

[GC33] GALEX Early-Type Galaxies in the Local Universe: The Fundamental Plane of Galaxies with Recent Star Formation Activities

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Recent GALEX observations reveal enhanced UV emission from an unexpectedly large fraction of early-type galaxies in the local universe, which has been interpreted as evidence for recent star formation. Here we have examined the physical characteristics of the recent star formation activities and investigated their influence on the various scaling relations of early-type galaxies. We discuss wide implication of our findings with a particular interest in the origin of the tilt and scatter of the Fundamental Plane. We gratefully acknowledge NASA's support for construction, operation, and scientific analysis for the GALEX mission. This work was supported by the Korea Research Foundation Grant funded by the Korean Government (KRF-2006-331-C00134).

[GC34] A study of NGC 1399 globular cluster system from multi-band photometry

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Globular clusters (GCs) have been used as an important tracer of galaxy formation history. The bimodality in GC color distribution functions - one of the most conspicuous features of GC systems - has introduced various galaxy formation scenarios, all of which are based on the basic assumption of the bimodality coming from two GC sub-populations. Recently, however, a new explanation is proposed in which the non-linear metallicity-to-color transformations can produce the color bimodality even from the unimodal metallicity spread. A crucial test against the new hypothesis is to examine the distribution functions of multi-band colors as the scenario predicts a dramatic change in color distributions depending on colors used. We have thus undertaken the multi-band (U-, B-, V-, and I-band) photometry of nearby galaxies using the 4-m Blanco telescope at the Cerro Tololo Inter-American Observatory (CTIO). In this poster we report our first result on GCs around NGC 1399, the central giant elliptical galaxy of the Fornax cluster. We discuss the power of the U-band color in placing constraints on the origin of color bimodality and present a detailed comparison between our observation and various stellar population models. This work was supported by the Korea Research Foundation Grant funded by the Korean Government (KRF-2006-331-C00134).