^{102}Pd(p,p′γ) 1977La16,1978Ka35,1980FaZX

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	D. De Frenne	NDS 110, 1745 (2009)	31-Dec-2008

1977La16: E=8 MeV; measured E(p), Eγ, p′γ(θ).
1978Ka35: E=7.5 MeV; measured Eγ, γγ-coin.
1980FaZX: measured pce(t).
1979Ba70: E=6.3 MeV; measured E(ce), Ice.
1987Fa07: E(p) not mentioned. Measured: α(K)exp, α(L)exp.
All data from 1977La16, unless noted otherwise.

^{102}Pd Levels

E(level)†	Jπ#	$T_{1/2}$	Comments
0	0^+		
556.1 *1*	2^+		
1275.3 *3*	4^+		
1534.35 *15*	2^+		Jπ: pγ(θ) results of 1977La16 consistent with J(1534)=2 only.
1594	0^+	14.6 ns *7*	E(level): from 1980FaZX. $T_{1/2}$: from pce(t) results of 1980FaZX.
1657.6 *1*	0^+		
1943.9 *1*	2^+		
2110.8 *2*	6^+		
2112.1 *3*	3^+		
2137.6 *3*	4^+		
2247.7 *1*	(2,3)		
2300.4 *5*	$(4)^+$		
2341.7 *2*	(3^-)		
2390.4 *2*	$(1,2)^+$		
2431.3 *8*			
2479.9 *9*			
2489.6 *6*			
2532.4 *4*	$(4)^+$		
2545.4 *8*			
2574.9 *6*	(1,2)		
2582.3 *8*			
2606.2‡			
2610.0 *8*	$(1,2)^+$		
2660.4 *9*			
2674.7 *5*			
2695.9 *5*	(1,2)		
2716.6 *8*	$(1,2)^+$		
2735.0 *10*			
2975.3‡	$4^{(+)},5^{(+)},6^{(+)}$		
3003.0‡	$4^+,5^+,6^+$		
3009.0 *5*	(4)		
3039.6 *6*			
3075.9‡	$4^+,5^+,6^+$		
3123.8 *8*	$1^+,2^+,3^+$		
3168.6‡	4,5,6		
3238.0 *3*	$1^+,2^+$		

† From a least-squares procedure using given gammas.
‡ From 1978Ka35.
# From Adopted Levels.

^{102}Pd(p,p′γ) 1977La16,1978Ka35,1980FaZX (continued)

γ(^{102}Pd)

E_γ	I_γ[@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ[#]	α[†]	Comments
556.1		556.1	2^+	0	0^+	E2		0.00441	α(K)=0.00383; α(L)=0.00048 α(L)exp=0.50×10^{-3} *8*
603.2	20	2137.6	4^+	1534.35	2^+				
719.2		1275.3	4^+	556.1	2^+	E2		0.00222	α(K)=0.00193; α(L)=0.00023 α(K)exp=1.98×10^{-3} *16* α(L)exp=0.28×10^{-3} *3*
835.5		2110.8	6^+	1275.3	4^+				α(K)exp=1.65×10^{-3} *21* α(L)exp=0.35×10^{-3} *11*
864.3[&]		2975.3	$4^{(+)},5^{(+)},6^{(+)}$	2110.8	6^+				α(K)exp=1.7×10^{-3} *4*
892.0[&]		3003.0	$4^+,5^+,6^+$	2110.8	6^+				α(K)exp=1.47×10^{-3} *25*
897.2	28	2431.3		1534.35	2^+				
964.0[&]		3075.9	$4^+,5^+,6^+$	2112.1	3^+				
978.1	93	1534.35	2^+	556.1	2^+	E2+M1			α(K)exp=1.13×10^{-3} *14* δ=+10.4 *+121−37*.
1012.2	100	2545.4		1534.35	2^+				
1025.1	22	2300.4	$(4)^+$	1275.3	4^+				α(K)exp=1.11×10^{-3} *11*
1057.6[&]		3168.6	4,5,6	2110.8	6^+				
1101.5		1657.6	0^+	556.1	2^+	E2		0.00081	α(K)=0.00071 α(K)exp=0.46×10^{-3} *40*
1126.5	40	2660.4		1534.35	2^+				
1257.1		2532.4	$(4)^+$	1275.3	4^+				α(K)exp=0.67×10^{-3} *8*
1307.0		2582.3		1275.3	4^+				
1330.6[&]		2606.2		1275.3	4^+				α(K)exp=0.6×10^{-3} *3*
1387.8	100	1943.9	2^+	556.1	2^+	E2+M1	+8.1 *+73−26*		α(K)exp=0.61×10^{-3} *13*
1459.8		2735.0		1275.3	4^+				
1474.3 *1*		3009.0	(4)	1534.35	2^+				α(K)exp=0.40×10^{-3} *16*
1534.5	100	1534.35	2^+	0	0^+	E2			α(K)exp=0.37×10^{-3} *7*
1556.0		2112.1	3^+	556.1	2^+	E2+M1			α(K)exp=0.40×10^{-3} *17* δ≥15. This is the same lower limit as that from 1976Gr12 in (HI,xnγ). The second value, δ≈0.24 (1976Gr12), is excluded on the basis of (p,p′γ) results.
1581.5	100	2137.6	4^+	556.1	2^+				
1594		1594	0^+	0	0^+	E0			K/L=7.4 *7* (1987Fa07) Completely converted transition observed by 1980FaZX. K/L+M=7.1 *4* (1979Ba70).
1657.7[a]		1657.6	0^+	0	0^+	E0			ce(E0,1658γ)/ce(E2,1101γ)< 46×10^{-5} *40* (1987Fa07).
1691.6		2247.7	(2,3)	556.1	2^+				α(K)exp=0.24×10^{-3} *9*
1744.3	100	2300.4	$(4)^+$	556.1	2^+				α(K)exp=0.28×10^{-3} *4*
1785.6		2341.7	(3^-)	556.1	2^+				
1800.3[&]		3075.9	$4^+,5^+,6^+$	1275.3	4^+				
1834.3		2390.4	$(1,2)^+$	556.1	2^+				α(K)exp=0.27×10^{-3} *7*
1874.9	100	2431.3		556.1	2^+				
1923.8		2479.9		556.1	2^+				
1933.5		2489.6		556.1	2^+				
1943.8	23	1943.9	2^+	0	0^+				
1989.3	87	2545.4		556.1	2^+				
2018.8		2574.9	(1,2)	556.1	2^+				
2053.9	100	2610.0	$(1,2)^+$	556.1	2^+				

Continued on next page (footnotes at end of table)

^{102}Pd(p,p′γ) 1977La16,1978Ka35,1980FaZX (continued)

γ(^{102}Pd) (continued)

E_γ	I_γ[@]	E_i(level)	J_i^π	E_f	J_f^π	E_γ	I_γ[@]	E_i(level)	J_i^π	E_f	J_f^π
2103.9	100	2660.4		556.1	2^+	2609.8	17	2610.0	$(1,2)^+$	0	0^+
2118.6		2674.7		556.1	2^+	2682.3		3238.0	$1^+,2^+$	556.1	2^+
2160.5	100	2716.6	$(1,2)^+$	556.1	2^+	2695.9		2695.9	(1,2)	0	0^+
2483.5		3039.6		556.1	2^+	2716.4	32	2716.6	$(1,2)^+$	0	0^+
2567.7		3123.8	$1^+,2^+,3^+$	556.1	2^+						

† α(K)exp,α(L)exp from 1987Fa07. Normalized to α(K)=3.82×10^{-3} for 556.4γ (E2).
‡ From α(K)exp and α(L)exp.
# From p′γ(θ) (1977La16).
@ Branchings from each level normalized to 100 for the strongest transition.
& From 1978Ka35.
a Placement of transition in the level scheme is uncertain.

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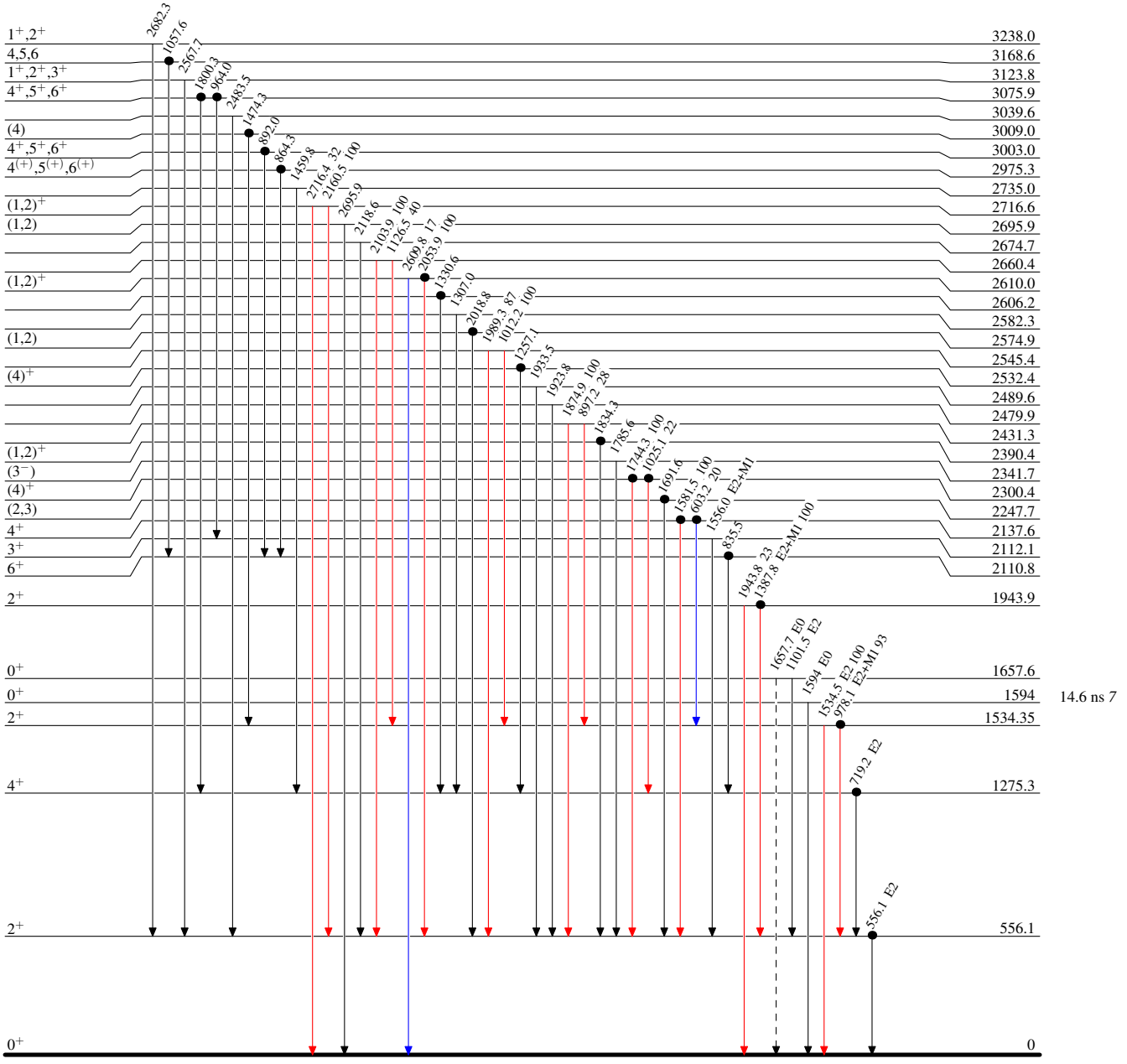
Level Scheme

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



$^{102}_{46}Pd_{56}$