Abstract

REQUIREMENTS, RESOURCE PLANNING AND MANAGEMENT FOR DECREWING/RECREWING SCENARIOS OF THE INTERNATIONAL SPACE STATION

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Following the failure of 44P on launch in August 2011, and the subsequent grounding of all Russian Soyuz rocket based launches, the ISS ground teams engaged in an effort to determine how long the ISS could remain crewed, what would be required to safely configure the ISS for decrewing, and what would be required to recrew the ISS upon resumption of Soyuz rocket launches if decrewing became necessary. This White Paper was written to capture the processes and lessons learned from real-time time events and to provide a reference and training document for ISS Program teams in the event decrewing of the ISS is needed.

Through coordination meetings and assessments, teams identified six decrewing priorities for ground and crew operations. These priorities were integrated along with preflight priorities through the Increment re-planning process. Additionally, the teams reviewed, updated, and implemented changes to the governing documentation for the configuration of the ISS for a contingency decrewing event. Steps were taken to identify critical items for disposal prior to decrewing, as well as identifying the required items to be strategically staged or flown with the astronauts and cosmonauts who would eventually recrew the ISS.

After the successful launches and dockings of both 45P and 28S, the decrewing team transitioned to finalizing and publishing the documentation for standardizing the decrewing flight rules. With the continued launching of crews and cargo to the ISS, utilization and science is again a high priority, with the Increment pairs 29 and 30, and 31 and 32 reaching the milestone of at least 35 hours per week average utilization.

I propose that this paper is suitable for an oral presentation at the IAASS conference.

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