

Yonsei-Yale Isochrones: the Status Report

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This talk is the first major progress report of the Yonsei-Yale Isochrone Project. The use of isochrones has grown steadily. The isochrone fitting technique has been a corner stone in the study of formation and evolution of the Milky Way. Thanks to the recent improvement in the input physics (opacities and EOS, etc.), we now boast of knowing the age of the Milky Way within 20% uncertainty. Recently, various population synthesis studies have shown that isochrones can be of great power in understanding the evolution of external galaxies as well, by matching their colors and spectra. Numerous studies demonstrated that isochrones can even help us to select a more likely cosmology model, not just the age of the universe. Those also showed only carefully constructed isochrones can provide the required accuracy. Therefore, there have been demands for an updated full-set of isochrones. The Yonsei-Yale Isochrone Project has been designed and carried out to fulfill such needs. This new isochrones would create particularly positive impacts to the astronomical community in general. In this talk, the current status of the project will be reported. The comparison studies with existing isochrones of other groups will be discussed.