^{136}Ce(n,γ) E=thermal 1981KoZW

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 108,2173 (2007)	1-Oct-2006

Measured: G. Other: Measured isomeric σ ratios (2001Ga57).

^{137}Ce Levels

E(level)	J$^\pi$†	E(level)	J$^\pi$†	E(level)	J$^\pi$†	E(level)	J$^\pi$†
0.0	$3/2^+$	866.6 *1*	(5/2,3/2)	1577.2 *2*	(1/2)	2277.4 *15*	$3/2^{(+)}$
160.4 *1*	$(1/2)^+$	1105.2 *1*	3/2	1602.7 *3*	3/2	2293.5 *7*	(1/2)
434.0 *1*	$(3/2)^+$	1179.3 *3*	$(5/2^+)$	1715.2 *8*	(1/2)	2454.1 *3*	(1/2)
514.1 *1*	$(3/2)^+$	1259.7? *2*		1886.9 *3*	3/2	2565.5 *6*	(1/2)
763.0 *1*	$(5/2,3/2)^+$	1270.9 *2*	3/2	1951.7 *4*	3/2	(7480.7 *4*)	$1/2^+$
825.7 *1*	(1/2,3/2)	1435.3 *4*		2135.8 *12*	$3/2^{(+)}$		
836.9 *1*	$(5/2)^+$	1475.8 *4*	$(5/2^+,3/2^+)$	2142.7 *5*	(1/2)		

† Adopted values.

γ(^{137}Ce)

E$_\gamma$	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
160.2 *1*	173 *1*	160.4	$(1/2)^+$	0.0	$3/2^+$
x184.5@ *4*	4 *1*				
329.0 *2*	26 *2*	763.0	$(5/2,3/2)^+$	434.0	$(3/2)^+$
354.1 *1*	<74	514.1	$(3/2)^+$	160.4	$(1/2)^+$
403.1 *2*	3.9 *8*	836.9	$(5/2)^+$	434.0	$(3/2)^+$
416.3 *1*	108 *1*	1179.3	$(5/2^+)$	763.0	$(5/2,3/2)^+$
434.0 *1*	248 *2*	434.0	$(3/2)^+$	0.0	$3/2^+$
x452.8 *3*	2.9 *8*				
514.2 *1*	174 *2*	514.1	$(3/2)^+$	0.0	$3/2^+$
590.6 *2*	15 *3*	1105.2	3/2	514.1	$(3/2)^+$
603.0 *1*	58 *2*	763.0	$(5/2,3/2)^+$	160.4	$(1/2)^+$
x627.1 *1*	8.8 *9*				
665.5# *1*	<50.4	825.7	(1/2,3/2)	160.4	$(1/2)^+$
665.5# *1*	<50.4	1179.3	$(5/2^+)$	514.1	$(3/2)^+$
706.5@ *3*	7 *2*	866.6	(5/2,3/2)	160.4	$(1/2)^+$
712.8 *1*	29.8 *11*	1475.8	$(5/2^+,3/2^+)$	763.0	$(5/2,3/2)^+$
x726.8 *2*	7 *1*				
763.1 *1*	37.4 *11*	763.0	$(5/2,3/2)^+$	0.0	$3/2^+$
x766.1 *1*	23.7 *11*				
x794.3 *3*	3.7 *9*				
825.7 *1*	<59.0	825.7	(1/2,3/2)	0.0	$3/2^+$
825.7@ *1*	<59	1259.7?		434.0	$(3/2)^+$
836.7 *1*	35.9 *15*	836.9	$(5/2)^+$	0.0	$3/2^+$
866.6 *1*	70.1 *44*	866.6	(5/2,3/2)	0.0	$3/2^+$
x900.8 *3*	5.1 *10*				
x905.3 *2*	48.2 *11*				
x914.3 *4*	6.6 *15*				
921.2 *2*	5.6 *12*	1435.3		514.1	$(3/2)^+$
x953.5 *4*	3.4 *9*				
1018.7 *2*	7.8 *11*	1179.3	$(5/2^+)$	160.4	$(1/2)^+$
x1064.5 *1*	<17				
1088.7 *1*	39 *3*	1602.7	3/2	514.1	$(3/2)^+$

Continued on next page (footnotes at end of table)

^{136}Ce(n,γ) E=thermal 1981KoZW (continued)

γ(^{137}Ce) (continued)

E_γ	I_γ †	E_i(level)	J_i^π	E_f	J_f^π
1105.1 *1*	35 *5*	1105.2	3/2	0.0	$3/2^+$
1110.7 *1*	64.4 *14*	1270.9	3/2	160.4	$(1/2)^+$
x1126.9 *3*	4.1 *10*				
x1219.4 *4*	4.2 *12*				
x1246.1 *4*	3.8 *13*				
1270.7 *2*	12.0 *12*	1270.9	3/2	0.0	$3/2^+$
x1314.9@ *4*	4.1 *11*				
x1347.0 *2*	11.7 *14*				
1437.6 *2*	12.6 *13*	1951.7	3/2	514.1	$(3/2)^+$
x1527.6 *3*	5.9 *13*				
x1627.3 *3*	7.4 *15*				
x1691.4 *4*	5.8 *17*				
x1800.1 *3*	<7.5				
x1872.1 *5*	4.5 *18*				
1886.9 *3*	8.6 *17*	1886.9	3/2	0.0	$3/2^+$
x1895.4 *4*	5.4 *15*				
x2040.4 *4*	6.0 *16*				
x2060.4 *3*	8.4 *14*				
x2180.7 *1*	26.8 *27*				
x2319.4 *4*	5.2 *16*				
x2391.4 *2*	13.5 *12*				
x2501.0 *2*	11.5 *15*				
x2505.4 *4*	7.1 *16*				
4916.0 *6*	0.11‡ *4*	(7480.7)	$1/2^+$	2565.5	(1/2)
5027.4 *3*	0.18‡ *2*	(7480.7)	$1/2^+$	2454.1	(1/2)
5188.0 *7*	0.51‡ *6*	(7480.7)	$1/2^+$	2293.5	(1/2)
5204.1 *15*	0.49‡ *7*	(7480.7)	$1/2^+$	2277.4	$3/2^{(+)}$
5338.8 *5*	0.24‡ *6*	(7480.7)	$1/2^+$	2142.7	(1/2)
5345.7 *12*	0.07‡ *2*	(7480.7)	$1/2^+$	2135.8	$3/2^{(+)}$
5766.3 *8*	0.07‡ *2*	(7480.7)	$1/2^+$	1715.2	(1/2)
5878.9 *12*	0.06‡ *2*	(7480.7)	$1/2^+$	1602.7	3/2
5904.3 *2*	0.36‡ *4*	(7480.7)	$1/2^+$	1577.2	(1/2)
6209.8 *4*	0.25‡ *6*	(7480.7)	$1/2^+$	1270.9	3/2
6376.2 *4*	0.08‡ *2*	(7480.7)	$1/2^+$	1105.2	3/2
6655.0 *2*	0.17‡ *2*	(7480.7)	$1/2^+$	825.7	(1/2,3/2)
7321.3 *1*	0.97‡ *3*	(7480.7)	$1/2^+$	160.4	$(1/2)^+$
7480.7 *4*	0.50‡ *2*	(7480.7)	$1/2^+$	0.0	$3/2^+$

† Iγ normalized to Iγ(160γ)=173.
‡ Photons/100 n-captures.
# Multiply placed.
@ Placement of transition in the level scheme is uncertain.
x γ ray not placed in level scheme.

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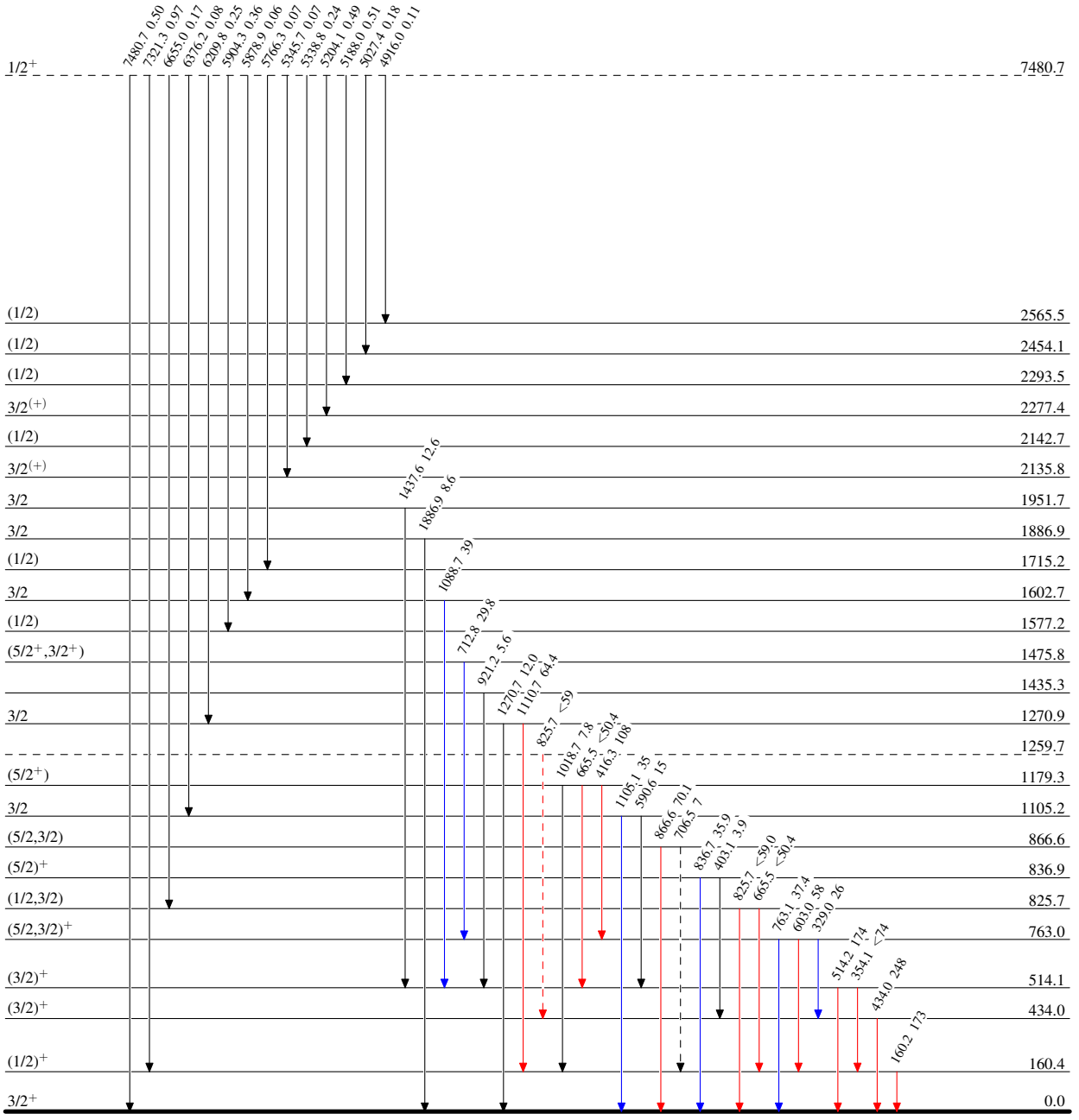
Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)

Level Scheme

Intensities: For capture state Iγ/100 captures; others Iγ(rel)



$^{137}_{58}Ce_{79}$