

Restudy of the eruptive history on Daisen Volcano, SW Japan

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Daisen is a Quaternary volcano situated in SW Japan, and consists of adakite lava domes, pyroclastic flows and Plinian fall deposits. Although the eruptive history of this volcano has revealed by Tsukui (1984), the large frames of the history do not reach the quantification. Particularly, ca. 50-ka Daisen-Kurayoshi eruption which was the largest Plinian-type one, but was not understood whether this eruption was the thing which got up in the long-term volcanic activity of this volcano how. Therefore, this study performed revision of the stratigraphy of the past approximately 200,000 years of this volcano, radiocarbon dating and a re-measurement of the magma discharge quantity. In the point that is important by the revised stratigraphy, the Misen pyroclastic flow of Tsukui (1984) is divided into the Shimizuhara pyroclastic flow derived from the Sankoho lava dome in the north foot and the Masumizuhara pyroclastic flow derived from the Misen lava dome in the west - southwest foot; their essential materials differ in chemical compositions. The new radiocarbon calendar ages are 18,960-18,740 calBC and 26,570-26,280 calBC for the former and latter, respectively. Therefore, the youngest eruption was the formation of the Sankoho lava dome in approximately 20,000 years ago. Furthermore, this study rewrote the isopach maps for the tephra layers of this volcano origin and measured quantity of tephra volumes by the Legros (2000) method again. The tephra which quantity of volume came to largely have a bigger than a value conventionally is the ca. 80-ka Daisen-Namateke eruption, and its the smallest volume is 2 km³DRE. The revised magma discharge rate shows that a high state continued in this volcano for approximately 100,000 years, and the Daisen-Kurayoshi eruption is not specifically big in activity at this time of Daisen Volcano.

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