

Abstract Submitted
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Neutron-induced fission measurements with the NIFFTE fissionTPC¹ MICHAEL MENDENHALL, Lawrence Livermore Natl Lab, NIFFTE COLLABORATION — The NIFFTE collaboration's fission time projection chamber (fissionTPC) is a $2 \times 2\pi$ charged particle tracker designed for measuring neutron-induced fission. Detailed 3D track reconstruction for fission products enables evaluation of systematic effects and corresponding uncertainties which are less directly accessible by other measurement techniques. This talk describes measurements of cross-section ratios between $^{238}\text{U}(n,f)$, $^{235}\text{U}(n,f)$, and $^{239}\text{Pu}(n,f)$ reactions, for incident neutron energies from 0.2 to 20 MeV from a spallation source at the Los Alamos Neutron Science Center. We also discuss exploration of the $^6\text{Li}(n,\alpha)t$ reaction as a complementary reference in actinide cross-section ratio measurements.

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