

Temporal evolution of the elements in the context of GALAH: method description and preliminary results

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The field of Galactic archaeology is currently undergoing a revolution largely thanks to a new generation of ambitious spectroscopic surveys of $>10^5$ stars, such as APOGEE, GALAH and Gaia-ESO, producing copious amounts of high quality, high resolution observations. Galactic chemical evolution plays an important role in the interpretation and understanding of this expanding body of data, with the ultimate goal of probing the mechanisms of galaxy formation. I will present an overview of my work involving age/mass determination using a full Bayesian framework of isochrones fitting. Using this method, I derived ages and masses for a sample of 200000 stars using a combination of GALAH derived stellar parameters/abundances and Gaia-TGAS parallaxes (when available). I will present the reconstructed temporal evolution of elements such as Na, Mg, Al, Si, K, Ca, Sc, Ti, Cr, Fe, Ni, Cu, Ba and many more, and the implication of these trends in the context of chemical evolution and Galactic formation.

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