

GALAH view of the Galactic Disk

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The GALAH (GALactic Archaeology with HERMES) Survey is a major Australian-led project to obtain detailed elemental abundances for about a million stars. By applying the technique of chemical tagging, the major goal of GALAH is to identify chemically similar groups of stars in the Galactic disk, which are most likely ancient disrupted clusters, to decipher the star formation, migration and minor-merger history of the Milky Way. The key science questions of the GALAH survey are (a) When and where were the major episodes of star formation in the disk and what drove them? (b) To what extent is the Galactic disk composed of stars from merger events? (c) How have the stars that formed in situ in the disk evolved dynamically since their birth? (d) Where are the solar siblings that formed together with our Sun?

The HERMES instrument, currently being commissioned, is a multi-fibre spectrograph being built for the AAT 3.9m telescope at Siding Spring Observatory, designed to simultaneously obtain high resolution ($R \approx 28000$ or ≈ 45000) spectra for 392 stars over a 2 degree field of view. The first GALAH science observations with HERMES are scheduled to commence in November 2013. The survey data products will include stellar parameters, radial velocities and abundances for some 25 elements. This presentation provides an overview of the GALAH survey, target selection, execution and opportunities.