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Measurement of Proton-Induced Delayed Neutron Cross-Sections at 800 and 4000  $MeV^1$  RANDY SPAULDING, CHRIS MORRIS, STEVEN GREENE, GREG CANAVAN, ZHEHUI WANG, MARK MAKELA, LAURIE WA-TERS, KIWHAN CHUNG, FESSEHA MARIAM, JEFFREY BACON, Los Alamos National Laboratory, MATTHEW MURRAY, FRED WYSOCKI, GARY HOGAN, Los Alamos National Laboratory — Energetic proton beams are being used to explore delayed neutron emissions from a variety of materials in support of national security goals. To accomplish these goals it is necessary to have a firm understanding of the time structure of delayed neutrons emitted from the daughter nuclei of spallation, fragmentation, and fission interactions in structural and shielding materials as well as fissionable isotopes. Results of experiments conducted at Los Alamos National Laboratory (LANL) at 800-MeV and Brookhaven National Laboratory (BNL) at 4-GeV are presented.

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