Astrophysics Seminar

Prof. Yoram Lithwick

Northwestern University

Limit Cycles of Enceladus

Time: 16:15-16:45, 16 July (Tuesday), Shanghai time

Venue: N600（TDLI）

Host: Dong Lai (赖东)

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Meeting ID: 760551216

Abstract:

Enceladus exhibits some remarkable phenomena, including water spraying through surface cracks, a global shell of ice that is librating atop an ocean, an abundance of heat escaping from its surface, and rapid outwards migration. We model the evolution of Enceladus under the action of tides and orbital dynamics, and find that Enceladus is driven into a periodic state—a limit cycle. Most of Enceladus's observed phenomena emerge in the simple model.

Biography:

I am an associate professor in CIERA & Physics and Astronomy at Northwestern University. My research is in theoretical astrophysics. I try to understand how planets, and systems of planets, form and evolve. I also work on sundry other topics in astrophysics, including convection in rotating planets and stars, accretion disks, and dark matter haloes.