

Characterising dual-AGN candidates in galaxy mergers

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Galaxy mergers are thought to play a significant role in triggering accretion onto the central super massive black holes (SMBHs), resulting in Dual/Offset AGN. These systems are crucial probes of the accretion history of the universe, but are challenging to detect and characterize, therefore a detailed understanding remains unclear. The X-ray study of optically selected dual-AGN candidates with XMM-Newton and Chandra revealed that (i) dual AGN exhibit higher nuclear obscuration with respect to isolated systems and (ii) around 50% of optical dual-AGN appear as single X-ray nuclei, raising questions about their true nature, the role of X-ray absorption and possible classification. To further investigate the emission properties of these systems, we performed a multi-wavelength study (X-ray vs mid-IR, NIR) with archival and new data. In this talk, I will present the key results of our study and the future perspectives on revealing BH activation mechanisms in galaxy mergers through Integral Field Spectroscopic studies.

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Astrofisica relativistica e particellare

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