

[GC27] An overdensity of galaxies at $z \sim 3.7$ in the CDF-S

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We examined if there is an overdensity at $z \sim 3.7$ in the Chandra Deep Field South (CDF-S) using multiwavelength datasets. We find that 2 AGNs with spectroscopic redshift of $z \sim 3.7$ in this field. Motivated by this, we explored if these AGNs reside in an overdensity. We selected $z \sim 3.7$ candidates through B-band dropout technique and H-K color by the break at 1216 and 4000 angstrom, respectively, and evaluated photometric redshifts. Comparing the number density of $z \sim 3.7$ candidates with the number density of objects at redshift $z \sim 4$ in other region, we find that the CDF-S shows overdensity of at least a factor of two over ~ 50 sqarcmin. We will present these results in this poster, and discuss the implication of our results.

[GC28] RADIAL VARIATION OF COLOR DISTRIBUTIONS OF
GLOBULAR CLUSTERS WITHIN GIANT ELLIPTICAL GALAXIES

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The colors of globular clusters (GCs) in most large early-type galaxies are bimodal. Recently, Yoon, Yi, & Lee (2006) presented a theoretical metallicity-color relationship that has a significant inflection and showed that such a relation can produce bimodal color distributions even when the underlying metallicity distribution is unimodal. We applied this hypothesis to the radial variation of cluster color distributions within individual galaxies. It has long been thought that the radial variation of GC color distribution originates from the different spatial distribution of two GC sub-populations with distinct mean metallicity. We demonstrated that the observed variation of color distribution as a function of galactocentric distance can be a natural consequence of the higher mean metallicity of GCs towards the galaxy center. However, we hardly detect the age variation of GCs along the radius, which implies that the radial color distribution change is mainly governed by mean metallicity variation rather than age variation. We suggest that the formation of most GCs in giant elliptical galaxies occurred over a short timescale (~ 1 Gyr). This work was supported by the Korea Research Foundation Grant funded by the Korean Government (KRF-2006-331-C00134)