

Molecules and planets in the outer Galaxy: is there a boundary of the Galactic Habitable Zone?

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Galactic Chemical Evolution: impact of stellar yields and link with the Galactic Habitable Zone

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The chemical evolution of the elements in the Milky Way is a key diagnostic to understand the enrichment history and the abundance distribution of metals necessary to form Earth-like planets in the Sun and in other stars in the solar neighborhood. The production of specific elemental ratios (and isotopes) can be used to constrain different uncertainties affecting galactic chemical evolution simulations. Theoretical stellar yields are one of the major uncertainties, as it is consistently reported by several works in the literature. In this talk I will focus on the chemical evolution of key elements that underpin the formation of planets like C, N, O, Mg and Si, and I will put into context their main uncertainties, among others the stellar yields. I will discuss possible strategies to solve the puzzles that still affect the production of these elements in stars.

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