

HUMAN SPACE ENDEAVOURS SYMPOSIUM (B3)  
How Can We Best Apply Our Experience to Future Human Missions? (2)

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DISCUSSION ON THE INTERNATIONALIZATION TENDENCY AND INTERNATIONAL  
COLLABORATION APPROACH OF SPACE STATION

**Abstract**

Space station is the most complex manned spacecraft. Its size is huge, and its technology is advanced, so it requires much technology support. From the development of Mir and International Space Station (ISS), we can see that the fabrication and operation of space station comes to be international collaboration. International collaboration and technology communion can promote space technology and the standardization of spacecraft, and reinforce the all-around utilization of space station. Firstly, diagnosing pattern of international collaboration. Include the avenue of Space Shuttle docking with the Mir complex and the circles of each participant country of ISS. The avenue of international collaboration is introduced. Analyzing the docking pattern and load support pattern of ISS. Analyzing the technology obstacles between visiting spacecraft and ISS, it includes orbit qualifications, communications qualifications, launch field and landing field qualifications, etc. Analyzing the adaptability, it includes GNC adaptability, launch and landing adaptability, docking system adaptability, etc. The technology qualification for spacecraft to participate in ISS program are introduced. After analyzing the successful experience of ISS international collaboration, the international collaboration approach of space station is introduced. It includes space station module collaboration, equipment and load collaboration, transport and supply collaboration, cosmonaut and engineer collaboration, etc. The feasibility and actualize avenue is analyzed. Finally, summarizing the international collaboration approach of space station. The avenue of international collaboration of space station is various, while there are many technology obstacles.