Comparative Study of the Moon and Mercury: Rupes, their Topography and Origin

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Rupes of the Moon and Mercury are comparatively studied on their topography and origin. Images of rupes taken by Kaguya TC and MI, Lunar Reconnaissance Orbiter LROC for the Moon , and MESSENGER MDIS for Mercury are downloaded from Kaguya Data Archives and NASA Planetary Data System. The images are processed and mosaicked to investigate their feature and topography using USGS Integrated Software for Imagers and Spectrometers ISIS program package.
Thirty-one rupes on Mercury are described in IAU approved Gazetteer of Planetary Nomenclature. Only eight rupes of the Moon are named in the list. Rupes are characteristic and remarkable feature in Mercury surface thought to be originated when Mercury's interior cooled and the entire planet shrank slightly as a result. Most rupes in the Moon distribute in the outer edge of mares to attribute their origin to magma eruption. The rupes have never been found in lunar highland and farside except for Rupes Altai in nearside highland.
High resolution images and topographic data of rupes will be referred to show the difference of feature, topography, and origin in the Moon and Mercury.

Keywords: Kaguya, LRO, MESSENGER, rupes, ISIS, mosaics

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