

Abstract Submitted  
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**Neutron capture cross sections for AFCI at DANCE** RENE REIFARTH, Los Alamos National Laboratory, DANCE COLLABORATION — The Detector for Advanced Neutron Capture Experiments (DANCE) is a  $4\pi$  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). A number of radioactive isotopes under investigation were motivated by the Advanced Fuel Cycle Initiative (AFCI). During the talk the detector will be described, and first results for the neutron capture cross section experiment on  $^{240,242}\text{Pu}$  will be presented.

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