

DISSECTING THE ACTIVE GALACTIC NUCLEUS IN CIRCINUS GALAXY

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Circinus galaxy is the closest Seyfert 2 galaxy and harbours the second brightest active galactic nucleus (AGN) in the mid-infrared (MIR). Recent MIR interferometry and single dish imaging, together with detailed radiative transfer modeling, have cast this galaxy in a major role as a prototype in the emerging paradigm of ‘polar dust AGN’, in which a major fraction of the MIR emission is associated with dusty winds blown away from the sublimation zone by the radiation pressure. Namely, high angular resolution observations with several instruments mounted on the Very Large Telescope (VLT) revealed that a major fraction of the MIR emission is coming from the polar region, in contrast to the expectations from a standard AGN picture of equatorial dust distribution. By employing radiative transfer modelling, we demonstrated that both the observed morphology and spectral energy distribution can be explained with a compact dusty disc and a hollow dusty cone illuminated by a tilted anisotropic central source. Driven by the success of this model, we launched a campaign to observe this source with several other VLT instruments and in different modes. I will provide an overview of our past, on-going and future efforts in this endeavour, focusing on the MIR and optical polarimetry data.