

Star Formation from Molecular Clouds Across Galaxies

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Abstract:

In galaxies stars form in collections of gas known as molecular clouds. Historically astronomers have observed entire galaxies, or large regions of galaxies, containing many of these star-forming clouds. Only over the past decade have we been able to observe individual star-forming clouds directly. In this talk I will introduce the tools that we use to observe star formation and gas, both within our own Milky Way Galaxy and other nearby galaxies. I will describe how the process of star formation can differ between different types of galaxies and also different environments within a single galaxy. Finally, I will connect these observations of local galaxies to the current theories of the star formation process. This talk will be an overview of how stars form, and how astronomers study star formation, both in our own Galaxy and beyond.



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Allegro Fellow and Leiden Observatory Research Associate, From November 2020. PhD in Astrophysics, 2020, McMaster University, Hamilton, Ontario, Canada, work on dense gas and star formation in nearby galaxies. MSc in Astrophysics, 2013, Bonn University & Max Planck Institut für Radioastronomie, Bonn, work on methanol as a probe of physical conditions in star forming regions. BSc with Honors Physics and Astronomy, 2011, University of Massachusetts, Amherst, Amherst, MA, USA, work on the role of convergent gas streams in producing star formation.

Teaching in physics and astronomy at University of Massachusetts (2009-2010) and McMaster University (2016-2019). Research supervision Leiden University (from 2020).

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