

**NRAO/Socorro Colloquium Series**

**Jackie Hodge**

*NRAO-CV*

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**Revealing the gas-star formation connection over cosmic time**

**Abstract:**

Understanding how galaxies formed their stars over cosmic time is one of the most fundamental questions in modern-day astrophysics.

Thanks to deep surveys in the rest-frame optical/UV and color-selection techniques, the last decade has seen dramatic progress in our ability to answer this question, with the star formation history of the universe now constrained through the era of galaxy assembly at  $z \sim 1-3$  and all the way out to the epoch of reionization. Yet despite such advances, little is currently known about the content, properties, and evolution of the underlying gas reservoirs ultimately fueling the star formation. I will present recent progress in detecting and mapping the star-forming interstellar medium in high-redshift galaxies, including a detailed case study of the gas-star formation connection in a  $z \sim 4$  submillimeter galaxy, as well as current efforts to expand the sample size beyond one.

I will end with a discussion of future prospects for understanding the nature of high-redshift star formation and, consequently, how today's galaxy population developed through cosmic time.

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**May 1, 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.**

Local Host: C. Carilli

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