

Geological Map of Kuju Volcano; More accurate eruptive history and magma eruption rate

KAWANABE, Yoshihisa^{1*} ; HOSHIZUMI, Hideo¹ ; ITOH, Jun'ichi¹ ; YAMASAKI, Seiko¹

¹Geological Survey of Japan, AIST

Geological Survey of Japan, AIST has published a new Kuju volcano geological map. In this "Geological Map of Kuju Volcano", we re-examined the stratigraphy of Kuju volcano by tephra study and many K-Ar and ¹⁴C dating. Kuju volcano is composed of an aggregation of small stratovolcanoes and lava domes of dacite from basaltic andesite. Approximately old volcanic body exists in the west, new volcanic body are distributed to the east. Around the Kuju volcano, there are volcanic fan made of block and ash flow deposits, debris avalanche deposits and debris flow deposits. Large-scale pyroclastic flows, such as the Handa pyroclastic flow deposits, also distributed around Kuju volcano. We divided the activity of Kuju volcano into four stages, the 1st stage (from 200ka to 54ka), the 2nd stage of the Handa pyroclastic flow eruption occurred (54ka), the 3rd stage (from 54ka to 15ka) mainly occurred at the central area of Kuju volcano, the 4th stage (from 15ka to present), characterized by eruption of mafic magma. For the fourth stage, we performed a detailed tephra description including a relatively small (magma) steam eruption. We re-examined the magma eruption rate of the 3rd and the 4th stage. The magma eruption rate of the 4th stage is about 0.45km³/1000 years (DRE) and has increased from the 3rd stage of about 0.29km³/1000 years.

Keywords: active volcano, Kuju volcano, eruptive history, geological map of volcano, eruption rate, dating