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Measurements of the 169Tm(n,2n)168Tm cross section between 9.0 and 17.5 MeV J. SOTER, Drew University, MEGHA BHIKE, FNU KRISHICHAYAN, S.W. FINCH, W. TORNOW, Duke University — Measurements of the ^{169}Tm(n,2n)^{168}Tm cross section have been performed in 0.5 MeV intervals for neutron energies ranging from 9.0 MeV to 17.5 MeV in order to resolve discrepancies in the current literature data. The neutron activation technique was used with ^{90}Zr and ^{197}Au as monitor foils. After irradiation, de-excitation gamma rays were recorded off-line with High-Purity Germanium (HPGE) detectors in TUNL's Low-Background Counting Facility. In addition, data for the ^{169}Tm(n,3n)^{167}Tm reaction have also been obtained from 15.5 MeV to 17.5 MeV. The results of these measurements provide the basis for investigating properties of the interial confinement fusion plasma in deuterium-tritium (DT) capsules at the National Ignition Facility located at Lawrence Livermore National Laboratory.

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