

The relation of volcanic stages for the recent 10000 years of Kirisima and Southern Kyushu volcanoes

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In this study the eruption ages of tephra and lava generated from Shinmoedake volcano and Ebinokogen volcanic area by ¹⁴C dating were determined. Those ages indicate that the Kirishima volcanoes have three eruptive stages among the recent 10,000 years. The eruptive stage C started from 9.0 to 8.0 cal ka BP with RyD-L from Shinmoedake volcano and Fd-TmA tephra and Fudoike lava from Ebinokogen volcanic area. Old-Takachihono volcano and Takachihonomine volcano grew rapidly in this stage. The eruptive stage B continued from 5.6 to 2.3 cal ka BP growing the Shinmodedake and Nakadake volcanic edifices. Three eruptions at the same time, which were the Miike plinian eruption at 4.6 cal ka BP from Miike maar, Sm-Sy eruption at 4.5 cal ka BP from Shinmoedake volcano and Kn-EbD eruption at 4.3 cal ka BP from Ebinokogen volcanic area in this stage. The time interval between eruptive stage B and eruptive stage A was 2.3 to 1.6 cal ka BP. The youngest eruptive stage A started with Fd-EbC tephra from Ebinokogen volcanic area at 1.6 ka. In this stage, the Ohachi volcano grew from 6th century and Shinmoedake volcano erupted from 18th century. This result indicates that the Kirisima volcanoes repeated a few thousand years of eruptive stages and 500 to 1000 years intervals. The current eruptive stage A lasts about 1600 years. The relation of eruption ages of Kirishima volcanoes and Sakurajima volcano is well.

Keywords: Kirishima Volcano, Volcanic stage, Shinmoedake, Ebinokogen, Long term activity