

## Low tempter Pyroclastic flow (pyroclastic density current) from phreatic eruption

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In this study, is carried out restoration of Yakedake Taishoike eruption from newly discovered record and old photographs. The 6 June 1915 Yakedake, active volcano in the central Japan, eruption produced “cold” pyroclastic flow. The pyroclastic flow was spread over an area of ca.1 km<sup>2</sup>. The eruption products are clay rich tephra and lacking any juvenile component, there shows the characteristics of phreatic eruption. At the same time with the eruption, the lahar flowed in the gullies. The lahars deposits dammed up the Azusa River in the foot of Yakedake, and made the dam lake of length 1.9km. The dam lake is named Taishoike. Thickness of the eruption tephra is significantly thicker at near the crater; but significantly thin at distal area of the crater. Its feature is also similar to the Ontakesan 2014 eruption that low-temperature pyroclastic flows occurred. Therefore, significantly-thicker phreatic eruption tephra at near the crater, there is a possibility that the low-temperature pyroclastic flow occurred during the eruption.

Since the 19th century, steam eruption that low temperature pyroclastic flow occurs in Japan, pyroclastic flow occurs in the initial. From these eruptions sequence, it is suggested that the plume cannot obtained the buoyancy, because contains a large amount of low-temperature rock fragments in ejecta by new crater formation.

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