

²³⁸Pu(n,γ) E=th 1975WeZA,1975MaXY

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli		NDS 122, 293 (2014)	30-Jun-2013

²³⁹Pu Levels

E(level)	J ^π †	E(level)	J ^π †	E(level)	J ^π †	E(level)	J ^π †
0	1/2 ⁺	470.1	1/2 ⁻	798.2	1/2,3/2	1099.5	1/2,3/2
7.9	3/2 ⁺	492.1	3/2 ⁻	805.1	1/2,3/2	(5646.6 3)	1/2 ⁺
57.3	5/2 ⁺	505.4	(5/2 ⁻)	825.5	1/2,3/2		
75.7	7/2 ⁺	556.6	(7/2 ⁻)	888.0	1/2,3/2		
163.8	9/2 ⁺	752.5	1/2 ⁺ ,3/2	933.3	1/2,3/2		

† From Adopted Levels.

γ(²³⁹Pu)

E _γ	I _γ ‡	E _i (level)	J _i ^π	E _f	J _f ^π
392.7	0.3 [†]	556.6	(7/2 ⁻)	163.8	9/2 ⁺
429.7	1.4 [†]	505.4	(5/2 ⁻)	75.7	7/2 ⁺
434.9	3.1 [†]	492.1	3/2 ⁻	57.3	5/2 ⁺
448.5	0.2 [†]	505.4	(5/2 ⁻)	57.3	5/2 ⁺
462.2	4.3 [†]	470.1	1/2 ⁻	7.9	3/2 ⁺
470.1	2.4 [†]	470.1	1/2 ⁻	0	1/2 ⁺
484.3	0.4 [†]	492.1	3/2 ⁻	7.9	3/2 ⁺
492.2	2.3 [†]	492.1	3/2 ⁻	0	1/2 ⁺
497.6	1.4 [†]	505.4	(5/2 ⁻)	7.9	3/2 ⁺
499.4	0.5 [†]	556.6	(7/2 ⁻)	57.3	5/2 ⁺
695.6	0.4 [†]	752.5	1/2 ⁺ ,3/2	57.3	5/2 ⁺
744.6	0.8 [†]	752.5	1/2 ⁺ ,3/2	7.9	3/2 ⁺
752.5	1.0 [†]	752.5	1/2 ⁺ ,3/2	0	1/2 ⁺
790.4	1.7 [†]	798.2	1/2,3/2	7.9	3/2 ⁺
797.3	1.0 [†]	805.1	1/2,3/2	7.9	3/2 ⁺
798.2	1.2 [†]	798.2	1/2,3/2	0	1/2 ⁺
805.1	0.3 [†]	805.1	1/2,3/2	0	1/2 ⁺
817.5	1.0 [†]	825.5	1/2,3/2	7.9	3/2 ⁺
825.5	2.2 [†]	825.5	1/2,3/2	0	1/2 ⁺
888.4	0.5 [†]	888.0	1/2,3/2	0	1/2 ⁺
925.7	0.1 [†]	933.3	1/2,3/2	7.9	3/2 ⁺
933.6	0.4 [†]	933.3	1/2,3/2	0	1/2 ⁺
4547.1 3	7.3 15	(5646.6)	1/2 ⁺	1099.5	1/2,3/2
4714.7 3	1.8 7	(5646.6)	1/2 ⁺	933.3	1/2,3/2
4759.0 8	1.0 5	(5646.6)	1/2 ⁺	888.0	1/2,3/2
4821.8 3	24 5	(5646.6)	1/2 ⁺	825.5	1/2,3/2
4842.0 5	3.6 12	(5646.6)	1/2 ⁺	805.1	1/2,3/2
4848.8 6	2.0 5	(5646.6)	1/2 ⁺	798.2	1/2,3/2
4894.9 7	2.0 5	(5646.6)	1/2 ⁺	752.5	1/2 ⁺ ,3/2
5154.6 5	3.5 8	(5646.6)	1/2 ⁺	492.1	3/2 ⁻
5176.9 2	23 5	(5646.6)	1/2 ⁺	470.1	1/2 ⁻

Continued on next page (footnotes at end of table)

$^{238}\text{Pu}(n,\gamma)$ E=th 1975WeZA,1975MaXY (continued) $\gamma(^{239}\text{Pu})$ (continued)

<u>E_γ</u>	<u>I_γ^\ddagger</u>	<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>
5638.0		(5646.6)	1/2 ⁺	7.9	3/2 ⁺
5646.6 5	2.0 5	(5646.6)	1/2 ⁺	0	1/2 ⁺

† Relative intensities.

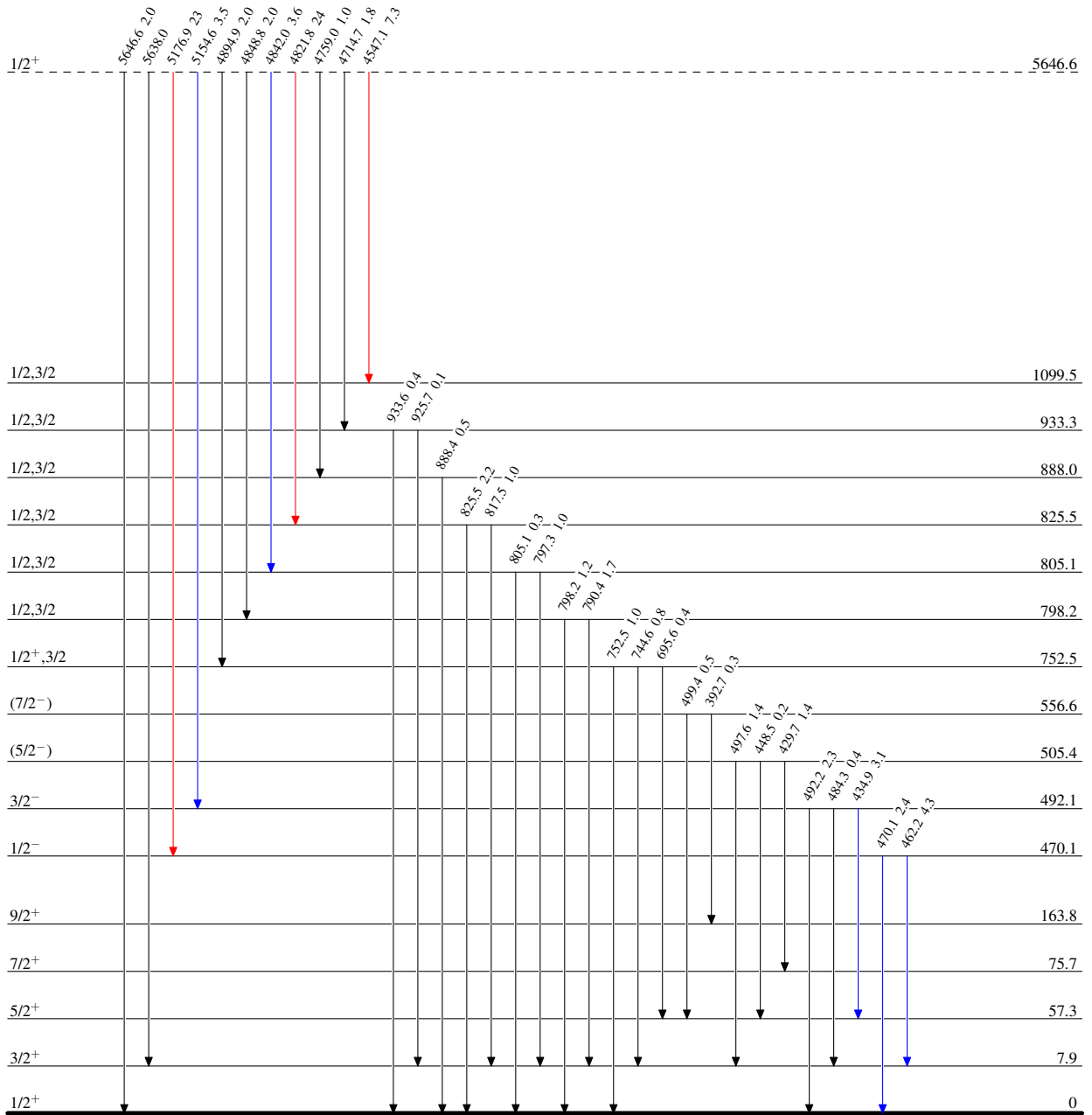
‡ For intensity per 100 neutron captures, multiply by 0.10.

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Level Scheme
Intensities: Relative I_γ

Legend

- $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- $I_\gamma > 10\% \times I_\gamma^{\text{max}}$



$^{239}_{94}\text{Pu}_{145}$