



Science & Technology
Facilities Council

UK Research
and Innovation

Welcome to Fascination, a fortnightly behind the scenes look at our labs, facilities and funded research and the breakthroughs they bring.

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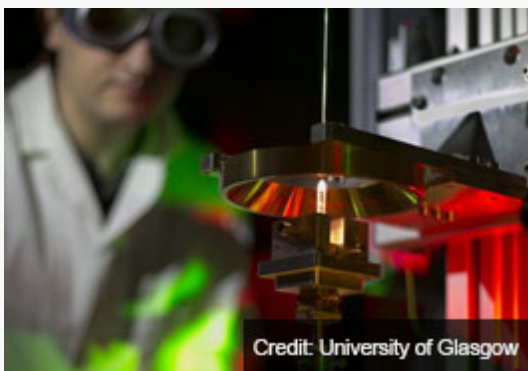


Step closer to central Africa's first astronomical observatory

Kenya could soon host the only research-class observatory in equatorial Africa, thanks to a collaboration with the UK. This project will give future generations of African

astronomers access to an observatory in their own continent, and UK and Kenyan teams are currently working together to find locations for an astronomical observatory.

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Credit: University of Glasgow

Gravitational wave funding announced

A global network of gravitational wave observatories is to be upgraded. The Advanced LIGO Plus (ALIGO+) project will improve the two existing Laser Interferometer Gravitational Wave Observatories (LIGO) in the US, and will be included as standard in LIGO India.

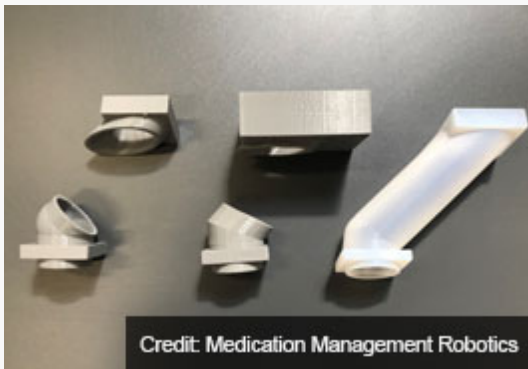
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Billion pixel upgrade for ALICE detector at CERN

The Large Hadron Collider's ALICE detector is undergoing a major upgrade to become a billion pixel detector, and scientists at Daresbury Laboratory are helping to build it! A major international project, once complete, ALICE will tell us more about the early universe than ever before.



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Medicine dispensing robot gets 3D printing help

3D printing technologies at Daresbury Laboratory have helped Medication Management Robotics, a Sci-Tech Daresbury company, overcome a key manufacturing challenge. The ability to 3D print prototype parts in just 10 days saved the company considerable time and money.

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Polar bear inspired paint is all white for the planet

Polar bears, although famously white, actually have black skin and colourless, see-through fur. Scientists are studying the mechanism that makes their fur appear white, called structural colouration, with the aim of making eco-friendly paints that never lose their colour.



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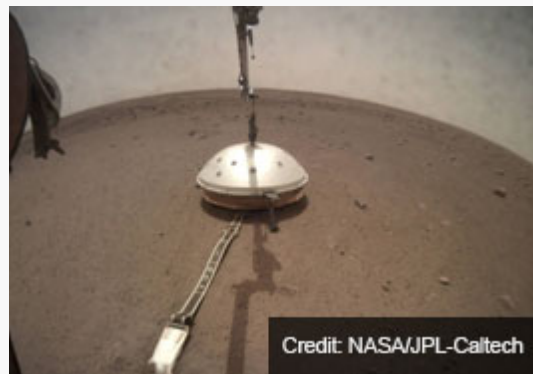
Nanogels offer injection-free drug treatments

Scientists are investigating a new way of delivering potentially life-saving drugs directly through the skin without the need for injections. The work at ISIS Neutron and Muon Source could revolutionise how drugs are administered for diseases such as cancer and diabetes.

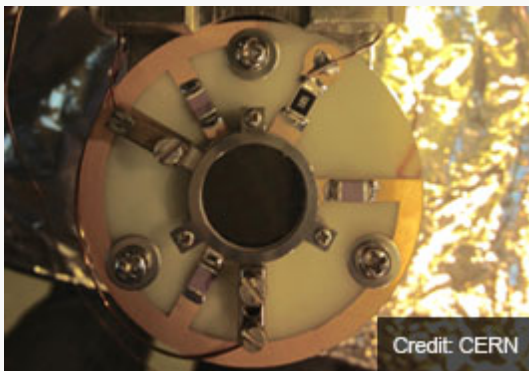
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UK-built Mars instrument dons a protective sunhat

The NASA InSight lander has gained a protective shield. The Wind and Thermal Shield was deployed earlier this month to cover the delicate seismometer that will detect vibrations from the planet. A package of sensors within the instrument were built here in the UK.



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Taking the waiting out of dating for archaeologists!

Archaeologists will soon be able to date artefacts in days rather than months! Artemis Analytical has joined the STFC CERN Business Incubation Centre at Daresbury Laboratory to use CERN-developed technology to provide fast and affordable carbon dating capability.

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A week in the life of a Policy Lead

STFC's very own particle physicist, Dr Stewart Martin-Haugh, spent a 'Week in Westminster' as part of The Royal Society Pairing Scheme – shadowing and experiencing the working life of John Cockaday, Future Sectors Policy Lead.



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Accelerating business opportunities

The UK is leading the way in transforming ideas developed using accelerator technology into successful businesses. Start-ups joined us at Daresbury Laboratory recently to find out how we can help them access CERN technologies and expertise to boost their business opportunities.

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Young scientists and engineers feeding our futures

Farm Urban are working with schools and organisations across the North West to introduce the concept of urban farming and find ways to reconnect people with their food.

The project is challenging young people to get hands-on and think creatively to design, build and use their own farming systems and grow, eat and enjoy their own-grown food.

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ICYMI [@wynneevans](#) [@BBCRadioWales](#) broadcast live from [@CERN](#). There's banter, black holes and some brilliant members of our [#WalesatCERN](#) community. [Listen here.](#)



A super strong material called fused silica helps make gravitational wave detectors sensitive enough to pick up ripples in space time [@UofGlasgow](#). [Read more here.](#)



Secondary Science PGCE students from [@uochester](#) are on site to learn about STFC projects and how we can educate young people on [#bigscience](#). [Read more here.](#)



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