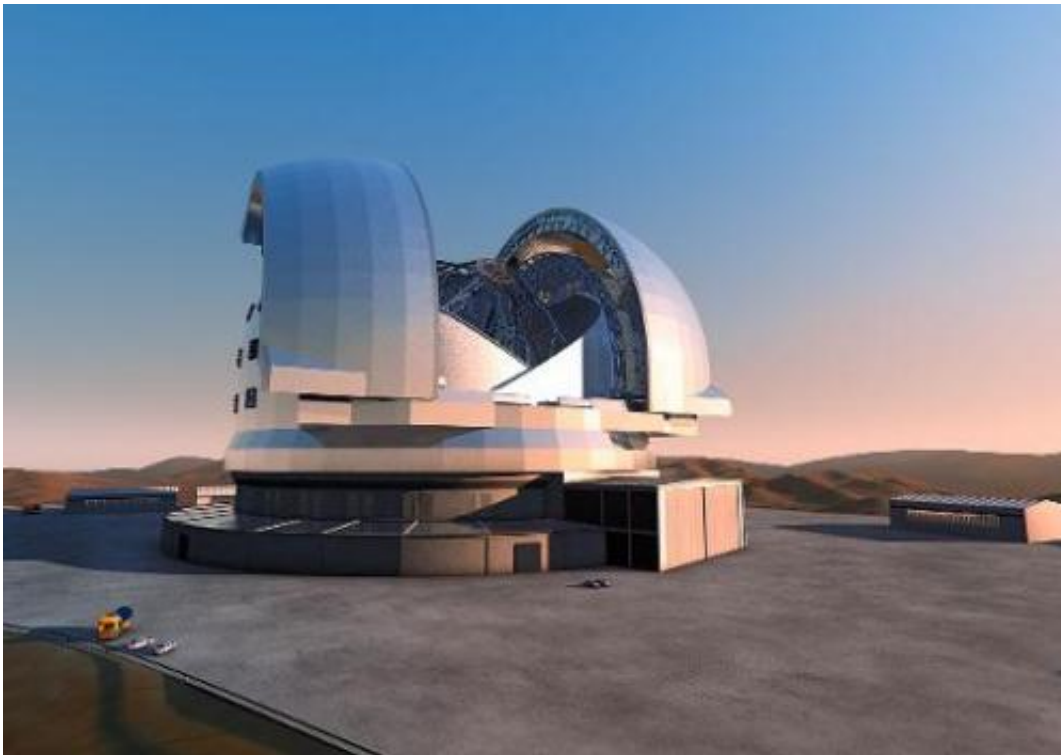


Chile hilltop razed for world's largest telescope (Update)

June 19 2014, by Patricia Luna



Handout image released by the European Southern Observatory (ESO) of an artist's rendering of the future European Extremely Large Telescope (E-ELT) that will be located atop Cerro Armazones, in the Chilean Andes

Construction on the world's largest optical telescope began with a bang Thursday, as workers demolished a hilltop in Chile's Atacama desert.

The European Extremely Large Telescope (E-ELT) telescope, being

built by the European Southern Observatory, aims to give astronomers new insight into the origins of the universe and help search for potentially habitable planets elsewhere in the galaxy.

Currently, "we have no proof of the existence of an Earth-like planet at the same distance from the sun in our galactic neighborhood," said astronomer Fernando Comeron, ESO's representative in Chile.

"That's not because they don't exist but because we didn't yet have the tools to detect them.

"With the E-ELT, we can."

Construction will take an estimated 10 years, and the telescope will be put into service two years later.

The first step, estimated at \$1.4 billion, involves razing around 5,000 cubic meters (177,000 cubic feet) of rock off the top of Mount Armazones.

The newly flat surface will support the foundation of the telescope, with an "eye"—a main mirror—of 39 meters (128 feet) in diameter.

The new telescope's light-collecting surface "will be 10 to 15 times greater than those of existing telescopes," Comeron said.

Thanks to its dry and cold climate, and the lack of light pollution from cities in the remote region, Chile's Atacama desert provides an ideal location for astronomical research.

The ESO, a collaboration involving 15 mainly European countries, operates a number of high-powered telescopes in Chile, including the Very Large Telescope array and the Atacama Large

Millimeter/submillimeter Array, or ALMA.

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