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## Wombat –the high intensity diffractometer at OPAL

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Wombat is a high intensity neutron diffractometer located in the OPAL Neutron Guide Hall. It is primarily used as a high-speed powder diffractometer, but has also expanded into texture characterisation and single-crystal measurement, particularly diffuse scattering. The high performance comes from the combination of the best area detector ever constructed for neutron diffraction with the largest beam guide yet put into any research reactor and a correspondingly large crystal monochromator, all combine with the centre's polarisation capability to provide an instrument which is unique within the Southern hemisphere.

Wombat has been used to explore a broad range of materials, including: novel hydrogen-storage materials, negative-thermal-expansion materials, methane-ice clathrates, piezoelectrics, high performance battery anodes and cathodes, high strength alloys, multiferroics, superconductors and novel magnetic materials. Our poster will highlight both the capacity of the instrument, and some recent results.

Presenter Gender

Woman

Do you wish to take part in the Student Poster Slam

No

Condition of submission

Yes

Students Only - Are you interested in AINSE student funding

No

Level of Expertise

Expert

Pronouns

She/Her

Which facility did you use for your research

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Session Classification: Poster Session