

## [KST-09] Metallicity Distribution of the Galactic Halo from SDSS Photometry

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We explore the metallicity distribution of the Galactic halo based on the SDSS ugriz photometry. We use empirically calibrated sets of stellar isochrones to determine distances and metallicities of individual main-sequence stars in the halo. At heliocentric distances greater than 5 kpc, we find that the in situ photometric metallicity distribution reveals chemically divided dual halo components, which supports arguments from earlier studies based on the medium resolution spectroscopy. Our finding provides an unbiased estimate of relative fractions of each of these stellar components in the Galactic halo.

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## [KST-10] Optical and NIR Photometric Study of Star Clusters in IC10

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A dwarf irregular galaxy IC10 in the Local Group is the nearest starburst galaxy, playing an important role revealing the details of starburst. It is located close to the Galactic plane so that it suffers from severe foreground reddening. Therefore much less is known about the property of this galaxy compared with other galaxies in the Local Group. So are star clusters in this galaxy.

We present a photometric study of the star clusters in IC10. 57 star clusters are already found from HST images in previous studies, and we newly found 15 star clusters using Local Group Survey data and SUBARU/Suprime-Cam data. We derive UBVRI integrated photometry of these star clusters from the images from Local Group Survey data and JHKs photometry taken with SUBARU/MOIRCS. Then we derive age and mass of these clusters using the spectral energy distribution fitting with the simple stellar population models. We discuss the photometric and physical properties of these star clusters and its implication.