

The PSF Reconstruction of MICADO@EELT

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MICADO@EELT will be the workhorse facility for Adaptive Optic assisted ground-breaking NIR deep high spatial-resolution imaging and spectroscopy of the next decade. Modern ground-based large telescopes depend heavily on AO systems to correct for atmospheric turbulence. The recovery of the intrinsic properties of the observed sources (position, photometry, morphology) depends critically on the reconstructed point spread function (PSF). Our Team is actively working on developing instrument software for the reconstruction of the PSF of MICADO, independently of the science data, both for single- and multi-conjugate adaptive optics mode observations using AO telemetry data. The PSF-Reconstruction software will be able to generate field-dependent PSF images at the desired wavelength taking into account both AO and non-AO (e.g. telescope or atmospheric) input. The PSF-Reconstruction service will support the state-of-the-art scientific analysis of the MICADO SCAO-MCAO assisted imaging and spectroscopic data by maximizing the scientific information that could be extracted from complex but powerful AO data.

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