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EVA Details

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STS-130/20A - EVA 3

Date: February 16, 2010

Mission/Increment: STS-130/20A

CREW MEMBERS:
Behnken, Robert - EV1 - EMU
Patrick, Nicholas - EV2 - EMU

Flight Control Team:
Art Thomason - Lead
Alex Kanelakos Task
Landon Lagesse Systems
Jonnie Davidson Airlock

EVA PET: 05:48:00

EVA Narrative Description:

The third EVA was performed on Flight Day (FD) 9 and all planned activities were completed during the 5 hr 48 min EVA.

EVA crewmembers opened the US Lab Loop B QD valves to enable secondary path ammonia flow between the US Lab and Node 3, the crew also installed thermal booties on the QDs.

Ammonia Line MLI Management was completed by attaching wire ties between the MLI and US Lab Handrail 201 and handrail 0219. The Pressurized Mating Adapter #3 (PMA 3) heater cables (P602) and data cable (P601) were installed to Node 3 on the port axial cone. One of the two Node 3 LTA cable connections was removed from Node 1 J612 and the Airlock secondary power cable P1 was re-connected back to J612.

The EVA crewmembers removed the Cupola MLI and released the window shutter launch lock bolts on all seven window shutters. Worksite Interfaces (WIFs) 01, 02 and 06 were installed on Node 3. NH3 Line MLI Photogrammetry was performed on US Lab to document clearances for the future berthing of the PMM. Six more Node 3 Handrails were installed at locations: 0612, 0638, 0631 0624, 0639 and 0644.

A Video Signal Convertor (VSC) Cable was installed between S0 and the FBG, the S0 side of the cables were mated to the S0 panel. The Node 2 Zenith CBSC flap was closed.

Get ahead tasks completed included the gap spanner installation between the ESP-2 Handrail 8013 (Port) and US Lab Handrail 0293 (Aft) and the APFR #3 relocation from Lab WIF 4 to Starboard Airlock Toolbox WIF.

The planned task of removing the P1 FHRC (Flex Hose Radiator Coupler) P-Clamps was dropped from the end of EVA 3 due to consumable limitations on the EV1 crewmember.

EVA glove inspections and post-EVA photographs indicated no glove damage on EV1's gloves and a non-critical peeling of the RTV (Room Temperature Vulcanizing) pad on EV2's left glove thumb.

Nominal Tasks Completed: - Node 3 Open NH3 Loop B QDs - PMA3 on Node 3 Cables - Node 3 LTA Cable Disconnect - Cupola MLI Removal - Node 3 OIWIF Install (3) - Node 3 Handrail Install (6) - Cupola Launch Lock Release - P1 FHRC P-Clamp Release (12) - APFR Relocate - Install Video Signal Convertor (VSC) Video Fiber Optic Cable



Nominal Tasks Uncompleted:

Get Ahead Task Completed:

First Flight EVA Tools/EMU Hardware:

Anomalies Impacting EVA: - AR 004589: EVA STS-130/20A EV1 and EV2 Observed rumbling during depress - AR 004558: STS-130 Cupola Launch Lock Bolts Required Higher Torque for Release - AR 004560: STS-130/20A: Higher than expected CO2 for EMU 3004 (possible sensor bias) - AR 004559: STS-130 (20A): Larger than expected voltage drop in EMU 3004. - AR 004561: EMU 3005 Water droplets observed during EVA 1 and EVA 3 on STS-130/20A

On-Orbit Hardware Repairs:



Nicholas Patrick

Robert Behnken

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Anomalies Requiring Tiedowns:
Anomalies Met Rates:
Anomalies from ISS Grounding EVA:
Off-nominal Use of Tools:
Cross Utilization of US/Russian Tools:
Vehicle EVA Performed from: ISS - US Airlock

