

[JJ] Evening Poster | S (Solid Earth Sciences) | S-VC Volcanology

[S-VC43] Volcanic and igneous activities, and these long-term forecasting

convener: Teruki Oikawa (GSJ, National Institute of Advanced Industrial Science and Technology), Takeshi Hasegawa (Department of Earth Sciences, College of Science, Ibaraki University), Daisuke MIURA (一般財団法人 電力中央研究所 地球工学研究所 地圏科学領域, 共同), Nobuo Geshi (Geological Survey of Japan, The National Institute of Advanced Industrial Science and Technology)

Sun. May 20, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

This session focuses on generation and accumulation processes of magmas, magma-crust interaction and degassing, and modes of eruption, long-term forecast of eruption, dispersal and emplacement of the volcanic products. The discussion spans petrological, geochemical, geophysical, and geological processes related with volcanic activity and products in the past, the present and the future.

[SVC43-P07] Eruptive history of Mashu volcano, as inferred from boring core to the east of Mashu volcano

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Mashu volcano is caldera volcano located on the eastern wall of Kucharo caldera, eastern Hokkaido. The history of Mashu volcano was divided into the following three stages: 1) Stratovolcano forming stage, 2) Caldera forming stage, 3) Central cone forming stage (Katsumi et al., 1975). Hasegawa et al. (2009) revealed that Mashu volcano produced more than 50 plinian eruptions over the period from 35 to 1 ka, with no dormant period exceeding several thousand years in duration. However, the eruptive history of Stratovolcano forming stage is not revealed enough, because outcrops of this stage are limited. To reveal eruptive history of the active phase of mafic magma, we conducted a boring survey to the east of Mashu volcano and are analyzing pyroclastic deposits. The deposits of Central cone forming stage (Ma-b, -c2, -c3, -d, -e, -f, -g, -h, -i, -j) are recognized in depth 0.10 - 2.54 m. The deposits of caldera forming stage (Ma-f - j) are recognized in depth 2.60 - 32.42 m. Four pyroclastic deposits and several lahar deposits are recognized in depth 35.63 - 50.37 m. These pyroclastic deposits can be identified to Ma-l. Deposits in depth 66.45 - 107.79 m are mainly composed of scoria and lithic fragments of lapilli - sand size. These deposits can be divided into 6 groups by soil. In addition, accretionary lapilli and pyroclastic flow deposits are recognized in these units. These tephra can be identified to deposits of Stratovolcano forming stage of Mashu volcano. Accretionary lapilli in pyroclastic deposits indicate that wet eruption (phreatomagmatic) columns are formed.