

$^9\text{Be}(^{238}\text{U}, \text{X}\gamma)$ **1998Pf02**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 105,1 (2005)	1-Mar-2005

$E(^{238}\text{U})=1000$ MeV/nucleon; Target: 1000 mg/cm² thick ^9Be ; Detectors: fragment separator; position-sensitive multi-wire counters; HPGE; Measured: $E\gamma$, $I\gamma$, $T_{1/2}$.

No level scheme is reported in **1998Pf02**. The authors stated that they observed all γ -rays reported in earlier work (**1977SI01**), but only 232, 280, 328, 351, 533, 589 and 795 keV γ -rays are shown in figure 3 (**1998Pf02**). Given the limited new information presented in **1998Pf02**, the evaluator assumes the γ -ray ordering of **1977SI01**. Such an assignment should be considered as tentative.

 ^{203}Tl Levels

E(level) [†]	J^π [‡]	$T_{1/2}$	Comments
0.0	$1/2^+$		
279.1954 10	$3/2^+$		
680.5161 22	$5/2^+$		
1074.10 13	$7/2^+$		
1184.28 5	$7/2^+$		
1217.70 8	$9/2^+$		
1449.7 10	$11/2^-$		
2038.7 14	(13/2)		
2571.7 17	(15/2)		
2899.7 20	(17/2)		
3250.7 22	(17/2 ⁻ , 19/2 ⁻)		
3515.7 23			
3515.7+x	(25/2 ⁺)	7.7 μs 5	J^π : In analogy with ^{205}Tl . $T_{1/2}$: From $\gamma(t)$ for 232 γ , 280 γ , 328 γ , 589 γ and 795 γ . configuration: $\pi(h_{11/2}^{-1} \otimes \nu(p_{1/2})^{-1}, i_{13/2}^{-1})$.

[†] From a least-squares fit to $E\gamma$. $\Delta E\gamma=1$ keV assumed for transitions reported without uncertainties.

[‡] From Adopted Levels, unless otherwise stated.

 $\gamma(^{203}\text{Tl})$

E_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π
33.4 [‡] 1	1217.70	$9/2^+$	1184.28	$7/2^+$
143.6 [‡] 1	1217.70	$9/2^+$	1074.10	$7/2^+$
232	1449.7	$11/2^-$	1217.70	$9/2^+$
265.0 [‡] 2	3515.7		3250.7	(17/2 ⁻ , 19/2 ⁻)
279.1952 [‡] 10	279.1954	$3/2^+$	0.0	$1/2^+$
328	2899.7	(17/2)	2571.7	(15/2)
351	3250.7	(17/2 ⁻ , 19/2 ⁻)	2899.7	(17/2)
401.320 [‡] 3	680.5161	$5/2^+$	279.1954	$3/2^+$
503.45 [‡] 11	1184.28	$7/2^+$	680.5161	$5/2^+$
533	2571.7	(15/2)	2038.7	(13/2)
537.2 [‡] 1	1217.70	$9/2^+$	680.5161	$5/2^+$
589	2038.7	(13/2)	1449.7	$11/2^-$
680.515 [‡] 3	680.5161	$5/2^+$	0.0	$1/2^+$
795	1074.10	$7/2^+$	279.1954	$3/2^+$
905.17 [‡] 6	1184.28	$7/2^+$	279.1954	$3/2^+$

Continued on next page (footnotes at end of table)

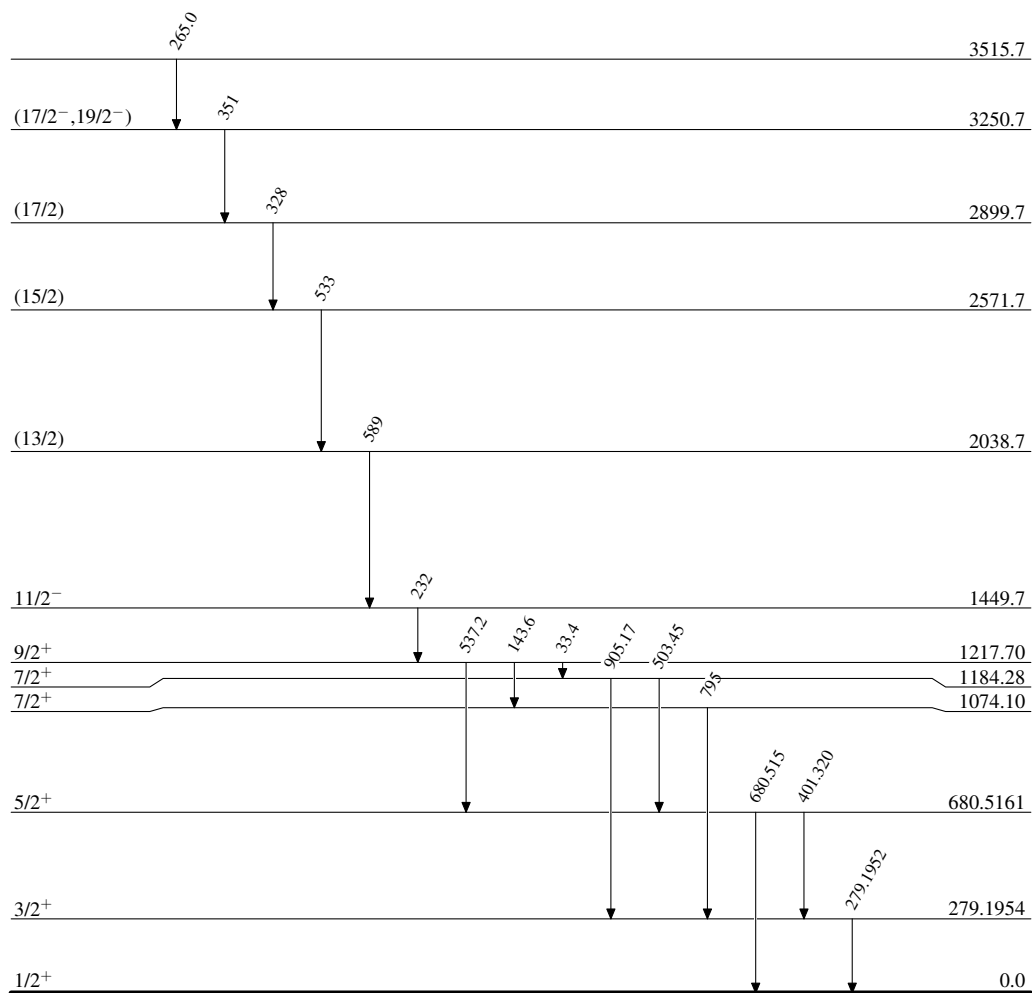
$^9\text{Be}(^{238}\text{U},\text{X}\gamma)$ [1998Pf02](#) (continued)

$\gamma(^{203}\text{Tl})$ (continued)

[†] From [1998Pf02](#). There is no experimental evidence presented in [1998Pf02](#) (figure 3) regarding the existence of 33.4 γ , 143.6 γ , 401.4 γ , 503.8 γ , 537.2 γ , 680.7 γ and 905.2 γ .

[‡] From adopted gammas.

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Level Scheme

 $^{203}_{81}\text{Tl}_{122}$