

# NIFITS: building a new data standard to enable the rise of nulling interferometry

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Just as the extreme adaptive optics has enabled the effective use of coronagraphs to detect and characterize exoplanets, the advent of high-precision fringe tracking on our interferometric facilities is opening the door to high-contrast interferometry with nulling beam-combiners. Long-baseline nullers should prove complementary to visible and NIR coronagraphs in the characterization of exoplanets.

Although many nullers have already been commissioned on sky, their usage exploitation has so-far remained a niche practice. One reason for this is that nulling data does not fit in the perimeter of OIFITS standard, making the astrophysical interpretation difficult without the ad-hoc instrument model. The challenge is reinforced by the extreme diversity in the architectures, operating principles and collected observables of both existing and envisioned nullers, including Asgard/NOTT and the LIFE space mission.

With this presentation I will introduce our efforts to create a new data standard called NIFITS (Nulling Interferometry FITS) to fill this gap. To account for the diversity of present and future instruments, NIFITS encapsulates a complete description of the instrumental transfer function, allowing for a straightforward inference for the user to carry-out model fitting, spectra extraction or even image reconstruction.