

$^{235}\text{U}(\text{n,F}), ^{239}\text{Pu}(\text{n,F})$  **1974Su04,1970Gr38,1969Wa29**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 152, 331 (2018)	1-Apr-2018

**1969Wa29:**  $^{235}\text{U}(\text{n,F}), ^{239}\text{Pu}(\text{n,F})$ . Fast neutrons from 30-MeV electrons on uranium. Measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma(t)$  using NaI detector.

**1970Gr38:**  $^{235}\text{U}(\text{n,F})$  with E=thermal. Measured  $E_\gamma$ ,  $\gamma(t)$ ,  $\gamma\gamma$  and fragment- $\gamma$  coincidences using Ge(Li) diodes and a fast transmission counter to detect the arrival of fission fragments.

**1974Su04:**  $^{235}\text{U}(\text{n,F}), ^{239}\text{Pu}(\text{n,F})$  with E=thermal. Measured  $E_\gamma$ ,  $I_\gamma$ , fragment- $\gamma$  coincidences using a coaxial Ge(Li) detector and heavy-ion surface barrier detectors.

**2012Mu08:**  $^{235}\text{U}(\text{n,F})$  with E=thermal. Measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$  using two Compton-suppressed HPGe Clover detectors; deduced relative isotopic yield distributions.

Other: **1977SeZJ**.

$\alpha$ : [Additional information 1](#).

 $^{136}\text{Xe}$  Levels

E(level) <sup>†</sup>	$J^\pi$ <sup>‡</sup>	$T_{1/2}$	Comments
0.0	$0^+$		
1313.9 4	$2^+$		
1695.4 6	$4^+$		
1892.7 7	$6^+$	3.10 $\mu\text{s}$ 25	$T_{1/2}$ : from fragment- $\gamma(t)$ ( <b>1970Gr38</b> ). Other: 3.4 $\mu\text{s}$ 4 from $\gamma(t)$ in <b>1969Wa29</b> and assuming that their observed 205 $\gamma$ , 390 $\gamma$ , 1330 $\gamma$ cascade corresponds to the decay of the 1892-keV isomer in $^{136}\text{Xe}$ .

<sup>†</sup> From  $E_\gamma$ .

<sup>‡</sup> From the Adopted Levels.

 $\gamma(^{136}\text{Xe})$ 

$E_\gamma$ <sup>†</sup>	$I_\gamma$ <sup>‡</sup>	$E_f(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. #	$I_{\gamma\text{rel}}^{\text{@}}$	$\alpha$	Comments
197.3 4	0.82 12	1892.7	$6^+$	1695.4	$4^+$	E2	73.3	0.169	$\alpha(\text{K})=0.1334$ 20; $\alpha(\text{L})=0.0283$ 5; $\alpha(\text{M})=0.00593$ 9; $\alpha(\text{N})=0.001192$ 19; $\alpha(\text{O})=0.0001310$ 20 $I_\gamma$ : 1.52 23 ( <b>1974Su04</b> ). $E_\gamma$ : other: 197.0 ( <b>1970Gr38</b> ).
381.5 4	0.59 13	1695.4	$4^+$	1313.9	$2^+$	E2	100	0.0198	$\alpha(\text{K})=0.01653$ 24; $\alpha(\text{L})=0.00259$ 4; $\alpha(\text{M})=0.000533$ 8; $\alpha(\text{N})=0.0001086$ 16 $\alpha(\text{O})=1.275\times 10^{-5}$ 19 $I_\gamma$ : 1.8 4 ( <b>1974Su04</b> ). $E_\gamma$ : other: 381.0 ( <b>1970Gr38</b> ).
1313.9 4	0.95 29	1313.9	$2^+$	0.0	$0^+$	E2	>100	$9.40\times 10^{-4}$	$\alpha(\text{K})=0.000792$ 11; $\alpha(\text{L})=9.88\times 10^{-5}$ 14; $\alpha(\text{M})=1.99\times 10^{-5}$ 3; $\alpha(\text{N})=4.12\times 10^{-6}$ 6; $\alpha(\text{O})=5.15\times 10^{-7}$ 8 $I_\gamma$ : 1.6 6 ( <b>1974Su04</b> ). $E_\gamma$ : other: 1313.0 ( <b>1970Gr38</b> ).

<sup>†</sup> From **1974Su04**.

<sup>‡</sup> Photons per 100  $^{235}\text{U}$  fissions (**1974Su04**). Photons per 100  $^{239}\text{Pu}$  fissions are given under comments. Data from **1969Wa29** are in agreement.

# From the Adopted Gammas.

@ Relative intensity from **2012Mu08**.

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