



PHYSICS AND ASTRONOMY SEMINAR

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“The Stellar Populations of Extragalactic Globular Clusters”

Abstract

Observable at much greater distances than resolved stars, globular clusters provide important clues to galaxy evolution. It has been known for two decades that the colour distributions of globular clusters in almost all galaxies are bimodal. This colour bimodality has been traditionally interpreted as metallicity bimodality which would imply each galaxy experienced two phases of globular cluster formation. However, it has been suggested that the colour bimodality is an artefact of a strongly non-linear colour-metallicity relation and that the true globular cluster metallicity distributions are single peaked. Using metallicities derived from spectra from the SLUGGS survey for over 1000 GCs in 13 galaxies, I have shown that colour does trace metallicity and that most galaxies have bimodal globular cluster metallicity distributions. Additionally, using this dataset I have found evidence that the globular cluster colour-metallicity relation varies from galaxy to galaxy, contrary to the common assumption that this relation is the same for all galaxies.

Thursday, September 11, 2014
11:30 a.m.
Elliott Building
Room 161