Cosmology 2023 in Miramare



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Near-field cosmology and the formation of the Milky Way

Monday 28 August 2023 16:15 (25 minutes)

In this talk, I will discuss the chemical evolution of the Milky Way in the light of the most recent observational data from Galactic surveys and missions. Indeed, we are in a golden era for this field of research thanks to the advent of large spectroscopic surveys and projects (e.g. Gaia-ESO, APOGEE, GALAH, LAMOST, AMBRE), which are enhanced by ESA Gaia mission. In this way, detailed stellar abundances of stars in the Milky Way can be measured. Then, by means of detailed chemical evolution models, it is possible to predict the chemical abundances expected in the stars of each Galactic component: halo, thick disc, thin disc and bulge. From the comparison between data and model predictions for different chemical elements from lithium to europium, we can reconstruct the history of star formation occurred in each component, and thus the history of formation and evolution of the entire Galaxy.

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