

NRAO/Socorro Colloquium Series**Caitlin Casey***Univ. of Texas at Austin*

The Universe's most extreme star-forming galaxies**Abstract:**

Dusty star-forming galaxies (DSFGs) host the most intense stellar nurseries in the Universe. Their unusual characteristics (SFRs=200-2000 M_{sun}/yr) pose a unique challenge for cosmological simulations and galaxy formation theory, particularly at early times. Although rare today, they were factors of 1000 times more prevalent at $z\sim 2-5$, contributing significantly to the buildup of the Universe's stellar mass and the formation of high-mass galaxies. However, an ongoing debate lingers as to their evolutionary origins at high-redshift, whether or not they are triggered by major mergers of gas-rich disk galaxies, or if they are solitary galaxies continually fed pristine gas from the intergalactic medium. I will discuss some of the latest observational programs dedicated to understanding their origins and prevalence at early times, their context in large scale structure (including how they might be uniquely useful as probes of early galaxy clusters in formation), and future long-term observing campaigns that will reveal their relationship to 'normal' galaxies, thus teaching us valuable lessons on the physical mechanisms of galaxy growth.

October 2, 2015**11:00 am****Array Operations Center Auditorium****All NRAO employees are invited to attend via video, available in Charlottesville Auditorium, Green Bank Auditorium, and VLA Video Conference Room.**
