



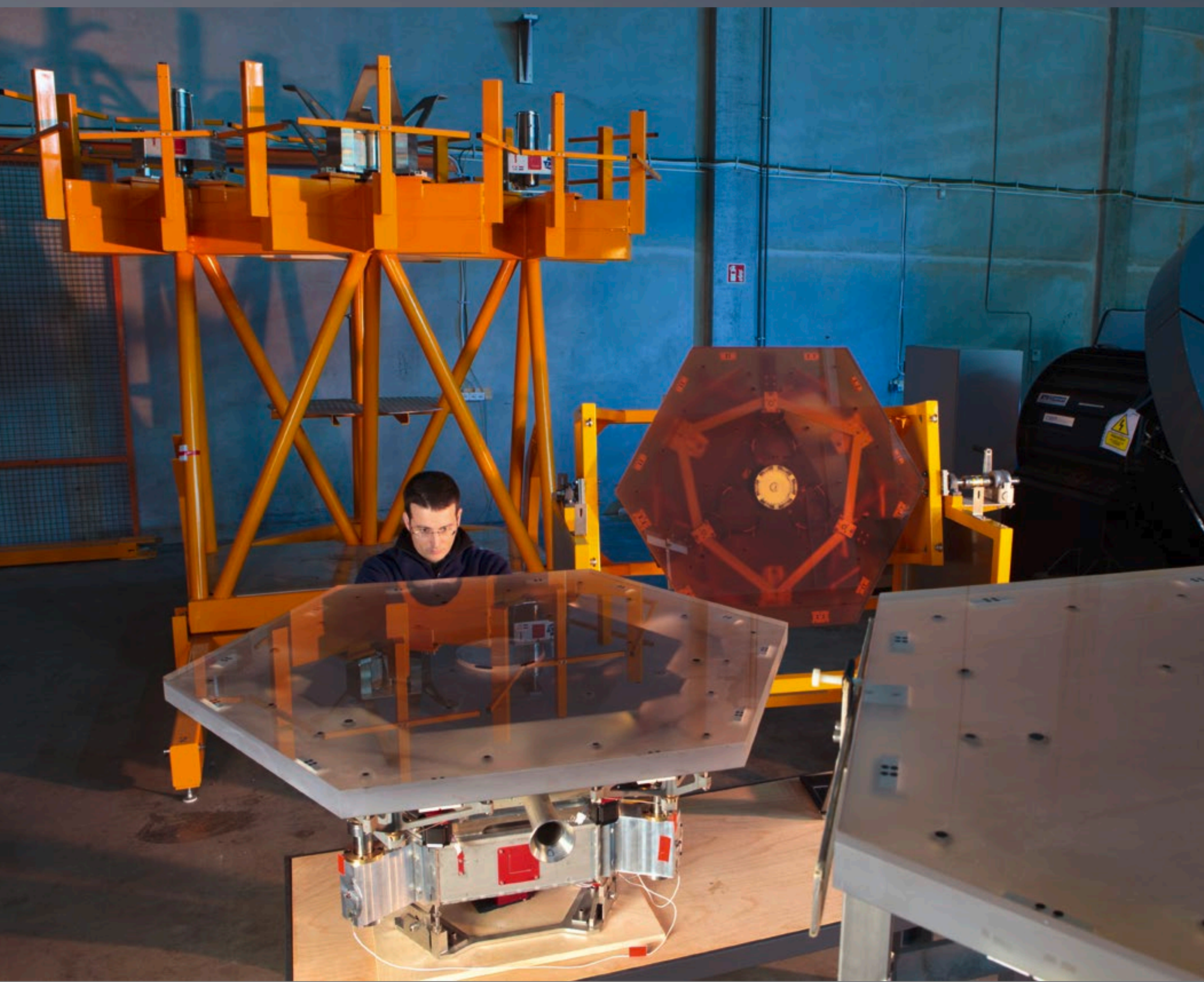
The European Extremely Large Telescope — The World's Biggest Eye on the Sky

The development of extremely large telescopes is considered to be one of the highest priorities in ground-based astronomy. These telescopes will vastly advance our knowledge of the Universe, opening the way for detailed studies of fundamental scientific questions that are well outside the reach of current facilities. In close consultation with the scientific community and industry, ESO has designed and is now constructing an extremely large optical/infrared, adaptive telescope, the European Extremely Large Telescope (E-ELT).

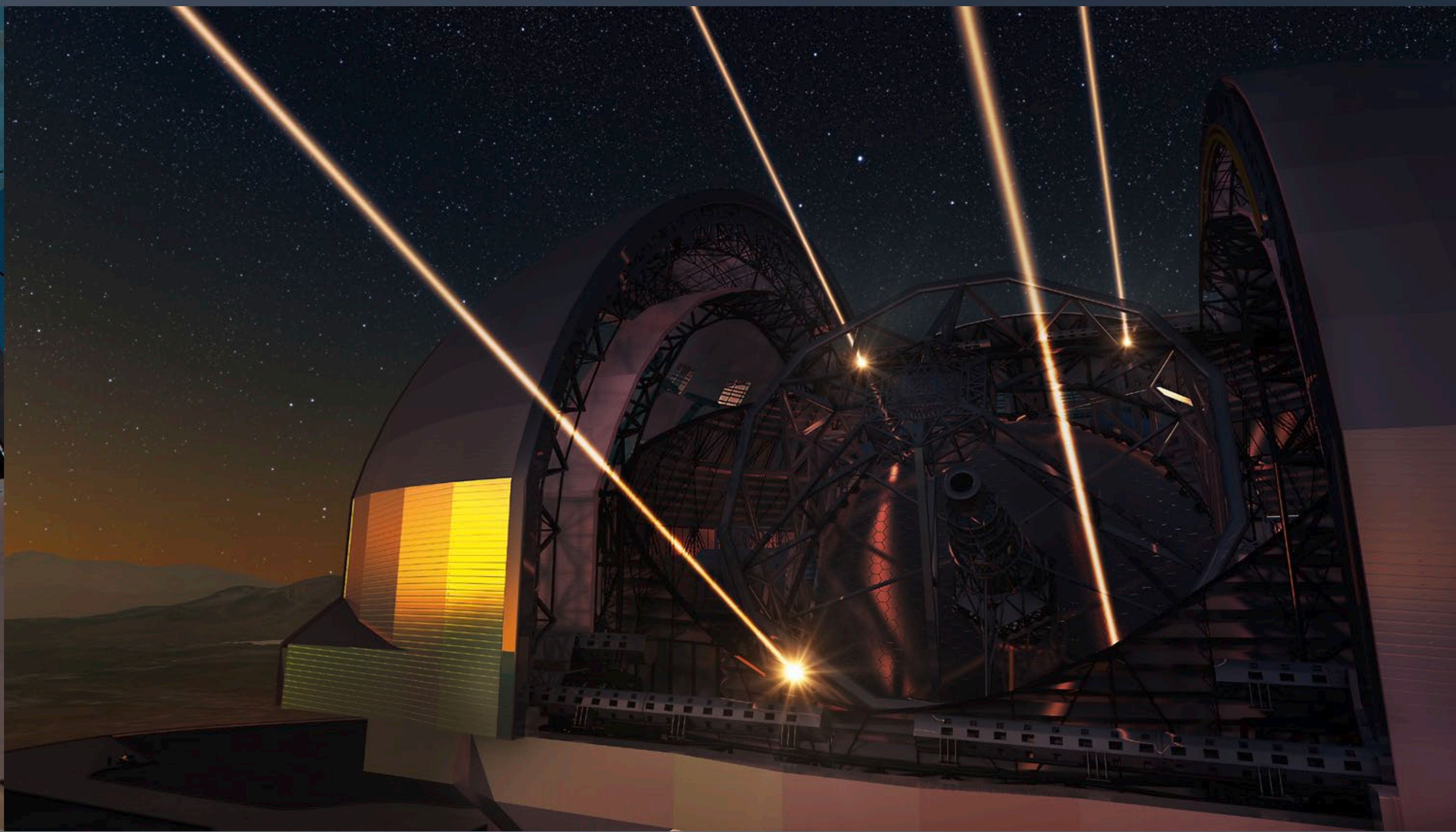
While the main mirrors of the Unit Telescopes of ESO's VLT are each 8.2 metres in diameter, the revolutionary 39-metre E-ELT will have an innovative five-mirror design and will capture far more light than any other telescope.

Cerro Armazones is a 3060-metre peak in the central part of Chile's Atacama Desert, about 20 kilometres from Cerro Paranal, home of ESO's Very Large Telescope. This site excels in all aspects of astronomical sky quality. ESO selected Cerro Armazones as the future home for the E-ELT and the site is currently being prepared for construction to start. The telescope will be operated as an integral part of the Paranal Observatory.

The E-ELT will have the latest in adaptive optics systems to correct for atmospheric turbulence, providing images 15 times sharper than those from the NASA/ESA Hubble Space Telescope. Astronomers using the E-ELT will tackle some of the biggest scientific challenges of our time: extrasolar planets and protoplanetary discs, galaxy formation, dark matter, dark energy and other cutting-edge topics. It may, eventually, revolutionise our perception of the Universe as much as Galileo's telescope did more than 400 years ago.



Experimental segments of the giant primary mirror of the E-ELT undergoing testing.



Artist's impression of the European Extremely Large Telescope deploying lasers for adaptive optics.
Credit: ESO/L. Calçada/N. Risinger (skysurvey.org)

