

Abundances in LMC and SMC Globular Clusters

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Abstract. We present results for abundances in four old Magellanic Cloud clusters based on high-resolution spectroscopy of individual giants.

1. Abundances

We present abundances for four old LMC and SMC clusters based on high-resolution spectra of 2-3 red giants per cluster taken with the Magellan telescope. We find that in the two clusters close to the LMC bar, NGC 1898 and NGC 2019, the [Si/Fe] ratio is enhanced by ~ 0.5 dex relative to solar, while [Ca/Fe] and [Ti/Fe] are between 0 and 0.2 dex, similar to what is seen in the inner halo Milky Way clusters. In contrast, [Ca/Fe] is 0.3 dex in the outer LMC cluster Hodge 11 and in the SMC cluster NGC 121, which is the canonical value for the old outer halo Milky Way clusters. The [Fe/H] values found are in good agreement with those previously derived from the slopes of the red giant branches. Finally, the [Fe/H] and $[\alpha/\text{Fe}]$ ratios are compared to the results from integrated spectra of these clusters.