



# ILL news letter

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## Almost at the end of 2023, we have delivered a full and exciting scientific programme: 165 reactor days and 2171 user visits for 1042 full experiments.

This newsletter focusses on enhancing the science programme with the successful delivery of Endurance projects through the commissioning of new and upgraded instruments and their availability for user experiments:

**D10+** on the new H24 guide is the completely renewed, thermal neutron, single crystal diffractometer with an end-of-guide position, new monochromators and large, position-sensitive detector. There are 6x more neutrons reaching the sample and the detector is 2x as efficient. 17 experiments have been performed in 2023.

**XtremeD** on the H24 guide is a brand new diffractometer with a 2D position-sensitive detector for powders and single crystals and focusing optics for extreme conditions sample environments. The performance is comparable to D20. 12 experiments in 2023.

**IN13+** on the H24 guide is the thermal neutron, backscattering spectrometer. The new guide, temperature-gradient monochromator and deflector are expected to give 15x more flux. 9 experiments in 2023.

**D16** is the cold neutron diffractometer with a new monochromator and secondary diffractometer, including a large-area, position-sensitive detector, leading to a 4x increased count rate. 23 experiments in 2023.

**NeXT** is the upgraded, cold neutron imaging instrument, which includes a new, in-situ, X-ray imaging setup and a second measurement station, MOTO, for monochromatic imaging. 56 experiments in 2023.

**SuperSUN** is the new cryogenic, ultracold neutron source, with a 3-metre long conversion volume of liquid helium at 500 mK. Ultracold neutrons have now been produced that will supply the next generation neutron electric dipole measurements.



The delivery of the remaining Endurance projects - SHARP+, D11+, SAM and D007 - is being accelerated for commissioning in 2024.





## Updated version of the ILL virtual tour

Enjoy an interactive tour of the scientific installations of the ILL through a set of spherical panoramas from different viewpoints. You can view the Virtual Tour on your computer, tablet, smartphone and virtual reality headset. The MAP is a good way to navigate!

Each instrument is now described by a thumbnail (photo + text) that links to the instrument web page and, the other way round, the instrument panorama can be accessed directly from the web page. Still more to come as Endurance finishes...



### NEWS FOR USERS

#### Proposal round

549 proposals were submitted at the last round in September 2023, and 259 of them were accepted. They will be scheduled during the first cycle in 2024.

**Next proposal deadline** will be at the end of January 2024 for scheduling in the second cycle of the year.

Meanwhile, **Easy Access** requests for short measurements and **DDT requests** for full experiments to be performed as soon as possible can be submitted at any time. Follow instructions [here](#).

[Important dates and reactor schedule for next year](#)

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