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Platypus Neutron Reflectometer

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PLATYPUS is the initial neutron reflectometer at the Australian Centre for Neutron Scattering with a capability to study surfaces and interface systems ranging from biomolecules, soft matter through to magnetic thin films [1-3]. There have been a number of significant improvements to both the instrument and data reduction and treatment software [4] over the last two years. On the hardware front the original detector has been replaced [5] enabling higher count rate capabilities, greater detection efficiency at shorter wavelengths and significantly lower background. The slits which define the neutron beam have been replaced with upgraded positioning mechanisms enabling greater flexibility in experimental setup. These changes have significantly enhanced the instrument performance with improved reproducibility.

- [1] M. James et al., J. Neutron Research 14, 91 - 108 (2006)
- [2] M. James et al., Nuclear Inst. and Methods in Physics Research A, 632, 112 - 123 (2011)
- [3] T. Saerbeck et al., Rev. Sci. Instrum. 83, 081301 (2012)
- [4] A. Nelson et al., J. Appl. Crystallography, 52, 193 - 200 (2019)
- [5] L. Abuel et al., Journal of Neutron Research, 23(1), 53 -67, (2021).

Presenter Gender

Man

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

He/Him

Which facility did you use for your research

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