

**EGS-AGU-EUG**  
**Joint Assembly**  
**Nice, France, 06 - 11 April 2003**

**SESSION:** Planetary and Solar System Sciences

**PS1.01** Terrestrial Planets, Surface and interior

**Convener:** Smith, D.

**Co-Convener(s):** Spohn, T.

**Abstract ID-Nr.:** EAE03-A-12792

**INTERNAL STRUCTURE OF SATURN ICY SATELLITES INFERRED FROM  
CASSINI RADIOSCIENCE EXPERIMENTS**

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We present a comprehensive review of the state of knowledge on the internal structure of Saturn's icy satellites Titan, Enceladus, Hyperion, Dione and Rhea, which are under focus of the RSS gravity science experiments of the Cassini mission. The purpose of this presentation is to describe which improvements on our understanding of these satellites are expected to derive from this mission, as a function of the observation times dedicated so far to the Radio Science observations. Other sources of information by other Cassini instruments are also taken into account in a multidisciplinary approach. For that purpose, we propose detailed modelling of the internal structure of these satellites, and consider the uncertainties expected to interfere with the inversion of the gravity coefficients, from the observational and the modelling points of view. Discussion of the uncertainties on the viscoelastic properties of the materials involved in the internal structure will be especially dealt with. A program of inversion of the degree two gravity coefficients by means of simulated annealing, has been especially designed in view of the fact that the Cassini mission is likely to provide Titan's dynamic Love number  $k_2$  with an accuracy within  $10^{-2}$ .