

EVALUATED NUCLEAR DATA FILE OF Th-232*

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September 1977

ABSTRACT

An evaluated nuclear data file for thorium is described. The file extends over the energy range 0.049 (i.e., the inelastic-scattering threshold) to 20.0 MeV and is formulated within the framework of the ENDF system. The input data base, the evaluation procedures and judgments, and ancillary experiments carried out in conjunction with the evaluation are outlined. The file includes: neutron total cross sections, neutron scattering processes, neutron radiative capture cross sections, fission cross sections, (n;2n) and (n;3n) processes, fission properties (e.g. nu-bar and delayed neutron emission) and photon production processes. Regions of uncertainty are pointed out particularly where new measured results would be of value. The file is extended to thermal energies using previously reported resonance evaluations thereby providing a complete file for neutronic calculations. Integral data tests indicated that the file was suitable for neutronic calculations in the MeV range.

*This work supported by the U. S. Department of Energy.