Annual Scientific Meeting & Harley Wood School



Contribution ID: 71 Type: Oral

Revised Open Cluster Membership Probabilities in GALAH DR4 and their Abundances and Kinematics

Monday 7 July 2025 10:00 (15 minutes)

The radial migration and chemical evolution of the stars in the Milky Way disc can be studied through the dynamics, distribution and chemical abundances of open clusters. With the latest GALAH DR4 catalogue, we are now able to work with refined stellar parameters and up to 30 elemental abundances per star. I will present my work on obtaining a revised catalogue of open cluster stars, with 76 clusters with a total of 29097 stars with membership probabilities above 50%. This work uses the DBSCAN clustering algorithm to cluster the stars using Gaia astrometry and GALAH radial velocity. I will present the resulting cluster orbits in the Galaxy, the internal light-element abundance dispersions, and radial gradients of metallicity and alpha elements across the disc.

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Session Classification: Methods & Applications