

## Poster Flash Talk2: Obscured AGNs in the third Deepest XMM-Newton Field

*Tuesday 19 November 2024 16:50 (10 minutes)*

“In this project, we present preliminary results from a systematic X-ray analysis combined with multiwavelength photometric and spectroscopic data to identify and characterize obscured and highly obscured (Compton-Thick or CT) AGNs in the XMM-Newton 1.75 Ms Ultra Narrow Deep Field (XMM175UNDF) survey, one of the deepest XMM-Newton survey to date.

We analyzed a sample of 118 X-ray AGNs with redshifts up to  $z \sim 2.5$  and optical/Infrared counterparts. We searched for typical multi-wavelength signatures of CT-AGNs, based on their spectral energy distribution (SED), UV/optical-mid-IR photometric colors, and X-ray spectroscopic features such as  $\text{FeK}\alpha$  emission line intensity and reflected component.

We explored potential correlations between the main spectral properties of the obscured AGN population, such as column density, luminosity,  $\text{FeK}\alpha$  line, photon index, and black hole mass. We found evidence of an anti-correlation between the luminosity and the  $\text{FeK}\alpha$  line equivalent width (known as the “Iwasawa-Taniguchi effect”), suggesting this relation prevails in the most obscured AGNs. Additionally, we observed an over density distribution of obscured AGNs around a cosmic filament at  $z = 0.44$ , potentially linked of dust lanes in the host galaxy or underlying presence of BAL QSOs at this redshift.”

**Presenter:** ELÍAS CHÁVEZ, Mauricio (Universidad Nacional Autónoma de México)