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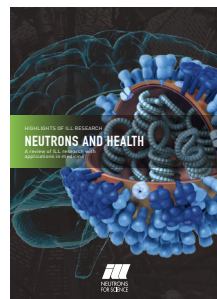
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In brief

- Several new buildings on the EPN campus, which were funded in part or in full by the local and regional authorities in the framework of a so-called CPER contract, were officially opened on 21 February (more on p.2).
- The ILL reactor will start-up again on 8 July, after a year-long shutdown, which was necessary to carry out a number of major projects (more on p.3). We are looking forward to welcoming you again to the ILL!
- We will soon publish a brochure *Neutrons and Health*. This booklet is the 6th of a series devoted to the application of neutron techniques in different research areas. Contact us if you would like to receive a copy. Alternatively, you will soon find a pdf file on the ILL website:

<http://www.ill.eu/quick-links/publications/brochures/>.



Facility news

Inauguration of new buildings at EPN campus



At the cutting edge... from left to right Jérôme Safar, ILL director Bill Stirling, Jean-Jack Queyranne, Geneviève Fioraso, Marc Baïetto and ESRF Director General Francesco Sette cutting the inaugural ribbon.

Friday 21 February saw the official opening on the EPN campus (European Photon and Neutron Science Campus) of several new buildings which were funded in part or in full by the local and regional authorities in the framework of a so-called CPER contract (*Contrat de Projets Etat-Région*). The opening ceremonies were attended by the French Minister for Higher Education and Research, Geneviève Fioraso, the President of the Rhône-Alpes region, Jean-Jack Queyranne, the President of Grenoble Alpes Metropole, Marc Baïetto, and deputy Mayor of Grenoble, Jérôme Safar, in their capacity as representatives of the funding agencies and faithful supporters of these projects.

The most emblematic of the buildings inaugurated is the 5000 m² Science Building, which is designed to facilitate research collaborations and to host new scientific partnerships, such as the Partnership for Soft Condensed Matter. Despite its rather unimaginative name, the Science Building will be home to cutting-edge science that promises to pave the way for countless industrial applications for use in everyday products: pharmaceuticals,

detergents, cosmetics, ceramics, gels and elastomers, to name but a few. The building will also provide a single point of contact for industrial R&D teams who wish to make use of the unrivalled range of analysis tools offered by the large-scale research facilities.

The 120 new occupants of the Science Building have now moved into their new quarters. The ESRF's Business Development Office and the ILL's Industrial Liaison Office will be situated on the ground floor. They will be close to the MSSL (Materials Science Support Laboratory) which provides support for materials science users, and to the characterization platform, a facility designed in collaboration with the CEA and CNRS to provide industrial users with access to the full analytical capacities of the large-scale instruments.

The first floor holds the ILL and ESRF chemistry laboratories, the Soft Condensed Matter partnership and laboratories are on the second floor, and the third floor houses the ESRF's SSM group (Structure of Soft Matter) and the ILL's LSS group (Large-Scale Structures).

Finally, at the top on the fourth floor we find the Science Library and the Theory Group.

The ESRF and the ILL also inaugurated new infrastructures, which will benefit everyone on the site: a new entrance on avenue des Martyrs and the extension of the staff restaurant, which will provide an improved service for the thousands of scientists who come to carry out experiments on the site each year.

For its part, the IBS celebrated the completion of its new building: 5600 m² of laboratories, platforms and offices dedicated to structural biology. UNESCO has declared 2014 as *International Year of Crystallography*. It is therefore fitting that the IBS now has at its disposal a unique environment for exploring the molecular architectures of living organisms and their dynamics in order to further our understanding of the main cellular functions. So, it's the start of a new era for the EPN campus. ■



The interior of the new Science Building.

Reactor restart

The ILL reactor will start-up again on 8 July, after almost a one-year shutdown - since 9 August 2013. This exceptionally long shutdown was necessary to carry out a number of major projects. Some are part of the Millennium upgrade programme; others are the result of the complementary safety assessment performed by the ILL following the accident at Fukushima. Work on these projects involved virtually every service in the ILL.

The main operations which were planned during the shutdown were:

- Several major projects to reinforce the safety of the reactor imposed by the post-Fukushima safety assessment
- Construction of the heavy water building (together with its technical installations) and the replacement of the reactor heavy water
- Replacement of three beam tubes (iH3, H6/H7, H13)
- Replacement of almost all the H5 guides which

deliver neutrons from the horizontal cold source to the instruments in ILL22 as well as to IN14

- Installation of two new instruments (ThALES and WASP) and the major upgrade of another four instruments (SuperADAM, D16, D22, IN15).

The start-up will certainly comprise a few hours at very low power, possibly extended to up to a few days according to the progress of radioprotection measurements. The power will then be maintained at 30 MW till the end by the cycle, which is planned on Saturday, 26 July at 8:30 am.

In case of new events the start-up could be delayed further. The date of the end of the cycle will not be modified. The start-up of the following cycle will take place on the originally planned date of 28 August. Thank you for taking into account this new information when planning your experiment.

We are looking forward to welcoming you again to the ILL! ■

Instrument & technical upgrades

Development of single crystal based gas pressure cells for *in situ* powder diffraction studies of solid-gas reactions (Long Term Proposal LTP-5A-1)

N. Kurtzemann, P. Wenderoth, C. Reichert (Saarland University), T. C. Hansen (ILL) and H. Kohlmann (University Leipzig)

Reaction pathways and mechanisms are often unknown in solid state chemistry. This makes rational synthesis planning difficult and leaves many intermediates phases yet to be discovered. The aim of this LTP was to develop a gas pressure cell for *in situ* neutron powder diffraction studies of solid-gas reactions with optimized performance for the study of hydrogenation reactions of intermetallic compounds. For real-time studies high intensity is mandatory and makes D20 at the ILL a natural choice.

The gas pressure cell is based on a sapphire single crystal with a 6 mm diameter bore-hole for the sample and is connected to a gas delivery system. Elevated temperatures are provided by a two-sided laser heating system and measured by a pyrometer (figure 1). Bragg reflections of the container material sapphire can be avoided by proper orientation, although sometimes a few degrees in 2θ have to be excluded due to phonon contributions of sapphire's Bragg peaks. The powder diffraction data are of high quality allowing Rietveld refinement of crystal structures including light atom (hydrogen, deuterium, nitrogen) positions, thermal displacement parameters and occupation numbers [1]. The main advantage compared to other *in situ* neutron powder diffraction cells is the clean background of the empty cell, the free optical access and the absence of hydrogen embrittlement. Hydrogen (deuterium) pressures up to 160 bar for 300 K and 90 bar for 700 K were routinely applied. For safety reasons the pressure cell is enclosed in a vacuum vessel on D20, equipped with flanges for the laser optics, the pyrometer, cables for the camera and vacuum (figure 1). It serves as a mechanical shield, as a save means of removing hydrogen gas in case of any leaks and as an optical housing for the laser beam. Measurements have in general been carried out on D20 with high-resolution mode using $\lambda = 1.87 \text{ \AA}$, with radial collimator and a minimum of 30 s per frame in time resolved measurements.

In order to test the set-up, well-known systems like Pd-D₂ and LaNi₅-D₂ were studied. At deuterium pressures up to 30 and 40 bar, respectively, and temperatures up to 600 K, the formation of PdD_{0.7} and LaNi₅D_{6.7}, respectively, including the $\alpha \rightarrow \beta$ transition could be followed *in situ* [1]. The hydrogenation reactions as well as the crystal structures described in the literature could be reproduced well, proving the gas pressure cell to be a useful and reliable tool for the study of the hydrogenation (deuteration) of intermetallic compounds.

Using the sapphire based single crystal cell the reaction pathways of the hydrogenation of various intermetallic compounds were studied. In MPd₃ phases (M = Mg, In, Tl) hydrogen induces rearrangements within several superstructures of the cubic close packing. A detailed understanding

of the reaction by a gliding of MPd₃ slabs by the crystallographic translation $\frac{1}{2} [110]$ could be developed from the *in situ* experiments. SrGa₂ is a Zintl phase with a ${}_{\infty}[\text{Ga}]$ polyanion. It can be hydrogenated to yield SrGa₂H₂, in which the hydrogen is covalently bound to the polyanionic gallium network, which makes it a polyanionic hydride. A detailed structural study of *in situ* diffraction data at 50 bar deuterium pressure and temperatures up to 350° C proves that SrGa₂ converts directly into SrGa₂D₂ without proceeding through any intermediates. CaSi on the other hand forms a so-called Zintl phase hydride with interstitial hydride anions via an intermediate phase, which is structurally related and has got lower hydrogen content. This can be easily seen from the diffraction lines appearing and disappearing with switching on and off the deuterium pressure, respectively (figure 2). The fast kinetics of the formation of this intermediate hydride is of interest in view of the potential use of Zintl

phases as hydrogen storage materials. It also demonstrates the use of *in situ* measurements, because such metastable phases remain often uncovered in standard *ex situ* experiments.

Lithium aluminium phases show a complex hydrogenation behavior. At deuterium pressures up to 50 bar and temperatures up to 600 K lithium rich compounds react stepwise to lithium poorer ones, starting at Li₃Al₄, followed by Li₂Al and Li₃Al₂ as intermediates and finally LiAl, forming LiD at each step (figure 3).

Further *in situ* measurements revealed the formation of binary hydrides in Dy₅Pd₂, hydrogen induced amorphization of the permanent magnet SmCo₅ as a first step in the HDDR (hydrogenation-decomposition-desorption-recombination) process and a one-step formation of lithium amide, LiNH₂, from Li₃N at higher hydrogen pressures.

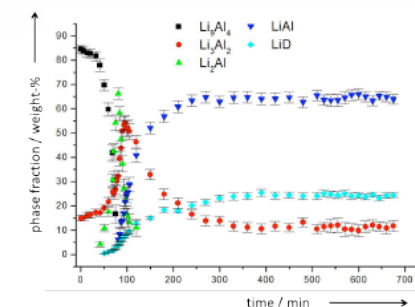


Figure 3: Development of crystalline phases upon the deuteration of LiAl at 50 bar deuterium pressure and temperatures up to 600 K as derived from *in situ* neutron powder diffraction.

In situ neutron powder diffraction with the single crystal based gas pressure cells on D20 provide high-quality data with low background and the absence of parasitic reflections with time resolution of around one minute. This allows for the detailed analysis of reaction pathways of hydrogenation (deuteration) reactions, which help in a rational synthesis planning and by which intermediate phases were discovered. Developing the static pressure to a gas flow cell and to reaction gases other than hydrogen (deuterium) is in progress and may extend its use for *in situ* diffraction to a wider range of solid-gas reactions.

We are very grateful for the invaluable technical support of Alain Daramsy and the electronics workshop at the ILL and for making the impossible (blue LED) possible.

[1] H. Kohlmann, N. Kurtzemann, T. C. Hansen, **Powder Diff.** **2013**, *28*, S242-S255 ■

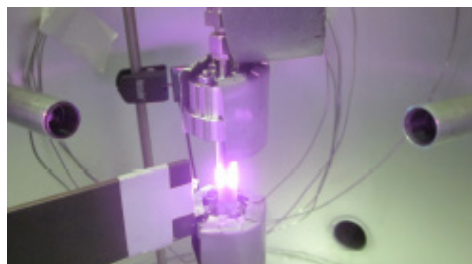


Figure 1: The sapphire gas pressure cell mounted on D20 (neutron beam coming from the right) and the two sided laser heating system (optics hidden in aluminium tubes left and right).

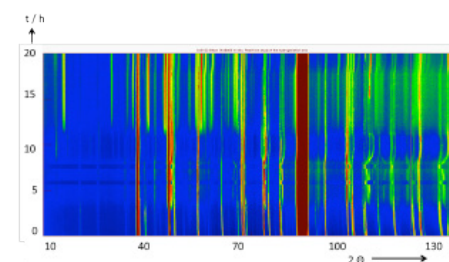


Figure 2: *In situ* neutron powder diffraction of the deuteration of CaSi given in false colors (red = high intensity, blue = low intensity). At about 90° 2 θ , peaks of the sapphire single crystal have been cut out. The refined wavelength is 1.86765(5) Å. The patterns were recorded with a time resolution of 2 min/scan. Sudden changes in diffraction patterns are due to the formation and decomposition of an intermediate deuteride CaSiD_{0.3} upon switching between 55 and 1 bar deuterium pressure.

Using the sapphire based single crystal cell the reaction pathways of the hydrogenation of various intermetallic compounds were studied. In MPd₃ phases (M = Mg, In, Tl) hydrogen induces rearrangements within several superstructures of the cubic close packing. A detailed understanding

Lithium aluminium phases show a complex hydrogenation behavior. At deuterium pressures up to 50 bar and temperatures up to 600 K lithium rich

New facilities for the ILL Chemistry and Soft Matter Laboratories

D. Heß and G. Fragneto (ILL)

The chemistry and soft matter laboratories formerly situated on the second floor in ILL20 have now moved to their new facilities in the Science Building and have become part of the Soft Matter Science and Support group. In addition to expanded space and state of the art furnishing of the laboratories our users will profit from direct access to the ILL7 guide hall after the restart of the reactor.

The laboratories devoted to all areas of chemistry excluding soft matter are located on the first floor of the Science Building, which will also host the ESRF chemistry laboratories. Among others, a main chemistry lab, a laboratory for handling corrosives, a furnace and oven room, a glove box room and a cold room can be found there. The main chemistry lab is equipped with bench space and four fume hoods and it is, just as most of the other laboratories now, equipped with an in-house gas supply of nitrogen and argon. It is dedicated to simple chemical synthesis and advanced sample preparation and will also host a stock of chemicals. The glove box is currently still in its original place in ILL20/207. It will be moved as soon as all necessary installations for its operation are finished in the new room. A bio-oriented laboratory, sharing space with the DNA spinner, is also available on the first floor, where users needing to prepare solutions of biological samples not related to deuteration, can find the appropriate equipment. Further information, e.g. on laboratory safety, can be found on <http://www.ill.eu/instruments-support/labs-facilities/chemistry-laboratories/home/>.

The facilities associated with soft matter can now be found on the second floor of the Science Building, where they are embedded in the PSCM (Partnership for Soft Condensed Matter) platform. Special laboratories for different purposes are available, e.g. a clean room for work on aqueous surfaces, a lipid extraction lab and

two aqueous chemistry laboratories devoted to soft matter. A special acid resistant fume hood is available for piranha cleaning procedures. The various laboratory instruments offered through the PSCM platform are now allocated to different rooms. Available equipment includes for example a UV-Vis spectrophotometer and a new FTIR spectrometer, an ALV light scattering instrument and Malvern Zetasizer, ellipsometers and Brewster Angle Microscope. They are described and can be booked via <http://www.epn-campus.eu/users/partnership-for-soft-condensed-matter-pscm/>.

Access to the laboratories on both floors is generally badge-locked. A new access routine for ILL users is currently introduced in cooperation with the User Office and IT services and we hope to test it successfully with the first users on the restart of the reactor. The main purpose of the chemistry and soft matter laboratories will be user operation, but of course they will remain accessible for ILL staff, and the soft matter facilities also to collaborators joining the PSCM. If you wish to enter or if you have further enquiries on either the chemistry laboratories or soft matter instruments, please get in contact with David Heß (hessd@ill.fr) or Yuri Gerelli (gerelli@ill.fr), respectively. ■



The new main chemistry laboratory in the Science Building.

Event & meeting reports

Reimei workshop (ILL, 23-25 January)

T. Ziman (ILL)

<http://www.ill.eu/news-events/past-events/2014/reimei-2014/>

This workshop was sponsored by the Reimei program of the Advance Science Research Center of the Japanese Atomic Energy Authority, with principal partners at the ILL and Utrecht. Local organizers were from the ILL, the CEA and SpinTec with additional support from the *Centre de Physique Théorique* of the University of Grenoble and the Grenoble Nanosciences Foundation.

The aim of the workshop was to bring specialists in spintronics and related areas, such as novel magnetic memories, nanomagnets and actinide films, to discuss recent results and future directions. It was

held at the ILL to encourage the exploration of ways in which neutron and X-ray scattering can contribute to this field of magnetism. This is vital to current and future technologies, but presents a challenge as it is based on increasingly smaller devices, with dimensions down to the nano-scale.

The meeting attracted more than 100 participants, including over 20 from Japan and 20 from Europe (outside France) and the US. The sessions included discussion on spintronics, beginning with discussions by leaders in Japan including Y. Otani (from the Institute of Solid State Physics

of the University of Tokyo) surveying progress on Spin Hall effects and K. Takahashi (Institute of Materials Research in Sendai) with results on spin caloritronics in alloys. The interplay of heat and spin currents phenomena were a recurring theme, as the ultimate limits of miniaturization will no doubt be concerned with such issues. A. Fert (from CNRS and Thales) discussed the science of future technologies based on magnetic skyrmions and S. Parkin, (IBM, Almaden), who was this year awarded the 2014 Millenium Prize for Technology, discussed his latest ideas on magnetic "racetrack" memories. There were sessions on magnetic multilayers, interfaces of ferromagnetic tunnel junctions and hybrid magnetic/non-magnetic structures, for example Yttrium Iron Garnet/Platinum promising for efficient spin-injection. One session was devoted to recent research in the new field of thin films and molecular magnetism based on actinides. The closing session was by the chairman of the Reimei program, S. Maekawa on correlations and spin-orbit interactions in spintronics. ■



Stuart Parkin (winner of the 2014 Millenium Prize, IBM) with Sadamichi Maekawa, (JAEA) during the Reimei meeting.

CRISP WIN (ILL, 17 March)*D. Atkins (ILL)*<http://www.ill.eu/news-events/past-events/2014/crisp-win/>

The ILL was host to a workshop on imaging with neutrons and complementary X-ray methods on 17 March, funded by the Cluster of Research Infrastructures for Synergies in Physics (CRISP). Foremost European experts in these fields presented to an invited group of guests from industry, academic research and cultural heritage, an overview of neutron and X-ray imaging, with emphasis on their applications to current important engineering and world heritage topics.

The aim of the workshop was to present relevant applications of neutron imaging and related techniques, such as X-ray tomography in CRISP large infrastructure facilities, to a representative selection of key current and potential users, and to collect their viewpoints in order to identify potential common fields of interest. It was organized co-jointly by the ILL, the ESRF and the ESS.

Deputy ILL Director Charles Simon gave an introduction to the workshop and the day's session was started with an entertaining and thought

provoking talk from Yves Bréchet, High Commissioner of Atomic Energy (CEA) and member of the French Academy of Science, entitled "Neutron imaging in industry and research". There followed very high-level presentations by colleagues from the BNC, CEA, CTU, ENEA, ESRF, ESS, FRM2, HZB and the PSI to an attentive and enthusiastic audience. Thilo Pirling and Bob Cubitt ended the day by giving guests an overview of neutron imaging at the ILL.

Immediate feedback has been very positive, both from the industrial and cultural heritage sectors, and synergies have already been identified and will be developed thanks to the workshop. ■



Jérôme Beaucour and Charles Simon (centre and right) with Yves Bréchet, High Commissioner of Atomic Energy (CEA, left).

CARAC2014 (Grenoble, 3 avril)

La science rencontre l'industrie autour des plateformes de caractérisation grenobloises
G. Manzin and J. Beaucour (ILL)

<http://www.ill.eu/html/news-events/past-events/2014/carac-2014/>

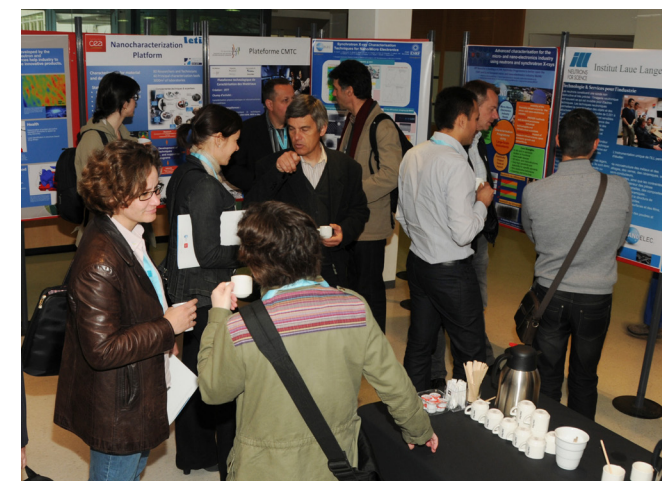
The ILL is leading one of the seven programs founded by IRT nanoelec, the Characterization Program, which aims at facilitating access to ILL and ESRF for technological research in micro/nanoelec domains. It is in the framework of this program that the characterization means of the ILL, ESRF, CEA, CNRS, Grenoble INP pooled together.

In collaboration with the other partners, the ILL organized a one-day workshop to invite people from the industry world discovering the characterization tools available in the Grenoble area.

The workshop was set-up to promote exchanges between scientists and engineers issued from the industry world. In the morning, the characterization tools available at the 5 partner platforms in Grenoble (ILL, ESRF, CNRS Polygone Scientifique, Consortium des Moyens Technologiques Communs of Grenoble INP, Plateforme de Nano-Characterisation of CEA) were presented to the audience.

The afternoon was dedicated to very interesting presentation from industrial partners (ST, Essilor, Constellium, Erasteel and Novitom, which already successfully collaborated with the partner Institutes) explaining how the detailed understanding of material properties can be the origin of promising developments.

This event is meant to be the origin of a series of workshop/training days aimed at bringing closer the science and industry worlds. ■



Experts, scientists and engineers enjoying a rich poster session and coffee break.

MDANSE (Grenoble, 9-10 May)*M. Johnson and M. Gonzalez (ILL)*<http://www.ill.eu/news-events/past-events/2014/mdanse-2014/>

The purpose of this school, combining theoretical lectures and practical sessions, is to train students and scientists in the use of atomistic simulation tools to analyze and interpret their neutron scattering data. Taking into account the QENS/WINS meeting the following week in Autrans, the school focused mainly on how to model quasielastic and inelastic neutron scattering spectra using either Molecular Dynamics or Lattice Dynamics simulations. During two intense days, mornings were dedicated to theoretical lectures on the principles of such simulations and their analysis, while the afternoons were devoted to the hands-on sessions in which the students could get familiar with several simulation codes and analysis programmes and apply them to the examples provided or their own scientific problems. The lectures were given either by members of the Computing for Science group (Eric Pellegrini, Emmanuel Farhi, Miguel A. Gonzalez, Mark Johnson), other ILL scientists (Stéphane Rols from the TOF group and Marie-Bernadette Lepetit from the Theory group) and external experts (Gerald Kneller, CNRS-Orleans).

Some 30 young participants from universities and research institutions all over the world attended the school and contributed to an enjoyable and lively event. The school closed with a roundtable discussion where each participant talked briefly about their scientific interests, their needs concerning computer simulations and neutron experiments, and their opinion about the school, which overall was very positive, encouraging us to organize a similar event in the future.

The slides of the presentations can be found on the webpage of the Computing for Science group:

<http://www.ill.eu/instruments-support/computing-for-science/modelling/mdanse-2014/>. ■



Participants to the MDANSE school.

QENS/WINS (Autrans, 11-16 May)*H. Mutka and B. Frick (ILL)*<http://www.ill.eu/news-events/past-events/2014/qens-2014-wins-2014/>

Some 150 participants involved with quasi-elastic neutron scattering and inelastic, energy resolved neutron scattering instruments and methods gathered for one week in Autrans, a very nice location in the Vercors Mountains, well known as a destination for snow sports and hiking. A previous joint meeting of this kind was organized in Nikko, Japan in 2012. This joint format is appealing as it gives the opportunity to combine the technical aspects of neutron spectrometers with the largely multidisciplinary scientific applications of quasi-elastic neutron scattering, and in fact helps to bring together a critical mass of interested scientists.

WINS contributions on instrumentation concentrated on new instruments and recent upgrades at both reactors and spallation sources and instrument projects for the ESS. The scientific contributions for QENS covered among others subjects related to the dynamics of biological systems, dynamics in confinement and soft matter, dynamics of energy related materials, of liquids and of disordered materials. Keynote speakers in such wide scientific fields were Helmut Schober (ILL), Janna Maranas (Penn

State, USA), Andreas Meyer (DLR, Germany), Denis Morineau (Rennes, France) and Juan Colmenero (San Sebastian, Spain).

The local committee relied on the expertise of two separate advisory boards consisting of eminent scientists representing the global communities in the two themes treated. We wish to express our thanks to the advisors for the collective effort that helped to set up a comprehensive and stimulating program of talks and posters for the five days of the conference.

The organisers are indebted to Laurence Tellier, Brigitte Dubouloz and Serge Claisse for their competent help in preparing and running the meeting. We appreciate the financial support received from ILL, ESS (Lund), FRMII (München), ISIS (Didcot), JCNS (Jülich), HZB (Berlin), PSI (Villigen) and LLB (Saclay).

During the meeting the two advisory boards discussed the future of these events and it was decided that the next joint meeting will take place in Germany in 2016, under the responsibility of Margarita Russina at Helmholtz Zentrum Berlin. ■



QENS/WINS participants in Autrans, in the Vercors Mountains (Grenoble region).

Announcements for ILL users

New site entrance since April 2014

Please note that the new site entrance - located at 71 avenue des Martyrs - came into operation in April 2014. You are no longer be able to access the site via the previous site entrance on Rue J. Horowitz.

There is now a new n°34 bus stop in front of the new site entrance - Martyrs-Résistance. Only those buses that terminate at Sassenage Château will stop here; in other words one bus in every two or three.

You can consult the "Travelling to the ILL" web page <http://www.ill.eu/users/user-guide/travelling-to-the-ill/> to get a better understanding of the new arrangements.

Restaurant badges: new regulations

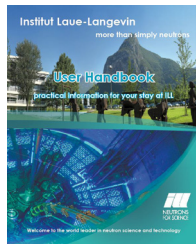
Your canteen card is now on your entrance badge. All users will need to charge their badge at the canteen during opening hours (check them at <http://www.epn-campus.eu/practical-info/site-restaurant/>). Badges are no longer pre-charged for users eligible for reimbursement.

Your meals will be reimbursed along with your claim. ■

At the beginning of September 2014, the Tram B extension will come into service. From the current terminus "Cité Internationale", the extension of the B line will connect the station area with the Résistance roundabout (near the ILL) via the Rue des Martyrs. Two new stops, CEA and Résistance will be created. Once the B line extension is operational, the n° 34 bus service between the city centre and the Polygone Scientifique will be cancelled. ■

Vademecum for ILL users

A leaflet containing information useful for your stay during your experiment will now be included in the package that you receive at the site entrance.



Proposal round

The next deadline for proposal submission and long term proposal submission (LTP) is Monday, 15 September 2014, midnight (EU time).

The web system will **open on 1 July 2014**. Proposals will be reviewed over October/November and the Subcommittee Meetings will meet to assess them on **12-13 November 2014**.

Proposals must be submitted via the Electronic Proposal Submission (EPS) system on our new User Club (<https://userclub.ill.eu/cvng>), once you

have logged in with your personal username and password. The detailed guidelines for the submission of a proposal at the ILL can be found on the web site <http://www.ill.eu/users/applying-for-beamtime/electronic-proposal-system/>.

In case of problems, you will receive full support from the Visitors Club team. Please allow sufficient time for any unforeseen computing hitches. If you have any difficulties at all, please contact our web-support (club@ill.eu). For other queries, contact the User Office (sco@ill.eu). ■

Long Term Proposals

You can find the reinforced rules for LTP submission at <http://www.ill.eu/users/applying-for-beamtime/long-term-proposal/>

In particular, we would like to stress the fact that it is expected that at the end of the project the LTP deliverables will become available to all ILL users through the normal process of application for beamtime. To ensure that this will be possible in practice, an ILL scientist should be included in the LTP team and fully involved in it, to ensure the transfer of knowhow. This is a condition required for LTP acceptance.

Also, if the LTP yearly reports are not provided on time, the ILL Management reserves the right to postpone or stop the allocation of beamtime to the user group concerned. ■

Subcommittee 5B reorganization

Over the last few years, Subcommittee 5B (the panel which evaluates the proposals submitted to college 5B, magnetism) has received a very high number of proposals; close to 150. Therefore, to ease the workload of the panel members, it has been decided to appoint a deputy chair and a deputy college secretary, who will be treating part of the submitted proposals separately (those which are dealing with small-angle scattering and reflection; this includes therefore all proposals asking for time on instruments D11, D17, D22, D33 and SuperADAM).

A similar 'soft split' was already applied a few years ago to Subcommittee 9 (the panel which evaluates the proposals submitted to college 9, Structure and dynamics of soft-condensed matter) and it has proved successful. ■

Instruments available

The following instruments will be available for the forthcoming round:

- powder diffractometers: D1B*, D2B, D20, SALSA
- liquids diffractometer: D4
- polarised neutron diffractometers: D3, D23*
- single-crystal diffractometers: D9, D10
- large scale structure diffractometers: D19, LADI
- small-angle scattering: D11, D22, D33
- reflectometers: SuperADAM*, D17, FIGARO
- small momentum-transfer diffractometer: D16
- diffuse-scattering spectrometer: D7
- three-axis spectrometers: IN1-LAGRANGE, IN8, IN12*, IN20, IN22*, ThALES
- time-of-flight spectrometers: IN4, IN5, IN6, BRISP*
- backscattering and spin-echo spectrometers: IN11, IN13*, IN15, IN16B
- nuclear-physics instruments: PN1, PN3
- fundamental-physics instruments: PF1B, PF2, S18*

* Instruments marked with an asterisk are CRG instruments, where a smaller amount of beamtime is available than on ILL-funded instruments, but we encourage applications for these.

The list of **operating CRGs** is as follows (status June 2014):

CRG-A: D1B, IN13

CRG-B: BRISP, D23, SuperADAM, IN12, IN22, S18

CRG-C: CryoEDM (no public beam time available)

GRANIT jointly funded with LPSC (UJF, CNRS)

You will find details of the instruments on our web site at

<http://www.ill.eu/instruments-support/instruments-groups/>

Scheduling period

Those proposals accepted at the next round will be scheduled in the first 2 reactor cycles in 2015.

College Secretaries

College 1 - Applied metallurgy, instrumentation and techniques: *Anne Stunault*

College 2 - Theory: *Marie-Bernadette Lepetit*

College 3 - Nuclear and particle physics: *Aurélien Blanc*

College 4 - Magnetic excitations: *Goran Nilsen*

College 5A - Crystallography: *Thomas Hansen*

College 5B - Magnetism: *Clemens Ritter, Charles Dewhurst (focus group secretary)*

College 6 - Structure and dynamics of liquids and glasses: *Viviana Cristiglio*

College 7 - Spectroscopy in solid state physics and chemistry: *Mohamed Zbiri*

College 8 - Structure and dynamics of biological systems: *Bruno Demé*

College 9 - Structure and dynamics of soft-condensed matter: *Orsolya Czakkel, Lionel Porcar (focus group secretary)*.

Calendar

Important dates

Subcommittee meetings: **12 -13 November 2014**

Scientific Council: **13-14 November 2014**

Please note that this time, exceptionally, the two meetings will follow on from each other on the same day. The Scientific Council will start at 16h00 on Thursday 13 (immediately after the Subcommittee pool meeting), and will continue all day on Friday 14.

Reactor cycles in 2015 (projected)

Cycle n° 174	from to	14/04/2015 03/06/2015
Cycle n° 175	from to	16/06/2015 05/08/2015
Cycle n° 176	from to	01/09/2015 21/10/2015
Cycle n° 177	from to	03/11/2015 22/12/2015

Provisional dates for future reactor operation can be found at

<http://www.ill.eu/reactor-environment-safety/high-flux-reactor/cycles/projected-operation/>

Forthcoming workshops and schools in 2014

- SCES 2014 (Grenoble, 7-11 July 2014) - <http://www.sces2014.org/>
- HERCULES Specialised Courses (EPN campus, 15-19 September 2014) - <http://www.esrf.eu/events/conferences/HSC/>



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