



X-RAY ASTRONOMY 2019

Current Challenges and New Frontiers in the Next Decade

8-13 September 2019
CNR/INAF Research Area, Bologna, Italy

Contribution ID: 174

Type: **Contributed**

The realm of hyperluminous quasars

Thursday, 12 September 2019 10:00 (15 minutes)

We are performing a systematic study of the the X-ray properties of the most luminous ($L_{bol} > 10^{47}$ erg/s) quasars in the Universe spanning from optical- NIR- MIR-selected sources at $z=2-3$. These AGN exhibit widespread outflow signatures at all scales and they are the sources where we expect quasar feedback to manifests in full force. Hence they are in a transit phase, predicted in quasar merger-driven evolutionary scenarios, where powerful winds sweep out the obscuring-dust and leads to optically bright quasars. Our study aim at investigating the link between nuclear energetic output and the acceleration of winds. We find a mixture of unobscured and obscured sources with column density values reaching $\sim 10^{24}$ cm⁻². Given the high Eddington ratio this is indicative that the nuclear regions in most of these systems are in the blow-out phase. Furthermore we discover that, despite the similarly high bolometric luminosity, the coronal X-ray radiative output varies by 1.5 dex and anti-correlate with the broad line region wind velocity. This evidence points to a link between the presence of winds and the nuclear radiative output.

Topic

Active Galactic Nuclei: accretion physics and evolution across cosmic time

Affiliation

INAF - OAR

Primary author: ZAPPACOSTA, Luca (Istituto Nazionale di Astrofisica (INAF))

Co-author: PICONCELLI, Enrico (Istituto Nazionale di Astrofisica (INAF))

Presenter: ZAPPACOSTA, Luca (Istituto Nazionale di Astrofisica (INAF))

Session Classification: ACTIVE GALACTIC NUCLEI