Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 108,2035 (2007)	30-Mar-2007

Q(β^-)=−4279 *4*; S(n)=9981 *3*; S(p)=8656 *3*; Q(α)=−2596.1 *17* 2012Wa38
Note: Current evaluation has used the following Q record −4279 4 *9982* 5 *8657* 5 −2596 5 2003Au03.
For comparison of strongly populated high-spin sequences observed in ^{102}Pd, ^{104}Pd, ^{106}Pd, see 1976Gr12.

^{104}Pd Levels

Cross Reference (XREF) Flags

A	^{104}Rh β^- decay (42.3 s)	F	^{104}Ru(α,4nγ)	K	^{106}Pd(p,t)
B	^{104}Rh β^- decay (4.34 min)	G	^{104}Pd(n,n′γ)	L	^{107}Ag(p,α)
C	^{104}Ag ε decay (69.2 min)	H	^{104}Pd(p,p′)	M	^{64}Ni(^{48}Ca,6n2pγ)
D	^{104}Ag ε decay (33.5 min)	I	Coulomb excitation	N	^{104}Pd(p,p′γ)
E	^{94}Zr(^{13}C,3nγ)	J	^{105}Pd(d,t)		

E(level)†	Jπ‡	$T_{1/2}$	XREF	Comments
0.0#	0+	stable	ABCDEFGHIJKLMN	
555.81# *4*	2+	9.9 ps *5*	ABCDEFGHIJKLMN	μ=+0.92 *8* (1980Br01); Q=−0.47 *10* (1989Ra17) Q: other: −0.45 *10*. Method: Coul. ex. reorientation precession technique. μ: IMPAC. Other: see 1989Ra17. Jπ: L(p,t)=2. $T_{1/2}$: from B(E2)(0-2)=0.535 *35* (1987Ra01).
1323.59# *6*	4+	1.5 ps *2*	ABCDEFGHIJK MN	Jπ: L(p,t)=4, 767$\gamma(\theta)$. $T_{1/2}$: from B(E2) in Coul. ex.
1333.59 *8*	0+	5.2 ps *5*	AB D GH JKL N	Jπ: L(p,t)=0.
1341.68 *5*	2+	1.60 ps *4*	ABCDEFGHIJK N	Jπ: E2 γ to 0+. $T_{1/2}$: from B(E2) in Coul. ex.
1792.86 *6*	0+	<0.25 ps	AB D G IJKL	$T_{1/2}$: from B(E2) in Coul. ex. Jπ: (555γ)(777γ)(θ) (1960Bu05), no γ to (g.s.).
1794.3 *5*	2+	<1.4 ps	AB D GHIJ N	XREF: J(1797). $T_{1/2}$: from B(E2) in Coul. ex. Jπ: log *ft*=6.1 from 2+. 1794γ to 0+ g.s., M2 γ would not be likely, M1 γ to 2+.
1820.65 *16*	3+		ABCDEFG J L N	Jπ: (1265γ)(555γ)(θ), M1 γ to 2+, L=1 in ^{107}Ag(p,α) is inconsistent with the adopted Jπ.
1941.2 *5*			BC GH	
1948 *4*			H	
1999.1 *4*	(1,2)		D H	Jπ: 1999γ to 0+ g.s.
2070			L	
2082.38 *6*	4+	1.2 ps *12*	BC EFGHIJK N	$T_{1/2}$: from B(E2) in Coul. ex. Jπ: L(p,t)=4, E2 γ to 2+ states.
2103 *2*	0+		H	
2125.5 *1*			B J	
2138.7 *10*	0+		GH K	Jπ: L(p,t)=0.
2178.5 *10*			G JK	
2181.56 *6*	4+		BC E GH N	Jπ: log *ft*=5.4 from 5+, 1625γ to 2+.
2193.4 *6*	(4+)		CD GH JK	Jπ: L(p,t)=(4), I=3 in (p,p′).
2228 *2*	4+		H	
2244.9 *3*	2+		A D GH JK	Jπ: L(p,t)=2.
2249.5# *5*	6+		C EFG MN	Jπ: 926$\gamma(\theta)$ strong E2 in cascade to g.s.
2265.31 *7*	4+		BC EFGH J N	Jπ: 941$\gamma(\theta)$ and ang. distribution in (p,p′).
2276.5 *3*	1+,2+		D G J N	Jπ: M1 γ to 2+, 2276γ to 0+ g.s.

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Adopted Levels, Gammas (continued)

^{104}Pd Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
2290		L	
2298.9 *3*	4⁻	CDE G	Jπ: E1+M2 γ to 4⁺, M1 γ from 5⁻, decay to 2⁺.
2337.9 *3*	1⁺,2⁺	D GH JK	XREF: K(2331). Jπ: log *ft*=5.9 from 2⁺, 2338γ to 0⁺ g.s.
2351.6 *9*		GH	
2444.5 *3*	4⁺,5⁺,6⁺	BC G J	Jπ: log *ft*=5.6 from 5⁺, L(d,t)=4.
2456.6 *4*	(1,2,3)	CD GH J	Jπ: log *ft*=6.7 from 2⁺.
2465 *5*		GH J	
2479.0 *6*	1,2	CD KL	XREF: K(2484). Jπ: log *ft*=7.2 from 2⁺, 2479γ to 0⁺ g.s.
2491.4 *5*	5⁻	E H	Jπ: 1167γ(θ), linear-polarization data, strong E1 to 4⁺ member of g.s. band.
2492.0 *5*		D	
2521.4 *4*	2⁺	D GH K	XREF: K(2526). Jπ: L(p,t)=2.
2533.4 *5*	(2,3)⁺	D GH J	Jπ: log *ft*=6.3 from 2⁺,L(d,t)=0.
2570.3 *4*	4⁺	CD GH JK N	XREF: K(2564). Jπ: log *ft*=6.5 from 5⁺, M1 γ to 4⁺, and ang. distribution in (p,p′).
2572.5		G	
2613.4 *5*	2⁺,3⁺	C G JKL	XREF: K(2604). Jπ: L(d,t)=0.
2622.2 *5*	(1,2,3)	D H	Jπ: log *ft*=6.2 from 2⁺.
2626.9 *4*	(1,2⁺)	D G	Jπ: log *ft*=6.4 from 2⁺, 2627γ to 0⁺ g.s.
2642.6 *5*	4⁺	D GH JK	XREF: K(2635). Jπ: log *ft*=7.3 from 2⁺,and ang. distribution in (p,p′).
2667.7 *2*	5⁻	E H L	Jπ: E1 γ to 4⁺, E2 γ from 7⁻.
2677.8 *4*	4⁺	CD H JK	Jπ: L(d,t)=4.
2695.0 *5*	2⁺	D H J	Jπ: L(p,t)=2.
2714.8 *6*	(4,5,6)	CD G J	Jπ: log *ft*=7.2 from 5⁺.
2734 *5*	4⁻	H	
2760.3 *4*	(4,5,6)	CD L	Jπ: log *ft*=6.6 from 5⁺.
2767.0 *4*	4⁺	C G K	Jπ: L(p,t)=4.
2771.5 *5*		D H J	
2774.5 *4*	4⁺	C GH	Jπ: log *ft*=6.1 from 5⁺ and ang. distribution in (p,p′).
2784 *6*	⁺	J	Jπ: L(d,t)=2(+4).
2800.5 *6*	4⁺	CD GH JK	XREF: K(2795). Jπ: L(p,t)=4.
2810.0 *5*	2⁺,3⁺	D JK	Jπ: L(d,t)=0.
2866.0 *10*		GH K	XREF: K(2868).
2875.2 *5*	(4,5,6)	C G J	Jπ: log *ft*=6.9 from 5⁺.
2900.8 *2*	6⁻	E	Jπ: M1 γ to 5⁻.
2913 *6*		H J	
2918.3 *4*	(1,2,3)⁺	D GH JK	XREF: J(2920)K(2914). Jπ: log *ft*=6.4 from 2⁺. L(d,t)=2(+4).
2924.2 *3*	(4,5,6)⁺	C G	Jπ: log *ft*=6 from 5⁺. L(d,t)=2.
2933 *6*		J	
2958.9 *3*	4⁻,5⁻,6⁻	E H L	Jπ: M1 γ to 5⁻.
2960.5 *7*	(2⁺,3)	D	Jπ: log *ft*=6.7 from 2⁺, 2960γ to 4⁺.
2975.5 *5*	(1,2,3)	D G J	Jπ: log *ft*=6.1 from 2⁺.
2988.4 *2*	7⁻	E	Jπ: from 738γ(θ) and linear pol. g.s. band.
2993.6 *8*	4⁺	D GH J	Jπ: log *ft*=6.6 from 2⁺, L(d,t)=0+2, ang. distribution in (p,p′).
3000.3 *5*		G J	
3008.3 *5*	(1,2⁺)	D GH J	XREF: G(3013.5)H(3014). Jπ: log *ft*=7.0 from 2⁺, 3008γ to 0⁺ g.s.
3013.5 *9*		GH	
3020.3 *9*		GH J	
3034.0 *5*	(1,2⁺)	D	Jπ: log *ft*=6.5 from 2⁺, 3034γ to 0⁺ g.s.

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Adopted Levels, Gammas (continued)

^{104}Pd Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
3078.5 *5*	$2^+,3^+$	D GH J	XREF: J(3076). Jπ: L=0 (d,t).
3084 *6*	(2^+ to 5^+)	C GH J	XREF: G(3086). Jπ: L(d,t)=2+4. Probable feeding of 4^+.
3092 *6*	($2^+,3^+$)	J	Jπ: L(d,t)=0+2.
3094 *5*	3^-	H	
3097.8 *5*	1,2	CD G	Jπ: γ to 0^+ g.s., log *ft*=7.8 from 2^+.
3105.0 *4*	4^+	C G J N	XREF: J(3102). Jπ: log *ft*=5.4 from 5^+, M1 γ to 4^+, γ to 2^+ state.
3112.8 *6*	$5^+,6^+$	C N	Jπ: log *ft*=5.2 from 5^+, M1 γ to 6^+.
3113.3 *6*	(1,2,3)	D j	Jπ: log *ft*=7.3 from 2^+.
3115.6 *5*		C j	
3116.5 *5*	$1,2^{(+)}$	D j	Jπ: γ to 0^+ g.s., log *ft*=7.8 from 2^+.
3136.9 *4*	4^+	C GH J	XREF: J(3134). Jπ: log *ft*=5.7 from 5^+ parent, ang. distribution in (p,p′).
3151.8[&] *2*	8^-	E	Jπ: from 251γ(θ), linear pol, ΔJ=2 E2 γ to 6^-.
3157.9 *4*	4^+	C H N	Jπ: log *ft*=5.1 from 5^+ parent, ang. distribution in (p,p′), but $J^\pi=5^+$ in (p,p′γ)?
3179.3 *4*		G	
3187 *5*	2^+	H	
3193.3 *6*	($3^-,4^-$)	CD H J	XREF: J(3191). Jπ: log *ft*=7.7 from 5^+ and 2^+ parents.
3213.5 *4*	$1^+,2^+,3^+$	D H	XREF: H(3210). Jπ: log *ft*=5.6 from 2^+.
3220.7[#] *2*	8^+	EF M	
3224 *5*	2^+	H	
3230 *5*	6^+	H	
3253 *5*	2^+	H	
3271 *5*	6^+	H	
3280.5 *6*	4^+	C GH	Jπ: log *ft*=7.3 from 5^+ parent, not fed from 2^+ parent ang. distribution in (p,p′).
3285.4 *6*	4^+	D H	XREF: H(3285). Jπ: log *ft*=5.7 from 2^+, ang. distribution in (p,p′).
3309.6 *5*	4,5,6	C	Jπ: log *ft*=6 from 5^+; not fed from 2^+ parent.
3321 *5*	2^+	H	
3333.8 *4*	($3^-,4^-$)	CD H	Jπ: fed from 5^+ and 2^+ parent.
3349 *5*	2^+	H	
3362 *5*	4^+	H	Jπ: ang. distribution in (p,p′).
3368.1[@] *2*	9^-	E	Jπ: 380γ(θ), linear pol., ΔJ=2 E2 γ to 7^-.
3376 *5*	6^+	H	
3381 *5*	2^+	H	
3408.0 *4*	$1^+,2^+,3^+$	D	Jπ: log *ft*=5.3 from 2^+.
3417 *3*	2^+	H	
3421.8 *5*	(8^+)	E	Jπ: 201γ(θ).
3432 *5*	3^-	H	
3447		H	
3461 *5*	(2^+)	H	
3474.4 *5*	4^+	D H	Jπ: log *ft*=6.0 from 2^+, ang. distribution in (p,p′).
3501.8 *5*	(9^-)	E	Jπ: 216γ(θ).
3515 *5*		H	
3522 *5*	2^+	H	
3556 *5*	(5^-)	H	
3578 *5*		H	
3590.2 *5*		C	
3602 *5*	2^+	C H	
3622 *5*	(2^+)	H	
3647 *5*	2^+	D H	

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Adopted Levels, Gammas (continued)

^{104}Pd Levels (continued)

E(level)†	Jπ‡	XREF	Comments
3666 *5*	4^+	H	J^π: ang. distribution in (p,p′).
3704 *5*		H	
3726 *5*	(4^+)	H	J^π: ang. distribution in (p,p′).
3738 *5*	4^+	H	J^π: ang. distribution in (p,p′).
3744 *5*	(5^-)	H	
3758 *5*	2^+	H	
3769.5& *5*	10^-	E	
3787 *5*	4^+	H	J^π: ang. distribution in (p,p′).
3833 *5*	2^+	H	
3849 *5*	2^+	H	
3873 *5*	(2^+)	H	
3903 *5*	(3^-)	H	
3934 *5*	4^+	H	J^π: ang. distribution in (p,p′).
3959 *5*	3^-	H	
4009.2 *5*	$1^+,2^+,3^+$	D	J^π: log *ft*=4.9 from 2^+.
4023.1a *3*	10^+	E M	
4029.7 *5*	$1^+,2^+,3^+$	D	J^π: log *ft*=5.3 from 2^+ parent.
4047.9@ *3*	11^-	E	J^π: E2 γ to 9^-.
4202.4 *4*	(11^-)	E	J^π: 701γ(θ).
4635.0a *3*	12^+	E M	J^π: E2 γ to 10^+.
4648.5& *3*	12^-	E	J^π: E2 γ to 10^-.
4963.1@ *3*	13^-	E	J^π: E2 γ to 11^-.
5432.1a *3*	14^+	E M	J^π: E2 γ to 12^+.
5681.2& *4*	14^-	E	J^π: E2 γ to 12^-.
6021.8@ *4*	15^-	E	J^π: E2 γ to 13^-.
6358.3a *6*	16^+	E M	J^π: E2 γ to 14^+.
7422.4a *6*	18^+	E M	J^π: E2 γ to 16^+.
8616	(20^+)	M	J^π: γ to 18^+.
9873	(22^+)	M	J^π: γ to (20^+).
11237	(24^+)	M	J^π: γ to (22^+).
12707	(26^+)	M	J^π: γ to (24^+).
xc	(24)	M	J^π: γ to (22).
1263+xb	(26)	M	J^π: γ to (24).
2644+xb	(28)	M	J^π: γ to (26).
4155+xb	(30)	M	J^π: γ to (28).
5793+xb	(32)	M	J^π: γ to (30).
7556+xb	(34)	M	J^π: γ to (32).
9475+xb	(36)	M	J^π: γ to (34).
11554+xb	(38)	M	J^π: γ to (36).

† Level energy from least-squares adjustment.
‡ Unless indicated otherwise, J^π are based upon, γ(θ), linear polarization, γγ(θ) from oriented nuclei. Members of ΔJ=2 sequences are connected by stretched E2.
# Band(A): ΔJ=2 sequence. up to 8^+ built on g.s., see 1976Gr12.
@ Band(B): ΔJ=2 sequence. up to 15^- built on 9^-, see 1976Gr12.
& Band(C): ΔJ=2 sequence. up to 14^- built on 8^- level, see 1976Gr12.
a Band(D): ΔJ=2 sequence. up to 18^+ built on 10^+ level, see 1976Gr12.
b Band(E): Superdeformed ΔJ=2 band built on a (24) level, see 1988Ma38.
c x >9873.

Adopted Levels, Gammas (continued)

γ(^{104}Pd)

E_i(level)	J_i^π	E_γ	I_γ[‡]	E_f	J_f^π	Mult.[†]	δ[†]	α[#]	Comments
555.81	2^+	555.796 *23*	100	0.0	0^+	E2		0.0045	B(E2)(W.u.)=36.9 *19*
1323.59	4^+	767.72 *8*	100	555.81	2^+	E2		0.0019	B(E2)(W.u.)=49 *7*
1333.59	0^+	777.8 *1*	100	555.81	2^+	E2			B(E2)(W.u.)=13.2 *13*
		1333.6 *1*		0.0	0^+	E0			Mult.: ρ^2=4.7×10^{-3} *14* (1986Lu06).
1341.68	2^+	785.86 *3*	100 *6*	555.81	2^+	E2			B(E2)(W.u.)=21.8 *17* δ: −4.8 *42*.
		1341.69 *4*	86 *5*	0.0	0^+	E2			B(E2)(W.u.)=1.29 *10*
1792.86	0^+	451.15 *22*	9.4 *9*	1341.68	2^+				
		1237.2 *1*	100 *6*	555.81	2^+	(E2)			B(E2)(W.u.)>25
1794.3	2^+	460.5 *4*	4 *1*	1333.59	0^+				I_γ: Iγ=16 in ^{104}Rh β$^-$ decay (4.34 min).
		1238.0 *1*	100 *6*	555.81	2^+	M1			B(M1)(W.u.)>0.0073
		1794.0 *4*	10 *1*	0.0	0^+	(E2)			B(E2)(W.u.)>0.066
1820.65	3^+	479.1 *1*	24 *4*	1341.68	2^+	M1,E2			
		497.8 *6*	77 *8*	1323.59	4^+				I_γ: Iγ from ^{104}Rh β$^-$ decay, Iγ=11 from ^{104}Ag ε decay.
		1265.03 *7*	100 *10*	555.81	2^+	M1+E2	0.23 *7*		
1941.2		617.0 *10*	100	1323.59	4^+				
1999.1	(1,2)	1999.1 *5*	100	0.0	0^+				
2082.38	4^+	740.67 *4*	95 *5*	1341.68	2^+	E2			B(E2)(W.u.)=25 *25*
		758.76 *5*	100 *5*	1323.59	4^+	M1+E2	−0.84 *24*		B(M1)(W.u.)=0.009 *9*; B(E2)(W.u.)=10 *10*
		1526.58 *5*	85 *8*	555.81	2^+	E2			B(E2)(W.u.)=0.6 *6*
2125.5		332.6 *2*	100	1792.86	0^+				
2138.7	0^+	1583.0 *2*	100	555.81	2^+				
2178.5		1622.8 *2*	100	555.81	2^+				
2181.56	4^+	839.7 *2*	12 *3*	1341.68	2^+				
		857.9 *1*	100 *10*	1323.59	4^+	M1+E2	0.45 *30*		
		1625.8 *1*	50 *5*	555.81	2^+	E2			
2193.4	(4^+)	1637.5 *5*	100	555.81	2^+				
2244.9	2^+	902.4 *6*	10 *2*	1341.68	2^+				
		1689.0 *2*	100 *10*	555.81	2^+				
2249.5	6^+	926.2 *1*	100	1323.59	4^+	E2			
2265.31	4^+	183.2 *3*	2 *1*	2082.38	4^+				
		444.5 *2*	7 *2*	1820.65	3^+	M1,E2			
		923.3 *5*	28 *3*	1341.68	2^+				
		941.7 *1*	100	1323.59	4^+	M1+E2	−0.64 *14*		
		1708.0 *5*	4 *1*	555.81	2^+				I_γ: from ^{104}Ag ε decay Iγ=1 from ^{104}Rh β$^-$ decay.
2276.5	$1^+,2^+$	934.6 *2*	19 *2*	1341.68	2^+				
		1720.8 *4*	70 *7*	555.81	2^+	(M1)			
		2276.7 *4*	100 *8*	0.0	0^+				
2298.9	4^-	116.3 *2*	70 *10*	2181.56	4^+				
		215.6 *3*	95 *3*	2082.38	4^+				
		974.2 *2*	100 *20*	1323.59	4^+	E1(+M2)	0.5 *6*		

$^{104}_{46}Pd_{58}$-5

Adopted Levels, Gammas (continued)

γ(^{104}Pd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[‡]	E_f	J_f^π	Mult.[†]	δ[†]	α[#]	Comments
2298.9	4⁻	1743.5 *5*		555.81	2⁺				E_γ: not seen in ^{94}Zr(^{13}C,3nγ).
2337.9	1⁺,2⁺	996.1 *3*	24 *3*	1341.68	2⁺				
		1781.8 *5*	100 *21*	555.81	2⁺				
		2338.3 *4*	44 *8*	0.0	0⁺				
2351.6		1028.1 *9*	100	1323.59	4⁺				
2444.5	4⁺,5⁺,6⁺	179.3 *3*	2	2265.31	4⁺				
		263.2 *2*	40 *5*	2181.56	4⁺	E2		0.0465	
		362.3 *2*	50 *10*	2082.38	4⁺	M1,E2			
		623.2 *2*	100 *18*	1820.65	3⁺				
		1120.5 *4*	33 *4*	1323.59	4⁺				
		1889.9 *10*	30 *5*	555.81	2⁺				
2456.6	(1,2,3)	1133.1 *4*	90 *10*	1323.59	4⁺				
		1900.9 *5*	100 *10*	555.81	2⁺				
2465		1132.1 *3*	100 *10*	1333.59	0⁺				
		1909.8 *10*	21 *8*	555.81	2⁺				
2479.0	1,2	1923.8 *5*	100	555.81	2⁺				
		2478.3 *5*	100	0.0	0⁺				
2491.4	5⁻	193.4 *2*	13 *2*	2298.9	4⁻	M1		0.063	
		309.7 *3*	8 *3*	2181.56	4⁺				
		409.0 *2*	3.5 *3*	2082.38	4⁺				
		1167.8 *1*	100 *5*	1323.59	4⁺	E1			
2492.0		1936.1 *5*	100	555.81	2⁺				
2521.4	2⁺	1179.3 *2*	100 *10*	1341.68	2⁺				
		1965.6 *5*	33 *7*	555.81	2⁺				
2533.4	(2,3)⁺	1191.5 *4*	21 *6*	1341.68	2⁺				
		1977.5 *4*	100 *10*	555.81	2⁺				
2570.3	4⁺	1247.1 *5*	100 *20*	1323.59	4⁺	(M1)			
2572.5		1230.7 *2*	100 *19*	1341.68	2⁺				
		2016.9 *3*	81 *10*	555.81	2⁺				
2613.4	2⁺,3⁺	1271.7		1341.68	2⁺				E_γ: seen only in ^{104}Pd(n,n′γ).
		2613.4 *5*		0.0	0⁺				E_γ: seen only in ^{104}Ag ε decay.
2622.2	(1,2,3)	1297.8 *3*	100	1323.59	4⁺				
2626.9	(1,2⁺)	2070.0 *3*		555.81	2⁺				E_γ: seen only in ^{104}Pd(n,n′γ).
		2626.9 *4*		0.0	0⁺				E_γ: seen only in ^{104}Ag ε decay.
2642.6	4⁺	1300.0 *8*	33 *10*	1341.68	2⁺				
		1318.2 *3*	100 *10*	1323.59	4⁺				
		2086.8 *5*		555.81	2⁺				E_γ: seen only in ^{104}Ag ε decay.
2667.7	5⁻	1344.1 *2*	100	1323.59	4⁺	E1+M2	−0.06 *5*		
2677.8	4⁺	1354.3 *3*	100	1323.59	4⁺				
2695.0	2⁺	2139.2 *5*	100	555.81	2⁺				
2714.8	(4,5,6)	1372.6 *9*	90 *30*	1341.68	2⁺				

$^{104}_{46}Pd_{58}$-6

Adopted Levels, Gammas (continued)

γ(^{104}Pd) (continued)

E_i(level)	J_i^π	E_γ	I_γ ‡	E_f	J_f^π	Mult.†	δ†	Comments
2714.8	(4,5,6)	1381.4 *8*	100 *30*	1333.59	0^+			
		1390.1 *11*	70 *30*	1323.59	4^+			
		2158.9 *5*	100 *30*	555.81	2^+			E_γ: seen only in ^{104}Ag ε decay.
2760.3	(4,5,6)	1418.5 *3*	100	1341.68	2^+			
2767.0	4^+	1425.0 *5*	100	1341.68	2^+			E_γ: seen only in ^{104}Ag ε decay.
		2210 *6*	3	555.81	2^+			E_γ: seen only in ^{104}Pd(n,n′γ).
2771.5		2215.6 *5*	100	555.81	2^+			
2774.5	4^+	1451.2 *5*	100 *16*	1323.59	4^+			
		2218.3 *5*	8 *5*	555.81	2^+			
2800.5	4^+	2244.6 *5*	100	555.81	2^+			
2866.0		1542.0	100 *19*	1323.59	4^+			
2875.2	(4,5,6)	1551.6 *7*	100	1323.59	4^+			
2900.8	6^-	233.2 *3*	16 *4*	2667.7	5^-	M1+E2	−0.02 *3*	
		409.5 *1*	100 *7*	2491.4	5^-	M1		
		602.8 *2*	47 *3*	2298.9	4^-	E2		
		651.0 *2*	42 *3*	2249.5	6^+	E1+M2	0.18 *8*	
2918.3	$(1,2,3)^+$	2362.4 *4*	100	555.81	2^+			
2924.2	$(4,5,6)^+$	659.3 *3*	45 *9*	2265.31	4^+			
		1600 *2*	100 *18*	1323.59	4^+			
2958.9	$4^-,5^-,6^-$	467.5 *5*	100	2491.4	5^-	M1+E2	0.28 *5*	
2960.5	$(2^+,3)$	1636.1 *5*	100	1323.59	4^+			
2975.5	(1,2,3)	2419.6 *4*	100	555.81	2^+			
2988.4	7^-	320.7 *3*	4 *1*	2667.7	5^-	E2		
		497.0 *1*	11 *2*	2491.4	5^-	E2		
		738.6 *1*	100 *5*	2249.5	6^+	E1(+M2)	−0.04 *2*	
2993.6	4^+	910.2 *4*		2082.38	4^+			E_γ: seen only in ^{104}Pd(n,n′γ).
		1652.1 *5*	100 *5*	1341.68	2^+			
		2437.3 *5*	33 *3*	555.81	2^+			
3000.3		1676.6 *5*	100 *20*	1323.59	4^+			
		3001.6 *12*	53 *20*	0.0	0^+			
3008.3	$(1,2^+)$	2452.2 *7*		555.81	2^+			E_γ: seen only in ^{104}Pd(n,n′γ).
		3008.3 *5*	100	0.0	0^+			
3013.5		3013.5 *9*	100	0.0	0^+			
3020.3		1696.8 *6*	100	1323.59	4^+			
3034.0	$(1,2^+)$	3034.0 *5*	100	0.0	0^+			
3078.5	$2^+,3^+$	2522.7 *4*	100	555.81	2^+			
3097.8	1,2	2540.4 *6*	100	555.81	2^+			
		3097.8 *5*	100	0.0	0^+			
3105.0	4^+	1022.9 *5*	18 *3*	2082.38	4^+	(M1)		
		1283.9 *4*	25 *3*	1820.65	3^+			
		1763.1 *5*	20 *6*	1341.68	2^+			

$^{104}_{46}Pd_{58}$-7

Adopted Levels, Gammas (continued)

γ(^{104}Pd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[‡]	E_f	J_f^π	Mult.[†]	δ[†]	Comments
3105.0	4^+	1781.8 *4*	100 *18*	1323.59	4^+	(M1)		
		2549.0 *5*	2 *1*	555.81	2^+			
3112.8	$5^+,6^+$	863.0 *3*	100 *13*	2249.5	6^+	(M1)		
		1788.2 *5*	1 *1*	1323.59	4^+			
3113.3	(1,2,3)	2557.4 *5*	100	555.81	2^+			
3115.6		1792.0 *5*	100	1323.59	4^+			
3116.5	$1,2^{(+)}$	3116.0 *5*	100	0.0	0^+			
3136.9	4^+	955.3 *3*	60 *10*	2181.56	4^+			
		1813.7 *4*	100 *20*	1323.59	4^+			
		2582.3 *10*	5 *5*	555.81	2^+			
3151.8	8^-	163.4 *2*	31 *7*	2988.4	7^-	M1		
		250.97 *10*	100 *5*	2900.8	6^-	E2		
3157.9	4^+	892.6 *3*	10 *2*	2265.31	4^+			
		908.0 *3*	100 *12*	2249.5	6^+			
		1075.3 *3*	48 *8*	2082.38	4^+	(M1,E2)		
		1835.0 *5*	2 *1*	1323.59	4^+			
3179.3		2623.6 *4*	100	555.81	2^+			
3193.3	$(3^-,4^-)$	1869.7 *5*	100	1323.59	4^+			
3213.5	$1^+,2^+,3^+$	2657.5 *5*	22 *3*	555.81	2^+			
		3213.6 *5*	100 *13*	0.0	0^+			
3220.7	8^+	970.7 *1*	100	2249.5	6^+	E2		
3280.5	4^+	1956.9 *5*		1323.59	4^+			E_γ: seen only in ^{104}Ag ε decay.
		2726.1 *11*	100 *33*	555.81	2^+			
		3281.3 *11*	78 *22*	0.0	0^+			
3285.4	4^+	2729.5 *5*	100	555.81	2^+			
3309.6	4,5,6	1986.0 *4*	100	1323.59	4^+			
3333.8	$(3^-,4^-)$	1992.0 *5*	100	1341.68	2^+			
		2777.9 *5*	30	555.81	2^+			
3368.1	9^-	216.3 *3*	15 *2*	3151.8	8^-	M1+E2		
		379.7 *1*	100	2988.4	7^-	E2		
3408.0	$1^+,2^+,3^+$	2065.9 *5*	16 *3*	1341.68	2^+			
		2852.5 *5*	22 *3*	555.81	2^+			
		3407.8 *5*	100	0.0	0^+			
3421.8	(8^+)	201.1 *2*	33 *3*	3220.7	8^+	M1+E2	−0.15 *15*	
		1172.0 *2*	100 *5*	2249.5	6^+	E2		
3474.4	4^+	2918.8 *5*	100 *20*	555.81	2^+			
		3473.9 *5*	55 *5*	0.0	0^+			
3501.8	(9^-)	350.0 *2*	100	3151.8	8^-	M1+E2	0.22 *3*	
3590.2		2266.6 *5*	100	1323.59	4^+			
3769.5	10^-	401.4 *2*	12 *2*	3368.1	9^-	M1+E2	−1.0 *5*	
		617.7 *1*	100 *5*	3151.8	8^-	E2		

$^{104}_{46}Pd_{58}$-8

Adopted Levels, Gammas (continued)

γ(^{104}Pd) (continued)

E_i(level)	J_i^π	E_γ	I_γ[‡]	E_f	J_f^π	Mult.[†]	E_i(level)	J_i^π	E_γ	I_γ[‡]	E_f	J_f^π	Mult.[†]
4009.2	$1^+,2^+,3^+$	1382.4 *3*	100	2626.9	$(1,2^+)$		6358.3	16^+	926.2 *4*	100	5432.1	14^+	
		4009.0 *5*	3	0.0	0^+		7422.4	18^+	1064.2 *2*	100	6358.3	16^+	E2
4023.1	10^+	601.3 *2*	17 *2*	3421.8	(8^+)	E2	8616	(20^+)	1194	100	7422.4	18^+	
		802.5 *1*	100 *5*	3220.7	8^+	E2	9873	(22^+)	1257	100	8616	(20^+)	
4029.7	$1^+,2^+,3^+$	2705.3 *5*	100	1323.59	4^+		11237	(24^+)	1364	100	9873	(22^+)	
4047.9	11^-	679.8 *1*	100	3368.1	9^-	E2	12707	(26^+)	1470	100	11237	(24^+)	
4202.4	(11^-)	700.6 *2*	100	3501.8	(9^-)		1263+x	(26)	1263	100	x	(24)	
4635.0	12^+	611.9 *1*	100	4023.1	10^+	E2	2644+x	(28)	1381	100	1263+x	(26)	
4648.5	12^-	879.0 *1*	100	3769.5	10^-	E2	4155+x	(30)	1511	100	2644+x	(28)	
4963.1	13^-	915.3 *1*	100	4047.9	11^-	E2	5793+x	(32)	1638	100	4155+x	(30)	
5432.1	14^+	797.0 *1*	100	4635.0	12^+	E2	7556+x	(34)	1763	100	5793+x	(32)	
5681.2	14^-	1032.7 *2*	100	4648.5	12^-	E2	9475+x	(36)	1919	100	7556+x	(34)	
6021.8	15^-	1058.7 *2*	100	4963.1	13^-	E2	11554+x	(38)	2079	100	9475+x	(36)	

[†] From $\gamma(\theta)$ and linear polarization in ^{94}Zr (^{13}C,3nγ), and α(K)exp in (p,p′γ).

[‡] Relative photon branching from each level.

[#] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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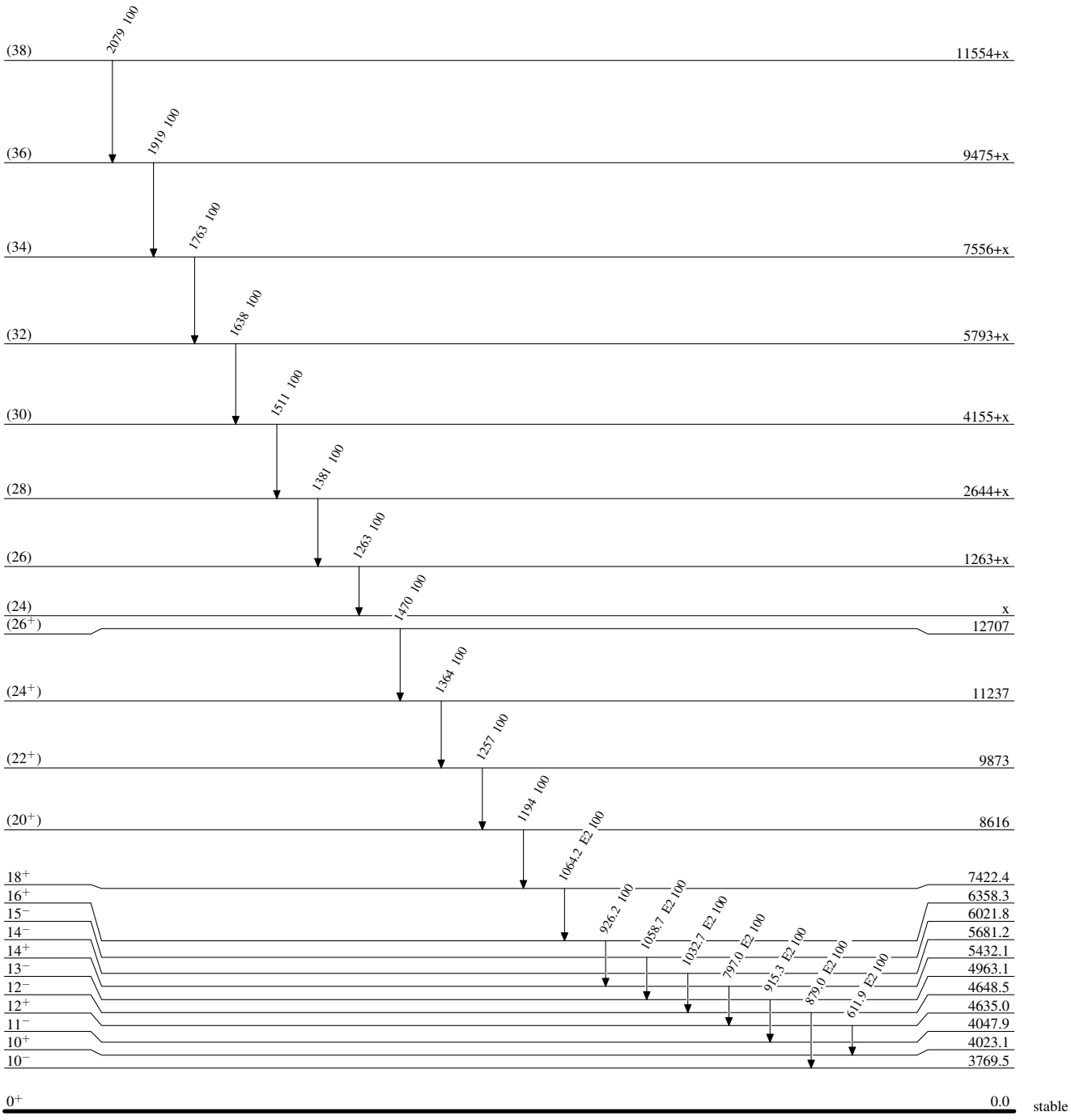
Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



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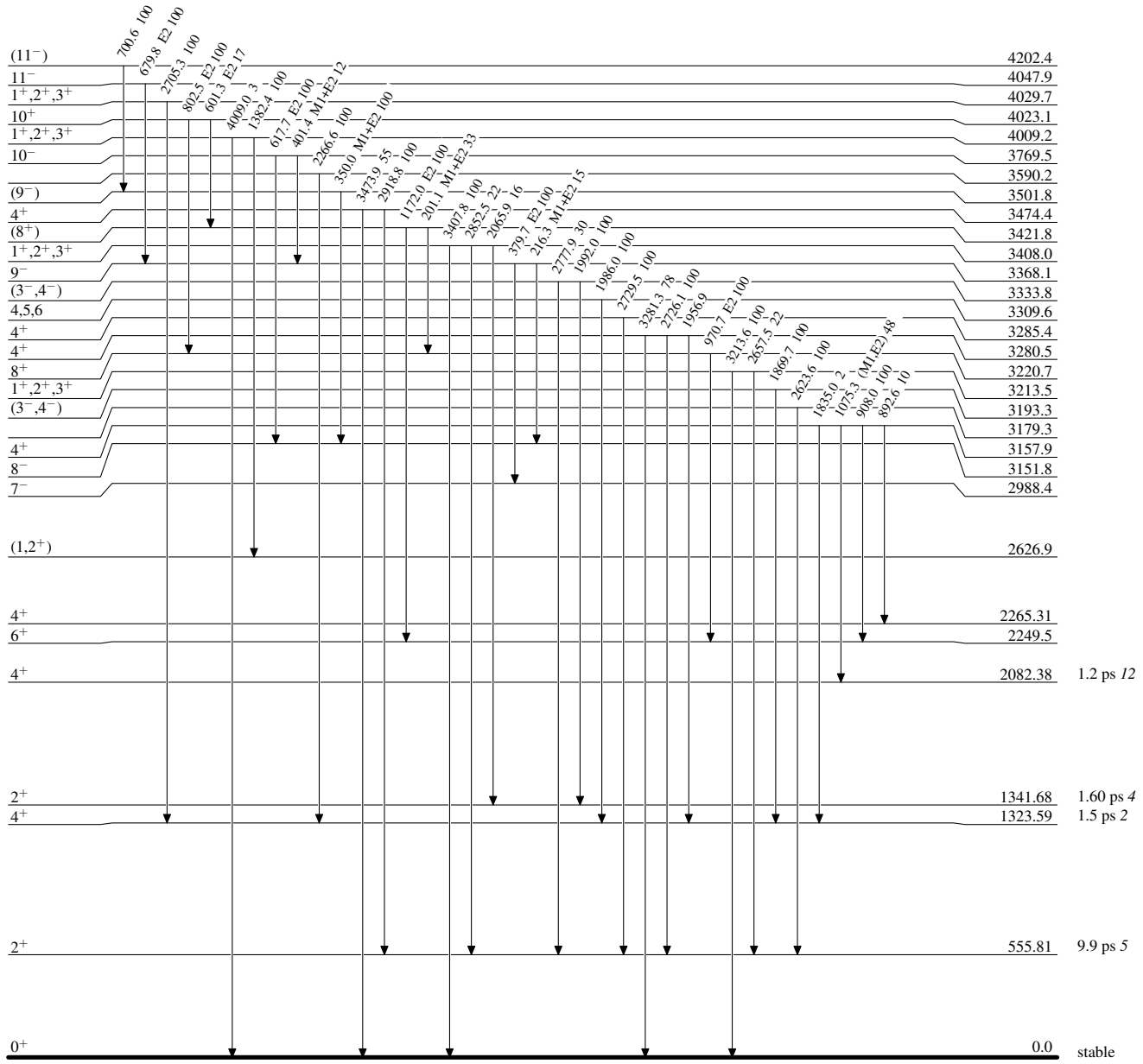
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



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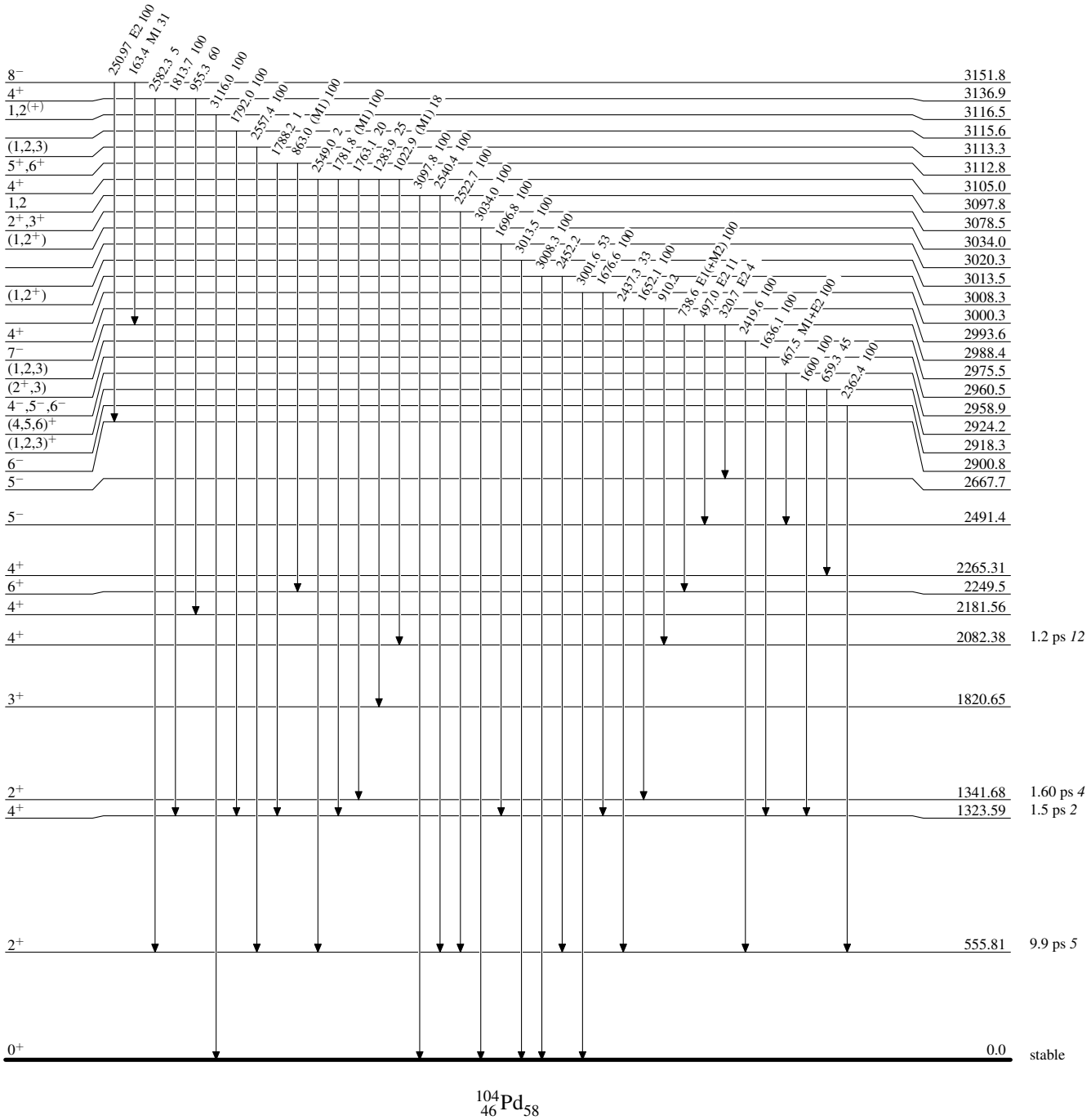
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

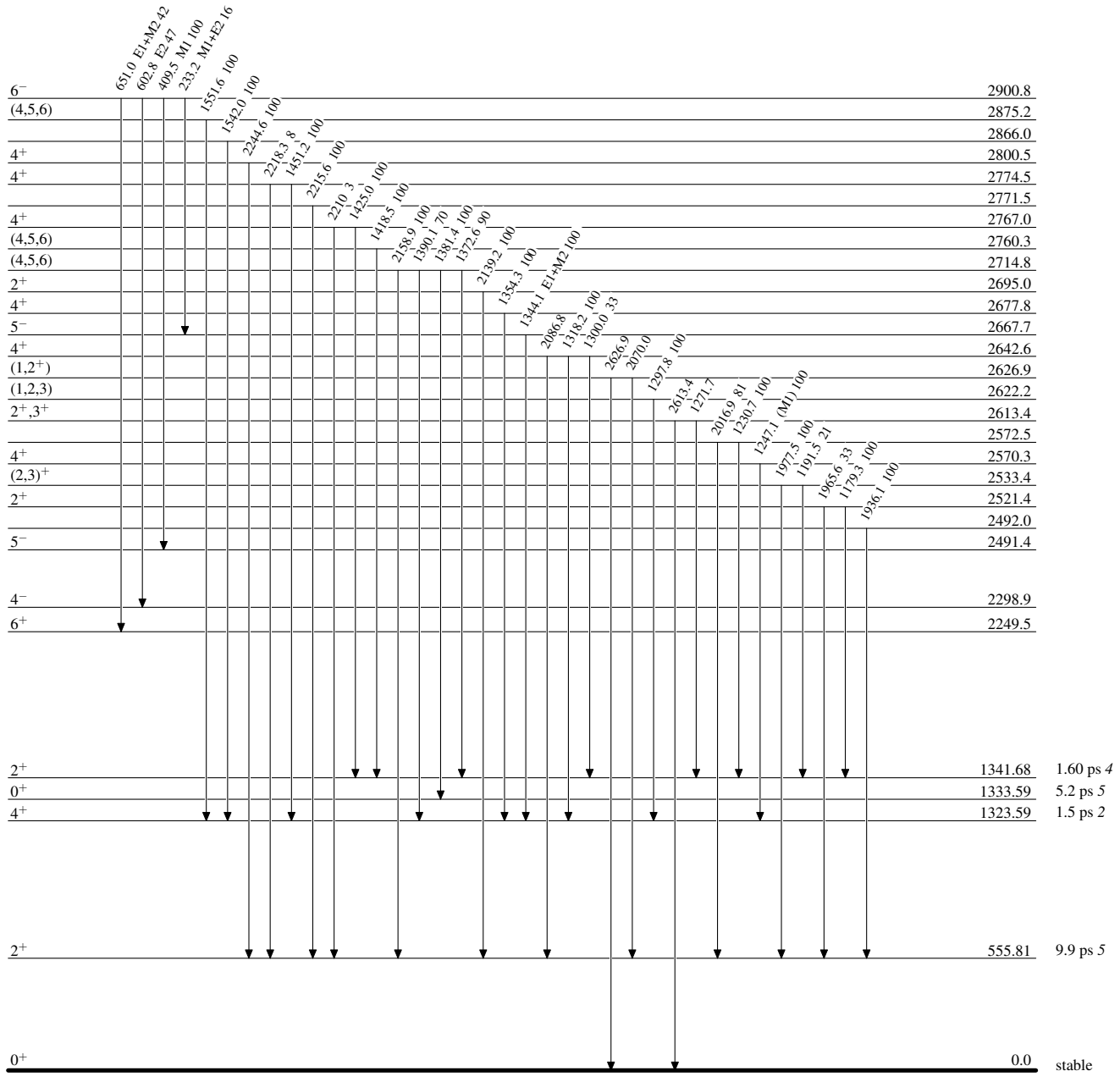


$^{104}_{46}Pd_{58}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



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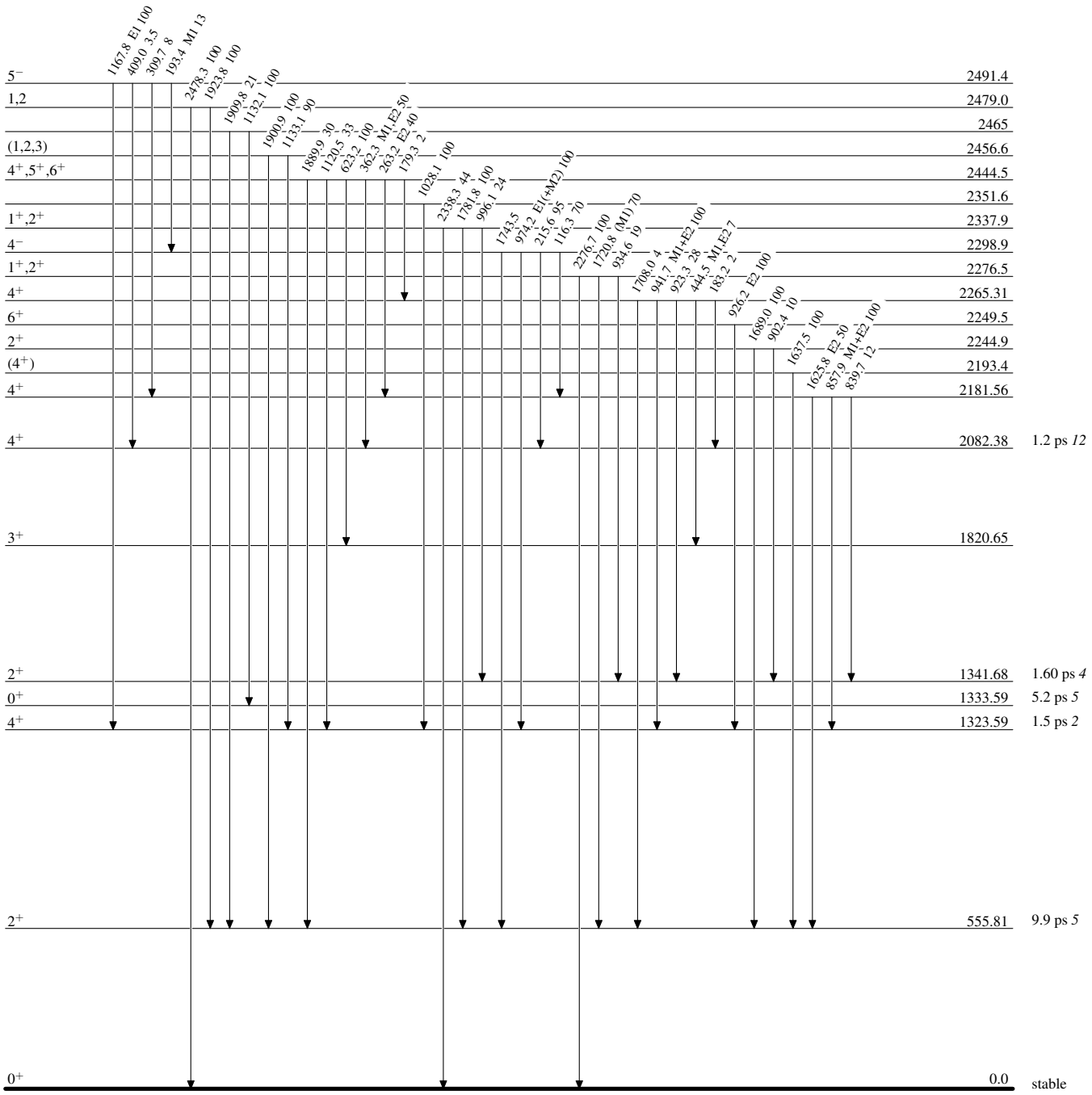
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

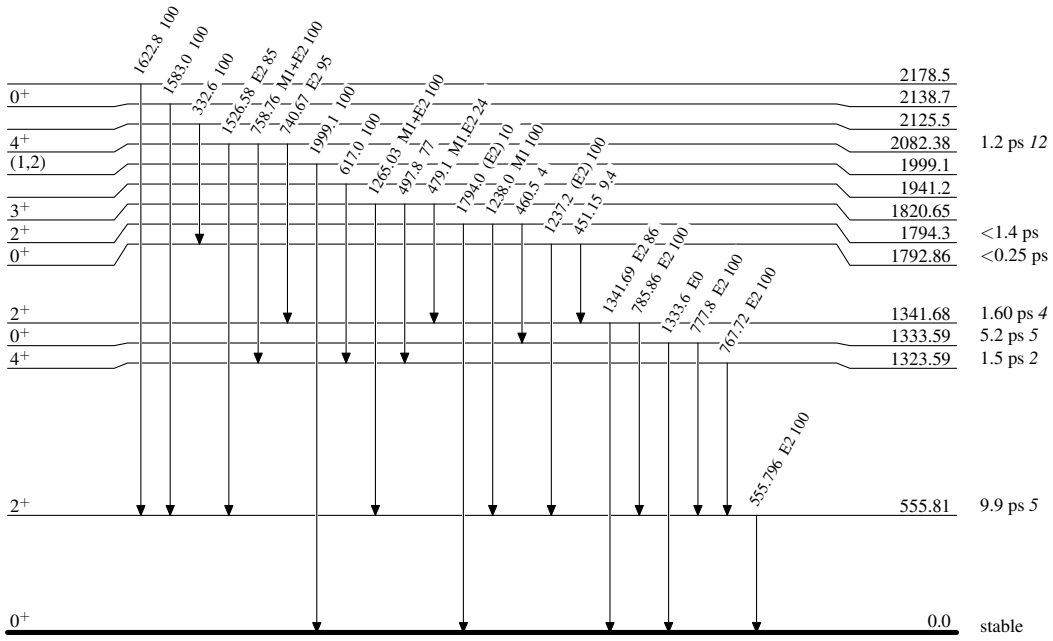


$^{104}_{46}Pd_{58}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



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Adopted Levels, Gammas