

Preliminary Squawk List for flight 1887,  
flown Thursday,  
18 October 2001  
This was pre-IMRPOVE II test flight 1.

Instruments not mentioned as having a problem are believed to have worked satisfactorily. (More items may be added below when aircraft data are downloaded to CARG disks here at the UW.)

## **WEATHER BACKDROP**

Moist northwesterly flow with multilayered clouds covered region of flight. Very light rain and sprinkles reached the ground. Tops of clouds found to be just below 500 mb level. A spiral ascent was carried out over a point north of Port Townsend to provide a temperature and cloud microstructure profile at a MM5 grid point for use in a later comparison with the model state and microphysical predictions for this point.

### **1. AIRCRAFT PARAMETERS**

**Tans-vector system:** Heading was missing from its output.

**Shadin Air Computer:** No wind direction or speed available due to the lack of a heading measurement.

### **2. STATE PARAMETERS**

**Rosemount static temperature:** Previous discussion revised. Tstat, not available in flight, was recovered in the post-flight processing meaning that the problem in flight was due to a software problem somewhere. Tstat tracked the tstatr values well, but was 1-3° C lower than tstatr the entire flight. This discrepancy is being investigated to see if it arises with the correction equation for tstat, generated when it was “broken”.

**Rosemount pressure transducer:** Continues to exhibit noise of up to several mb in range per second. These, in turn, cause spurious pressure altitude changes of up to 30-50 m in one second. Device may be wearing out. Has been acting this way since the SAFARI project and since the plane has been reconfigured, these fluctuations could be real and associated with some change in the flow around the probe.

### **3. Cloud Microstructure Probes**

**DMT Hot wire device:** Did not work. Cause unknown—being investigated by Don.

**JW Hot wire device:** Did not work. Cause unknown—being investigated by Don.

**PMS 2-D cloud probe:** Worked at start of flight and then quit for unknown reasons a few minutes into the flight. Laser may have died. Being investigated by Don.

**SPEC HVPS:** Generally worked but had several outages for seconds to a minute or two for unknown reasons. The outages were characterized by single lines or rectangular areas of densely packed horizontal lines—a common type of outage for this probe. Believed to be due to some sort of contamination on the lens. Don will check lenses for cleanliness of the lenses.

#### **4. AEROSOLS-not checked yet**