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

Author: Mr. Yoshiyuki Hasegawa
Japan Aerospace Exploration Agency (JAXA), Japan, hisadome.yasushi@jaxa.jp

Mr. Tetsuo Tanaka
Japan Aerospace Exploration Agency (JAXA), Japan, tanaka.tetsuo@jaxa.jp
Mr. Masazumi Miyake
Japan Aerospace Exploration Agency (JAXA), Japan, miyake.masazumi@jaxa.jp

JAXA'S INITIATIVE ON HUMAN SPACEFLIGHT PROGRAM FOR FUTURE SPACE EXPLORATION

Abstract

After the first International Space Exploration Forum (ISEF) in January 2014, there has been an increasing discussion in Japan about how to play an important role in the international cooperation for future space exploration program, as the government targeting the second ISEF in Japan in 2016 or 2017. The international lunar vicinity mission would be very possible path for Japan Aerospace Exploration Agency (JAXA) as a post ISS plan beyond low earth orbit (BLEO). With the aim of moving toward BLEO for next thirty years, JAXA places great importance on creating new scientific values and expanding the space frontier for humankind in the lunar vicinity, utilizing Japanese Experiment Module (JEM) "Kibo" on ISS.

Considering the circumstances mentioned above, JAXA focuses on technology research for long-duration mission, partial gravity environment activity and transportation. As key technology research for manned missions, JAXA stresses the importance of technology demonstration such as radiation protection, water recovery system, air recycle system etc., which are demonstrated on JEM. JAXA also places stress on life science experiments such as biological experiments on mice/rats, and the space medicine research with astronauts. Furthermore, based on HTV (H-II Transfer Vehicle) technology, JAXA grapples with the development of next generation HTV for servicing beyond low earth orbit, and the return capsule as a re-entry demonstration.