

ABSOLUTE MEASUREMENTS OF THE ^{233}U (n,f)
CROSS SECTION BETWEEN 0.13 AND 8.0 MeV

by

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ABSTRACT

The fast neutron fission cross section of ^{233}U was measured absolutely between 0.13 and 8.0 MeV. The absolute cross section values were obtained by low-geometry alpha counting and isotopic dilution analysis of various ^{233}U samples, 2π -detection of the fission fragments with an ionization chamber, and the measurement of the neutron flux with several Black Neutron Detectors. Absolute cross sections were obtained with a 2-3% uncertainty over the most important energy range.