^{233}U(n,F), ^{233}U(d,pF)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. Ota	NDS 207,351 (2026)	1-Dec-2023

^{234}U(μ^-,F): muon momentum=39 MeV/c (1990Ha03); lifetime for muon bound in 1s orbital was measured by 1990Ha03 to be τ=70.6 ns 2. No longer (about second) component, corresponding to a SF isomer, was observed by 1990Ha03.

^{234}U(e,e′F): E=5-7 MeV (1986Ar02), E=5.5-25.4 MeV (1982Ar14,1981Ar09); the electrofission cross sections were measured; giant quadrupole and giant dipole resonance-parameters, and transition strengths were deduced.

^{234}U(γ,F): E=5-18 MeV (1986Be38); from measured cross sections, giant dipole resonance parameters were deduced.

^{234}U(n,n′F): E=2.6-4.7 MeV (1983Dm04); searched for a fissioning isomer and upper limits for its production cross sections were given by 1983Dm04 as between 1.5×10^{-6} b, for $T_{1/2}\approx100$ ns and 2×10^{-5} b, for $T_{1/2}$=20 ns.

^{234}U(n,n′F): E=5-11 MeV (1987Go36); influence of angular momentum on the fission probability was observed and results were discussed by 1987Go36 in terms of two-hump-fission barrier.

^{233}U(d,pF): E=13 MeV (1971Ba30,1974Ba28); the fission probability was deduced from the measured singles rates and the measured triple coincidences between fission fragments and protons. Fission-barrier parameters were extracted by 1974Ba28.

^{233}U(d,pF): E=11, 12.5, 13 MeV (1986Bl11); fission probability and fission-fragment angular distributions were measured and observed fine structure is discussed in 1986Bl11. See also 1978Go13, 1982Pa14, 1989AnZO, 1999Kr18, and 2001Kr05, for (d,pF) data and discussions.

^{233}U(d,pF): E=12 MeV (1998Kr19, 1999Kr16, 1999Kr18, 2001Kr17, 2006KrZY); Measured protons in coincidence with fission fragments. Deduced hyperdeformed states in ^{234}U. The g.s. in the third minimum of the potential energy well was estimated to be at 3.1 MeV 4.

^{233}U(n,F): see 1981Wa05, 1983Be05, 1983Go20, 1986Go09, 1986Ga28, 1988Ba73, 1993Fl01, 1997Ba83, 1994Le31, 1994Le01, and 1994Gu02.

^{232}Th(^{16}O,^{14}CF): see 1987Vi02, 2000Si04, and 2000MeZZ.

^{232}Th(α,2nF): 2005ThZZ, 2004ThZZ, 1998Er01, 1997Er02, 1995ErZY, 1995Er03, and 1994ErZZ.

^{236}U(p,tF): 2012Hu01. A 28 MeV proton beam on a ^{236}U target. Measured E(t) and fission energy spectra in coincidence with a Si telescope array, and measured coincident γ-rays with a Compton-suppressed Ge array. $\sigma[^{234}$U(n,F)$]/\sigma[^{233}$U(n,F)$]$ ratio was measured at neutron energies from nearly 0 MeV to 8 MeV with the surrogate ratio method using (p,dF) and (p,tF) reactions on the ^{236}U target.

^{233}U(d,pFγ): 2017Ro16. A 12.5 MeV deuteron beam on a ^{233}U target. A Si telescope measured protons (at backward angle) while PPAC detectors measured fission fragments (at forward angle). A NaI array measured coincident γ-rays. Prompt fission γ spectra were measured as a function of ^{234}U excitation energy from 4.8 to 10 MeV.

^{237}Np(^{18}O,^{21}F)^{234}U: 2020Ve07. Fission fragment spectra were measured at the ^{234}U excitation energies between 7-60 MeV, using a ^{18}O beam on a ^{237}Np target at 162 MeV. ^{234}U excitation energy was deduced by a Si telescope array and the fission fragment energy was measured with four multi-wire proportional counters. The fission spectra were measured in ^{232}Th(^{18}O,^{16}C)^{234}U reaction by the same group (2016Le13).