[포GC-22] Photometry of dwarf galaxies in the Leo HI gas ring

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The HI ring serendipitously found in the Leo I galaxy group is unique in size in the Local Universe. It is ~200kpc in diameter with MHI~1.67 x 109M⊙, surrounding a pair of early type galaxies M105 and NGC 3384. Its origin is still under debate whether it is the remnant of formation of a galaxy group (primordial) or formed from stripped material during galaxy-galaxy interaction (tidal origin). Intriguingly a number of dwarf galaxies have been identified along the gas ring (with or without optical counterpart). Various properties of these dwarf galaxies such as dark matter content, color, and/or metallicity will allow us to pin down the origin of this large scale HI ring. We have obtained a mosaicked CFHT MegaCam image and the EVLA HI cube of the large scale gas ring. In this work we present optical and gas properties of dwarf galaxies identified in the CFHT data.

[포GC-23] Progress Report on the Relationship Between the Bright and Faint Galaxies in Abell 3659

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The properties of bright galaxies are closely related to those of their nearby neighbors and satellite galaxies. In addition, the properties of galaxies in clusters are known to be strongly affected by the cluster environment. These two environmental effects raise a question: how significantly do nearby neighbors and satellite galaxies affect the properties of bright galaxies in a cluster? To address this issue, we reduce and analyze the deep and wide-field images of Abell 3659 ($z \sim 0.0907$) in the g' and r' bands obtained using IMACS on the Magellan (Baade) 6.5m telescope. The main goal of this study is to find out the relationship between the properties of bright galaxies and those of fainter companion galaxies in a cluster. This poster is a progress report, in which we present the sample selection and the preliminary results.