

The most luminous quasars: probing the AGN/galaxy co-evolution at its extreme

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Abstract

We have undertaken an extensive multi-wavelength observing program (from mm-wave to hard X-rays) to investigate the role of nuclear activity in SMBH-galaxy self-regulated growth via extended outflows. Specifically, we look into the properties of high- z , WISE-selected, hyper-luminous quasars at $2 < z < 3$ and the impact of AGN-driven feedback on their host galaxies. I will review the most relevant results obtained to date with emphasis on the discovery of [OIII] outflows in high- z , hyper-luminous ($\geq 10^{14} L_{\odot}$), dust-enshrouded quasars and the relation between AGN properties (obscuration, Eddington ratio and luminosity) and large-scale winds.