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Progress report on the use of old stellar tracers to constrain the early formation of the Galactic spheroid

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The main aim of this project is to use RR Lyrae (RRL) variables to investigate the Milky Way's early formation and evolution. We will provide the largest spectroscopic dataset for RRLs, using a mix of proprietary and publicly available spectroscopic catalogs. We provide accurate measurements of radial velocities and metallicities via the Delta-S method by using single epoch spectra. Moreover, we also investigate their orbital properties using kinematic parameters provided by the astrometric satellite Gaia. The chemo–dynamical properties of old (t>= 10 Gyrs) stellar tracers will allow us to investigate the early formation and evolution of the Galactic spheroid.

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