

Metallicities of intermediate-age and old star clusters in the Large Magellanic Cloud

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Abstract. We derive photometric metallicities for 56 intermediate-age and old star clusters in the Large Magellanic Cloud from the slopes of their red-giant branches in near-infrared color-magnitude diagrams (CMDs). The cluster sample covers the LMC bar and disk to a distance of ~ 2 kpc from the LMC center. The derived cluster metallicity distribution spans a range of $[\text{Fe}/\text{H}] = +0.0\dots 1.4$ and is similar to the metallicity distribution of field stars. We find that the average cluster metallicities in certain fields of the LMC bar and disk may be different, but there seems to be no compelling evidence for a global cluster metallicity gradient in the LMC.

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