
[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-P05] Phreatomagmatic explosion history and petrographical characteristics of Izu-Oshima at southeast

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Izu-Oshima Volcano is northernmost frontal arc volcano of the Izu-Bonin arc. The basement of Izu-Oshima is made up of three volcanos, named Okata, Gyojanoiwaya and Fudeshima Volcanos. The volcano is divided into three groups; the Senzu Group, the Older Oshima Group and the Younger Oshima Group in ascending order. Large eruption has occurred in about 150 years cycle, which include phreatomagmatic explosion around coast.

We report stratigraphic and petrographic study of the volcanic products of southeastern of Izu-Oshima volcano, especially around northeastern part of Habuminato and southwestern part of Habuminato.

Northeastern part of Habuminato

L3 lava, L2 lava, Kotoshi tuff, Ooyanokubo pyroclastic surge deposits, L1 lava, Kakiyara tuff, Sand and Scoria in ascending order.

Kotoshi tuff contain accessory rock fragments of Ryuo-zaki lava (Pl: 3.3 vol.%, Mg#=44). Kakiyara tuff is characterized by containing accretionary lapilli. Rock fragments are Fudeshima volcanic rocks in origin (Pl: 19.6-39.1 vol. %, SiO₂=49.45-50.03 wt.%).

Southwestern part of Habuminato

Shimobara lava (the Old Oshima Group), Silt, Scoria, Habu breccia (N3), Scoria & ash, and Imasaki breccia (Y4) in ascending order.

Habu breccia contain accessory rock fragments of Ryuo-zaki lava (Pl: 1.0-10.8 vol.%, Mg#=44) and Fudeshima volcanic rocks (Pl: 23.2-28.0 vol.%, SiO₂=50.8-51.7). Imasaki breccia contain not only accessory rock fragments of Shimobara lava (Pl: 0.2-9.3 vol.%, Mg#=39) but essential rock fragments of Y4 stage lava (Pl: 0.3-0.9 vol.%, Mg#=40).