

最近における火星の火成活動によって形成された火山性コーン地形の分布 Global distribution of volcanic cones associated with recent Martian magmatism

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Martian magmatism within recent several hundreds of millions years is still inside the certain of enigma. Enormous numbers of small cone have been identified in wide range of areas mostly on the Amazonian surface by high resolution imagings [e.g. Fagents and Thordarson, 2007, Jaeger et al., 2007]. In many cases they can be interpreted as scoria cones and rootless cones, which indicate existence of recent magmatic activity [e.g. Jaeger et al., 2010, Hamilton et al., 2011].

Volcanic cones on Mars have various morphological characteristics. For example, cones in Athabasca Valles have a second cone inside the summit vent. This structure named as double cone structure [Noguchi and Kurita, 2011a] is common in Athabasca Valles and Lake Myvatn, Iceland [Noguchi and Kurita, 2011b]. It is considered that Athabasca Valles was under lacustrine environment and covered with hot lava in the recent past, which generated a lot of rootless cones in this area.

Throughout Noachian and Hesperian, intensive activity of shield volcanism was evident. By connecting these change of the style of volcanism is suggested by Kurita and Ohmori, 2011; from concentrated large volcanic edifice forming eruption to small but wide-spread flood type eruption. In this presentation we report global distribution of cone morphology by extensive survey of high resolution images. We found several new locations having cone morphology, which have not been described before. As a whole, clustering near the dichotomy boundary seems evident.

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