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

E. Piconcelli[1] at al.

[1] *Osservatorio Astronomico di Roma (INAF), Via Frascati 33, Monte Porzio Catone, I-00040, Italy*

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.