

### [GC-29] Radio-loud AGN in the AKARI-NEP field

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A unique ensemble of datasets is available for the AKARI North Ecliptic Pole (NEP) field, having been observed virtually across the whole electromagnetic spectrum. We have undertaken a study of radio sources in the NEP field and in particular radio-loud AGN. We present preliminary results concerning the identification of these radio-loud AGN using a host of different selection criteria. We aim to study the host galaxies of these systems within the current framework of galaxy evolution and the role that AGN play in it.

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### [GC-30] The $M_{\text{BH}}-\sigma_*$ relation of local active galaxies

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The black hole mass-stellar velocity dispersion ( $M_{\text{BH}}-\sigma_*$ ) relation observed in the present-day universe has motivated numerous studies on the black hole-galaxy co-evolution. It is crucial to define the  $M_{\text{BH}}-\sigma_*$  local active galaxies since cosmic evolution of the correlations is calibrated based on the local relation. However, stellar velocity dispersion is difficult to measure in active galaxies due to much higher AGN continuum than stellar pseudo-continuum, resulting in a small sample with reliable velocity dispersion measurements for studying the AGN  $M_{\text{BH}}-\sigma_*$  relation. To increase the sample size and improve the measurements, we obtained high S/N near-IR spectra for 3 local AGNs, i.e., NGC 3227, Akn 120, 3C 390.3, for which reverberation black hole masses are measured, using the TripleSpec at the Palomar 5-m Telescope. By investigating aperture effect and correcting for rotation component, we determine the luminosity-weighted  $\sigma_*$ , based on the spatially resolved kinematics and compare them with optical measurements from literature. Combining our new measurements with literature data, we present an improved  $M_{\text{BH}}-\sigma_*$  relation for the enlarged sample of reverberation-mapped AGNs.