

IAF HUMAN SPACEFLIGHT SYMPOSIUM (B3)
Governmental Human Spaceflight Programs (Overview) (1)

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JAXA'S INITIATIVE ON HUMAN SPACEFLIGHT PROGRAM FOR ISS AND BLEO

Abstract

JAXA has been rigorously conducting various missions, such as small animal mission under artificial gravity in the Japanese Experiment Module, “Kibo” since its assembly complete in 2009. Last year, JAXA successfully conducted the mission sample retrieval from ISS via newly-developed reentry technology demonstrator “HSRC” (HTV Sample Return Capsule). Currently, JAXA is also working to technical demonstrators for new ECLSS functions and IVR robotics into Kibo. The outcome of these missions will contribute to various fields of society and industry on earth, and furthermore could lead to the acquisition of new technology for the future manned space exploration. JAXA will continue making effort to maximize the utilization of Kibo, maintaining and improving its function and performance. For the future manned space mission beyond LEO, with the space exploration scenario targeting the Moon and Mars, JAXA is studying contribution the NASA Gateway program by providing ECLSS system and cargo resupply service. For the lunar surface exploration, JAXA is assessing the system feasibility of core systems, such as lunar descent/ascent vehicle, and pressurized rover. With the knowledge and experience gained in Kibo operation and state-of-the-art commercial technology integrated together, JAXA will keep trying to make the space exploration scenario realized.