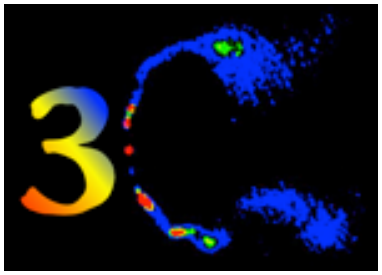

Contribution ID: **85** Type: **not specified**

X-ray and multi-wavelength observations of z>0.5 3CRR radio galaxies.

Monday, 16 September 2019 16:00 (30 minutes)

The complex nuclear structures of active galactic nuclei (AGN)
lead to strong selection effects in most wavebands, including the X-ray.
Highly obscured AGN are hard to find, and identify. Estimating their
numbers, a function of luminosity and redshift, remains a major quest
both for AGN science, and in understanding the level of accretion
power particularly in the early Universe.
Multi-wavelength observations of the low-frequency, radio-selected 3CR luminous
AGN sample (z>0.5) largely avoid selection biases, revealing the obscured AGN,
and probing both their intrinsic, and orientation-dependent properties.
Chandra, Spitzer, Herschel and multi-wavelength observations confirm that
the FIR (> ~40um) does not depend on orientation and that ~half the sample
is significantly obscured with ~a quarter being Compton thick. This is a
larger fraction than typically estimated for optically- or X-ray-selected,
high-luminosity samples. Once the primary X-ray power-law is obscured, AGN
X-ray spectra are complex, and detecting and estimating X-ray obscuration
levels becomes highly uncertain. This is particularly true for sources close
to the flux limit. The loss or miss-classification of obscured AGN in surveys
also results in large (*10-1000) uncertainties on their intrinsic luminosities.
The use of independent measures of the AGN power, such as the low-frequency
radio, help to counteract such problems, and so to probe the intrinsic AGN
properties.

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