## **Accepted Manuscript**

Enceladus's crust as a non-uniform thin shell: I Tidal deformations

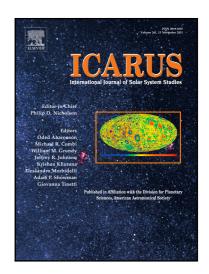
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#### ACCEPTED MANUSCRIPT

### Highlights

- Non-uniform viscoelastic thin shells coupled to tides
- Comparison to FEM models (Enceladus, Ganymede)
- Stress inversely proportional to shell thickness
- $\bullet$  South polar stress amplified by a factor of 10
- No time lag of stress due to viscosity

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