

Progress on Second Target Station Instruments

Four new instruments are presently under construction on the Second Target Station: Chipir will test the effect of high energy neutrons on electronics; Larmor is a multipurpose instrument for small angle scattering, diffraction and spectroscopy using the Larmor precession of polarised neutrons; Imat is an imaging and diffraction instrument for materials science, materials processing and engineering; and Zoom is a flexible high count rate small angle scattering instrument.

Chipir construction is progressing extremely well with the main parts of the blockhouse and the novel beamstop installed. The Larmor guide is being installed and the blockhouse with its internal crane is also built. The Imat extension building has been erected and the first part of the guide installed. Key components of Zoom have been delivered. Chipir is expected to be available in early 2014, with other instruments coming online in sequence after this.



Left: Interior of the Imat instrument building.



Below: Construction of the Larmor blockhouse next to the other TS-2 reflectometers.

ISIS-Italy Partnership

ISIS has had a very long-standing partnership with Italy. The first agreement between ISIS and the Italian national research council (CNR) was signed in 1985. To celebrate the ISIS-Italy collaboration, the current CNR President, Prof Luigi Nicolais, and colleagues, visited ISIS towards the end of last year.

Prof Luigi Nicolais, President of the Italian CNR, talking to instrument scientist Tatiana Guidi during his visit to ISIS.

ISIS and the EPSRC Centres for Doctoral Training

EPSRC is presently calling for proposals for Centres for Doctoral Training (CDTs), one of the three main ways that it provides funding for PhD students. EPSRC is happy to receive proposals for CDTs which require facility work to deliver against the relevant science priority area. ISIS also welcomes the opportunity to contribute directly to the work of CDTs - through the research enabled by ISIS beamtime and the co-provision of relevant training. Further details of how ISIS can work with CDTs can be found [on the ISIS website](#). If you would like to discuss how ISIS can be involved in a CDT application, please contact Philip King (philip.king@stfc.ac.uk) or Sean Langridge (sean.langridge@stfc.ac.uk).



New home for the ISIS User Office



The ISIS and Facilities User Office has moved! It is now located in the R75 reception building near the main gate at Rutherford Appleton Laboratory. The move of the User Office into the reception building will enable users to get ISIS visitor passes and welcome information immediately, rather than queuing at the main reception desk for a temporary pass and then waiting again for their ISIS access pass at the user office in ISIS. Over time we are aiming to activate ISIS passes with meal vouchers and experimental hall access, and have dosimeters ready for users who have completed online requirements before arrival.

Changes to ISIS User Office online services

We have listened to your feedback and made improvements to our online user office systems. As we continue to improve our systems, please send your feedback on the changes we are making to isisuo@stfc.ac.uk

VISITS SYSTEM

The visits system now remembers your personal details. So all you have to do is keep your My Details page up to date and our Visits system will look your contact details up from there.

We have also added features for tracking your visit bookings once you have submitted them:

- A diary view so you can see who on your team is coming and when
- See when aspects of your visit, eg taxi requests, have been processed
- See live information about your taxis and accommodation on your smart phone – just scan this QR code.



ARRIVING FOR EXPERIMENTS AT ISIS

If your experiment starts during office hours: a quick visit to the User Office on arrival ensures you have all you need to start your experiment.

If your experiment starts during the weekend: If you have done the safety test, read the health and safety information and updated your personal details online before you arrive, then you can collect your dosimeter and pass (pre-loaded with meal vouchers) from the ISIS Main Control Room (MCR). *If you have not done these things online in advance of arriving, your entry into the ISIS hall will be delayed and you may not be allowed in until the next working day.*

Meetings and workshops

- **UK Neutron and Muon User Meeting**
8-9 April 2013, Warwick Conference Centre
NMUM is an opportunity for UK neutron and muon users to get together to hear about latest neutron and muon science, ISIS and ILL facility developments, and other matters that affect you, and to discuss and provide feedback on these things. For further details and to register, please visit <http://www.wis2.isis.rl.ac.uk/useroffice/NMUM2013/Register.asp>
- **ISIS Facility Access Panels**
5-6 June 2013, Rutherford Appleton Laboratory
- **ISIS User Committee**
7 June 2013, Rutherford Appleton Laboratory
- **International Conference on Neutron Scattering, ICNS2013**
8-12 July 2013, International Conference Centre, Edinburgh <http://www.icns2013.org/>

BEAM STATUS ON YOUR SMART PHONE

We have made available live beam and shutter information in a format suitable for your smart phone. Browse to m.facilities.rl.ac.uk and select 'ISIS Beam Status & MCR News'.



EDUROAM TO CONNECT TO WIFI

During your experiment you can now connect to our visitors WiFi network using your home institution credentials using 'Eduroam'. Eduroam is set up by your institution so contact your local IT helpdesk before your visit to make sure everything is ready for you to use this new service. Visit www.ja.net to find out more about eduroam and to discover participating organisations. If your organisation is not listed then you will still be able to connect to our WiFi using the same login details that you use for all our other online services.

PUBLICATIONS

PUBLISHING YOUR RESEARCH

When publishing results from experiments at ISIS, we expect that you will include your ISIS local contact as a co-author on your papers.

Without the dedicated work of ISIS scientists in designing, commissioning, building, maintaining and developing the ISIS instruments many experiments could not succeed.

Your publications from experiments at ISIS should also contain an acknowledgement of the support received from ISIS. For example, "Experiments at the ISIS Neutron and Muon Source were supported by a beamtime allocation from the Science and Technology Facilities Council."

Please send information about your publications to isisreports@stfc.ac.uk

INFORMATION FOR USERS

ISIS

NEXT PROPOSAL ROUND CLOSING DATE: 16 APRIL 2013, 23:00 GMT

www.isis.stfc.ac.uk
www.stfc.ac.uk



HOW TO APPLY FOR BEAM TIME

www.isis.stfc.ac.uk/apply-for-beamtime

ISIS neutron and muon instruments are free to use for academic researchers provided results from experiments at ISIS are published in the public domain.

For each experiment at ISIS, a beamtime proposal outlining the scientific case must be submitted. If you are a postgraduate or undergraduate student, your academic supervisor must be listed as the principal investigator on the proposal.

New users are always welcome at ISIS and we are constantly encouraging new areas of research that can flourish. ISIS scientists and the User Office can help you with your beamtime proposal and all ISIS users receive a high level of support during experiments.

UK industry and private sector researchers can use ISIS through the fast-track ISIS Collaborative R&D Programme. When a company joins the programme, requests for beam time can be made at any time, and a decision on access to the facility will be made within two weeks.

For more information please contact the ISIS Industry Liaison Manager Dr Christopher Frost (christopher.frost@stfc.ac.uk).

Types of beam time

The different ISIS access routes, listed below, are currently under review. Your comments on how you would like to see the access mechanisms working – what you need for your science – and how the routes should be developed are welcome – please email Philip King (philip.king@stfc.ac.uk).

DIRECT ACCESS

Direct access is the standard route to apply for beam time at ISIS. There are two calls for proposals each year with deadlines 16 April and 16 October. All direct access proposals are peer reviewed by the ISIS Facility Access Panels (FAPs).

RAPID ACCESS

When speed is critical, you can make a rapid access proposal. This route is suited to, for example, high-priority science, samples with finite lifetimes, the end of a PhD student project or other reasons why you may need access to ISIS beam time more quickly than is possible through the direct access route.

Rapid access proposals can be submitted at any time and will be peer reviewed by members of the Facility Access Panels (FAPs). If the proposal is considered appropriate for rapid access, it will be scheduled as soon as possible at ISIS.

Reasons for requesting rapid access must be clearly made within your proposal.

XPRESS ACCESS

Xpress access allows for small amounts of beamtime for a variety of reasons including a single determination of a crystal structure, trial of a sample prior to proposal submission or to full allocation of beamtime, quick measurements to finish off an experiment, etc. Some instruments have a formal Xpress service, including:

- Gem Xpress for powder diffraction
- Sans Xpress for small angle scattering
- SESANS Xpress for spin-echo small-angle scattering on Offspec
- QENS Xpress for quasi-elastic neutron scattering
- Merlin Xpress for inelastic neutron scattering
- Tosca Xpress for molecular spectroscopy
- Muon Xpress for muon spectroscopy
- Engin-X Xpress for engineering measurements.

Xpress proposals can be submitted at any time. There is no advance peer review for this service, and your beam time proposal does not require a science case. Samples are sent by courier to ISIS for measurement and high-quality data, ready for analysis, will be provided in return. You are expected to carry out data analysis with minimal assistance from ISIS.

PROGRAMME ACCESS

Programme access can be awarded to UK academics in support of a research grant which has clearly demonstrated the need for a connected series of experiments. Please contact Philip King (philip.king@stfc.ac.uk) to discuss your beamtime needs before submitting your proposal.

Writing your proposal

INITIAL DISCUSSIONS

Before you write your proposal, we advise you to contact ISIS instrument scientists to discuss your experiments. They can help you to decide on the most suitable instrument and the amount of time you will need.

Note that not all sample environment equipment is available for all instruments and it is advisable to check your requirements with the sample environment team or instrument scientists.

www.isis.stfc.ac.uk/people
www.isis.stfc.ac.uk/instruments

SCIENCE CASE

At the heart of your proposal is a science case written in English and no longer than two sides of A4 paper.

You should give a clear account of the aims of the experiment and set it within the broader scientific context. Keep in mind that not all review panel members are experts in the field. You should indicate if there could be a potential economic impact of your research.

Give a detailed description of the experiment, explain why neutrons or muons are needed and give reasons for your choice of instrument. Where possible, show results of preliminary work carried out (for example, other characterisation techniques which you have used to demonstrate sample properties or quality).

You should justify the amount of beam time your request.

If you have funding support from UK research councils

(or other sources) describe how your proposal connects with this research. This can help to increase the success of your proposal. Please tell us about how your research is funded through the 'Support for your research' page within the proposal system.

If you want to apply for more than one instrument you must submit a separate proposal for each instrument. Your proposal could be allocated to another instrument, so please list other instruments that could be used.

Supply a list of recent publications from work at ISIS. As well as giving supporting information for your proposal, a good track record of publications following ISIS experiments can increase the success of your proposal.

Proposals will be copied for FAP panel members in black and white and reduced in size. Please make sure all text, figures and images are clear and legible when viewed at smaller sizes than A4.

SAFETY

It is important that you give accurate information about the safety of samples and the safety of the proposed experiment. Failure to give correct information could delay the start of your experiment.

If you have any questions about sample or experiment safety, please contact Steve Roberts (steve.roberts@stfc.ac.uk).

All ISIS experiments are now required to complete an online Experiment Risk Assessment before starting work to evaluate experiment and sample safety. Providing this information in advance will allow ISIS staff to ensure that your experiments can go ahead and be safe and successful. Successful proposers will be sent a link to the ERA system in advance of their experiment.

SUBMITTING PROPOSALS

Your ISIS beam time proposals must be submitted using our online system available through:

www.isis.stfc.ac.uk/apply-for-beamtime

Proposals can be edited up until the deadline for submissions.

If you have any questions about the online proposal system, please contact the ISIS User Programme Manager Andrew Kaye (andrew.kaye@stfc.ac.uk).

You will need a 24 hour team

If your proposal is successful, you are responsible for arranging for a competent research team to be at ISIS on a 24 hour basis for the duration of your beam time.

How to write a good proposal

Proposal reminders:

- Justify the amount of beam time you ask for.
- Justify the samples you will use and give evidence of their quality.
- Make sure your text, figures and images will be legible when copied in black and white to a smaller size.

"Always talk to an instrument scientist to accurately assess the time needed and discuss experiment feasibility."

Sarah Hainsworth, University of Leicester

Justify why you need to use a particular instrument and why ISIS is important. What will the results enable you to do that you couldn't do before?

"One of the main reasons for not obtaining the support of the panel is a lack of clear statements on how the proposed work will result in significant advances."

Sue Kilcoyne, University of Salford

For a complex series of experiments, either summarise them in a table or show how you reach your final beam request. ISIS instrument scientists will be able to help you with this. For example, 2 samples at 3 pressures and 4 temperatures for 5 hours each = 2 x 3 x 4 x 5 = 120 hours of beam time. Also include any time needed for equipment set up and sample equilibration.

"Make sure you state exactly what measurements you want to do and break down the experiment so that the panel can assess the time requested."

John Evans, Former Chairman, Facility Access Panel 1 – Diffraction



Responsibilities of the Principal Investigator on ISIS proposals

Please remember that the Principal Investigator on an ISIS proposal has specific responsibilities. The Principal Investigator has to:

- ensure that a trained team capable of running the experiment on a 24 hour basis will be available and that the researchers will observe the appropriate regulations, especially on safety, of STFC
- ensure that the information on the sample and the safety aspects are correct and complete
- nominate the people who have access to the experimental data
- ensure that an experiment report is submitted within 3 months of experiment completion and that results from experiments at ISIS are published within a reasonable timeframe
- ensure that ISIS is acknowledged in publications and that ISIS staff, where appropriate, are included as co-authors.

Note that research students cannot be Principal Investigators on ISIS proposals.



ISIS User Office

The User Office is available to help all users, and is located in R75 Reception building at the entrance to the Rutherford Appleton Laboratory site. We can arrange accommodation and transport during your experiment and process your expense claims when the experiment is finished. We will always be able to find someone who can answer your questions.

The User Office has moved location! Please see overleaf for details.

ISIS User Office
Science and Technology Facilities Council
Rutherford Appleton Laboratory
Harwell Oxford
Didcot OX11 0QX, United Kingdom
+44 1235 445592 isisuo@stfc.ac.uk
www.isis.stfc.ac.uk/user-office

Planning your experiments at ISIS

This call for proposals covers beam time for September 2013 to early 2014. Some instruments have restricted availability:

- Let** Please contact Rob Bewley (robert.bewley@stfc.ac.uk) before submitting a proposal to Let.
- Vestiblo** Open for proposals, but reduced time available. Please contact Andrew Seel (andrew.seel@stfc.ac.uk) if you would like to discuss a proposal before submission.
- Engin-X** If you would like to submit a proposal requiring imaging on these instruments, please contact Winfried Kockelmann (winfried.kockelmann@stfc.ac.uk) before submission.

