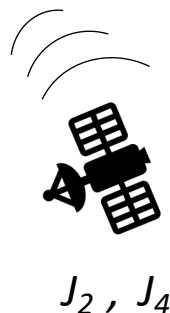
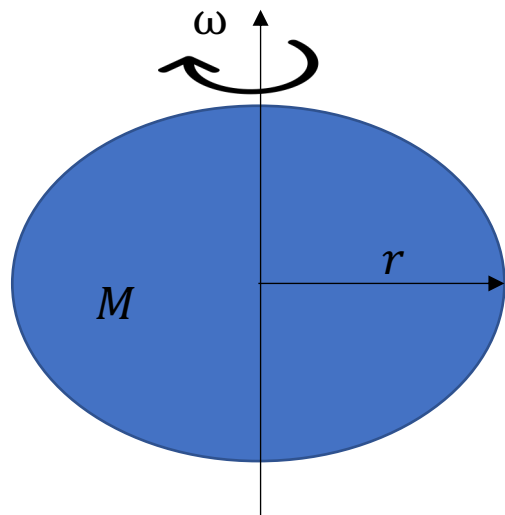


# Connecting gravity field, moment of inertia, and core properties in Jupiter through empirical structure models

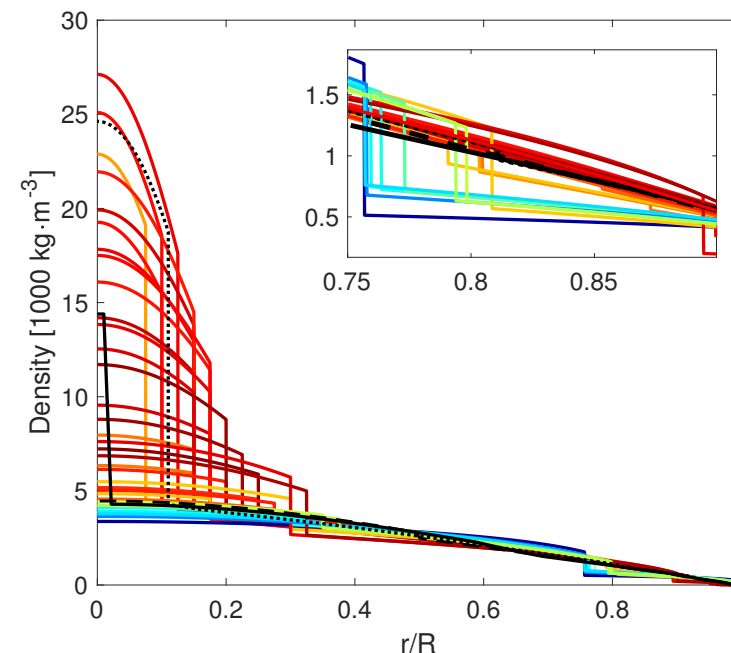


Benno A. Neuenschwander, Ravit Helled, Naor Movshovitz & Jonathan J. Fortney (2021)

Internal structure models fit observable quantities



yields non-unique solutions



can precise knowledge of the moment of inertia further constrain the solution space?

Evaluated ~ 350 empirical models

Theory of Figures 4<sup>th</sup> order

based on 3 piecewise polytropes

$$P = K\rho^{1+\frac{1}{n}}$$

1. Mol contains more/diff. information than  $J_2$  &  $J_4$
2. Need an accuracy of  $\sim 0.1\%$  to possibly constrain core and/or envelope region