

## Explosiveness of the 2000 volcanic eruption of Miyakejima Volcano

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The eruption that happened at the summit of Miyakejima in August, 2000 was anomalously explosive compared with many other historical eruptions of this volcano. The ejecta from the explosive events are similar to those from the eruption of 2500 years ago that was accompanied by collapse of the same summit area as the current eruption. The strong explosiveness is considered to have resulted from contact of magma with old rock segments and water that fell into the summit conduit. Namely, the fallen materials that had covered magma prevented volcanic gas from leaking and an enhanced gas pressure first triggered each eruptive event. The initial explosion mixed the fallen materials with magma and rapid evaporation of water due to efficient heating lead to the following major explosions.