Adopted Levels, Gammas

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, G. Mukherjee, A. A. Sonzogni	NDS 111,2555 (2010)	30-Jun-2009

Q(β^-)=−1691 *5*; S(n)=7369.10 *10*; S(p)=8630.4 *18*; Q(α)=−2239.4 *19* 2012Wa38
Note: Current evaluation has used the following Q record −1691 5 *7369*.1010 *8631*.4 *19* −2241.0 *19* 2009AuZZ.
S(2n)=17047 *4*, S(2p)=15167.4 *19* (2009AuZZ).
α: Additional information 1.

^{95}Mo Levels

Cross Reference (XREF) Flags

A	^{95}Nb β^- decay (34.991 d)	H	^{94}Mo(d,p)	O	^{65}Cu(^{36}S,αpnγ)
B	^{95}Nb β^- decay (3.61 d)	I	^{94}Mo(^{13}C,^{12}C),(^{13}C,^{12}Cγ)	P	^{82}Se(^{18}O,5nγ)
C	^{95}Tc ε decay (20.0 h)	J	^{95}Mo(γ,γ): res fluorescence	Q	^{96}Mo(pol p,d)
D	^{95}Tc ε decay (61 d)	K	Coulomb excitation	R	^{94}Mo(n,γ):resonances
E	^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)	L	^{96}Mo(p,d),(d,t)	S	U(p,F)
F	^{94}Mo(n,γ) E=thermal	M	^{96}Mo(p,d),(d,t),(^{3}He,α) IAR	T	^{16}O(^{82}Se,3nγ)
G	^{94}Mo(n,γ) E=24.3 keV	N	^{96}Mo(^{3}He,α)		

E(level)†	J$^\pi$‡	T$_{1/2}$#	XREF	Comments
0.0&	5/2$^+$	stable	ABCDEFGHIJKL NOPQ ST	Q=−0.022 *1*; μ=−0.9142 *1* J$^\pi$: 5/2 from paramagnetic resonance (1956Ow04) and optical spectroscopy (1951Ar29, 1976Fu06). π=+ from L(d,p)=2. μ: NMR (Nuclear Magnetic Resonance)(2005St24). Q: AB (Atomic beam magnetic resonance,thermal beam) calculated from ratio and Q(^{97}Mo); no polarization correction included(1989Ra17). Other: −0.015 *4* ABLDF (Atomic beam with laser double resonance detection) (1978Du24). Δ<r^2>(^{95}Mo,^{92}Mo)=+0.410 fm^2 *26* (2009Ch09); uncertainty is systematic.
59.3 *6*	(5/2$^+$)		O	E(level): adopted following ^{65}Cu(^{36}S,αpnγ). J$^\pi$: γ from (7/2$^+$).
204.1163 *16*	3/2$^+$	751 ps *9*	ABCDEFGHI KL N Q	μ=−0.404 *12* (1984Al11) XREF: Q(214). J$^\pi$: 3/2$^+$,5/2$^+$ from L(p,d),(d,t)=2; ≠5/2 from linear pol in Coulomb ex. T$_{1/2}$: from $\gamma\gamma$(t) in 61-d ε decay. Others: see Coulomb excitation. μ: IPAC (Integral perturbed angular); Other: −0.378 *15* (1976Jo03).
526.6 *4*	(7/2$^+$)[d]		O	
765.803& *8*	7/2$^+$	4.4 ps *7*	A C E HIJKL NOPQ T	XREF: N(756)Q(775). J$^\pi$: 7/2$^+$,9/2$^+$ from L(d,p)=4; 7/2 from $\gamma(\theta)$ in (γ,γ); 7/2$^+$ from L(^{3}He,α)=4. T$_{1/2}$: from σ(res) in (γ,γ).
786.201 *3*	1/2$^+$	4.33 ps *27*	B DE GHIJKL	T$_{1/2}$: from B(E2)↑ in Coul. ex. J$^\pi$: From angular momentum transfer in (d,p).
820.628 *4*	3/2$^+$	0.62 ps *14*	B DE GHIJKL N Q	XREF: Q(826). J$^\pi$: 3/2$^+$,5/2$^+$ from L(d,p)=2; ≠5/2 from $\gamma\gamma(\theta)$ and linear pol in 61-d ε decay. (5/2) from s(d,t)/s(d,p) discrepant. T$_{1/2}$: from σ(res) in (γ,γ).

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Adopted Levels, Gammas (continued)

^{95}Mo Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
947.685[&] *16*	9/2+	2.58 ps *11*	C E HIJKL NOPQ T	Jπ: 7/2+,9/2+ from L(d,p)=4; ≠7/2 from γ(θ) in Coul. ex. $T_{1/2}$: weighted av of 2.66 ps *29* (DSAM) and 2.57 *12* (B(E2)↑) in Coul. ex.
1039.269 *4*	1/2+	0.32 ps *7*	B DEFGHIJKL	XREF: L(1041). $T_{1/2}$: from B(E2)↑ in Coul. ex. Jπ: From angular momentum transfer in (d,p).
1056.771 *20*	5/2+	≤0.43 ps	CDE G KL N Q	XREF: L(1044)Q(1049). Jπ: 3/2+,5/2+ from L(d,p)=2; 5/2 from primary Iγ(135°)/Iγ(90°) in (n,γ) E=24.3 keV. $T_{1/2}$: from B(E2)↑ in Coul. ex.
1073.727 *16*	7/2+	0.34 ps *11*	C E IJKL	XREF: L(1092). Jπ: 7/2+,9/2+ from L(p,d),(d,t)=4; M1+E2 γ to 5/2+. $T_{1/2}$: from B(E2)↑ in Coul. ex. and adopted level and γ properties.
1092 *12*	3/2+,5/2+		L	
1302.31 *7*	1/2+		D GH	Jπ: From angular momentum transfer in (d,p).
1318.23 *16*	(3/2+,5/2+)	≤6.9 ns	EF	XREF: F(1324). Jπ: primary γ from 1/2+ capture state. Possible d,E2 γ's to 5/2+ and 7/2+.
1332.9[c] *4*	(11/2−)[d]		O	
1369.75 *12*	(3/2)	≤6.9 ns	DE GH L Q	XREF: H(1364)Q(1356). Jπ: L(d,p)=2; 3/2+ from s(d,t)/s(d,p) for 1364 doublet. L(p,d),(d,t)=(1) for 1367 doublet; consistent with (α,nγ),(α,3nγ) reaction.
1376.0? *20*	3/2+		G K	May correspond to preceding level but energies disagree. Jπ: L(d,p)=2; 3/2+ from s(d,t)/s(d,p) for 1364 doublet. L(p,d),(d,t)=(1) for 1367 doublet.
1425.992 *24*	(5/2)+	≤6.9 ns	CDE GH L Q	XREF: H(1420)Q(1412). Jπ: 3/2+,5/2+ from L(d,p)=2. ≠3/2+ from possible d,E2 γ from (9/2)+. 3/2 from s(d,t)/s(d,p) discrepant.
1440.02? *13*	(7/2+,9/2,11/2)	≤6.9 ns	E	Jπ: possible D,Q γ to 7/2+; possible D,E2 γ from 11/2+.
1540.801[&] *13*	11/2+	≤6.9 ns	C E OP T	Jπ: from γ(θ) and γ-pol in (α,nγ),(α,3nγ).
1551.772[b] *18*	(9/2)+	≤6.9 ns	C E KL NOP T	XREF: L(1542)N(1584). Jπ: 7/2+,9/2+ from L(p,d),(d,t)=4. ≠7/2+ from possible (E1) γ from 11/2−. $T_{1/2}$: upper limit from γ(t) in (α,3nγ); lower limit from B(E2)↑<0.0042 in Coul. ex.
1620.26 *3*	3/2+		D GH L Q	XREF: Q(1603). Jπ: 3/2+,5/2+ from L=2 in (d,p); ≠5/2+ from log *ft*=8.1 (log $f^{1u}t$<8.5) from 1/2−.
1645.1? *6*	7/2(+)		C	Jπ: 7/2,9/2,11/2 from log *ft*=6.8 *4* from 9/2+; γ to 3/2+.
1660.3? *3*	(≤5/2)		D	Jπ: log *ft*=11.6 from 1/2−.
1667 *8*	7/2+,9/2+		L N Q	XREF: N(1659)Q(1656). E(level): weighted av of 1659 *10* from (^{3}He,α) and 1674 *10* from (p,d),(d,t).
1683.0? *10*	7/2,9/2(+)		C	Jπ: 7/2,9/2,11/2 from log *ft*=6.6 +*7*−*18* from 9/2+; γ to 5/2+.
1692	1/2+		H	Jπ: L(d,p)=0.
1742.90? *16*	(9/2)	≤6.9 ns	E	Jπ: (1/2 to 9/2) from possible D,Q γ to (3/2+,5/2+),

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Adopted Levels, Gammas (continued)

^{95}Mo Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	$T_{1/2}$[#]	XREF	Comments
				($7/2^+$ to $15/2^+$) from possible D,E2 γ to $11/2^+$, and ($7/2^-$ to $15/2^-$) from D,E2 γ from $11/2^-$.
1796.30? *17*		≤6.9 ns	E	J$^{\pi}$: ($7/2^+$ to $15/2^+$) from possible D,E2 γ to to $11/2^+$, ≤7/2 from possible D,Q γ to $3/2^+$, and ($7/2^-$ to $15/2^-$) from possible D,E2 γ from $11/2^-$ discrepant.
1808.02? *21*	($7/2^+$)	≤6.9 ns	E	J$^{\pi}$: ≤7/2 from D,Q γ to $3/2^+$. ($7/2^+$ to $15/2^+$) from D,E2 γ to to $11/2^+$.
1888.54 *22*	$(9/2)^+$	≤6.9 ns	E L N Q	XREF: L(1879)N(1886)Q(1859). J$^{\pi}$: J^{π}(1879)=$7/2^+$,$9/2^+$ from L(p,d),(d,t)=4; J(2059)=13/2 from $\gamma(\theta)$ in (α,nγ),(α,3nγ). J^{π}(1879)=$9/2^+$, J^{π}(2059)=$13/2^+$ from a possible connecting D,E2 γ.
1916 *5*	$(9/2)^+$		Q	J$^{\pi}$: L+1 transfer from Ay(θ); $1g_{9/2}$ for L=4; uncertain assignment either the $\sigma(\theta)$ or the Ay(θ) discrepant DWBA calculations.
1937.47[a] *7*	$11/2^-$	≤6.9 ns	E H L N P T	XREF: L(1942)N(1927). J$^{\pi}$: $11/2^-$ from L(^{3}He,α)=5; supported by $9/2^-$,$11/2^-$ from L(d,p)=5; $11/2^{(-)}$ from $\gamma(\theta)$ and γ-pol in (α,nγ),(α,3nγ).
1963	$3/2^+$,$5/2^+$		H L	XREF: L(1942). J$^{\pi}$: From angular momentum transfer in (d,p).
1984 *15*	$3/2^+$,$5/2^+$		L	J$^{\pi}$: L=2 transfer in (p,d),(d,t).
2024 *4*	$3/2^+$		Q	J$^{\pi}$: L-1 transfer from Ay(θ).
2045 *3*	$(3/2)^+$		F H L	XREF: H(2042)L(2050). E(level): from 94Mo(n,γ). J$^{\pi}$: L(d,p)=2 for 2042. ≠$5/2^+$ from s(d,t)/s(d,p).
2049	$1/2^+$		H	J$^{\pi}$: L(d,p)=0.
2058.51 *7*	($13/2^+$)	≤6.9 ns	E P T	J$^{\pi}$: from a possible connecting stretched E2 γ.
2067	($5/2^-$,$7/2^-$)		L	J$^{\pi}$: assumed to extract spectroscopic factors in (p,d),(d,t).
2089	$(3/2)^+$		H	J$^{\pi}$: L(d,p)=2; 3/2 from s(d,t)/s(d,p).
2092.9[c] *6*	($15/2^-$)[d]		O	
2118	$7/2^+$,$9/2^+$		H L Q	XREF: L(2130)Q(2096). J$^{\pi}$: From angular momentum transfer in (d,p).
2152 *9*	$(5/2)^+$		Q	J$^{\pi}$: From angular momentum transfer in (pol p,d).
2169 *15*	$(3/2)^+$		H L Q	XREF: L(2179)Q(2188). J$^{\pi}$: L(d,p)=2; 3/2 from s(d,t)/s(d,p).
2213 *4*	$1/2^-$,$3/2^-$		F L Q	XREF: L(2221)Q(2223). E(level): from ^{94}Mo(n,γ) E=thermal. J$^{\pi}$: from (d,t) data of 1970Di06; Unresolved doublet with E_x=2240 *15*, L=1+2 in 1977Bi02.
2219.2[b] *4*	$(13/2)^+$[d]		O	
2232.27[&] *7*	$(15/2)^+$	≤6.9 ns	E O P T	J$^{\pi}$: stretched E2 γ to $11/2^+$. D+Q γ to $13/2^{(+)}$.
2244	$(3/2)^+$		H L	XREF: L(2260). J$^{\pi}$: L(d,p)=2; 3/2 from s(d,t)/s(d,p).
2315 *8*	$1/2^-$,$3/2^-$		H L N Q	XREF: Q(2301). E(level): weighted av of 2319 *12* from (p,d),(d,t) and 2312 *10* from from (^{3}He,α). J$^{\pi}$: From angular momentum transfer in (d,p).
2357	$1/2^+$		H L	XREF: L(2375). J$^{\pi}$: From angular momentum transfer in (d,p).
2383	$(3/2)^+$		H L	XREF: L(2375). J$^{\pi}$: L(d,p)=2; 3/2 from s(d,t)/s(d,p).
2396 *10*	$(3/2)^+$		H	J$^{\pi}$: L(d,p)=2; 3/2 from s(d,t)/s(d,p).
2428 *13*	$7/2^+$,$9/2^+$		H L N Q	XREF: L(2441)N(2415)Q(2417). E(level): unweighted av of 2441 *12* from (p,d),(d,t) and 2415 *10* from (^{3}He,α).

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Adopted Levels, Gammas (continued)

^{95}Mo Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$[#]	XREF	Comments
2491 *3*	$(3/2)^+$		F H	XREF: H(2488). Jπ: L(d,p)=2; (3/2) from s(d,t)/s(d,p).
2501 *15*	$(7/2^+,9/2^+)$		L	Jπ: L=4 transfer in (p,d),(d,t).
2531 *12*	$9/2^+$		L N Q	XREF: N(2515)Q(2518). Jπ: L+1 transfer from Ay(θ); $1g_{9/2}$ for L=4, consistent with L=4 transfer in (p,d), (d,t).
2544	$(1/2^-,3/2^-)$		H	Jπ: From angular momentum transfer in (d,p).
2580.08[&] *10*	$(17/2)^+$	≤6.9 ns	E OP T	Jπ: from γ(θ) and γ-polarization in (α,nγ) or (α,3nγ).
2595	$1/2^+$		H L	XREF: L(2610). Jπ: From angular momentum transfer in (d,p).
2611.14[a] *12*	$(15/2^-)$[d]	≤6.9 ns	E P T	
2618.08[&] *11*	$(19/2)^+$[d]		P T	
2671?			H	
2695	$(3/2^+)$		H L	XREF: L(2680). Jπ: L(d,p)=(2); (3/2) from s(d,t)/s(d,p).
2711 *3*	$1/2^-,3/2^-$		L Q	XREF: L(2718). Jπ: L=1 transfer in (pd), (d,t).
2725	$(3/2^+)$		H	Jπ: L(d,p)=(2); (3/2) from s(d,t)/s(d,p).
2732.1 *8*	$19/2^+$	≤6.9 ns	E O	Jπ: stretched M1(+E2) γ to $(13/2^+,17/2^+)$.
2745	$(3/2^+)$		H Q	Jπ: L(d,p)=(2); (3/2) from s(d,t)/s(d,p).
2754	$(3/2^+)$		H L	XREF: L(2769). Jπ: L(d,p)=(2); (3/2) from s(d,t)/s(d,p) discrepant.
2769.9[&] *4*	$(21/2)^+$[d]		P T	
2830	$(3/2)^+$		H	Jπ: s(d,t)/s(d,p) was used to distinguish between d3/2 and d5/2.
2843	$(3/2)^+$		H	Jπ: L(d,p)=(2); (3/2) from s(d,t)/s(d,p.
2861 *3*	$1/2^-$		Q	Jπ: L-1 transfer from Ay(θ) in ^{96}Mo(pol p,d).
2895.5[b] *6*	$(17/2)^+$[d]		O	
2919	$1/2^-,3/2^-$		H L	XREF: L(2890).
2955	$1/2^-,3/2^-$		H L Q	XREF: L(2986). E(level): Not observed in (d,t) by 1970Di06.
3037	$3/2^+$		H Q	XREF: Q(3027). Jπ: From angular momentum transfer in (d,p).
3056	$1/2^+$		H	Jπ: L(d,p)=0.
3063 *17*	$1/2^-,3/2^-$		L	Jπ: L(d,p)=0 for 3056 discrepant.
3130.1[c] *7*	$(19/2^-)$[d]		O	
3142	$(3/2)^+$		H Q	XREF: Q(3122). Jπ: L(d,p)=2; (3/2) from s(d,t)/s(d,p).
3155	$3/2^+,5/2^+$		H L Q	XREF: L(3170)Q(3162). Jπ: L(pol. p,d)=1 discrepant.
3200 *20*	$(3/2^+,5/2^+)$		L Q	XREF: Q(3226). Jπ: L(pol. p,d)=4 discrepant.
3260 *20*	$3/2^+,5/2^+$		L Q	
3277.1[a] *4*	$(19/2^-)$[d]		T	
3310? *20*	$3/2^+,5/2^+$		L Q	
3310 *10*	$(7/2^+,9/2^+)$		N Q	XREF: Q(3296). Jπ: from L(^{3}He,α)=(4); J; L(pol. p,d)=1 discrepant.
3395 *15*	$7/2^+,9/2^+$		L N Q	XREF: N(3410)Q(3354). E(level): unweighted av of 3380 *17* from (p,d),(d,t) and 3410 *10* from (^{3}He,α).
3403 *5*	$3/2^-$		Q	Jπ: L+1 transfer from Ay(θ).
3443 *17*	$1/2^-,3/2^-$		L	Jπ: L=1 transfer from (d,t).
3494 *17*	$7/2^+,9/2^+$		L N Q	XREF: N(3510)Q(3464).

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Adopted Levels, Gammas (continued)

^{95}Mo Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
			Jπ: L=4 transfer from (p,d) and (d,t).
3551 *17*	7/2+,9/2+	L Q	XREF: Q(3521). Jπ: L=4 transfer from (p,d) and (d,t).
3625 *17*	7/2+,9/2+	L Q	XREF: Q(3601). Jπ: L=4 transfer from (p,d) and (d,t).
3672.5[&] *4*	(25/2)+[d]	E OP T	
3698 *13*		Q	
3741 *16*		Q	
3874.8 *5*	(25/2)+	P	
3960 *20*	1/2−,3/2−	L Q	XREF: Q(3985). Jπ: L=1 transfer from (p,d) and (d,t).
4010 *20*	1/2−,3/2−	L Q	XREF: Q(4032). Jπ: L=1 transfer from (p,d) and (d,t).
4047.7[a] *5*	(23/2−)[d]	P T	
4070 *20*	1/2−,3/2−	L	Jπ: L=1 transfer from (p,d) and (d,t).
4139.9[&] *5*	(29/2)+[d]	P T	
4170 *20*	1/2−,3/2−	L Q	XREF: Q(4154). Jπ: L=1 transfer from (p,d) and (d,t).
4240 *20*	1/2−,3/2−	L Q	XREF: Q(4229). Jπ: L(pol. p,d)=2 discrepant.
4310 *20*	1/2−,3/2−	L Q	XREF: Q(4299). Jπ: L=1 transfer from (p,d) and (d,t).
4350 *20*	1/2−,3/2−	L Q	XREF: Q(4394). Jπ: L=1 transfer from (p,d) and (d,t).
4396.1[c] *8*	(23/2−)[d]	O	
4400 *25*	3/2−	L	Jπ: From angular momentum transfer in (p,d),(d,t).
4441 *17*	3/2−	Q	Jπ: From angular momentum transfer in (pol p,d).
4450 *25*	3/2−	L	Jπ: From angular momentum transfer in (p,d),(d,t).
4486 *17*	(3/2)−	Q	Jπ: From angular momentum transfer in (pol p,d).
4500 *25*	3/2−	L	Jπ: From angular momentum transfer in (p,d),(d,t).
4533	(3/2)−	Q	Jπ: From angular momentum transfer in (pol p,d).
4560 *20*	3/2+	L	Jπ: From angular momentum transfer in (p,d),(d,t).
4630 *30*	(3/2+,5/2+)	L	Jπ: From angular momentum transfer in (p,d),(d,t).
4740 *30*	1/2−,3/2−	L Q	XREF: Q(4738). Jπ: From angular momentum transfer in (d,p),(p,d) and (pol p,d).
4810 *30*	3/2−	L Q	XREF: Q(4792). Jπ: From angular momentum transfer in (p,d),(d,t).
4852.0 *5*		P	
4860 *12*	(3/2)−	Q	Jπ: L+1 transfer from Ay(θ); $2p_{3/2}$ for L=1.
4908 *16*	(9/2)+	Q	Jπ: L+1 transfer from Ay(θ); $1g_{9/2}$ for L=4.
4953.4 *5*		P	
4954 *24*	9/2+	Q	Jπ: L+1 transfer from Ay(θ); $1g_{9/2}$ for L=4.
5117.4[a] *5*	(27/2)−[d]	P T	
5362.2[&] *5*	(31/2+)[d]	P T	
5451.5 *7*		P	
5760.4[a] *7*	(31/2−)[d]	P T	
5896.1[c] *9*	(27/2−)[d]	O	
6327.9[&] *7*	(35/2+)[d]	T	
6708.6[a] *7*	(35/2−)[d]	P T	
7368.3 *17*	1/2+	FG	XREF: G(7391). E(level),Jπ: Energy from 2003Au03, and spin and parity is from the assumption of s-wave capture on an even-even target.

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Adopted Levels, Gammas (continued)

^{95}Mo Levels (continued)

E(level)[†]	Jπ[‡]	XREF	Comments
7427.1[c] *13*	(31/2⁻)[d]	O	
7451.0[a] *8*	(37/2⁻)[d]	P T	
7985.3[a] *8*	(39/2⁻)[d]	T	
8424.9[&] *9*	(37/2⁺)[d]	T	
9300.2[c] *17*	(35/2⁻)[d]	O	
9654.7[a] *10*	(41/2⁻)[d]	T	
10508.9[a] *11*	(45/2⁻)[d]	T	
12.10×10³ *3*	(9/2)⁺[@]	M	IAR(^{95}Nb g.s.).
12.36×10³ *3*	(1/2)⁻[@]	M	IAR(^{95}Nb 236).
12.94×10³ *3*	(3/2)⁻[@]	M	IAR(^{95}Nb 799).
13.15×10³ *3*	(5/2)⁻[@]	M	IAR(^{95}Nb 1011).
13.37×10³ *3*	(3/2)⁻[@]	M	IAR(^{95}Nb 1219).
13.43×10³ *3*	(5/2)⁻[@]	M	IAR(^{95}Nb 1273).

[†] From least-squares fit to Eγ's (including primary γ's) for states connected by definitely placed γ's, unless otherwise noted.
[‡] From angular momentum transfer in (p,d) or (d,t), except as noted. See (α,nγ), ^{94}Zr(α,3nγ) for other suggested spins and parities.
[#] From γ(t) in (α,3nγ), except as noted.
[@] From angular momentum transfer in (p,d),(d,t),(^{3}He,α) IAR and spin and parity of ^{95}Nb parent.
[&] Band(A): γ sequence based on g.s..
[a] Band(B): γ sequence based on 11/2⁻.
[b] Band(C): γ sequence based on 9/2⁺.
[c] Band(b): γ sequence based on 2nd 11/2⁻ at 1332.9 keV.
[d] From high-spin data, based on γγ(θ), Mγ when available, decay gamma pattern.

Adopted Levels, Gammas (continued)

γ(^{95}Mo)

See ^{95}Tc ε decay (61 d), ^{92}Zr(α,nγ), ^{94}Zr(α,3nγ), and ^{94}Mo(n,γ) E=thermal for unplaced gammas.

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[#]	α	Comments
204.1163	3/2$^+$	204.1161[@] *17*	100	0.0	5/2$^+$	M1+E2	−0.62 *7*	0.052 *3*	α(K)=0.0449 *23*; α(L)=0.0058 *4*; α(M)=0.00103 *7*; α(N)=0.000154 *9*; α(O)=7.5×10^{-6} *4* α(N+..)=0.000161 *10* B(E2)(W.u.)=21.5 *11*; B(M1)(W.u.)=0.00237 *16* Mult.: from L1/L23 in 61-d ε decay. δ: value from the evaluation of 1981HaZY (based on L1/L23 in 61-d ε decay); sign from linear pol in Coul. ex. Other: 0.624 *23* from $T_{1/2}$ and B(E2)↑=0.0369 *19*.
526.6	(7/2$^+$)	467.3 *4*	100	59.3	(5/2$^+$)				E_γ: observed only in ^{65}Cu(^{36}S,αpnγ).
765.803	7/2$^+$	561.67[c] *10*	0.0134[b] *7*	204.1163	3/2$^+$	(E2)[a]		0.00338 *5*	α(K)=0.00296 *5*; α(L)=0.000351 *5*; α(M)=6.27×10^{-5} *9*; α(N)=9.44×10^{-6} *14*; α(O)=5.00×10^{-7} *7* α(N+..)=9.94×10^{-6} *14* B(E2)(W.u.)=0.0120 *20* E_γ: observed only in ^{95}Tc ε decay (20.0 h).
		765.791[@] *9*	100[b]	0.0	5/2$^+$	M1+E2	−0.14 *9*	0.001445 *21*	α(K)=0.001272 *18*; α(L)=0.0001428 *20*; α(M)=2.55×10^{-5} *4* α(O)=2.22×10^{-7} *4*; α(N+..)=4.11×10^{-6} B(E2)(W.u.)=0.96 *24*; B(M1)(W.u.)=0.0109 *18* E_γ: weighted average of 765.789 *9* (^{95}Tc ε decay (20.0 h)), 765.9 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 765.95 *14* (Coulomb excitation), 766.1 *4* (^{65}Cu(^{36}S,αpnγ)), 765.9 *1* (^{82}Se(^{18}O,5nγ)). Mult.: D+Q from γ(θ) in (γ,γ). M1+E2 from observation in Coul. ex. δ: from γ(θ) in (γ,γ). Other: 0.079 *12* from $T_{1/2\ 1/2}$ and B(E2)↑=0.0004 *1*.
786.201	1/2$^+$	582.082 *3*	100.00[&] *17*	204.1163	3/2$^+$	M1+E2[d]	+0.266[d] *+52−40*	0.00273 *4*	α(K)=0.00240 *4*; α(L)=0.000272 *4*; α(M)=4.85×10^{-5} *8*; α(N)=7.39×10^{-6} *11*; α(O)=4.19×10^{-7} *6*

$^{95}_{42}Mo_{53}$-7

Adopted Levels, Gammas (continued)

γ(^{95}Mo) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[#]	α	Comments
									α(K)=0.00240 *4*; α(L)=0.000272 *4*; α(M)=4.85×10^{-5} *8*; α(N)=7.39×10^{-6} *11*; α(O)=4.19×10^{-7} *6* α(N+..)=7.81×10^{-6} *12* B(E2)(W.u.)=3.9 *15*; B(M1)(W.u.)=0.0187 *13* E_γ: weighted average of 582.082 *3* (^{95}Tc ε decay (61 d)), 582.2 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 582.38 *23* (Coulomb excitation).
786.201	1/2$^+$	786.198 *4*	28.90[&] *15*	0.0	5/2$^+$	(E2)[a]		0.001375 *20*	α(K)=0.001207 *17*; α(L)=0.0001390 *20*; α(M)=2.48×10^{-5} *4* α(O)=2.06×10^{-7} *3*; α(N+..)=3.96×10^{-6} B(E2)(W.u.)=3.79 *23* E_γ: weighted average of 786.198 *4* (^{95}Tc ε decay (61 d)), 786.2 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 786.31 *20* (Coulomb excitation).
820.628	3/2$^+$	54.88[&n]	<0.004[&]	765.803	7/2$^+$	[E2]		10.39	α(K)=7.29 *11*; α(L)=2.56 *4*; α(M)=0.470 *7*; α(N)=0.0638 *9*; α(O)=0.000952 *14* α(N+..)=0.0648 *9* E_γ: observed only in ^{95}Tc ε decay (61 d).
		616.49 *3*	27.2[&] *3*	204.1163	3/2$^+$	M1+E2[d]	−2.00[d] *22*	0.00256 *4*	α(K)=0.00224 *4*; α(L)=0.000261 *4*; α(M)=4.67×10^{-5} *7*; α(N)=7.06×10^{-6} *11*; α(O)=3.83×10^{-7} *6* α(N+..)=7.44×10^{-6} *11* B(E2)(W.u.)=68 *16*; B(M1)(W.u.)=0.0065 *19* E_γ: weighted average of 616.49 *2* (^{95}Tc ε decay (61 d)), 616.5 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 617.4 *5* (Coulomb excitation).
		820.624 *5*	100.00[&] *14*	0.0	5/2$^+$	M1+E2[e]	−0.068[f] *12*	0.001238 *18*	α(K)=0.001090 *16*; α(L)=0.0001221 *17*; α(M)=2.18×10^{-5} *3* α(O)=1.90×10^{-7} *3*; α(N+..)=3.51×10^{-6} B(E2)(W.u.)=0.35 *9*; B(M1)(W.u.)=0.050 *12* E_γ: weighted average of 820.624 *5* (^{95}Tc ε decay (61 d)), 820.8 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 820.8 *2* (Coulomb excitation). δ: sign from γ(θ) in (α,nγ) or (α,3nγ). Value from $T_{1/2}$ and B(E2)↑=0.00060 *15*. Other: −0.15 *17* from Coul. ex.
947.685	9/2$^+$	181.88 *5*	0.18[g] *5*	765.803	7/2$^+$	(M1,E2)		0.09 *5*	α(K)=0.08 *4*; α(L)=0.011 *6*; α(M)=0.0020 *11*; α(N)=0.00029 *16*; α(O)=1.3×10^{-5} *6* α(N+..)=0.00031 *17* E_γ: weighted average of 181.88 *5* (^{95}Tc ε decay (20.0 h)), 181.5 *5* (Coulomb excitation); not observed in ^{65}Cu(^{36}S,αpnγ). Mult.: D,E2 from comparison to RUL. Δπ=no from level scheme.

$^{95}_{42}Mo_{53}$-8

Adopted Levels, Gammas (continued)

γ(^{95}Mo) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[#]	α	Comments
947.685	9/2$^+$	421.1 *4*	2.0 *5*	526.6	(7/2$^+$)				E_γ: observed only in ^{65}Cu(^{36}S,αpnγ).
		947.677 *19*	100.0[g] *10*	0.0	5/2$^+$	E2(+M3)[e]	−0.01[f] *1*	0.000875 *13*	α(K)=0.000769 *11*; α(L)=8.75×10^{-5} *13*; α(M)=1.562×10^{-5} *22* α(O)=1.319×10^{-7} *19*; α(N+..)=2.50×10^{-6} B(E2)(W.u.)=11.3 *6* E_γ: weighted average of 947.67 *2* (^{95}Tc ε decay (20.0 h)), 947.9 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 947.72 *9* (Coulomb excitation), 947.3 *4* (^{65}Cu(^{36}S,αpnγ)), 947.8 *1* (^{82}Se(^{18}O,5nγ)).
1039.269	1/2$^+$	218.640 *8*	0.162[&] *8*	820.628	3/2$^+$	M1+E2[h]	0.73[h] *5*	0.0449 *15*	α(K)=0.0389 *13*; α(L)=0.00499 *19*; α(M)=0.00089 *4*; α(N)=0.000133 *5*; α(O)=6.47×10^{-6} *19* α(N+..)=0.000140 *5* B(E2)(W.u.)=69 *17*; B(M1)(W.u.)=0.0062 *15* E_γ: observed only in ^{95}Tc ε decay (61 d).
		253.067 *9*	2.295[&] *17*	786.201	1/2$^+$	M1[h]		0.0208	α(K)=0.0182 *3*; α(L)=0.00211 *3*; α(M)=0.000377 *6*; α(N)=5.74×10^{-5} *8*; α(O)=3.22×10^{-6} *5* α(N+..)=6.06×10^{-5} *9* B(M1)(W.u.)=0.086 *19* E_γ: weighted average of 253.068 *4* (^{95}Tc ε decay (61 d)), 252.6 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 252.8 *1* (Coulomb excitation).
		835.149 *5*	100.0[&] *8*	204.1163	3/2$^+$	M1+E2[d]	+0.038[d] *19*	0.001191 *17*	α(K)=0.001049 *15*; α(L)=0.0001174 *17*; α(M)=2.09×10^{-5} *3* α(O)=1.83×10^{-7} *3*; α(N+..)=3.38×10^{-6} B(E2)(W.u.)=0.22 *22*; B(M1)(W.u.)=0.104 *23* E_γ: weighted average of 835.149 *5* (^{95}Tc ε decay (61 d)), 835.3 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 834.97 *17* (Coulomb excitation).
		1039.264 *7*	10.43[&] *10*	0.0	5/2$^+$	(E2)[a]		0.000708 *10*	α(K)=0.000623 *9*; α(L)=7.05×10^{-5} *10*; α(M)=1.257×10^{-5} *18* α(O)=1.069×10^{-7} *15*; α(N+..)=2.02×10^{-6} *3* B(E2)(W.u.)=5.4 *12* E_γ: weighted average of 1039.264 *6* (^{95}Tc ε decay (61 d)), 1039.0 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 1039.40 *10* (Coulomb excitation).
1056.771	5/2$^+$	236.8[n] *3*	70 *12*	820.628	3/2$^+$	M1		0.0247	α(K)=0.0216 *4*; α(L)=0.00251 *4*; α(M)=0.000449 *7*; α(N)=6.82×10^{-5} *10*; α(O)=3.83×10^{-6} *6* α(N+..)=7.21×10^{-5} *11* E_γ: observed only in (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)).

$^{95}_{42}Mo_{53}$-9

Adopted Levels, Gammas (continued)

γ(^{95}Mo) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[#]	α	Comments
1056.771	5/2$^+$	852.61[&] *4*	100[&] *3*	204.1163	3/2$^+$	(M1+E2)		0.001131 *17*	α(K)=0.000995 *16*; α(L)=0.0001126 *17*; α(M)=2.01×10^{-5} *3* α(O)=1.72×10^{-7} *4*; α(N+..)=3.23×10^{-6} E_γ: weighted average of 852.60 *2* (^{95}Tc ε decay (61 d)), 852.8 *1* (Coulomb excitation). Mult.: D+Q from γ(θ) in Coul. ex. Δπ=no from the level scheme. δ: −0.02 *8* or −3.6 *+11−21*.
		1056.798[&] *25*	42.4[&] *16*	0.0	5/2$^+$	M1+E2[e]	+0.55[f] *+45−31*	0.000706 *13*	α(K)=0.000622 *12*; α(L)=6.95×10^{-5} *12*; α(M)=1.239×10^{-5} *21* α(O)=1.080×10^{-7} *24*; α(N+..)=2.00×10^{-6} B(E2)(W.u.)=39 *8*; B(M1)(W.u.)=0.014 *+24−14* E_γ: weighted average of 1056.70 *25* (^{95}Tc ε decay (20.0 h)), 1056.79 *2* (^{95}Tc ε decay (61 d)), 1057.0 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 1057.0 *1* (Coulomb excitation).
1073.727	7/2$^+$	125.80 *21*	1.10 *15*	947.685	9/2$^+$	(M1)		0.1331	α(K)=0.1165 *18*; α(L)=0.01376 *22*; α(M)=0.00247 *4*; α(N)=0.000374 *6*; α(O)=2.07×10^{-5} *4* α(N+..)=0.000395 *7* B(M1)(W.u.)=0.25 *11* E_γ: weighted average of 125.8 *3* (^{95}Tc ε decay (20.0 h)), 125.8 *3* (Coulomb excitation). Mult.: d from comparison to RUL. Δπ=no from level scheme. I_γ: from Coulomb Excitation.
		252.6[in] *3*	32[i] *32*	820.628	3/2$^+$	[E2]		0.0436	α(K)=0.0376 *6*; α(L)=0.00500 *8*; α(M)=0.000898 *14*; α(N)=0.0001324 *20*; α(O)=6.01×10^{-6} *9* α(N+..)=0.0001384 *21* E_γ: observed only in Coulomb Excitation.
		307.929[c] *20*	0.93[c] *3*	765.803	7/2$^+$	(M1,E2)		0.017 *5*	α(K)=0.015 *4*; α(L)=0.0019 *6*; α(M)=0.00033 *11*; α(N)=5.0×10^{-5} *16*; α(O)=2.5×10^{-6} *6* α(N+..)=5.3×10^{-5} *16* E_γ: weighted average of 307.93 *2* (^{95}Tc ε decay (20.0 h)), 307.8 *3* (Coulomb excitation). Mult.: d,E2 from comparison to RUL. Δπ=no from level scheme.
		869.60[c] *3*	8.47[c] *20*	204.1163	3/2$^+$	[E2]		0.001073 *15*	α(K)=0.000942 *14*; α(L)=0.0001078 *15*; α(M)=1.92×10^{-5} *3* α(O)=1.613×10^{-7} *23*; α(N+..)=3.08×10^{-6}

$^{95}_{42}Mo_{53}$-10

Adopted Levels, Gammas (continued)

γ(^{95}Mo) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[#]	α	Comments
									B(E2)(W.u.)=8 *3* E_γ: weighted average of 869.60 *3* (^{95}Tc ε decay (20.0 h)), 870.0 *5* (Coulomb excitation).
1073.727	7/2$^+$	1073.72[c] *4*	100.0[c] *10*	0.0	5/2$^+$	M1+E2[e]	−0.72[f] *11*	0.000679 *10*	α(K)=0.000598 *9*; α(L)=6.69×10^{-5} *10*; α(M)=1.193×10^{-5} *17* α(O)=1.037×10^{-7} *16*; α(N+..)=1.92×10^{-6} *3* B(E2)(W.u.)=10.7 *8*; B(M1)(W.u.)=0.024 *8* E_γ: weighted average of 1073.71 *2* (^{95}Tc ε decay (20.0 h)), 1073.9 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 1074.0 *1* (Coulomb excitation).
1302.31	1/2$^+$	245.83[&] *9*	100[&] *25*	1056.771	5/2$^+$				
		263[&n]	≤7[&]	1039.269	1/2$^+$				
		515.6[&n] *4*	18[&] *18*	786.201	1/2$^+$				
		1098[&n]	≤1.1[&]	204.1163	3/2$^+$				
		1302[&n]	≤1.1[&]	0.0	5/2$^+$				
1318.23	(3/2$^+$,5/2$^+$)	244.1[n] *3*	49 *7*	1073.727	7/2$^+$	D,E2			
		261.3[n] *3*	100 *11*	1056.771	5/2$^+$	D,E2			
		552.6[mn] *3*	87[m] *9*	765.803	7/2$^+$	D,E2			
1332.9	(11/2$^-$)	385.2 *4*	5.0 *10*	947.685	9/2$^+$				alternative placement of 385.2 keV γ-ray from 1937.4 keV, suggested in ^{16}O(^{82}Se,3nγ).
1369.75	(3/2)	1165.5[i] *3*	56[i] *6*	204.1163	3/2$^+$				E_γ: from (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ).
		1369.76[&] *13*	100[i] *10*	0.0	5/2$^+$				E_γ: weighted average of 1369.75 *15* (^{95}Tc ε decay (61 d)), 1369.8 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ).
1376.0?	3/2$^+$	1376.0 *20*		0.0	5/2$^+$				E_γ: from Coulomb excitation.
1425.992	(5/2)$^+$	640.0[i] *3*	19.8[i] *18*	786.201	1/2$^+$	(E2)[a]		0.00235 *4*	α(K)=0.00206 *3*; α(L)=0.000241 *4*; α(M)=4.31×10^{-5} *6*; α(N)=6.51×10^{-6} *10*; α(O)=3.50×10^{-7} *5* α(N+..)=6.86×10^{-6} *10* E_γ: observed only in (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)). I_γ: from intensity ratio at θ=80° and Eα=14 MeV w.r.t. to 1222 keV γ-ray in (α,nγ).
		1222.00[&] *3*	100.0[&] *17*	204.1163	3/2$^+$	D,Q			E_γ: weighted average of 1221.90 *15* (^{95}Tc ε decay (20.0 h)), 1222.00 *3* (^{95}Tc ε decay (61 d)), 1222.1 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)). Mult.: from comparison to RUL and α(K)exp in 61-d ε decay.
		1426.11[&] *15*	0.30[&] *23*	0.0	5/2$^+$				E_γ: observed only in ^{95}Tc ε decay (61 d).

$^{95}_{42}Mo_{53}$-11

Adopted Levels, Gammas (continued)

γ(^{95}Mo) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
1440.02?	(7/2$^+$,9/2,11/2)	674.1[mn] *3*	79[mi] *9*	765.803	7/2$^+$	D,Q		
		1235.8[in] *3*	100[i] *10*	204.1163	3/2$^+$			
		1440.5[in] *3*	46[i] *6*	0.0	5/2$^+$			
1540.801	11/2$^+$	101.5[n] *3*	3.1 *4*	1440.02?	(7/2$^+$,9/2,11/2)	D,E2		E_γ,I_γ: from ^{92}Zr(α,nγ), ^{94}Zr(α,3nγ) only.
		467.3[n] *3*	9.2 *10*	1073.727	7/2$^+$	(E2)[a]	0.00581 *9*	α(K)=0.00507 *8*; α(L)=0.000613 *9*; α(M)=0.0001096 *16*; α(N)=1.644×10^{-5} *24* α(O)=8.49×10^{-7} *12*; α(N+..)=1.729×10^{-5} *25*
		593.15[c] *5*	100 *12*	947.685	9/2$^+$	(M1+E2)[j]	0.00274 *17*	E_γ,I_γ: from ^{92}Zr(α,nγ), ^{94}Zr(α,3nγ). α(K)=0.00241 *14*; α(L)=0.000278 *22*; α(M)=5.0×10^{-5} *4*; α(N)=7.5×10^{-6} *6*; α(O)=4.14×10^{-7} *17* α(N+..)=7.9×10^{-6} *6* E_γ: weighted average of 593.16 *6* (^{95}Tc ε decay (20.0 h)), 593.3 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 593.2 *4* (^{65}Cu(^{36}S,αpnγ)), 593.1 *1* (^{82}Se(^{18}O,5nγ)), 593.2 *5* (^{16}O(^{82}Se,3nγ)).
		774.989[c] *11*	78 *8*	765.803	7/2$^+$	E2[k]	0.001425 *20*	I_γ: from ^{92}Zr(α,nγ), ^{94}Zr(α,3nγ). α(K)=0.001251 *18*; α(L)=0.0001442 *21*; α(M)=2.57×10^{-5} *4* α(O)=2.14×10^{-7} *3*; α(N+..)=4.11×10^{-6} E_γ: weighted average of 774.99 *1* (^{95}Tc ε decay (20.0 h)), 775.2 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 774.4 *4* (^{65}Cu(^{36}S,αpnγ)), 774.9 *1* (^{82}Se(^{18}O,5nγ)), 774.4 *5* (^{16}O(^{82}Se,3nγ)). I_γ: from ^{92}Zr(α,nγ), ^{94}Zr(α,3nγ).
1551.772	(9/2)$^+$	111.3[in] *3*	14.6[i] *21*	1440.02?	(7/2$^+$,9/2,11/2)	D,E2		
		126.03[cn] *4*	3.4[c] *3*	1425.992	(5/2)$^+$	(E2)[l]	0.522	α(K)=0.433 *6*; α(L)=0.0734 *11*; α(M)=0.01328 *19*; α(N)=0.00190 *3*; α(O)=6.40×10^{-5} *9* α(N+..)=0.00196 *3* E_γ: discrepant with 125.60 *4* from the level scheme.
		477.7[c] *4*	4.3[c] *16*	1073.727	7/2$^+$	D,Q		
		495.16[cn]	≤0.5[c]	1056.771	5/2$^+$			
		604.02[c] *6*	100[c] *3*	947.685	9/2$^+$	(M1+E2)[j]	0.00262 *15*	α(K)=0.00230 *12*; α(L)=0.000265 *20*;

Adopted Levels, Gammas (continued)

γ(^{95}Mo) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
								α(M)=4.7×10^{-5} *4*; α(N)=7.2×10^{-6} *5*; α(O)=3.96×10^{-7} *15* α(N+..)=7.6×10^{-6} *5* B(M1)(W.u.)≤0.58 *4* E_γ: weighted average of 604.04 *2* (^{95}Tc ε decay (20.0 h)), 604.0 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 603.5 *1* (^{82}Se(^{18}O,5nγ)), 604.0 *5* (^{16}O(^{82}Se,3nγ):xundl-6)). I_γ: weighted average of 100 *3* (^{95}Tc ε decay (20.0 h)), 100 *10* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 100 *6* (^{82}Se(^{18}O,5nγ)).
1551.772	(9/2)$^+$	785.929[c] *20*	48[c] *3*	765.803	7/2$^+$	D+Q		E_γ: weighted average of 785.93 *2* (^{95}Tc ε decay (20.0 h)), 785.9 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 785.6 *4* (^{82}Se(^{18}O,5nγ)), 785.9 *5* (^{16}O(^{82}Se,3nγ)). I_γ: weighted average of 48 *3* (^{95}Tc ε decay (20.0 h)), 46 *5* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)). Mult.,δ: from γ(θ) in 20-h ε decay.
		1551.71[c] *5*	6.7[c] *6*	0.0	5/2$^+$	[E2]	0.000408 *6*	α(K)=0.000269 *4*; α(L)=2.99×10^{-5} *5*; α(M)=5.32×10^{-6} *8*; α(N)=8.11×10^{-7} *12* α(O)=4.62×10^{-8} *7*; α(N+..)=0.0001041 *15* B(E2)↓≤0.94 *13* E_γ,I_γ: from ^{95}Tc ε decay (20.0 h).
1620.26	3/2$^+$	318.27[&n] *10*	2.7[&] *10*	1302.31	1/2$^+$			
		563.48[&] *6*	25[&] *4*	1056.771	5/2$^+$			
		799.60[&] *15*	3.8[&] *14*	820.628	3/2$^+$			
		1416.09[&] *8*	4.81[&] *17*	204.1163	3/2$^+$			
		1620.20[&] *4*	100[&] *5*	0.0	5/2$^+$			
1645.1?	7/2$^{(+)}$	1441.0[cn] *9*	100[c] *57*	204.1163	3/2$^+$			
		1645.0[cn] *9*	86[c] *43*	0.0	5/2$^+$			
1660.3?	(≤5/2)	1660.27[&n] *25*	100[&]	0.0	5/2$^+$			
1683.0?	7/2,9/2$^{(+)}$	1683[cn]	100[c]	0.0	5/2$^+$			
1742.90?	(9/2)	201.9[in] *3*	79[i] *9*	1540.801	11/2$^+$	D,E2		
		424.3[in] *3*	17.0[i] *22*	1318.23	(3/2$^+$,5/2$^+$)	D,Q		
		977.6[in] *3*	100[i] *11*	765.803	7/2$^+$	D,Q		
1796.30?		255.6[in] *3*	88[i] *13*	1540.801	11/2$^+$	D,E2		
		974.8[in] *3*	100[i] *13*	820.628	3/2$^+$	D,Q		
1808.02?	(7/2$^+$)	266.9[in] *3*	30[i] *3*	1540.801	11/2$^+$	(E2)[l]	0.0360	α(K)=0.0311 *5*; α(L)=0.00410 *6*; α(M)=0.000734 *11*; α(N)=0.0001085 *16*; α(O)=5.00×10^{-6} *8* α(N+..)=0.0001135 *17*

Adopted Levels, Gammas (continued)

γ(^{95}Mo) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
1808.02?	(7/2$^+$)	987.7[in] *3*	100[i] *11*	820.628	3/2$^+$	(E2)[a]	0.000795 *12*	α(K)=0.000699 *10*; α(L)=7.93×10^{-5} *12*; α(M)=1.415×10^{-5} *20* α(O)=1.199×10^{-7} *17*; α(N+..)=2.27×10^{-6}
1888.54	(9/2)$^+$	337.3[in] *3*	2.9[i] *3*	1551.772	(9/2)$^+$	D,E2		
1937.47	11/2$^-$	140.4[in] *3*	12.3[i] *15*	1796.30?		D,E2		
		194.5[in] *3*	7.6[i] *10*	1742.90?	(9/2)	D,E2		
		385.82[n] *9*	≤100	1551.772	(9/2)$^+$	(E1)[k]	0.00283 *4*	α(K)=0.00249 *4*; α(L)=0.000280 *4*; α(M)=4.98×10^{-5} *7*; α(N)=7.55×10^{-6} *11*; α(O)=4.17×10^{-7} *6* α(N+..)=7.96×10^{-6} *12* E_γ: weighted average of 385.9 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 385.8 *1* (^{82}Se(^{18}O,5nγ)), 386.0 *5* (^{16}O(^{82}Se,3nγ)). I_γ: from ^{92}Zr(α,nγ), ^{94}Zr(α,3nγ). alternative placement of 385.2 keV γ-ray from 1937.4 keV, suggested in ^{65}Cu(^{36}S,αpnγ).
		396.46 *17*	7.1 *9*	1540.801	11/2$^+$	D,Q		E_γ: weighted average of 396.6 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 396.4 *2* (^{82}Se(^{18}O,5nγ). I_γ: from ^{92}Zr(α,nγ), ^{94}Zr(α,3nγ).
		990.4 *3*	<52	947.685	9/2$^+$	(E1+M2)	0.0011 *9*	α(K)=0.0010 *8*; α(L)=0.00012 *9*; α(M)=2.1×10^{-5} *15*; α(N)=3.1×10^{-6} *23*; α(O)=1.8×10^{-7} *13* α(N+..)=3.3×10^{-6} *24* E_γ: weighted average of 990.7 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 990.1 *3* (^{82}Se(^{18}O,5nγ)). I_γ: from ^{92}Zr(α,nγ), ^{94}Zr(α,3nγ). Mult.: (D+Q) from γ(θ) in (α,nγ) or (α,3nγ). Δπ=yes from the level scheme.
2058.51	(13/2$^+$)	170.5[in] *3*	6.8[i] *11*	1888.54	(9/2)$^+$	(E2)[l]	0.175	α(K)=0.1487 *23*; α(L)=0.0221 *4*; α(M)=0.00398 *7*; α(N)=0.000578 *9*; α(O)=2.28×10^{-5} *4* α(N+..)=0.000600 *10*
		517.4[in] *3*	6.8[i] *11*	1540.801	11/2$^+$	D,Q		
		1110.75 *10*	100 *10*	947.685	9/2$^+$	(E2)[j]	0.000611 *9*	α(K)=0.000537 *8*; α(L)=6.05×10^{-5} *9*; α(M)=1.079×10^{-5} *16*; α(O)=9.22×10^{-8} *13* α(N+..)=2.61×10^{-6} *4* E_γ: weighted average of 1111.2 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 1110.7 *1* (^{82}Se(^{18}O,5nγ)), 1110.8 *5* (^{16}O(^{82}Se,3nγ)). I_γ: from (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)).
2092.9	(15/2$^-$)	760.0 *4*	5.0 *10*	1332.9	(11/2$^-$)	E2		Mult.: from directional correlation ratio.
2219.2	(13/2)$^+$	667.4 *4*	100	1551.772	(9/2)$^+$	E2		Mult.: from directional correlation ratio.
2232.27	(15/2)$^+$	173.78 *9*	7.80 *22*	2058.51	(13/2$^+$)	(M1+E2)[j]	0.11 *6*	α(K)=0.09 *5*; α(L)=0.013 *8*; α(M)=0.0024 *14*; α(N)=0.00035

Adopted Levels, Gammas (continued)

γ(^{95}Mo) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
								19; α(O)=1.5×10^{-5} *7* α(N+..)=0.00036 *20* E_γ: weighted average of 173.5 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 173.8 *1* (^{82}Se(^{18}O,5nγ)), 174.0 *5* (^{16}O(^{82}Se,3nγ):xundl-6). I_γ: weighted average of 7.9 *8* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 7.79 *23* (^{82}Se(^{18}O,5nγ)).
2232.27	(15/2)$^+$	691.45 *9*	100 *3*	1540.801	11/2$^+$	E2[k]	0.00191 *3*	α(K)=0.001677 *24*; α(L)=0.000195 *3*; α(M)=3.48×10^{-5} *5*; α(N)=5.27×10^{-6} *8*; α(O)=2.86×10^{-7} *4* α(N+..)=5.55×10^{-6} *8* E_γ: weighted average of 691.7 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 691.7 *4* (^{65}Cu(^{36}S,αpnγ)), 691.4 *1* (^{82}Se(^{18}O,5nγ)), 691.5 *5* (^{16}O(^{82}Se,3nγ)). I_γ: weighted average of 100 *11* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 100 *3* (^{82}Se(^{18}O,5nγ)). Mult.: stretched Q.
2580.08	(17/2)$^+$	347.89 *9*	100.0 *4*	2232.27	(15/2)$^+$	M1(+E2)[k]	0.012 *3*	α(K)=0.0105 *24*; α(L)=0.0013 *4*; α(M)=0.00023 *6*; α(N)=3.4×10^{-5} *9*; α(O)=1.8×10^{-6} *4* α(N+..)=3.6×10^{-5} *9* E_γ: weighted average of 347.8 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 347.8 *4* (^{65}Cu(^{36}S,αpnγ)), 347.9 *1* (^{82}Se(^{18}O,5nγ)), 348.0 *5* (^{16}O(^{82}Se,3nγ):xundl-6). I_γ: weighted average of 100 *11* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 100.0 *4* (^{82}Se(^{18}O,5nγ)).
		521.57 *16*	3.8 *15*	2058.51	(13/2$^+$)	Q		E_γ: weighted average of 521.8 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 521.4 *2* (^{82}Se(^{18}O,5nγ)), 522.0 *5* (^{16}O(^{82}Se,3nγ)). I_γ: weighted average of 3.2 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 7.9 *8* (^{82}Se(^{18}O,5nγ)).
2611.14	(15/2$^-$)	552.45[m] *16*	20[m] *6*	2058.51	(13/2$^+$)	D,Q		E_γ: weighted average of 552.6 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 552.3 *2* (^{82}Se(^{18}O,5nγ)), 553.0 *5* (^{16}O(^{82}Se,3nγ)). I_γ: weighted average of 28 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 15.8 *23* (^{82}Se(^{18}O,5nγ.
		673.88[m] *20*	100[m] *10*	1937.47	11/2$^-$	Q		E_γ: weighted average of 674.1 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 673.7 *3* (^{82}Se(^{18}O,5nγ)), 673.8 *5* (^{16}O(^{82}Se,3nγ)). I_γ: weighted average of 100 *10* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 100 *5* (^{82}Se(^{18}O,5nγ)).
		1070.5[n] *3*	8.1 *13*	1540.801	11/2$^+$			E_γ: observed only in (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)). I_γ: from (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)).

$^{95}_{42}Mo_{53}$-15

Adopted Levels, Gammas (continued)

γ(^{95}Mo) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
2618.08	$(19/2)^+$	38.1 *1*	100.0 *8*	2580.08	$(17/2)^+$			E_γ: suggested but not observed in ^{82}Se(^{18}O,5nγ). I_γ: estimated on the basis of relative intensity data of 2004Ch18.
		385.63 *13*	0.84 *8*	2232.27	$(15/2)^+$	E2	0.00723 *11*	α(K)=0.00635 *9*; α(L)=0.000725 *11*; α(M)=0.0001297 *19*; α(N)=1.97×10^{-5} *3* α(O)=1.118×10^{-6} *16*; α(N+..)=2.09×10^{-5} *3* E_γ: weighted average of 385.6 *1* (^{82}Se(^{18}O,5nγ)), 386.3 *5* (^{16}O(^{82}Se,3nγ)).
2732.1	$19/2^+$	152.0 *8*	100	2580.08	$(17/2)^+$	M1+(E2)	0.17 *9*	α(K)=0.14 *8*; α(L)=0.021 *13*; α(M)=0.0038 *24*; α(N)=0.0005 *4*; α(O)=2.3×10^{-5} *11* α(N+..)=0.0006 *4* E_γ: weighted average of 151.4 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 153.1 *4* (^{65}Cu(^{36}S,αpnγ)).
2769.9	$(21/2)^+$	151.8 *4*	100	2618.08	$(19/2)^+$	M1	0.0797 *14*	α(K)=0.0698 *12*; α(L)=0.00820 *14*; α(M)=0.001469 *25*; α(N)=0.000223 *4* α(O)=1.241×10^{-5} *21*; α(N+..)=0.000235 *4* E_γ: weighted average of 151.9 *5* (^{82}Se(^{18}O,5nγ)), 151.7 *5* (^{16}O(^{82}Se,3nγ):xundl-6). Mult.: from DCO in ^{82}Se(^{18}O,5nγ).
2895.5	$(17/2)^+$	676.3 *4*	100	2219.2	$(13/2)^+$	E2		
3130.1	$(19/2^-)$	1037.2 *4*	5.0 *10*	2092.9	$(15/2^-)$	E2		γ ray not observed in ^{16}O(^{82}Se,3nγ). Mult.: from directional correlation ratio.
3277.1	$(19/2^-)$	666.0 *5*	100	2611.14	$(15/2^-)$			
3672.5	$(25/2)^+$	902.6 *3*	100	2769.9	$(21/2)^+$	E2	0.000981 *14*	α(K)=0.000862 *12*; α(L)=9.84×10^{-5} *14*; α(M)=1.756×10^{-5} *25* α(O)=1.477×10^{-7} *21*; α(N+..)=2.81×10^{-6} E_γ: weighted average of 902.7 *3* (^{92}Zr(α,nγ), ^{94}Zr(α,3nγ)), 904.8 *4* (^{65}Cu(^{36}S,αpnγ)),902.5 *1* (^{82}Se(^{18}O,5nγ)), 902.5 *5* (^{16}O(^{82}Se,3nγ)).
3874.8	$(25/2)^+$	202.3 *1*	12.8 *19*	3672.5	$(25/2)^+$	M1	0.0372	α(K)=0.0326 *5*; α(L)=0.00380 *6*; α(M)=0.000680 *10*; α(N)=0.0001033 *15*; α(O)=5.78×10^{-6} *9* α(N+..)=0.0001090 *16*
4047.7	$(23/2^-)$	770.6 *5*	100	3277.1	$(19/2^-)$			
4139.9	$(29/2)^+$	467.41 *19*	100	3672.5	$(25/2)^+$	E2	0.00581 *9*	α(K)=0.00507 *8*; α(L)=0.000612 *9*; α(M)=0.0001095 *16*; α(N)=1.643×10^{-5} *24* α(O)=8.49×10^{-7} *12*; α(N+..)=1.728×10^{-5} *25* E_γ: weighted average of 467.4 *2* (^{82}Se(^{18}O,5nγ)), 467.5 *5* (^{16}O(^{82}Se,3nγ):xundl-6).
4396.1	$(23/2^-)$	1266.0 *4*	4.0 *10*	3130.1	$(19/2^-)$			
4852.0		977.2 *2*	100	3874.8	$(25/2)^+$			
4953.4		1078.6 *1*	100	3874.8	$(25/2)^+$			

Adopted Levels, Gammas (continued)

γ(^{95}Mo) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	α	Comments
5117.4	(27/2)$^-$	1069.7 *4*	79 *16*	4047.7	(23/2$^-$)			E_γ: weighted average of 1069.9 *5* (^{82}Se(^{18}O,5nγ)), 1069.5 *5* (^{16}O(^{82}Se,3nγ)).
		1444.93 *19*	100 *16*	3672.5	(25/2)$^+$	E1	0.000425 *6*	α(K)=0.000327 *5*; α(L)=3.62×10^{-5} *5*; α(M)=6.46×10^{-6} *9*; α(N)=9.86×10^{-7} *14* α(O)=5.69×10^{-8} *8*; α(N+..)=5.49×10^{-5} *8* E_γ: weighted average of 1444.9 *2* (^{82}Se(^{18}O,5nγ)), 1445.1 *5* (^{16}O(^{82}Se,3nγ):xundl-6).
5362.2	(31/2$^+$)	1222.24 *19*	100	4139.9	(29/2)$^+$	E2	0.000507 *8*	α(K)=0.000437 *7*; α(L)=4.90×10^{-5} *7*; α(M)=8.75×10^{-6} *13*; α(N)=1.330×10^{-6} *19* α(O)=7.51×10^{-8} *11*; α(N+..)=1.245×10^{-5} *18* E_γ: weighted average of 1222.3 *2* (^{82}Se(^{18}O,5nγ)), 1221.9 *5* (^{16}O(^{82}Se,3nγ)).
5451.5		1311.6 *5*	100	4139.9	(29/2)$^+$			
5760.4	(31/2$^-$)	643.0 *5*	100	5117.4	(27/2)$^-$	E2		Mult.: adopted from 82Se(^{18}O,5nγ).
5896.1	(27/2$^-$)	1500.0 *4*	4.0 *10*	4396.1	(23/2$^-$)			
6327.9	(35/2$^+$)	965.7 *5*	100	5362.2	(31/2$^+$)			
6708.6	(35/2$^-$)	948.2 *3*	100	5760.4	(31/2$^-$)	(E2)	0.000887 *19*	α(K)=0.000781 *17*; α(L)=8.80×10^{-5} *14*; α(M)=1.570×10^{-5} *25* α(O)=1.35×10^{-7} *4*; α(N+..)=2.52×10^{-6} E_γ: weighted average of 948.2 *4* (^{82}Se(^{18}O,5nγ)), 948.2 *5* (^{16}O(^{82}Se,3nγ)).
7368.3	1/2$^+$	4877 *2*	8.2	2491	(3/2)$^+$			
		5155 *4*	11.3	2213	1/2$^-$,3/2$^-$			
		5323 *3*	2.6	2045	(3/2)$^+$			
		6045 *7*	7.7	1318.23	(3/2$^+$,5/2$^+$)			
		6326 *4*	13	1039.269	1/2$^+$			
		7165 *2*	100	204.1163	3/2$^+$			
7427.1	(31/2$^-$)	1531.0 *10*	3.0 *10*	5896.1	(27/2$^-$)			
7451.0	(37/2$^-$)	742.6 *5*	11 *3*	6708.6	(35/2$^-$)			
7985.3	(39/2$^-$)	534.5 *5*	65 *20*	7451.0	(37/2$^-$)			
		1276.5 *5*	1.0×10^2 *3*	6708.6	(35/2$^-$)			
8424.9	(37/2$^+$)	2097.0 *5*	6.5 *20*	6327.9	(35/2$^+$)			
9300.2	(35/2$^-$)	1873.0 *10*	2.0 *5*	7427.1	(31/2$^-$)			
9654.7	(41/2$^-$)	1669.3 *5*	100	7985.3	(39/2$^-$)			
10508.9	(45/2$^-$)	854.2 *5*	100	9654.7	(41/2$^-$)			

† From (α,3nγ), except as noted.
‡ From comparison to RUL, except as noted.
# From γ(θ) in (α,nγ) or (α,3nγ), except as noted.

$^{95}_{42}Mo_{53}$-17

Adopted Levels, Gammas (continued)

$\gamma(^{95}Mo)$ (continued)

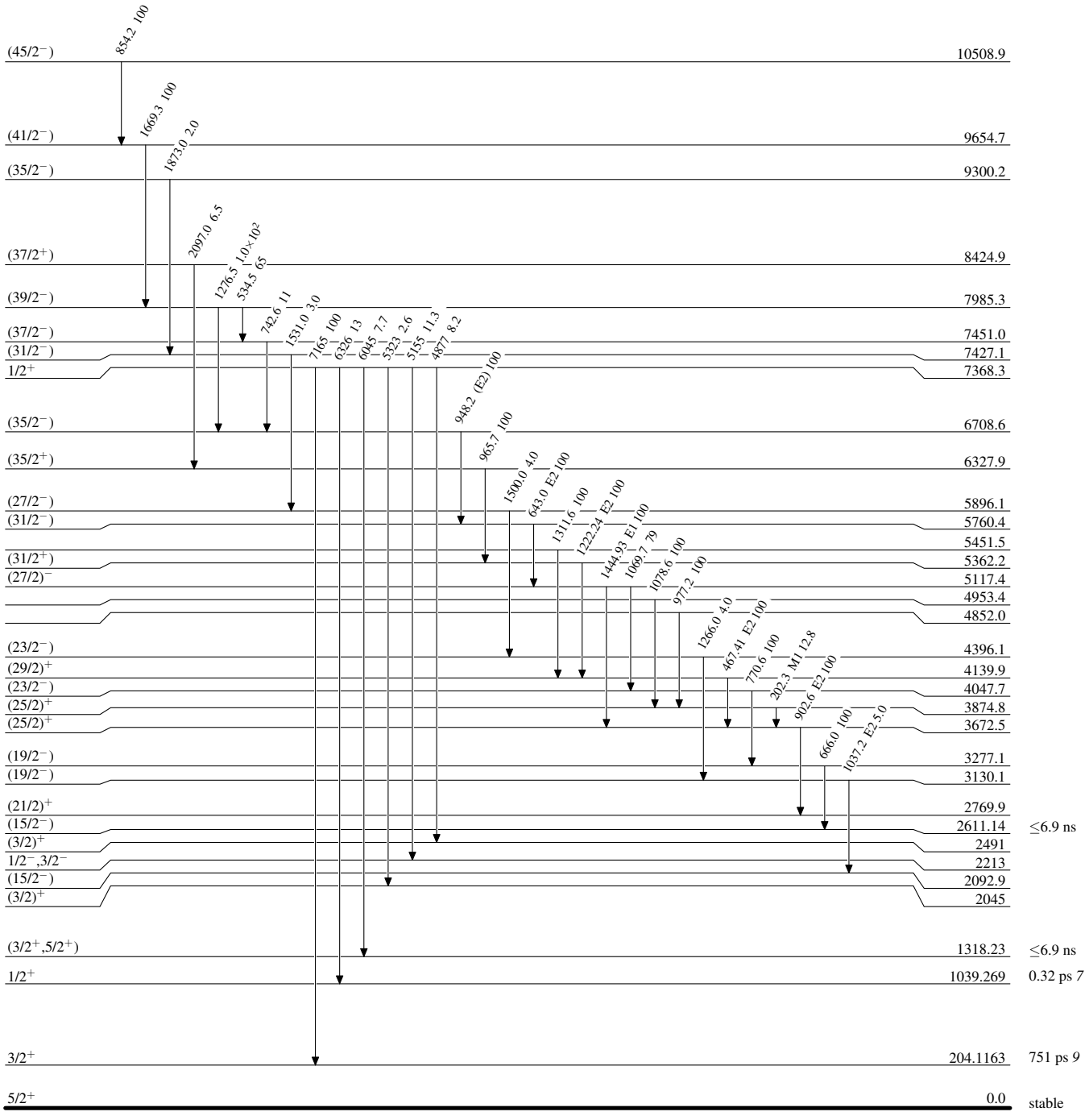
@ From ^{95}Nb β^- decay (3.61 d) 2000He14.
& From 61-d ε decay.
[a] D,Q from comparison to RUL. ΔJ^π=2,no from the level scheme.
[b] Weighted average of Iγ(561γ)/Iγ(766γ)=1.3×10^{-4} *3* from 35-d β^- decay and 1.5×10^{-4} *6* from 20-h ε decay.
[c] From 20-h ε decay.
[d] From $\gamma\gamma(\theta)$ and linear pol in 61-d ε decay.
[e] From $\gamma(\theta)$ in Coulomb excitation and observation in Coulomb excitation.
[f] From $\gamma(\theta)$ in Coulomb excitation.
[g] Unweighted average of Iγ(182γ)/Iγ(948γ)=1.3×10^{-3} *4* from 20-h ^{95}Tc ε decay and 2.2×10^{-3} *5* from Coulomb excitation.
[h] From α(K)exp in 61-d ε decay. E1+M2, δ(219γ)=0.521 *12* and δ(253γ)=0.44 *5*, excluded by comparison to RUL.
[i] From (α,nγ).
[j] D+Q or Q from $\gamma(\theta)$ in (α,nγ) or (α,3nγ). $\Delta\pi$=no from the level scheme.
[k] From $\gamma(\theta)$ and γ-polarization in (α,nγ) or (α,3nγ).
[l] D,E2 from comparison to RUL. ΔJ^π=2,no from the level scheme.
[m] Multiply placed with undivided intensity.
[n] Placement of transition in the level scheme is uncertain.

$^{95}_{42}Mo_{53}$-18

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{95}_{42}Mo_{53}$

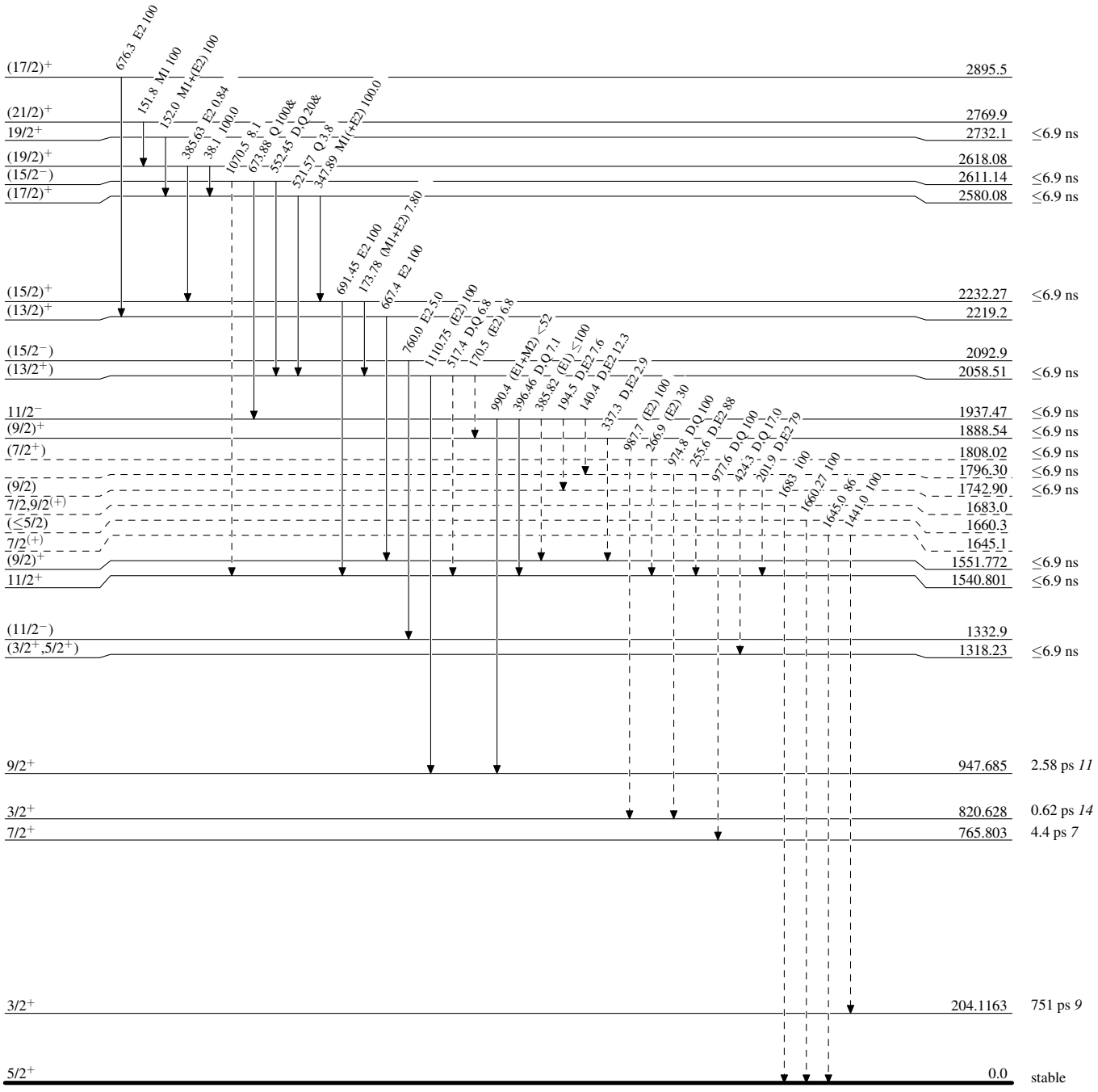
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

γ Decay (Uncertain)



$^{95}_{42}Mo_{53}$

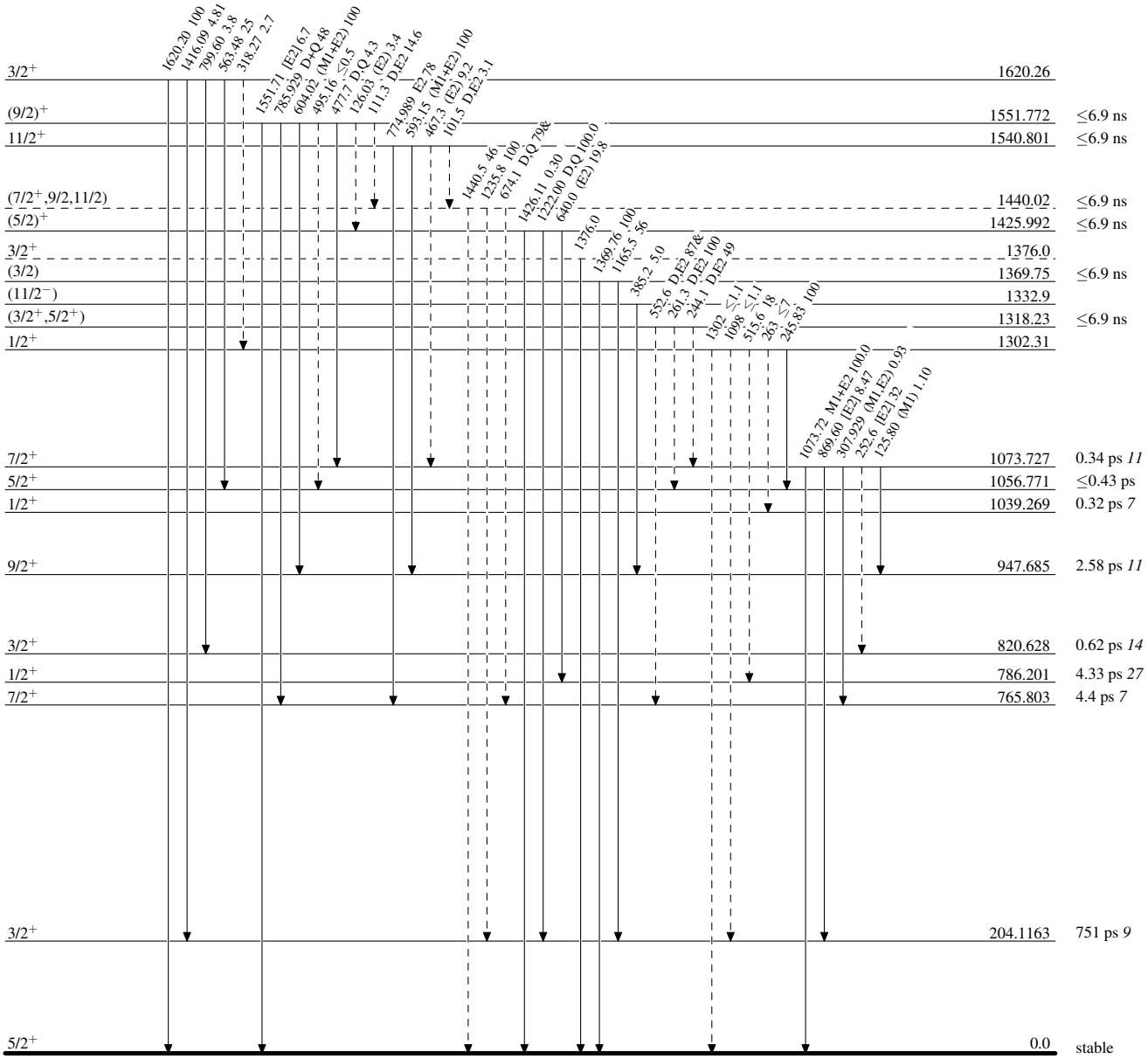
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

- - - - - - ► γ Decay (Uncertain)

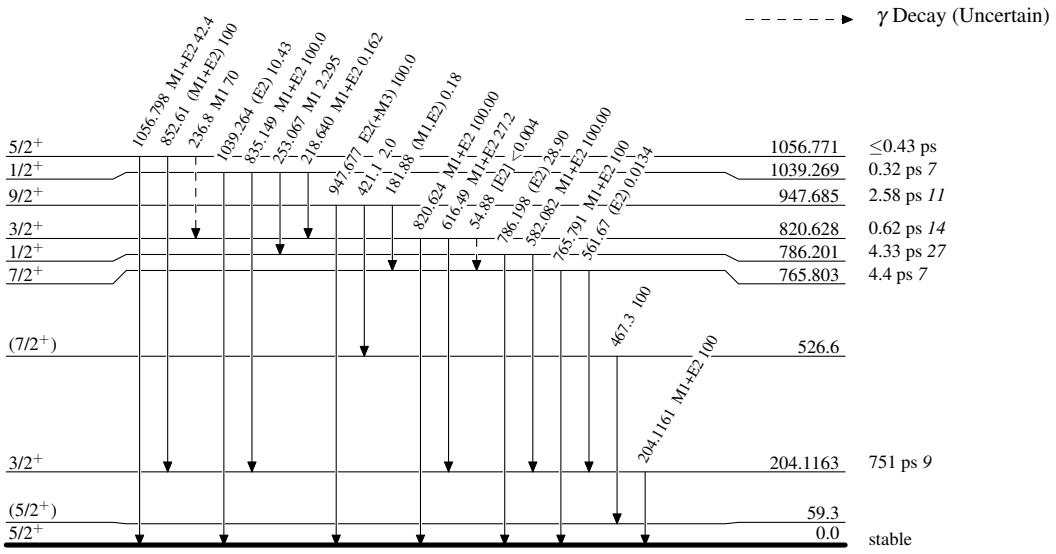


$^{95}_{42}Mo_{53}$

Adopted Levels, Gammas

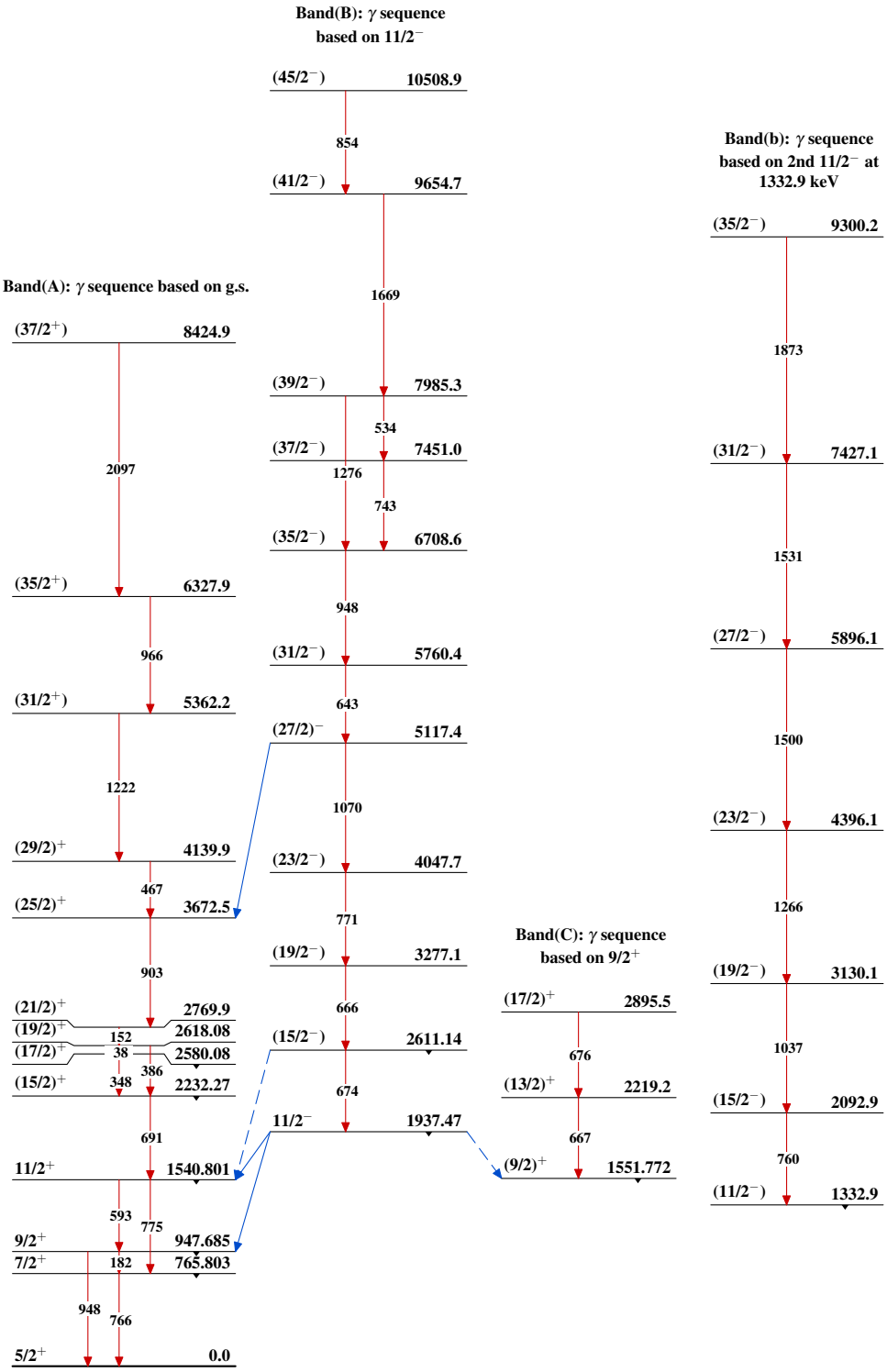
Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



$^{95}_{42}Mo_{53}$

Adopted Levels, Gammas



$^{95}_{42}Mo_{53}$