

**[표GC-55] Correlation between galaxy mergers and AGN activity**

Jueun Hong<sup>1</sup>, Myungshin Im<sup>1</sup>

<sup>1</sup>*CEO/Dept. of Physics and Astronomy, Seoul National University*

Using deep images taken at Maidanak 1.5m telescope, at McDonald 2.1m telescope and Canada-France-Hawaii Telescope, we investigated the fraction of merging galaxies in hosts of 26 AGN which are brighter than  $M = -22.2$  mag and nearer than  $z = 0.2$ . We found that 9 to 12 of 26 AGN host galaxies show the evidence of mergers like tidal tail, shell via visual inspection. We also studied with the merging fraction of a control sample, SDSS Stripe82 galaxies. Surface brightness limit and magnitude are similar to that of the AGN sample. We found that merging fraction of the AGN sample is higher than that of normal galaxy samples. This result implies that AGN activity may be correlated with merging. We also investigated the detailed morphology of merging feature. About  $\sim 1/4$  of control sample classified as a tidal and tidal+dust are shell structures. On the other hand only one of the AGN sample shows shell structures. Almost all merging AGNs show tidal tail features. From point of view that tidal tail may be at the early stage of merging, and shell may be at the late stage of mergers, this result implies that AGN may be evolved into early-type galaxies after merging.

---