

## Future Opportunities at the Australian Replacement Research Reactor

W. T. Klooster

*Bragg Institute, ANSTO, PMB 1, Menai, NSW 2234, Australia*

*Email: [wim@ansto.gov.au](mailto:wim@ansto.gov.au)*

### ABSTRACT

The new Replacement Research Reactor (RRR) which is being build at the Australian Nuclear Science and Technology Organisation will be a great opportunity for research using neutrons. Data collection times for most experiments will be 10s-1000s of times faster than currently at HIFAR. Also, the sample size needed for an experiment can be considerably smaller.

The RRR will start with 7 instruments: high intensity and high resolution powder diffractometers, a quasi-Laue single-crystal diffractometer, a reflectometer, a small angle scattering instrument, a 3-axis spectrometer and a residual stress diffractometer. More instruments will be installed in the future. These new instruments will be useful tools to obtain structural information in a timely fashion, especially where x-rays do not provide enough information. Applications are in a wide variety of areas, like physics, chemistry, biology, material science, engineering, geosciences etc.

The RRR is expected to be operational in early 2006. More detailed information will be presented.

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