

2015-16 years activity of Niigata-Yakeyama volcano; ash emission eruptions and syneruptive-spouted type lahar generated in 2016 year eruption.

*Teruki Oikawa¹, Keiji Ikeda¹, Hiroaki Yanagisawa¹, Takanori Ishihara¹, Jiro Komori², Chiyuki Narama³

1. Volcanology Division, Japan Meteorological Agency, 2. Teikyo Heisei University, 3. Department of Environmental Science, Niigata University

Niigata-Yakeyama Volcano, Niigata prefecture in central-Japan, consists of lava dome and pyroclastic flow and is young active volcano. Recently, in this volcano, phreatic-eruptions occurred in 1949 and 1974; small-scale eruptions (ash emissions) occurred in 1983-84, 1987, 1989, 1997-1998 and 2016. We report of the sequence of 2015-16 years activity of Niigata-Yakeyama Volcano, based on the analysis of tephra and observation from the ground and aerial. From the end of August 2015 to the fall of 2016, the fumarolic activity of Niigata -Yakeyama Volcano was active. In 2016, Niigata-Yakeyama Volcano emitted volcanic ash 8 times (6 times before April 15, once in May and July) and syneruptive-spouted type lahar 6 times (May 1-8 and 20, June 3-4 and 26, July 2 and 19). Along with these ash emissions, release of ejected rock fragments and high temperature matters has not been observed. The emitted volcanic ash was found to be composed of altered volcanic fragments, fresh plagioclases, pyroxenes and roundness volcanic rocks fragment. However, the absence of juvenile material in the eruptive products indicates that the eruption was phreatic. The estimated total discharged mass was less than 10^6 kg. From these characteristics, it is estimated that the eruptions of 2016 is phreatic eruptions that occurred when the surrounding fine grains were blown off by activation of fumaroles. However, the eruption of warm or muddy water from the volcanic body (syneruptive-spouted type lahar) is a characteristic activity of 2016 eruption.

Keywords: active volcano, Niigata Prefecture , eruption, tephra, volcanic ash, syneruptive-spouted type lahar