

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. J. Martin, C. D. Nesaraja		NDS 186, 261 (2022)	31-Dec-2021

$Q(\beta^-)=1200$ SY; $S(n)=5650$ SY; $S(p)=8410$ SY; $Q(\alpha)=3670$ SY [2021Wa16](#)

$\Delta Q(\beta^-)=280$, $\Delta S(n)=280$, $\Delta S(p)=360$, $\Delta Q(\alpha)=200$ (syst,[2021Wa16](#)).

$S(2n)=10240$ 200 (syst,[2021Wa16](#)).

Assignment: $^{244}\text{Pu}(n,2p_n)$ chem ([1979Ha26](#)).

 ^{242}U LevelsCross Reference (XREF) Flags

[A](#) $^{244}\text{Pu}(^{18}\text{O},^{20}\text{Ne}\gamma)$

E(level)	$J^\pi^\dagger$	$T_{1/2}$	XREF	Comments
0.0	0^+	16.8 min 5	A	$\% \beta^- = 100$ $T_{1/2}$: From 1979Ha26 .
47.8 3	2^+		A	
158.2 7	4^+		A	
327.5 8	6^+		A	
552.2 8	8^+		A	

† From assigned band structure. See ($^{18}\text{O},^{20}\text{Ne}\gamma$).

 $\gamma(^{242}\text{U})$

$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	$\alpha^\dagger$	Comments
47.8	2^+	(47.8 3)	100	0.0	0^+	[E2]	451 15	$\alpha(\text{L})=329$ 11; $\alpha(\text{M})=90.8$ 31 $\alpha(\text{N})=24.6$ 8; $\alpha(\text{O})=5.64$ 19; $\alpha(\text{P})=0.913$ 31; $\alpha(\text{Q})=0.00224$ 7 E_γ : Transition not seen. $E(\gamma)$ is derived in $^{244}\text{Pu}(^{18}\text{O},^{20}\text{Ne}\gamma)$ from the moment of inertia deduced from the higher levels.
158.2	4^+	110.4 6	100	47.8	2^+	[E2]	8.42 25	$\alpha(\text{L})=6.13$ 18; $\alpha(\text{M})=1.70$ 5 $\alpha(\text{N})=0.462$ 13; $\alpha(\text{O})=0.1062$ 31; $\alpha(\text{P})=0.0174$ 5; $\alpha(\text{Q})=7.68 \times 10^{-5}$ 18
327.5	6^+	169.3 3	100	158.2	4^+	[E2]	1.416 22	$\alpha(\text{K})=0.1958$ 28; $\alpha(\text{L})=0.890$ 14; $\alpha(\text{M})=0.246$ 4 $\alpha(\text{N})=0.0667$ 11; $\alpha(\text{O})=0.01539$ 25; $\alpha(\text{P})=0.00256$ 4; $\alpha(\text{Q})=1.987 \times 10^{-5}$ 30
552.2	8^+	224.7 3	100	327.5	6^+	[E2]	0.490 7	$\alpha(\text{K})=0.1273$ 18; $\alpha(\text{L})=0.265$ 4; $\alpha(\text{M})=0.0727$ 11 $\alpha(\text{N})=0.01972$ 30; $\alpha(\text{O})=0.00456$ 7; $\alpha(\text{P})=0.000767$ 12; $\alpha(\text{Q})=9.24 \times 10^{-6}$ 13

† [Additional information 1.](#)

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Legend

Level Scheme

Intensities: Relative photon branching from each level

-----► γ Decay (Uncertain)

