

Relationship on Surface Morphology of Small Asteroids and Geopotential

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We compared the distribution of smooth terrains with the geopotential map of the asteroid Itokawa, and demonstrate that the distribution of smooth terrains on Itokawa is strongly controlled by the geopotential distribution. Because the geopotential distribution of an asteroid can be estimated from its shape, rotation state and density, we can predict the distribution of smooth terrains on the asteroid from these observations.

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