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Molecular abundances in the outer Galaxy and their relation with the Galactocentric distance

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The outer Galaxy is characterized by a sub-Solar metallicity that decreases with increasing distance from the Galactic center. Therefore, molecule formation and survival processes in star-forming regions within the inner and outer Galaxy are expected to differ and may depend on the Galactocentric radius. To better understand how chemistry evolves throughout the Milky Way and how star formation occurs in such a metal-poor environment, it is essential to study the chemical composition of star-forming regions in the outer Galaxy. In this talk, I will present the latest results concerning the study of molecular abundances of star-forming regions as a function of the Galactocentric distance. The outcome of this work has important implications for the chemistry occurring in the outermost star-forming regions of the Galaxy and can help to constrain models adapted for lower metallicity environments to set the boundaries of the Galactic habitable zone.

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