^{235}U(n,γ) E=2 keV 1975OtZX

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Shaofei Zhu	NDS 182, 2 (2022).	1-Apr-2022

1975OtZX: Measured Eγ, Iγ, γγ coin. Detector: fission-neutron anticoincidence spectrometer. Chopped neutron beam.

^{236}U Levels

E(level)	Jπ†	Comments
45.3	2+	
149.4	4+	
961.3	2+	
1001.1	3+	
1051.4	4+	
1058.9	4+	
1065.8	(3+,4+)	
1093.5	(2+,5+)	
1126.2	5+	
1145.7	(3+,4+)	
1220.6	(2+,5+)	
1249.3	(2+,5+)	
1265.2	(3+,4+)	
1320.4	(2+,5+)	
1329.0	(3+,4+)	
1332.8	(3+,4+)	
1346.8	(3+,4+)	
1351.3	(3+,4+)	
1381.3	(3+,4+)	
1399.8	(2+,5+)	
6546.6	3−,4−	Jπ: Iγ pattern is consistent with neutron capture in states with J^π=3−,4− (1975OtZX).

† Spin and parity assignments are from Iγ systematics with states of spins 3 and 4 fed twice as intensely as levels of spins 2 and 5 and assuming E1 multipolarities for γ rays from J^π=3−,4− neutron resonances (1975OtZX).

γ(^{236}U)

Eγ	Iγ†‡	Ei(level)	J_i^π	Ef	J_f^π	Comments
5146.8	0.17	6546.6	3−,4−	1399.8	(2+,5+)	
5165.3	0.34	6546.6	3−,4−	1381.3	(3+,4+)	
5195.3	0.31	6546.6	3−,4−	1351.3	(3+,4+)	
5199.9	0.50	6546.6	3−,4−	1346.8	(3+,4+)	Eγ: possible doublet.
5213.8	0.34	6546.6	3−,4−	1332.8	(3+,4+)	
5217.6	0.34	6546.6	3−,4−	1329.0	(3+,4+)	
5226.2	0.13	6546.6	3−,4−	1320.4	(2+,5+)	
5281.4	0.27	6546.6	3−,4−	1265.2	(3+,4+)	
5297.3	0.16	6546.6	3−,4−	1249.3	(2+,5+)	
5326.0	0.17	6546.6	3−,4−	1220.6	(2+,5+)	
5399.9	0.41	6546.6	3−,4−	1145.7	(3+,4+)	
5420.4	0.23	6546.6	3−,4−	1126.2	5+	
5453.1	0.16	6546.6	3−,4−	1093.5	(2+,5+)	
5480.8	0.27	6546.6	3−,4−	1065.8	(3+,4+)	
5487.7	0.29	6546.6	3−,4−	1058.9	4+	
5495.2	0.34	6546.6	3−,4−	1051.4	4+	
5545.5	0.34	6546.6	3−,4−	1001.1	3+	
5585.3	0.23	6546.6	3−,4−	961.3	2+	Eγ: possible doublet to 960.5- and 958.0-keV levels.

Continued on next page (footnotes at end of table)

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γ(^{236}U) (continued)

E_γ	I_γ[†][‡]	E_i(level)	J_i^π	E_f	J_f^π
6397.2	0.68	6546.6	3^-,4^-	149.4	4^+
6501.3	0.32	6546.6	3^-,4^-	45.3	2^+

[†] Uncertainties in relative intensities are 5-30%, which is reflected by the 20% uncertainty of capture normalization factor (1975OtZX,1975WeZA). 1975OtZX report Iγ/1000 neutron captures.

[‡] For intensity per 100 neutron captures, multiply by 0.10 *2*.

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Level Scheme

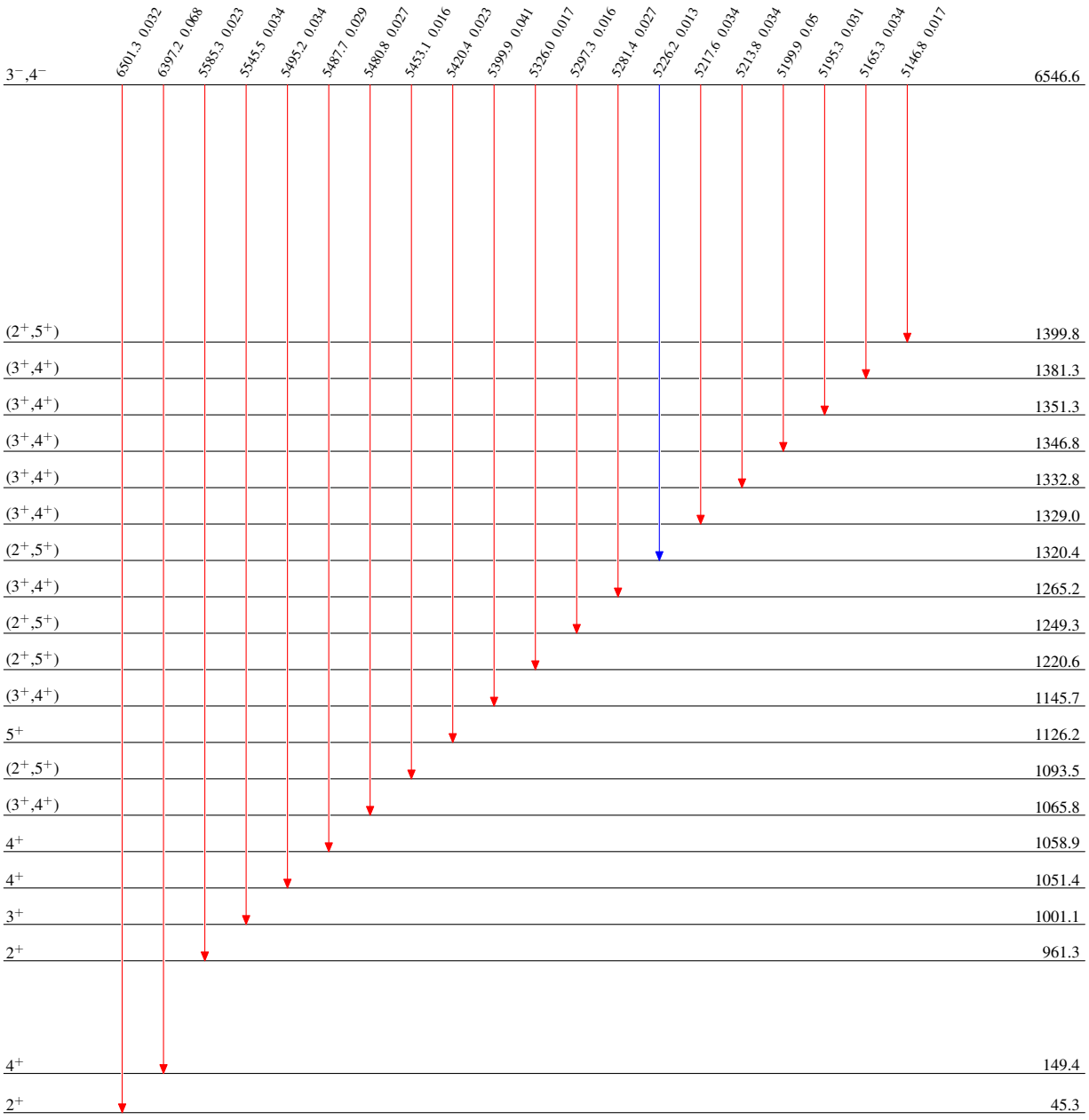
Intensities: I_γ per 100 neutron captures

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{236}_{92}U_{144}$