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Measurement of the neutron-capture cross section on 63,65Cu between 0.4 and 7.5 MeV ISABEL BRAY, MEGHA BHIKE, (NONE) KRISHICHAYAN, W TORNOW, None — Copper is currently being used as a cooling and shielding material in most experimental searches for $0\nu\beta\beta$ decay. In order to accurately interpret background events in these experiments, the cross section of neutron-induced reactions on copper must be known. The purpose of this work was to measure the cross section of the ^{63,65}Cu(n,γ)^{64,66}Cu reactions. Data were collected through the activation method at a range of energies from approximately 0.4 MeV to 7.5 MeV, employing the neutron production reactions ^{3}H(p,n)^{3}He and ^{2}H(d,n)^{3}He. Previous data were limited to energies below approximately 3 MeV. The results are compared to predictions from the nuclear data libraries ENDF/B-VII.1 and TENDL-2014.

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None

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