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Overview Session (Present and Near-Term Human Space Flight Programmes) (1)

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NEW HORIZON OF JAPAN'S ISS PROGRAM

Abstract

Japan has been participating in the International Space Station Program with the Japanese Experiment Module (JEM) "KIBO" and own cargo resupply vehicle to the ISS, the H-II Transfer Vehicle "Kounotori." "KIBO" continues providing stable environment for various utilization with no major issues since its assembly completion in July 2009 on orbit, and producing outcomes in various fields. Its capabilities are being enhanced by realizing remote operation of its Remote Manipulator System from the ground, updating its payload data multiplexer, development of the JEM Small Satellite Orbital Deployer (J-SSOD), and other efforts. The HTV3 delivers J-SSOD to the ISS for its first mission in Summer 2012 with new experiment equipments and resupply items. For the extended operation of the ISS and "KIBO" beyond 2016, JAXA is making efforts to expand and diversify its utilizations, including acquiring the key technologies in preparation for the future human space flight and exploration missions, such as environment control and life support, crew health and medical support, cargo return, and so on. This paper summarizes JAXA's achievements through "KIBO" and "Kounotori" as well as Japanese astronauts activities, then introduces JAXA's efforts for expanded utilizations and key technology development in Japan's ISS program for future manned exploration program.