## [포GC-27] High redshift galaxy clusters in ELAIS-N1/N2 fields with a new color selection technique

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Galaxy clusters, the largest gravitationally bound systems, are an important means to place constraints on cosmological models. Moreover, they are excellent places to test galaxy evolution models in connection to the environments. To this day, massive clusters have been found unexpectedly(Kang & Im 2009, Durret et al. 2011, Tashikawa et al. 2012) and evolution of galaxies in cluster have been still controversial (Elbaz et al. 2007, Cooper et al. 2008, Tran et al. 2009). Finding galaxy cluster candidates at $z>1$ in a wide, deep imaging survey data will enable us to solve the such issues of modern extragalactic astronomy. We report new candidates of galaxy clusters and their physical properties in one of the wide and deep survey fields, European Large Area ISO Survey North1(ELAIS-N1) and North2(ELAIS-N2) fields, covering sky area of  and  each. We also suggest a new useful color selection technique to separate $1 < z < 2$ galaxies from low-z galaxies by combining multi-wavelength data from the UKIRT Infrared Deep Sky Survey Deep Extragalactic Survey (UKIDSS DXS/J and K band), Spitzer Wise-area InfraRed Extragalactic survey (SWIRE/two mid-infrared bands), Canada France Hawaii Telescope (CFHT/z band), Issac Newton Telescope(INT/ u, g, r, i, z band) and Infrared Medium-deep Survey(IMS/J band).

## [포GC-28] Host galaxy of tidal disruption object, Swift J1644+57

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We present long-term optical to NIR data of the tidal disruption object, Swift J1644+57. The data were obtained with CQUEAN, UKIRT WFCAM observations. We analyze the morphology of the host galaxy of this object and decompose the bulge component using high resolution HST WFC3 images. We conclude that the host galaxy is bulge dominant. We also estimate the multi-band fluxes of the host galaxy through the light curves based on the long-term observational data. We fit the SED models to the multi-band fluxes of the host galaxy and determine its stellar mass. Finally, we estimate the mass of the central super massive black hole which is responsible for the tidal disruption event. The estimated stellar mass and black hole mass are $\sim 10^{9.1} M_{\odot}$, $\sim 10^{6.8} M_{\odot}$, respectively. We compare our results to other previous estimates.