

Searching for extremely metal-poor star candidates from LAMOST and SDSS survey

Tuesday, 4 December 2018 16:27 (1 minute)

The very metal-poor stars are important in the Milky Way, which record the heavy element abundances produced in the first generations of stars, thus can help us to understand the earliest nucleosynthesis events. Thanks to the large sky surveys like HK survey, Hamburg/ESO survey, SDSS, RAVE, SkyMapper, the number of very metal-poor stars especially the Extremely Metal-Poor stars (EMP, $[\text{Fe}/\text{H}] < -3$) have been increased. The abundance analysis method based on the Equivalent Width (WD) of CaII K absorption line and stellar atmospheric model had been verified to be valid to search EMP candidates especially the Ultra Metal-Poor stars (UMP, $[\text{Fe}/\text{H}] < -4$). Here we used this method to search for new EMP candidates from the LAMOST and SDSS low resolution spectra. We re-determined the $[\text{Fe}/\text{H}]$ for all the stars with $[\text{Fe}/\text{H}] < -2$ measured by the LSP3 (Xiang et al. 2016). While for the SDSS sample, we re-calculated the $[\text{Fe}/\text{H}]$ for the stars with $[\text{Fe}/\text{H}] < -2.5$ measured by SSPP. Here we present the EMP candidates found by us from LAMOST and SDSS. For those having high resolution spectroscopic analysis results, the agreements are very good.

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Talk/Poster

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Session Classification: Poster Short Presentations