flight when precipitation and droplet clouds were present. Also, large amplitude heating-cooling cycles returned and persisted through most of the first half of the flight. It appeared to perform well in drier conditions.

Ophir dewpoint (dp_o): Higher than the ambient temperature for much of the flight. Not considered reliable in moist conditions at present. The cause is unknown at this time.

Rosemount analog pressure transducer (pstat): Continues to exhibit spurious changes in pressure of up to several mb in per second.

3. Cloud Microstructure Probes

DMT Hot wire device: Did not work; no response whatever to cloud penetrations.

JW Hot wire device: Power was shutoff to the J-W to eradicate the noise spikes generated by the J-W system that also affected several other parameters.

PMS 1-D cloud probe: The data need to be examined very closely to see if they are OK. However, 1-DC concentrations were clearly well-correlated with the 2-DC concentrations (just available as of 12-26-01) giving new hope that the spectra may be OK after all.

SPEC CPI: Not installed.

HVPS: Brief outages.

4. AEROSOLS

Not QC-ed.