

Studying Martian interior structure by using geodesic data

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We inverted the Martian interior structure by using geodesic data, including Love number k_2 and tidal response factor Q . We used model parameters (V_s , V_p) obtained from the Insight mission to calculate the grain-size distribution of the Martian mantle by combining four rheology models (Maxwell, Andrade, Burgers, and Sundberg-Cooper). We found the grain size is generally larger than the Martian meteorolite found on the Earth.

Keywords: Mars, Phobos, Geodesic data, Insight mission