

23rd IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE SOLAR SYSTEM (A5)
Human Exploration of the Moon and Cislunar Space (1)

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ISS LESSONS LEARNED AS APPLIED TO MOON EXPLORATION

Abstract

The ISS partners and space actors notice the success of the ISS program. Mutual technical and programmatic support and the redundancy have been making the program sustainable and efficient for more than 20 years of the ISS operation with crew aboard.

Key factors driving the success of the program include modular design, functionally complementing and redundant capabilities of two-segment configuration, two transportation systems to deliver the crew to the station, a number of partner's cargo vehicles, and the international program framework.

The remoteness of the Moon, as a new program's destination, the cost and technical challenges of reaching the Lunar orbit and surface make the international cooperation on the Moon program even more necessary and important.

Based on the ISS principles and experience, the paper reviews the aspects of technical, programmatic and international integration of the Moon exploration program at its different phases, including a lunar orbital platform, transportation systems and lunar landers.