

## ABSTRACT ONLY

### THE ROLE OF MAJOR MERGERS IN BLACK HOLE GROWTH AND GALAXY EVOLUTION

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A clear picture is emerging in which rapid supermassive black hole (SMBH) growth episodes are directly linked to major galaxy mergers, while slower growth phases can be triggered by secular (internal) processes and/or minor mergers (Treister et al. 2012). In this scenario, the more traditional Active Galactic Nuclei (AGN) unification paradigm in which orientation is the main parameter only holds at lower luminosities, while for the more violent accretion events, triggered by major mergers, we find evidence for an evolutionary sequence in which the AGN is first heavily obscured (Compton-thick), to then reveal an unobscured quasar.

In this talk, I will present observational evidence in support of this scenario, both in the local Universe and at high redshifts. In particular, I will discuss the main results from a NuSTAR AO-1 program aimed to obtain high energy,  $E > 10$  keV, observations for a sample of 12 nearby galaxies undergoing major mergers. These data allow us to detect even heavily obscured SMBH growth episodes, including the detection for the first time of a hidden AGN in NGC6286 (Ricci et al. 2016). Then, I will present the first results from our program aimed to obtain optical and near-IR Integral Field Unit (IFU) spectroscopy and ALMA maps for a sample of confirmed nearby dual AGN (separation  $< 10$  kpc), including the archetypical galaxy NGC6240. Clear evidence for complex morphologies and kinematics, outflows and feedback effects can be seen in these systems.

The importance of these high-luminosity, merger-triggered, obscured SMBH growth episodes, identified in the IR as ULIRGs, for the cosmic history of SMBH growth and its connection to galaxy evolution will be discussed.

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