

SAN DIEGO STATE UNIVERSITY DEPARTMENT OF PHYSICS AND DEPARTMENT OF
ASTRONOMY COLLOQUIUM

Speaker: Dr. Caitlin Casey -- University of California, Irvine

Topic: Getting the Census Right: The History of Cosmic Star-Formation and
Importance of Galaxy Mergers (or not)

Time: 3:00 PM, Friday, February 13, 2015 (refreshments served at 2:45 PM)

Place: Room 215, Physics-Astronomy Building (PA-215)

Abstract:

Whether many of the Universe's stars are formed in galaxy mergers or quiescent, secularly evolving Milky Way-type disk galaxies is fiercely debated. Locally, dusty infrared galaxies are all driven by major mergers of gas-rich disk galaxies, but their origin is less clear at high-redshift. Observing the most luminous star-forming galaxies -- galaxies which are rare but produce huge numbers of stars very rapidly -- provides an important method of studying galaxy evolution and the stellar mass assembly of the early Universe. Infrared observations are uniquely useful since they probe star formation directly, as seen from dust-reprocessed emission of ultraviolet light from young stars. I will describe some of the latest research surrounding infrared-luminous starburst galaxies, from low to high redshift, and present some of the conundrums of this type of research. Our long-term goal is to understand the triggering mechanisms for star formation episodes in extreme, ultraluminous starburst environments, how they relate to star formation in more common 'Milky Way' type galaxies at high-redshift, and what the implications are for galaxy evolution at very early times.