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Neutron-Induced Fission Cross Section Measurements for Full Suite of Uranium Isotopes ALEXANDER LAPTEV, FREDRIK TOVESSON, Los Alamos National Laboratory, TONY HILL, Idaho National Laboratory — A well established program of neutron-induced fission cross section measurement at Los Alamos Neutron Science Center (LANSCE) is supporting the Fuel Cycle Research program (FC R&D). The incident neutron energy range spans energies from sub-thermal energies up to 200 MeV by measuring both the Lujan Center and the Weapons Neutron Research center (WNR). Conventional parallel-plate fission ionization chambers with actinide deposited foils are used as a fission detector. The time-of-flight method is implemented to measure neutron energy. Counting rate ratio from investigated and standard U-235 foils is translated into fission cross section ratio. Different methods of normalization for measured ratio are employed, namely, using of actinide deposit thicknesses, normalization to evaluated data, etc. Finally, ratios are converted to cross sections based on the standard U-235 fission cross section data file. Preliminary data for newly investigated isotopes U-236 and U-234 will be reported. Those new data complete a full suite of Uranium isotopes, which were investigated with presented experimental approach. When analysis of the new measured data will be completed, data will be delivered to evaluators. Having data for full set of Uranium isotopes will increase theoretical modeling capabilities and make new data evaluations much more reliable.

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