Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 172, 1 (2021)	31-Jan-2021

Q(β^-)=−7075 *18*; S(n)=11101 *18*; S(p)=6920 *19*; Q(α)=−1557 *18* 2017Wa10
S(2n)=20034 *18*, S(2p)=11566 *19* (2017Wa10).
Other reactions:
^{102}Pd(p,t): 1974De31, 1977BrYJ, 1982NaZT; mainly Q value measurements.
^{96}Ru(^{16}O,^{12}C): 1982Th01; Q value measurement.
Multi-nucleon transfer in heavy-ion reactions: 1976Mi13.
1998Be11: Hyperfine fields in Ni and Pd from $\gamma\gamma(\theta$,H,t) in ^{100}Pd ε decay.
Additional information 1.
Theory references: consult the NSR database (www.nndc.bnl.gov/nsr/) for 49 primary references, 48 dealing with nuclear structure calculations and one with decay modes and half-lives.
The high-spin (J>8) data are available from several different reactions (2001Pe05, 2001Zh26, 2000ApZY, 1997Ta02, 1981Pi02). There is general agreement between the results of the three most recent and detailed studies using large γ-ray detector arrays. However, above 9 MeV excitation energy, there are differences in the ordering of the cascades and inventory of γ rays. The evaluators have adopted results from 2001Pe05 since the data from this study are presented in a most detailed and comprehensive manner. The differences between various studies are noted here as well as in the individual datasets. The band structures are mostly common between different studies but are primarily adopted from 2001Pe05 and 2001Zh26.
The following $\gamma\gamma$ cascades given in 2001Zh26, 2000ApZY, 1997Ta02 and 1981Pi02 with different orderings are reordered based on the adopted ordering taken from 2001Pe05:
876-1071-1035-940-809-805 in 1981Pi02 is reordered as 1071-940-1035-806-809-876 in 2001Pe05 and others; 1036-940 in 1981Pi02 is reordered as 940-1036 in 2001Pe05; 1736-1510-1200 (1997Ta02), 1850-1737-1201-1510 (2000ApZY), 1852-1510-1200-1736 (2001Zh26) is reordered as 1510-1852-1200-1736 in 2001Pe05; 1106-609 in 2001Zh26 is reordered as 609-1106 in 2001Pe05; 609-1383-1107-1388 in 1997Ta02 is reordered as 1383-609-1107-1388 in 2001Pe05 and others; 626-1118 in 2000ApZY is reordered as 1116-626 in 2001Pe05; 558-1293 cascade in 2000ApZY from 15015 level in 2000ApZY is from 13502 level in 2001Pe05.

^{100}Pd Levels

Cross Reference (XREF) Flags

A	^{100}Ag ε decay (2.01 min)	E	^{46}Ti(^{58}Ni,4pγ)	I	^{91}Zr(^{12}C,3nγ)
B	^{100}Ag ε decay (2.24 min)	F	^{50}Cr(^{58}Ni,4p$\alpha\gamma$),^{70}Zn(^{36}S,6nγ)	J	^{92}Mo(^{11}B,p2nγ)
C	^{12}C(^{96}Ru,2$\alpha\gamma$)	G	^{66}Zn(^{37}Cl,p2nγ)	K	^{99}Ru(^{3}He,2nγ)
D	^{24}Mg(^{80}Se,4nγ)	H	^{72}Ge(^{35}Cl,αp2nγ)		

E(level)[†]	J$^\pi$[#]	T$_{1/2}$[@]	XREF	Comments
0.0[&]	0$^+$	3.63 d *9*	ABCDEFGHIJK	%ε=100 T$_{1/2}$: from 1968Pa24. Others: 3.66 d (1972Ch13), 3.7 d *3* (1964An07), 1964Ro20, 4.0 d (1948Li03).
665.49[&] *10*	2$^+$	6.24 ps *28*	ABCDEFGHIJK	μ=+0.60 *28* (2011To09,2014StZZ) J$^\pi$: ΔJ=2, E2 665.5γ to 0$^+$. T$_{1/2}$: other: 9.2 ps *6* (RDDS in ^{24}Mg(^{80}Se,4nγ); 2012An17,2011An04,2011AnZZ). μ: g factor=+0.30 *14* from transient magnetic field technique in inverse kinematics (2011To09).
1416.09[&] *13*	4$^+$	2.50 ps *21*	ABCDEFGHIJK	μ=+1.80 *56* (2011To09,2014StZZ) J$^\pi$: ΔJ=2, E2 750.6γ to 2$^+$; band assignment. T$_{1/2}$: other: 1.66 ps *12* (RDDS in ^{24}Mg(^{80}Se,4nγ); 2011AnZZ). μ: g factor=+0.45 *14* from transient magnetic field technique in inverse kinematics (2011To09).

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Adopted Levels, Gammas (continued)

^{100}Pd Levels (continued)

E(level)[†]	Jπ[#]	$T_{1/2}$[@]	XREF	Comments
1523.6 *3*	(1,2$^+$)		B	E(level): from ε decay (2.24 m) only; level not confirmed in other studies. Jπ: 1523.6γ to 0$^+$.
1587.60 *14*	2$^{(+)}$		ABC K	Jπ: from γγ(θ) and 2-phonon state in (^{3}He,2nγ) (2009Ra06); 1587.8γ to 0$^+$.
1925.86 *17*	3$^{(+)}$		A C K	Jπ: from γγ(θ) and possible 3-phonon state in (^{3}He,2nγ) (2009Ra06). Possible direct ε feeding from (5)$^+$ (ΔJ=0 or 1) produces conflicting Jπ=(4,5,6), probably due to incomplete knowledge of the decay scheme.
2055.08[b] *17*	(4$^-$)		A C F H JK	Jπ: 450.5γ ΔJ=(1), D from 5$^-$; 639.3γ to 4$^+$; possible bandhead.
2189.31[&] *15*	6$^+$	2.56 ps *35*	A CDEFGHIJK	μ=+8.8 *52* (2011To09) Jπ: ΔJ=2, E2 773.2γ to 4$^+$; band assignment. $T_{1/2}$: other: 1.66 ps *8* (RDDS in ^{24}Mg(^{80}Se,4nγ); 2011AnZZ). μ: g factor=+1.47 *87* from transient magnetic field technique in inverse kinematics (2011To09). This value is not listed in 2014StZZ.
2278.14 *18*	5$^{(+)}$		A C K	Jπ: spin=5 from γγ(θ) in (^{3}He,2nγ); 352.8γ to 3$^{(+)}$.
2350.98 *22*	(4$^+$)		A C K	Jπ: 1685.7γ to 2$^+$; possible direct ε feeding (ΔJ=0 or 1) from (5)$^+$.
2359.3 *4*	(2$^+$)		B K	Jπ: tentative assignment from γγ(θ) and one-phonon mixed-symmetry state in (^{3}He,2nγ) (2009Ra06); possible allowed ε feeding from (2)$^+$.
2431.11 *23*	4		C K	Jπ: from γγ(θ) in (^{3}He,2nγ).
2469.90 *15*	6$^{(+)}$		A C F H K	Jπ: ΔJ=(0), dipole 280.6γ to 6$^+$; 1053.8γ to 4$^+$; 708.1γ from 8$^+$.
2505.46[c] *16*	5$^-$	13.97 ps *35*	C EFGHIJK	Jπ: ΔJ=1, E1 1089.3γ to 4$^+$; spin=5 from γγ(θ) in (^{3}He,2nγ) (2009Ra06).
2519.1 *4*	(0$^+$ to 4$^+$)		K	Jπ: 931.6γ to 2$^{(+)}$.
2531.89 *24*	(2$^+$)		AB I K	XREF: I(?). Jπ: ΔJ=(2) 1115.8γ to 4$^+$ gives J=(2$^+$ or 6$^+$). β$^+$ feeding from (5)$^+$ and (2)$^+$ isomers produce conflicting Jπ assignments probably due to incomplete knowledge of the decay schemes. However, a stronger β$^+$ feeding from (2)$^+$ isomer suggests a preference for Jπ=2$^+$.
2616.9 *4*	(0$^+$ to 4$^+$)		C K	Jπ: 1951.4γ to 2$^+$.
2621.5 *4*	(1$^-$ to 4$^+$)		AB	Jπ: 1956.0γ to 2$^+$; 614.1γ from (3$^-$). E(level): level not confirmed in other studies other than ε decay studies.
2679.2 *10*	(0$^+$ to 4$^+$)		A	E(level): from ^{100}Ag ε decay (2.01 min) only; level not confirmed in other studies. Jπ: 2013.7γ to 2$^+$.
2694.00 *24*	(4)		A K	Jπ: from γγ(θ) in (^{3}He,2nγ).
2784.0 *5*	(1$^+$,2$^+$,3$^+$)		B K	Jπ: possible allowed ε feeding from (2)$^+$.
2821.40 *24*	(4)		A K	Jπ: from γγ(θ) in (^{3}He,2nγ).
2879.86 *22*	(4$^+$)		A K	Jπ: possible direct ε feeding (ΔJ=0 or 1) from (5)$^+$; 2214.3γ to 2$^+$.
2886.6 *3*	(4$^+$,5,6$^+$)		K	Jπ: 1470.2γ to 4$^+$ and 697.4 γ to 6$^+$.
2920.11 *16*	(4)$^+$		A K	Jπ: strong ε feeding (allowed) from (5)$^+$; spin=(4) from γγ(θ) in (^{3}He,2nγ).
2939.4 *6*	(2$^+$ to 6$^+$)		K	Jπ: 1523.3γ to 4$^+$.
2976.7 *6*	(0$^+$ to 4$^+$)		K	Jπ: 1389.1γ to 2$^{(+)}$.
2987.97[&] *16*	8$^+$	3.47 ps *28*	DEFGHIJK	Jπ: ΔJ=2, E2 798.6γ to 6$^+$; band assignment. $T_{1/2}$: other: 1.75 ps *7* (RDDS in ^{24}Mg(^{80}Se,4nγ); 2011AnZZ).
3021.90[b] *16*	(6$^-$)		F H K	Jπ: 516.3γ to 5$^-$; possible ΔJ=(2) 967.0γ to (4$^-$); band assignment.
3079.61 *21*	(4$^+$,5$^+$,6$^+$)		A K	Jπ: possible allowed ε feeding from (5)$^+$; 890.4γ to 6$^+$.
3178.21 *16*	8$^+$	0.9 ns *2*	EFGHI K	Jπ: ΔJ=2, E2 988.9γ to 6$^+$; ΔJ=0, M1 190.3γ to 8$^+$. $T_{1/2}$: from γγ(t), centroid-shift method (1982An17).
3231.36[c] *16*	7$^-$		EFGHI K	Jπ: ΔJ=2, E2 726.0γ to 5$^-$; 1042.0γ to 6$^+$; ΔJ=1 209.3γ to (6$^-$).

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Adopted Levels, Gammas (continued)

^{100}Pd Levels (continued)

E(level)[†]	J^{π}[#]	$T_{1/2}$[@]	XREF	Comments
3235.7 *4*	(2^+,3^+)		AB K	J^{π}: 1819.6γ to 4^+ gives J=2 to 6. Fairly strong and possibly allowed ε feeding from $(2)^+$ parent suggests a preference for 2^+,3^+. Possible weak ε feeding from $(5)^+$ parent produces a conflicting J^{π} assignment of J=(4,5,6), probably due to incomplete knowledge of the decay scheme.
3296.6 *4*	(6^+)		K	J^{π}: 308.8γ to 8^+ and 376.6γ to $(4)^+$.
3311.69 *24*	(4,5,6)		A K	J^{π}: possible direct ε feeding (ΔJ=0 or 1) from $(5)^+$.
3371.9 *9*	(2^+ to 6^+)		K	J^{π}: 1955.8γ to 4^+.
3439.82 *19*	$8^{(+)}$		EFGH K	J^{π}: ΔJ=2 970.0γ to $6^{(+)}$; ΔJ=(0) 261.7γ to 8^+.
3468.1 *6*	(2 to 6)		K	J^{π}: 1037.0γ to (4).
3548.4 *6*	(2 to 6)		K	J^{π}: 1117.3γ to 4.
3622.4 *11*	(4^+ to 8^+)		K	J^{π}: 1152.5γ to $6^{(+)}$.
3646.5 *6*	(3^- to 7^-)		K	J^{π}: 1141.0γ to $(5)^-$.
3822.8 *4*	(4,5,6)		A K	J^{π}: possible direct ε feeding (ΔJ=0 or 1) from $(5)^+$.
3869.17[&] *18*	10^+	1.94 ps *42*	DEFGHIJK	J^{π}: ΔJ=2, E2 881.1γ to 8^+; band assignment. $T_{1/2}$: other: 0.51 ps *6* (RDDS in ^{24}Mg(^{80}Se,4nγ); 2011AnZZ).
3879.22[b] *17*	$8^{(-)}$		F H K	J^{π}: ΔJ=1, D 647.8γ to 7^-; 213.7γ from $9^{(-)}$; band assignment.
4054.09[a] *17*	9^-		EFGHI K	E(level): corresponding to 8715 level in (^{12}C,3nγ) deexcited by the 875.9γ. J^{π}: ΔJ=1, E1 875.9γ to 8^+; ΔJ=2, Q 822.8γ to 7^-; band assignment.
4092.90[c] *17*	$9^{(-)}$		EFGHI	J^{π}: ΔJ=2, Q 861.7γ to 7^-; ΔJ=2, Q 770.7γ from 11^-; probable band assignment.
4145.68[d] *22*	$10^{(+)}$		EFGHIJ	J^{π}: ΔJ=0, D 276.6γ to 10^+; ΔJ=(2), (Q) 967.8γ to 8^+; band assignment.
4635.11[b] *19*	(10^-)		EF H	J^{π}: ΔJ=(1), (D) 542.2γ to $9^{(-)}$; band assignment.
4761.62[&] *20*	12^+	3.60 ps *28*	DEFGHIJ	J^{π}: ΔJ=2, E2 892.3γ to 10^+; band assignment. $T_{1/2}$: other: 1.81 ps *14* (RDDS in ^{24}Mg(^{80}Se,4nγ); 2011AnZZ).
4779.3[d] *3*	$11^{(+)}$		EF H	J^{π}: ΔJ=1, D 633.7γ to $10^{(+)}$; 298.0γ from $12^{(+)}$; band assignment.
4863.52[a] *17*	11^-		EFGHI	E(level): corresponding to 4792 level in (^{12}C,3nγ) deexcited by the 809.4γ. J^{π}: ΔJ=2, E2 809.4γ to 9^-; 994.3γ to 10^+; band assignment.
4926.27 *22*	$12^{(+)}$		F H	J^{π}: ΔJ=2, Q 1056.9γ to 10^+; 526.5γ from 13^+.
4946.76[c] *24*	(11^-)		EF H	J^{π}: ΔJ=2, Q 853.8γ to $9^{(-)}$; 311.5γ to (10^-); possible band assignment.
5078.02[d] *22*	$12^{(+)}$		EF H	J^{π}: ΔJ=2, Q 1209.0γ to 10^+; ΔJ=1, D 374.6γ from 13^+; band assignment.
5452.70[d] *21*	13^+		EFGHI	J^{π}: ΔJ=1, M1 691.2γ to 12^+; 254.1γ from 14^+; band assignment.
5573.5[b] *4*	(12^-)		EF H	E(level): corresponding to 6691 level in (^{58}Ni,4pγ) deexcited by the 626.2γ. J^{π}: ΔJ=(2), (Q) 939.0γ to (10^-); 626.2γ to (11^-); band assignment.
5669.22[a] *19*	13^-		EFGHI	E(level): corresponding to 3982 level in (^{12}C,3nγ) deexcited by the 805.7γ. J^{π}: ΔJ=2, E2 805.7γ to 11^-; ΔJ=1, D 908.1γ to 12^+; band assignment.
5706.73[&] *21*	14^+		DEFGHI	J^{π}: ΔJ=2, E2 945.0γ to 12^+; g.s. band assignment.
5879.9 *17*	(11,12,13^+)		E	J^{π}: 1100.5γ to $11^{(+)}$.
5918.72[d] *22*	14^+		EFGHI	XREF: I(?). J^{π}: ΔJ=1, M1 466.1γ to 13^+; ΔJ=2, Q 1156.8γ to 12^+; band assignment.
6068.8[c] *6*	(13^-)		E H	J^{π}: 1122.0γ to (11^-); possible band member.
6134.11 *23*	(14^+)		EF H	J^{π}: ΔJ=1, D 681.3γ to 13^+; possible 570.0γ from 15^-.
6459.12[d] *22*	$(15)^+$		EFGH	J^{π}: ΔJ=1, M1 γ from $(16)^+$; ΔJ=1, D 540.4γ to 14^+; band

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Adopted Levels, Gammas (continued)

^{100}Pd Levels (continued)

E(level)[†]	Jπ[#]	$T_{1/2}$[@]	XREF	Comments
				assignment.
6689.5[b] 7	(14⁻)		E H	Jπ: 1116.0γ to (12⁻); possible band assignment.
6704.63[a] 21	15⁻	0.90 ps 10	EFGHI	E(level): corresponding to 6768 level in (^{12}C,3nγ) deexcited by the 1035.4γ. Jπ: ΔJ=2, E2 1035.4γ to 13⁻; 786.0γ to 14⁺; band assignment. $T_{1/2}$: from DSAM for 1035γ (2020Si20). Listed in ^{72}Ge(^{35}Cl,αpnγ) dataset.
6938.48[d] 23	(16)⁺		EFGHI	E(level): corresponding to 6168 level in (^{12}C,3nγ) deexcited by the 479.4γ. Jπ: ΔJ=2, E2 1231.8γ to 14⁺; band assignment.
7085.56 23	(16⁺)		EF H	Jπ: ΔJ=2, Q 1378.8γ to 14⁺; 626.4γ to (15)⁺.
7274.9 4	(16⁺)		E H	Jπ: 1140.0γ to (14⁺) and 370.0γ from (17)⁻.
7341.8[f] 3	(16⁺)		EF H	Jπ: ΔJ=2, Q 1422.1 to 14⁺ and 256.0γ to (16⁺).
7644.82[a] 23	(17)⁻	0.55 ps 7	EFGHI	E(level): corresponding to 5732 level in (^{12}C,3nγ) deexcited by the 940.2γ. Jπ: ΔJ=2, E2 940.2γ to 15⁻; 706.4γ to (16)⁺. $T_{1/2}$: from DSAM for 940γ (2020Si20). Listed in ^{72}Ge(^{35}Cl,αpnγ) dataset.
7835.4[f] 4	(17⁺)		E H	Jπ: ΔJ=1 492.7γ to (16⁺).
7970.5[d] 3	(18⁺)		EF H	Jπ: ΔJ=2, Q 1032.0γ to (16)⁺; band assignment. 2001Zh26 proposed (17⁺) based on ΔJ=1 band assignment, but γ(θ) and γ(DCO) for 1032γ in (^{58}Ni,4pγ) (2000ApZY) are inconsistent with a ΔJ=1 transition.
8303.5[f] 6	(18⁺)		EF H	Jπ: ΔJ=2, Q 1365.2γ to (16)⁺, 468.0γ to (17⁺).
8565.0 5	(19⁻)		H	Jπ: ΔJ=(2), (Q) 920.0γ to (17)⁻.
8716.01[‡a] 25	(19)⁻	0.42 ps 5	EFGHI	XREF: I(?). Jπ: ΔJ=2, E2 1071.2γ to (17)⁻; band assignment. $T_{1/2}$: from DSAM for 1071γ (2020Si20). Listed in ^{72}Ge(^{35}Cl,αpnγ) dataset.
9389.5[d] 6	(20⁺)		H	Jπ: 1419.0γ to (18⁺); band assignment. 2001Zh26 proposed (18⁺) based on (17⁺) for 7970 level and ΔJ=1 band assignment.
9689.5[f] 7	(20⁺)		E H	Jπ: ΔJ=2, Q 1386.0γ to (18⁺).
9870.7 7	(20⁻)		EF	Jπ: ΔJ=1 1154.8γ to (19)⁻.
10104.0[‡a] 3	(21)⁻	<0.15 ps	EFGH	Jπ: ΔJ=2, E2 1388.0γ to (19)⁻; band assignment. $T_{1/2}$: effective half-life=0.15 ps from DSAM for 1388γ (2020Si20), assuming 100% side feeding. Listed in ^{72}Ge(^{35}Cl,αpnγ) dataset.
10136.2? 4	(21⁻)		E	Jπ: ΔJ=(2) 1420.2γ to (19)⁻.
10452.3[e] 5	(20)⁺		EFGH	E(level): corresponding to 13165 level in (^{58}Ni,4pγ) and 13159 level in (^{37}Cl,p2nγ), deexcited by the 1736.4γ. Jπ: ΔJ=1, E1 1736.4γ to (19)⁻; possible band head.
10604.3? 6	(21⁻)		E	Jπ: 733.8γ to (20⁻), 1218.0γ from (23⁻).
11211.2 4	(22⁻)		EFGH	E(level): corresponding to 11816 level in (^{35}Cl,αp2nγ) deexcited by the 1107.1γ. Jπ: ΔJ=1, D 1107.1γ to (21)⁻.
11528.0 3			F	Jπ: 1424.0γ to (21)⁻.
11652.6[e] 5	(22⁺)		EF H	E(level): corresponding to 9913 level in (^{58}Ni,4pγ) and (^{37}Cl,p2nγ) deexcited by the 1200.3γ. Jπ: ΔJ=2,Q 1200.3γ to (20)⁺; band assignment.
11685.9[‡] 4	(23⁻)		F H	Jπ: ΔJ=(2), (Q) 1581.9γ to (21)⁻.
11821.1[a] 4	(23⁻)		EFGH	E(level): corresponding to 10709 level in (^{35}Cl,αp2nγ) and 13200 level in (^{37}Cl,p2nγ), deexcited by the 609.9γ. Jπ: ΔJ=2, Q 1717.2γ to (21)⁻; ΔJ=1, Q 609.9γ to (22⁻); band assignment.

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Adopted Levels, Gammas (continued)

^{100}Pd Levels (continued)

E(level)[†]	J^{π}[#]	XREF	Comments
12620.4? *4*	(24^-)	F	J^{π}: 799.3γ to (23^-), 584.7γ from (25^-).
12879.0 *3*		F	
12946.0[e] *6*	(23^+)	EF H	E(level): corresponding to 14559 level in (^{58}Ni,4pγ) and 14451 level in (^{35}Cl,αp2nγ), deexcited by the 1293.4γ. J^{π}: 1293.4γ to (22^+); band assignment.
13205.1[a] *4*	(25^-)	EFGH	E(level): corresponding to 12591 level in (^{37}Cl,p2nγ), deexcited by the 1384.0γ. J^{π}: ΔJ=2, Q 1384.0γ to (23^-); band assignment.
13438.3[‡] *7*	(25^-)	F H	J^{π}: ΔJ=2, Q 1752.3γ to (23^-).
13504.1[e] *6*	(24^+)	EF H	E(level): corresponding to 15009 level in (^{35}Cl,αp2nγ) and 15016 level in (^{58}Ni,4pγ), deexcited by the 558.1γ and 1851.4γ. J^{π}: 558.1γ to (23^+), 1851.4γ to (22^+); band assignment.
15014.1[e] *9*	(25^+)	EFGH	E(level): corresponding to 13158 level in (^{35}Cl,αp2nγ), 10227 level in (^{58}Ni,4pγ), and 11423 level in (^{37}Cl,p2nγ), deexcited by the 1510.0γ. J^{π}: ΔJ=1, D 1510.0γ to (24^+); band assignment.
16107.1 *9*		F	J^{π}: 1093.0γ to (25^+).

[†] From least-squares fit to Eγ data. Many additional levels in the range 3650-6750 are implied by observed β^+,ε feedings from ^{100}Ag ε decay (2.01 min), as a result of a total γ-absorption study by 1995Ba25. See ^{100}Ag ε decay (2.01 min) for details.

[‡] Possible antimagnetic rotational structure. This structure proposed by 2001Zh26 in (^{35}Cl,αp2nγ) based on spectroscopic properties and cranked model calculations.

[#] For levels populated in high-spin reaction studies, ascending order of spins is assumed with increasing excitation energy. This is supported by the yrast population of states in these reactions and by the decay modes. In addition to the arguments listed with the levels, the assignment to a relevant band is also used.

[@] For excited states, values are from recoil-distance Doppler shift (RDDS) in ^{92}Mo(^{11}B,p2nγ) using Cologne Plunger (2009Ra28) with uncertainty including statistical and 2% systematic, unless otherwise noted. Corresponding values from RDDS in ^{24}Mg(^{80}Se,4nγ) in inverse kinematics (2011AnZZ) are in sharp disagreement, and are given in comments. Evaluators prefer to adopt values from 2009Ra28 primary publication, due to possible analysis issues in inverse kinematics reactions in 2011AnZZ.

[&] Band(A): g.s. band. The 18^+ state probably corresponds to configuration=$\nu(d_{5/2}g_{7/2})^4\otimes\pi g_{9/2}^{-2}$. The terminating state at 22^+ will have a break-up of second pair of $g_{9/2}$ protons.

[a] Band(B): Band based on 9^-. Possible antimagnetic rotational (AMR) band (2001Zh26, 2020Si20) with configuration=$[\nu(g_{7/2})^3h_{11/2}]\otimes\pi g_{9/2}^{-4}$ (2020Si20). The 25^- state can also correspond to terminating state with configuration=$[\nu(d_{5/2}g_{7/2})^3h_{11/2}]\otimes\pi g_{9/2}^{-4}$. 2001Zh26 and 2020Si20 proposed antimagnetic rotational structure, based on lifetime measurements for 15^-, 17^- and 19^- levels, and decreasing trend in B(E2) above 17^- and with large values of (dynamic moment of inertia)/B(E2) in 2020Si20, cranked shell-model calculations in 2001Zh26, and semiempirical particle-rotor model calculations in 2020Si20.

[b] Band(C): Band based on (4^-),α=0.

[c] Band(c): Band based on 5^-, α=1.

[d] Band(D): Band based on $10^{(+)}$.

[e] Band(E): Band based on $(20)^+$. Probable configuration of the 24^+ (terminating) state of α=0 signature: $\nu(g_{7/2}^3h_{11/2})\otimes\pi(g_{9/2}^{-3}p_{1/2}^{-1})$. Probable configuration of the 25^+ (terminating) state of α=1 signature: $\nu(g_{7/2}^2d_{5/2}h_{11/2})\otimes\pi(g_{9/2}^{-3}p_{1/2}^{-1})$.

[f] Seq.(F): γ cascade based on (16^+).

$\gamma(^{100}Pd)$

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	δ	α&	Comments
665.49	2^+	665.48 *10*	100	0.0	0^+	E2		0.00271	B(E2)(W.u.)=25.1 *11* E_γ: weighted average of 665.7 *1* from ^{100}Ag ε decay (2.01 min), 665.50 *10* from (^{96}Ru,2$\alpha\gamma$), 665.5 *3* from (^{58}Ni,4pγ), 665.4 *1* from (^{58}Ni,4p$\alpha\gamma$), 665.0 *5* from (^{35}Cl,αp2nγ), 665.32 *12* from (^{12}C,3nγ), and 665.4 *2* from (^{3}He,2nγ). Mult.: from $\gamma(\theta$,pol) in (^{12}C,3nγ) and (^{58}Ni,4p$\alpha\gamma$), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ), and ce data in ε decay (2.01 m).
1416.09	4^+	750.61 *10*	100	665.49	2^+	E2		0.00199	B(E2)(W.u.)=34 *3* E_γ: weighted average of 750.8 *1* from ^{100}Ag ε decay (2.01 min), 750.50 *20* from (^{96}Ru,2$\alpha\gamma$), 750.6 *3* from (^{58}Ni,4pγ), 750.6 *1* from (^{58}Ni,4p$\alpha\gamma$), 750.0 *5* from (^{35}Cl,αp2nγ), 750.48 *12* from (^{12}C,3nγ), and 750.5 *2* from (^{3}He,2nγ). Mult.: from $\gamma(\theta$,pol) in (^{12}C,3nγ) and (^{58}Ni,4p$\alpha\gamma$), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ).
1523.6	$(1,2^+)$	1523.6 *3*	100	0.0	0^+				E_γ: from ε decay (2.24 m) only.
1587.60	$2^{(+)}$	922.00 *17*	100 *4*	665.49	2^+	(E2+M1)	−1.77 +*32*−*43*	1.25×10^{-3} *2*	E_γ: unweighted average of 922.3 *1* from ^{100}Ag ε decay (2.01 min), 922.3 *1* from ^{100}Ag ε decay (2.24 min), 921.70 *10* from (^{96}Ru,2$\alpha\gamma$), and 922.0 *2* from (^{3}He,2nγ). I_γ: from (^{3}He,2nγ) and (^{96}Ru,2$\alpha\gamma$). Mult.,δ: from $\gamma\gamma(\theta)$ in (^{3}He,2nγ).
		1587.6 *2*	61 *5*	0.0	0^+				E_γ: weighted average of 1587.9 *2* from ^{100}Ag ε decay (2.01 min), 1587.3 *3* from (^{96}Ru,2$\alpha\gamma$), and 1587.4 *3* from (^{3}He,2nγ). I_γ: weighted average of 72 *17* from ^{100}Ag ε decay (2.24 min), 60 *5* from (^{3}He,2nγ), 69 *23* from ^{100}Ag ε decay (2.01 min). Other: 33 *3* in (^{96}Ru,2$\alpha\gamma$) seems discrepant.
1925.86	$3^{(+)}$	337.9 *3*	14 *3*	1587.60	$2^{(+)}$	(M1+E2)	−0.59 +*31*−*42*	0.0160 *14*	α(K)=0.0139 *11*; α(L)=0.00173 *21*; α(M)=0.00033 *4* α(N)=5.4×10^{-5} *6* E_γ: weighted average of 337.5 *3* from (^{96}Ru,2$\alpha\gamma$) and 338.1 *2* from (^{3}He,2nγ). I_γ: unweighted average of 17.5 *20* from (^{96}Ru,2$\alpha\gamma$) and 11.0 *20* from (^{3}He,2nγ). Mult.,δ: from $\gamma\gamma(\theta)$ in (^{3}He,2nγ).
		510.9 *4*	<68	1416.09	4^+				E_γ,I_γ: from (^{96}Ru,2$\alpha\gamma$). Other: Iγ<72 in (^{3}He,2nγ).
		1260.4 *2*	100 *3*	665.49	2^+	(E2+M1)	−2.36 *30*		E_γ: weighted average of 1260.5 *1* from ^{100}Ag ε decay

$^{100}_{46}Pd_{54}$-6

γ(^{100}Pd) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	δ	α&	Comments
									(2.01 min), 1260.0 *6* from (^{96}Ru,2αγ), and 1260.0 *2* from (^{3}He,2nγ). I_γ: from (^{96}Ru,2αγ). Other: 100 *4* from (^{3}He,2nγ). Mult.,δ: from γγ(θ) in (^{3}He,2nγ).
2055.08	(4$^-$)	639.3 *3*	100	1416.09	4$^+$				E_γ: unweighted average of 639.9 *1* from ^{100}Ag ε decay (2.01 min), 639.5 *10* from (^{96}Ru,2αγ), 638.5 *2* from (^{58}Ni,4pαγ), 639.0 *5* from (^{35}Cl,αp2nγ), and 639.6 *2* from (^{3}He,2nγ).
2189.31	6$^+$	773.19 *10*	100	1416.09	4$^+$	E2		0.00185	B(E2)(W.u.)=29 *4* E_γ: weighted average of 773.3 *1* from ^{100}Ag ε decay (2.01 min), 773.0 *7* from (^{96}Ru,2αγ), 773.2 *3* from (^{58}Ni,4pγ), 773.2 *1* from (^{58}Ni,4pαγ), 773.0 *5* from (^{35}Cl,αp2nγ), 773.05 *12* from (^{12}C,3nγ), and 773.1 *2* from (^{3}He,2nγ). Mult.: from γ(θ,pol) in (^{12}C,3nγ) and (^{58}Ni,4pαγ), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ), and ce data in ε decay (2.01 m). δ(M3/E2)=+0.01 *5* from γγ(θ) in (^{3}He,2nγ).
2278.14	5$^{(+)}$	222.4 *2*	24 *8*	2055.08	(4$^-$)				E_γ: poor fit. Level-energy difference=223.06. E_γ: weighted average of 222.5 *2* from ^{100}Ag ε decay (2.01 min), 221.9 *3* from (^{96}Ru,2αγ), and 222.7 *4* from (^{3}He,2nγ). I_γ: weighted average of 27 *8* from ^{100}Ag ε decay (2.01 min), and 20 *8* from (^{3}He,2nγ). Other: 89 *11* in (^{96}Ru,2αγ) seems discrepant.
		352.8 *3*	29 *12*	1925.86	3$^{(+)}$				E_γ: weighted average of 353.0 *5* from ^{100}Ag ε decay (2.01 min), 353.6 *5* from (^{96}Ru,2αγ), and 352.6 *2* from (^{3}He,2nγ). I_γ: unweighted average of 26 *4* from ^{100}Ag ε decay (2.01 min), 50 *7* from (^{96}Ru,2αγ), and 10 *5* from (^{3}He,2nγ).
		862.4 *2*	100 *7*	1416.09	4$^+$	(M1+E2)	−0.14 *5*	1.57×10^{-3}	α(K)=0.001371 *20*; α(L)=0.0001588 *23*; α(M)=2.98×10^{-5} *5* α(N)=5.02×10^{-6} *7* E_γ: weighted average of 862.5 *1* from ^{100}Ag ε decay (2.01 min), 862.0 *2* from (^{96}Ru,2αγ), and 862.0 *4* from (^{3}He,2nγ). I_γ: from (^{96}Ru,2αγ). Other: 100 *8* from ^{100}Ag ε decay (2.01 min), 100 *20* from (^{3}He,2nγ). Mult.,δ: from γγ(θ) in (^{3}He,2nγ).
2350.98	(4$^+$)	1685.7 *3*	100	665.49	2$^+$				E_γ: weighted average of 1685.8 *3* from ^{100}Ag ε decay (2.01 min), 1686.0 *8* from (^{96}Ru,2αγ), and 1685.5 *4* from (^{3}He,2nγ).
2359.3	(2$^+$)	1693.8 *3*	100	665.49	2$^+$	(M1(+E2))	−0.08 *20*		E_γ: weighted average of 1694.0 *3* from ^{100}Ag ε decay (2.24

From ENSDF

Adopted Levels, Gammas (continued)

$\gamma(^{100}Pd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	δ	α[&]	Comments
									min) and 1693.4 *4* from (^{3}He,2nγ). Mult.,δ: D(+Q) from $\gamma\gamma(\theta)$ in (^{3}He,2nγ); (M1(+E2)) from level scheme.
2359.3	(2$^+$)	2359.3[a] *8*		0.0	0$^+$				E_γ: tentative γ from (^{3}He,2nγ) only.
2431.11	4	505.25 *15*	100	1925.86	3$^{(+)}$	D+Q	−0.08 *5*		E_γ: weighted average of 505.30 *10* from (^{96}Ru,2$\alpha\gamma$) and 504.8 *3* from (^{3}He,2nγ). Mult.,δ: from $\gamma\gamma(\theta)$ in (^{3}He,2nγ).
2469.90	6$^{(+)}$	191.3 *8*	3.2 *4*	2278.14	5$^{(+)}$	[M1]		0.0640 *12*	α(K)=0.0558 *10*; α(L)=0.00675 *13*; α(M)=0.001271 *23* α(N)=0.000214 *4* E_γ: unweighted average of 190.5 *5* from ^{100}Ag ε decay (2.01 min) and 192.0 *5* from (^{3}He,2nγ). I_γ: weighted average of 3.2 *3* from ^{100}Ag ε decay (2.01 min) and 8 *4* from (^{3}He,2nγ).
		280.6 *2*	71 *3*	2189.31	6$^+$	(M1)			E_γ: weighted average of 280.7 *2* from ^{100}Ag ε decay (2.01 min), 280.90 *20* from (^{96}Ru,2$\alpha\gamma$), 280.4 *2* from (^{58}Ni,4p$\alpha\gamma$), 280.0 *5* from (^{35}Cl,αp2nγ), and 280.5 *2* from (^{3}He,2nγ). I_γ: weighted average of 69 *8* from ^{100}Ag ε decay (2.01 min), 49 *11* from (^{96}Ru,2$\alpha\gamma$), 75 *10* from (^{58}Ni,4p$\alpha\gamma$), 72 *6* from (^{35}Cl,αp2nγ), and 72 *3* from (^{3}He,2nγ). Mult.: from (^{58}Ni,4p$\alpha\gamma$) with ΔJ=(0), (M1) from ΔJ^π.
		1053.8 *1*	100 *5*	1416.09	4$^+$				E_γ: weighted average of 1053.9 *1* from ^{100}Ag ε decay (2.01 min), 1053.5 *3* from (^{96}Ru,2$\alpha\gamma$), 1053.8 *2* from (^{58}Ni,4p$\alpha\gamma$), 1053.0 *5* from (^{35}Cl,αp2nγ), and 1053.5 *2* from (^{3}He,2nγ). I_γ: from (^{3}He,2nγ).
2505.46	5$^-$	450.5 *3*	10.0 *18*	2055.08	(4$^-$)	(M1)		0.00718	B(M1)(W.u.)=0.0016 *3* E_γ: weighted average of 450.4 *3* from (^{96}Ru,2$\alpha\gamma$), 450.7 *2* from (^{58}Ni,4p$\alpha\gamma$), 449.0 *5* from (^{35}Cl,αp2nγ), and 450.6 *5* from (^{3}He,2nγ). I_γ: unweighted average of 12 *1* from (^{3}He,2nγ), 6.4 *9* from (^{58}Ni,4p$\alpha\gamma$), and 11.5 *10* from (^{35}Cl,αp2nγ). Other: 43 *5* in (^{96}Ru,2$\alpha\gamma$) seems discrepant. Mult.: D from $\gamma\gamma(\theta)$ in (^{36}S,6nγ), consistent with ΔJ=1.
		1089.32 *10*	100 *2*	1416.09	4$^+$	E1			B(E1)(W.u.)=1.58×10^{-5} *7* E_γ: weighted average of 1089.40 *10* from (^{96}Ru,2$\alpha\gamma$), 1089.4 *9* from (^{58}Ni,4pγ), 1089.3 *1* from (^{58}Ni,4p$\alpha\gamma$), 1089.0 *5* from (^{35}Cl,αp2nγ), 1089.1 *3* from (^{12}C,3nγ), and 1089.2 *2* from (^{3}He,2nγ). Mult.: from $\gamma(\theta$,pol) in (^{12}C,3nγ) and (^{58}Ni,4p$\alpha\gamma$), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ). δ(M2/E1)=−0.06 *4* from $\gamma\gamma(\theta)$ in (^{3}He,2nγ).
2519.1	(0$^+$ to 4$^+$)	931.6 *4*	100 *10*	1587.60	2$^{(+)}$				E_γ,I_γ: from (^{3}He,2nγ) only.

$^{100}_{46}Pd_{54}$-8

γ(^{100}Pd) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	δ	Comments
2519.1	(0^+ to 4^+)	1853.5 *5*	10 *5*	665.49	2^+			E_γ,I_γ: from (^{3}He,2nγ) only.
2531.89	(2^+)	1115.8 *2*	100	1416.09	4^+	(E2)		E_γ: weighted average of 1115.8 *2* from ^{100}Ag ε decay (2.01 min) and 1115.6 *5* from (^{3}He,2nγ). Mult.: (Q) from $\gamma\gamma(\theta)$ in (^{3}He,2nγ), δ(O/Q)=−0.10 *14*; (E2) from level scheme.
2616.9	(0^+ to 4^+)	1951.4 *3*	100	665.49	2^+			E_γ: weighted average of 1951.4 *3* from (^{96}Ru,2$\alpha\gamma$) and 1951.4 *5* from (^{3}He,2nγ).
2621.5	(1^- to 4^+)	1956.0 *4*	100	665.49	2^+			E_γ: from ^{100}Ag ε decay (2.01 min).
2679.2	(0^+ to 4^+)	2013.7 *10*	100	665.49	2^+			E_γ: from ^{100}Ag ε decay (2.01 min) only.
2694.00	(4)	1277.9 *2*	100	1416.09	4^+	D(+Q)	−0.37 *+45−63*	E_γ: weighted average of 1278.0 *2* from ^{100}Ag ε decay (2.01 min) and 1277.8 *3* from (^{3}He,2nγ). Mult.,δ: from $\gamma\gamma(\theta)$ in (^{3}He,2nγ).
2784.0	(1^+,2^+,3^+)	2118.5 *5*	100	665.49	2^+			E_γ: from both ^{100}Ag ε decay (2.01 min) and (^{3}He,2nγ).
2821.40	(4)	1405.3 *2*	100	1416.09	4^+	D+Q	−0.66 *+51−97*	E_γ: weighted average of 1405.3 *2* from ^{100}Ag ε decay (2.01 min) and 1405.2 *5* from (^{3}He,2nγ). Mult.,δ: from $\gamma\gamma(\theta)$ in (^{3}He,2nγ).
2879.86	(4^+)	528.9 *1*	44 *10*	2350.98	(4^+)			E_γ: weighted average of 528.9 *1* from ^{100}Ag ε decay (2.01 min) and 528.7 *4* from (^{3}He,2nγ). I_γ: from (^{3}He,2nγ). Iγ=167 *17* in ^{100}Ag ε seems discrepant.
		953.6 *5*	5.0 *14*	1925.86	$3^{(+)}$			E_γ: weighted average of 953.3 *5* from ^{100}Ag ε decay (2.01 min) and 954.3 *8* from (^{3}He,2nγ). I_γ: from ^{100}Ag ε decay (2.01 min). Other: 5.0 *20* from (^{3}He,2nγ).
		2214.3 *3*	100 *20*	665.49	2^+			E_γ: weighted average of 2214.3 *3* from ^{100}Ag ε decay (2.01 min) and 2214.1 *8* from (^{3}He,2nγ). I_γ: from (^{3}He,2nγ). Other: 100 *25* from ^{100}Ag ε decay (2.01 min).
2886.6	(4^+,5,6^+)	416.9 *4*	52 *10*	2469.90	$6^{(+)}$			E_γ,I_γ: from (^{3}He,2nγ) only.
		697.4 *4*	100 *20*	2189.31	6^+			E_γ,I_γ: from (^{3}He,2nγ) only.
		1470.2 *4*	56 *10*	1416.09	4^+			E_γ,I_γ: from (^{3}He,2nγ) only.
2920.11	$(4)^+$	450.2 *1*	100 *6*	2469.90	$6^{(+)}$			E_γ: weighted average of 450.2 *1* from ^{100}Ag ε decay (2.01 min) and 450.0 *2* from (^{3}He,2nγ). I_γ: from ^{100}Ag ε decay (2.01 min). Other: 100 *10* from (^{3}He,2nγ).
		569.2 *5*	4.1 *3*	2350.98	(4^+)			E_γ: weighted average of 569.5 *3* from ^{100}Ag ε decay (2.01 min) and 568.5 *5* from (^{3}He,2nγ). I_γ: weighted average of 4.1 *3* from ^{100}Ag ε decay (2.01 min) and 6.0 *20* from (^{3}He,2nγ).
		730.9 *1*	42 *3*	2189.31	6^+			E_γ: weighted average of 730.9 *1* from ^{100}Ag ε decay (2.01 min) and 730.6 *3* from (^{3}He,2nγ). I_γ: from ^{100}Ag ε decay, where the 2920 level is strongly populated. Iγ=20 *5* in (^{3}He,2nγ) seems discrepant.
		1503.7 *2*	72 *5*	1416.09	4^+	(M1+E2)	−0.7 *+5−11*	E_γ: weighted average of 1503.8 *2* from ^{100}Ag ε decay (2.01 min)

$^{100}_{46}$Pd$_{54}$-9

Adopted Levels, Gammas (continued)

$\gamma(^{100}$Pd) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	α&	Comments
								and 1503.4 *4* from (^{3}He,2nγ). I_γ: from ^{100}Ag ε decay, where the 2920 level is strongly populated. Iγ=30 *8* in (^{3}He,2nγ) seems discrepant. Mult.,δ: from $\gamma\gamma(\theta)$ in (^{3}He,2nγ).
2939.4	(2^+ to 6^+)	1523.3 *5*	100	1416.09	4^+			E_γ: from (^{3}He,2nγ) only.
2976.7	(0^+ to 4^+)	1389.1 *5*	100	1587.60	$2^{(+)}$			E_γ: from (^{3}He,2nγ) only.
2987.97	8^+	798.57 *10*	100	2189.31	6^+	E2	1.71×10^{-3}	B(E2)(W.u.)=18.2 *15* E_γ: weighted average of 798.7 *4* from (^{58}Ni,4pγ), 798.6 *1* from (^{58}Ni,4p$\alpha\gamma$), 798.0 *5* from (^{35}Cl,αp2nγ), 798.58 *14* from (^{12}C,3nγ), and 798.5 *2* from (^{3}He,2nγ). Mult.: from $\gamma(\theta$,pol) in (^{12}C,3nγ) and (^{58}Ni,4p$\alpha\gamma$), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ). δ(M3/E2)=+0.04 *5* from $\gamma\gamma(\theta)$ in (^{3}He,2nγ).
3021.90	(6^-)	516.3 *1*	100 *7*	2505.46	5^-			E_γ: weighted average of 516.3 *1* from (^{58}Ni,4p$\alpha\gamma$), 516.0 *5* from (^{35}Cl,αp2nγ), and 516.4 *3* from (^{3}He,2nγ). I_γ: from (^{3}He,2nγ).
		967.0 *1*	6 *5*	2055.08	(4^-)	(Q)		E_γ: weighted average of 967.0 *1* from (^{58}Ni,4p$\alpha\gamma$) and 967.0 *5* from (^{3}He,2nγ). I_γ: weighted average of 6 *6* from (^{58}Ni,4p$\alpha\gamma$) and 6 *5* from (^{3}He,2nγ). Mult.: from $\gamma(\theta)$ in (^{58}Ni,4p$\alpha\gamma$).
3079.61	(4^+,5^+,6^+)	609.6 *2*	100 *14*	2469.90	$6^{(+)}$			E_γ: weighted average of 609.6 *1* from ^{100}Ag ε decay (2.01 min) and 609.0 *4* from (^{3}He,2nγ). I_γ: from ^{100}Ag ε decay (2.01 min). Other: 100 *20* from (^{3}He,2nγ).
		890.4 *2*	81 *8*	2189.31	6^+			E_γ: weighted average of 890.4 *2* from ^{100}Ag ε decay (2.01 min) and 890.5 *4* from (^{3}He,2nγ). I_γ: weighted average of 96 *11* from ^{100}Ag ε decay (2.01 min) and 69 *10* from (^{3}He,2nγ).
3178.21	8^+	190.3 *1*	100 *4*	2987.97	8^+	M1	0.0649	B(M1)(W.u.)=0.0018 *+7−4* α(K)=0.0565 *8*; α(L)=0.00685 *10*; α(M)=0.001289 *19* α(N)=0.000217 *3* E_γ: weighted average of 190.4 *3* from (^{58}Ni,4pγ), 190.3 *1* from (^{58}Ni,4p$\alpha\gamma$), 190.0 *5* from (^{35}Cl,αp2nγ), 189.6 *3* from (^{12}C,3nγ), and 190.4 *4* from (^{3}He,2nγ). I_γ: from (^{58}Ni,4p$\alpha\gamma$). Other: 100 *5* from (^{35}Cl,αp2nγ) and (^{3}He,2nγ), 100 *12* from (^{12}C,3nγ). Mult.: from $\gamma(\theta$,pol) (^{58}Ni,4p$\alpha\gamma$), γ(DCO) in (^{58}Ni,4pγ), (^{35}Cl,αp2nγ) and (^{12}C,3nγ), with ΔJ=0.
		708.1 *5*	5.8 *13*	2469.90	$6^{(+)}$	[E2]	0.00231	B(E2)(W.u.)=0.0039 *+25−15* E_γ: weighted average of 708.0 *5* from (^{35}Cl,αp2nγ) and 708.2 *5* from (^{3}He,2nγ).

$^{100}_{46}$Pd$_{54}$-10

$\gamma(^{100}Pd)$ (continued)

E_i(level)	J_i^π	E_γ†	I_γ†	E_f	J_f^π	Mult.	α&	Comments
								I_γ: weighted average of 5.7 *10* from (^{35}Cl,αp2nγ) and 19 *10* from (^{3}He,2nγ).
3178.21	8^+	988.9 *1*	80 *5*	2189.31	6^+	E2	1.03×10^{-3}	B(E2)(W.u.)=0.0100 *+37−24* E_γ: weighted average of 989.6 *6* from (^{58}Ni,4pγ), 988.9 *1* from (^{58}Ni,4p$\alpha\gamma$), 988.0 *5* from (^{35}Cl,αp2nγ), 988.6 *6* from (^{12}C,3nγ), and 988.8 *5* from (^{3}He,2nγ). I_γ: unweighted average of 88 *4* from (^{58}Ni,4p$\alpha\gamma$), 72 *8* from (^{35}Cl,αp2nγ), 71 *4* from (^{12}C,3nγ), and 89 *8* from (^{3}He,2nγ). Other: 155 *6* from (^{58}Ni,4pγ) is discrepant. Mult.: from $\gamma(\theta$,pol) (^{58}Ni,4p$\alpha\gamma$), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ).
3231.36	7^-	209.3 *2*	13.9 *14*	3021.90	(6^-)	(M1)	0.0504	α(K)=0.0439 *7*; α(L)=0.00531 *8*; α(M)=0.000998 *15* α(N)=0.0001681 *24* E_γ: weighted average of 209.3 *2* from (^{58}Ni,4p$\alpha\gamma$), 209.0 *5* from (^{35}Cl,αp2nγ), and 209.4 *5* from (^{3}He,2nγ). I_γ: weighted average of 14.9 *12* from (^{58}Ni,4p$\alpha\gamma$), 9.5 *24* from (^{35}Cl,αp2nγ), and 14.0 *20* from (^{3}He,2nγ). Mult.: D from $\gamma(\theta)$ in (^{58}Ni,4p$\alpha\gamma$), ΔJ=1.
		726.0 *1*	100 *4*	2505.46	5^-	E2	0.00216	E_γ: weighted average of 726.0 *1* from (^{58}Ni,4p$\alpha\gamma$), 726.0 *5* from (^{35}Cl,αp2nγ), 725.8 *4* from (^{12}C,3nγ), and 725.9 *4* from (^{3}He,2nγ). Other: 726.1 *7* from (^{58}Ni,4pγ). I_γ: from (^{3}He,2nγ). Others: 100 *9* from (^{58}Ni,4p$\alpha\gamma$), 100 *10* from (^{35}Cl,αp2nγ). Mult.: Q (ΔJ=2) from $\gamma(\Delta$CO) in (^{58}Ni,4pγ), (^{35}Cl,αp2nγ) and (^{58}Ni,4p$\alpha\gamma$); (E2) from $\gamma(\theta)$ and γ(pol) in (^{12}C,3nγ); M2 is ruled out by RUL, B(M2)(W.u.)<1, since it would require an isomeric half-life ($T_{1/2}$>5 ns) for the 3231 level which is unlikely.
		1042.0 *1*	16.3 *23*	2189.31	6^+			E_γ: weighted average of 1042.0 *1* from (^{58}Ni,4p$\alpha\gamma$), 1042.0 *5* from (^{35}Cl,αp2nγ), and 1042.2 *4* from (^{3}He,2nγ). I_γ: weighted average of 16.1 *23* from (^{58}Ni,4p$\alpha\gamma$), 17.9 *24* from (^{35}Cl,αp2nγ), and 14 *3* from (^{3}He,2nγ).
3235.7	$(2^+,3^+)$	614.1 *4*	38 *18*	2621.5	$(1^-$ to $4^+)$			E_γ,I_γ: from ^{100}Ag ε decay (2.24 min) only.
		1819.6 *5*	100 *20*	1416.09	4^+			I_γ: from ^{100}Ag ε decay (2.24 min).
3296.6	(6^+)	308.8 *5*	45 *10*	2987.97	8^+			E_γ,I_γ: from (^{3}He,2nγ) only.
		376.6 *5*	100 *20*	2920.11	$(4)^+$			E_γ,I_γ: from (^{3}He,2nγ) only.
		1018.1 *5*	12 *5*	2278.14	$5^{(+)}$			E_γ,I_γ: from (^{3}He,2nγ) only.
3311.69	(4,5,6)	960.7 *1*	100	2350.98	(4^+)			E_γ: from ^{100}Ag ε decay (2.01 min). Other: 960.1 *5* from (^{3}He,2nγ).
3371.9	$(2^+$ to $6^+)$	1955.8 *8*	100	1416.09	4^+			E_γ: from (^{3}He,2nγ) only.
3439.82	$8^{(+)}$	261.7 *2*	100 *7*	3178.21	8^+	D		E_γ: weighted average of 261.6 *6* from (^{58}Ni,4pγ), 261.6 *2* from

$^{100}_{46}Pd_{54}$-11

$\gamma(^{100}Pd)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	α&	Comments
								(^{58}Ni,4pαγ), 262.0 *5* from (^{35}Cl,αp2nγ), and 261.7 *5* from (^{3}He,2nγ). I_γ: from (^{58}Ni,4pαγ). Others: 100 *21* from (^{3}He,2nγ), 100 *11* from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{58}Ni,4pγ), consistent with ΔJ=(0).
3439.82	$8^{(+)}$	970.0 *2*	82 *8*	2469.90	$6^{(+)}$	Q		E_γ: weighted average of 970.0 *2* from (^{58}Ni,4pαγ), 970.0 *5* from (^{35}Cl,αp2nγ), and 969.9 *5* from (^{3}He,2nγ). I_γ: weighted average of 104 *21* from (^{3}He,2nγ) and 79 *7* from (^{58}Ni,4pαγ). Other: 189 *17* in (^{35}Cl,αp2nγ) seems discrepant. Mult.: from γ(DCO) in (^{35}Cl,αp2nγ) and γ(θ) in (^{58}Ni,4pαγ), with ΔJ=2.
		1250.3 *5*	53 *7*	2189.31	6^+			E_γ: weighted average of 1250.0 *5* from (^{35}Cl,αp2nγ) and 1250.6 *5* from (^{3}He,2nγ). I_γ: weighted average of 72 *16* from (^{3}He,2nγ) and 50 *6* from (^{35}Cl,αp2nγ). This γ is not seen in (^{58}Ni,4pαγ).
3468.1	(2 to 6)	1037.0 *5*	100	2431.11	4			E_γ: from (^{3}He,2nγ) only.
3548.4	(2 to 6)	1117.3 *5*	100	2431.11	4			E_γ: from (^{3}He,2nγ) only.
3622.4	(4^+ to 8^+)	1152.5 *10*	100	2469.90	$6^{(+)}$			E_γ: from (^{3}He,2nγ) only.
3646.5	(3^- to 7^-)	1141.0 *5*	100	2505.46	5^-			E_γ: from (^{3}He,2nγ) only.
3822.8	(4,5,6)	1767.7 *3*	100	2055.08	(4^-)			E_γ: weighted average of 1767.7 *3* from ^{100}Ag ε decay (2.01 min) and 1767.6 *8* from (^{3}He,2nγ).
3869.17	10^+	881.14 *10*	100	2987.97	8^+	E2	1.35×10^{-3}	B(E2)(W.u.)=20 *+6−4* E_γ: weighted average of 881.2 *4* from (^{58}Ni,4pγ), 881.1 *1* from (^{58}Ni,4pαγ), 881.0 *5* from (^{35}Cl,αp2nγ), 881.33 *18* from (^{12}C,3nγ), and 881.1 *2* from (^{3}He,2nγ). Mult.: from γ(θ,pol) in (^{12}C,3nγ) and (^{58}Ni,4pαγ), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ).
3879.22	$8^{(-)}$	647.8 *1*	100 *13*	3231.36	7^-	D		E_γ: weighted average of 647.8 *1* from (^{58}Ni,4pαγ), 648.0 *5* from (^{35}Cl,αp2nγ), and 647.9 *6* from (^{3}He,2nγ). I_γ: from (^{58}Ni,4pαγ). Mult.: from γ(θ) in (^{58}Ni,4pαγ), with ΔJ=1.
		857.4 *1*	25 *13*	3021.90	(6^-)			E_γ: weighted average of 857.4 *1* from (^{58}Ni,4pαγ) and 857.3 *6* from (^{3}He,2nγ). I_γ: from (^{58}Ni,4pαγ).
4054.09	9^-	614.4 *2*	5.0 *11*	3439.82	$8^{(+)}$	D		E_γ: weighted average of 614.8 *3* from (^{58}Ni,4pγ), 614.3 *2* from (^{58}Ni,4pαγ), and 614.0 *5* from (^{35}Cl,αp2nγ). I_γ: unweighted average of 2.8 *3* from (^{58}Ni,4pγ), 6.2 *7* from (^{58}Ni,4pαγ), and 6.0 *6* from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{58}Ni,4pαγ), consistent with ΔJ=(1).
		822.8 *2*	24 *3*	3231.36	7^-	Q		E_γ: weighted average of 823.1 *3* from (^{58}Ni,4pγ), 822.8 *2* from (^{58}Ni,4pαγ), 822.0 *5* from (^{35}Cl,αp2nγ), and 822.7 *8* from (^{3}He,2nγ). I_γ: unweighted average of 26.9 *10* from (^{58}Ni,4pγ), 18.2 *11* from (^{58}Ni,4pαγ), and 27 *3* from (^{35}Cl,αp2nγ).

$\gamma(^{100}Pd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	α[&]	Comments
								Mult.: from γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ), $\gamma(\theta)$ in (^{58}Ni,4p$\alpha\gamma$), with ΔJ=2.
4054.09	9^-	875.9 *1*	100 *4*	3178.21	8^+	E1		E_γ: weighted average of 876.1 *3* from (^{58}Ni,4pγ), 875.9 *1* from (^{58}Ni,4p$\alpha\gamma$), 876.0 *5* from (^{35}Cl,αp2nγ), and 876.1 *8* from (^{3}He,2nγ). Other: 875.5 *5*, placed from a 8715 level in (^{12}C,3nγ). I_γ: from (^{58}Ni,4pγ). Others: 100 *5* from (^{58}Ni,4p$\alpha\gamma$) and (^{35}Cl,αp2nγ). Mult.: from $\gamma(\theta$,pol) in (^{58}Ni,4p$\alpha\gamma$), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ), with ΔJ=1.
		1065.7 *2*	5.1 *6*	2987.97	8^+	D		E_γ: weighted average of 1066.0 *3* from (^{58}Ni,4pγ), 1065.5 *2* from (^{58}Ni,4p$\alpha\gamma$), and 1066.0 *5* from (^{35}Cl,αp2nγ). I_γ: weighted average of 6.6 *18* from (^{58}Ni,4p$\alpha\gamma$), and 4.9 *6* from (^{35}Cl,αp2nγ). Other: 25.9 *11* from ^{46}Ti(^{58}Ni,4pγ) seems discrepant. Mult.: from γ(DCO) and $\gamma(\theta)$ in (^{58}Ni,4pγ), with ΔJ=1.
4092.90	$9^{(-)}$	213.7 *1*	8 *3*	3879.22	$8^{(-)}$			E_γ: weighted average of 213.7 *1* from (^{58}Ni,4p$\alpha\gamma$) and 214.0 *5* from (^{35}Cl,αp2nγ). I_γ: weighted average of 10.9 *22* from (^{58}Ni,4p$\alpha\gamma$) and 5.7 *19* from (^{35}Cl,αp2nγ).
		861.7 *2*	100 *9*	3231.36	7^-	Q		E_γ: weighted average of 861.1 *3* from (^{58}Ni,4pγ), 861.8 *2* from (^{58}Ni,4p$\alpha\gamma$), 861.0 *5* from (^{35}Cl,αp2nγ), and 862.1 *3* from (^{12}C,3nγ). I_γ: from (^{58}Ni,4p$\alpha\gamma$). Other: 100 *10* from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{58}Ni,4pγ), (^{35}Cl,αp2nγ) and (^{12}C,3nγ).
4145.68	$10^{(+)}$	276.6 *2*	100 *5*	3869.17	10^+	D		E_γ: weighted average of 276.6 *6* from (^{58}Ni,4pγ), 276.6 *2* from (^{58}Ni,4p$\alpha\gamma$), 276.0 *5* from (^{35}Cl,αp2nγ), and 277.3 *5* from (^{12}C,3nγ). I_γ: from (^{58}Ni,4pγ). Others: 100 *11* from (^{35}Cl,αp2nγ), 100 *16* from (^{12}C,3nγ). Mult.: from γ(DCO) in (^{58}Ni,4pγ), (^{35}Cl,αp2nγ), and (^{12}C,3nγ), $\gamma(\theta)$ in (^{58}Ni,4p$\alpha\gamma$), consistent with ΔJ=0.
		706.2[@a] *10*	<8	3439.82	$8^{(+)}$			
		967.8 *7*	44 *17*	3178.21	8^+	(Q)		E_γ: unweighted average of 967.2 *10* from (^{58}Ni,4pγ), 967.0 *5* from (^{35}Cl,αp2nγ), and 969.1 *6* from (^{12}C,3nγ). I_γ: unweighted average of 13 *5* from (^{58}Ni,4pγ), 46 *4* from (^{35}Cl,αp2nγ), and 73 *5* from (^{12}C,3nγ). Mult.: from γ(DCO) and $\gamma(\theta)$ in (^{12}C,3nγ).
4635.11	(10^-)	542.2 *2*	100 *17*	4092.90	$9^{(-)}$	(D)		E_γ: weighted average of 542.2 *5* from (^{58}Ni,4pγ) and 542.2 *2* from (^{58}Ni,4p$\alpha\gamma$). Other: 540.0 *5* from (^{35}Cl,αp2nγ) is discrepant. I_γ: from (^{58}Ni,4p$\alpha\gamma$). Mult.: from $\gamma(\theta)$ in (^{58}Ni,4p$\alpha\gamma$), ΔJ=(1).
		755.9[#] *1*	33 *17*	3879.22	$8^{(-)}$			
4761.62	12^+	616.3 *2*	1.9 *2*	4145.68	$10^{(+)}$	[E2]	0.00332	B(E2)(W.u.)=1.19 *+28−23* E_γ: weighted average of 616.5 *2* from (^{58}Ni,4pγ), 615.8 *3* from (^{58}Ni,4p$\alpha\gamma$), and 616.0 *5* from (^{35}Cl,αp2nγ). I_γ: weighted average of 1.90 *22* from (^{58}Ni,4pγ), 1.6 *4* from (^{58}Ni,4p$\alpha\gamma$), and 2.2 *4* from (^{35}Cl,αp2nγ).

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Adopted Levels, Gammas (continued)

γ(^{100}Pd) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$†	I$_\gamma$†	E$_f$	J$^\pi_f$	Mult.	α&	Comments
4761.62	12$^+$	892.28 *16*	100 *3*	3869.17	10$^+$	E2	1.31×10^{-3}	B(E2)(W.u.)=9.9 *8* E$_\gamma$: weighted average of 892.5 *4* from (^{58}Ni,4pγ), 892.4 *1* from (^{58}Ni,4p$\alpha\gamma$), 892.0 *5* from (^{35}Cl,αp2nγ), and 891.95 *16* from (^{12}C,3nγ). I$_\gamma$: from (^{58}Ni,4pγ). Others: 100 *7* from (^{58}Ni,4p$\alpha\gamma$), and 100 *5* from (^{35}Cl,αp2nγ). Mult.: from γ(θ,pol) in (^{12}C,3nγ) and (^{58}Ni,4p$\alpha\gamma$), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ), ΔJ=2.
4779.3	11$^{(+)}$	633.7 *2*	100 *7*	4145.68	10$^{(+)}$	D		E$_\gamma$: weighted average of 633.3 *3* from (^{58}Ni,4pγ), 633.8 *1* from (^{58}Ni,4p$\alpha\gamma$), and 633.0 *5* from (^{35}Cl,αp2nγ). I$_\gamma$: from (^{58}Ni,4pγ). Other: 100 *17* from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{35}Cl,αp2nγ), consistent with ΔJ=1.
		909.6 *4*	83 *17*	3869.17	10$^+$			E$_\gamma$: weighted average of 909.8 *3* from (^{58}Ni,4pγ) and 909.0 *5* from (^{35}Cl,αp2nγ). I$_\gamma$: from (^{35}Cl,αp2nγ) (2001Zh26). Other: <18 for an uncertain γ in (^{58}Ni,4pγ) (2000ApZY).
4863.52	11$^-$	717.1 *4*	4.1 *14*	4145.68	10$^{(+)}$			E$_\gamma$: unweighted average of 718.8 *4* from (^{58}Ni,4pγ), 717.5 *1* from (^{58}Ni,4p$\alpha\gamma$), and 718.0 *5* from (^{35}Cl,αp2nγ). I$_\gamma$: unweighted average of 2.35 *22* from (^{58}Ni,4pγ), 6.8 *3* from (^{58}Ni,4p$\alpha\gamma$), and 3.0 *4* from (^{35}Cl,αp2nγ).
		770.7 *1*	3.3 *5*	4092.90	9$^{(-)}$	Q		E$_\gamma$: from (^{58}Ni,4p$\alpha\gamma$). Others: 771.0 *10* from (^{58}Ni,4pγ), 770.0 *5* from (^{35}Cl,αp2nγ). I$_\gamma$: unweighted average of 2.8 *7* from (^{58}Ni,4pγ), 2.9 *3* from (^{58}Ni,4p$\alpha\gamma$), and 4.3 *4* from (^{35}Cl,αp2nγ). Mult.: from γ(θ) in (^{58}Ni,4p$\alpha\gamma$), ΔJ=2.
		809.40 *10*	100 *3*	4054.09	9$^-$	E2	1.65×10^{-3}	E$_\gamma$: weighted average of 809.6 *4* from (^{58}Ni,4pγ), 809.4 *1* from (^{58}Ni,4p$\alpha\gamma$), 809.0 *5* from (^{35}Cl,αp2nγ) and 809.39 *14* from (^{12}C,3nγ) (placed from a 4792 level). I$_\gamma$: from (^{58}Ni,4pγ). Others: 100 *5* from (^{58}Ni,4p$\alpha\gamma$), and (^{35}Cl,αp2nγ). Mult.: from γ(θ,pol) in (^{58}Ni,4p$\alpha\gamma$) and (^{12}C,3nγ), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ).
		994.3 *2*	4.9 *4*	3869.17	10$^+$			E$_\gamma$: weighted average of 995.7 *6* from (^{58}Ni,4pγ), 994.3 *1* from (^{58}Ni,4p$\alpha\gamma$), and 994.0 *5* from (^{35}Cl,αp2nγ). I$_\gamma$: weighted average of 4.4 *4* from (^{58}Ni,4pγ), 5.6 *6* from (^{58}Ni,4p$\alpha\gamma$), and 5.2 *4* from (^{35}Cl,αp2nγ).
4926.27	12$^{(+)}$	1056.9 *4*	100	3869.17	10$^+$	Q		E$_\gamma$: weighted average of 1057.0 *2* from (^{58}Ni,4p$\alpha\gamma$) and 1056.0 *5* from (^{35}Cl,αp2nγ). Mult.: from γ(θ) in (^{58}Ni,4p$\alpha\gamma$) and γ(DCO) in (^{35}Cl,αp2nγ), ΔJ=2.
4946.76	(11$^-$)	311.5 *4*	9 *3*	4635.11	(10$^-$)			E$_\gamma$: weighted average of 309.8 *10* from (^{58}Ni,4pγ), 311.4 *4* from (^{58}Ni,4p$\alpha\gamma$), and 312.0 *5* from (^{35}Cl,αp2nγ). I$_\gamma$: weighted average of 7.0 *16* from (^{58}Ni,4pγ), 19 *6* from (^{58}Ni,4p$\alpha\gamma$), and 16 *5* from (^{35}Cl,αp2nγ).

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Adopted Levels, Gammas (continued)

γ(^{100}Pd) (continued)

E$_i$(level)	J$^{\pi}_i$	E$_\gamma$[†]	I$_\gamma$[†]	E$_f$	J$^{\pi}_f$	Mult.	α[&]	Comments
4946.76	(11$^-$)	853.8 2	100 7	4092.90	9$^{(-)}$	Q		E$_\gamma$: weighted average of 854.0 2 from (^{58}Ni,4pγ), 853.7 2 from (^{58}Ni,4pαγ), and 853.0 5 from (^{35}Cl,αp2nγ). I$_\gamma$: from (^{58}Ni,4pγ). Others: 100 13 from (^{58}Ni,4pαγ), and 100 11 from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ), γ(θ) in (^{58}Ni,4pαγ), ΔJ=2.
5078.02	12$^{(+)}$	298.0 5	6.6 16	4779.3	11$^{(+)}$			E$_\gamma$: from (^{35}Cl,αp2nγ). Other: 298.0 10 from (^{58}Ni,4pγ). I$_\gamma$: from (^{58}Ni,4pγ). Other: 154 17 in (^{35}Cl,αp2nγ). γ not reported in (^{58}Ni,pαγ).
		931.8 5	41 7	4145.68	10$^{(+)}$			E$_\gamma$: weighted average of 931.1 10 from (^{58}Ni,4pγ) and 932.0 5 from (^{35}Cl,αp2nγ). I$_\gamma$: weighted average of 45 5 from (^{58}Ni,4pγ) and 29 9 from (^{35}Cl,αp2nγ).
		1209.0 2	100 7	3869.17	10$^+$	Q		E$_\gamma$: weighted average of 1207.8 10 from (^{58}Ni,4pγ), 1209.1 2 from (^{58}Ni,4pαγ), and 1209.0 5 from (^{35}Cl,αp2nγ). I$_\gamma$: from (^{58}Ni,4pγ). Other: 100 9 from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{35}Cl,αp2nγ) and (^{58}Ni,4pγ), γ(θ) in (^{58}Ni,4pαγ), ΔJ=2.
5452.70	13$^+$	374.6 3	13.7 25	5078.02	12$^{(+)}$	D		E$_\gamma$: weighted average of 376.0 10 from (^{58}Ni,4pγ), 374.6 2 from (^{58}Ni,4pαγ), and 374.0 5 from (^{35}Cl,αp2nγ). I$_\gamma$: unweighted average of 11.2 7 from (^{58}Ni,4pγ) and 16.1 12 from (^{58}Ni,4pαγ). Other: 26 3 from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{58}Ni,4pγ) and γ(θ) in (^{58}Ni,4pαγ), ΔJ=1.
		526.5 1	11 4	4926.27	12$^{(+)}$			E$_\gamma$: weighted average of 526.5 1 from (^{58}Ni,4pαγ) and 526.0 5 from (^{35}Cl,αp2nγ). I$_\gamma$: unweighted average of 14.9 12 from (^{58}Ni,4pαγ) and 7.6 15 from (^{35}Cl,αp2nγ).
		674.0[@a] 10	3.6 12	4779.3	11$^{(+)}$			
		691.2 2	100 3	4761.62	12$^+$	M1	0.00260	E$_\gamma$: weighted average of 691.3 4 from (^{58}Ni,4pγ), 691.2 2 from (^{58}Ni,4pαγ), 691.0 5 from (^{35}Cl,αp2nγ), and 691.5 4 from (^{12}C,3nγ). I$_\gamma$: from (^{58}Ni,4pγ). Others: 100 6 from (^{58}Ni,4pαγ), and 100 11 from (^{35}Cl,αp2nγ). Mult.: from γ(θ,pol) in (^{58}Ni,4pαγ), γ(DCO) in (^{58}Ni,4pγ), (^{35}Cl,αp2nγ) and (^{12}C,3nγ), ΔJ=1.
5573.5	(12$^-$)	626.2 5	2.4 4	4946.76	(11$^-$)			E$_\gamma$: unweighted average of 626.9 3 from (^{58}Ni,4pαγ), 626.0 5 from (^{35}Cl,αp2nγ), and 625.6 3 from (^{58}Ni,4pγ) (placed from a 6691 level). I$_\gamma$: from (^{35}Cl,αp2nγ).
		939.0[‡] 5	100 5	4635.11	(10$^-$)	(Q)		Mult.: from γ(DCO) in (^{35}Cl,αp2nγ), ΔJ=(2).
5669.22	13$^-$	591.2 3	1.8 9	5078.02	12$^{(+)}$			E$_\gamma$: weighted average of 593.3 10 from (^{58}Ni,4pγ), 591.2 2 from (^{58}Ni,4pαγ), and 591.0 5 from (^{35}Cl,αp2nγ). I$_\gamma$: weighted average of 2.78 24 from (^{58}Ni,4pγ) and 2.9 7 from (^{35}Cl,αp2nγ). Other: 0.3 3 from (^{58}Ni,4pαγ),

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$\gamma(^{100}Pd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	α[&]	Comments
5669.22	13^-	742.0[‡] *5*	1.5 *7*	4926.27	$12^{(+)}$			
		805.69 *11*	100 *3*	4863.52	11^-	E2	1.67×10^{-3}	E_γ: weighted average of 805.7 *4* from (^{58}Ni,4pγ), 805.8 *1* from (^{58}Ni,4p$\alpha\gamma$), 805.0 *5* from (^{35}Cl,αp2nγ), and 805.43 *18* from (^{12}C,3nγ) (placed from a 3982 level). Mult.: from $\gamma(\theta$,pol) in (^{58}Ni,4p$\alpha\gamma$) and (^{12}C,3nγ), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ), ΔJ=2. I_γ: from (^{58}Ni,4pγ). Others: 100 *5* from (^{58}Ni,4p$\alpha\gamma$) and (^{35}Cl,αp2nγ).
		908.1 *3*	5.4 *8*	4761.62	12^+	D		E_γ: weighted average of 909.3 *5* from (^{58}Ni,4pγ), 907.9 *2* from (^{58}Ni,4p$\alpha\gamma$), and 908.0 *5* from (^{35}Cl,αp2nγ). I_γ: unweighted average of 6.7 *5* from (^{58}Ni,4pγ), 3.9 *6* from (^{58}Ni,4p$\alpha\gamma$), and 5.5 *11* from (^{35}Cl,αp2nγ). Mult.: from $\gamma(\theta)$ in (^{58}Ni,4p$\alpha\gamma$).
5706.73	14^+	254.1 *1*	2.0 *7*	5452.70	13^+			E_γ: weighted average of 254.1 *1* from (^{58}Ni,4p$\alpha\gamma$) and 254.0 *5* from (^{35}Cl,αp2nγ). I_γ: from (^{58}Ni,4p$\alpha\gamma$).
		945.0 *2*	100 *6*	4761.62	12^+	E2	1.14×10^{-3}	E_γ: weighted average of 945.0 *6* from (^{58}Ni,4pγ), 945.0 *2* from (^{58}Ni,4p$\alpha\gamma$), 944.0 *5* from (^{35}Cl,αp2nγ), and 945.4 *4* from (^{12}C,3nγ). I_γ: from (^{58}Ni,4p$\alpha\gamma$). Mult.: from $\gamma(\theta$,pol) in (^{58}Ni,4p$\alpha\gamma$) and (^{12}C,3nγ), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ), ΔJ=2.
5879.9	(11,12,13^+)	1100.5[@] *16*	100	4779.3	$11^{(+)}$			
5918.72	14^+	466.1 *2*	100 *4*	5452.70	13^+	M1	0.00661	E_γ: weighted average of 466.1 *5* from (^{58}Ni,4pγ), 465.9 *1* from (^{58}Ni,4p$\alpha\gamma$), 466.0 *5* from (^{35}Cl,αp2nγ), and 467.4 *5* from (^{12}C,3nγ). I_γ: from (^{58}Ni,4pγ). Others: 100 *6* from (^{58}Ni,4p$\alpha\gamma$), and 100 *11* from (^{35}Cl,αp2nγ). Mult.: from $\gamma(\theta$,pol) in (^{58}Ni,4p$\alpha\gamma$), γ(DCO) in (^{58}Ni,4pγ), (^{12}C,3nγ) and (^{35}Cl,αp2nγ), ΔJ=1.
		842.8[@a] *13*	4.9 *13*	5078.02	$12^{(+)}$			
		992.4 *1*	46 *3*	4926.27	$12^{(+)}$			E_γ: weighted average of 992.4 *1* from (^{58}Ni,4p$\alpha\gamma$) and 992.0 *5* from (^{35}Cl,αp2nγ). I_γ: weighted average of 47 *3* from (^{58}Ni,4p$\alpha\gamma$) and 44 *4* from (^{35}Cl,αp2nγ).
		1156.8 *3*	14 *2*	4761.62	12^+	Q		E_γ: weighted average of 1157.3 *10* from (^{58}Ni,4pγ), 1156.7 *3* from (^{58}Ni,4p$\alpha\gamma$), and 1157.0 *5* from (^{35}Cl,αp2nγ). I_γ: weighted average of 13.7 *19* from (^{58}Ni,4pγ), and 15 *4* from (^{35}Cl,αp2nγ). Other: 29 *5* from (^{58}Ni,4p$\alpha\gamma$) seems discrepant. Mult.: from γ(DCO) in (^{58}Ni,4pγ), ΔJ=2.

$^{100}_{46}Pd_{54}$-16

γ(^{100}Pd) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	δ	α&	Comments
6068.8	(13$^-$)	1122.0 *5*	100	4946.76	(11$^-$)				E_γ: from (^{35}Cl,αp2nγ). Other: 1118.4 *2* in (^{58}Ni,4pγ) (2000ApZY) probably corresponds to 1116.0γ and 1122.0γ in (^{35}Cl,αp2nγ) (2001Zh26).
6134.11	(14$^+$)	681.3 *1*	100	5452.70	13$^+$	D			E_γ: weighted average of 682.0 *7* from (^{58}Ni,4pγ), 681.2 *1* from (^{58}Ni,4p$\alpha\gamma$), and 682.0 *5* from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) and $\gamma(\theta)$ in (^{58}Ni,4pγ), γ(DCO) in (^{35}Cl,αp2nγ), ΔJ=1.
		1208.0‡ *5*		4926.27	12$^{(+)}$				
6459.12	(15)$^+$	324.0 *5*	11.7 *12*	6134.11	(14$^+$)				E_γ: from (^{35}Cl,αp2nγ). Other: 323.8 *10* from (^{58}Ni,4pγ). I_γ: available only from ^{46}Ti(^{58}Ni,4pγ) (2000ApZY).
		540.4 *2*	17 *3*	5918.72	14$^+$	D			E_γ: weighted average of 539.8 *3* from (^{58}Ni,4pγ), 540.5 *1* from (^{58}Ni,4p$\alpha\gamma$), and 540.0 *5* from (^{35}Cl,αp2nγ). I_γ: unweighted average of 14.0 *23* from (^{58}Ni,4pγ), 15 *4* from (^{58}Ni,4p$\alpha\gamma$), and 22.6 *16* from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ), $\gamma(\theta)$ in (^{58}Ni,4p$\alpha\gamma$), ΔJ=1.
		752.4 *1*	100 *4*	5706.73	14$^+$				E_γ: weighted average of 752.5 *6* from (^{58}Ni,4pγ), 752.4 *1* from (^{58}Ni,4p$\alpha\gamma$), and 753.0 *5* from (^{35}Cl,αp2nγ). I_γ: from (^{58}Ni,4pγ). Others: 100 *8* from (^{58}Ni,4p$\alpha\gamma$), and 100 *15* from (^{35}Cl,αp2nγ).
		1006.5 *1*	14.9 *12*	5452.70	13$^+$				E_γ: weighted average of 1006.5 *1* from (^{58}Ni,4p$\alpha\gamma$) and 1006.0 *5* from (^{35}Cl,αp2nγ). Other: 1006.0 *19* from (^{58}Ni,4pγ). I_γ: from (^{58}Ni,4p$\alpha\gamma$). Other: 2.3 *11* from (^{58}Ni,4pγ)).
6689.5	(14$^-$)	1116.0 *5*	100	5573.5	(12$^-$)				E_γ: from (^{35}Cl,αp2nγ). 1118.4 *2* in ^{46}Ti(^{58}Ni,4pγ) probably corresponds to 1116.0γ and 1122.0γ in (^{35}Cl,αp2nγ).
6704.63	15$^-$	570.0 *5*	0.4 *4*	6134.11	(14$^+$)	[E1]			B(E1)(W.u.)=7×10^{-6} *+10−7*
		786.0 *2*	4.1 *8*	5918.72	14$^+$	[E1]			B(E1)(W.u.)=2.8×10^{-5} *+7−6* E_γ: weighted average of 786.1 *3* from (^{58}Ni,4pγ), 786.0 *2* from (^{58}Ni,4p$\alpha\gamma$), and 786.0 *5* from (^{35}Cl,αp2nγ). I_γ: unweighted average of 2.59 *23* from (^{58}Ni,4pγ), 5.4 *3* from (^{58}Ni,4p$\alpha\gamma$), and 4.2 *4* from (^{35}Cl,αp2nγ).
		997.9 *1*	1.7 *3*	5706.73	14$^+$	[E1]			B(E1)(W.u.)=5.6×10^{-6} *+13−11* E_γ: weighted average of 997.9 *1* from (^{58}Ni,4p$\alpha\gamma$) and 998.0 *5* from (^{35}Cl,αp2nγ). I_γ: weighted average of 1.7 *3* from (^{58}Ni,4p$\alpha\gamma$) and 1.7 *4* from (^{35}Cl,αp2nγ).
		1035.43 *16*	100 *3*	5669.22	13$^-$	E2			B(E2)(W.u.)=18.0 *+22−18* E_γ: weighted average of 1036.1 *4* from (^{58}Ni,4pγ), 1035.3 *1* from (^{58}Ni,4p$\alpha\gamma$), 1035.0 *5* from (^{35}Cl,αp2nγ) and 1035.87 *21* from (^{12}C,3nγ) (placed from a 6768 level). I_γ: from (^{58}Ni,4pγ). Others: 100 *4* from (^{58}Ni,4p$\alpha\gamma$), and 100 *5* from (^{35}Cl,αp2nγ). Mult.: from $\gamma(\theta$,pol) in (^{58}Ni,4p$\alpha\gamma$) and (^{12}C,3nγ), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ), ΔJ=2.

Adopted Levels, Gammas (continued)

$\gamma(^{100}Pd)$ (continued)

E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f	Mult.	α &	Comments
6938.48	$(16)^+$	479.4 *1*	100 *3*	6459.12	$(15)^+$	M1	0.00617	E_γ: weighted average of 480.2 *6* from (^{58}Ni,4pγ), 479.4 *1* from (^{58}Ni,4p$\alpha\gamma$), 479.0 *5* from (^{35}Cl,αp2nγ), and 479.6 *3* from (^{12}C,3nγ) (placed from a 6186 level). I_γ: from (^{58}Ni,4pγ) and (^{58}Ni,4p$\alpha\gamma$). Other: 100 *11* from (^{35}Cl,αp2nγ). Mult.: from $\gamma(\theta$,pol) in (^{58}Ni,4p$\alpha\gamma$), γ(DCO) in (^{58}Ni,4pγ), (^{35}Cl,αp2nγ) and (^{12}C,3nγ), ΔJ=1.
		1019.0 *5*	8 *3*	5918.72	14^+			E_γ: from (^{35}Cl,αp2nγ). Other: 1020 *3* from (^{58}Ni,4pγ). I_γ: unweighted average of 5.3 *15* from (^{58}Ni,4pγ) and 10.6 *21* from (^{35}Cl,αp2nγ).
		1231.8 *2*	71 *8*	5706.73	14^+	E2		E_γ: weighted average of 1230.9 *6* from (^{58}Ni,4pγ), 1231.8 *1* from (^{58}Ni,4p$\alpha\gamma$), and 1231.0 *5* from (^{35}Cl,αp2nγ). I_γ: unweighted average of 72 *3* from (^{58}Ni,4pγ), 83 *4* from (^{58}Ni,4p$\alpha\gamma$), and 57 *9* from (^{35}Cl,αp2nγ). Mult.: from $\gamma(\theta$,pol) in (^{58}Ni,4p$\alpha\gamma$), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ), ΔJ=2.
7085.56	(16^+)	626.4# *2*	36 *11*	6459.12	$(15)^+$			
		1166.93 *24*	86 *10*	5918.72	14^+			E_γ: weighted average of 1166.93 *24* from (^{58}Ni,4p$\alpha\gamma$) and 1166.0 *5* from (^{35}Cl,αp2nγ). Other: 1164.0 *10* from (^{58}Ni,4pγ). I_γ: from (^{58}Ni,4p$\alpha\gamma$).
		1378.8 *1*	100 *11*	5706.73	14^+	Q		E_γ,I_γ: from (^{58}Ni,4p$\alpha\gamma$). Other: Eγ=1379.0 *5* from (^{35}Cl,αp2nγ). Mult.: from $\gamma(\theta)$ in (^{58}Ni,4p$\alpha\gamma$).
7274.9	(16^+)	816.0‡ *5*	100 *43*	6459.12	$(15)^+$			
		1140.0‡ *5*	57 *29*	6134.11	(14^+)			
		1569.0 *5*	57 *14*	5706.73	14^+			E_γ,I_γ: from (^{35}Cl,αp2nγ). Other: Eγ=1565.2 *3* in (^{58}Ni,4pγ).
7341.8	(16^+)	256.0‡ *5*	63 *25*	7085.56	(16^+)			
		1422.1 *4*	100 *13*	5918.72	14^+	Q		E_γ: weighted average of 1422.3 *6* from (^{58}Ni,4pγ), 1421.8 *3* from (^{58}Ni,4p$\alpha\gamma$), and 1423.0 *5* from (^{35}Cl,αp2nγ). I_γ: from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{58}Ni,4pγ), ΔJ=2.
		1635.0‡ *5*	50 *13*	5706.73	14^+			
7644.82	$(17)^-$	302.0‡ *5*		7341.8	(16^+)			
		370.0‡ *5*		7274.9	(16^+)			
		706.4 *2*	6.0 *14*	6938.48	$(16)^+$	[E1]		B(E1)(W.u.)=9.2×10^{-5} *+25−23* E_γ: weighted average of 707.6 *10* from (^{58}Ni,4pγ), 706.4 *2* from (^{58}Ni,4p$\alpha\gamma$), and 706.0 *5* from (^{35}Cl,αp2nγ). I_γ: unweighted average of 3.3 *3* from (^{58}Ni,4pγ), 7.1 *3* from (^{58}Ni,4p$\alpha\gamma$), and 7.7 *8* from (^{35}Cl,αp2nγ).
		940.2 *1*	100 *3*	6704.63	15^-	E2	1.16×10^{-3}	B(E2)(W.u.)=48 *+7−6* E_γ: weighted average of 940.6 *4* from (^{58}Ni,4pγ), 940.2 *1* from (^{58}Ni,4p$\alpha\gamma$), 940.0 *5* from (^{35}Cl,αp2nγ), 940.2 *3* from (^{12}C,3nγ)

$\gamma(^{100}Pd)$ (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	Comments
							(placed from a 5732 level). I_γ: from (^{58}Ni,4pγ). Others: 100 *4* from (^{58}Ni,4p$\alpha\gamma$), and 100 *5* from (^{35}Cl,αp2nγ). Mult.: from $\gamma(\theta$,pol) in (^{58}Ni,4p$\alpha\gamma$) and (^{12}C,3nγ), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ), ΔJ=2.
7835.4	(17$^+$)	492.7 *5*	56 *22*	7341.8	(16$^+$)	D	E_γ: weighted average of 493.0 *3* from (^{58}Ni,4pγ) and 492.0 *5* from (^{35}Cl,αp2nγ). I_γ: from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{58}Ni,4pγ), ΔJ=1.
		1377.0‡ *5*	100 *33*	6459.12	(15)$^+$		
7970.5	(18$^+$)	1032.0 *2*	100	6938.48	(16)$^+$	Q	E_γ: weighted average of 1032.3 *4* from (^{58}Ni,4pγ), 1032.0 *1* from (^{58}Ni,4p$\alpha\gamma$), and 1931.0 *5* from (^{35}Cl,αp2nγ). I_γ: from γ(DCO) and $\gamma(\theta)$ in (^{58}Ni,4pγ), ΔJ=2.
8303.5	(18$^+$)	468.0‡ *5*		7835.4	(17$^+$)		
		1365.2 *8*	100	6938.48	(16)$^+$	Q	E_γ: unweighted average of 1366.7 *6* from (^{58}Ni,4pγ), 1365.0 *1* from (^{58}Ni,4p$\alpha\gamma$), and 1364.0 *5* from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{58}Ni,4pγ), ΔJ=2.
8565.0	(19$^-$)	920.0‡ *5*	100	7644.82	(17)$^-$	(Q)	
8716.01	(19)$^-$	1071.2 *1*	100	7644.82	(17)$^-$	E2	B(E2)(W.u.)=34.6 *+47−37* E_γ: weighted average of 1071.9 *6* from (^{58}Ni,4pγ), 1071.2 *1* from (^{58}Ni,4p$\alpha\gamma$), 1071.0 *5* from (^{35}Cl,αp2nγ) and 1071.0 *5* from (^{12}C,3nγ) (placed from a 7839 level). Mult.: from $\gamma(\theta$,pol) in (^{58}Ni,4p$\alpha\gamma$) and (^{12}C,3nγ), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ), ΔJ=2.
9389.5	(20$^+$)	1419.0‡ *5*	100	7970.5	(18$^+$)		
9689.5	(20$^+$)	1386.0 *3*	100	8303.5	(18$^+$)	Q	E_γ: from (^{58}Ni,4pγ). Other: 1386.0 *5* from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{58}Ni,4pγ), ΔJ=2.
9870.7	(20$^-$)	1154.8 *8*	100	8716.01	(19)$^-$	D	E_γ: unweighted average of 1154.1 *6* from (^{58}Ni,4pγ) and 1155.6 *4* from (^{58}Ni,4p$\alpha\gamma$). Mult.: from γ(DCO) in (^{58}Ni,4pγ), ΔJ=1.
10104.0	(21)$^-$	1388.0 *1*	100	8716.01	(19)$^-$	E2	B(E2)(W.u.)>27 E_γ: weighted average of 1388.9 *6* from (^{58}Ni,4pγ), 1388.0 *1* from (^{58}Ni,4p$\alpha\gamma$), and 1388.0 *5* from (^{35}Cl,αp2nγ). Mult.: from $\gamma(\theta$,pol) in (^{58}Ni,4p$\alpha\gamma$), γ(DCO) in (^{58}Ni,4pγ) and (^{35}Cl,αp2nγ), ΔJ=2.
10136.2?	(21$^-$)	1420.2@ *3*	100	8716.01	(19)$^-$	(Q)	Mult.: from γ(DCO) in (^{58}Ni,4pγ).
10452.3	(20)$^+$	1736.4 *4*	100 *8*	8716.01	(19)$^-$	E1	E_γ: weighted average of 1736.5 *4* from (^{58}Ni,4p$\alpha\gamma$), 1736.0 *5* from (^{35}Cl,αp2nγ), and 1736.6 *5* from (^{58}Ni,4pγ) (placed from a 13165 level). Other: 1736, placed from a 13159 level in (^{37}Cl,p2nγ). I_γ: from (^{35}Cl,αp2nγ). Mult.: from $\gamma(\theta$,pol) in (^{58}Ni,4p$\alpha\gamma$), and γ(DCO) in (^{35}Cl,αp2nγ). But Q from γ(DCO) in (^{58}Ni,4pγ) is in conflict.
		1887.0‡ *5*	33 *8*	8565.0	(19$^-$)		
10604.3?	(21$^-$)	733.8@ *8*	100	9870.7	(20$^-$)		
11211.2	(22$^-$)	606.6@ *5*	7.4 *11*	10604.3?	(21$^-$)		

$^{100}_{46}Pd_{54}$-19

γ(^{100}Pd) (continued)

E_i(level)	J^π_i	E_γ †	I_γ †	E_f	J^π_f	Mult.	Comments
11211.2	(22−)	1107.1 *2*	100 *4*	10104.0	(21)−	D	E_γ: weighted average of 1107.1 *8* from (^{58}Ni,4pγ), 1107.1 *1* from (^{58}Ni,4pαγ), and 1106.0 *5* from (^{35}Cl,αp2nγ) (placed from a 11816 level). I_γ: from (^{58}Ni,4pγ). Mult.: from γ(DCO) in (^{58}Ni,4pγ), (^{58}Ni,4pαγ) and (^{35}Cl,αp2nγ), ΔJ=1.
11528.0		1424.0# *1*	100	10104.0	(21)−		
11652.6	(22+)	1200.3 *2*		10452.3	(20)+	Q	E_γ: weighted average of 1200.0 *5* from (^{35}Cl,αp2nγ), 1200.3 *2* from (^{58}Ni,4pαγ), and 1201.1 *6* from (^{58}Ni,4pγ) (placed from a 9913 level). Other: 1200, placed from a 9913 level in (^{37}Cl,p2nγ). Mult.: from γ(DCO) in (^{35}Cl,αp2nγ) and (^{58}Ni,4pγ). Other: D from γ(DCO) in (^{35}Cl,αp2nγ) is inconsistent.
11685.9	(23−)	1581.9 *3*	100	10104.0	(21)−	(Q)	E_γ: weighted average of 1581.9 *3* from (^{58}Ni,4pαγ) and 1582.0 *5* from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{35}Cl,αp2nγ).
11821.1	(23−)	609.9 *1*	100 *4*	11211.2	(22−)	D	E_γ: weighted average of 609.9 *6* from (^{58}Ni,4pγ), 609.9 *1* from (^{58}Ni,4pαγ), and 609.0 *5* from (^{35}Cl,αp2nγ) (placed from a 10709 level). Other: 609, placed from a 13200 level in (^{37}Cl,p2nγ). I_γ: from (^{58}Ni,4pγ). Other: 100 *5* from (^{58}Ni,4pαγ). Mult.: from γ(DCO) and γ(θ) in (^{58}Ni,4pγ), γ(DCO) in (^{58}Ni,4pαγ) and (^{35}Cl,αp2nγ), ΔJ=1.
		1218.0@ *10*	24 *3*	10604.3?	(21−)		
		1717.2 *4*	46 *3*	10104.0	(21)−	Q	E_γ: weighted average of 1718.2 *5* from (^{58}Ni,4pγ), 1716.9 *3* from (^{58}Ni,4pαγ), and 1717.0 *5* from (^{35}Cl,αp2nγ). I_γ: weighted average of 45.5 *20* from (^{58}Ni,4pγ), 74 *12* from (^{58}Ni,4pαγ), and 44 *11* from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{58}Ni,4pγ), ΔJ=2.
12620.4?	(24−)	799.3# *4*	100	11821.1	(23−)		
12879.0		1351.0# *1*	100	11528.0			
12946.0	(23+)	1293.4 *4*	100	11652.6	(22+)		E_γ: weighted average of 1293.0 *1* from (^{58}Ni,4pαγ), 1294.1 *3* from (^{58}Ni,4pγ) (placed from a 14459 level), and 1293.0 *5* from (^{35}Cl,αp2nγ) (placed from a 14451 level).
13205.1	(25−)	584.7# *2*	33 *8*	12620.4?	(24−)		
		1384.0 *1*	100 *6*	11821.1	(23−)	Q	E_γ: weighted average of 1384.0 *1* from (^{58}Ni,4pαγ), 1384.0 *5* from (^{35}Cl,αp2nγ), and 1383.9 *5* from (^{58}Ni,4pγ). Other: 1383, placed from a 12591 level in (^{37}Cl,p2nγ). Mult.: from γ(DCO) in (^{58}Ni,4pαγ) and (^{35}Cl,αp2nγ), ΔJ=2. But ΔJ=1, D from γ(DCO) in (^{58}Ni,4pγ) is inconsistent.
13438.3	(25−)	1752.3 *5*	100	11685.9	(23−)	Q	E_γ: weighted average of 1752.6 *5* from (^{58}Ni,4pαγ) and 1752.0 *5* from (^{35}Cl,αp2nγ). Mult.: from γ(DCO) in (^{35}Cl,αp2nγ), ΔJ=2.
13504.1	(24+)	558.1 *1*	100 *6*	12946.0	(23+)		E_γ: weighted average of 558.1 *1* from (^{58}Ni,4pαγ), 558.0 *5* from (^{35}Cl,αp2nγ) (placed from a 15009 level), and 558.7 *7* from (^{58}Ni,4pγ) (placed from a 15016 level). I_γ: from Iγ(558γ)/Iγ(1851γ)=(0.84 *5*)/(0.79 *4*) in (^{58}Ni,4pγ). Other: 100 *16* from (^{58}Ni,4pαγ).
		1851.4 *6*	96 *5*	11652.6	(22+)		E_γ: weighted average of 1852.0 *4* from (^{58}Ni,4pαγ), 1852.0 *5* from (^{35}Cl,αp2nγ) (placed from

From ENSDF

$\gamma(^{100}Pd)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	Comments
							a 15009 level), and 1850.1 *3* from (^{58}Ni,4pγ) (placed from a 15016 level). I_γ: weighted average of 111 *16* in (^{58}Ni,4p$\alpha\gamma$) and 94 *5* in (^{58}Ni,4pγ).
15014.1	(25$^+$)	1510.0 *6*	100	13504.1	(24$^+$)	D	E_γ: weighted average of 1511.0 *1* from (^{58}Ni,4p$\alpha\gamma$), 1510.5 *5* from (^{35}Cl,αp2nγ) (placed from a 13158 level), and 1508.9 *6* from (^{58}Ni,4pγ) (placed from a 10227 level). Other: 1510, placed from a 11423 level in (^{37}Cl,p2nγ). Mult.: from γ(DCO) in (^{58}Ni,4p$\alpha\gamma$) and (^{35}Cl,αp2nγ), ΔJ=1. But ΔJ=2, Q from γ(DCO) in (^{58}Ni,4pγ) is inconsistent.
16107.1		1093.0[#] *3*	100	15014.1	(25$^+$)		

† Weighted averages of values from available γ-ray data of comparable precision. Note that for the two activities of ^{100}Ag decay, Eγ and Iγ data are from the same paper (1983Ra10), only one value of Eγ is used when a γ ray is observed in both decays.

‡ γ from (^{35}Cl,αp2nγ) (2001Zh26) only.

γ from (^{58}Ni,4p$\alpha\gamma$),^{70}Zn(^{36}S,6nγ) (2001Pe05) only.

@ γ from (^{58}Ni,4pγ) (2000ApZY) only.

& 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.

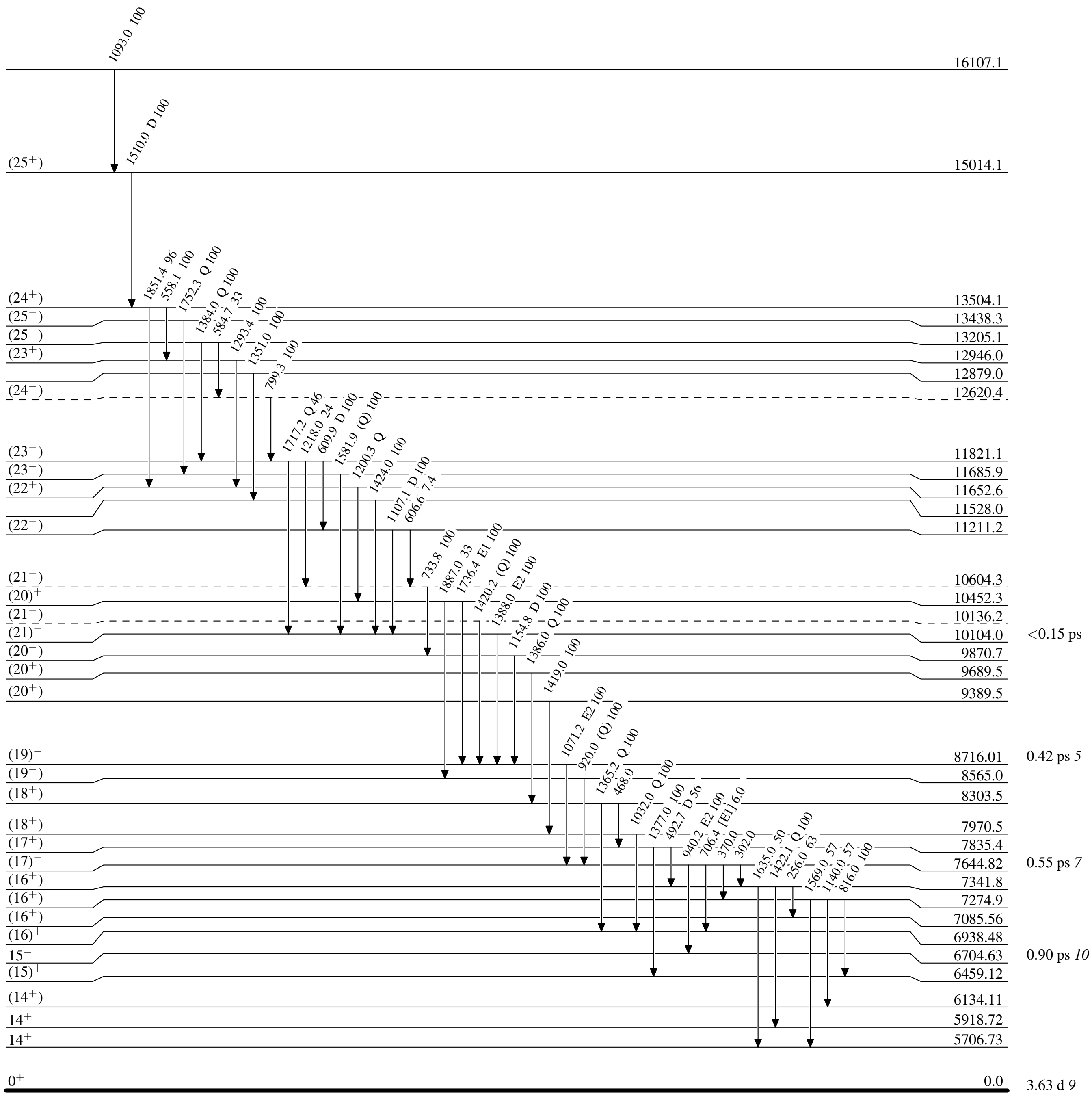
a Placement of transition in the level scheme is uncertain.

$^{100}_{46}Pd_{54}$-21

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

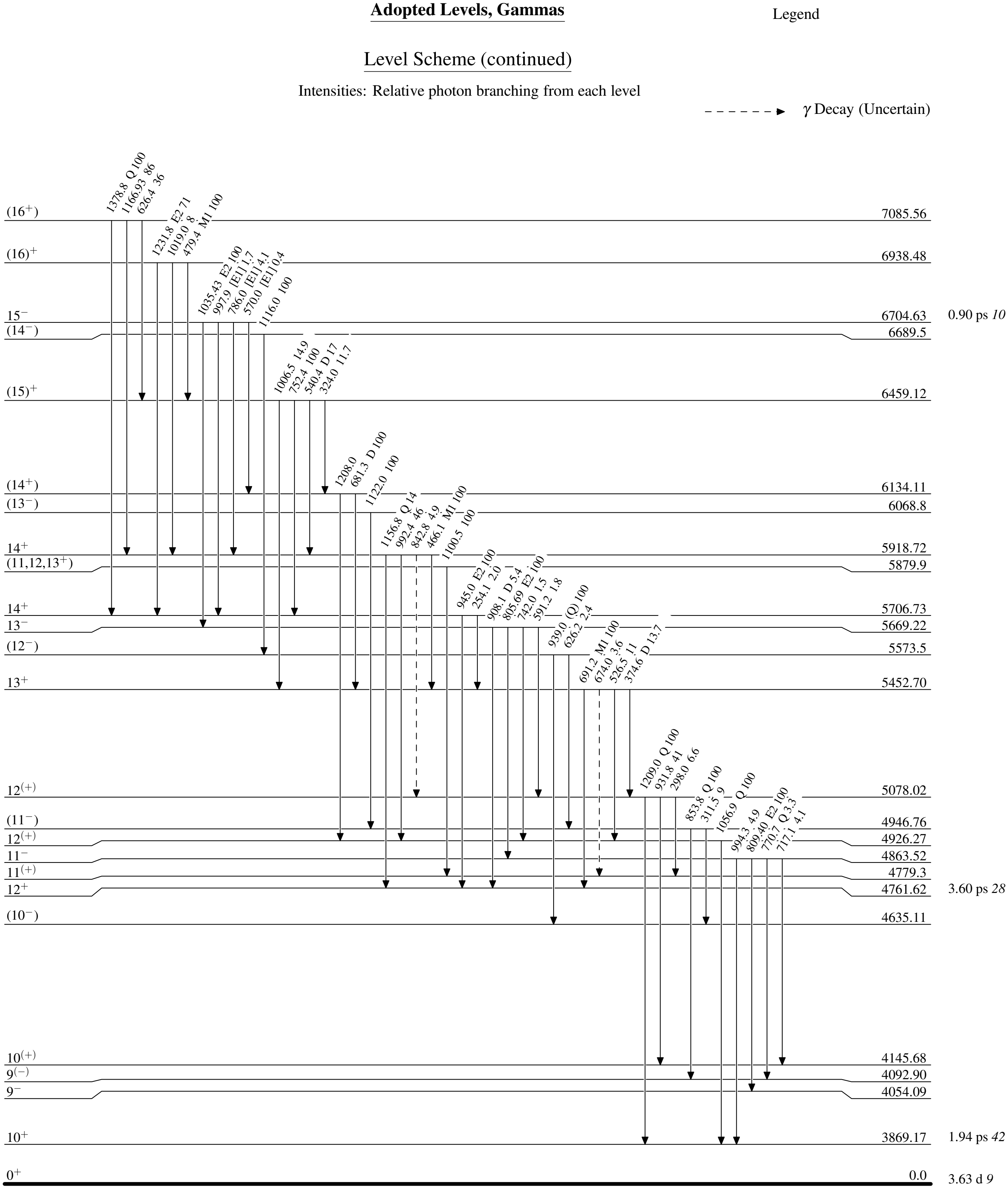


$^{100}_{46}Pd_{54}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

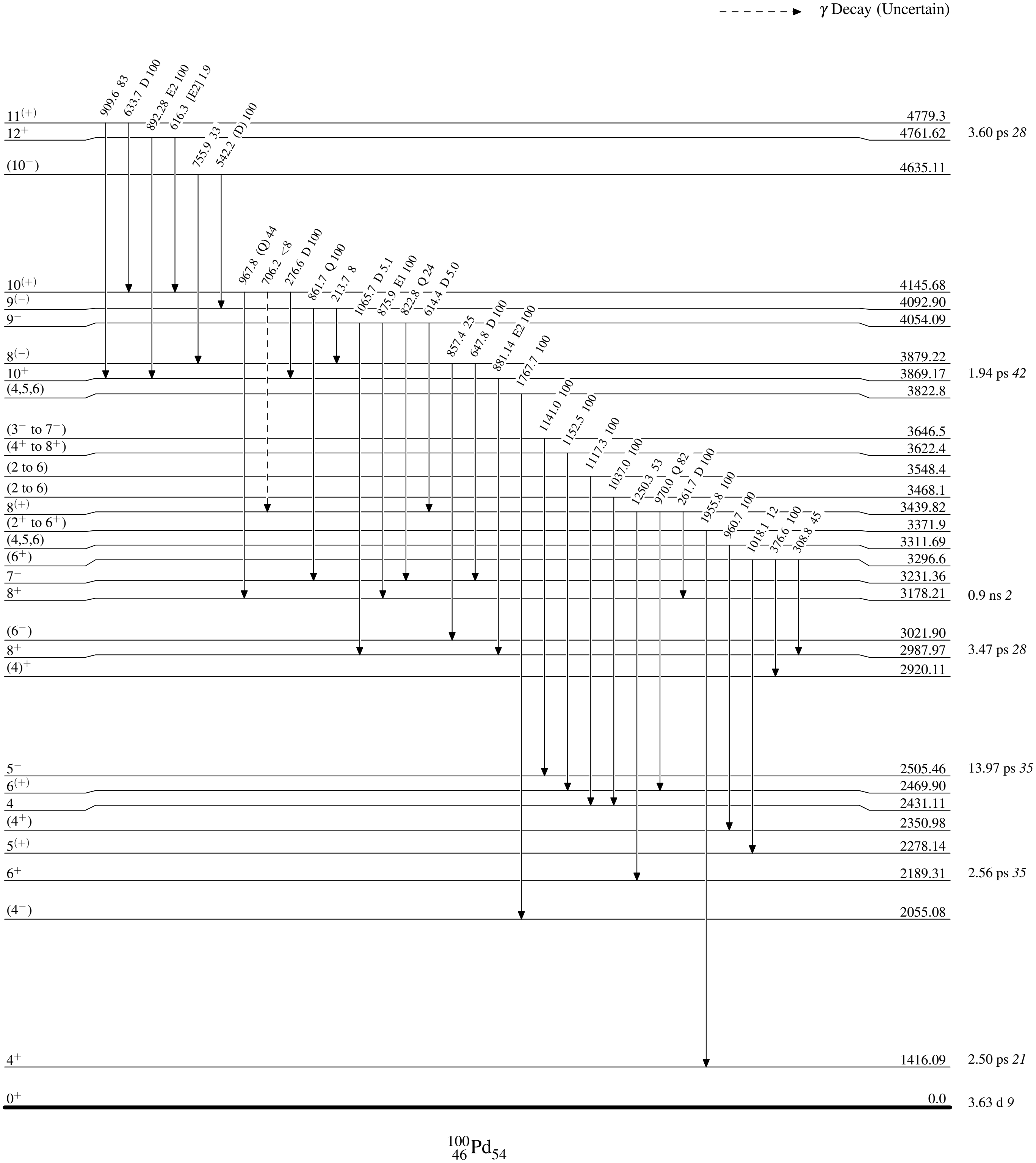


$^{100}_{46}Pd_{54}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



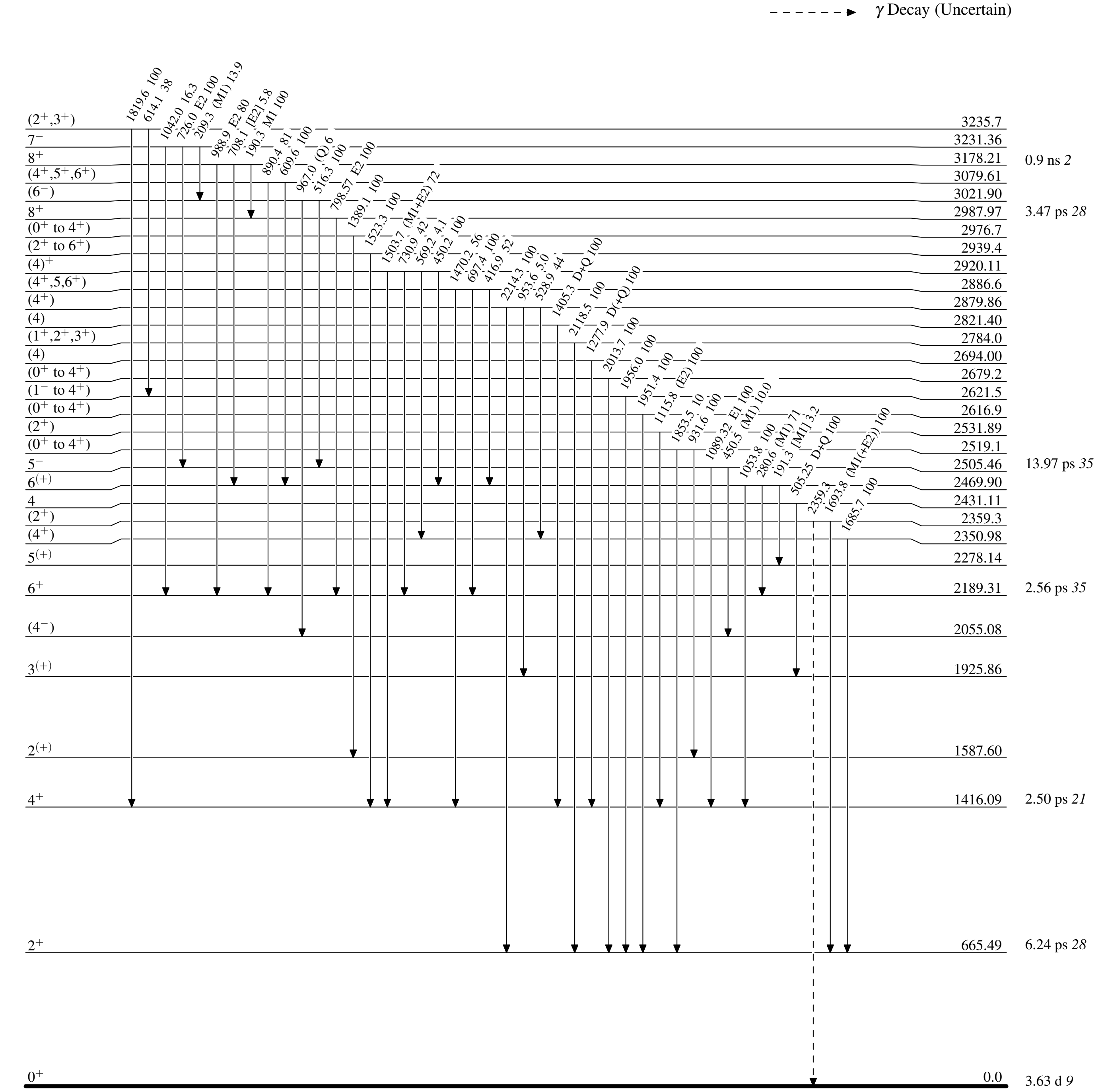
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

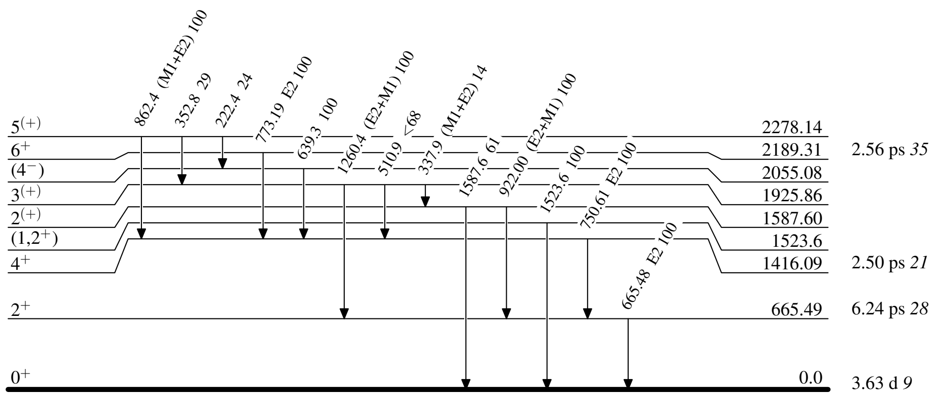


$^{100}_{46}Pd_{54}$

Adopted Levels, Gammas

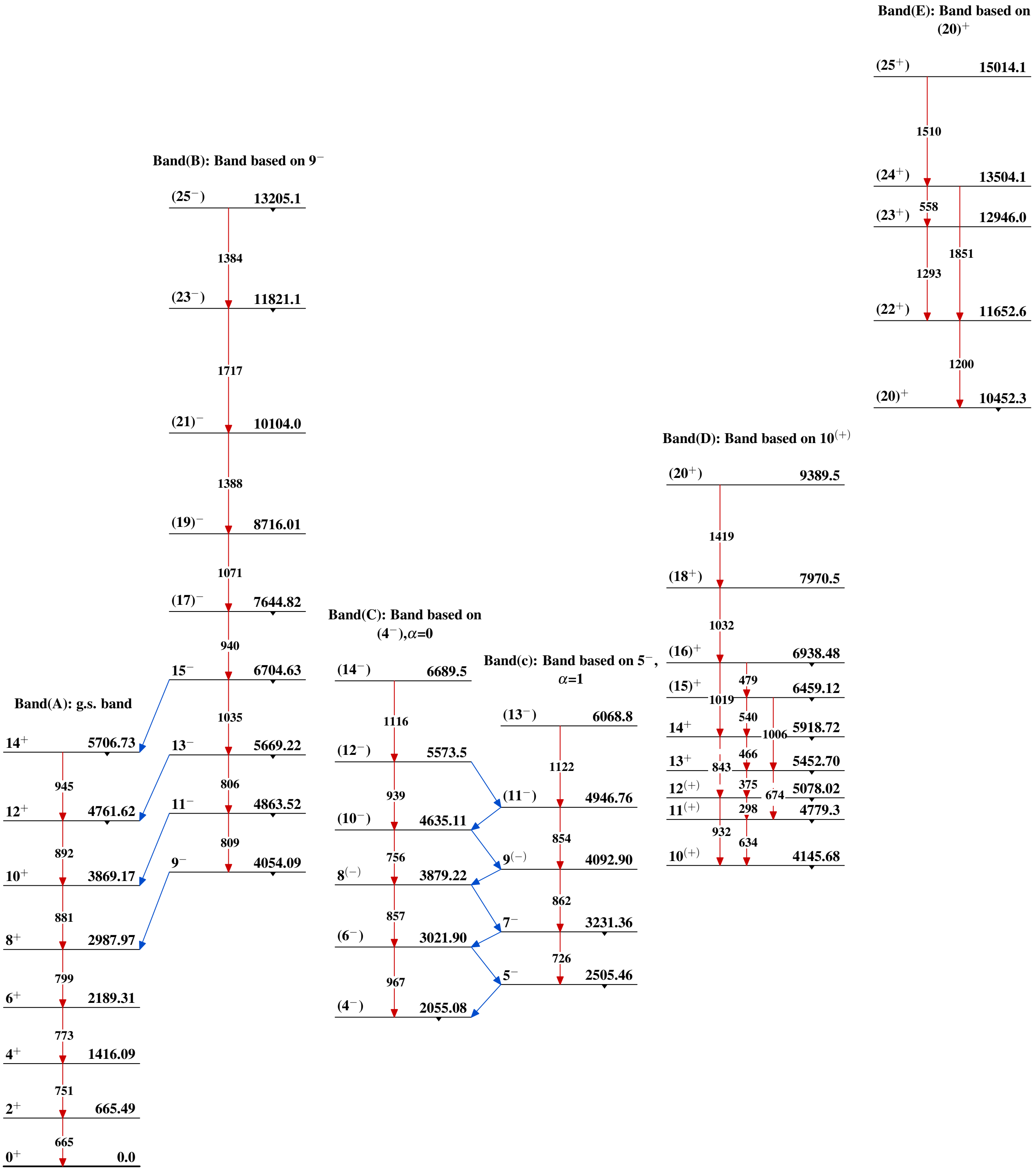
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{100}_{46}Pd_{54}$

Adopted Levels, Gammas



$^{100}_{46}Pd_{54}$

Adopted Levels, Gammas (continued)