BOSTON UNIVERSITY

Astrophysics Seminar
Monday, September 21, 2015

Tracking Planet Footprints in Dusty Disks

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3:15 pm
Refreshments
CAS Room 500

3:30 pm
Seminar
CAS Room 502

Abstract:

We know that most stars were once surrounded by protoplanetary disks. How these young disks evolve into planetary systems is a fundamental question in astronomy. Observations of T Tauri stars (TTS) may provide insights, particularly a subset of TTS with “transitional disks” that contain holes or gaps in their dust disk. Many researchers have posited that these holes and gaps are the “footprints” of planets given that theoretical simulations predict that a young, forming planet will clear the material around itself, leaving behind a cavity in the disk. In this talk, I will review the key observational constraints on the dust and gas properties of transitional disks and examine these in the context of theoretical planet-induced disk clearing models. I will also discuss possibilities for future work in this field in the era of ALMA observations.

Next Week

- *Leslie Rogers*
  UC Berkeley &
  University of Chicago
- Origins and Demographics of Super-Earth and Sub-Neptune Sized Planets

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