Space optics in the Safran chalet

In the wake of the go-ahead to start building for the European Extremely Large Telescope (E-ELT), Safran organized an event to showcase its expertise in high-performance optical components at the Paris Air Show on Wednesday June 17, 2015 – International Year of Light. The Group presented the trailblazing technologies it is bundling into very-high-precision optical components for astronomy and space, to its customers, partners, decision-makers and journalists.

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Reosc – a Sagem (Safran) subsidiary, a key player in the ground-based-astronomy and space-optics fields, and a leading designer and manufacturer of high-performance optics – presented its latest technology breakthroughs revolving around telescope mirror polishing and component production, in particular for focal planes on space instruments, at an event it organized this Wednesday, June 17, in Safran’s chalet* at the Paris Air Show.

Large-scale programs in ground-based astronomy

This event also provided an opportunity to spotlight its latest contributions to the principal ground-based astronomy programs, such as the new 1.1-meter-deformable mirror for the Very Large Telescope (in Atacama Desert, northern Chile, over 3,000 meters above sea level), and the segmented mirrors for the Gran Telescopio Canarias (on the Canary Islands). Reosc is also involved in the calls to tender from the ESO (European Southern Observatory) for the E-ELT** project, the world’s largest and most powerful ground-based telescope ever built (also in Chile’s Atacama Desert).

A 39-meter-diameter mirror

Reosc has already secured the order to manufacture the segments making up the optical surface of the M4 mirror, and is bidding on the other four mirrors – in particular the M1 primary mirror, which will span 39 meters in diameter and consist of 798 hexagonal segments each 1.45 meters across. The challenge for Reosc will be to ramp up industrial capacity until it is producing almost one segment a day.

* Row B – no. 139

**The E-ELVT is expected to be operational and enter into service during 2024.

Learn more

Reosc is a world leader in the design, production and integration of high-performance optics for both civil and defense applications, including astronomy, space, high-energy lasers and the semiconductor industry. In the field of ground-based astronomy, the company in particular develops and manufactures large monolithic mirrors, primary-mirror segments for very large instruments, and "turnkey" telescope systems including telescopes, domes, control-command systems, maintenance equipment and civil engineering.

Reosc's active optics systems for space
Safran's full range of space technologies