

Interior structure of giant planets

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Giant planets in the solar system are reference planets for extrasolar giant planets. While illuminated and with their parent star tidally interacting extrasolar planets require other observables to be addressed than the cold and fast spinning outer planets, common uncertainties in internal structure can be expressed in terms of core mass, metallicity, and shell structure. We present these parameters for Jupiter and Saturn in dependence on the equation of state and on the observables J_2 and J_4 . The same approach of modeling giant planets we then apply to extrasolar objects and discuss the information content of the potentially observable k_2 tidal Love number on the core mass of hot Jupiters.