[포GC-07] On the Systematic Bias of Stellar Mass Estimators: The Effect of Radial Metallicity Gradient within Elliptical Galaxies

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Elliptical galaxies show the internal radial gradient of stellar metallicity in that metallicity increases toward the center. The mean metallicity increases with increasing galaxy luminosities, causing color-magnitude relations among ellipticals. Moreover, as evident from observations, ellipticals often show diversity in their radial age structures. Such a variation in stellar constituents within and among galaxies should break down to some extent the congruity of the intrinsic mass-weighted properties with the luminosity-weighted properties as proxies. In this poster, we examine the effect of radial metallicity gradient on the widely-used stellar mass estimator(i.e., $M^* \sim R \times \sigma^2$) for virialized ellipticals, and present our preliminary yet interesting result on the possible origin of the puzzling discrepancy between the stellar and dark matter masses among bright ellipticals.

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[포GC-08] An Evolutionary Connection between AGNs and GALEX UV-excess Early-type Galaxies

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Tracking galaxies'evolution by studying the relation between their AGN activity and recent star-formation (RSF) history is one of hot topics of modern astronomy. With the advent of GALEX UV observations, we may have much more accurate information than ever about RSF histories of early-type galaxies in the local universe. Benefiting from the UV data of ~ 30,000 morphologically-selected early-type galaxies, we have identified three otherwise unrecognizable RSF modes of early-types: Galaxies (a) in a quiescent mode (no UV, no Ha), (b) in a post-SF mode (UV, no Ha), and (c) in an ongoing starburst mode (UV, strong Ha). In this poster, we present a preliminary yet interesting result on the possible evolutionary connection between the AGN activities and the RSF histories of early-type galaxies.

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