Contribution ID: **89** Contribution code: **CC05** Type: **Talk**

# Feeding and Finding Close-Separation Dual AGN: Insights from Multiwavelength SEDs and ALMA Observations

*Tuesday, January 6, 2026 9:00 AM (25 minutes)*

Dual AGN at kiloparsec separations mark the phase of most rapid supermassive black hole growth, but systematic discovery is hindered by extreme obscuration ($N_H > 10^{24}$ cm$^{-2}$). I present a new method that combines ALMA millimeter continuum observations with hard X-ray data to identify these systems.

The mm/X-ray luminosity correlation traces SMBH accretion from the innermost regions and, critically, is unaffected by obscuration. We validate this approach with known dual AGN, which follow the same correlation as single systems despite having two active nuclei.
Applying this to Swift-BAT AGN in mergers, our multi-wavelength study shows that the morphological stage (not separation) drives 2-5× enhancements in black hole growth activity during late-stage mergers. ALMA CO observations reveal similar nuclear gas content in single versus dual AGN, suggesting that variability determines the occurrence of dual AGN. Our ongoing ALMA continuum survey, exploiting the mm/X-ray method, has revealed new dual AGN candidates at separations of 100 pc to 1 kpc—among the closest known and crucial for understanding merger-driven SMBH growth.

**Author:** Prof. TREISTER, Ezequiel (Universidad de Tarapaca)

**Co-author:** BAUER, Franz E. (Universidad de Tarapaca)

**Presenter:** Prof. TREISTER, Ezequiel (Universidad de Tarapaca)

**Session Classification:** Invited talk(s)

**Track Classification:** CC05: Galaxies, AGNs, Black Holes and Cosmology