

22nd IAA SYMPOSIUM ON HUMAN EXPLORATION OF THE SOLAR SYSTEM (A5)
Human Exploration of the Moon and Cislunar Space (1)

Author: Mr. Shigeru Imai

Japan Manned Space Systems Corporation, Japan, imai.shigeru@jamss.co.jp

Mrs. Mari Kigoshi

Japan Manned Space Systems Corporation (JAMSS), Japan, kyoda.mari@jamss.co.jp

Mr. Yuuki Kaneko

Japan Manned Space Systems Corporation (JAMSS), Japan, kaneko.yuuki@jamss.co.jp

CURRENT ACTIVITIES AND FUTURE VISION OF JAMSS TO NEAR-FUTURE LUNAR
EXPLORATION

Abstract

JAMSS, Japan Manned Space Systems Corporation of Japan, has been involved in development, operation and utilization of Japanese Experimental Module of the International Space Station, so called “KIBO”, for 30 years. Since 2008, when the KIBO modules were launched and assembled to the ISS, JAMSS has been the prime contractor for KIBO operation and utilization. While several space agencies and private sectors are planning various space exploration activities aiming beyond LEO (Low Earth Orbit) especially targeting the lunar vicinity and the surface, JAMSS is also actively working for applying knowledge and technology obtained thru the KIBO operation and utilization to the space exploration. For example, training program for ground operators of JAXA’s asteroid explorer “HAYABUSA2”, which successfully landed on the asteroid “RYUGU” in February this year, was established and executed incorporating the training know-how of JAMSS obtained thru the ISS program. Also, JAMSS is working on several RDs to resolve technology gaps between the ISS and space exploration beyond LEO, such as establishment of secured and efficient management of astronaut exposure to space radiation, improvement of Quality of Life (QOL) of astronauts, tele-operation and autonomy of robotics system for the space exploration, etc. JAMSS is also promoting technology demonstration for the space exploration utilizing capabilities, resources and characteristics available in the pressurized module and on the exposed facility of KIBO, involving several non-space based private sectors. This article introduces such on-going activities and future vision of JAMSS aiming to near-future lunar exploration.