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Exploring the Galactic halo neutron-capture enrichment through the MINCE project

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The chemo-kinematical properties of the Milky Way stellar halo contain the fossil records of our galaxy assembly history.

The Measuring at Intermediate Metallicity Neutron-Capture Elements (MINCE) project aims to provide high quality measurements of n-capture elements in halo stars at intermediate metallicity.

In the metallicity range -2.5 < [Fe/H] < -1.5, only 20% of the stars with available chemical abundances have n-capture elements

measurements.

Thus, the MINCE project represents an opportunity to shed light on the origin of n-capture elements, the early interstellar medium pollution

processes and the timescales of the Galactic halo formation.

This talk shows our recent results for about 70 Galactic halo stars observed with worldwide facilities.

In particular, the chemical abundances of 27 species (Na, Mg, Al, Si, S, Ca, Sc, Ti, V, Cr, Mn, Co, Ni, Cu, Zn, Rb, Sr, Y,

Zr, Ba, La, Ce, Pr, Nd, Pm, Sm, Eu) will be presented.

The kinematical analysis revealed that a sub-sample of stars has been accreted from Gaia Sausage Enceladus (GSE) and Sequoia.

Finally, the comparison of our results with stochastic chemical evolution models provides clues on the Milky Way, GSE and Sequoia evolution.

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