INSTITUT LAUE-LANGEVIN

High-Flux Reactor Ready to Restart

A total of 596 research proposals for neutron beam-time were submitted by the 15 August deadline to the Institut Max von Laue-Paul Langevin (ILL) in Grenoble in anticipation of the expected restart of its High-Flux Reactor. This corresponds to an oversubscription of 2-3 times for the first 2.5 reactor cycles. Subcommittees will peer-review the proposals in October on the basis of scientific merit. Meanwhile, the ILL is preparing the reactor and instruments to produce and receive the first neutrons later this autumn, with the start of experiments on the scheduled instruments anticipated in January.

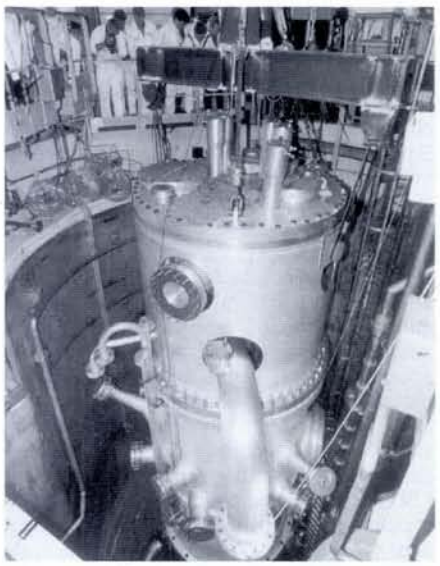
The ILL will find itself in a new position with a changed internal organization and a reduced budget and staff when the reactor restarts. The Intergovernmental Agreement signed in 1991 by the three partners (France, Germany and the UK) implied a reduction in the UK's contribution to the annual operating budget. The other two partners also reduced their contributions, but by a much smaller extent. Switzerland and Spain also contribute at a lower level as scientific members, and Austria is expected to sign an agreement shortly.

Compared to the 30 instruments for 6 cycles before the refurbishment, the ILL will now operate 25 scheduled instruments for 5 annual reactor cycles (each of 48 days). Collaborating Research Groups of the type A (CRG-A) will be responsible for some of the descheduled ILL instruments; others (CRG-B) will install their own or buy existing instruments from the ILL. These instruments will also be partially available to users. Finally, external groups can carry out experiments with their own equipment on an ILL neutron beam (CRG-C).

The Agreement also envisages that the allocation of time on the scheduled instruments will reflect the relative contributions to the budget, as well as prior investment and eventual decommissioning of the reactor. Adjustment of the beam-time allocations to correspond with these financial contributions will be made *a posteriori*. Scientists from nonmember countries can still be involved in experiments in collaboration with groups from participating countries.

Improvements have been made to many of the scheduled instruments during the shutdown. The suite of 25 instruments contains a brand new small-angle scattering instrument (see figure) and a further three new instruments will become available during the next three years. While this might mean the withdrawal of some of the existing 25 instruments, it nevertheless reflects ILL's continuing commitment to the highest quality in instrumentation and science.

R. Scherm, *ILL, Grenoble*



The new D_2O reflector tank being lowered last March into its final position inside the pool of the Institut Laue-Langevin's High-Flux Reactor. The reactor was shut down in April 1991 to undergo a major refurbishment in which all internal structures have been replaced. The refurbishment was completed on schedule and within budget, the cost having been kept within the initial estimate of 173 MFF, which was financed from the Institute's normal operating budget through stringent savings during the years 1991-3. The reactor is now ready to start operating. After a public enquiry in June and a final meeting of the French licensing body in mid-September, the ILL has now to wait for a ministerial decree before operation can resume.

Large dynamic range, small-angle diffractometer. The ILL's new small-angle diffractometer is designed to operate at momentum transfers that cover a large range. It also has a high neutron flux at the sample and a large detector area with a large amount of computer memory storage. The facility is therefore ideal for investigating structures on the scale of one to several hundreds of nanometres in samples which cannot be prepared identically for use with several different instruments.

The neutron beam is passed through a mechanical chopper and into a collimation system (shown on the left of the photograph) consisting of 8 rotable guide sections that define the virtual source-to-sample distance. The sample station lies beneath the first part of the platform. Scattered neutrons are detected using an approximately 1 m^2 ^3He multidetector that can be translated inside the 2.5 m in diameter by 20 m long vacuum tube (on the right) to provide sample-to-detector distances of 1.3 to 18 m.

ILL Proposals: February Deadline

The deadline for the next round of proposals for neutron beam time at the ILL is 15 February 1995, with decisions announced in mid-April. For scientific inquiries, tel. +31 (-) 76 20 70 82 or email to sco@ill.fr.

The forthcoming deadline for applications for magnet time allocation (February to July 1995 at the

Grenoble High Magnetic Field Laboratory

is **December 9, 1994**.

Scientists of EU countries are entitled to apply under the "Access to research under high magnetic fields" programme. Application forms are available on request.

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