



Positive Spin

The Newsletter of the ISIS Muon Group

Volume 6, Issue 2, April 2017

News

WELCOME

"30 glorious years and of even brighter future, especially for MUSR! All the muon spectrometers are being continuously upgraded to allow all users to continue performing cutting edge science at ISIS. If you want to exploit the high positron count rates and unique performances of ISIS muon instruments please remember that the deadline for beam time applications is approaching. FAP6

JOIN US

Muon Group Instrument Scientist

www.topcareer.jobs/vacancy/irc240811_7102.aspx

Informal enquiries contact
Aidy

members are willing to receive a lot of brilliant proposals. Best wishes, **Pietro**"

HAPPY 30th BIRTHDAY!

On 23rd March 1987, around 11am the first muons were generated from a single instrument, MuSR. Since then the muon facilities have grown to 7 experimental areas, including the



RIKEN-RAL facility and over 1100 papers have been produced across a brand range of scientific subjects.

Muon Spectroscopy at Low Temperatures

On the 6-7 Feb 2017, to mark 30 years of muon science and the recent retirement of our first dilution fridge, delivered by TBT in Mar'92, we held a symposium to discuss μ SR studies at low temperatures. The meeting was also accompanied by the ISIS Facility User Meeting providing a chance to hear updates about the proposed MUSR upgrades and our ongoing project to provide new low temperature sample environment.

International Society for μ SR Spectroscopy (ISMS)

To join or for further details please click [here](#) or email **Peter** (secretary)

Happy Birthday

Free commemorative POSTER
For Every Reader! Click [HERE](#)

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 PLEASE INFORM US IF ANY ARE MISSING.

- MAGNETIC ORDERING OF DEFECTS IN A MOLECULAR SPIN-PEIERLS SYSTEM
- IMPLANTED MUON SPIN SPECTROSCOPY ON 2-O-ADAMANTANE: A MODEL SYSTEM THAT MIMICS THE LIQUID \rightarrow GLASSLIKE TRANSITIONS
- NODAL SUPERCONDUCTING GAP STRUCTURE IN THE QUASI-ONE-DIMENSIONAL $\text{Cs}_2\text{Cr}_3\text{As}_3$ INVESTIGATED USING μ SR MEASUREMENTS
- RATE OF MOLECULAR TRANSFER OF ALLYL ALCOHOL ACROSS AN AOT SURFACTANT LAYER USING MUON SPIN SPECTROSCOPY
- INSTABILITIES OF SPIN-LIQUID STATES IN A QUANTUM KAGOME ANTIFERROMAGNET
- FAST MICROWAVE-ASSISTED SYNTHESIS OF LI-STUFFED GARNETS AND INSIGHTS INTO LI DIFFUSION FROM MUON SPIN SPECTROSCOPY

Instrumentation

MUSR DETECTOR RINGS AND RACK RAILWAY

Over the winter shutdown MUSR's thirty year old detector support rings were replaced with aluminum replicas and a hand-drawn rack railway was



installed to make rotating the instrument easier. The zero field

system drift is measurably reduced and the detectors have been tuned up for maximum performance.

Muon Instrument Review

This year muons at ISIS will be appraised by a panel of international experts to look at the current state of muon research and how the spectrometers may be developed in the future. The findings will be summarised in a future issue

MANTID FOR MUONS

Since inception, Mantid functionality has evolved exponentially. From simple model fitting, to analysis of ALC measurements, we greatly value your feed-

back regarding the current analysis suite as well as suggestions for the future. send comments to **Mark** The latest version can be downloaded [here](#). Basic introduction to the analysis of muon data can be found [here](#)

Keep The Date Free

NMSUM
27-29 June 2017, Warwick
[register here](#)

ISIS Access
For Spring and Summer 2018
next proposal deadline
16th October 2017

Dates for your diary

- ISIS PROPOSAL DEADLINE: 16 OCT 2017
- MUSR2017 25-30TH JUNE, 2017, SAPPORO, HOKKAIDO, JAPAN
- THEORETICAL AND EXPERIMENTAL MAGNETISM MEETING, 4-6 JULY 2017, ABINGDON, UK

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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