

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	D. Abriola(a), A. A. Sonzogni		NDS 109,2501 (2008)	1-Apr-2008

$Q(\beta^-) = -1.167 \times 10^4$ 9; S(n)=14289 6; S(p)=5131 6; $Q(\alpha) = -4306$ 5 [2012Wa38](#)

Note: Current evaluation has used the following Q record -11660 SY14150 SY5.18E+3 21-4250 syst [2003Au03](#).

$\Delta Q(\beta^-) = 430$, $\Delta S(n) = 430$, $\Delta Q(\alpha) = 330$ ([2003Au03](#)).

α : [Additional information 1](#).

 ^{96}Pd LevelsCross Reference (XREF) Flags

A	^{96}Ag ε decay (4.40 s)	D	^{60}Ni (^{40}Ca ,2p2n γ)
B	^{96}Ag ε decay (6.9 s)	E	^{97}Cd εp decay
C	^{64}Zn (^{36}Ar ,2p2n γ)		

E(level) [#]	J [†]	T _{1/2}	XREF	Comments
0.0 [‡]	0 ⁺	122 s 2	ABCDE	$\% \varepsilon + \% \beta^+ = 100$ T _{1/2} : from 1982Ku15 . Others: 125 s 5 (1985Ry02), 120 s 6 (1980Ar11).
1415.31 [‡] 10	2 ⁺		ABCDE	J ^π : from systematics of even-even N=50 nuclei.
2099.01 [‡] 14	(4 ⁺)		ABCDE	J ^π : from systematics of even-even N=50 nuclei.
2391.4? 3	≤4		AB	J ^π : log ft>6.5 from (2 ⁺) in $\varepsilon + \beta^+$ decay, γ to 2 ⁺ .
2424.19 [‡] 17	(6 ⁺)	7.5 ns 10	A CDE	T _{1/2} : from 1989Al05 . Others: 11.7 ns 28 (1983Pi05), 4.6 ns 14 (1983Gr01).
2530.57 [‡] 23	(8 ⁺)	2.10 μs 21	A CD	J ^π : from systematics of even-even N=50 nuclei, E2 γ from (8 ⁺). $\mu = +10.97$ 6 (1983Gr01 , 1989Ra17) T _{1/2} : weighted average of 2.0 μs 3 (2007My02) and 2.2 μs 3 (1983Gr01).
2648.70 21	(5 ⁻)		A CD	J ^π : from systematics of even-even N=50 8+ isomers.
3184.0 3	(7 ⁺)		A	J ^π : γ 's to (6 ⁺) and (4 ⁺) and shell model calculations. J ^π : log ft=6.1 from (8 ⁺), γ to (8 ⁺) and (6 ⁺) shell model calculations suggest (7 ⁺) (2003Ba39).
3724.7? 3	(4 ⁺ to 8 ⁺)		A	J ^π : log ft>7.0 from (8 ⁺), γ to (6 ⁺).
3783.6 [‡] 3	(10 ⁺)		A CD	J ^π : from systematics of even-even N=50 nuclei, (E2) γ to (8 ⁺).
4573.6 [‡] 4	(12 ⁺)		CD	J ^π : from systematics of even-even N=50 nuclei, (E2) γ to (10 ⁺).
4710.6 3	(6 ⁺ to 9 ⁺)		A	J ^π : $\varepsilon + \beta^+$ decay from (8 ⁺), γ to (8 ⁺) and (7 ⁺).
5282.4? 3			A	
6728.7 11	(13 ⁺)		CD	J ^π : systematics of 13 ⁺ states in even-even N=50 nuclei.
7040.0 12	(15 ⁺)	35 ns 4	CD	$\mu = 12.5$ 5 (1989Al05 , 1989Ra17) T _{1/2} : from 1989Al05 . Other: 58 ns 5 (1983Pi05). J ^π : systematics of 15 ⁺ states in even-even N=50 nuclei. μ : from TDPAD.

[†] From excit, $\gamma(\theta)$, mult, syst.

[‡] Band(A): g.s. cascade.

[#] From least-squares fit to E γ assuming $\Delta E\gamma = 1$ keV when unknown.

Adopted Levels, Gammas (continued)

$\gamma(^{96}\text{Pd})$								
$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	α	Comments
1415.31	2^+	1415.3 1	100	0.0	0^+	[E2]	0.000535 8	$\alpha(\text{K})=0.000422$ 6; $\alpha(\text{L})=4.87\times 10^{-5}$ 7; $\alpha(\text{M})=9.11\times 10^{-6}$ 13; $\alpha(\text{N})=1.535\times 10^{-6}$ 22 $\alpha(\text{N}+..)=5.57\times 10^{-5}$ 8
2099.01	(4^+)	683.7 1	100	1415.31	2^+	[E2]	0.00253 4	$\alpha(\text{K})=0.00220$ 3; $\alpha(\text{L})=0.000268$ 4; $\alpha(\text{M})=5.04\times 10^{-5}$ 7; $\alpha(\text{N})=8.43\times 10^{-6}$ 12; $\alpha(\text{N}+..)=8.43\times 10^{-6}$ 12
2391.4?	≤ 4	976.1 3	100	1415.31	2^+	[E2]	0.0227	$\alpha(\text{K})=0.0194$ 3; $\alpha(\text{L})=0.00267$ 4; $\alpha(\text{M})=0.000504$ 7; $\alpha(\text{N})=8.28\times 10^{-5}$ 12; $\alpha(\text{N}+..)=8.28\times 10^{-5}$ 12 B(E2)(W.u.)=0.78 11
2424.19	(6^+)	325.2 1	100	2099.01	(4^+)			
2530.57	(8^+)	106.37 17	100	2424.19	(6^+)	E2	1.120	$\alpha(\text{K})=0.875$ 14; $\alpha(\text{L})=0.200$ 4; $\alpha(\text{M})=0.0385$ 6; $\alpha(\text{N})=0.00604$ 10; $\alpha(\text{N}+..)=0.00604$ 10 B(E2)(W.u.)=0.36 4 E_γ : weighted average of 106.2 3 (^{96}Ag ε decay) and 106.45 20 ($^{60}\text{Ni}(^{40}\text{Ca}, 2\text{p}2\text{n}\gamma)$).
2648.70	(5^-)	224.6 2	8×10^1 4	2424.19	(6^+)	[E1]	0.01528	$\alpha(\text{K})=0.01337$ 19; $\alpha(\text{L})=0.001572$ 23; $\alpha(\text{M})=0.000294$ 5; $\alpha(\text{N})=4.90\times 10^{-5}$ 7; $\alpha(\text{N}+..)=4.90\times 10^{-5}$ 7
3184.0	(7^+)	549.6 2 653.4 2 759.8 3	100 15 100 8 78 8	2099.01	(4^+)	(E2)	0.000633 9	$\alpha(\text{K})=0.000541$ 8; $\alpha(\text{L})=6.28\times 10^{-5}$ 9; $\alpha(\text{M})=1.176\times 10^{-5}$ 17; $\alpha(\text{N})=1.98\times 10^{-6}$ 3 $\alpha(\text{N}+..)=1.753\times 10^{-5}$ 25 $\alpha(\text{K})=0.001528$ 22; $\alpha(\text{L})=0.000184$ 3; $\alpha(\text{M})=3.45\times 10^{-5}$ 5; $\alpha(\text{N})=5.78\times 10^{-6}$ 9 $\alpha(\text{N}+..)=5.78\times 10^{-6}$ 9
3724.7?	$(4^+ \text{ to } 8^+)$	1300.5 3	100	2424.19	(6^+)			
3783.6	(10^+)	1253.0 2	100	2530.57	(8^+)			
4573.6	(12^+)	790.0 3	100	3783.6	(10^+)	(E2)	0.001753 25	
4710.6	$(6^+ \text{ to } 9^+)$	1526.5 3 2180.2 4	86 21 1.0×10^2 3	3184.0	(7^+)	[E2]	0.0262	$\alpha(\text{K})=0.0224$ 4; $\alpha(\text{L})=0.00310$ 5; $\alpha(\text{M})=0.000587$ 9; $\alpha(\text{N})=9.64\times 10^{-5}$ 15; $\alpha(\text{N}+..)=9.64\times 10^{-5}$ 15 B(E2)(W.u.)=0.206 24
5282.4?		1498.7 [†] 2	100 10	2530.57	(8^+)			
		2099.2 [†] 7	≈ 9.6	3783.6	(10^+)			
6728.7	(13^+)	2155	100	3184.0	(7^+)			
7040.0	(15^+)	311.3 4	100	4573.6	(12^+)	[E2]	0.0262	$\alpha(\text{K})=0.0224$ 4; $\alpha(\text{L})=0.00310$ 5; $\alpha(\text{M})=0.000587$ 9; $\alpha(\text{N})=9.64\times 10^{-5}$ 15; $\alpha(\text{N}+..)=9.64\times 10^{-5}$ 15 B(E2)(W.u.)=0.206 24
				6728.7	(13^+)			

[†] Placement of transition in the level scheme is uncertain.

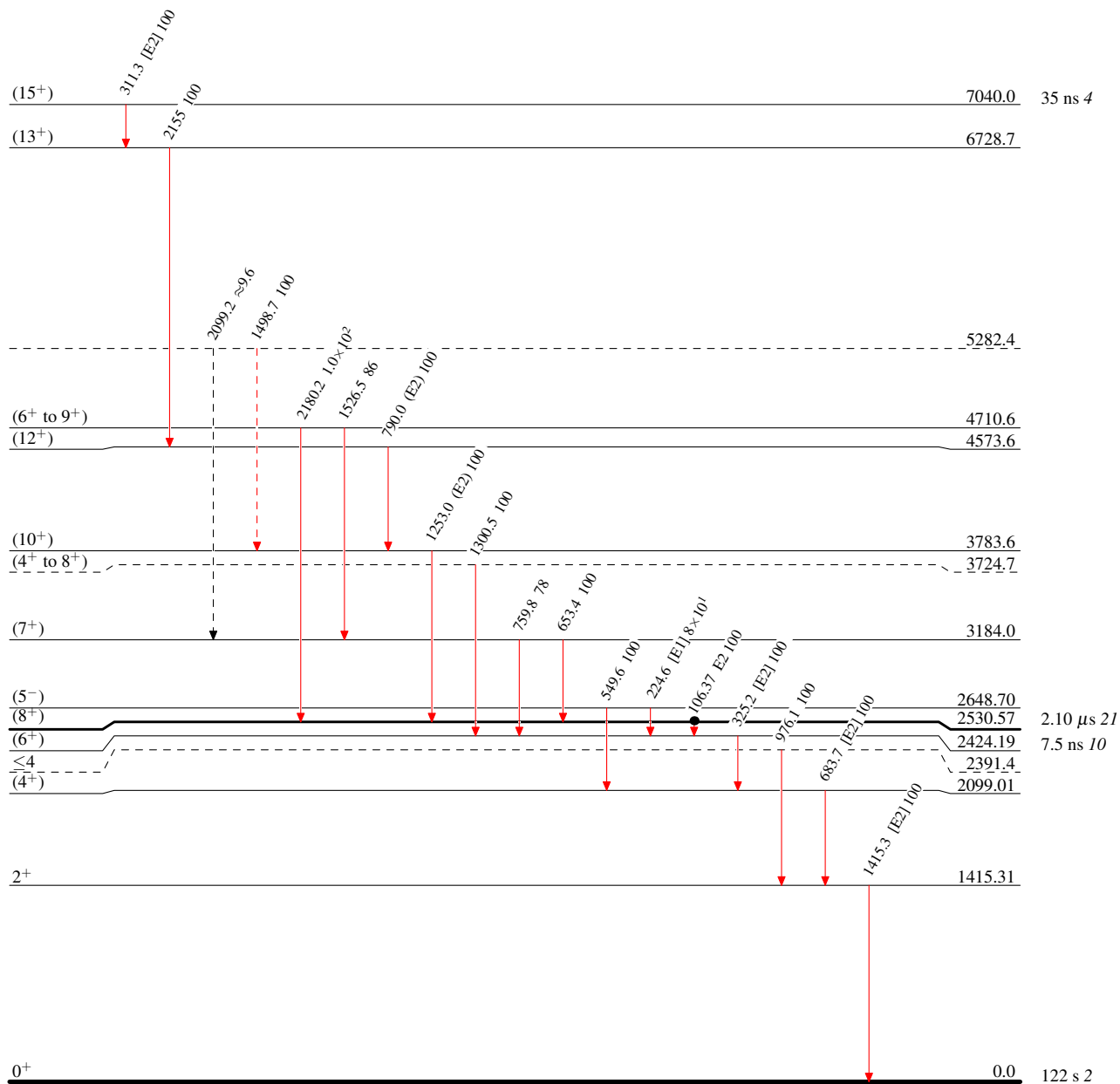
Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

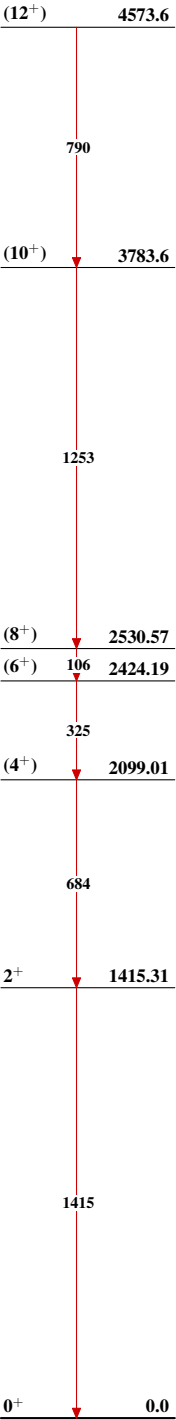
Legend

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



Adopted Levels, Gammas

Band(A): g.s. cascade



$^{96}_{46}\text{Pd}_{50}$