

**[구ST-03] The Effects of Individual Element Changed Mixture  
on the Standard Stellar Models**

Minje Beom<sup>1</sup>, Young-Wook Lee<sup>1</sup>, Jason W. Ferguson<sup>3</sup>, and Yong -Cheol, Kim<sup>1,2</sup>

<sup>1</sup>*Department of Astronomy, University of Yonsei, Seoul, 120-749, Korea*

<sup>2</sup>*Yonsei University Observatory, Seoul, 120-749, Korea*

<sup>3</sup>*Department of Physics, Wichita State University, Wichita, KS 67260-0032, USA*

This research is to study the effects of individual element(C, N, O, Na, Mg, Al, Si, and Fe) on the standard stellar models. Our work is different from previous works in two aspects. Firstly, we have chosen to maintain helium abundance and other metal elements as target elements were changed. This is to see the effects more clearly, without further complication. Secondly, the amount of enhancement or reduction in each element has been based on the recent observation of stars in globular clusters. For comparison study with observation of the globular clusters, the mass and metallicity grids of the standard stellar models have been constructed in range  $0.7\sim1.0M_{\odot}$  and  $0.0002\sim0.007$ , respectively. The opacity as a function of depth in stellar models at equal evolutionary point, as well as the evolutionary tracks, have been analyzed. The quantified shifts of the evolutionary tracks for the stellar models which have changed abundance of individual element and the astronomical meaning with physical reasons which produce the results, are going to be presented in this talk.

---

**[구ST-04] Discovery of a New Globular Cluster Candidate  
Hidden behind the Milky Way**

Jinhyuk Ryu and Myung Gyoon Lee

*Department of Physics and Astronomy, Seoul National University*

We report the discovery of a new Milky Way globular cluster (GC) candidate in the Galactic plane. We found this object during our WISE survey of star clusters in the Milky Way. We derived physical parameters of this object using the 2MASS JHK photometry. The color-magnitude diagram of the resolved stars shows a well-developed red giant branch (RGB). We derived its reddening, distance and metallicity. These results indicate that it is probably an old globular cluster, located behind the Galactic disk.