



The UK Astronomy Technology Centre is the national centre for astronomical technology and part of the Science and Technology Facilities Council. We design and build instruments for many of the world's major telescopes. We also project-manage UK and international collaborations. Our scientists carry out observational and theoretical research into questions such as the origins of planets and of galaxies.



## Innovation and Experience

The UK ATC has a world-leading track record in the delivery of facility class instrumentation systems. Advances in observational astronomy are very demanding and any proposed new facility is almost certainly a one-off project which must be hundreds, if not thousands, of times better than any predecessor if it is to be funded. Having innovative, creative staff who are up to date on developments in their field is therefore essential. Equally, experience is necessary to turn new ideas into reliable, cost effective solutions.

## Solving Design Challenges

New projects are inspired by the scientific need to detect fainter and more distant objects, and to improve our understanding of brighter objects through imaging, spectroscopy and polarimetry. The expertise of our staff includes optics and optical design, mechanical design and machining, electronic design and fabrication, real-time computer control and data capture and analysis.

The UK ATC is providing novel

design solutions through our work in major projects which currently include a key instrument (SCUBA-2) for the James Clerk Maxwell Telescope; A mid infrared instrument (MIRI) for the James Webb Space Telescope; the VISTA telescope and infrared camera and a multi object spectrograph (KMOS) for the ESO VLT in Chile. We are also using our expertise to help shape the future of Europe's next large telescope. We are participating in design studies for the European Extremely Large Telescope (E ELT).

## Science and Research

Our research covers a broad range of topics in astronomy, but has special focus on studying dust and planets around nearby stars, galaxy formation and evolution, and nearby young stellar populations. These research areas are perfect for exploiting the state-of-the-art instruments being built at, or already delivered by, the UK ATC to telescopes around the world.

## Working together

In order to maintain our excellent track record we need strong links and connections with outside organisations – locally and globally; in academia and industry; within the astronomy community and outside it.

Our customers include: European Southern Observatory (ESO), Gemini Observatories (North & South), European Space Agency (ESA), Joint Astronomy Centre (JAC), National Aeronautics and Space Administration (NASA), and many others – including those outside of the conventional astronomy areas.

Delivering the current range of

complex systems needed by these customers requires large international collaborations. The list of current collaborators is extensive – including universities, national institutes, research centres, and industry. With dedicated project management and systems engineering professionals, the UK ATC has considerable experience in successfully leading and participating in many such large projects.

Within our local area the UK ATC is part of the Edinburgh Research Partnership in Engineering & Mathematics (ERP) and the Scottish Universities Physics Alliance (SUPA). Further afield we are founding members of both the Photonics Knowledge Transfer Network (PKTN) and the European Network of Optical Clusters (ENOC). We also have close links with many other organisations, networks and research groups globally.

## Science and Society

We support an active science and society programme through the work of the Royal Observatory Visitor Centre.

## Contact

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