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Generation, Ascent and Eruption of Magma on the Moon: New Insights Into Source Depths, Magma Supply, Intrusions and Effusive/Explosive Eruptions (Part 1: Theory)

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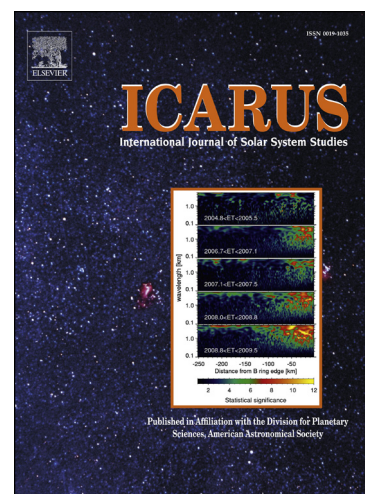
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**Generation, Ascent and Eruption of Magma on the Moon:  
New Insights Into Source Depths, Magma Supply, Intrusions  
and Effusive/Explosive Eruptions (Part 1: Theory)**

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**Abstract:**

We model the ascent and eruption of lunar mare basalt magmas with new data on crustal thickness and density (GRAIL), magma properties, and surface topography, morphology and structure (Lunar Reconnaissance Orbiter). GRAIL recently measured the broad spatial variation of the bulk density structure of the crust of the Moon. Comparing this with the densities of lunar

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