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The New Quasi-Laue Diffractometer at the Replacement Research Reactor. Wim T. Klooster, Bragg Institute, ANSTO, PMB 1, Menai, NSW 2234, Australia (wim@ansto.gov.au).

The new single-crystal diffractometer for the Replacement Research Reactor in Australia will be a quasi-Laue diffractometer, similar to VIVALDI at ILL, France. It will be competitive with the best instruments currently available. Data collection times for a normal structure determination will be less than a day, a considerable improvement on current data collection times, typically a few weeks at HIFAR. Also, the crystal size needed for an experiment can as small as about 0.1 mm^3 , opening up new research areas where it has proved difficult to grow crystals sufficiently big (several mm^3) which are currently needed. An area of research opening up will be multiple temperature and/or pressure measurements.

This new instrument will be a useful tool to obtain structural information in a timely fashion, where x-rays do not provide enough detail. More detailed information on the instrument will be presented.