Visual observation and ash fall sampling for the 2011 Eruptive activity of Shinmoe-dake, Kirishima volcano

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Shinmoe-dake started magmatic eruptions on 26 January 2011. Meteorological Research Institute conducted visual observations of eruptive and fumarolic activities of Shinmoe-dake from the end of January to the end of March. Further, ash falls by the eruptive activities were sampled.

Visual observation was conducted to monitor eruptive and fumarolic activities and to estimate heat discharge rate from the crater of Shinmoe-dake. Video and infrared thermal cameras were installed about 8 km to the south of Shinmoe-dake. High-resolution images of discharges of volcanic ashes and vapor were obtained by the observation.

Ash fall sampling was conducted in order to understand tephra transport and to enhance tephra fall prediction. Ash traps were placed at fixed point to the southeast of Shinmoe-dake, and ash fall deposits were sampled every a few days. Moreover, for several eruptions, we directly sampled falling ashes to enhance temporal resolution of sampling data.

We will report results of these observations in the presentation.

Keywords: kirishima volcano, Shinmoe-dake, visual observation, ash fall sampling