
The uncertainty of age measurements in Globular Clusters by the variations of the 2nd parameter candidates

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It is believed that age controls horizontal-branch (HB) morphology of Globular Clusters besides metallicity (first parameter). However, other second parameter candidates, such as He abundance and alpha elements enhancement, could also affect HB morphology. These effects may influence to the age measurements from the main-sequence turnoff (MSTO) as well. We will measure the variations of age caused by each second parameter candidate at HB and MSTO respectively, using the well known second parameter pair M3 and M13. These results will be used to estimate the sensitivity of various age measurement techniques to the probable variations of second parameters.