

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

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Chemical abundances of stars hosting planets

The characterization of solar-type stars is fundamental for various fields in astrophysics, including exoplanet detection and the chemical evolution of our Galaxy. In particular, the determination of chemical abundances for stars at different metallicities and ages provides us with a key insight on how and when the various chemical elements were formed within the Galaxy. The chemical trends observed in different parts of the Galaxy (thin disk, thick disk, bulge and halo) also serve to understand how those different populations were formed.

On the other hand, knowing the particular characteristics of a given star is essential to be able to detect its hosted planets as well as to characterise their mass, radius, structure and bulk internal composition. The probability of finding planets is clearly related to the chemical makeup of the stars and these planets in turn can have an influence on the stellar composition. In this talk I will review some of the important advances on studying the chemical peculiarities of stars hosting planets.

Primary author: DELGADO MENA, Elisa (Centro de Astrobiología (CSIC-INTA, Madrid))

Presenter: DELGADO MENA, Elisa (Centro de Astrobiología (CSIC-INTA, Madrid))

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