

Isotope Intercomparison Flight Summary

30 June 2005

General Information

Flight date – 30 June 2005

Flight description – Flight 1 Isotope mission

Flight duration – 3.1 hours

Crew – Andrew Roberts, John Bain (281.244.9661)

Instruments flown (13): ALIAS, Argus, CAPS, CO₂, Harvard Water Vapor, HOxotope, ICOS, IRIS, JLH, MMS, PANTHER, PT, Total Water

Flight Log

MMS On	2:30	Takeoff	2:57	Begin Descent	5:15
Before Taxi	2:47	Climb/18000	3:15	Landing	5:59

Gear extension/retractions

Gear Up	2:57					
Gear Down	5:50					

Weather Observations

Climb:

- The visibility was clear on climb-out, with numerous cumulus clouds and rain clouds in the vicinity. We made one brief penetration through a cloud for 10 to 20 sec at 3:07 pm (~13 kft).

Cruise:

- The visibility was clear at our altitudes, with cumulus clouds near the ground and a higher layer of alto-cumulus and stratus. We could see cirrus clouds in the distance at the southern end of our flight, but they were never very close.

Descent:

- The descent was clear of clouds.

Flight Profile

- The turn toward waypoint 2 was initiated at 3:25 pm. The climb from 43 kft to 53 kft was initiated at 3:35 pm. We reached 53 kft at 3:46 pm.
- The MMS pitch maneuver was initiated at 3:46 pm, the yaw maneuver at 3:47 pm, and the box maneuver at 3:49 pm. These maneuvers were executed at 53 kft and mach 0.7.
- The turn back south was initiated at 4:24 pm, about 71 nm short of the planned waypoint 5 due to fuel considerations.

Instrument Notes

- The Total Water fail light came on at 3:07 pm, a few seconds before the short cloud penetration. I cycled power three times per the checklist, with no recovery from the fail condition. At 3:20 pm, I left the switch in the off position.
- A fail light came on for the ALIAS experiment in the final descent at 5:35 pm (18 kft). I cycled the power and it recovered.
- The Harvard water vapor light came on at 8 kft during descent, as expected. No action was taken.
- The ICOS fail light came on at 3 kft during descent, as expected. No action was taken.
- The HOxotope fail light never came on during the descent, and was not on after landing when I turned the experiment off.

To ftp for the nav data:

IP address 128.157.138.64

Username: anonymous@wb57f.asds.net

Password: <any email address>

The directory is: WB57F_Processed/Isotope