

The restless nature of AGN: 10 years later



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Early-stage AGN with extreme radio variability

Narrow-line Seyfert 1 (NLS1) galaxies are a class of active galactic nuclei (AGN) identified almost 40 years ago, but still not well understood. They are preferentially hosted by disk-like galaxies, and harbour fast-growing, low-mass supermassive black holes, accreting at high Eddington ratios. Some tens of NLS1s have been detected in gamma-rays, proving the presence of powerful relativistic jets in them. An intriguing subset of jetted NLS1s was discovered in late 2010s when seven previously radio-silent sources were detected at Jy-levels at 37 GHz at Metsähovi Radio Observatory (Finland). These sources proved to exhibit extremely high-amplitude radio variability, at levels previously unseen in AGN. This launched an extensive, still ongoing, investigation into these sources, utilising several facilities - such as the JVLA, VLBA, Effelsberg, OVRO, IRAM, GranTe-Can, Swift, XMM-Newton, and Fermi - across the electromagnetic spectrum. In this talk I will summarise our efforts so far to understand and explain the nature of these extraordinary AGN.

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