

## Sample Environment Equipment for use on Neutron Instruments

*Wednesday, 29 November 2017 18:10 (6)*

In order to complete and complement the neutron instruments, Australian Centre for Neutron Scattering procures and commissions a continuously evolving suite of sample environment equipment, able to determine and manipulate the physical conditions under which a neutron scattering experiment is performed. The sample environment equipment, therefore, plays a crucial role in the success of an experiment; the very role of sample environment has shifted from purely technical infrastructure to an invaluable component of the experimental procedure. The range of equipment available spans from cryostats and cryofurnaces, superconductive magnets, high temperature, high pressure, gas and vapour delivery systems to more specialised equipment tailored to specific necessities.

In designing a neutron instrument, consideration is given to ensuring the different sample environment equipment can be repeatedly and efficiently mounted, installed and operated within the confines of the instrument's sample stage and surrounding floor space. Current development projects include the design, construction and commissioning of a new superconducting split-coil magnet, a fast cooling closed cycle cryostat and a closed cycle dilution refrigerator of the latest generation. Also in the pipeline are thermalised sample tumblers for SANS and USANS.

### Formal Invitation Letter Required

No

**Primary author(s)** : LEE, Stan (Australian Nuclear Science Technology Organisation)

**Co-author(s)** : MANNING, Andrew (ANSTO); WAKEHAM, Deborah (ANSTO); DAVIDSON, Gene (ANSTO); Dr BOOTH, Norman (ANSTO); D'ADAM, Timothy (ANSTO)

**Presenter(s)** : LEE, Stan (Australian Nuclear Science Technology Organisation)

**Session Classification** : Nibblies - Poster, Sponsors DENIM Challenge