



2016 SPITZER LECTURER

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## COLLOQUIUM

Tuesday, May 10, 2016

11:30-12:30 followed by Bahcall Lunch

### The Panchromatic Hubble Andromeda Treasury: Using Stars to Understand Dust

The Panchromatic Hubble Andromeda Treasury is an HST multicycle program to image the north east quadrant of M31 to deep limits in the UV, optical, and near-IR. The HST imaging has resolved the galaxy into over 150 million stars (comparable to  $\sim 1/2$  the number of stars in SDSS), all with common distances and foreground extinctions. As its legacy, this survey adds M31 to the Milky Way and Magellanic Clouds as a fundamental calibrator of stellar evolution and star-formation processes for understanding the stellar populations of distant galaxies. I will briefly describe the survey strategy, data reduction, and key data products. I will then highlight new work using the NIR stellar populations to constrain the large scale properties of the cold ISM, with 25 pc resolution. These new maps offer the highest resolution available in M31, and point to surprising challenges facing models of dust emission.

Thursday, May 12

Stellar  
Populations  
as a Generic  
Chronometer

Monday, May 16

Stars  
are  
Still  
Interesting

Tuesday, May 17

Stellar  
Populations  
as Constraints on  
Galaxy Formation

Thursday, May 19

Planning  
for the Next  
UV-Optical-NIR  
Space Telescope

ALL TALKS 11:30-12:30 IN PEYTON HALL AUDITORIUM