

Extremely Large Telescope (ELT)

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Extremely Large Telescope Latest News

Lurking in the barren Atacama Desert, the Extremely Large Telescope (ELT), a colossal machine nears completion.

About Extremely Large Telescope (ELT)

- It **will be the world's largest optical telescope**, with a **primary mirror** that **measures 128 feet** (39 meters) across.
- It is being **built by the European Southern Observatory (ESO) in Chile** at a cost of 1.3 billion euros (around \$1.4 billion).
- It will be **capable of detecting**—and possibly even **imaging**—**terrestrial planets** in the **habitable zones of other stars**.
- The ELT is under construction **atop Cerro Armazones**, which is a **mountaintop in Chile's Atacama Desert**.
- The giant ELT dome will house the telescope and its interior structure, providing protection from the extreme environment of Chile's Atacama Desert.
- The **main structure** of the telescope will hold its **five mirrors and optics**, including the enormous 39-metre primary mirror.
- The primary mirror, rather than being a single slab of glass, is made up of 798 hexagonal segments, each of which is 5 feet (1.5 m) across and 2 inches (5 cm) thick.

Key Facts about European Southern Observatory (ESO)

- It is the **preeminent intergovernmental science and technology organisation in astronomy**.
- It is supported by **16 countries: Austria, Belgium, Brazil**, the Czech Republic, Denmark, **France**, Finland, **Germany**, Ireland, **Italy**, the Netherlands, Portugal, Spain, Sweden, **Switzerland**, and the **United Kingdom**.
- It carries out an ambitious programme focused on the **design, construction, and operation of powerful ground-based observing facilities for astronomy** to enable important scientific discoveries.
- ESO also plays a leading role in promoting and organising cooperation in astronomical research.
- ESO **operates three unique, world-class observing sites in Chile: La Silla, Paranal, and Chajnantor**.
- **Headquarters: Garching, Germany**

Extremely Large Telescope FAQs

Q1. Where is the Extremely Large Telescope located?

Ans. It is being built atop Cerro Armazones, which is a mountaintop in Chile's Atacama Desert.

Q2. Which is the world's largest telescope?

Ans. The world's largest telescope is the Gran Telescopio Canarias (GTC), located at the Roque de los Muchachos Observatory on the Canary Island of La Palma, Spain.

Q3. What is an optical telescope?

Ans. An optical telescope is an instrument used to observe distant objects by collecting and magnifying visible light (the light that can be seen by the human eye).

Source: BT

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