

¹³⁶Ce(n,γ): E≈24 keV 1981KoZW

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

Measured: G. Other: Measured capture σ (1996Ka03).

¹³⁷Ce Levels

E(level)	J ^π †	Comments
0.0	3/2 ⁺	
160.4 1	(1/2) ⁺	
434.0 4	(3/2) ⁺	
514.1 6	(3/2) ⁺	
764.6 6	(3/2,5/2) ⁺	
826.5 2	(1/2) ⁺	
867.2 6	(3/2 ⁺ ,5/2 ⁺)	
1105.3 4	3/2	
1271.7 4	3/2	
1478.2 10	(3/2 ⁺ ,5/2 ⁺)	
1577.2 2	(1/2)	
1602.6 12	3/2	
1643.0 3	(1/2)	
1687.1 18	(1/2)	
1715.2 8	(1/2)	
1728.1 4	(1/2)	
1909.0 5	(1/2)	
2040.6 8	(1/2)	
2206.7 4	(3/2 ⁺ ,5/2 ⁺)	
2302.5 12	3/2 ⁽⁺⁾	
2454.1 3	(1/2)	
2565.5 6	(1/2)	
(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻	E(level): x=E(n)≈24 keV.

J^π: the captured neutrons with E(n)≈24 keV may bring the orbital angular momentum L=0 or 1. Therefore, the big group of excited resonances may have only J^π=1/2± or 3/2⁻.

† Adopted values.

γ(¹³⁷Ce)

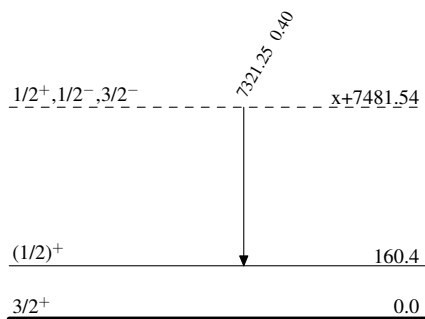
E _γ †	I _γ	E _i (level)	J _i ^π
4916.0 6	0.29 4	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻
5027.4 3	0.28 7	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻
5179.0 12	0.20 7	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻
5274.8 4	0.22 3	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻
5440.9 8	0.16 3	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻
5572.5 5	0.10 4	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻
5753.4 4	0.13 4	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻
5766.3 8	0.06 2	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻
5794.4 18	0.11 4	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻
5838.5 3	0.11 3	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻
5878.9 12	0.15 8	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻
5904.3 2	0.28 4	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻
6003.3 10	0.11 4	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻
6209.8 4	0.59 5	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻
6376.2 4	0.07 4	(x+7481.54)	1/2 ⁺ ,1/2 ⁻ ,3/2 ⁻

Continued on next page (footnotes at end of table)

$^{136}\text{Ce}(n,\gamma): E \approx 24 \text{ keV}$ **1981KoZW (continued)** $\gamma(^{137}\text{Ce})$ (continued)

E_γ^\dagger	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
6614.3 6	0.21 3	(x+7481.54)	$1/2^+, 1/2^-, 3/2^-$		
6655.0 2	0.14 7	(x+7481.54)	$1/2^+, 1/2^-, 3/2^-$		
6716.9 6	0.34 11	(x+7481.54)	$1/2^+, 1/2^-, 3/2^-$		
6966.7 6	0.25 4	(x+7481.54)	$1/2^+, 1/2^-, 3/2^-$		
7047.7 4	0.23 5	(x+7481.54)	$1/2^+, 1/2^-, 3/2^-$		
7321.25 7	0.40 3	(x+7481.54)	$1/2^+, 1/2^-, 3/2^-$	160.4	$(1/2)^+$
7480.7 4	0.38 3	(x+7481.54)	$1/2^+, 1/2^-, 3/2^-$		

† From thermal n-capture.

 $^{136}\text{Ce}(n,\gamma): E \approx 24 \text{ keV}$ **1981KoZW**Level SchemeIntensities: Relative I_γ  $^{137}_{58}\text{Ce}_{79}$