

$^{232}\text{Th}(\alpha, 3n\gamma)$ 1983Ha44

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	B. Singh, J. K. Tuli, E. Browne		NDS 170, 499 (2020)	8-Oct-2020

1983Ha44: $E(\alpha)=35$ MeV (1983Ha44). Measured $E\gamma$, ce, (ce) γ -coin. Conversion electrons were measured with an iron free orange spectrometer, and γ rays were detected using Ge(Li) detector at the Bonn cyclotron facility. Level scheme is given as constructed by 1983Ha44 based on their ce and (ce) γ -coin data.

 ^{233}U Levels

E(level)	J^π	E(level)	J^π	E(level)	J^π	E(level)	J^π
0.0	5/2 ⁺	229.2 6	13/2 ⁺	635.0 6	21/2 ⁺	1200.3 8	29/2 ⁺
40.35 1	7/2 ⁺	314.7 5	15/2 ⁺	761.8 5	23/2 ⁺	1361.9 7	31/2 ⁺
92.2 2	9/2 ⁺	410.9 6	17/2 ⁺	899.1 6	25/2 ⁺	1536.5 9	33/2 ⁺
155.3 3	11/2 ⁺	517.7 5	19/2 ⁺	1044.0 6	27/2 ⁺		

 $\gamma(^{233}\text{U})$

$E_\gamma^\dagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [‡]	$\alpha^@$
(40.349 [#] 5)	40.35	7/2 ⁺	0.0	5/2 ⁺		
(51.8 [#] 2)	92.2	9/2 ⁺	40.35	7/2 ⁺		
92.2 [#] 2	92.2	9/2 ⁺	0.0	5/2 ⁺		
114.9 [#] 3	155.3	11/2 ⁺	40.35	7/2 ⁺		
137.2 1	229.2	13/2 ⁺	92.2	9/2 ⁺	(E2)	3.34
159.4 1	314.7	15/2 ⁺	155.3	11/2 ⁺	(E2)	1.80
181.7 1	410.9	17/2 ⁺	229.2	13/2 ⁺	(E2)	1.075
203.0 1	517.7	19/2 ⁺	314.7	15/2 ⁺	(E2)	0.707
224.1 2	635.0	21/2 ⁺	410.9	17/2 ⁺	(E2)	0.495
244.1 2	761.8	23/2 ⁺	517.7	19/2 ⁺	(E2)	0.367
264.1 2	899.1	25/2 ⁺	635.0	21/2 ⁺		
282.2 2	1044.0	27/2 ⁺	761.8	23/2 ⁺		
301.2 4	1200.3	29/2 ⁺	899.1	25/2 ⁺		
317.9 4	1361.9	31/2 ⁺	1044.0	27/2 ⁺		
336.2 5	1536.5	33/2 ⁺	1200.3	29/2 ⁺		

[†] From measurements of γ rays, conversion electrons, and (ce) γ -coin (1983Ha44).

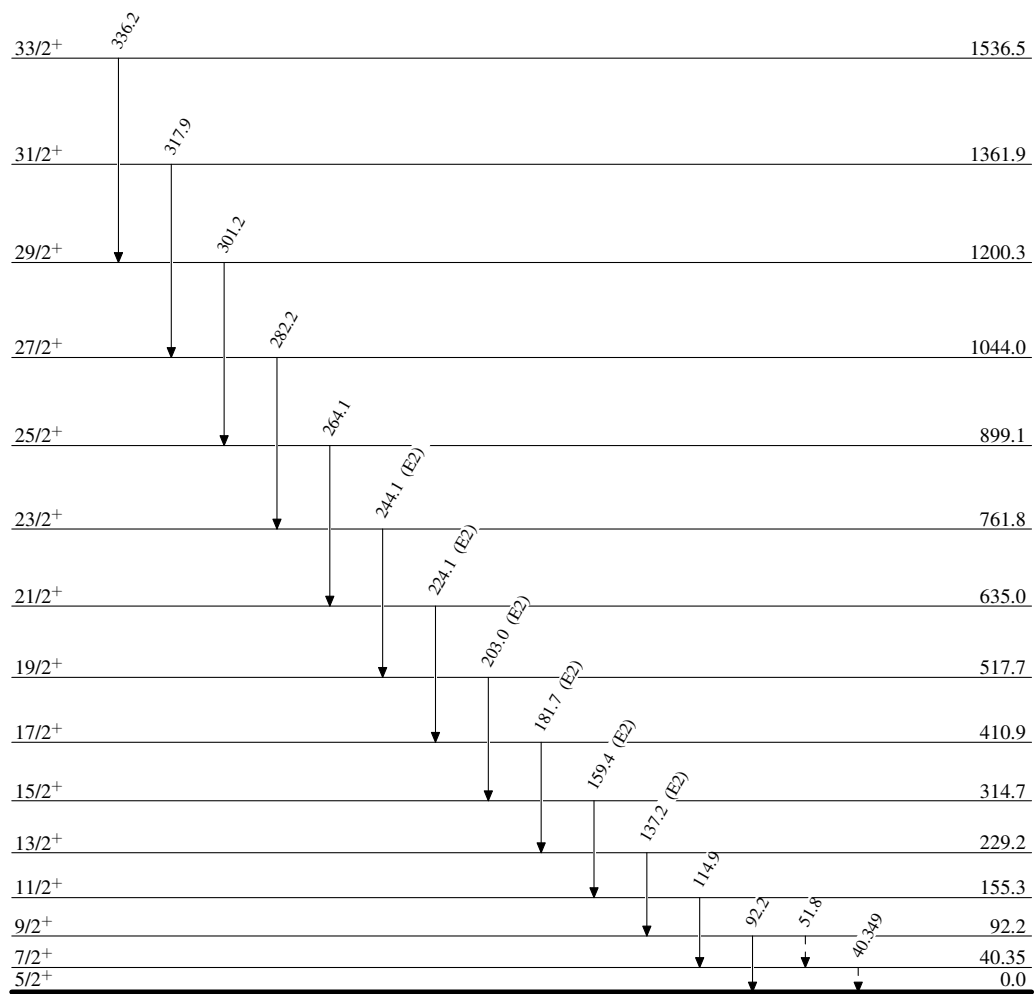
[‡] Determined by 1983Ha44 from their L-subshell ratios in ce data. The values of these ratios are not quoted by 1983Ha44; The L-ce lines are displayed in an electron spectrum.

[#] From the Adopted Gammas.

[@] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ -ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

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Legend

Level Scheme-----► γ Decay (Uncertain) $^{233}_{92}\text{U}_{141}$