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TRANSITIONING THE INTERNATIONAL SPACE STATION TO EXPLORATION: CHALLENGES  
AND OPPORTUNITIES

**Abstract**

The United States has announced plans to continue supporting the International Space Station (ISS) through at least the year 2024. The other ISS Partner agencies, the Russian Federal Space Agency, the Canadian Space Agency, the Japan Aerospace Exploration Agency, and the European Space Agency, are all currently evaluating their own human spaceflight programs and their role in ISS beyond 2020.

NASA has been conducting research and technology development onboard the ISS in order to achieve the following national goals: 1) extend human presence beyond low Earth orbit (LEO) for long duration missions, eventually to Mars, 2) provide benefits to humanity, 3) to enable the development of a commercial market in LEO, and 4) to provide the basis for international cooperation in human spaceflight beyond LEO. The extension of ISS to at least 2024 enables each of these goals from a United States perspective. NASA's goals beyond LEO are intimately tied to these goals on ISS.

This paper will explore the policy and programmatic challenges and opportunities in transitioning the activities and constructs of the ISS Program into a sustainable exploration program. Issues that will be address will include such topics as: mitigation of human risks from LEO to cis-lunar space, the role of commercial entities beyond LEO, habitation transition from a LEO environment to deep space, and reaching a consensus between Partner agencies on the transition out of ISS into exploration activities.