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MAVIS: a Visible MCAO-equipped imager and spectrograph for the VLT

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MAVIS is a multi-conjugate adaptive optics (MCAO) equipped system, designed to be coupled with the Very Large Telescope (VLT) Adaptive Optics Facility, with the aim to deliver visible images and integral field spectrograph data with 2-3x better angular resolution than the Hubble Space Telescope. The imager will deliver diffraction-limited image quality in the V band, in a 30"x30"field of view, with imaging from U to z bands and possibly exploiting fast cadence acquisition on a sub-section of the field. The current spectrograph baseline includes a selectable field-of-view of 2.5"x3.6", or 5"x7.2", with a spatial sampling of 25 or 50 mas respectively. This combination can deliver a spectral resolving power of R=5,000 to R=15,000, covering a wavelength range from 380 - 950 nm. The project is currently in its Phase-A study, which is being carried on by a consortium, led by Australian's AAO, and with a fundamental contribution by INAF, which is responsible for the Adaptive Optics Module design and is involved in the MAVIS science team.

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