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## Scientific exploitation of MICADO with pure PSF reconstruction

Adaptive optics (AO) will be the workhorse tool for most of the future ground-based observing facilities. Accurately modeling the point spread function (PSF) of these instruments will be mandatory to fully exploit their scientific potential. Reconstructing the PSF of AO instrumentation is challenging, since it is much more complex than in the traditional seeing-limited case or for space based telescopes.

As part of the MICADO PSF-Reconstruction (PSF-R) Team, we are developing a user-friendly software for the pure PSF-R, with the aim of reconstructing the PSF from telemetry data only, independently of the science data.

A few key science cases will be presented, with a discussion on the advantages and limitations of the pure PSF-R method. The first results, based on MICADO simulated AO images and real data from LBT-SOUL, allow us to constrain how uncertainties in the reconstructed PSF models affect the scientific measurements.

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