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## Urgent survey of eruptive deposit in January, 2011, from Shinmoedake volcano, Mt. Kirishima, South Kyushu, Japan

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A sub-plinian eruption occurred on 26-27 January, 2011, from Shinmoedake, Kirishima Volcano and produced about  $7 \times 10^7$  tons of pumice fall deposit. Prior to the onset of pumice eruption on 26 - 27 January, the volcano repeated small phreatic - phreatomagmatic eruption since 2008 and the pumiceous particles have been found in these tephra. Continuous ash emission and intermittent violent explosions follow the pumice eruption and a lava is filling the previous summit crater of Shimoedake since 30 January.

The field survey was done within 4 days after the first subplinian eruption and revealed the facts that the tephra covered an area more than 1000 km<sup>2</sup> and the distribution axis toward N120°E direction. The volume of the tephra is more than 100 kg/m<sup>2</sup> at the point 3 km away from the vent and 1 kg/m<sup>2</sup> at the point about 60 km from the volcano. Pumiceous lapilli and blocks are found in the area within about 10 km from the volcano. In the area more than 10 km away from the volcano, the tephra consists mainly sand - silt size grains. The distribution of tephra indicates that the total mass of the products is  $7 \times 10^7$  ton, including the estimation of proximal and distal phases.

Petrological analysis indicates that the magma has pyroxene andesitic composition with 57-58 wt% of SiO<sub>2</sub>. Detailed observation reveals that the andesite is the products of mixing between dacitic and basaltic magmas. The petrological character and the sequence of the eruption are quite similar to that of the previous magmatic eruption of 1716-17 AD, during which some layers of pumice-fall deposits and pyroclastic flows were produced.

Keywords: volcano, eruption, Kirishima, Shinmoedake, eruptive mass, pumice