

$^{236}\text{U}(\text{d,pn}\gamma)$ 1987Ze07

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

1987Ze07: E(d)=25 MeV. In-beam gammas and internal conversion electrons measured in coincidence with ce(L2)(151.5).
 Others: 1970Wo06, 1980Ti03, 1982Go02.

 ^{236}U Levels

E(level)	J^π	$T_{1/2}$	Comments
0 [†]	0 ⁺		
45.2 [†]	2 ⁺		
149.5 [†]	4 ⁺		
309.8 [†]	6 ⁺		
522.3 [†]	8 ⁺		
687.6 [‡]	1 ⁻		
744.2 [‡]	3 ⁻		
782.4 [†]	10 ⁺		
847.6 [‡]	5 ⁻		
999.1 [‡]	7 ⁻		
1085.9 [†]	12 ⁺		
1197.9 [‡]	9 ⁻		
1426.9 [†]	14 ⁺		
1442.9 [‡]	11 ⁻		
1731.9 [‡]	13 ⁻		
1801.5 [†]	16 ⁺		
2750 7	(0 ⁺)	67 ns 3	%IT=88 3; %SF=12 3 E(level), J^π : from Adopted Levels. observed in $^{236}\text{U}(\text{d,pnf})$ with roughly factor 10 higher isomer population cross-section (1970Wo06,1980Ti03,1982Go02). $T_{1/2}$: From Adopted Levels. Measured: 105 ns 20 (1970Wo06) and 137 ns 18 (1982Go02). %IT,%SF: from Adopted Levels.
3434 7	(0 ⁺)	<20 ns	J^π : proposed as the bandhead of a $K=0^+$ β band in the second potential minimum (1982Go02). $T_{1/2}$: estimated from the FWHM of the conversion electron peak of the 684-keV transition (1982Go02).

[†] Band(A): $K^\pi=0^+$ g.s rotational band.

[‡] Band(B): $K^\pi=0^-$ octupole vibrational band.

 $\gamma(^{236}\text{U})$

Upper limit of 10% established for possible E1 branching from the 3⁻ and 5⁻ levels to the g.s. band.

E_γ [‡]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [†]
45.2	45.2	2 ⁺	0	0 ⁺	E2
56.6	744.2	3 ⁻	687.6	1 ⁻	E2
103.4	847.6	5 ⁻	744.2	3 ⁻	E2
104.2	149.5	4 ⁺	45.2	2 ⁺	E2
151.5 5	999.1	7 ⁻	847.6	5 ⁻	E2

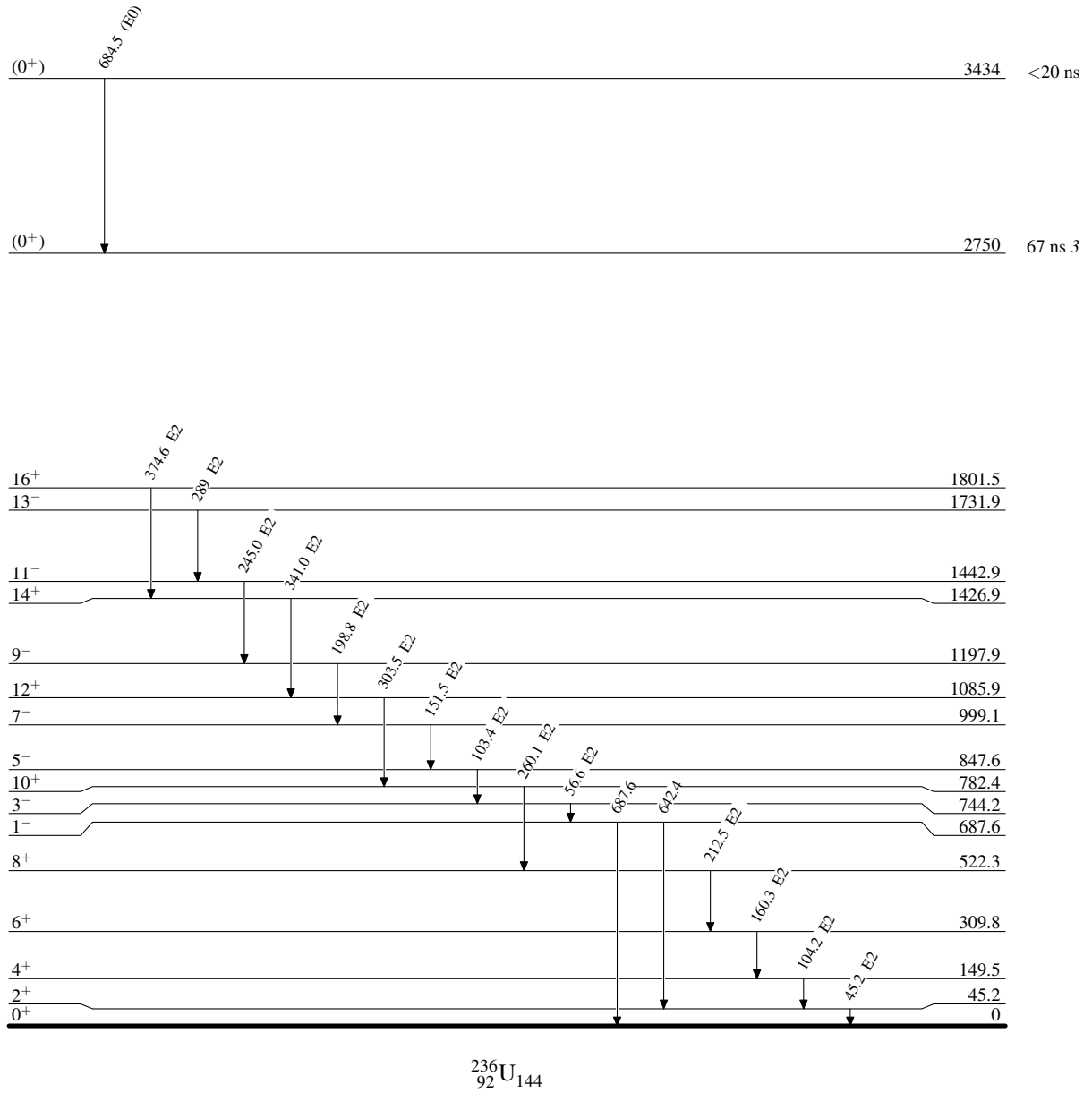
Continued on next page (footnotes at end of table)

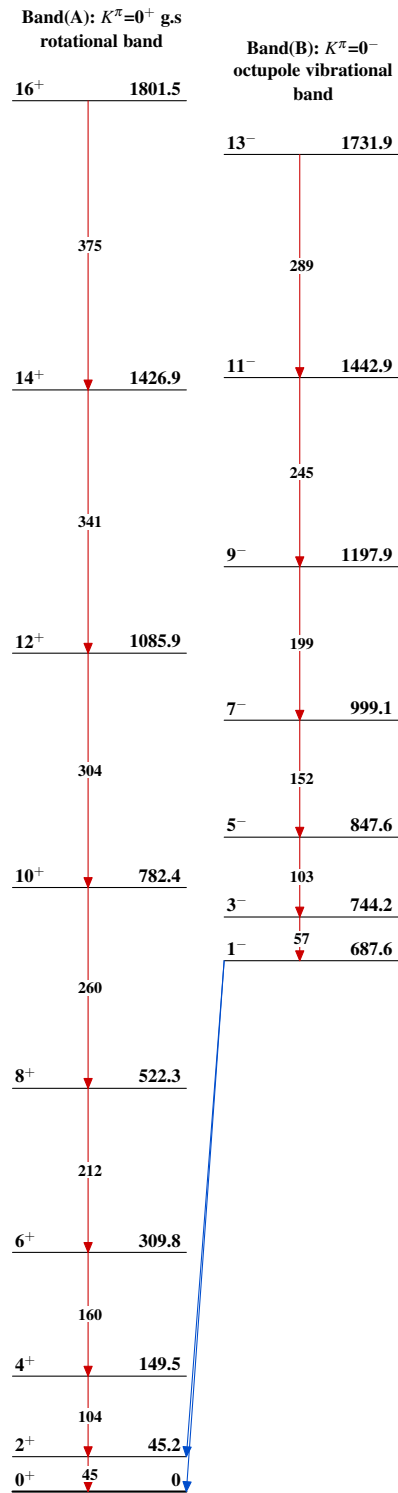
$^{236}\text{U}(\text{d,pn}\gamma)$ **1987Ze07** (continued) $\gamma(^{236}\text{U})$ (continued)

E_γ ‡	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. †	Comments
160.3	309.8	6 ⁺	149.5	4 ⁺	E2	
198.8 3	1197.9	9 ⁻	999.1	7 ⁻	E2	
212.5	522.3	8 ⁺	309.8	6 ⁺	E2	
245.0 5	1442.9	11 ⁻	1197.9	9 ⁻	E2	
260.1	782.4	10 ⁺	522.3	8 ⁺	E2	
289	1731.9	13 ⁻	1442.9	11 ⁻	E2	
303.5	1085.9	12 ⁺	782.4	10 ⁺	E2	
341.0	1426.9	14 ⁺	1085.9	12 ⁺	E2	
374.6	1801.5	16 ⁺	1426.9	14 ⁺	E2	
642.4	687.6	1 ⁻	45.2	2 ⁺		
684.5 7	3434	(0 ⁺)	2750	(0 ⁺)	(E0)	Mult.: based on evidence of K/L=4.7 14, limited population probability and FWHM associated with the upper limit on the half-lives of the observed transitions (1982Go02). E_γ : from conversion electrons (1982Go02).
687.6	687.6	1 ⁻	0	0 ⁺		

† From L subshell ratios without specific values given in 1987Ze07.

‡ From 1987Ze07, unless otherwise noted. Uncertainties were estimated by the evaluator to be 0.5 keV for those γ rays without uncertainties reported in 1987Ze07.

$^{236}\text{U}(\text{d,pn}\gamma)$ 1987Ze07Level Scheme

$^{236}\text{U}(\text{d,pn}\gamma)$ 1987Ze07 $^{236}_{92}\text{U}_{144}$