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INITIAL OPERATION OF THE 100KG SMALL SAR SATELLITE IZANAGI

Abstract

IZANAGI is the 100kg first technology demonstration satellite for the synthetic aperture radar (SAR) satellites constellation enabling near real-time Earth observation, being developed and operated by institute for Q-shu Pioneers of Space, Inc. (iQPS) in Japan. IZANAGI was launched on December 11 2019 by PSLV C48 launch vehicle from Satish Dhawan Space Centre in India. Once the S-band communications link for telemetry and command interface was confirmed at the first pass after launch, the Cassegrain antenna of 3.6 meter diameter was deployed on 16 December 2019 to enable capabilities of X-band SAR observation at 1 meter resolution and Ku-band payload data downlink at 360Mbps.

This paper reports the initial operation results of IZANAGI before and after the antenna deployment. This paper also introduces in detail the main functions of satellite system and ground segment to drive IZANAGI's mission.