ELT optical module



Overview

This diagram (artist's rendering) shows the advanced five-mirror optical system of ESO's Extremely Large Telescope (ELT) and the location of the ZERODUR ® mirror substrates. It is based on a giant main mirror that combines 798 hexagons (M1) and four smaller mirrors (M2 to M5) as. The optical design for the E-ELT is that of a folded three-mirror anastigmat, folding being provided by two flat mirrors sending the beam to either Nasmyth foci along the elevation axis of the telescope (see Figure 1). The optics are mounted on an altitude azimuth telescope main structure. MORFEO will not make observations itself; rather, it will enable other instruments, such as MICADO in the first. Optical design trade-offs of the multi conjugate adaptive optics relay for the European Extremely Large Telescope. The project is now in the Final Design Phase. In this paper, we report the status of the project. Downloading of the abstract is. Access SPIE's growing collection of conference proceeding papers from around the globe.

Article Content

ELT (Extremely Large Telescope)

Named the ELT (Extremely Large Telescope), this revolutionary new ground-based telescope concept will have a 39 meter main mirror and will be the largest optical/near-infrared

MORFEO | ELT | ESO

As a first-generation ELT instrument, MORFEO, will help compensate for the distortion of light caused by turbulence in the Earth''s atmosphere which makes

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PUBLICATIONS – MORFEO for ELT

Conceptual design and performance of the multiconjugate adaptive optics module for the European Extremely Large Telescope, Emiliano Diolaiti et al, Proceedings Volume 7736, Adaptive Optics

MORFEO at ELT: the adaptive optics module for ELT

MORFEO is a post-focal adaptive optics module that forms part of the first light instrument suite for the Extreme Large Telescope (ELT). The project is now in the Final Design Phase. In this

MORFEO at ELT: the adaptive optics module for ELT

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Extremely Large Telescope | SCHOTT

This diagram (artist''s rendering) shows the advanced five-mirror optical system of ESO''s Extremely Large Telescope (ELT) and the location of the ZERODUR ® mirror substrates.

Final optical design of MORFEO for the ELT

MORFEO (Multi-conjugate adaptive Optics Relay For ELT Observations), formerly known as MAORY, is the Multi-Conjugated Adaptive Optics (MCAO) module for the Extremely Large Telescope (ELT).

Microgate picks Vicor to power ESO ELT adaptive optics ...

Based in the Atacama Desert in Chile, the new ELT being developed by the ESO will have a pioneering five-mirror optical design that will allow it to

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Sample manuscript showing specifications and style

ABSTRACT The E-ELT is a project led by the European Southern Observatory (ESO) for a 40-m class optical, near- and mid-infrared, ground-based telescope. When it will enter into operation, the E-ELT

STMicroelectronics to enable higher-performance cloud

ST is helping hyperscalers, and the leading optical module provider, overcome those challenges with new silicon photonics and next-gen BiCMOS

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Controls | ELT | ESO

This mirror receives optical corrections from instrument and telescope adaptive optics modules at 1000 Hz and converts these modal amplitudes to actuator position commands. Movement of the actuators

(PDF) E-ELT optomechanics: overview

The E-ELT is a project led by the European Southern Observatory (ESO) for a 40-m class optical, near- and midinfrared, ground-based telescope.

The ELT Control System

The ELT design is based on a complex five mirror design and has five foci, with multiple instruments sitting on the Nasmyth platforms. Figure 1 shows the main telescope subsystems following the

HARMONI at ELT: line spread functions in a diffraction limited

The first paraxial lens now includes the combined effects of the ELT and MORFEO as well as the pre-optics and IFU within HARMONI. Since we are modelling the spectral line resulting from a

Adaptive Optics for Extremely Large Telescopes

Adaptive Optics (AO) has become a key technology for the largest ground-based telescopes currently under, or close to beginning of, construction. AO is an indispensable component and has basically

Overall science goals and top level AO requirements for the E-ELT

These split into three broad categories: i) the adaptive optics modes included in the telescope, ii) the adaptive optics modes studied as stand-alone, post-telescope-focus modules, and iii) the adaptive

Instruments | ELT | ESO

The first steps in developing the instrument plan were taken in 2007 when a plan for studying six instruments and two post-focal adaptive-optics-module concepts was presented to the ESO Council,

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