

Abstract Submitted
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Studies of Neutron-Induced Fission of ^{235}U , ^{238}U , and ^{239}Pu DANA DUKE, Los Alamos National Laboratory, TKE TEAM — A Frisch-gridded ionization chamber and the double energy (2E) analysis method were used to study mass yield distributions and average total kinetic energy (\overline{TKE}) release from neutron-induced fission of ^{235}U , ^{238}U , and ^{239}Pu . Despite decades of fission research, little or no \overline{TKE} data exist for high incident neutron energies. Additional average \overline{TKE} information at incident neutron energies relevant to defense- and energy-related applications will provide a valuable observable for benchmarking simulations. The data can also be used as inputs in theoretical fission models. The Los Alamos Neutron Science Center - Weapons Neutron Research (LANSCE - WNR) provides a neutron beam from thermal to hundreds of MeV, well-suited for filling in the gaps in existing data and exploring fission behavior in the fast neutron region. The results of the studies on ^{238}U , ^{235}U , and ^{239}Pu will be presented. LA-UR-14-24921

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