EVA report
EVA #4

Crew members : Mohammad Iranmanesh (EVA leader), Mehdi Scoubeau, Jyothi Nookula and Susan Jewell

Location : Around the Hab (12S-518230E-425720N)

No ATVs will be used for this EVA

END OF ENGINEERING CHECK AND EVA START: 10:10 a.m.

DURATION: 1:44 hours

PURPOSES:
- Scout areas nearby hab to conduct experiments on CRV (Cliff Reconnaissance Vehicle)
- Perform the experiment on different slopes to understand impact of gradient on experimental results
- Stability test of the UAV with extra payload installed (repeater) (only if time permits)

SUMMARY:
At 10:20 we were testing the CRV on the first slope and at 11 another slope nearby. We forgot the stabilizing rods in the HAB so we picked low gradient slopes to test mainly the video transmitting system. Everything was nominal and worked as expected.
At 11:20 we put the CRV in the engineering Airlock and started testing the LOCARD (Localization and Radio Relay Drone). A Wifi accesspoint (with no internet) was placed in front of the hab and the signal was measured. At around 120m from the HAB, behind a little Hill, the connection was lost. The Drone was used to hover over the hill and repeat the signal. The wifi analyzer confirmed the increase in the signal power when the UAV was flying. The experiment was successful and proved the feasibility of the concept, but the drone did not fly too long because of stability problems caused by the added payload.
At 11:40, a bit further where the HAB was hidden by the relief, the drone was used to localize the HAB in order to simulate a scenario where the crew is lost and needs to find the HAB.
At 11:54, EVA#4 was back in the Airlock and entered the HAB after 3 minutes of decompression.