

Photometric Study of Seven Old Open Clusters

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We present a photometric study of seven old open clusters (Be 54, King 11, King 2, Be 18, Be 20, Be 32 and Be 39), based on the Washington CCD photometry obtained using the 0.9m telescope at the Kitt Peak National Observatory. We have determined the reddening and metallicity of the clusters using the simultaneous fitting method for the red giants in the color-magnitude diagram. Then we have derived other basic parameters of the clusters including distance and age. The resulting metallicity and age of the clusters are found to be $[Fe/H] = -0.7$ dex to $+0.1$ dex and $t=3$ Gyrs to 8 Gyrs, respectively. The metallicity estimates of these clusters obtained in this study are consistent with the relation between the metallicity and the galactocentric distance of other old open clusters.