



**ASTROPHYSICS
SEMINAR SERIES**

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NOAO and CfA

**“From Planetesimals to Giant Planets: Chemical and
Dynamical Probes of Planet Formation”**

Monday, March 17, 2014

Refreshments at 3:15pm in CAS 500

Talk begins at 3:30pm in CAS 502

Abstract:

Work with the Spitzer Space Telescope revealed that emission from water and organic molecules is commonly present in the mid-infrared spectra of disks surrounding young stars. I will describe how these features might be used to help lift the veil on a very early stage of planet formation, the formation of planetesimals, those theoretically fundamental but observationally elusive building blocks of planets in core accretion theory. I will also describe some results from high resolution spectroscopy that suggest that forming high-mass giant planets may reveal themselves through non-axisymmetric signatures of their presence, e.g., circumplanetary disks and eccentric inner rims.