LAMOST/Subaru project: searching for metal-poor stars, moving groups and alpha-deficient stars

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Metal-poor stars in the Milky Way is of special importance to understand the history of Galactic evolution and early nucleosynthesis. While various groups of stars showing peculiarities in kinematics and/or chemical composition are evidence of the merging process of the halo, and unusual events such as particular nucleosynthesis environments. However, these stars are rare. With its large aperture and high spectrum acquiring rate, LAMOST is capable to obtain millions of spectra of Galactic stars, and hence provides an unprecedented opportunity to identify such rare objects in the Milky Way. Through the ongoing LAMOST survey, a large sample of candidates of metal-poor stars and stars with abnormal kinematics and/or abundance patterns has been obtained. Follow-up observations with Subaru telescope have been carried out to explore detailed abundance pattern for part of the sample. In this talk, we report progress of the LAMOST/Subaru project on exploring the early evolution and formation of the Galaxy through metal-poor stars, moving groups and alpha-deficient stars. We have established a catalogue of ten thousand bright very metal-poor stars ([Fe/H] < -2.0) stars including 670 candidates of extremely metal-poor ([Fe/H] < -3.0) and ultra metal-poor ([Fe/H] < -4.0) stars.

Affiliation

NAOC

Talk/Poster

Talk

Primary author: Dr LI, Haining (NAOC)

Presenter: Dr LI, Haining (NAOC)

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