

Petrological study of Miyake-jima volcano, Izu-islands-Magmatic system during 1469A.D.-1983A.D.-

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Miyake-jima volcano is an active which has erupted at least 13 times since 1469A.D. Whole-rock chemistry and mineral chemistry especially of crystal-clots of historic ejecta reveal that most of the ejecta were produced by magma mixing between andesitic and basaltic magmas which derived from a single primary magma. In addition, it should be noted that anorthite and olivine megacrysts are xenocrysts from almost solidified plutonic rocks. We also detect temporal differentiation of both the basaltic and andesitic magmas. During historic activities, the deep sheeted basaltic magma has changed simply to be basaltic andesite magma, and injected intermittently into the shallower andesitic magma. The injections has fluctuated magmatic compositions and temperature of the andesitic magma.