Contribution ID: **128** Type: **Oral Presentation**

Multi-Wavelength Observations of AGN Activity in the Fornax Cluster

Friday 11 July 2025 11:10 (20 minutes)

Active Galactic Nuclei (AGN) play a critical role in regulating and shaping galaxy evolution through various influential processes or mechanisms that impact the surrounding interstellar and intergalactic medium. In dense environments such as galaxy clusters, this interplay becomes even more complex due to environmental effects like ram pressure stripping, tidal interactions, and strangulation. In this talk, I will discuss AGN-host galaxies in the Fornax Cluster using Multi-wavelength observations from MeerKAT (probing neutral hydrogen gas), MUSE/VLT (resolving ionised gas and stellar kinematics), and eROSITA (tracing hot X-ray emitting gas). With this multi-wavelength observations of galaxies across three key gas phases: cold (HI), warm (ionised), and hot (X-ray). We will uncover signatures of AGN feedback, gas accretion or stripping, and environmental suppression of star formation. With this ongoing project, we will constrain how AGN influences their host galaxies and how the cluster environment modulates gas content and AGN activity and to our broader understanding of galaxy transformation in clusters and the role of AGN in quenching or fuelling galaxies within such environments.

Apply for student award at which level:

Consent on use of personal information: Abstract Submission

Yes, I ACCEPT

Primary author: WOLDEYES, Dejene Zewdie (North-West University)

Presenter: WOLDEYES, Dejene Zewdie (North-West University)

Session Classification: Astrophysics & Space Science

Track Classification: Track D1 - Astrophysics