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Precision Measurement of the n-^{235}U fission cross section using the Alpha-Gamma Absolute Cold Neutron Flux Measurement Device.[1] CHRIS HADDOCK, National Institute of Standards and Technology, APLHA-GAMMA COLLABORATION — The Alpha-Gamma device at NIST utilizes the interaction of neutrons with a totally absorbing ^{10}B target to precisely measure the flux of a monochromatic neutron beam. This measurement provides a calibration of the ^{6}Li(n,α)^{3}H based flux monitor used in the NIST neutron lifetime experiment to better than 0.1% and is now being utilized in a novel measurement of the ^{235}U neutron-induced fission cross section at the 0.2% level in an effort to provide a systematically independent measurement greatly needed in the global determination of this quantity. The results of recent and ongoing measurements will be presented, and planned operations will be discussed.

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