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Measurement of the ^{238}U neutron-capture cross section from 30 eV to 100 keV using the DANCE detector at LANSCE JOHN ULLMANN, TODD BREDEWEG, AARON COUTURE, ROBERT HAIGHT, MARIAN JANDEL, AUGUST KEKSIS, JOHN O'DONNELL, ROBERT RUNDBERG, DAVID VIEIRA, JAN WOUTERS, Los Alamos National Laboratory, CHING-YEN WU, JOHN BECKER, Lawrence Livermore National Laboratory, BAYARBADRAKH BARAMSAI, ANDRII CHYZH, North Carolina State University — The ^{238}U neutron-capture cross section was measured using the DANCE detector at LANSCE. DANCE is a 4π array consisting of 160 BaF_2 crystals, designed for studying neutron capture on small samples of rare or radioactive nuclides. These measurements were made with a 48 mg/cm^2 ^{238}U target. The measured cross sections are in substantial agreement with previous work. This measurement made use of a water-moderated neutron beam at the Manuel J. Lujan, Jr. Neutron Scattering Center at the Los Alamos National Laboratory, which is supported by the U.S. D.O.E. under contract DE-AC52-06NA25396.

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