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# Mechanism of snowmelt type lahar associated with 1926 eruption at Tokachi Volcano. - Approach for the snowmelt experiment -

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Snowmelt type lahar associated with volcanic eruption sometimes gives serious damages on the foot of the volcano. In 1926 eruption of Tokachi volcano, 144 inhabitants were killed by the snowmelt type lahar generation triggered by the debris avalanche.

In order to understand of the mechanism of snowmelt type lahar, it is important to clarify the interaction between the initial conditions of the snow and high temperature materials supplied from the volcano.

We constructed the snowmelt experiments equipment indoors and carried out the basic experiment of the snowmelt process by high temperature materials supply to snow coverage, paying attention to the particle diameter, supply materials temperature, and snow density. From the result of the experiments, the effectively conditions of snowmelt are,

(1) the supplied materials are enough high temperature, (>800°C),
(2) the snow density are remarkably high ( ) 0 . 1 3 *cm g* » ,
(3) The liquid-water content of the snow is high,
(4) The snow density is also low ( ) 3 . 0 3 *cm g* » .

In 1926 event of Tokachi volcano, snow density decreasing due to the rainfall from the previous day of lahar generating. In addition, Precedence with the main events of 16:17, small lahar generated triggered by the phreatic explosion at 12:11. The explosion might supply the hydrothermal water, and it caused to snow density has decreasing before the debris avalanche at 16:17.

Keywords: snowmelt type lahar, snowmelt experiment, Tokachi Volcano, 1926 eruption.