Abstract Submitted
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Neutron capture cross section of ^{243}Am M. JANDEL, Los Alamos National Laboratory, Los Alamos, NM, 87545, USA, DANCE COLLABORATION — The Detector for Advanced Neutron Capture Experiments (DANCE) at Los Alamos National Laboratory (LANL) was used for neutron capture cross section measurement on ^{243}Am. The high granularity of DANCE (160 BaF_2 detectors in a 4π geometry) enables the efficient detection of prompt gamma-rays following neutron capture. DANCE is located on the 20.26 m neutron flight path 14 (FP14) at the Manuel Lujan Jr. Neutron Scattering Center at the Los Alamos Neutron Science Center (LANSCE). The methods and techniques established in [1] were used for the determination of the ^{243}Am neutron capture cross section. The cross sections were obtained in the range of neutron energies from 0.02 eV to 400 keV. The resonance region was analyzed using SAMMY7 and resonance parameters were extracted. The results will be compared to existing evaluations and calculations. Work was performed under the auspices of the U.S. Department of Energy at Los Alamos National Laboratory by the Los Alamos National Security, LLC under Contract No. DE-AC52-06NA25396 and at Lawrence Livermore National Laboratory by the Lawrence Livermore National Security, LLC under Contract No. DE-AC52-07NA27344.

[1] M. Jandel et al., Phys. Rev. C**78**, 034609 (2008)

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