

Feasibility study of volcano monitoring using microsatellite: a case of Hodoyoshi-1

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We conducted a feasibility study of volcano monitoring using microsatellite. In order to monitor volcanic activity, it is necessary to observe the volcano region frequently by using spaceborne, airborne and ground based observation equipments. A constellation of microsatellites with an optical sensor is very useful to conduct volcano observation. Hodoyoshi-1 is a 60 kg, cubic microsatellite 60 cm on each side with aimed at Earth observation. Hodoyoshi-1 can obtain images with a ground resolution of 6.7 m in multiple spectral bands with a swath width of 28 km. Comparing a Hodoyoshi-1 color image with a red relief image map of volcano region, we can interpret lava flow, pyroclastic flow, landslide and so on. And, we can monitor coverage of thermal area and influence on forest using near infrared image and NDVI image.

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