MAVIS

Deeper than HST,
Sharper than JWST

What is MAVIS?

MAVIS (MCAO-Assisted Visible Imager & Spectrograph) is a proposed instrument for ESO's VLT Adaptive Optics Facility that will provide near-diffraction limited image quality over a large field of view using Multi-Conjugate Adaptive Optics. MAVIS is an Australian-European project.
More information at http://mavis-ao.org/mavis.

Science with MAVIS

- Star formation histories of the local volume through resolved stellar populations
- Local group internal dynamics via proper motions and crowded field spectroscopy
- Resolving star formation clumps to high redshift
- Dark matter substructure via lensing
- Monitoring solar system bodies

Strawman MAVIS Requirements

Field of view	30”x30”
Angular resolution	~ 20mas at V band
Wavelength coverage	VRI, extended to UBz
Strehl ratio	15% at V under median seeing conditions
Sky coverage	> 50%
Imager	~ 7mas pixel size. Broad and narrow band filters. Tuneable filters - to be explored
Spectrograph	Fibre + Starbug concepts to be explored: Highly multiplexed point-source capabilities Multiplexed compact IFUs (0.5” FoV) and larger FoV IFUs. R=5,000-10,000. Alternatively, 3”x3” image slicer IFU with 25mas spaxels.