Space Science Seminar
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Flood Lava Eruptions on Earth and Mars

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Flood lava eruptions extrude large volumes of lava onto the surface of terrestrial planets and moons. These events can have profound implications for the formation of planetary crusts and atmospheres. Additionally, they can generate hydrothermal environments with astrobiological implications. Nevertheless, a major uncertainty in understanding flood-lava eruptions relates to the timescale of their emplacement. Are they the product of high effusion rate, short duration eruptions, or are they emplaced at low effusion rates over long periods of time? Addressing this issue is vital for constraining the magma-ascent processes and the environmental impacts of these eruptions. This presentation will introduce terrestrial examples of both end-member eruption styles and compare their geomorphological characteristics to the products of flood-lava eruptions on Mars to interpret their origin.

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