



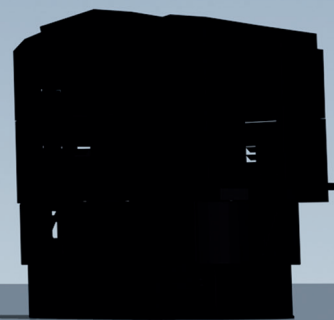
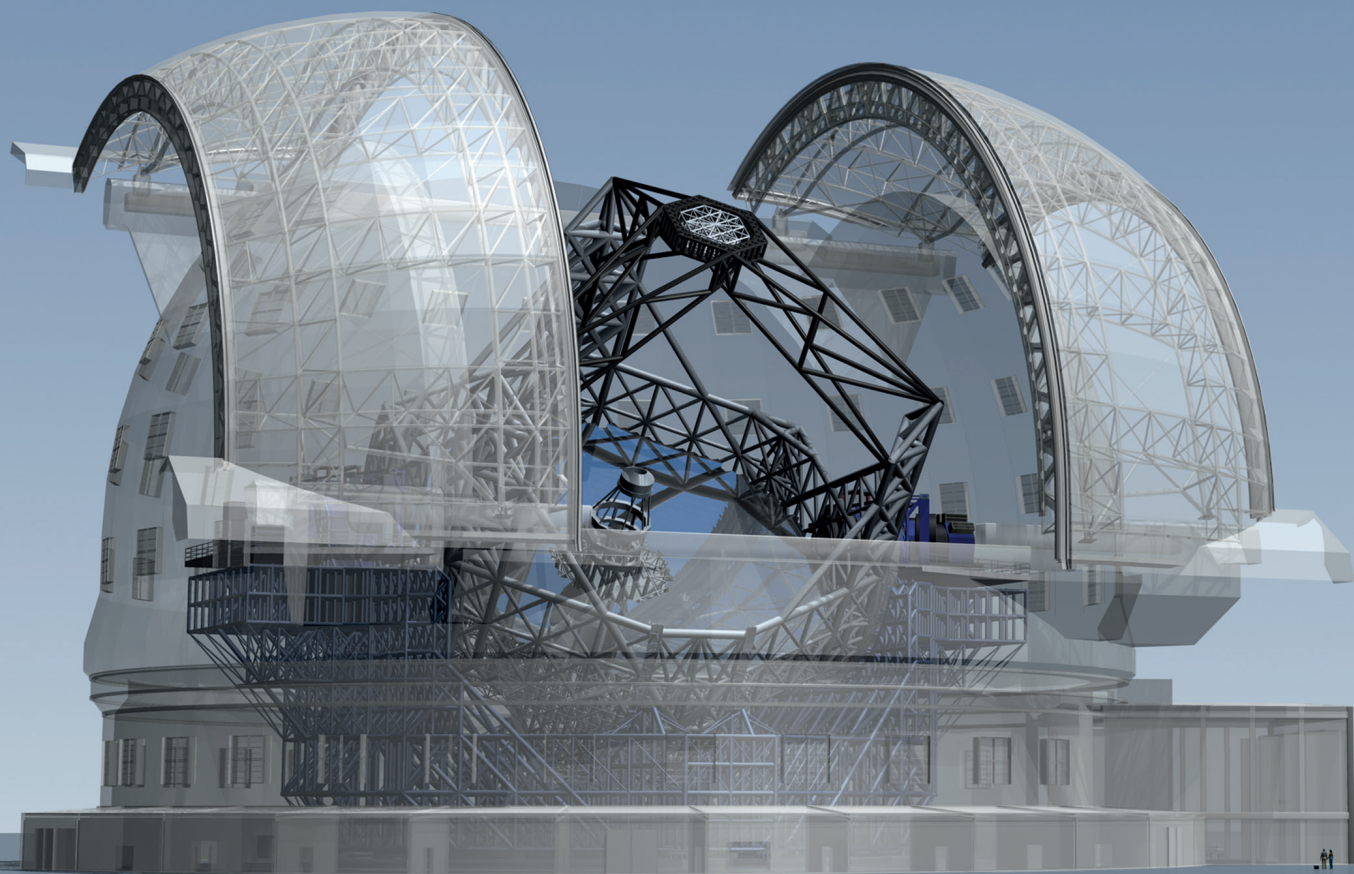
UT y AT abiertos
UT and AT open



La Silla



ALMA



ELT vs. VLT



AT





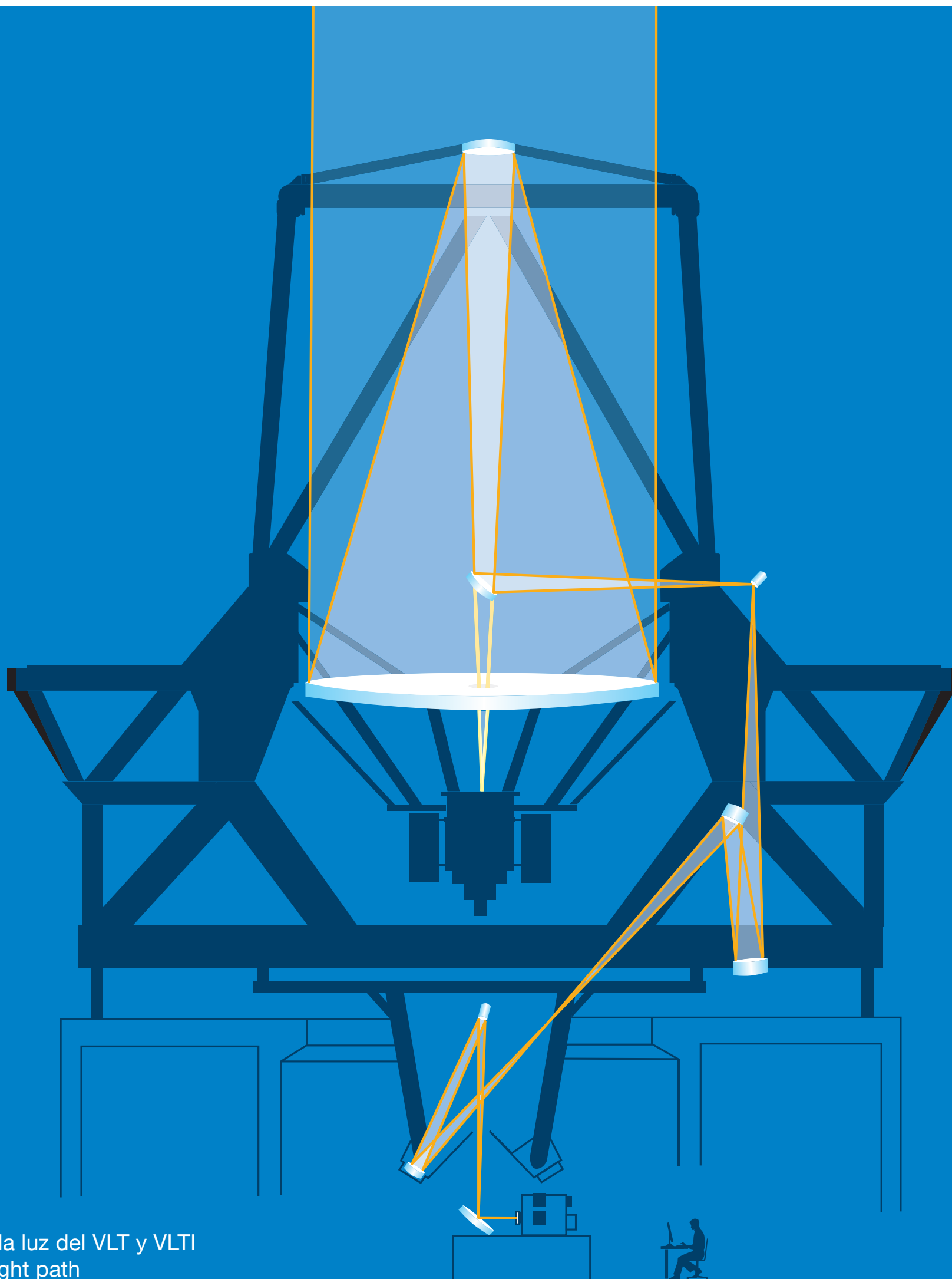
Vista interior UT
UT Inside view





Instrumento de telescopio
Telescope's instrument





Trayectoria de la luz del VLT y VLTI
VLT and VLTI light path

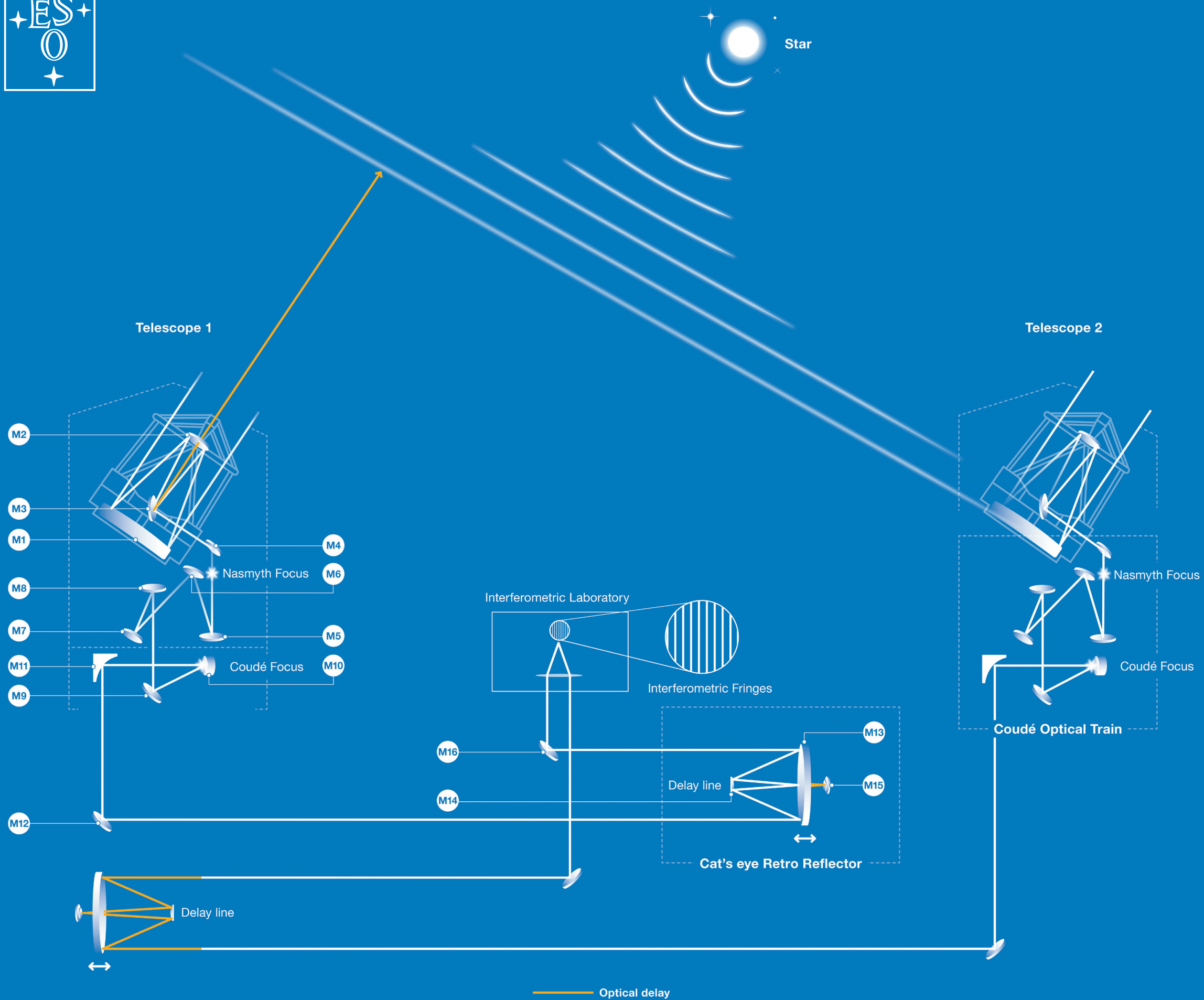


Diagrama VLTI
VLTI diagram

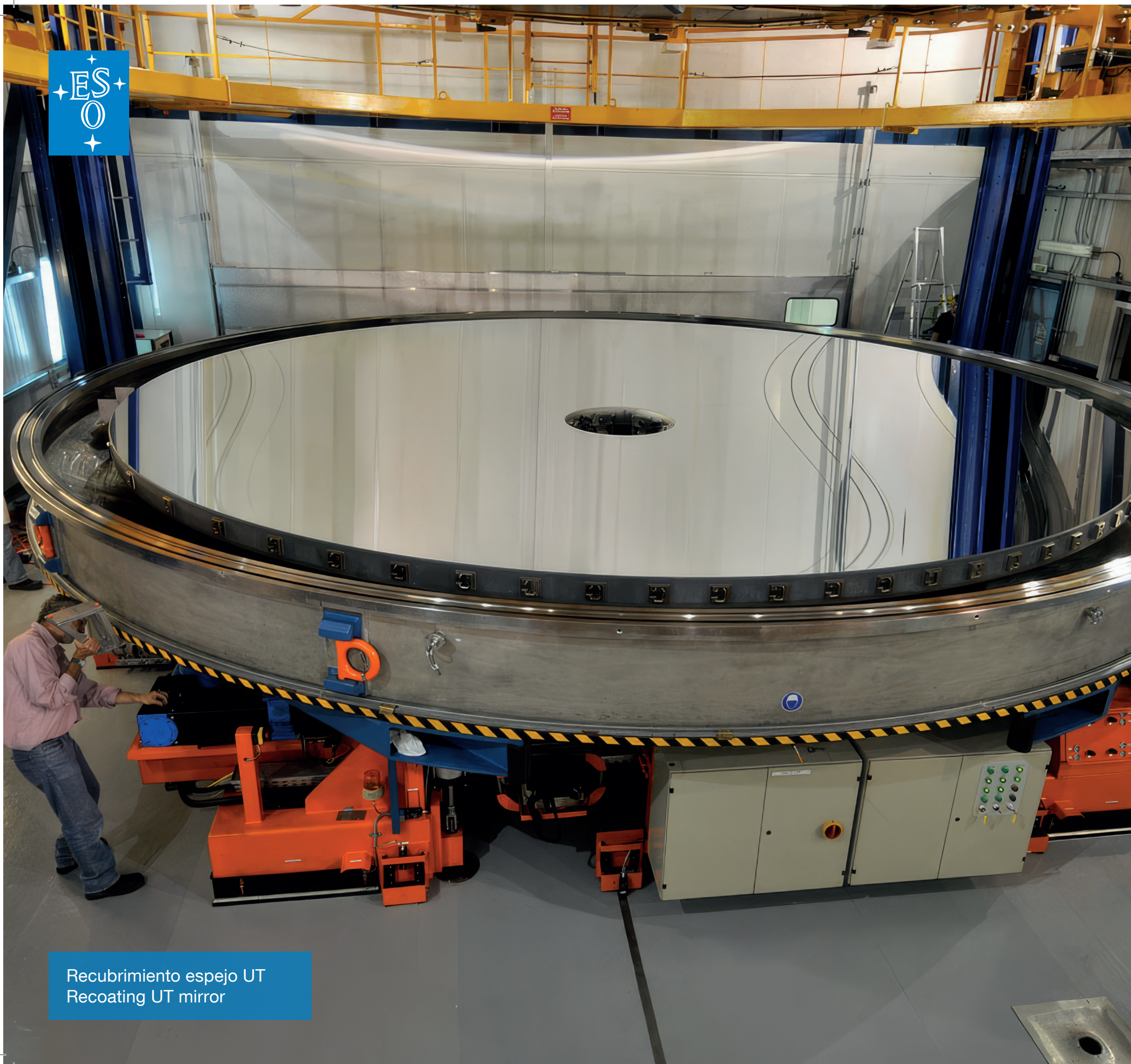


Túneles VLT
VLT tunnels





Los rayos de la Instalación de 4 Estrellas Guía Láser
The beams of the 4 Laser Guide Star Facility



Recubrimiento espejo UT
Recoating UT mirror

Astronomical mirrors are coated with a 80 nanometer (0.000 080mm) thin aluminum layer for light reflection. The layer would scratch during cleaning – therefore is it renewed every 2 years. The procedure lasts 1 week.



Dismounting from the telescope. 96 screws hold the mirror cell on the telescope structure.



The mirror and its mirror cell (45 ton) is lowered on a special air cushion vehicle.



The air cushion vehicle is provided with a lifting device from the telescope and loaded on a special transport truck.



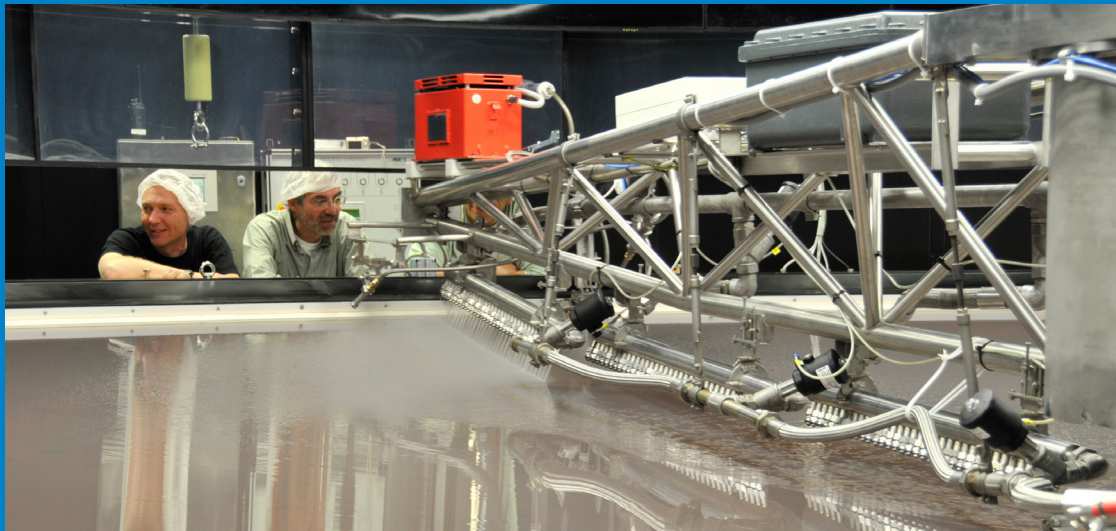
The mirror is transported to the Mirror Maintenance Building at the basecamp.



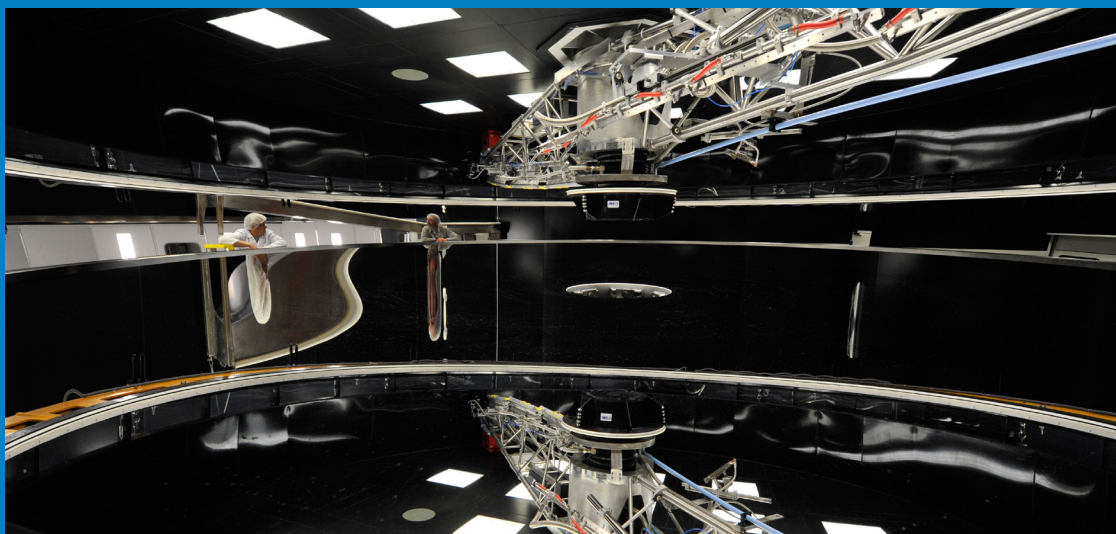
The mirror is removed from its mirror cell by means of a lifting machine.



23 tons of glass ceramic hang on 15 hooks!



The old aluminum layer is removed in a clean room with acid and high-purity water.

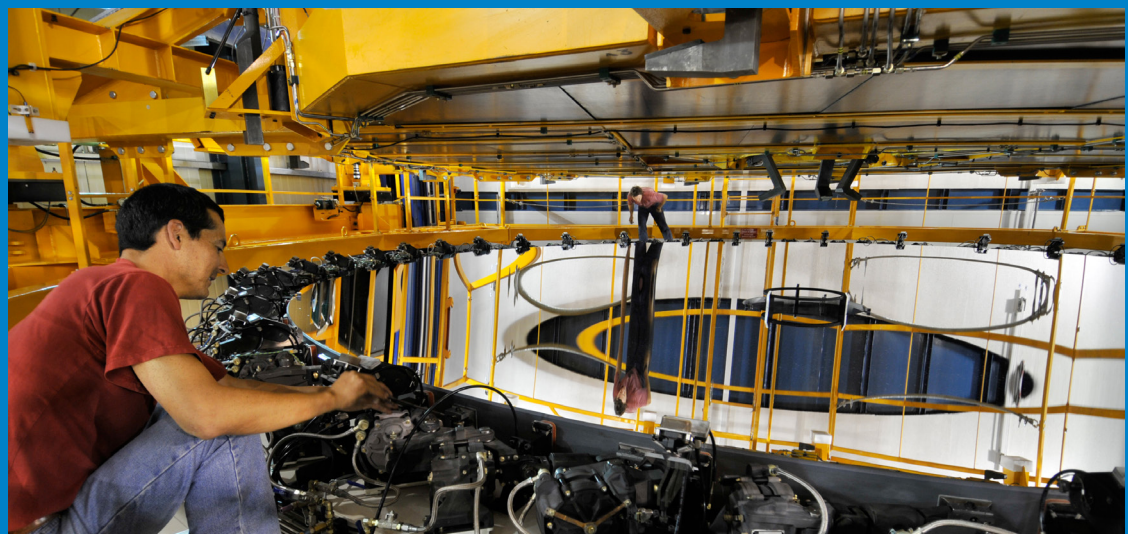


The vacuum tank is opened again and the new mirror layer is inspected.



The mirror with the cell is transported back to the telescope.

The clean mirror is moved to the vacuum chamber. High vacuum pumps operate an entire night, then a new reflective layer is evaporated with high uniformity during a single mirror rotation by means of cathode sputtering.



The mirror is back in its mirror cell. All 64 lateral mirror supports are carefully fastened.



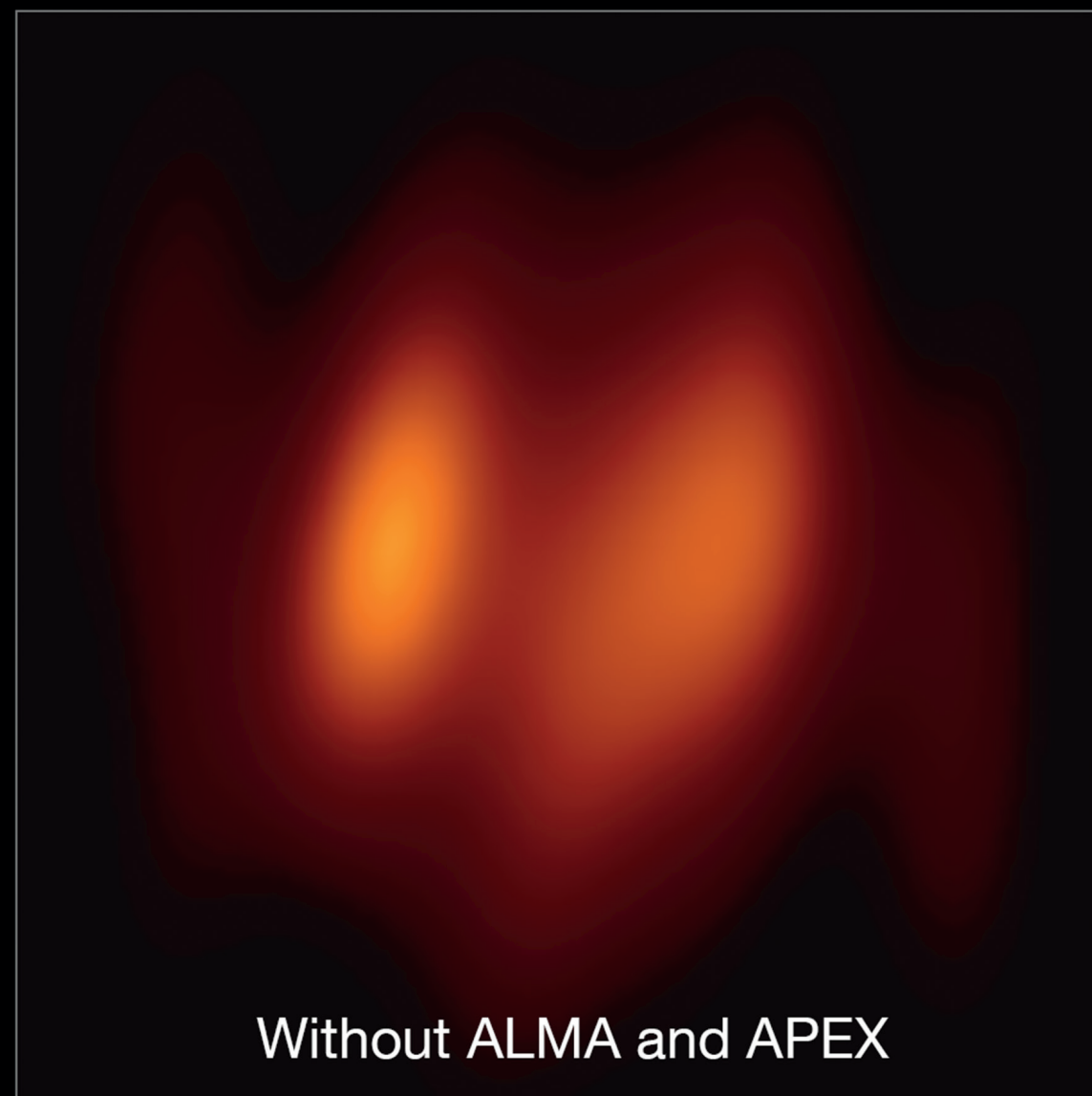
Done!



Puesta de Sol
Sunset



Primera imagen de un agujero negro
First image of a Black Hole





Edificio Sala de Control
Control Room building



Pantallas en Sala de Control
Screens at Control Room





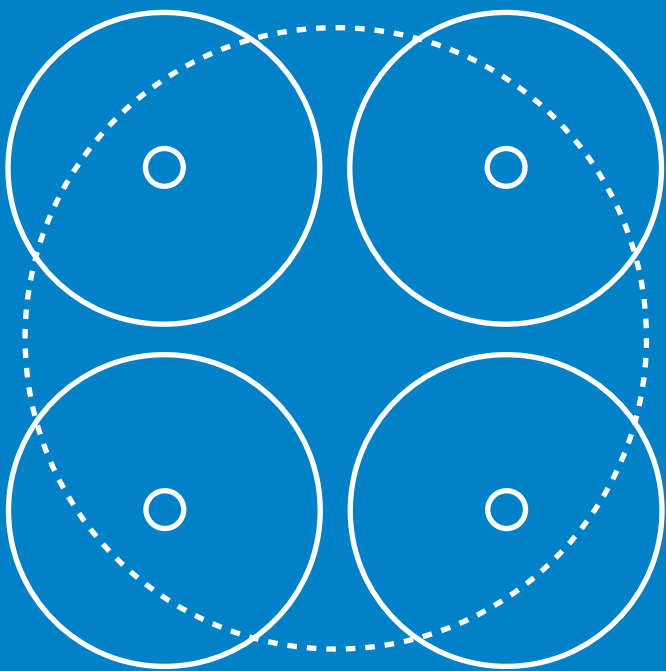
Sala de Control
Control Room



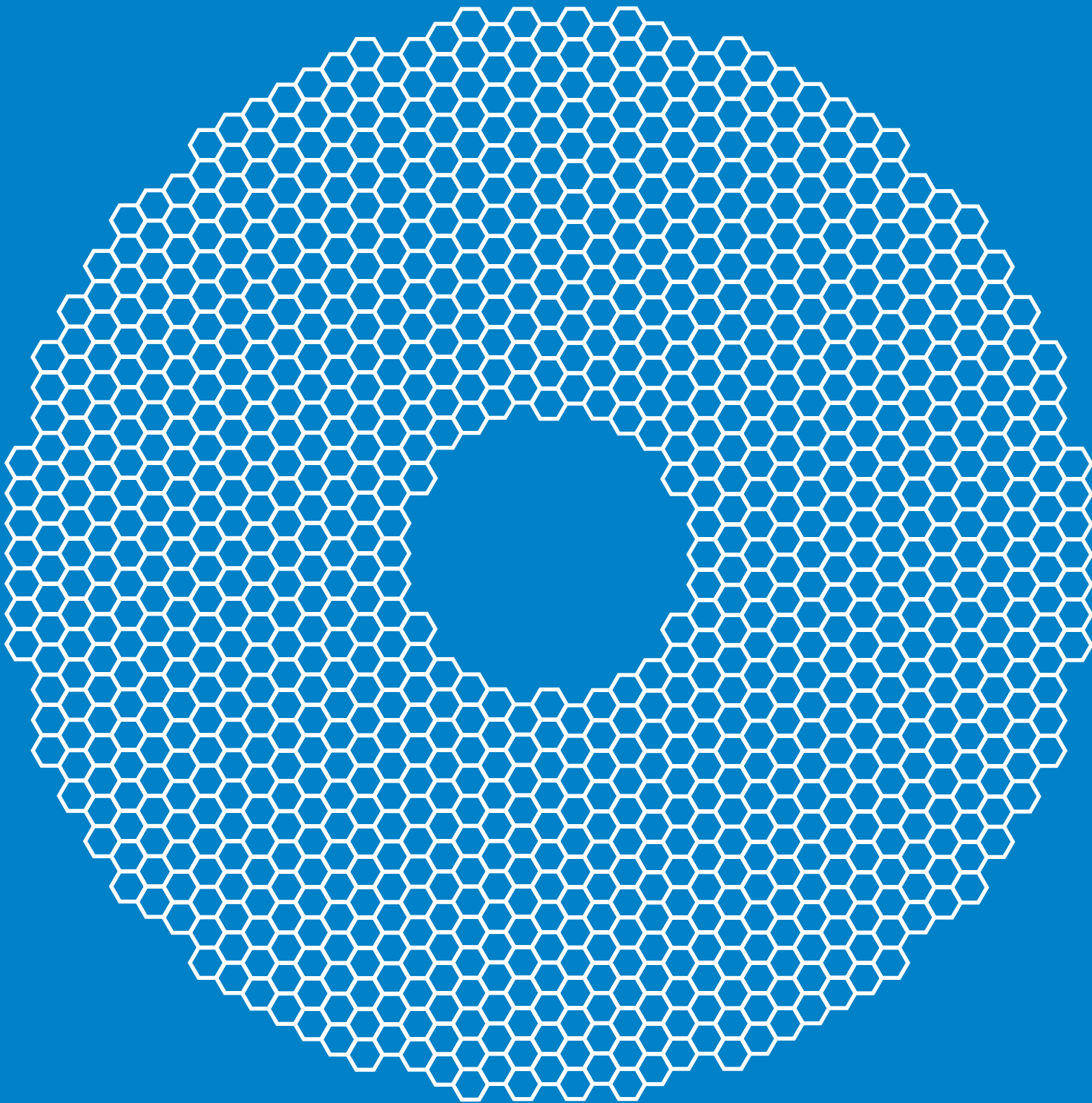
ELT



ESO 3.6-metre telescope
La Silla, Chile



Very Large Telescope
Cerro Paranal, Chile



Extremely Large Telescope
Cerro Amazones, Chile

Espejos de telescopios ópticos ESO a escala
ESO optical telescope mirrors to scale





Residencia
Residence