Geophysical Research Abstracts, Vol. 8, 00712, 2006 SRef-ID: 1607-7962/gra/EGU06-A-00712 © European Geosciences Union 2006



Ice rheology and the tidal response of Titan

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Titan is composed of ice and silicates as the other icy satellites such as Europa and Ganymede. Its interior structure is presently not well known. More can be learned about the internal structure of Titan from the expected gravity potential and tidal love number measurements of the Cassini spacecraft. In this study we present the response of Titan to the tidal forcing by Saturn, as a function of the internal structure and ice rheology.