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We report preliminary results from our radio study of X-ray selected complete AGN sample in the Local Universe ( $z < 0.05$ ), using the KVN/KaVA. The main goal is to probe the parsec-scale radio properties of the X-ray selected AGNs, which has not been done systematically before. The BASS (Burst Alert Telescope AGN spectroscopic survey) sample from the *Swift*-BAT hard X-ray all-sky survey is the least biased AGN sample against dense gas/torus obscurations compared to optically selected AGNs, providing ideal targets to study the general properties of local AGNs in radio wavelengths. Combining our radio data with BASS X-ray/optical measurements, we will probe the relations of radio powers with the fundamental quantities of black holes such as bolometric luminosity, black hole mass, and Eddington ratio. Using these relations, we will discuss our current understandings of how accretions and jets of local AGNs are linked together, and what they imply for the nature of our AGN sample.

#### [포 GC-08] On the physical origins for the two-halo conformity

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The two-halo conformity is that if a central galaxy in a dark matter halo is quenched in star formation, the central galaxies in other neighboring halos (within  $\sim 4$  Mpc) even with no causal contact seem conformed to be quenched. The galactic similarity ranging far beyond the virial radius of each dark matter halo cannot be explained by known environmental effects (ram pressure, tidal interaction, etc.). Here, using a cosmological hydrodynamic simulation, we put forward new physical origins for the phenomenon: the back-splash galaxies scenario and the halo assembly bias scenario. We discuss the relative importance of the two explanations on a quantitative basis.

#### [포 GC-09] Faint Quasar Candidates at $z \sim 5$ in the ELAIS-N1 field

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Faint quasars are important to test the possibility that quasars are the main contributor to the cosmic reionization. However, it has been difficult to find faint quasars due to the lack of deep, wide-field imaging data. In this poster, we present our efforts to find faint quasars in the ELAIS-N1 field through the deep data (iAB  $\sim 25$ ) obtained by the Subaru Hyper Suprime-Cam (HSC) Strategic Program survey. To select reliable quasar candidate, we also use the near-infrared (NIR) data of the Infrared Medium-deep Survey (IMS) and the UKIRT Infrared Deep Sky Survey (UKIDSS) - Deep Extragalactic Survey (DXS). Using multiple-band color cuts, we select high redshift quasar candidates. To confirm them as high redshift quasars, candidates are observed by the SED camera for QUasars in EARly uNiverse (SQUEAN) instrument in several medium band filters that can sample the redshifted Lyman break efficiency. The quasar sample will be used to study the growth of BH and stellar mass, the relation between the quasar activity and the host galaxy, and their contribution to the cosmic re-ionization.

#### [포 GC-10] Rest-frame optical spectroscopic properties of submillimeter galaxies

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Considering the statistical redshift distribution of the known submillimeter galaxy (SMG) population, most of the significant optical emission lines such as [OII] $\lambda 3727$ , H $\beta$ , [OIII] $\lambda 5007$ , and H $\alpha$  are redshifted into near-infrared. Using the 3D-HST grism data that provides low resolution NIR spectroscopy over the several deep fields covered by the JCMT large program S2CLS, I investigated