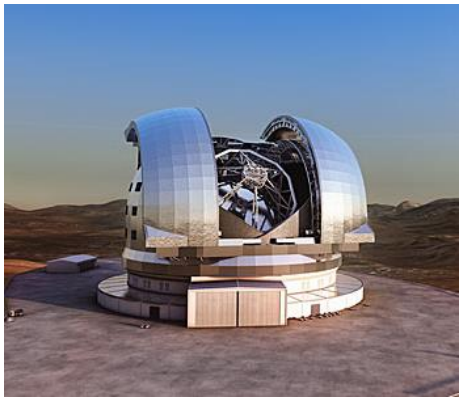
Press release

Garching bei München, Germany
and Grenoble, France
June 1, 2016

ESO and ALPAO sign 2 major contracts to develop new deformable mirrors for next generation instruments

The European Southern Observatory and the French company ALPAO will join efforts to develop the future of adaptive optics for extremely large telescopes.



Garching bei München, Germany and Grenoble, France and – June 1, 2016 –ESO and ALPAO announced the signing of 2 contracts for a Compact and an Extreme Adaptive Optics (XAO) deformable mirrors development. These contracts enable ALPAO to develop a 3 196 actuators deformable mirror in the frame of the compact project and a more than 12 000 actuators deformable mirror in the frame of the XAO project. They both will be at the state of the art level for astronomical applications. The project are linked to the 39-metre European Extremely Large Telescope (E-ELT) adaptive optics development plan.

Adaptive optics is an essential part that maximizes the performances of optical systems in astronomy. Using sensors that analyze the shape of the light waves and sophisticated deformable computer controlled mirrors, large terrestrial telescopes can in real-time correct for the distortion caused by the turbulence of the Earth's atmosphere, making the images obtained almost as sharp as those taken in space.

The up-coming E-ELT which is currently developed and build by ESO, will be such a big and high performances telescope that it requires a new generation of deformable mirror. This is the purpose of those 2 development projects. ALPAO will push its technology limits to maintain top performances while increasing the number of actuators of its pre-existing deformable mirrors.

“ESO has decided to push forward the development of different European deformable mirror technologies. The objective is to fulfill the E-ELT instruments needs. To reduce the development risks, ESO has awarded in parallel development contracts to two companies proposing different types of technologies. The technology developed by ALPAO looks promising to reach the small interactuator spacing requirement, a key element to limit the size of the future EELT instruments. We are confident that this development will allow ALPAO to fulfill the requirements for the future deformable mirrors.” said Elise Vernet, the project manager following the deformable mirror development at ESO.

“ALPAO is proud to be selected for these 2 projects started by such a renowned organization which is ESO. It will enable ALPAO to reach a major milestone in its development. It’s an important step in ALPAO’s growth. The new generation of deformable mirror will be a large step for astronomy, and together with ESO we can contribute to that” said Vincent HARDY, Head of Sales and Marketing at ALPAO.

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About ESO

ESO is the foremost intergovernmental astronomy organization in Europe and the world's most productive ground-based astronomical observatory by far. It is supported by 16 countries: Austria, Belgium, Brazil, the Czech Republic, Denmark, France, Finland, Germany, Italy, the Netherlands, Poland, Portugal, Spain, Sweden, Switzerland and the United Kingdom, along with the host state of Chile. ESO carries out an ambitious program focused on the design, construction and operation of powerful ground-based observing facilities enabling astronomers to make important scientific discoveries. ESO also plays a leading role in promoting and organizing cooperation in astronomical research. ESO operates three unique world-class observing sites in Chile: La Silla, Paranal and Chajnantor. At Paranal, ESO operates the Very Large Telescope, the world's most advanced visible-light astronomical observatory and two survey telescopes. VISTA works in the infrared and is the world's largest survey telescope and the VLT Survey Telescope is the largest telescope designed to exclusively survey the skies in visible light. ESO is a major partner in ALMA, the largest astronomical project in existence. And on Cerro Armazones, close to Paranal, ESO is building the 39-metre European Extremely Large Telescope, the E-ELT, which will become "the world's biggest eye on the sky".

For more information: www.eso.org

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About ALPAO

Incorporated in 2008, ALPAO designs and manufactures a complete range of adaptive optics products for use in research and industry. ALPAO is providing deformable mirrors, wavefront sensors and also softwares to the full adaptive optics loop. These adaptive optics components are tailor-made for astronomy, ophthalmology, microscopy, wireless optical communications and laser applications.
ALPAO deformable mirrors feature large stroke, fast deformation and very good optical quality. Our instruments are recognized for their unrivalled performance that's allow aberration compensation and very high-resolution images.
ALPAO is an international company with customers on 4 continents, over 20 countries. More than 90% of its turnover come from exports.
With 50% of its turnover in medical field, the company shows strong development in both astronomy and medical applications.

For more information: www.alpao.com

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