

Review report of *Japanese Participation in Artemis Program from The Views of Science and Engineering*

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On October 18, 2019, Japanese government announced "*Direction for Japanese participation in International Space Exploration led by USA*" and approved the new activity in space science of the country. In this direction, Japan begins corporation with international alley of space development by (1) providing advanced technology and instruments in the first phase of Gateway, (2) supplying materials and fuels to Gateway via HTV-X and H3 rockets, (3) sharing knowledge and information about lunar surface environment for landing site selections, and (4) developing means of transportation for future lunar explorations. Japan will further proceed examinations about whole program of *International Space Exploration (ISE)* including space sciences, and will reflect these examinations on new Doctrine of Space Development starting in 2021. Consequently, the space science community recognizes that "*Moon to Mars*" exploration program in the new era works under the framework of international collaborations and evaluation of political significance. In this perspective, new chances to promote a variety of space sciences are opened to the community. Space scientists are required to organize new activity in the community to take an advantage of Japanese participation in *ISE*. With this background, *ISE* Committee of ISAS/JAXA organized Science and Engineering Examination Team, and requested them to discuss intensively science goals and technical issues of *ISE*. The team recently publicized a review report of "*Japanese Participation in Artemis Program from The Views of Science and Engineering*." We briefly introduce an outline of this review report and argue further revisions aiming to make a consensus to advance lunar and planetary sciences in the next decade via *ISE*.

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