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The PCS Neutron Protein Crystallography Station at Los Alamos. Paul Langan, Leighton Coates, Tracey Ruscetti, Benno Schoenborn, Bioscience Div., Los Alamos National Laboratory, M888, Los Alamos, NM 87545 USA.

The **PCS** (Protein Crystallography Station) at Los Alamos Neutron Science Center, is a high performance neutron protein crystallography beam line funded by the Office of Biological and Environmental Research of the U.S. Department of Energy. Beam-time is free to expert and non-expert users and is allocated twice a year through a call for proposals and a peer review process.

Neutron diffraction is a powerful technique for locating hydrogen atoms even at resolutions of 2Å-2.5Å and can therefore provide unique information about enzyme mechanism, protein hydrogen and hydrogen bonding. For an experiment on the PCS, protein crystals have to be $\sim 1\text{mm}^3$ in volume. Crystals of perdeuterated protein can be significantly smaller. Users of the PCS have access to neutron beam-time, perdeuteration facilities and also support for data reduction and structure analysis. The beam-line exploits the pulsed nature of spallation neutrons and a large electronic detector in order collect wavelength resolved Laue patterns using all available neutrons in the wavelength range 1Å to 5Å. This poster describes the facility, some results from our user program, and provides information about obtaining beam-time.

For more information about the **PCS** and experimental requirements, contact Paul Langan (505) 665 8125, langan_paul@lanl.gov or Benno P. Schoenborn (505) 665 2033, schoenborn@lanl.gov.