



International Society for μ SR Spectroscopy

Newsletter No. 6 - December 2007

Greetings from the President of the ISMS, Jochen Litterst

Dear colleagues and friends of μ SR,

I hope you all had successful muon beam time during the past months, producing exciting results to be presented at our forthcoming International Conference on μ SR in Tsukuba in July 2008. All facilities enjoy a high level of beam requests, demonstrating the continuously increasing interest not only of specialists but also of new users. This group of users needs particular attention not only by the facilities but also regarding further training possibilities to enable them to continue to use the muon technique. Schools like those offered previously, and hopefully also further in the future, at ISIS, are an essential backbone for spreading not only basic knowledge but also the necessary skills of our method.

The excellence of our method is not only based on excellent results as we can trace from many outstanding publications during the last year and invited lectures at international conferences, but also on the quality of our experimental tools, the facilities. On the following pages you will learn about the new high magnetic field installation at ISIS and the ongoing successful progress of construction at J-PARC MUSE which we may inspect at the time of our conference in Tsukuba.

At the same time we are looking forward to future developments, thinking about a next generation of muon sources coming up. Be it parasitic use or dedicated machines, it will be necessary for our community to influence political developments for providing optimal conditions for future advanced facilities. In this sense the IPS08 Symposium (details on page 4) should be of high importance. It is an outstanding opportunity for close contact with the particle physics community and it will be possible to define joint interests.

Initiated by Bob Cywinski and as discussed recently by delegates from Europe at a meeting of the ISMS-E in Bilbao, a working group will be established to consider the construction of a possible dedicated FFAG accelerator for muon production, a far-reaching option for new developments. Although these are projections going far into the future, it is high time to start thinking about technical feasibility and also the scientific case to be presented on the political level.

Attached you will find the call for the 2008 ISMS Yamazaki Prize. I am sure we will find an excellent candidate who will receive the award at the International Conference on μ SR in Tsukuba. In addition to honouring outstanding scientific achievements, we hope the Prize and its winner will contribute to the higher scientific visibility of μ SR.

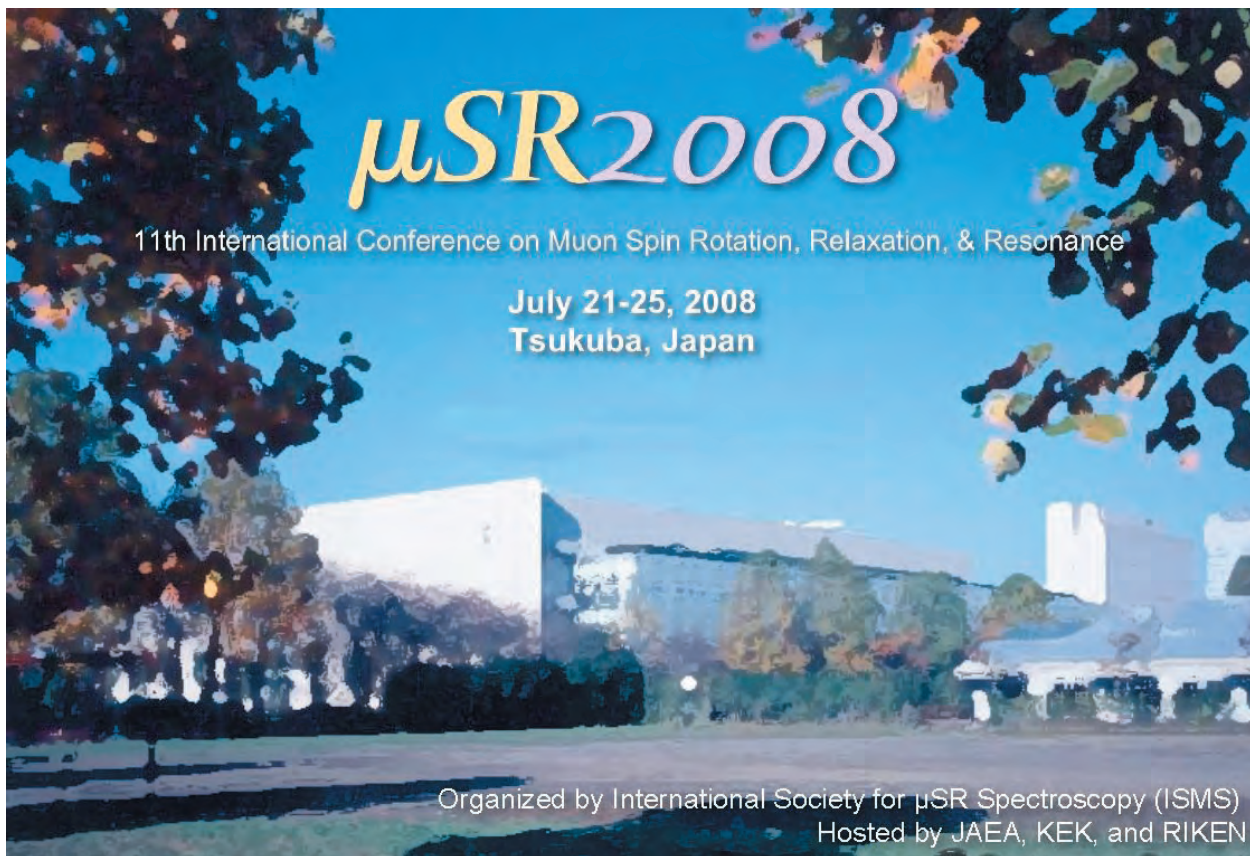
To acknowledge also the work of young scientists we would like to give in addition awards for excellent master and doctoral theses. We would therefore ask thesis mentors to consider possible candidates and nominate them by sending a brief recommendation letter together with a pdf-file of the thesis c/o the ISMS President (see page 3 for details). Selection will be done by the Executive Committee of ISMS.

For the coming festivities I would like to wish you all the best, health and happiness, and especially scientific success for experimental periods in 2008.

Jochen.

The International Society for μ SR Spectroscopy

c/o Philip King (Secretary), ISIS Facility, STFC Rutherford Appleton Laboratory, Chilton, Oxfordshire, OX11 0QX, UK. email: isms@rl.ac.uk. Web: <http://musr.org/isms/>



The next International Conference on Muon Spin Rotation, Relaxation and Resonance will be held in Tsukuba, Japan, 21-25 July 2008. The conference is being organised by the KEK Muon Science Laboratory, RIKEN Nishina Centre and JAEA Advanced Science Research Centre.

Invited Speakers:

J. Akimitsu (Aoyama Gakuin University, Japan)
H. Alloul (Université Paris-Sud, France)
E.H. Brandt (Max Planck Institute, Germany)
P.P. Edwards (University of Oxford, UK)
A.D. Huxley (University of Edinburgh, UK)
H. Kageyama (Kyoto University, Japan)
Y. Miyake (KEK, Japan)
S. Nagamiya (J-PARC, Japan)
H. Sato (Tokyo Metropolitan University, Japan)
J.L. Tallon (Victoria University, New Zealand)
C. Van de Walle (University of California, USA)
K. Yamada (Tohoku University, Japan)

Abstract Deadline:

11 April 2008

Conference Venue:

Tsukuba International Conference Centre, Tsukuba, Japan

The local organizing committee (LOC) of μ SR2008 is moving to high gear to develop the details of the conference. The list of invited speakers is finalized, and the conference web page has been set up for posting information including the list of invitees. The second announcement will be produced in early 2008.

<http://musr08.riken.jp>

μ SR2008
Tsukuba

The Executive Committee of the International Society for μ SR Spectroscopy

is pleased to announce the call for nominations for

THE 2008 ISMS YAMAZAKI PRIZE FOR μ SR SCIENCE

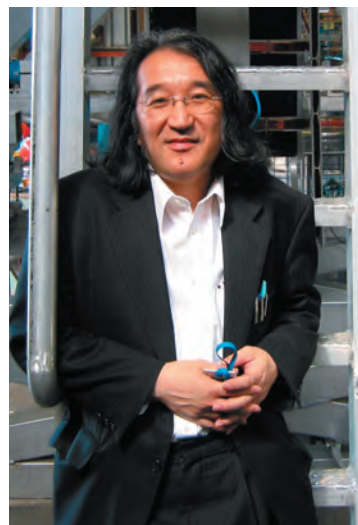
The \$3000 prize is made available by the ISMS every three years to any scientist for outstanding, sustained work in μ SR science with long-term impact on scientific and/or technical μ SR applications. The 2008 prize will be awarded at a special ceremony session of the International Conference on μ SR, to be held in Tsukuba, Japan.

Nominations for the prize will be considered by a Selection Committee which consists of the President and three Vice Presidents of the ISMS, together with authorities representing the major scientific disciplines to which μ SR contributes. The Committee includes acknowledged experts both inside and outside the μ SR community.

Nominations for the 2005 ISMS Toshimitsu Yamazaki Prize may be submitted by scientists as individuals or on behalf of a Group. To establish a high standard it is necessary that the Committee receive nominations that demonstrate a sustained, long-term impact on particular fields of science using μ SR and/or on substantial development of innovative μ SR-related techniques, technologies or theories. Nominations should include a cover letter describing the motivation for the award, a brief curriculum vitae of the nominee and a short list of major, relevant publications. At least two additional supporting letters of recommendation should be included. Nominations will be treated in confidence, and will be acknowledged, but no further communication from the Selection Committee will be sent.

Nominations should be sent before 29 February 2008
to the Chairman of the Selection Committee:

Prof. Dr. F. Jochen Litterst,
President ISMS
IPKM, TU Braunschweig
Mendelssohnstrasse 3
38106 Braunschweig
Germany
Telephone: +49 531 391 5103
Fax: +49 531 391 5129
Email: j.litterst@tu-bs.de

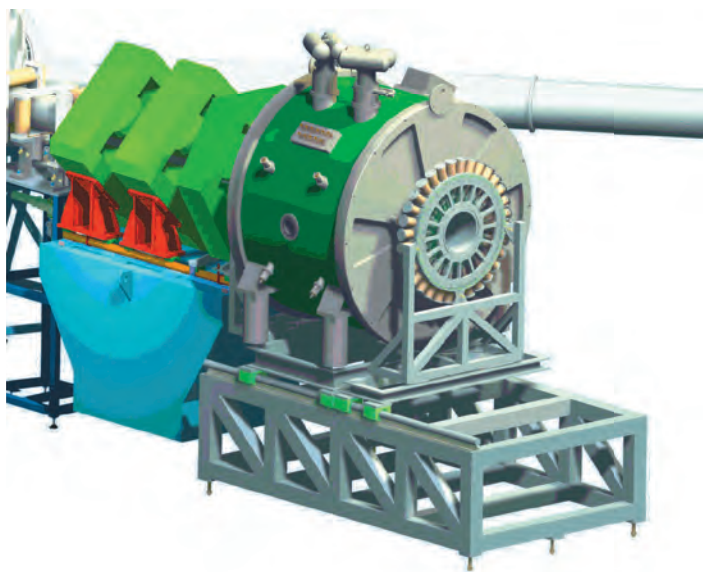


Prof. Yasutomo Uemura was the winner of the first Yamazaki Prize awarded in 2005.

News from the Regions

High-field Spectrometer at ISIS

The new high-field spectrometer at ISIS is progressing well. The instrument will be capable of 5 T longitudinal fields, and is based around a superconducting split-pair magnet. The magnet is due for delivery to ISIS next year, and we have just completed the design for the detector array ready for component manufacture. A closed-cycle refrigerator and ^4He cryostat are on order, and we are just completing a tender exercise for a dilution refrigerator. Construction of the new instrument is due to start mid-2008, with it being ready for operation by the end of 2008.



Outline design for the new high-field instrument, HiFi, at ISIS.

J-PARC Muon Facility (MUSE)

The construction work of J-PARC MUSE in 2007 was marked by the completion of the primary proton beam line in July. The muon construction team completed the major installation of the M2 tunnel which runs through the heart of the magnificent Materials and Life Science Facility (MLF) building (that was also completed in the Spring). Commissioning of muon production target and beam line components, such as pillow seals and beam monitors, is now in progress.

On July 17, the muon construction team, together with the J-PARC project leaders, the MLF division leader, and the KEK-IMSS director, celebrated the completion of the M2 tunnel. The tunnel is now covered completely by a ceiling of thick concrete shields with a total weight of 3500 tons. The vacuum systems of the M1 (upstream of M2) and M2 tunnels are connected, and the entire vacuum system from the Rapid Cycle Synchrotron (RCS) through the neutron source target is ready for beam

delivery. The muon construction team is now working hard on the installation of the superconducting solenoid channel for the muon beam line.

Meanwhile, the accelerator team has been making steady progress in the commissioning of their brand-new machines. After the successful operation of the LINAC to accelerate protons to the design value of 181 MeV in January, in November they achieved a beam accelerated to 3 GeV in the RCS and extracted it from the ring to the beam transport section heading for MLF.



The 'canyon' of the primary proton beamline in the M2 tunnel viewed from upstream near the muon production target.



Celebrating the completed primary proton beamline in the M2 tunnel.

IPS08: Announcement

The 1st International Symposium on Pulsed Neutron and Muon Sciences (IPS08), March 5-7, 2008, in Mito, Japan, is being organized by the J-PARC Center. For muon users, this would be a pre-meeting for the next international conference on μSR scheduled in July 2008. To differentiate the two successive meetings, IPS08 will emphasise the exchange of future ideas for using intense muon beams. It will serve as an excellent opportunity for people from both muon and neutron societies to get together and talk about future collaboration. ISMS members are strongly urged to participate in this meeting. For more details, please see the poster at the end of this newsletter and the symposium web page (<http://www.ips08.com/>).

ISMS Executive Elections

New ISMS Officers are elected every three years. Early next year, there will be a call for candidates to stand for the posts of

President-elect,
Treasurer,
Vice President Asia and Australasia
Vice President N. and S. America
Vice President Europe and Africa.

ISMS Officers have a chance to shape the activities of the Society, and help to progress the μ SR technique. Do consider if you would like to stand or if you know someone who does.

The present Executive is:

President - Prof. Jochen Litterst (Braunschweig, Germany)

President-elect - Dr. Jeff Sonier (SFU, Canada)

VP Asia and Australasia - Prof Ryosuke Kadono (KEK, Japan)

VP Europe and Africa - Prof Roberto De Renzi (Parma, Italy)

VP N. and S. America - Prof Graeme Luke (McMaster, Canada)

Treasurer - Dr. Hubertus Luetkens (PSI, Switzerland)

Secretary - Dr. Philip King (ISIS, UK)

Webmaster - Prof. Jess Brewer (UBC, Canada)

2011 Conference

It seems very strange to be thinking about the 2011 μ SR Conference when we've not yet had the 2008 one! But the location of the 2011 Conference will be decided at the 2008 meeting. The ISMS Executive Committee will hold a meeting during the 2008 Conference at which potential hosts of the 2011 conference can make a short presentation and answer questions. If you and your colleagues wish to host the 2008 Conference, please come to the Tsukuba meeting prepared to discuss a likely location for that Conference and the name(s) of the Conference Chair(s). Also, please be prepared to discuss likely funding sources (besides Conference fees) for your proposed location.

If you are intending to present your case for hosting the conference, please send a short proposal (less than one page) to Jochen Litterst, the ISMS President, via email before June 1, 2008 - his details can be found on page 3 of this newsletter.

Muon Facility Contact Details

ISIS

Contact: Philip King (philip.king@rl.ac.uk)
<http://www.isis.rl.ac.uk/muons/>

PSI

Contact: Dierk Herlach (dierk.herlach@psi.ch)
<http://lmu.web.psi.ch/>

TRIUMF

Contact: Syd Kreitzman (syd@triumf.ca)
<http://musr.triumf.ca/>

RIKEN-RAL

Contact: Dr. T. Matsuzaki (matsuzak@riken.jp)
http://riken.nd.rl.ac.uk/ral/ral_form.html

Comments on this newsletter?

The ISMS newsletter will be distributed periodically to inform the μ SR community of ISMS activities, and to provide other information and news of interest to community members. We would welcome comments and thoughts on the content and distribution method - please email the Secretary, Philip King, at isms@rl.ac.uk if you have suggestions.

The 1st J-PARC International Symposium

IPS 08



International Symposium on
Pulsed Neutron and Muon Sciences

March 5-8, 2008

Venue: **Ibarakiken Shichouson Kaikan, Mito, Ibaraki, Japan**



Scope

IPS08 will focus on the high intensity pulsed spallation neutron and muon sources at Materials and Life science Facility (MLF) of J-PARC and other facilities in the world. Prospective sciences and technologies performed in those facilities will be discussed.

Topics

1. Innovative sources and instruments

Muon target, Neutron source, Instruments, Device, Detector, Neutron optics, Polarization, Facility (inc. radiation safety), etc.

2. Advanced science in materials

Strongly correlated electron systems, Functional ceramics, Magnetism, Superconductivity, Ferroelectrics, etc.

3. Hydrogen and water

Life science, Soft matter, Polymer, etc.

4. Energy, environment and safety

Materials science, Functional materials, Nano science (Batteries, Fuel cells, Hydrogen storage materials, etc.)

5. Basic science and nuclear physics, chemistry, etc.

Joint session of IPS08 and NP08: "Science at J-PARC" (in the afternoon of March 5, 2008)

International Workshop on Nuclear and Particle Physics at J-PARC (NP08) will be held at the same dates as IPS08. A joint session of IPS08 and NP08, "Science at J-PARC" will be held in the afternoon of March 5, 2008 at Mito Plaza Hotel. A joint reception will also be held in the evening.

Chair: **Yujiro Ikeda**, Division Leader of Materials and Life Science Division, J-PARC Center
Susumu Ikeda, Deputy Division Leader of Materials and Life Science Division, J-PARC Center
International Program Committee Chair: **Takashi Kamiyama** (J-PARC Center)
Symposium Secretariat: **Masatoshi Arai** (J-PARC Center)
Organized by J-PARC Center
Co-organized by
Institute of Materials Structure Science, High Energy Accelerator Research Organization
Quantum Beam Science Directorate, Japan Atomic Energy Agency
Supported by Ibaraki Prefecture



Abstract Deadline

December 28, 2007

The papers will be published as a special issue of
Nuclear Instruments and Methods in Physics Research Section A.

www.ips08.com

E-mail: **IPS08@ml.j-parc.jp**