



# Positive Spin

The Newsletter of the ISIS Muon Group

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## News

### WELCOME

"Welcome. There are so many more  $\mu$  now thanks to the recent beamline upgrades! If you want to know about the systems that can be explored by  $\mu$ SR, do visit the online e-learning packages. Also, don't miss the deadline for your proposals. FAP6 wants to receive lots of them! Priority science may have access to ISIS through Rapid Access proposals. Best, **Pietro**"

**ISIS Access**  
Spring and Summer 2017  
Next proposal deadline  
**16th October 2017**

### CDT TALKS

In May the ISIS muon group introduced over 70 first-year PhD students within UK research-

### Your views are IMPORTANT!

Please complete the ISIS Neutron and Muon Science and User Meeting questionnaire [here](#)

council funded Centres of Doctoral Training to  $\mu$ SR. Contributing to the Introduction to ISIS and Diamond facilities for CDT students initiative, the group highlighted applications of this exotic probe through research focused primers and analysis.

### International Society for $\mu$ SR Spectroscopy (ISMS)

The International Society for  $\mu$ SR Spectroscopy (ISMS) was formed to promote the worldwide advancement of muon spin rotation, relaxation and resonance ( $\mu$ SR). To join or for further details please click [here](#) or email **Peter** (secretary)

### Thank you, Tom, and e-learning videos online

We say thank you, and best wishes, to Tom Loe who returns



to the Uni. of Reading having developed online training materials about muon spectroscopy with support from SINE2020. These e-learning packages, **and instructional videos**, are available online for free at [e-neutrons.org](http://e-neutrons.org).

## Science highlights

PAPERS RESULTING FROM ISIS WORK ARE AN IMPORTANT OUTPUT AND INCREASINGLY USED AS A MEASURE OF THE VALUE OF THE FACILITY. PLEASE KEEP US UP TO DATE WITH YOUR PUBLICATIONS. WE HAVE COMPILED LISTS FOR RECENT YEARS THAT ARE NOW AVAILABLE AT [WWW.ISIS.STFC.AC.UK/GROUPS/MUONS/PUBLICATIONS](http://WWW.ISIS.STFC.AC.UK/GROUPS/MUONS/PUBLICATIONS) PLEASE INFORM US IF ANY ARE MISSING.

- MUON SPIN RELAXATION EVIDENCE FOR THE U(1) QUANTUM SPIN-LIQUID GROUND STATE IN THE TRIANGULAR ANTIFERROMAGNET YbMgGaO<sub>4</sub>
- UNCONVENTIONAL MAGNETISM ON A HONEYCOMB LATTICE IN A-RuCl<sub>3</sub> STUDIED BY MUON SPIN ROTATION
- SIMULATIONS OF MUON PRODUCTION TARGETS
- SUPERCONDUCTIVITY AND MAGNETISM IN ORGANIC MATERIALS STUDIED WITH  $\mu$ SR
- STRUCTURAL AND MAGNETIC PROPERTIES OF THE 5d<sup>2</sup> DOUBLE PEROVSKITES Sr<sub>2</sub>BRE<sub>2</sub>O<sub>6</sub> (B=Y, IN)
- MUON SPIN SPECTROSCOPY OF FERROCENE: CHARACTERIZATION OF MUONIATED FERROCENYL RADICALS
- UNIVERSALITY CLASS OF THE MOTT TRANSITION

## Instrumentation

### BEAMLINE UPGRADED!

Over the summer we have completely rebuilt the front end section of the muon beamline –



the part normally hidden in the blockhouse, and built in 1987. Following a week of tuning and

commissioning we have resumed user experiments. Thanks to larger aperture magnets and more flexibility for beam tuning, the muon flux is now increased by about a factor of 4 from that before phase 1 of the upgrade, with little change in the spot size, muon stopping range, or other characteristics.

We are now considering detector upgrades to use the extra muons most effectively, particularly on  $\mu$ SR

### NEW POWER SUPPLIES

The new power supply for the  $\mu$ SR main magnet has been installed and commissioned.

## Dates for your diary

- ISIS PROPOSAL DEADLINE: 16 APR 2017
- MUSR2017 25-30TH JUNE, 2017, SAPPORO, HOKKAIDO, JAPAN
- SYMPOSIUM FOR PROF. DR. E. MORENZONI, PSI, OCT 13TH.

## Any other business...

**PUBLICATIONS** Please inform your local contact and the ISIS User Office of publications arising from work on Muon instruments. A link to the work can then be included on the STFC publications database: <http://epubs.stfc.ac.uk>

**CO-AUTHORS** Please remember to include Muon Group staff as co-authors on publications when deemed appropriate

**CYCLE DATES** Forthcoming cycle dates

Further information: [Muon Group Homepage](#) - [Group Members](#) - [HiFi](#) - [MuSR](#) - [EMU](#) - [ARGUS](#)

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