TOMELLERI

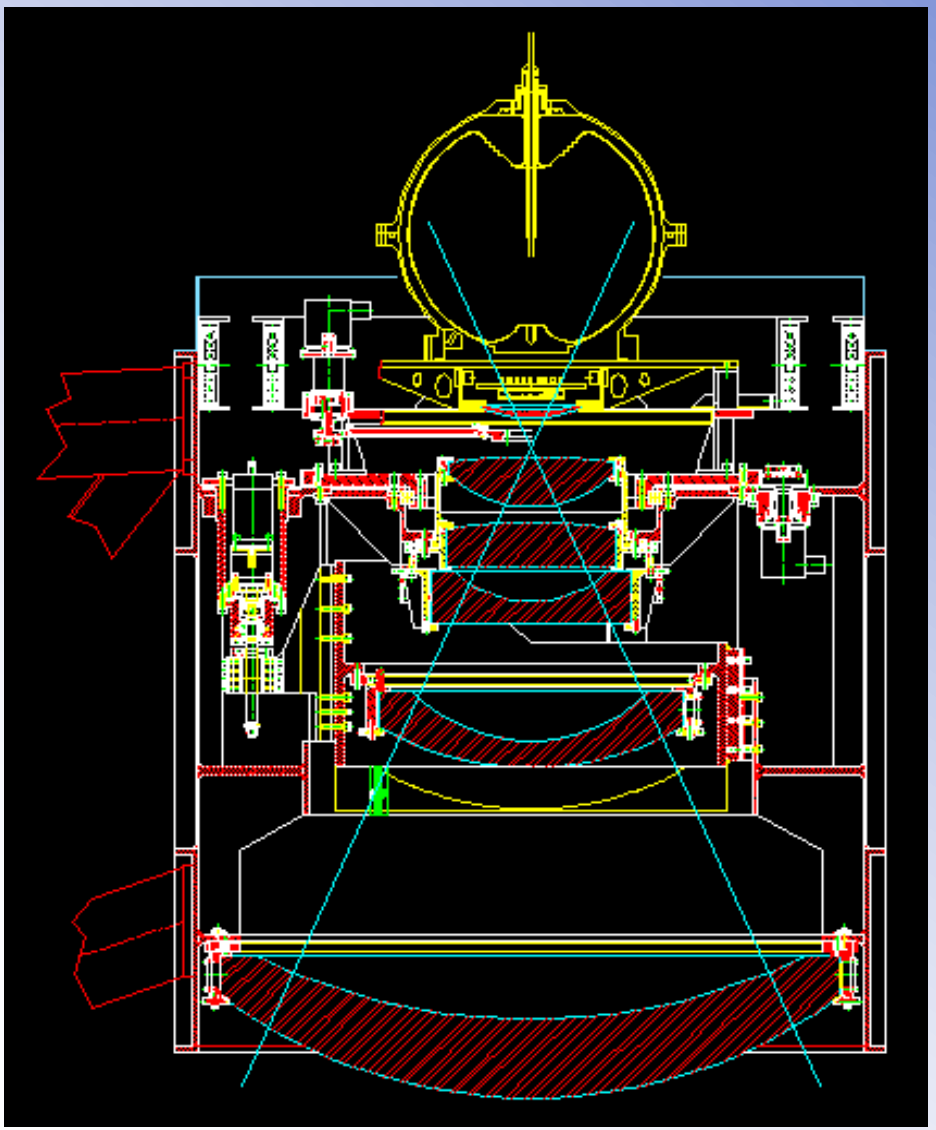
ASTRONOMY & RESEARCH

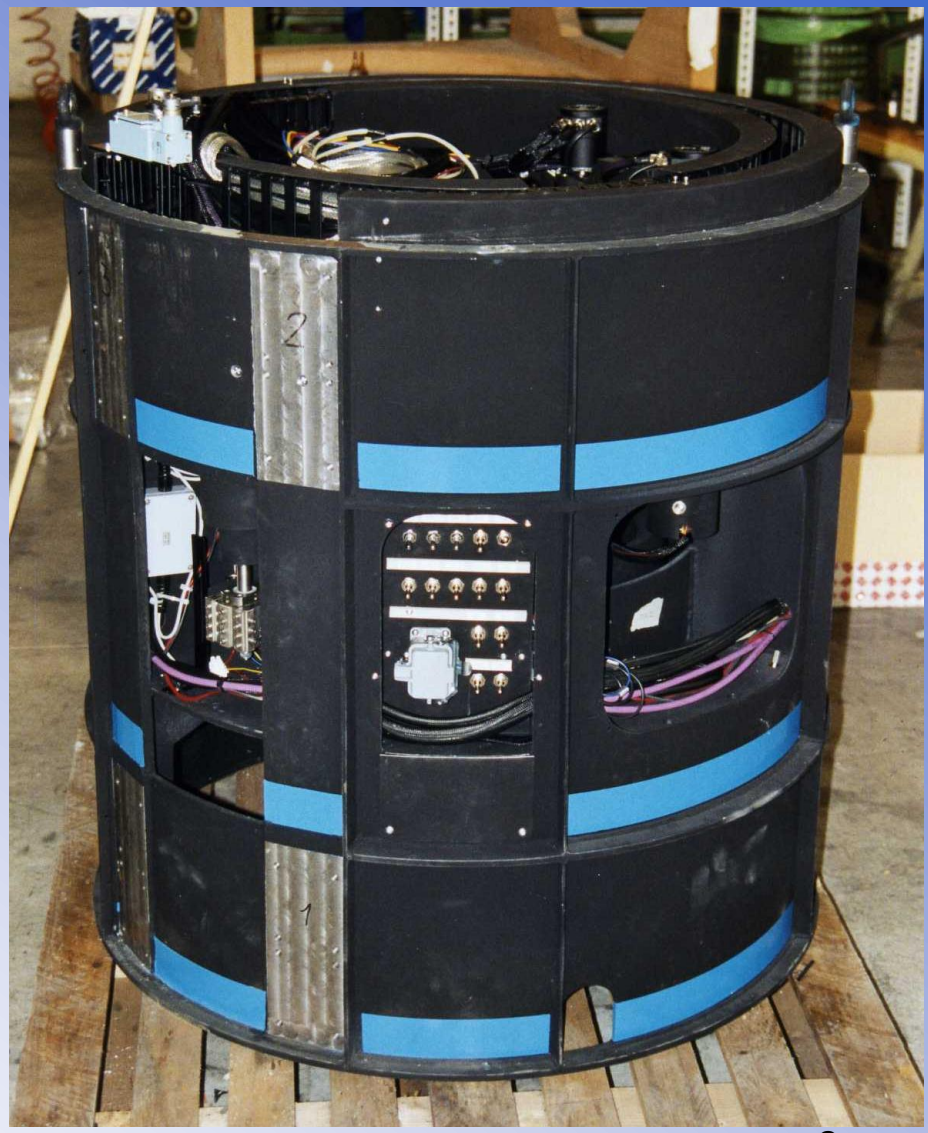
ESO Industry Day
Roma 22 June 2012

TOMELLERI IN ASTRONOMY

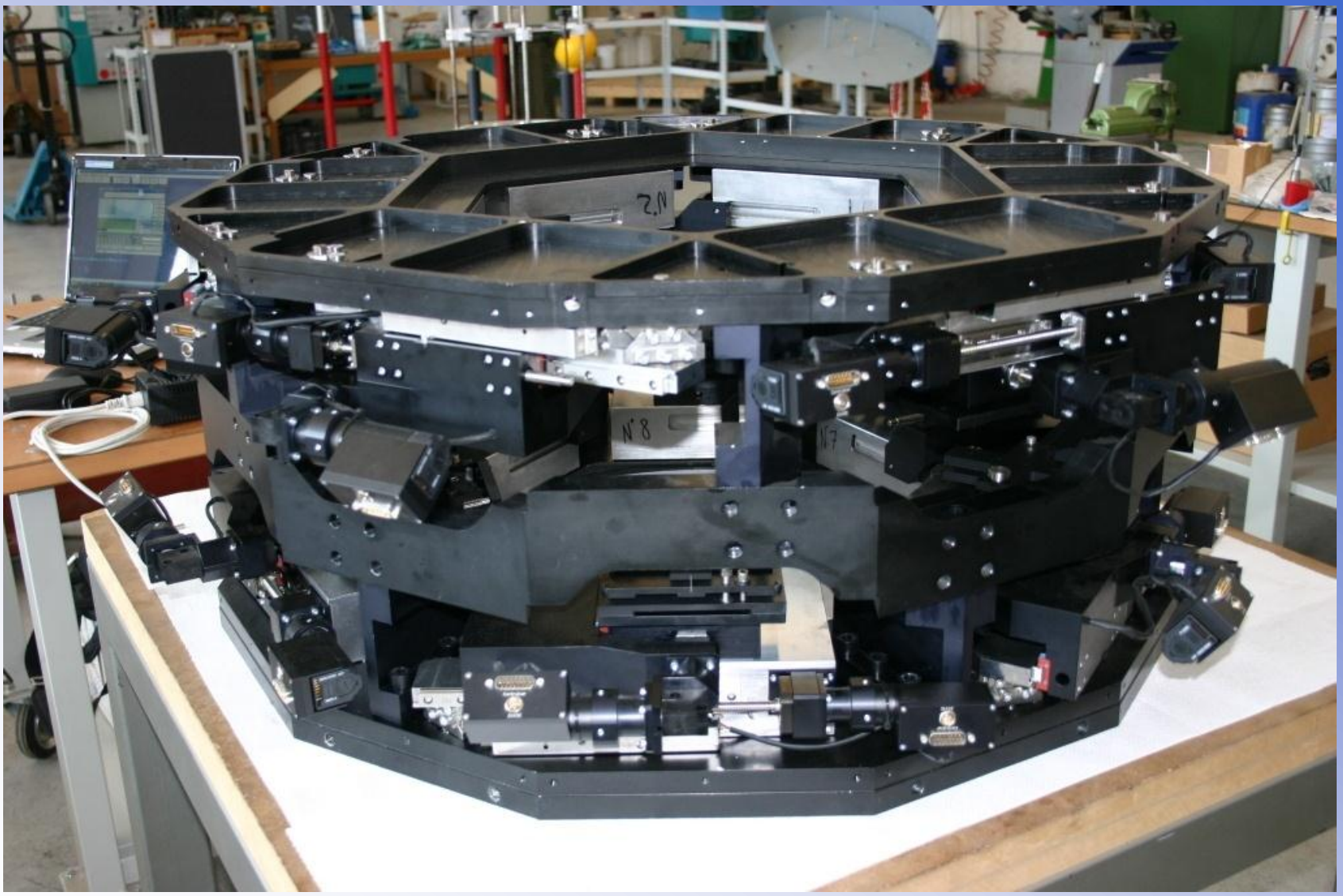
TOMELLERI s.r.l. started its activities back in 1984, and has been and still is involved in major telescope projects in relation to Bearing, Drive and Measurement Systems, as well as Instruments and special devices, conceived in cooperation with the main Italian Astronomical and Astrophysical Observatories (e.g. Arcetri, Padua, Rome, Bologna, Capodimonte, Brera and Merate), the European Southern Observatory, the Max Planck Institute, as well as some Observatories in the USA, namely the Stewart Observatory in Tucson, the TMT and GMT Corporations, and the Cornell University in Pasadena LA.

LBT Prime Focus Blue Channel Camera



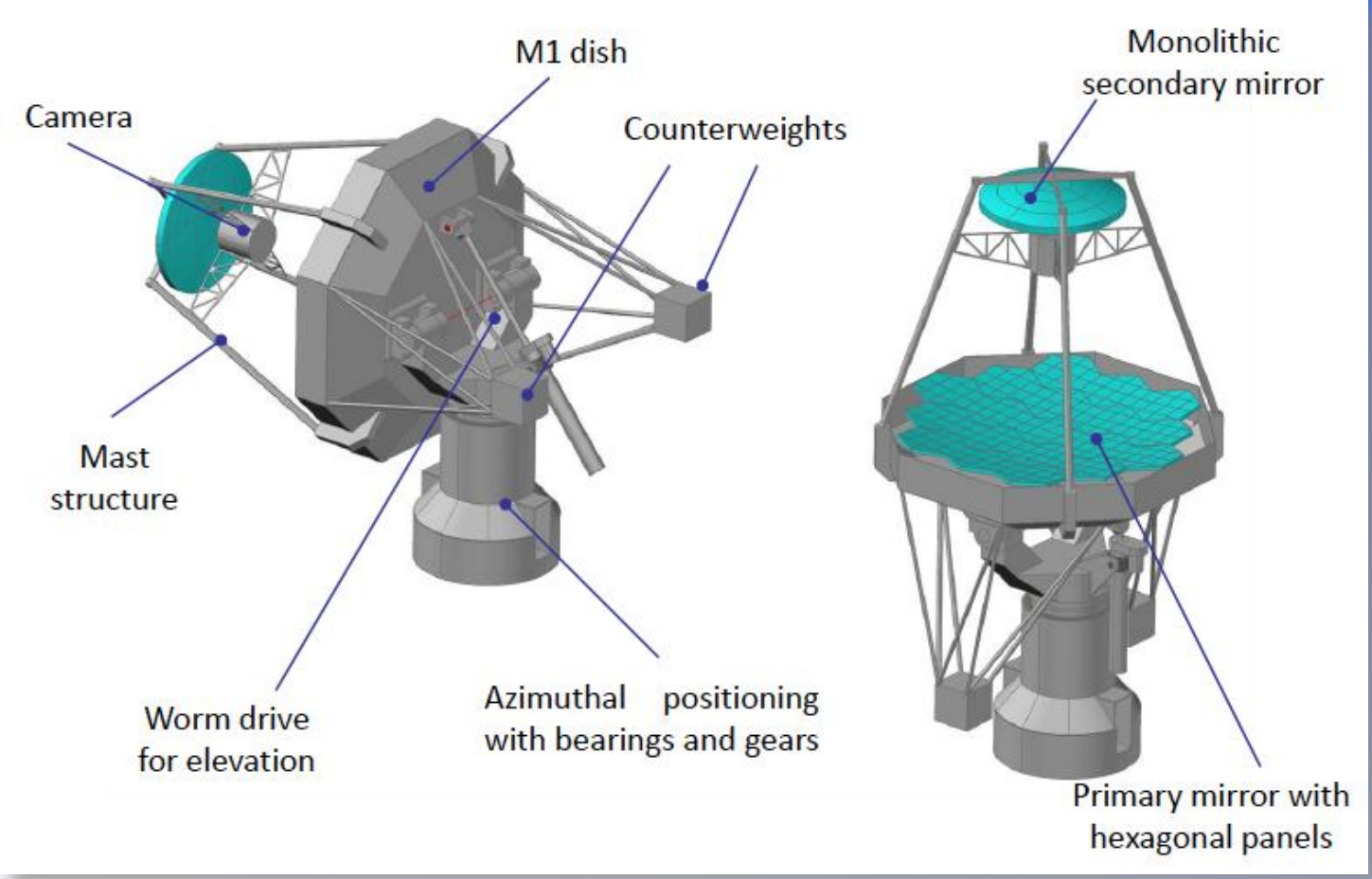


GLWFS for NIRVANA of VLT



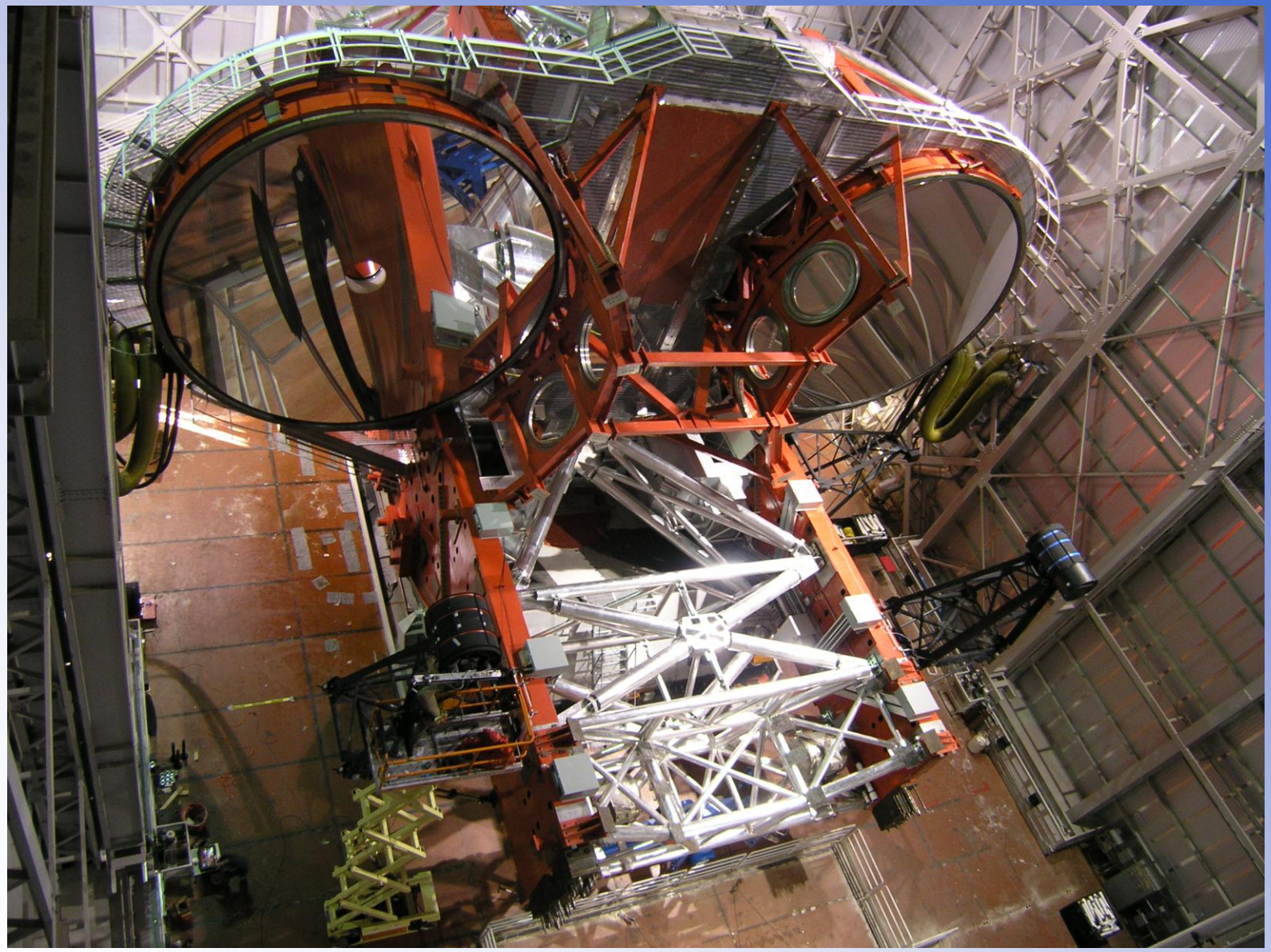
VST M1 Support sub-systems: design & supply

Cherenkov Telescope Array SST

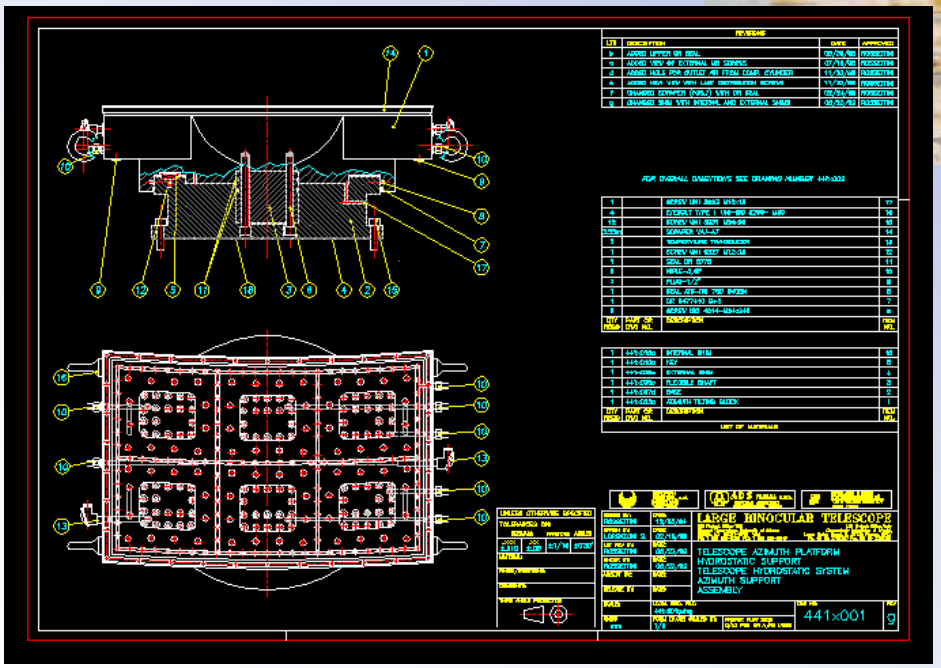


Feasibility study and executive design of the Bearing, Driving and Measuring Systems, Instruments and manufacturing and tests on the prototype of the Segment of M1

Hydrostatic , Driving and Subsystems of LBT



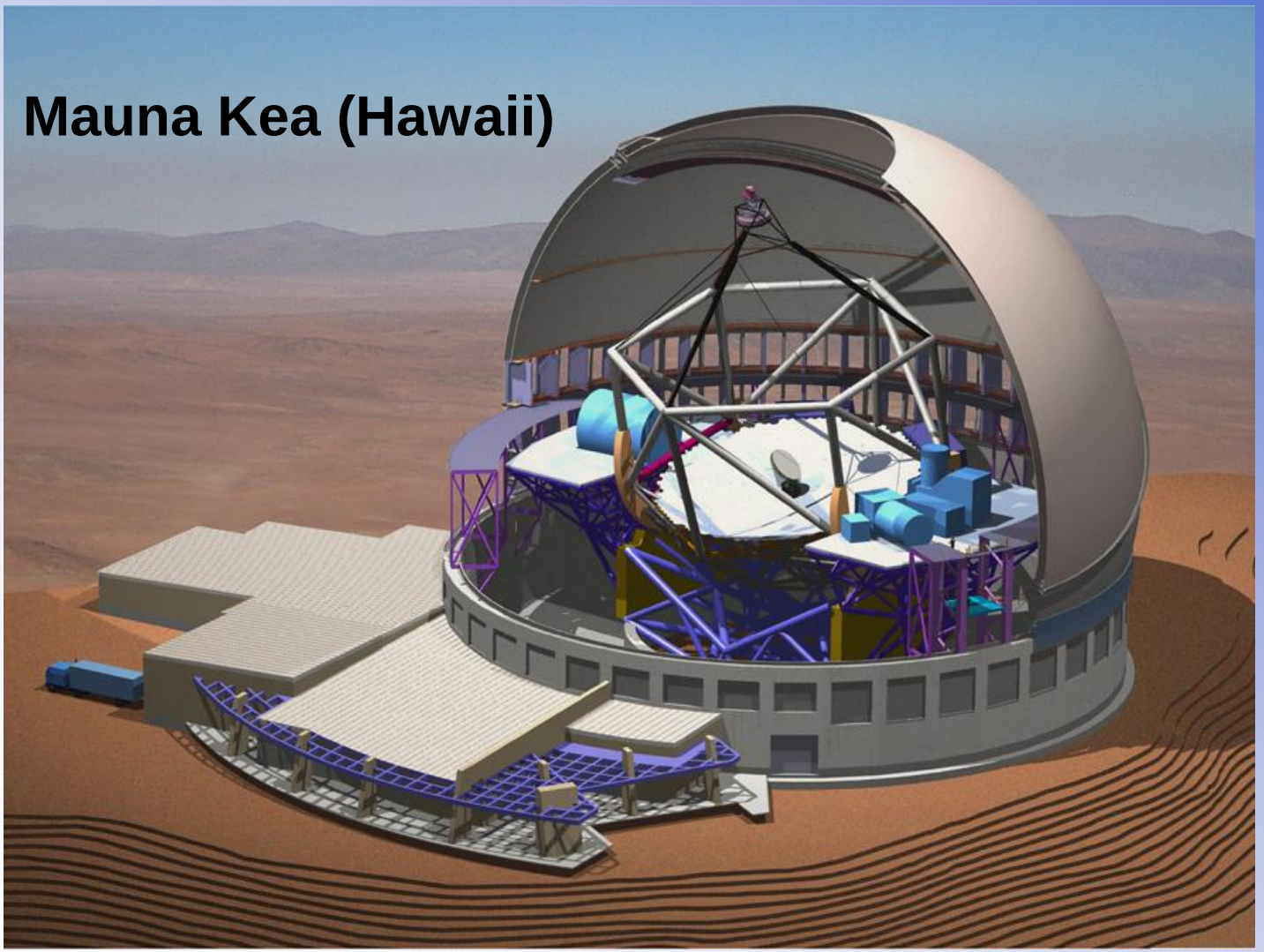
LBT azimuth hydrostatic bearing



Hydrostatic Bearing System

- High static and dynamic stiffness of the master bearing
- High dynamic stiffness of the slave bearing
- Frictionless tilting capability
- High velocity allowed
- Bronze sliding surface
- High temperature range
- Internal oil recovery
- Whiffle tree connection for lateral altitude
- Pressures, temperature and oil film monitored
- Good load sharing on all bearings
- High radial errors admitted on azimuth and altitude axes
- High tilting errors admitted on the azimuth and altitude axes
- Low power consumption
- Active seals

TMT Thirty Meter Telescope



Caltech

Canada

U. California

30m Aperture

738 segments

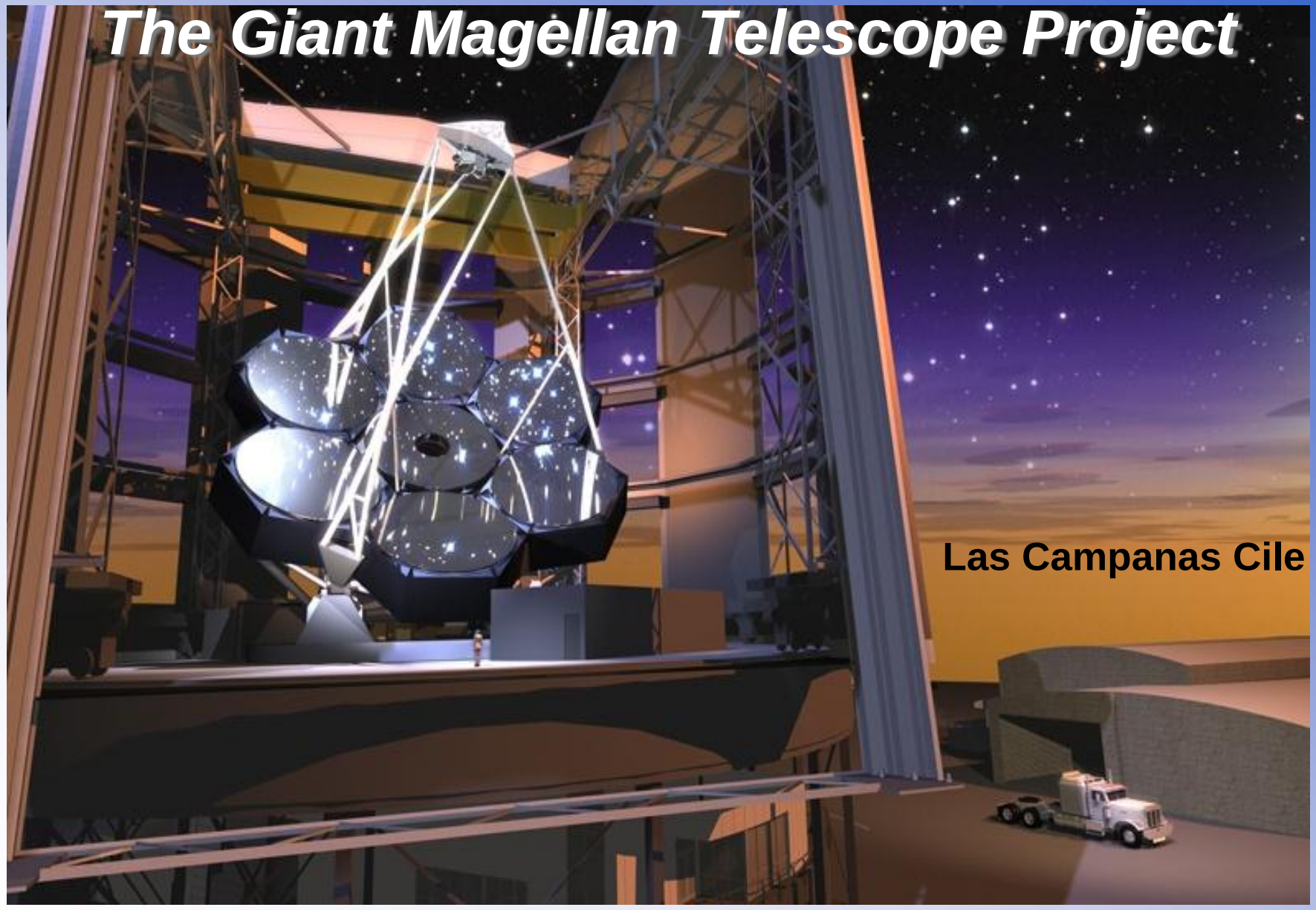
3 mirror

f/1 primary

f/15 foci

First light ~2018

The Giant Magellan Telescope Project



E-ELT: Feasibility study and preliminary design of the Hydrostatic Bearing and Driving System of the E-ELT