

Abstract Submitted
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Nuclear Science with Thermal and Fast Neutrons at UMass Lowell¹ C.J. GUESS, P. CHOWDHURY, N. BORGES, N. D'OLYMPIA, A.Y. DEO, T. HARRINGTON, S. HOTA, E.G. JACKSON, G. KEGEL, S. LAKSHMI, G. PARKER, V.S. PRASHER, K. RECCA, T. REGAN, J. THOMAS, Q. YUAN, UMass Lowell — Increased interest in improving nuclear data for applied nuclear science has prompted new research activity at the UMass Lowell Radiation Laboratory. At the 5.5-MV CN Van de Graaff accelerator facility, the beamline for precision (n,γ) and $(n,n'\gamma)$ measurements with sub-nanosecond proton beam bunches is being refurbished. A proton microbeam facility is being installed for interdisciplinary studies of materials using applied nuclear techniques. In addition, the thermal column of the 1-MW research reactor will be fitted with a new shielded area for thermal (n,γ) measurements. Neutron flux measurements, shielding calculations, and simulations are underway. Progress, status and research plans with these facilities will be discussed.

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C.J. Guess
UMass Lowell

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