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: **95** Type: **Poster**

The intrinsic fraction of type 2 AGN

Friday 13 September 2019 17:14 (2 minutes)

Most AGN studies find that the obscured AGN fraction decreases as the luminosity increases. This is usually explained by invoking receding torus models. However, recent results for the intrinsic type 2 fraction based on a complete hard X-ray selected sample (BUXS: Bright Ultrahard XMM-Newton Survey) showed little to no luminosity dependence, and uncovered a population of hidden luminous Compton-thick AGN. We furthered this analysis by applying a fully Bayesian approach to derive the distribution of column densities (N_H) for the 252 AGN with spectroscopic redshifts within BUXS. For a sub-sample of type 1 AGN at $z = 0.05 - 1$, we compared these results to the ones obtained for the optical obscuration. We fitted the optical spectra to classify the sources in types (1.0-1.9), based on emission line ratios, and to measure the optical-UV continuum obscuration (A_V). We find that there is a clear tendency towards increasing A_V and N_H from 1.0 to 1.9 objects, with a statistically significant difference between the 1.0-1.2-1.5 and 1.8-1.9 subsets, showing that they are different families. Regarding the dust-to-gas ratio (A_V vs. N_H) we do not find a clear tendency, instead the distribution shows a large scatter. We have also explored the suitability of the ratio of the broad Hα and Hβ emission lines to estimate the obscuration in type 1 AGN, finding average values similar to previous ones but with substantial dispersion, concluding that this ratio should be taken with extreme caution, if not discarded as an obscuration measurement altogether.

Topic

Active Galactic Nuclei: accretion physics and evolution across cosmic time

Affiliation

IFCA (CSIC-UC, Spain)

Authors: CORRAL, Amalia; MATEOS IBÁÑEZ, Silvia (Instituto de Física de Cantabria); CARRERA, Francisco J (Instituto de Fisica de Cantabria (CSIC-UC), Spain); Mr ORDOVAS-PASCUAL, Ignacio (IFCA (CSIC-UC), Spain)

Presenter: CORRAL, Amalia

Session Classification: POSTER SESSION