Abstract Submitted
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The neutron capture cross section of ^{151}Sm RENE REIFARTH, Los Alamos National Laboratory, DANCE COLLABORATION — The Detector for Advanced Neutron Capture Experiments (DANCE) is a 160-element 4π barium fluoride array designed to study neutron capture on small quantities of radioactive material. It is located on a 20 meter neutron flight path, which views an "upper tier" water moderator at the Manuel J. Lujan Jr. Neutron Scattering Center at the Los Alamos Neutron Science Center (LANSCE). The first radioactive isotope under investigation was ^{151}Sm with a half-life of 100 years. ^{151}Sm is an important branch point during the slow neutron capture nucleosynthesis. During the talk the detector will be described, and results for the neutron capture cross section on ^{151}Sm between 10 meV and 100 keV will be presented.

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