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# The WISSH survey: BLR vs NLR winds in the most luminous quasars

*Thursday, 11 October 2018 15:30 (15 minutes)*

I will review the most important results from near-IR spectroscopic observations of WISE/SDSS selected hyper-luminous (WISSH) quasars, designed to accurately probe the role of nuclear activity in SMBH-galaxy self-regulated growth via extended outflows. The total sample consists of 90 broad-line quasars at the brightest end of the AGN luminosity function (L_bol > 1e14 L_sun) and at the peak of their number density (z ~ 2.5 - 3.5).

We found that WISSH quasars are typically powered by highly accreting (0.3-3 Ledd), ten billion solar masses SMBHs, demonstrating that WISSH provides a simple and valuable tool to complete the census of the extreme SMBH population in the Universe. The huge luminosity drives very powerful winds both at BLR and NLR scales. We discovered [OIII] emission lines with a broad profile, tracing ionized outflows with kinetic power up to ~4% of L_bol in ~30% of the sample.
Remarkably, the remaining 70% of quasars lacks [OIII] emission but shows strong winds traced by 3,000-8,000 km/s blueshifts of the CIV broad emission line, revealing strong radiatively driven winds that dominate the BLR kinematics.

Finally, I will discuss nuclear and outflows properties of WISSH quasars in terms of inclination angle and fundamental AGN parameters such as bolometric luminosity, SMBH mass, Eddington ratio and the shape of the UV-X-ray continuum.

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