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Astronaut Training, Accommodation, and Operations in Space (5)

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ASSESSING ISS ASTRONAUT HABITABILITY TRAINING: A HISTORICAL PERSPECTIVE

Abstract

Over the lifetime of the International Space Station (ISS) training evolved based on Astronaut feedback, system updates, increased mission duration, and shifting operational goals. This training is a mixture of skills-based instruction and mission specific lessons on many topics. Habitability training specifically focuses on preparing astronauts for the day-to-day needs of living in space such as hygiene, food, sleep, restraints/mobility aids, and housekeeping. In this paper, the authors evaluate the effectiveness of habitability training for Astronauts working on the International Space Station (ISS) over the course of its continuously manned operation since 2000. This involved identifying ISS habitability training changes in lesson objectives and skills between revisions. These identified changes were then compared with relevant Astronaut feedback from post mission debriefs to determine the effectiveness of the changes. Habitability training is essential for Astronauts and has changed and continues to evolve over the course of the ISS. Understanding ISS habitability and how to most effectively train it will generate lessons learned that benefit current ISS operations and future exploration outside of Low Earth Orbit (LEO) to the moon and eventually Mars.