Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 116,1 (2014)	31-Dec-2013

Q(β^-)=−4668 *20*; S(n)=12020 *19*; S(p)=4482 *19*; Q(α)=−4810 *20* 2012Wa38
S(2n)=21780 *27*, S(2p)=13349 *19* (2012Wa38).

^{85}Y produced and identified in 1952Ca29 which was later assigned to an isomer in ^{85}Y. 1949Ro03 may have observed ^{85}Y through a 3.7-h activity formed in deuteron bombardment of ^{84}Sr, but they assigned it incorrectly to ^{84}Y. Later decay measurements: 1977Ar04, 1975Ba49, 1976Li02; also several references listed with half-lives of ground state and isomer.

Mass measurement: 2006Ka48 (Penning-trap method).

Additional information 1.

Nuclear structure calculations: 1992Ta01, 1988Bu09, 1983Bu09, 1976Kr12.

^{85}Y Levels

Cross Reference (XREF) Flags

A	^{85}Zr ε decay (7.86 min)	E	^{84}Sr(p,γ)
B	^{85}Zr ε decay (10.9 s)	F	^{84}Sr(p,p) IAR
C	^{52}Cr(^{37}Cl,2p2nγ)	G	^{84}Sr(^{3}He,d)
D	^{72}Ge(^{16}O,p2nγ)		

E(level)[†]	J$^\pi$	T$_{1/2}$[#]	XREF	Comments
0.0[a]	(1/2)$^-$	2.68 h *5*	ABCDE G	%ε+%β^+=100 J$^\pi$: L(^{3}He,d)=1; systematics of odd-A Y isotopes. T$_{1/2\ 1/2}$: weighted average of 2.9 h *2* (1966Ho04), 2.55 h *10* (1965Ni02), and 2.68 h *5* (1963Do07). Others: 1963Bu06, 1962Ya02, 1962Pa02, 1962Ma44, 1949Ro03 (authors assigned the observed 3.7-h activity to ^{84}Y but it most likely belonged to ^{85}Y).
19.68[&] *17*	(9/2)$^+$	4.86 h *20*	A CDE G	%ε+%β^+=100; %IT<0.002 μ=6.2 *5* (1988Be46,2011StZZ) J$^\pi$: L(^{3}He,d)=4; comparison of μ with Schmidt values. T$_{1/2\ 1/2}$: weighted average of 4.7 h *2* (1966Ho04), 4.9 h *3* (1965Ni02), and 5.0 h *2* (1963Do07). Others: 1963Bu06, 1962Pa02, 1952Ca29. %IT: From RUL if J^π=9/2$^+$ and J^π(g.s.)=1/2$^-$. μ: low-temperature nuclear orientation (1988Be46).
266.18[a] *10*	(5/2)$^-$	178 ns *7*	A C E G	μ=+1.355 *22* (2000Io02,2011StZZ) J$^\pi$: L(^{3}He,d)=3; ΔJ=2, E2 γ to (1/2)$^-$; comparison of μ with Schmidt diagram values. T$_{1/2\ 1/2}$: weighted average of 176 ns *7* from ^{72}Ge(^{16}O,p2nγ) and 182 *10* from ε decay (7.86 min). μ: from g factor=+0.542 *9* (time-dependent PAD in external magnetic field in ^{85}Rb(^{3}He,3n) reaction (2000Io02). Other: +1.33 *8* (1982RaZY).
416.5 *3*	(3/2)$^-$		AB E G	XREF: A(?). J$^\pi$: L(^{3}He,d)=1; γ from 5/2$^+$.
435.95 *18*	(5/2)$^+$		A E G	J$^\pi$: L(^{3}He,d)=2; E2 γ to (9/2)$^+$.
473.89 *18*	(7/2)$^+$		A CD	J$^\pi$: ΔJ=1,M1 γ to (9/2)$^+$; probable allowed β feeding from (7/2$^+$), log *ft*=5.6.
636.79 *18*	(3/2)$^-$		A E G	J$^\pi$: L(^{3}He,d)=1; possible β feeding from (7/2$^+$).
752 *3*			E	
793.88 *20*	(≤9/2)		A E	J$^\pi$: γ to (5/2)$^+$.
803 *4*	3/2$^+$,5/2$^+$		G	J$^\pi$: L(^{3}He,d)=2.
814.66[&] *17*	(13/2)$^+$	2.36 ps *14*	A CD	J$^\pi$: ΔJ=2, E2 γ to (9/2)$^+$; band member.
883 *4*	3/2$^+$,5/2$^+$		G	J$^\pi$: L(^{3}He,d)=2.

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Adopted Levels, Gammas (continued)

^{85}Y Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$[#]	XREF	Comments
888.68[b] *14*	(7/2$^-$)		A C E	Jπ: ΔJ=1, dipole γ to (5/2)$^-$.
898.4 *3*			A	
930.20 *20*	(9/2$^+$)		A C	Jπ: ΔJ=1, dipole γ to (7/2)$^+$; ΔJ=0, dipole γ to (9/2)$^+$.
936[‡] *3*	1/2$^-$,3/2$^-$		E G	Jπ: L(^{3}He,d)=1.
965[‡] *3*	1/2$^-$,3/2$^-$		E G	Jπ: L(^{3}He,d)=1.
1010.42 *19*	(11/2$^-$)		A C	Jπ: ΔJ=1, dipole γ to (9/2)$^+$; log *ft*=7.5 (log $f^{1u}t$=8.8) from (7/2$^+$). Positive parity is tentatively suggested in (^{37}Cl,2p2nγ), but log *ft* value disfavors such an assignment.
1030.4 *5*	(5/2$^+$ to 13/2$^+$)		A	Jπ: γ to (9/2)$^+$.
1050.2 *4*	(5/2,7/2,9/2)		A	Jπ: log *ft*=7.9 from (7/2$^+$).
1140.17[a] *14*	(9/2$^-$)		A C	Jπ: ΔJ=2,Q γ to (5/2)$^-$; band member.
1163.7 *7*	(5/2,7/2,9/2)		A	Jπ: log *ft*=8.1 from (7/2$^+$).
1179.59 *18*	(11/2$^+$)		A CD	Jπ: ΔJ=2,Q γ to (7/2)$^+$; ΔJ=1,(M1+E2) gammas to (9/2)$^+$ and (13/2$^+$). Large differences in branching ratios of γ rays between the reaction and decay studies, the evaluators have adopted data from the reaction work.
1214[‡] *3*	1/2$^-$,3/2$^-$		E G	Jπ: L(^{3}He,d)=1.
1218.12 *19*	(5/2$^+$,7/2,9/2$^+$)		A	Jπ: probable β feeding from (7/2$^+$); gammas to (5/2)$^+$ and (9/2)$^+$. 5/2$^+$,7/2$^+$ is not likely if 208.0γ to (11/2$^-$) is confirmed.
1270.0 *3*	(1/2 to 7/2$^-$)		A	Jπ: γ to (3/2)$^-$.
1274.10 *23*	(5/2,7/2,9/2$^+$)		A	Jπ: probable β feeding from (7/2$^+$), log *ft*=5.9; gammas to (5/2)$^+$ and (7/2)$^+$.
1280[‡] *3*	3/2$^+$,5/2$^+$		E G	Jπ: L(^{3}He,d)=2.
1310.8 *3*	(5/2$^+$,7/2,9/2$^+$)		A	Jπ: probable β feeding from (7/2$^+$), log *ft*=6.6; gammas to (5/2)$^+$ and (9/2)$^+$.
1378[‡] *3*	1/2$^+$		E G	Jπ: L(^{3}He,d)=0.
1393.07 *23*	(5/2,7/2,9/2$^+$)		A E	Jπ: log *ft*=7.1, log $f^{1u}t$=8.3 from 7/2$^+$; γ to (5/2)$^+$.
1422.6 *4*			A g	Jπ: L(^{3}He,d)=2 for a 1428 *6* group suggests 3/2$^+$,5/2$^+$ for 1422.6 and/or 1433.
1433 *3*			E g	Jπ: see comment for 1422.6 level.
1461.8 *3*	(5/2$^+$ to 13/2$^+$)		A	Jπ: γ to (9/2)$^+$.
1514.1 *3*	(5/2$^+$,7/2,9/2)		A	Jπ: probable β feeding from (7/2$^+$), log *ft*=6.8; gammas to (7/2)$^+$ and (9/2)$^+$; possible γ to (5/2)$^+$.
1605 *3*	3/2$^+$,5/2$^+$		E G	Jπ: L(^{3}He,d)=2.
1627.39 *24*	(5/2$^+$,7/2,9/2$^+$)		A	Jπ: probable β feeding from (7/2$^+$), log *ft*=6.7; gammas to (5/2)$^+$ and (9/2)$^+$.
1648.51 *17*	(13/2$^+$)		CD	Jπ: ΔJ=2,Q γ to (9/2)$^+$; ΔJ=1,(M1+E2) γ to (11/2$^+$).
1676 *3*			E	
1706.3 *5*	(5/2$^+$,7/2,9/2$^+$)		A	Jπ: probable β feeding from (7/2$^+$), log *ft*=6.7; gammas to (5/2)$^+$ and (7/2)$^+$.
1724.2 *3*	5/2$^+$		A E G	XREF: G(1716). Jπ: L(^{3}He,d)=2; γ to (9/2$^+$).
1737.65[b] *17*	(11/2$^-$)		C	Jπ: ΔJ=2,Q γ to (7/2$^-$); ΔJ=1, dipole γ to (9/2$^-$); band member.
1772.3 *4*	7/2$^+$,9/2$^+$		A G	Jπ: L(^{3}He,d)=4.
1788.7 *7*			A	
1797.43[&] *17*	(17/2)$^+$	1.32 ps *14*	CD	Jπ: ΔJ=2,E2 γ to (13/2)$^+$.
1824.4 *4*	(5/2,7/2,9/2)		A E	Jπ: log *ft*=6.7 from (7/2$^+$).
1837 *6*	1/2$^+$		G	Jπ: L(^{3}He,d)=0.
1846 *3*			E	
1893.0 *4*	(7/2$^+$,9/2)		A	Jπ: probable β feeding from (7/2$^+$), log *ft*=6.7; gammas to (7/2)$^+$ and (11/2$^+$).
1896 *6*	1/2$^+$		G	Jπ: L(^{3}He,d)=0.

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Adopted Levels, Gammas (continued)

^{85}Y Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$[#]	XREF	Comments
1954.2 *4*	(5/2+,7/2,9/2+)		A E	Jπ: probable β feeding from (7/2+), log *ft*=6.7; gammas to (5/2)+ and (9/2)+.
1992 *6*	1/2−,3/2−		G	Jπ: L(^{3}He,d)=1.
2003 *3*			E	
2023 *3*			E	
2044.26[a] *15*	(13/2−)		C	Jπ: ΔJ=2,Q γ to (9/2−); band member.
2156 *6*	1/2+&3/2+,5/2+		G	E(level),Jπ: doublet: 1/2+ and 3/2+,5/2+ from L(^{3}He,d)=0+2.
2204.12 *19*	(5/2+)		A	Jπ: probable allowed β feeding from (7/2+), log *ft*=5.1; gammas to (3/2)− and (7/2)+.
2223 *6*	1/2+&3/2+,5/2+		G	E(level),Jπ: doublet: 1/2+ and 3/2+,5/2+ from L(^{3}He,d)=0+2.
2259.52 *18*	(17/2)+	3.05 ps *35*	CD	Jπ: ΔJ=2,E2 γ to (13/2)+; ΔJ=0, dipole γ to (17/2+).
2294.0 *4*	(5/2,7/2,9/2)		A	Jπ: log *ft*=6.4 from (7/2+).
2303.25[b] *16*	(15/2−)	11.1 ps *14*	CD	Jπ: ΔJ=1, dipole γ to (13/2)+; ΔJ=2,E2 γ to (11/2−).
2349.75 *22*	(7/2+,9/2+)		A	Jπ: probable allowed β feeding from (7/2+), log *ft*=5.5; gammas to (7/2)+ and (11/2+).
2411.3 *6*	(5/2,7/2,9/2)		A	Jπ: log *ft*=5.9 from (7/2+).
2427 *6*	3/2+,5/2+		G	Jπ: L(^{3}He,d)=2. E(level): see energy comment for 2429.4 level.
2429.43 *24*	(7/2+,9/2+)		A	Jπ: probable allowed β feeding from (7/2+), log *ft*=5.5; gammas to (7/2)+ and (11/2+). E(level): this level may be the same as 2427 populated in (^{3}He,d), if γ to (11/2+) is incorrectly assigned.
2472 *6*	1/2+		G	Jπ: L(^{3}He,d)=0.
2507.06[a] *17*	(17/2−)	11.1[@] ps *7*	CD	Jπ: ΔJ=1, dipole γ to (15/2−); band member.
2519 *6*	3/2+,5/2+		G	Jπ: L(^{3}He,d)=2.
2551 *6*	3/2+,5/2+		G	Jπ: L(^{3}He,d)=2.
2586.3 *4*	(7/2+,9/2)		A	Jπ: possible β feeding from (7/2+), log *ft*=5.9; gammas to (9/2+) and (11/2+).
2649.58[&] *19*	(21/2)+	4.02 ps *21*	CD	Jπ: ΔJ=2,E2 γ to (17/2)+; band member.
2660.4 *4*	(5/2+,7/2,9/2)		A	Jπ: log *ft*=5.9 from (7/2+); γ to (9/2+).
2745.72 *17*	(17/2−)		CD	Jπ: ΔJ=0, dipole γ to (17/2−).
2748 *6*	3/2+,5/2+		G	Jπ: L(^{3}He,d)=2.
2782.52 *18*	(17/2−)		C	Jπ: ΔJ=0, dipole γ to (17/2−).
2840 *6*	(1/2+)		G	Jπ: L(^{3}He,d)=(0).
2861.67 *25*	(17/2−)		C	Jπ: ΔJ=(2),Q γ to (13/2−).
2925.68[b] *17*	(19/2−)	5.1 ps *10*	CD	Jπ: ΔJ=2,E2 γ to (15/2−); ΔJ=1, dipole gammas to (17/2)+ and (21/2+); band member.
2939 *6*	3/2+,5/2+		G	Jπ: L(^{3}He,d)=2.
2990.30 *19*	(21/2+)	1.73[@] ps *35*	CD	Jπ: ΔJ=2,E2 γ to (17/2)+; ΔJ=1, dipole γ to (21/2+).
3018.85 *18*	(19/2−)		CD	Jπ: ΔJ=1, dipole γ to (17/2−).
3041 *6*	1/2+		G	Jπ: L(^{3}He,d)=0.
3110 *6*	1/2+		G	Jπ: L(^{3}He,d)=0.
3168 *6*	(1/2+)		G	Jπ: L(^{3}He,d)=(0).
3230 *6*	3/2+,5/2+		G	Jπ: L(^{3}He,d)=2.
3270 *6*	3/2+,5/2+		G	Jπ: L(^{3}He,d)=2.
3304.45[a] *17*	(21/2−)	1.39 ps *14*	CD	Jπ: ΔJ=2,E2 γ to (17/2−); ΔJ=1,(M1+E2) γ to (19/2−); band member.
3375 *6*	1/2+		G	Jπ: L(^{3}He,d)=0.
3391.35 *20*	(23/2+)	1.0 ps *4*	CD	Jπ: ΔJ=1,(M1+E2) γ to (21/2+).
3519.74 *19*	(21/2−)		C	Jπ: ΔJ=1, dipole γ to (19/2−).
3672.30[&] *20*	(25/2+)	2.4 ps *+3−7*	CD	Jπ: ΔJ=2,E2 γ to (21/2+); ΔJ=1,(M1+E2) γ to (23/2+); band member.

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Adopted Levels, Gammas (continued)

^{85}Y Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$[#]	XREF	Comments
3710.8? *4*			C	
4004.83[b] *18*	(23/2⁻)	<5.5[@] ps	CD	Jπ: ΔJ=2,E2 γ to (19/2⁻); ΔJ=1, dipole γ to (21/2⁻); band member.
4080.43 *21*	(25/2⁺)		CD	Jπ: ΔJ=2,Q γ to (21/2⁺); ΔJ=0, dipole γ to (25/2⁺).
4159.58 *25*	(25/2⁺)		C	Jπ: ΔJ=2,Q γ to (21/2⁺); ΔJ=1, dipole γ to (23/2⁺).
4361.13[a] *19*	(25/2⁻)	1.66[@] ps *14*	CD	Jπ: ΔJ=2,E2 γ to (21/2⁻); ΔJ=1,(M1+E2) γ to (23/2⁻).
4603.62 *21*	(27/2⁺)		CD	Jπ: ΔJ=1, dipole γ to (25/2⁺); γ to (23/2⁺).
4913.41[&] *21*	(29/2⁺)	0.69[@] ps *14*	CD	Jπ: ΔJ=2,E2 γ to (25/2⁺); ΔJ=1, dipole γ to (27/2⁺); band member.
5020.55[b] *21*	(27/2⁻)		CD	Jπ: ΔJ=1, dipole γ to (25/2⁻); band member.
5436.65[a] *22*	(29/2⁻)		CD	Jπ: ΔJ=2,Q γ to (25/2⁻); ΔJ=1, dipole γ to (27/2⁻); band member.
5448.4 *3*	(25/2⁺,27/2,29/2⁺)		C	Jπ: gammas to (25/2⁺) and (27/2⁺).
5619.19 *23*	(29/2⁻)		C	Jπ: ΔJ=1, dipole γ to (27/2⁻).
6045.80[b] *24*	(31/2⁻)		C	Jπ: ΔJ=1, dipole γ to (29/2⁻); band member.
6171.7 *3*	(31/2⁻)		C	Jπ: ΔJ=1, dipole γ to (29/2⁻).
6176.9 *3*	(31/2⁺)		C	Jπ: ΔJ=2,Q γ to (27/2⁺); ΔJ=1, dipole γ to (29/2⁺).
6359.9[&] *3*	(33/2⁺)		C	Jπ: ΔJ=2,Q γ to (29/2⁺); band member.
6377.42 *24*	(31/2⁻)		C	Jπ: dipole γ to (29/2⁻).
6638.75[a] *24*	(33/2⁻)		C	Jπ: ΔJ=1, dipole γ to (31/2⁻); band member.
6738.1 *4*	(33/2⁺)		C	Jπ: ΔJ=2,Q γ to (29/2⁺); ΔJ=0, dipole γ to (33/2⁺).
6969.4? *11*			C	
7261.7[b] *3*	(35/2⁻)		C	Jπ: ΔJ=1, dipole γ to (33/2⁻); band member.
8004.2[&] *4*	(37/2⁺)		C	Jπ: ΔJ=2,Q γ to (33/2⁺); band member.
8774 *24*	5/2⁺	28 keV *8*	F	Γ_p=1.7 keV *5* Jπ: L=2 in (p,p′); IAR of 1355, 5/2⁺ level in ^{85}Sr, confirmed by comparison of Γ_p with the spectroscopic factor of the parent level in ^{84}Sr(d,p).
8811 *24*	1/2⁺	22 keV *5*	F	Γ_p=10 keV *2* Jπ: L=0 in (p,p′); IAR of 1403, 1/2⁺ level in ^{85}Sr.
9220 *24*	3/2⁺,5/2⁺	23 keV *8*	F	Jπ: L=2 in (p,p′); IAR of 1793, 3/2⁺,5/2⁺ level in ^{85}Sr.
9282 *24*	1/2⁺	15 keV *5*	F	Γ_p=1.4 keV *6* Jπ: L=0 in (p,p′); IAR of 1842, 1/2⁺ level in ^{85}Sr.
9473.9[&] *7*	(41/2⁺)		C	Jπ: ΔJ=2,Q γ to (37/2⁺); band member.
9750 *24*	(5/2)⁺	32 keV *10*	F	Γ_p=1.8 keV *5* Jπ: L=2 in (p,p′); IAR of 2325, (5/2)⁺ level in ^{85}Sr confirmed by comparison of Γ_p with the spectroscopic factor of the parent level in ^{84}Sr(d,p).
9938 *24*	1/2⁺	19 keV *5*	F	Γ_p=4.5 keV *10* Jπ: L=0 in (p,p′); IAR of 2496, 1/2⁺ level in ^{85}Sr.
9964 *24*	3/2⁺,5/2⁺	20 keV *4*	F	Jπ: L=2 in (p,p′); IAR of 2527, 3/2⁺,5/2⁺ level in ^{85}Sr.
9990.7? *11*			C	
10033 *24*	1/2⁺	16 keV *5*	F	Γ_p=4.0 keV *10* Jπ: L=0 in (p,p′); IAR of 2602, 1/2⁺ level in ^{85}Sr.
10180 *24*	1/2⁺	19 keV *3*	F	Γ_p=7.6 keV *10* Jπ: L=0 in (p,p′); IAR of 2748, 1/2⁺ level in ^{85}Sr.
10501 *24*	1/2⁺	54 keV *6*	F	Γ_p=15 keV *3* Jπ: L=0 in (p,p′).
10619 *24*			F	
10730 *24*	1/2⁺	25 keV *5*	F	Γ_p=9.6 keV *16* Jπ: L=0 in (p,p′); IAR of 3301, 1/2⁺ level in ^{85}Sr.
10894 *24*	1/2⁺	30 keV *6*	F	Γ_p=7.5 keV *10*

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Adopted Levels, Gammas (continued)

^{85}Y Levels (continued)

E(level)[†]	J^π	$T_{1/2}$[#]	XREF	Comments
				J^π: L=0 in (p,p′); IAR of 3455, $1/2^+$ level in ^{85}Sr.
11029 *24*	$1/2^+$	22 keV *4*	F	Γ_p=10.0 keV *18*
				J^π: L=0 in (p,p′); IAR of 3582, $1/2^+$ level in ^{85}Sr.
11082 *24*	$1/2^+$	25 keV *5*	F	Γ_p=7.0 keV *16*
				J^π: L=0 in (p,p′).
11099.3?[&] *14*			C	

[†] From least-squares fit to Eγ data.
[‡] Weighted average from (p,γ) and (^{3}He,d).
[#] Half-lives are from DSAM and recoil-distance method in ^{72}Ge(^{16}O,p2nγ) unless indicated otherwise. The widths are from ^{84}Sr(p,p) IAR.
[@] Upper limit since it is an effective half-life, not corrected for side feedings.
[&] Band(A): $g_{9/2}$ band, α=+1/2. Band crossing near spin 21/2 due to alignment of a pair of $g_{9/2}$ neutrons as suggested by systematics of N=46 isotopes.
[a] Band(B): Band based on $1/2^-$,α=+1/2.
[b] Band(b): Band based on $7/2^{(-)}$,α=−1/2.

Adopted Levels, Gammas (continued)

$\gamma(^{85}Y)$

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[a]	Comments
266.18	$(5/2)^-$	266.2 *1*	100	0.0	$(1/2)^-$	E2[&]		0.0309	α(K)=0.0269 *4*; α(L)=0.00334 *5*; α(M)=0.000570 *8*; α(N)=7.45×10^{-5} *11*; α(O)=4.44×10^{-6} *7* B(E2)(W.u.)=0.104 *4*
416.5	$(3/2)^-$	416.5 *3*	100	0.0	$(1/2)^-$				
435.95	$(5/2)^+$	416.3 *1*	100	19.68	$(9/2)^+$	E2[&]		0.00692 *10*	α(K)=0.00607 *9*; α(L)=0.000711 *10*; α(M)=0.0001214 *17* α(N)=1.607×10^{-5} *23*; α(O)=1.030×10^{-6} *15*
473.89	$(7/2)^+$	454.23 *10*	100	19.68	$(9/2)^+$	M1		0.00363 *5*	α(K)=0.00321 *5*; α(L)=0.000355 *5*; α(M)=6.06×10^{-5} *9* α(N)=8.16×10^{-6} *12*; α(O)=5.70×10^{-7} *8* Mult.: ce data in ^{85}Zr ε decay (7.86 min) suggest M1,E2; but $\gamma(\theta)$ in (^{37}Cl,2p2nγ) consistent with dipole.
636.79	$(3/2)^-$	636.7 *2*	100	0.0	$(1/2)^-$				
793.88	$(\leq 9/2)$	319.9 *6*	16 *6*	473.89	$(7/2)^+$				
		358.0 *1*	100 *10*	435.95	$(5/2)^+$				
		774.7[d] *4*	<6	19.68	$(9/2)^+$				
814.66	$(13/2)^+$	795.00 *5*	100	19.68	$(9/2)^+$	E2			B(E2)(W.u.)=34.0 *21*
888.68	$(7/2^-)$	416.0[d]		473.89	$(7/2)^+$				
		622.5 *1*	100 *20*	266.18	$(5/2)^-$	D			
898.4		462.5 *2*	100	435.95	$(5/2)^+$				
930.20	$(9/2^+)$	456.4 *2*	24 *10*	473.89	$(7/2)^+$	D			
		910.6 *2*	100 *9*	19.68	$(9/2)^+$	D[#]			
1010.42	$(11/2^-)$	536.0[d] *4*	<15	473.89	$(7/2)^+$				E_γ: from β^- decay only.
		990.9 *2*	100 *8*	19.68	$(9/2)^+$	D			
1030.4	$(5/2^+$ to $13/2^+)$	1010.0 *8*	100	19.68	$(9/2)^+$				
1050.2	(5/2,7/2,9/2)	576.3 *3*	100	473.89	$(7/2)^+$				
1140.17	$(9/2^-)$	874.0 *1*	100	266.18	$(5/2)^-$	Q			
1163.7	(5/2,7/2,9/2)	689.8[b] *6*		473.89	$(7/2)^+$				
1179.59	$(11/2^+)$	364.8 *2*	113 *9*	814.66	$(13/2)^+$	(M1+E2)	+0.25 *8*	0.00642 *20*	α(K)=0.00566 *18*; α(L)=0.000634 *22*; α(M)=0.000108 *4* α(N)=1.45×10^{-5} *5*; α(O)=1.00×10^{-6} *3* I_γ: from (^{37}Cl,2p2nγ). Other: 70 *4* in (^{16}O,p2nγ).
		705.8 *2*	37 *4*	473.89	$(7/2)^+$	Q			I_γ: 250 *50* in β^- decay not used since 1180 level weakly populated.
		1159.8 *1*	100 *4*	19.68	$(9/2)^+$	(M1+E2)	−0.9 *3*		
1218.12	$(5/2^+,7/2,9/2^+)$	208.0[d] *4*	<1.8	1010.42	$(11/2^-)$				
		287.8 *2*	8.3 *18*	930.20	$(9/2^+)$				
		744.2 *2*	6.4 *9*	473.89	$(7/2)^+$				

$^{85}_{39}Y_{46}$-6

Adopted Levels, Gammas (continued)

γ(^{85}Y) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[a]	Comments
1218.12	(5/2$^+$,7/2,9/2$^+$)	782.2 *2*	37 *3*	435.95	(5/2)$^+$				
		1198.4 *2*	100 *7*	19.68	(9/2)$^+$				
1270.0	(1/2 to 7/2$^-$)	633.0 *3*		636.79	(3/2)$^-$				
		854.0[d]		416.5	(3/2)$^-$				
1274.10	(5/2,7/2,9/2$^+$)	480.5 *2*	27 *5*	793.88	(≤9/2)				
		800.0 *2*	100 *23*	473.89	(7/2)$^+$				
		837.4 *6*	32 *5*	435.95	(5/2)$^+$				
1310.8	(5/2$^+$,7/2,9/2$^+$)	836.7 *3*	100 *13*	473.89	(7/2)$^+$				
		874.5 *4*	30 *7*	435.95	(5/2)$^+$				
		1291.1 *5*	63 *7*	19.68	(9/2)$^+$				
1393.07	(5/2,7/2,9/2$^+$)	599.1 *4*	<13	793.88	(≤9/2)				
		957.3 *3*	100 *13*	435.95	(5/2)$^+$				
1422.6		948.9 *5*	100	473.89	(7/2)$^+$				
1461.8	(5/2$^+$ to 13/2$^+$)	531.6 *2*	100	930.20	(9/2$^+$)				
1514.1	(5/2$^+$,7/2,9/2)	1039.8 *7*	56 *11*	473.89	(7/2)$^+$				
		1078.1 *6*	<22	435.95	(5/2)$^+$				
		1494.3 *3*	100 *22*	19.68	(9/2)$^+$				
1627.39	(5/2$^+$,7/2,9/2$^+$)	697.0 *7*	29 *14*	930.20	(9/2$^+$)				
		1153.4 *3*	100 *14*	473.89	(7/2)$^+$				
		1191.3 *3*	100 *14*	435.95	(5/2)$^+$				
		1607.6[d]		19.68	(9/2)$^+$				
1648.51	(13/2$^+$)	468.88 *7*	160 *12*	1179.59	(11/2$^+$)	(M1+E2)	−0.12 *5*	0.00339 *6*	α(K)=0.00299 *5*; α(L)=0.000331 *6*; α(M)=5.66×10^{-5} *9* α(N)=7.61×10^{-6} *12*; α(O)=5.32×10^{-7} *8* I_γ: from (^{37}Cl,2p2nγ). Other: 78 *3* in (^{16}O,p2nγ).
		638.1 *1*	70 *4*	1010.42	(11/2$^-$)	D			
		718.2 *3*	44 *4*	930.20	(9/2$^+$)	Q			
		833.97 *8*	100 *5*	814.66	(13/2)$^+$	D[#]			I_γ: from (^{37}Cl,2p2nγ). Other: 128 *9* in (^{16}O,p2nγ).
		1628.6 *2*	36.1 *25*	19.68	(9/2)$^+$	Q			
1706.3	(5/2$^+$,7/2,9/2$^+$)	1233.0 *13*	43 *14*	473.89	(7/2)$^+$				
		1270.3 *5*	100 *14*	435.95	(5/2)$^+$				
1724.2	5/2$^+$	454.0		1270.0	(1/2 to 7/2$^-$)				
		794.0[c] *2*	100[c] *43*	930.20	(9/2$^+$)				
		1249.5[cd] *6*	36[c] *21*	473.89	(7/2)$^+$				
1737.65	(11/2$^-$)	597.4 *4*	31 *8*	1140.17	(9/2$^-$)	D			
		849.0 *2*	100 *6*	888.68	(7/2$^-$)	Q			
1772.3	7/2$^+$,9/2$^+$	761.9[c] *4*	100[c] *50*	1010.42	(11/2$^-$)				
		1298.0 *9*	<100	473.89	(7/2)$^+$				

$^{85}_{39}Y_{46}$-7

Adopted Levels, Gammas (continued)

γ(^{85}Y) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[a]	Comments
1788.7		1315.0[b] *9*		473.89	$(7/2)^+$			
1797.43	$(17/2)^+$	982.81 *5*	100	814.66	$(13/2)^+$	E2		B(E2)(W.u.)=21.1 *23*
1824.4	(5/2,7/2,9/2)	794.0[c] *2*	100[c]	1030.4	$(5/2^+$ to $13/2^+)$			
1893.0	$(7/2^+,9/2)$	712.9 *6*	100 *25*	1179.59	$(11/2^+)$			
		1419.3[c] *4*	75[c] *25*	473.89	$(7/2)^+$			
1954.2	$(5/2^+,7/2,9/2^+)$	531.6 *2*	20 *10*	1422.6				
		1518.0 *5*	100 *20*	435.95	$(5/2)^+$			
		1934.1[d] *5*	220 *20*	19.68	$(9/2)^+$			
2044.26	$(13/2^-)$	904.1 *1*	100	1140.17	$(9/2^-)$	Q		
2204.12	$(5/2^+)$	689.8[b] *6*	<4	1514.1	$(5/2^+,7/2,9/2)$			
		781.5 *6*	<2	1422.6				
		811.1 *2*	21.7 *22*	1393.07	$(5/2,7/2,9/2^+)$			
		892.7 *6*	<4	1310.8	$(5/2^+,7/2,9/2^+)$			
		933.9 *3*	10.9 *22*	1270.0	$(1/2$ to $7/2^-)$			
		986.6 *5*	10.9 *22*	1218.12	$(5/2^+,7/2,9/2^+)$			
		1315.0[b] *9*	<4	888.68	$(7/2^-)$			
		1410.2 *3*	59 *4*	793.88	$(\leq 9/2)$			
		1567.4 *5*	26 *4*	636.79	$(3/2)^-$			
		1730.2[c] *3*	21[c] *3*	473.89	$(7/2)^+$			
		1768.2 *2*	100 *7*	435.95	$(5/2)^+$			
		1938.1 *5*	34.8 *22*	266.18	$(5/2)^-$			
2259.52	$(17/2)^+$	462.18 *11*	34.4 *24*	1797.43	$(17/2)^+$	(M1)[#@]	0.00349 *5*	α(K)=0.00308 *5*; α(L)=0.000340 *5*; α(M)=5.82×10^{-5} *9* α(N)=7.83×10^{-6} *11*; α(O)=5.47×10^{-7} *8* B(M1)(W.u.)=0.019 *3*
		1444.7 *1*	100 *6*	814.66	$(13/2)^+$	E2		B(E2)(W.u.)=0.99 *14*
2294.0	(5/2,7/2,9/2)	667.0[d] *6*	<44	1627.39	$(5/2^+,7/2,9/2^+)$			
		901.0 *6*	<44	1393.07	$(5/2,7/2,9/2^+)$			
		1500.1[c] *3*	100[c] *33*	793.88	$(\leq 9/2)$			
2303.25	$(15/2^-)$	259.0 *1*	42 *4*	2044.26	$(13/2^-)$	(M1)[@]	0.01444	α(K)=0.01273 *18*; α(L)=0.001430 *20*; α(M)=0.000245 *4* α(N)=3.29×10^{-5} *5*; α(O)=2.28×10^{-6} *4* B(M1)(W.u.)=0.024 *4*
		565.6 *1*	15.0 *21*	1737.65	$(11/2^-)$	E2	0.00273 *4*	α(K)=0.00240 *4*; α(L)=0.000274 *4*; α(M)=4.68×10^{-5} *7* α(N)=6.23×10^{-6} *9*; α(O)=4.13×10^{-7} *6* B(E2)(W.u.)=3.0 *6*
		654.78 *11*	100.0 *25*	1648.51	$(13/2^+)$	(E1)[@]		B(E1)(W.u.)=5.6×10^{-5} *8*
		1488.5 *1*	41.3 *17*	814.66	$(13/2)^+$	(E1)[@]		B(E1)(W.u.)=2.0×10^{-6} *3* I_γ: from (^{37}Cl,2p2nγ). Other: 65.6 *20* in (^{16}O,p2nγ).
2349.75	$(7/2^+,9/2^+)$	722.1 *3*	27 *7*	1627.39	$(5/2^+,7/2,9/2^+)$			
		1131.7 *7*	100 *13*	1218.12	$(5/2^+,7/2,9/2^+)$			

$^{85}_{39}Y_{46}$-8

Adopted Levels, Gammas (continued)

γ(^{85}Y) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α[a]	Comments
2349.75	(7/2$^+$,9/2$^+$)	1170.1 *2*	53 *7*	1179.59	(11/2$^+$)			
		1339.5 *4*	33 *13*	1010.42	(11/2$^-$)			
		1419.3[c] *4*	20[c] *7*	930.20	(9/2$^+$)			
		1876.2 *3*	67 *7*	473.89	(7/2)$^+$			
2411.3	(5/2,7/2,9/2)	622.6 *3*	45 *9*	1788.7				
		1137.1 *7*	100 *9*	1274.10	(5/2,7/2,9/2$^+$)			
2429.43	(7/2$^+$,9/2$^+$)	604.8 *5*	<20	1824.4	(5/2,7/2,9/2)			
		914.9 *5*	30 *10*	1514.1	(5/2$^+$,7/2,9/2)			
		1118.1 *5*	80 *10*	1310.8	(5/2$^+$,7/2,9/2$^+$)			
		1210.9 *3*	70 *20*	1218.12	(5/2$^+$,7/2,9/2$^+$)			
		1249.5[c] *6*	25[c] *15*	1179.59	(11/2$^+$)			
		1289.2 *10*	<20	1140.17	(9/2$^-$)			
		1500.1[c] *3*	45[c] *15*	930.20	(9/2$^+$)			
		1955.6 *5*	100 *10*	473.89	(7/2)$^+$			
2507.06	(17/2$^-$)	203.82 *5*	100	2303.25	(15/2$^-$)	(M1)[@]	0.0267	α(K)=0.0235 *4*; α(L)=0.00266 *4*; α(M)=0.000456 *7* α(N)=6.12×10^{-5} *9*; α(O)=4.22×10^{-6} *6* B(M1)(W.u.)=0.228 *15*
2586.3	(7/2$^+$,9/2)	761.9[c] *4*	29[c] *14*	1824.4	(5/2,7/2,9/2)			
		814.0 *6*	<29	1772.3	7/2$^+$,9/2$^+$			
		1124.4 *7*	100 *14*	1461.8	(5/2$^+$ to 13/2$^+$)			
		1406.6[d]		1179.59	(11/2$^+$)			
		1656.6		930.20	(9/2$^+$)			
2649.58	(21/2)$^+$	852.03 *14*	100	1797.43	(17/2)$^+$	E2		B(E2)(W.u.)=14.1 *8*
2660.4	(5/2$^+$,7/2,9/2)	1730.2[c] *3*	100[c]	930.20	(9/2$^+$)			
2745.72	(17/2$^-$)	238.67 *6*	100	2507.06	(17/2$^-$)	D[#]		
2782.52	(17/2$^-$)	275.5 *1*	100	2507.06	(17/2$^-$)	D[#]		
2861.67	(17/2$^-$)	817.4 *2*	100	2044.26	(13/2$^-$)	(Q)		
2925.68	(19/2$^-$)	143.2 *1*	24.6 *8*	2782.52	(17/2$^-$)	(M1)[@]	0.0680	α(K)=0.0599 *9*; α(L)=0.00684 *10*; α(M)=0.001172 *17* α(N)=0.0001571 *23*; α(O)=1.075×10^{-5} *16* B(M1)(W.u.)=0.14 *3* Branching ratios of all γ rays from 2925.6 level are from (^{37}Cl,2p2nγ). Values in (^{16}O,p2nγ) are incomplete.
		180.0 *1*	9.6 *4*	2745.72	(17/2$^-$)	(M1)[@]	0.0370	α(K)=0.0326 *5*; α(L)=0.00370 *6*; α(M)=0.000633 *9* α(N)=8.50×10^{-5} *12*; α(O)=5.84×10^{-6} *9* B(M1)(W.u.)=0.027 *6*
		275.70 *19*	27 *5*	2649.58	(21/2)$^+$	(E1)[@]	0.00574 *9*	α(K)=0.00507 *8*; α(L)=0.000557 *8*; α(M)=9.48×10^{-5} *14* α(N)=1.266×10^{-5} *18*; α(O)=8.55×10^{-7} *12* B(E1)(W.u.)=0.00034 *10*

$^{85}_{39}Y_{46}$-9

Adopted Levels, Gammas (continued)

γ(^{85}Y) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[a]	Comments
									Iγ(275.7)/Iγ(1128.6)=0.52 *3* in (^{16}O,p2nγ) is in disagreement.
2925.68	(19/2$^-$)	418.7 *5*	5.4 *15*	2507.06	(17/2$^-$)	[M1]		0.00441 *7*	α(K)=0.00390 *6*; α(L)=0.000432 *7*; α(M)=7.38×10^{-5} *11* α(N)=9.93×10^{-6} *15*; α(O)=6.93×10^{-7} *10* B(M1)(W.u.)=0.0012 *5*
		622.4 *1*	100 *8*	2303.25	(15/2$^-$)	E2		0.00208 *3*	α(K)=0.00183 *3*; α(L)=0.000208 *3*; α(M)=3.54×10^{-5} *5* α(N)=4.73×10^{-6} *7*; α(O)=3.16×10^{-7} *5* B(E2)(W.u.)=21 *5*
		666.1 *1*	63 *3*	2259.52	(17/2)$^+$	(E1)[@]			B(E1)(W.u.)=5.7×10^{-5} *12*
		1128.61 *14*	26.9 *23*	1797.43	(17/2)$^+$	(E1)[@]			B(E1)(W.u.)=5.0×10^{-6} *11*
2990.30	(21/2$^+$)	340.8 *1*	35.8 *21*	2649.58	(21/2)$^+$	(M1)[@]		0.00728 *11*	α(K)=0.00642 *9*; α(L)=0.000715 *10*; α(M)=0.0001223 *18* α(N)=1.645×10^{-5} *23*; α(O)=1.144×10^{-6} *16* B(M1)(W.u.)=0.085 *18*
		1192.8 *1*	100 *4*	1797.43	(17/2)$^+$	E2			B(E2)(W.u.)=4.5 *10*
3018.85	(19/2$^-$)	273.1 *1*	75.3 *24*	2745.72	(17/2$^-$)	D			
		511.8 *1*	100 *4*	2507.06	(17/2$^-$)	D			
3304.45	(21/2$^-$)	285.6 *1*	23.0 *9*	3018.85	(19/2$^-$)	(M1)[@]		0.01129	α(K)=0.00995 *14*; α(L)=0.001115 *16*; α(M)=0.000191 *3* α(N)=2.56×10^{-5} *4*; α(O)=1.777×10^{-6} *25* B(M1)(W.u.)=0.089 *10*
		378.72 *7*	100 *3*	2925.68	(19/2$^-$)	(M1+E2)	−0.2 *1*	0.00577 *19*	α(K)=0.00509 *16*; α(L)=0.000568 *21*; α(M)=9.7×10^{-5} *4* α(N)=1.30×10^{-5} *5*; α(O)=9.0×10^{-7} *3* B(M1)(W.u.)=0.160 *19*; B(E2)(W.u.)=50 *50*
		797.35 *8*	52 *3*	2507.06	(17/2$^-$)	E2			B(E2)(W.u.)=16.9 *20*
3391.35	(23/2$^+$)	401.1 *1*	14.5 *9*	2990.30	(21/2$^+$)	(M1)[@]		0.00489 *7*	α(K)=0.00432 *6*; α(L)=0.000479 *7*; α(M)=8.19×10^{-5} *12* α(N)=1.102×10^{-5} *16*; α(O)=7.69×10^{-7} *11* B(M1)(W.u.)=0.043 *18*
		741.7 *1*	100 *5*	2649.58	(21/2)$^+$	(M1+E2)	−1.4 *11*		B(M1)(W.u.)=0.016 *+18−16*; B(E2)(W.u.)=70 *50*
3519.74	(21/2$^-$)	500.9 *1*	100	3018.85	(19/2$^-$)	D			
3672.30	(25/2$^+$)	280.9 *1*	100 *6*	3391.35	(23/2$^+$)	(M1+E2)	−0.16 *10*	0.0121 *6*	α(K)=0.0107 *5*; α(L)=0.00120 *7*; α(M)=0.000206 *11* α(N)=2.76×10^{-5} *14*; α(O)=1.90×10^{-6} *8* B(M1)(W.u.)=0.24 *+8−4*; B(E2)(W.u.)=90 *+120−90*
		1022.75 *10*	65 *6*	2649.58	(21/2)$^+$	E2			B(E2)(W.u.)=3.7 *+12−6*
3710.8?		849.1[d] *2*	100	2861.67	(17/2$^-$)				I_γ: from (^{37}Cl,2p2nγ). Other: 181 *6* in (^{16}O,p2nγ).
4004.83	(23/2$^-$)	485.1 *2*	17.5 *6*	3519.74	(21/2$^-$)	(M1)[@]		0.00311 *5*	α(K)=0.00275 *4*; α(L)=0.000303 *5*; α(M)=5.18×10^{-5} *8* α(N)=6.98×10^{-6} *10*; α(O)=4.88×10^{-7} *7* B(M1)(W.u.)>0.0039
		700.3 *1*	41 *3*	3304.45	(21/2$^-$)	(M1)[@]			B(M1)(W.u.)>0.0030
		1079.3 *1*	100 *6*	2925.68	(19/2$^-$)	E2			B(E2)(W.u.)>2.0

$^{85}_{39}Y_{46}$-10

Adopted Levels, Gammas (continued)

γ(^{85}Y) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[‡]	α[a]	Comments
4080.43	(25/2$^+$)	408.2 *3*	13.6 *17*	3672.30	(25/2$^+$)	D[#]			
		689.1 *1*	34 *3*	3391.35	(23/2$^+$)				
		1089.7 *5*	100 *5*	2990.30	(21/2$^+$)	Q			
4159.58	(25/2$^+$)	487.3 *2*	77 *7*	3672.30	(25/2$^+$)	D[#]			
		768.2 *3*	100 *10*	3391.35	(23/2$^+$)	D			
		1509.9 *5*	80 *10*	2649.58	(21/2)$^+$	Q			
4361.13	(25/2$^-$)	356.4 *1*	58 *5*	4004.83	(23/2$^-$)	(M1+E2)	−0.2 *1*	0.00671 *24*	α(K)=0.00592 *21*; α(L)=0.00066 *3*; α(M)=0.000113 *5* α(N)=1.52×10^{-5} *6*; α(O)=1.05×10^{-6} *4* B(M1)(W.u.)=0.103 *14*; B(E2)(W.u.)=40 *40* I_γ: from (^{37}Cl,2p2nγ). Other: 29 *2* in (^{16}O,p2nγ).
		1056.45 *15*	100 *4*	3304.45	(21/2$^-$)	E2			B(E2)(W.u.)=7.4 *8*
4603.62	(27/2$^+$)	523.2 *1*	97 *4*	4080.43	(25/2$^+$)	D			E_γ: other: 522.3 *1* in (^{16}O,p2nγ).
		931.4 *1*	100 *4*	3672.30	(25/2$^+$)	D			
		1212.3 *5*	26 *3*	3391.35	(23/2$^+$)				
4913.41	(29/2$^+$)	309.9 *1*	47.3 *18*	4603.62	(27/2$^+$)	(M1)[@]		0.00920 *13*	α(K)=0.00812 *12*; α(L)=0.000907 *13*; α(M)=0.0001552 *22* α(N)=2.09×10^{-5} *3*; α(O)=1.448×10^{-6} *21* B(M1)(W.u.)=0.34 *8*
		1241.0 *1*	100 *9*	3672.30	(25/2$^+$)	E2			B(E2)(W.u.)=8.5 *20*
5020.55	(27/2$^-$)	659.5 *1*	100	4361.13	(25/2$^-$)	D			
5436.65	(29/2$^-$)	416.2 *1*	100 *5*	5020.55	(27/2$^-$)	D			
		1075.2 *2*	81 *5*	4361.13	(25/2$^-$)	Q			
5448.4	(25/2$^+$,27/2,29/2$^+$)	844.7[d] *2*	57 *29*	4603.62	(27/2$^+$)				
		1288.8 *1*	100 *29*	4159.58	(25/2$^+$)				
5619.19	(29/2$^-$)	598.6 *1*	100	5020.55	(27/2$^-$)	D			
6045.80	(31/2$^-$)	609.2 *1*	100	5436.65	(29/2$^-$)	D			
6171.7	(31/2$^-$)	735.0 *2*	100	5436.65	(29/2$^-$)	D			
6176.9	(31/2$^+$)	1263.5 *2*	58 *17*	4913.41	(29/2$^+$)	D			
		1573.1 *8*	100 *17*	4603.62	(27/2$^+$)	Q			
6359.9	(33/2$^+$)	1446.5 *2*	100	4913.41	(29/2$^+$)	Q			E_γ: 1440 in (^{16}O,p2nγ).
6377.42	(31/2$^-$)	758.2 *1*	100	5619.19	(29/2$^-$)	D			
6638.75	(33/2$^-$)	261.3 *1*	100 *6*	6377.42	(31/2$^-$)	D			
		466.9 *2*	49 *6*	6171.7	(31/2$^-$)	D			
		593.0 *1*	80 *9*	6045.80	(31/2$^-$)	D			
6738.1	(33/2$^+$)	378.2 *3*	100 *20*	6359.9	(33/2$^+$)	D[#]			
		1824.2 *11*	80 *20*	4913.41	(29/2$^+$)	Q			

$^{85}_{39}Y_{46}$-11

Adopted Levels, Gammas (continued)

$\gamma(^{85}Y)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]
6969.4?		1521.0[d] *10*	100	5448.4	$(25/2^+,27/2,29/2^+)$	
7261.7	$(35/2^-)$	623.0 *1*	100	6638.75	$(33/2^-)$	D
8004.2	$(37/2^+)$	1266.0 *2*	18 *5*	6738.1	$(33/2^+)$	
		1644.4 *5*	100 *9*	6359.9	$(33/2^+)$	Q
9473.9	$(41/2^+)$	1469.7 *5*	100	8004.2	$(37/2^+)$	Q
9990.7?		1986.5[d] *10*	100	8004.2	$(37/2^+)$	
11099.3?		1625.4[d] *12*	100	9473.9	$(41/2^+)$	

† Values represent averages of all available data, unless specified differently.
‡ From ^{72}Ge(^{16}O,p2nγ) unless indicated otherwise.
# ΔJ=0 transition from DCO.
@ ΔJ=1 from $\gamma(\theta)$ in (^{37}Cl,2p2nγ), M1 or E1 from ΔJ^π.
& From ce data in ^{85}Zr ε decay (7.86 min).
[a] 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.
[b] Multiply placed.
[c] Multiply placed with intensity suitably divided.
[d] Placement of transition in the level scheme is uncertain.

$^{85}_{39}Y_{46}$-12

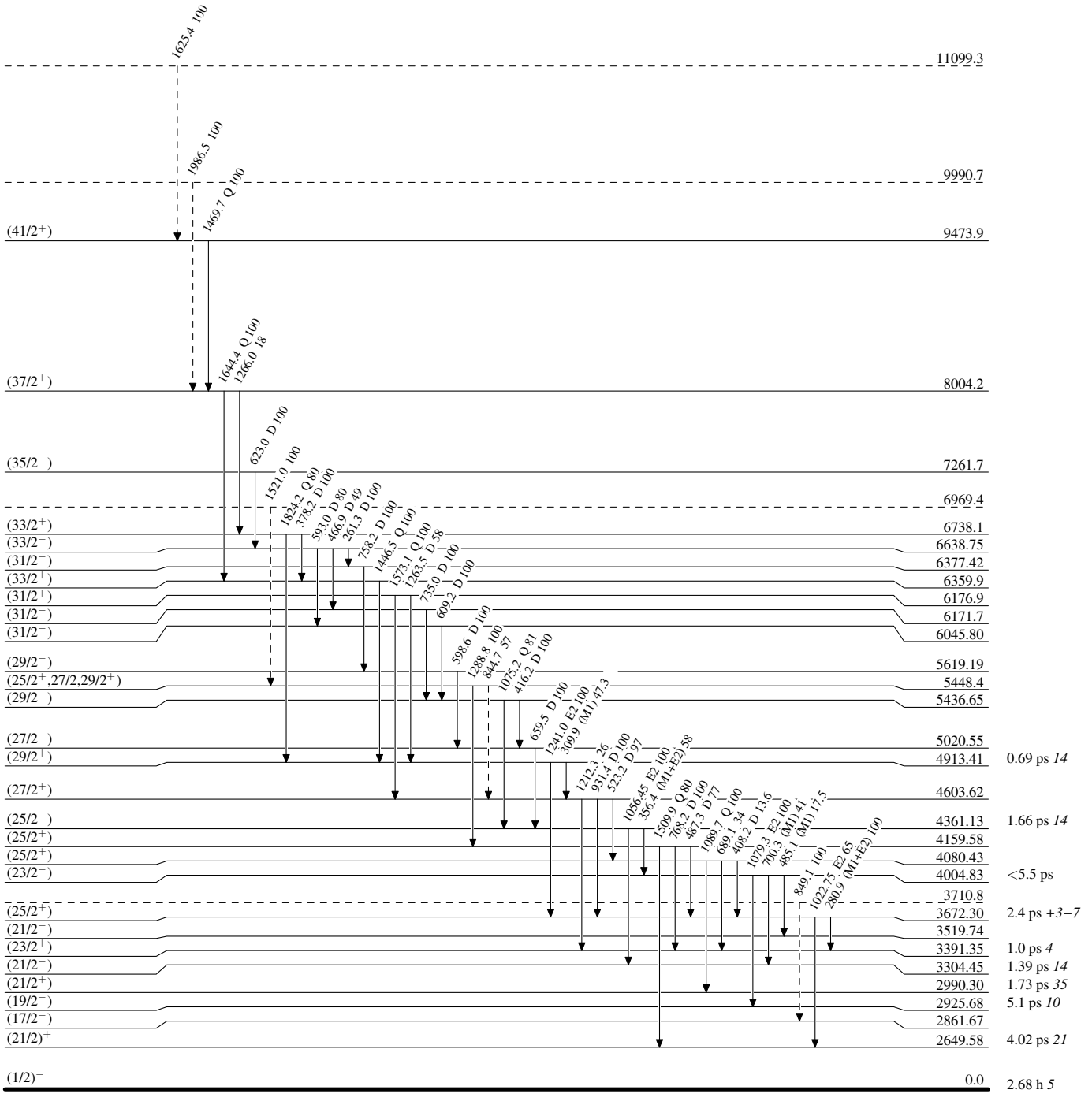
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{85}_{39}Y_{46}$

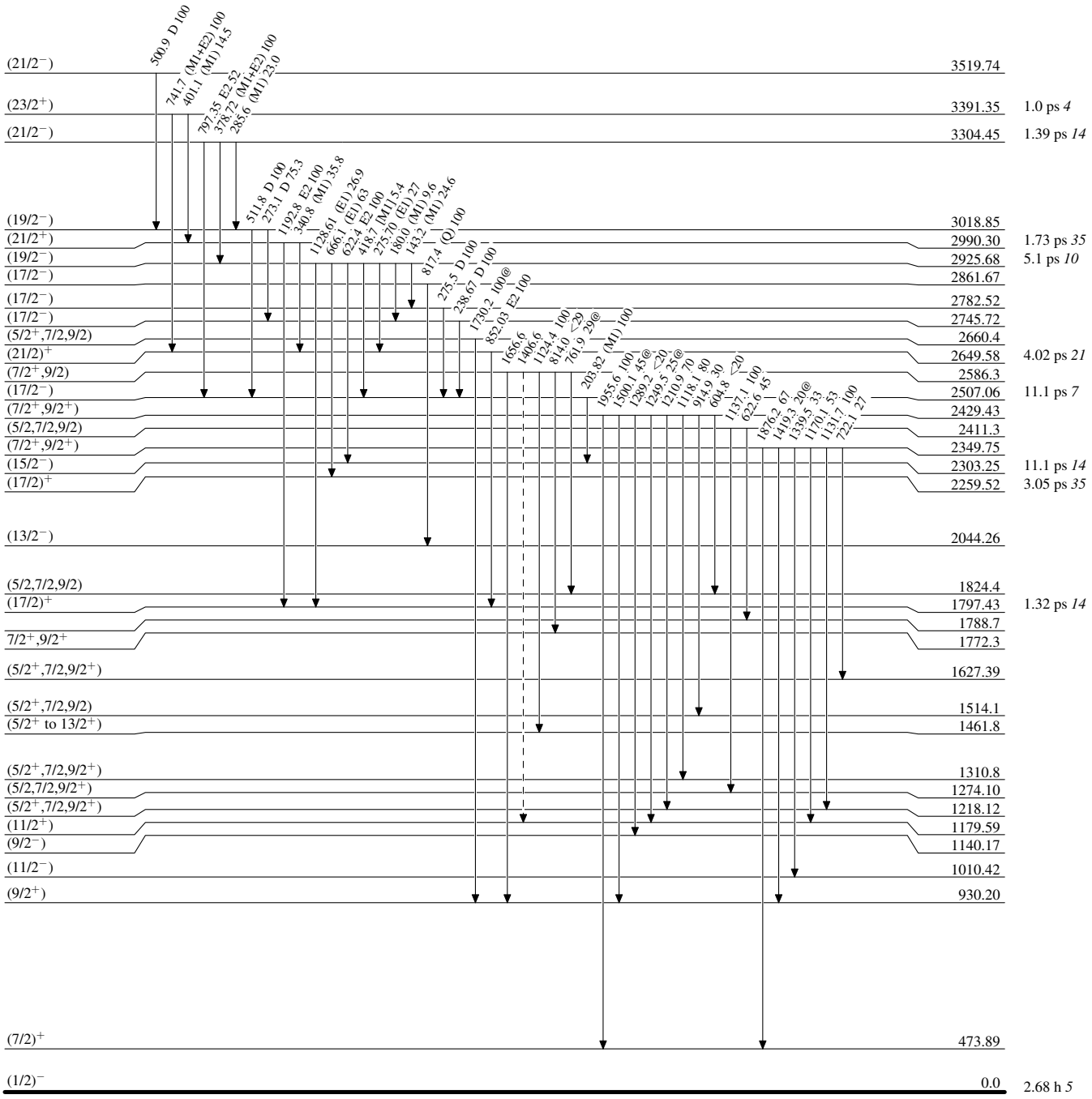
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

γ Decay (Uncertain)



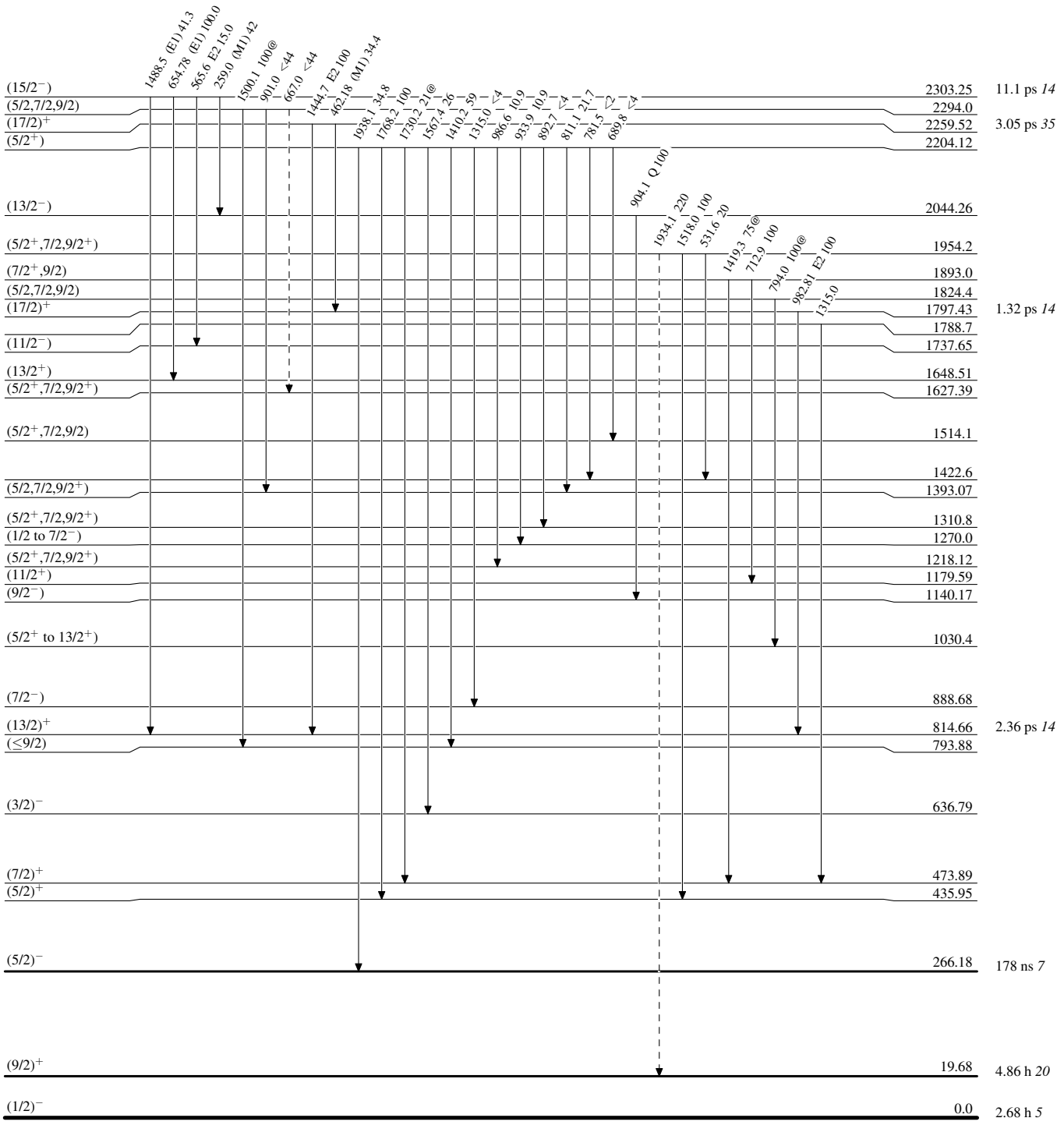
$^{85}_{39}Y_{46}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

Legend
γ Decay (Uncertain)



$^{85}_{39}Y_{46}$

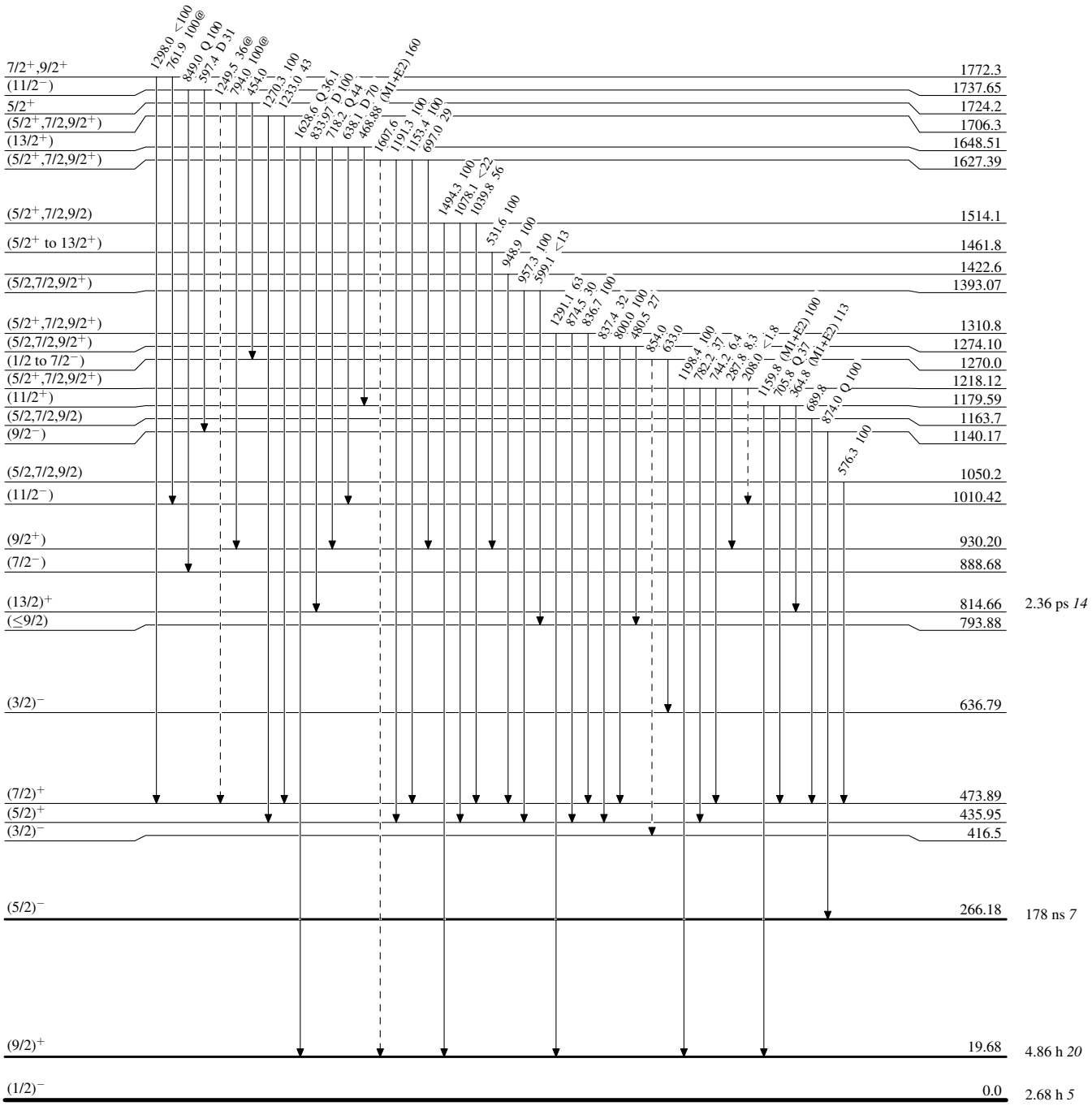
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

– – – – – – ► γ Decay (Uncertain)



$^{85}_{39}Y_{46}$

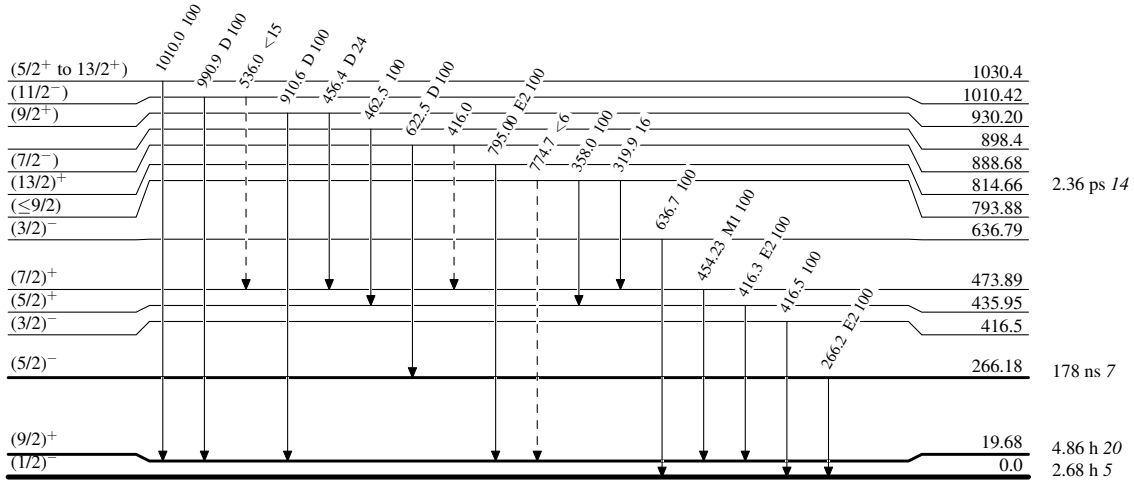
Adopted Levels, Gammas

Legend

Level Scheme (continued)

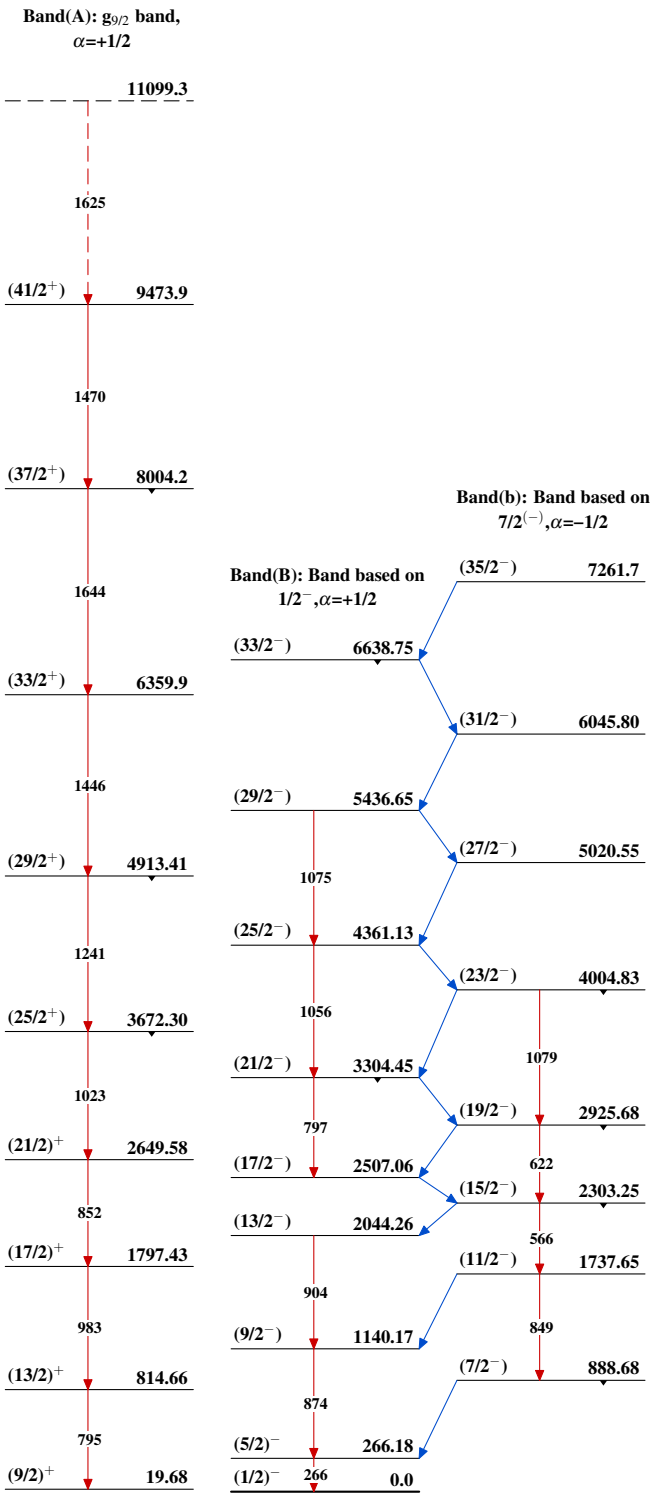
Intensities: Relative photon branching from each level
@ Multiply placed: intensity suitably divided

γ Decay (Uncertain)



$^{85}_{39}Y_{46}$

Adopted Levels, Gammas



$^{85}_{39}Y_{46}$