

### [GC-45] Probing the Starburst-AGN Connection in Type I AGN based on the 3.3 micron PAH lines.

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To probe the connection between starburst and AGN activity, we investigate the relation between the 3.3 micron PAH emission and AGN properties based on the new AKARI observations and the data collected from the literature. Using a sample of low- $z$  Type I AGN, we measure the global 3.3 micron PAH luminosity from the AKARI slit-less spectroscopy. The 3.3 micron PAH emissions are detected for 7 out of 26 target galaxies, but we find no strong correlation between the 3.3 micron PAH emission and AGN luminosity, suggesting that global star formation may not be tightly related with AGN activity. In contrast to global star formation, the nuclear 3.3 micron PAH emission luminosity, which are measured from ground-based long slit spectroscopy with a narrow slit, correlates with AGN luminosity. These results imply that starburst and AGN activity are directly connected at the nuclear region.

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### [GC-46] Probing Tidal Field Strength of Virgo Cluster Galaxies

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We probe the tidal perturbation parameter  $f$  of Virgo cluster galaxies. The goal is to measure the strength of tidal fields around individual galaxies to get better understanding gravitational processes that can affect galaxy evolution in the cluster environment. The  $f$ -value is defined as a logarithmic ratio between the net internal gravitational force within a galaxy and the external tidal force exerted by a neighboring galaxy. Hence, it provides one way to quantify the tidal field strength of galaxies, in particular, due to galaxy neighbors. In this study, we determine  $f$ -values of the VIVA galaxies, samples of the VLA Imaging study of Virgo galaxies in Atomic gas, using the Extended Virgo Cluster Catalog (EVCC) which is the most complete Virgo cluster catalog to date. With diagnostics based on the HI gas and R-band morphologies, we discuss the impact of the tidal fields on the evolution of the VIVA sample. Also, we compare the tidal field strength to the intra cluster medium (ICM) pressure for each sample galaxy to pin down environmental processes at work.