Coulomb excitation

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 111,717 (2010)	1-Dec-2009

E(p)=2.7-3 MeV (1969Mi07), (1985Si01).
E(α)=8.5 MeV (1977Na06), 9-10 MeV (1970St17), 10-11 MeV (1969Mi07), 8.3-12 MeV (1967St03).
E(^{12}C)=25-31 MeV (1967St03).
E(^{16}O)=35-42 MeV (1967St03), 42-49 MeV (1965Mc05).
Others: 1956Te26, 1957St50, 1958Sh01, 1961St02.
Measured: γ, $\gamma\gamma$, $\gamma\gamma(\theta)$, $\gamma(\theta$,t), $\gamma(\theta$,H,t).

^{116}Cd Levels

E(level)	J^π[†]	$T_{1/2}$	Comments
0.0	0^+		
513.1 *2*	2^+	14.1 ps *5*	Q=−0.71 (1977Na06) $T_{1/2}$: from B(E2)=0.560 *20* (1987Ra01). Values included in 1987Ra01 are B(E2): 0.65 *4* (1970St17), 0.581 *23* (1969Mi07), 0.621 *8* (1967St03), 0.58 *7* (1965Mc05) 0.532 *4* (1976Es02), 0.608 *30* (1985Si01). Q: others: −0.42 *8* (1976Es02), −0.88 *25* (1970St17) 0.81 *14* (1967St03). g-factor: 0.7 *4* (1969He11), 0.30 *7* (1980Br01), 0.4 *3* (1974Hu01).
1212.0 *4*	2^+	1.9 ps *3*	$T_{1/2}$: from B(E2)=0.019 *3* (1969Mi07). J^π: J=2 from $\gamma(\theta)$.
1218.5	4^+	1.7 ps *4*	$T_{1/2}$: from B(E2)(2-4)=0.35 *7* (1965Mc05).
1382.9	0^+	1.15 ps *23*	$T_{1/2}$: from B(E2)(2-0)=0.020 *4* (1965Mc05).
1896 *14*	(3^-)		B(E3)↑=0.075 *15* (1965Mc05)

[†] From Adopted Levels.

$\gamma(^{116}Cd)$

E_γ[†]	I_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	Comments
513.1 *2*		513.1	2^+	0.0	0^+	[E2]		B(E2)(W.u.)=33.6 *12* E_γ: from 1965Ro09.
699.0 *4*	100.	1212.0	2^+	513.1	2^+	(E2+M1)	−1.5 *+4−9*	B(M1)(W.u.)=0.007 *3*; B(E2)(W.u.)=24 *6* δ: from 1969Mi07, 699$\gamma(\theta)$. Mult: from $\gamma(\theta)$ with $\Delta\pi$=no required by level scheme.
705.4		1218.5	4^+	513.1	2^+	[E2]		B(E2)(W.u.)=57 *14*
869.8		1382.9	0^+	513.1	2^+			
1212.0 *5*	56 *4*	1212.0	2^+	0.0	0^+			
1383 *14*		1896	(3^-)	513.1	2^+			E_γ: from 1965Mc05.

[†] From 1969Mi07, except where noted otherwise.

Coulomb excitation

Level Scheme

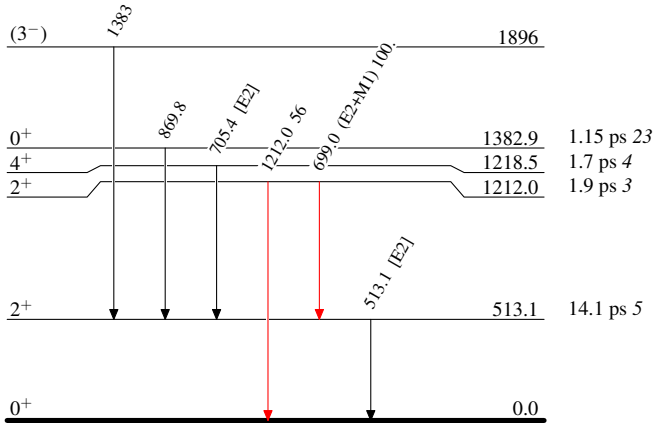
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{116}_{48}Cd_{68}$