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#### REACTOR STARTS ON 27 JANUARY - PROPOSAL DEADLINE 15 FEBRUARY



#### ILL next Director

The next ILL Director will be Paul Langan, who will take up his duties on 1st October 2021 when Helmut Schober completes his term of office.

Paul spent a brief period as a scientist at the ILL before moving to Los Alamos and then Oak Ridge National Laboratory. At Oak Ridge, over the past six years, Paul has served as the Associate Laboratory Director for Neutron Sciences, with responsibility for leading the operation and development of the Spallation Neutron Source (SNS) and the High Flux Isotope Reactor (HFIR).

Other assignments in biology, chemistry and physics have included various joint faculty positions as Professor at a number of universities, editorial positions in journals, leadership positions in professional organisations, and principal investigator of several research projects at national laboratories in the US. Read more



#### Neutron imaging for material and energy research

A joint research unit between the ILL, Helmholtz Berlin and Université Grenoble Alpes has been created, focusing on the development and application of combined, correlative neutron and x-ray Imaging in materials and energy research. The new unit is called "NI-Matters" (Neutron Imaging for Material and Energy Research). Read more



### Deuterated natural lipids at the ILL

A platform was recently set up within the PSCM and in collaboration with the D-Lab to handle inhouse requests for the production of deuterated and hydrogenous phospholipids from natural extracts. Last year, it was heavily involved in the preparation of samples for COVID19-related science during the lockdown and throughout the summer. The service is now available to external collaborative projects, and offered to ILL users from the February 2021 proposal round.



# PANTHER enters regular user operation

PANTHER is a completely new, thermal neutron time-of-flight spectrometer that replaces IN4C at ILL. It is one of the biggest projects of the ENDURANCE upgrade programme and the first (friendly) user experiment was performed at the end of the last cycle. Construction will continue in 2021 with the installation of five new background choppers. To meet demand from the user community, eager to use the instrument for measurements of magnetic and structural excitations, PANTHER enters regular user operation in the first cycle of 2021 with the existing background choppers.

# HIGHLIGHTS AND SCIENCENEWS



# Steps towards understanding the exotic atomic nuclei behind reactions in stars

Recent experiments jointly conducted at ILL and three other laboratories around the world have revealed a surprisingly complex landscape of three different coexisting shapes in 64Ni, a semi-magic nucleus thought to be purely spherical up to now. This experimental achievement is used to benchmark theoretical models that help us to understand the structure of "exotic" nuclei that power reactions in stars, in conditions that cannot be reproduced in laboratories on Earth.





#### Researchers find new way to stop shipwrecks 'turning to dust' on land with neutrons

Researchers at the ILL in collaboration with a group from the University of L'Aquila (Italy), have found a new way of protecting wooden objects, such as shipwrecks, preserved for hundreds of years under our waters, but vulnerable to decay as soon as they are brought on to land. The finding will enable the preservation of priceless, waterlogged artefacts, ensuring extremely rare fragments of our past can be kept for the study of archaeology, anthropology, and human history. Read more

# MORE HIGHLIGHTS HERE!

# A SELECTION OF RECENT ILL PUBLICATIONS

#### **NEWS FOR USERS**

#### Proposal round

Proposal deadline: 15 February 2021 (midnight central European time).

#### Call for proposals.

A maximum amount of beam time will be made available for this proposal round, although backlogs on instruments will have to be cleared before the forthcoming, long shutdown. Please check the list of available instruments for more details.

# Panel Meetings: 29-30 March 2021.

They will again be run remotely. All necessary information will be circulated soon to panel members. Accepted proposals will be scheduled during the third cycle in 2021. Please note that there will be no proposal round in Autumn 2021.

# Access policy to the ILL beam time

At the request of the ILL Associates (FR, D, UK), in the current budgetary context, only users from those countries that currently contribute to the operational costs of the ILL will be awarded beam time in the user programme (80% of total beam time). All proposals can be submitted and those not elligible for the user programme, due to this temporary measure, will be considered for Director's Discretion time (DDT - 5% of the overall time).

# Important information for users being able to come on site

The next reactor cycle was scheduled assuming that most users cannot come to ILL. New software tools for remote instrument control and data treatment will continue to be trialled during this cycle. Those users who will be able to come to ILL for their experiments must carefully read and follow the working procedures and practical issues for visitors on site.

Three cycles in 2021, for a total of about 170 days, before one-year long shutdown. Their lengths and dates are still to be finalised and will be updated here.

Previous issues of the ILL newsletter

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