High-contrast imaging with METIS

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Coronagraph Designs

Four planes are available for the introduction of coronagraphic optics and masks (highlighted with yellow circles below). Current designs for Apodized Phase Plates, Ring Apodized Vortex Coronagraphs, and hybrid coronagraph designs.

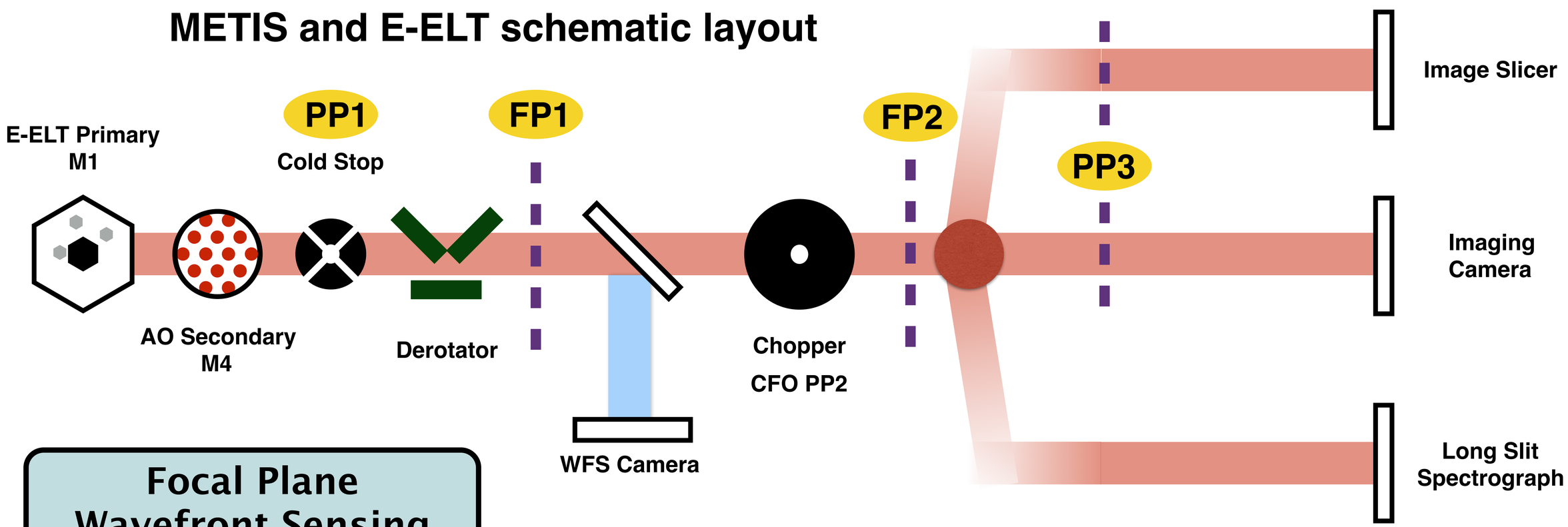
Three HCI Observing Modes in METIS

Two imagers (L/M camera, N camera) have a pupil plane available.

Long slit spectroscopy with a grism

Image Slicer with diffraction limited high spectral resolution spaxels.

METIS and E-ELT schematic layout



Focal Plane Wavefront Sensing

Using telemetry from the WFS Camera and the science camera to characterise speckles with algorithms including PSI (Codona and Kenworthy 2013), ZELDA, COFFEE…

METIS Papers this week

Data Reduction by Michael Mach 9913-110

HCI Simulations by Brunella Carlomagno at 9909-290

AO design by Remko Stuik 9909-11

METIS Overview by Bernhard Brandl 9908-74

Fore-Optics Design by Tibór Agocs 9908-360

Image Slicer by Martyn Wells 9912-202

SI Grating by Tibor Agócs 9912-41

Interferometric Imaging

Sub-Airy core resolution for brighter companions using Sparse Aperture Masking at all bands.

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9908-378 at SPIE 2016