



**The University of Western Ontario
DEPARTMENT OF PHYSICS AND ASTRONOMY**

PHYSICS & ASTRONOMY COLLOQUIUM

Date: Thursday, 8th March 2012

Time: 1:30 p.m.

Location: Physics & Astronomy Seminar Room 22

Dr. Travis Barman

Lowell Observatory
Flagstaff, Arizona

"Direct Imaging and Spectroscopy of Young Giant Planets"

ABSTRACT

Several young gas giants in wide orbits (> 10 AU) have now been directly imaged. These exciting discoveries provide new insights into the formation and early atmospheric properties of giant planets. This talk will focus on recent attempts to measure the near-infrared spectra of two planets orbiting the star HR8799. These data have aided in the characterization of the planets' cloud and chemical properties, but also highlight the many difficulties we face when modeling planet atmospheres.

The few planets imaged so far are just the beginning. New instruments, tailor made for high-contrast imaging, are coming online this year and will reveal dozens of young planets. These instruments will also provide low resolution near-IR spectra of each new planet, revealing a wealth of information across a wide range of planet masses and ages. Given the lessons we are learning from systems like HR8799, interpreting these data will not be easy and significant observational and planet modeling obstacles must be overcome.

Coffee & cookies will be available, courtesy of

