

Detection of Mg-Spinel at Sinus Iridium

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Abstract

The present study highlights presence of Mg Spinel at the Sinus Iridium which is a crescent shaped basin having extensive basaltic plain of upper Imbrian age which is situated NW of Mare Imbrium at the near side of the Moon. For the spectroscopic detection of Spinel rich regions across the moon requires high-spectral resolution in near-infrared region measurements to recognize its diagnostic absorption features around 2.0 and 3.0 μm . The Moon Mineralogy Mapper (M^3) is one of the payloads of Chandaryaan-1 which has provided the first global hyperspectral data of the lunar surface in 85 bands from 0.46 to 2.9 μm . As many earlier worker have been reported Spinel rich sites using by M^3 which includes Moscoviense basin, crater Theophilus, and crater Endymion in Mare Humboldtianum. Presence of Mg-Spinel exposures at the periphery of inner ring basin indicates principally of lower crust origin which predates the basin-forming era.

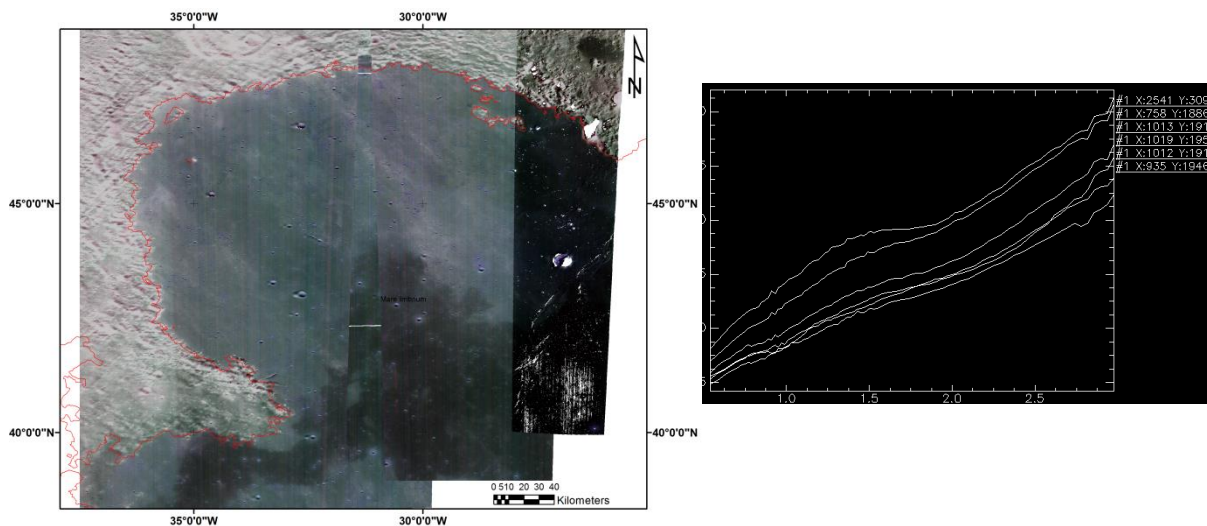


Fig: Sinus Iridium and Reflectance spectra of Mg-Spinel

References:

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