Abstract

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The Detector for Advanced Neutron Capture Measurements at LANSCE

J.L. Ullmann, E. Bond, T.A. Bredeweg, E.-I. Esch, M.M. Fowler, R.C. Haight, L. Hunt, A. Kronenberg, J.M. O'Donnell, R. Reifarth, R.S. Rundberg, J.M. Schwantes, D.D. Strottman, D.J. Vieira, J.B. Wilhelmy, J.M. Wouters, *Los Alamos National Laboratory*. U. Greife, R. Hatarik, A. Alpizar, *Colorado School of Mines.* U. Agvaanluvsan, J.A. Becker, *Lawrence Livermore National Laboratory*. F. Kaeppeler, M. Heil, *Forschungszentrum Karlsruhe*. D.C. Hoffman, C.M. Folden, *Lawrence Berkeley National Laboratory.*

The Detector For Advanced Neutron Capture Experiments (DANCE) is a 160-element, 4π BaF_2 array at the Los Alamos Neutron Science Center (LANSCE) moderated white neutron source. It is a gamma-ray calorimeter used for studying neutron capture and gamma emission from fission over the neutron energy range from thermal to about 100 keV on samples with as little as 500 μg of material. The complete array has operated for about two years, and we will present some design features and performance characteristics of the detector.