

Horizontal-Branch Stars as an Age Indicator

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The surface temperature distribution of horizontal-branch (HB) stars is very sensitive to age in old stellar systems, which makes it an attractive age indicator. In our talk, we will first present the recent revision of our model calculations for the HB morphology of Galactic globular clusters. The result is more updated version of our earlier models (Lee, Demarque, & Zinn 1994), which suggests that the HB morphology is more sensitive to age. We will then present our new model calculations on the effect of HB stars in dating old stellar systems using the H-beta index. Our results indicate that the effect of HB stars is rather strong, and suggest some hint for the systematic difference in age between the globular clusters in the Milky Way and those in giant E galaxies. Finally, we will compare these results with the relative ages estimated from our far-UV dating techniques for globular clusters and E galaxies.