

## Flight Summary Report: AVE 2004 Mission, Data Flight #3, 4 November 2004

**Aircrew:** Rick Hull and Dom Del Rosso

**Duration:** 5.4 hrs

**Takeoff:** 11:07

**Gear Up:** 11:07

**Gear Down:** 15:47

**Landing:** 16:28

**Point 3:** N29° 36'    W95° 10'

**Point 4:** N40° 35'    W98° 25'

**Point 5:** N41° 46'    W100° 22'

**Point 6:** N40° 02'    W99° 51'

**Point 7:** N38° 47'    W99° 28'

**Point 9:** N38° 32'    W97° 45'

**Point 13:** N32° 33'    W95° 58'

### **Flight Profile:**

- 10:58 – DAT recorder on
- 11:10 – JHL on, CPL laser on
- 11:14 – CAFS Upper and Lower on
- We took off and flew through a solid layer at 3,000 ft, immediately overhead EFD.
- 11:28 – We were finally cleared up to FL 450, flying over solid cloud layers.
- 11:46 – A few significant breaks in otherwise solid cloud cover were noted (478 nm from point 4)
- 12:05 – Took a photo westerly to note cloud cover (360 nm from point 4).
- 12:14 – CAFS Upper and Lower were cycled per checklist w/o incident.
- 12:30 – A solid cloud deck was noted at FL350-370 (240 nm from point 4).
- 12:44 – The cloud deck was increasing noticeably in altitude (240 nm from point 4).
- 12:50 – Video tape recorder in cockpit was set to record.
- 12:55 – Momentary fail light illuminated on the CAFS Lower and auto reset after approximately 1 second.
- 12:56 – Edge of solid cloud deck was noted, going to lightly scattered at much lower altitude (87 nm from point 4).
- 13:00 – Photo taken westerly noting scattered cloud layer (60 nm from point 4).
- 13:06 – Photo taken westerly noting wispy, higher cloud layer (29.5 nm from point 4).
- 13:14 – Momentary fail light illuminated on the CAFS Lower and auto reset after approximately 1 second.
- 13:15 – CAFS Upper and Lower were cycled per checklist w/o incident.
- 13:16 – Photo taken westerly (86.3 nm from point 5).
- 13:34 – Photos (5) taken in turn, generally down range, with the last through front cockpit.
- 13:34 – On sat track @ FL 585.6
- 13:43 – Noticeable 'jink' by the auto pilot (46 nm from point 6).
- 19:49 UT – Crossed point 6.

- 19:53 UT – 59.3 nm from point 7 @ FL585.6 along track. Photo east, photo south.
- 14:01 – Turned at point 7.
- 14:10 – Photo of multilayer cloud deck approaching.
- 14:12 – Crossed over solid cloud deck at point 8.
- 14:14 – CAFS Upper and Lower were cycled per checklist w/o incident.
- 14:15 – Began spoiler-only spiral decent, without dwell, to FL250 (note: significant confusion with ATC hindered even this phase, though they seemed aware of our general mission),
- 14:16 – CPL laser off due to impending cloud penetration.
- 14:24 – Camcorder screen flashing.
- 14:24 – S-HIS Sound fail indication.
- 14:24 – S-HIS Sound off
- At FL 290, we entered dense cloud cover (note: horizon appeared to have cloud tops in excess of FL340 in all directions).
- Controller hand-off.
- 14:34 – We leveled off at FL 250.
- 14:35 – ‘New’ controller would not give us airspace to spiral ascent with dwell at this point. Best option offered was to take vectors during the ‘straight and level’ 1-minute dwell. Suggested a point 30 nm north and vectors.
- 14:36 – New vectors for a point 50 nm south of point 8.
- 14:40 – S-HIS Sound on.
- 14:40 – Video camcorder off.
- 14:45 – Momentary fail indication (green light out) on the PT; auto reset after approximately 1 second @ FL250 in solid cloud layer.
- 14:48 – Spiral-up objective aborted due to lack of airspace; ascended to FL330.
- 14:52 – CPL laser on (clear air).
- 14:57 – Momentary fail light illuminated on the CAFS Lower; auto reset after approximately 1 second.
- 15:14 – CAFS Upper and Lower were cycled per checklist w/o incident.
- 15:16 – S-HIS Sound fail indication, successful reset 1x.
- 15:47 – Gear down.
- 15:52 – S-HIS Sound fail (spoilers out), turned off.
- Cloud deck broke up at 70 nm from EFD.
- 15:58 – CAFS Upper and Lower off.
- 16:14 – CPL laser off.
- 16:20 – JHL off.
- 16:23 – SP2 off, ARGUS off.
- CIMS – Failure indication off.
- 16:28 – Land EFD.

#### **Instrument Issues:**

- **CAFS** – The Upper and Lower had several instances noted of momentary failure indication. All reset without intervention.
- At the end of flight, CIMS and S-HIS Sound failed. Due to our proximity to the ground, I did not try to reset.