



<p>ESOCast Episode 66: A Groundbreaking Event for the E-ELT</p>	
<p>00:00 [Visuals start]</p> <p>[Narrator] 1. On 19 June 2014, a major milestone on the road to the construction of the European Extremely Large Telescope was reached. Part of the 3000-metre peak of Cerro Armazones was blasted away as a step towards levelling the summit. This paves the way for the largest optical/infrared telescope in the world.</p>	<p>Outdoor shot of tent with flags</p> <p>Blasting experts trigger the explosion</p> <p>Blast</p>
<p>00:34 ESOCast intro</p> <p>2. This is the ESOCast! Cutting-edge science and life behind the scenes of ESO, the European Southern Observatory.</p>	<p>ESOCast introduction</p>
<p>00:54 [Narrator]</p> <p>3. Cerro Armazones is in the Chilean Atacama Desert. This high and dry site offers ideal conditions for astronomical observations and the 3000-metre high mountain was chosen as the perfect site for the European Extremely Large Telescope, or E-ELT for short.</p> <p>The E-ELT is a revolutionary new ground-based telescope with a 39-metre primary mirror. It will collect about 15 times more light than the largest optical telescopes operating today. Once in operation it will provide astronomers with unparalleled observing power.</p>	<p>Cerro Armazones, distant view</p> <p>Mountain top</p> <p>E-ELT animation</p>
<p>01:48 [Narrator]</p> <p>4. However, to construct the telescope at the top of Cerro Armazones, a flat area at the summit first has to be created that is big enough to accommodate the E-ELT and its huge dome.</p> <p>As just one part of an elaborate levelling process to</p>	<p>Work at peak of Armazones: Drilling holes etc.</p>

<p>help re-shape the peak of the mountain, workers are blasting the site to remove a staggering total of 220 000 cubic metres of rock to make room for the 150 by 300 metre platform.</p>	
<p>02:29 [Narrator] 5. A groundbreaking ceremony took place 20 kilometres away from Cerro Armazones at ESO's Paranal Observatory. The milestone event was attended by VIPs from both Chile and the ESO Member States, as well as representatives of the local communities, senior officials from the project and ESO staff. The public were also invited to witness the event online.</p>	<p>Preparations in the tent at PAO</p>
<p>The ceremony included speeches by the ESO's Director General, Tim de Zeeuw, the President of ESO Council Xavier Barcons, the Intendente of the local city of Antofagasta, Valentin Volta, and the distinguished Chilean astronomer Luis Campusano.</p> <p>The order to start the first symbolic blasting was given by the Chilean Vice Minister of National Assets, Jorge Maldonado.</p>	<p>Footage from Livestream</p> <p>People outside of tent.</p> <p>Blast</p>
<p>03:51 [Narrator] 6. The E-ELT first light is planned for 2024, when it will begin to tackle many of the biggest astronomical challenges of our time.</p> <p>It will aim for a number of notable firsts, including tracking down Earth-like planets around other stars in the "habitable zones" where life could exist — one of the Holy Grails of modern observational astronomy.</p> <p>It will also allow astronomers to study the early history of the Universe and make fundamental contributions to cosmology, by measuring the properties of the first stars and galaxies and probing the nature of dark matter and dark energy.</p> <p>On top of this astronomers are also planning for the unexpected — new and unforeseeable questions will surely arise from the new discoveries made with the huge new telescope.</p> <p>The E-ELT: "the world's biggest eye on the sky" - is now on its way!</p>	<p>E-ELT animation</p> <p>exoplanet graphic</p> <p>graphic of stars, far away galaxies</p> <p>End with E-ELT animation</p>

05:09
[Outro]

ESOCast is produced by ESO, the European Southern Observatory.

ESO, the European Southern Observatory, is the pre-eminent intergovernmental science and technology organisation in astronomy designing, constructing and operating the world's most advanced ground-based telescopes.

END