

Abstract Submitted
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What are the Sands of Titan Telling Us About Gravity?¹ JERRY JENSEN — The mass distributions of Mars and Venus are determined by carefully measuring the perturbations of our orbiting probes. All volcanic peaks on the planet Mars exhibit positive Bouguer gravity anomalies. Mars chasma exhibit negative Bouguer gravity anomalies. The exact opposite is true of Venus: Our orbiting probes indicate Venus mountains exhibit negative Bouguer gravity anomalies while all Venus chasma exhibit positive gravity anomalies. These incongruencies can be identified as artifacts, if the Newtonian equivalence principle incorrectly predicts the masses of orbiting bodies. The curious spectra and surface features of Titan and other moons are better explained if much greater masses can be assigned to the outer planetary systems.

¹A speculative look at celestial mechanics

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