

Abstract Submitted
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Measurement of the $^{235}\text{U}(\text{n},\text{n}')^{235\text{m}}\text{U}$ Integral Cross Section in a Pulsed Reactor¹ D.J. VIEIRA, E.M. BOND, Los Alamos National Laboratory, G. BELIER, V. MEOT, CEA/DAM DIF, J.A. BECKER, R.A. MACRI, Lawrence Livermore National Laboratory, N. AUTHIER, D. HYNECK, X. JACQUET, Y. JANSEN, J. LEGRENDRE, CEA/DAM Valduc — We will present the integral measurement of the neutron inelastic cross section of ^{235}U leading to the 26-minute, $E^*=76.5$ eV isomer state. Small samples (5-20 microgm) of isotope-enriched ^{235}U were activated in the central cavity of the CALIBAN pulsed reactor at Valduc where a nearly pure fission neutron spectrum is produced with a typical fluence of 3×10^{14} n/cm². After 30 minutes the samples were removed from the reactor and counted in an electrostatic-deflecting electron spectrometer that was optimized for the detection of $^{235\text{m}}\text{U}$ conversion electrons. From the decay curve analysis of the data, the 26-minute $^{235\text{m}}\text{U}$ component was extracted. Preliminary results will be given and compared to gamma-cascade calculations assuming complete K-mixing or with no K-mixing.

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