

SVC070-P24

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## The range of volcanic deposit from the eruption of the 2011 eruption of Shinmoe - dake detected by satellite imagery

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At the time of volcanic eruption, it is well known pyroclastic deposit causes the post-eruption, such as secondary lahars. In order to predict and mitigate lahar disasters from volcanic eruptions, quick collect information following eruptions is important. However, gathering information in the proximity of response to erupting volcano is very dangerous and therefore extremely difficult. Thus, the effective use of satellite-based remote sensing technology provides a means of collecting information even in such situation. In this study, we tried to detect the range of volcanic ash time-series data taken through analysing satellite remote sensing data.

The satellite sensors of the images used in this study are the AVNIR-2 (Advanced Visible and Near Infrared Radiometer Type), PALSAR (Phased Array type L-band Synthetic Aperture Radar) aboard ALOS, and MODIS (Moderate Resolution Imaging Spectroradiometer) aboard Terra and Aqua.

The optical sensors, such as AVNIR-2 and MODIS, provided global and clear view of spatial distribution of pyroclastic materials. However, there were not very good images because of cloud or volcanic smoke. On the other hand, the SAR always provide cloud free images, which seem to show some changing areas by deposition of pyroclastic materials.

Keywords: Volcanic ash, Satellite, Synthetic Aperture Radar