

The New Quasi-Laue Diffractometer at the Australian OPAL Research Reactor

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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.

More detailed information on the instrument will be presented.

Keywords: neutron diffraction, instrumentation, single-crystal structure analysis