

**[AST-15] HIGH-RESOLUTION INTEGRATED SPECTROSCOPY OF GALACTIC GLOBULAR CLUSTERS**

Hak-Sub Kim<sup>1,2</sup>, Jaeil Cho<sup>1,2</sup>, Ray M. Sharples<sup>3</sup>, Alexandre Vazdekis<sup>4,5</sup>  
and Suk-Jin Yoon<sup>2</sup>

<sup>1</sup>*Equal first author,*

<sup>2</sup>*Department of Astronomy & Center for Galaxy Evolution Research, Yonsei University, Seoul 120-749, Republic of Korea,*

<sup>3</sup>*Department of Physics, University of Durham, South Road, Durham DH1 3LE, UK,*

<sup>4</sup>*Instituto de Astrofísica de Canarias, La Laguna, E-38200 Tenerife, Spain,*

<sup>5</sup>*Departamento de Astrofísica, Universidad de La Laguna, Spain*

We present new integrated spectroscopy of 24 Galactic globular clusters, observed with the Isaac Newton Telescope in La Palma. Spectra have been extracted from one core radius for each cluster, achieving high wavelength resolution of FWHM  $\sim 2.0$  Å. In combination with two previous data sets from Puzia et al. 2002 and Schiavon et al. 2005, we construct the largest database of the Lick indices for total 53 Galactic globular clusters. The empirical metallicity-index relations are given for the 20 Lick indices for the use of deriving metallicities of remote, unresolved stellar systems.

**[AST-16] Modeling of RGB mass-loss to predict the HB mass distribution in globular clusters**

Mario Pasquato

*Department of Astronomy & Center for Galaxy Evolution Research, Yonsei University*

The distributions of Horizontal Branch (HB) star color, temperature, and mass encode a great deal of information on the stellar evolutionary and (possibly) dynamical processes taking place in Globular Clusters (GCs). An accurate physical modeling of the Red Giant Branch (RGB) mass-loss process is key to solving the so-called second parameter problem. In my poster I will present the most recent advancements of an analytical model for mass-loss along the RGB. The model predicts the HB mass distribution with remarkable accuracy over a sample of 4 GCs. These results were submitted as a paper to ApJ (Pasquato et al. 2013, ApJ submitted), but here I expand on them presenting refinements to the model and a comparison with HB masses obtained from Galex ultraviolet observations.