

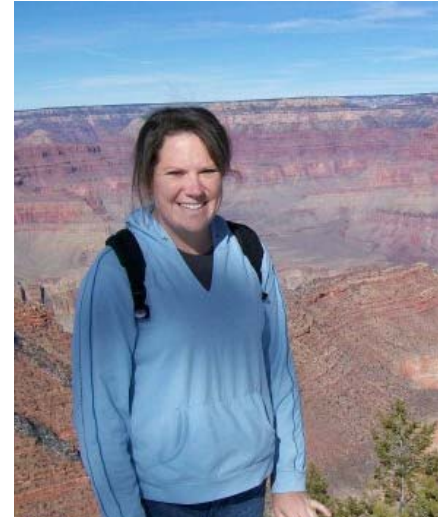
Astrophysics Seminar

Monday, October 16, 2017

Allison Kirkpatrick
Yale

Dusty Star Forming Galaxies in the Distant Universe

At $z = 1 - 3$, the formation of new stars is dominated by massive, dusty galaxies, whose far-IR emission indicates they contain colder dust than their counterparts in the local Universe. I explore the reasons for the evolving IR emission of similar galaxies over cosmic time using three samples of dusty galaxies. Despite similar infrared luminosities, $z > 0.5$ dusty star forming galaxies have an order of magnitude higher dust masses and 5 K colder dust temperatures. The increase in dust mass is linked with an increase in the gas fractions of dustystar forming galaxies with redshift. I find that dusty star forming galaxies are predominantly located on the main sequence at $z=1-2$, and I explore whether an active galactic nucleus is linked with declining star formation in these galaxies. Finally, I make predictions for the demographics of dusty galaxies that we will be able to observe with the James Webb Space Telescope at $z=1-2$.



3:30pm in CAS 502. Refreshments served at 3:15pm in CAS 500.



Next Week
Katherine Whitaker
University of Connecticut