Adopted Levels, Gammas

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	ENSDF	1-Jul-2006

Q(β^-)=1614 *24*; S(n)=8393 *24*; S(p)=7441 *24*; Q(α)=−3158 *24* 2012Wa38
Note: Current evaluation has used the following Q record 1614 248391 247441 25-3155 24 2003Au03.

^{101}Tc Levels

1976Ab06 studied Alaga-model predictions for odd-mass technetium isotopes.

Cross Reference (XREF) Flags

A	^{101}Mo β^- decay (14.61 min)	D	^{100}Mo(^{7}Li,α2nγ)
B	^{100}Mo(p,p) IAR	E	^{100}Mo(^{3}He,pnγ)
C	^{100}Mo(^{3}He,d)	F	^{176}Yb(^{28}Si,Fγ)

E(level)†	Jπ#	$T_{1/2}$	XREF	Comments
0.0@	9/2$^+$	14.22 min *1*	A CDEF	%β^-=100 Jπ: from L=4 (^{3}He,d); g.s. of ^{99}Tc,^{97}Tc,^{95}Tc are 9/2$^+$. $T_{1/2}$: weighted av: 14.224 *8* (1990Ab06), 14.0 min *1* (1957Ok01), 14.3 min *1* (1954Wi04). Others: 1941Ma03, 1948Pe03, 1948Mo33.
9.320 *9*	7/2$^+$	14.3 ns *3*	A E	Jπ: M1 γ to 9/2$^+$, Jπ=7/2$^+$ for the first-excited state is characteristic of ^{99}Tc,^{97}Tc,^{95}Tc. γ from 5/2$^-$. $T_{1/2}$: from 1976SvZY, 1974SvZZ (ce)(ce)(t), s.
15.602 *10*	5/2$^+$	26.8 ns *6*	A DEF	Jπ: based on E2 γ decay to 9/2$^+$ and M1+E2 γ decay to 7/2$^+$ state. E(level) follows trend of low-lying 5/2$^+$ states of ^{99}Tc,^{97}Tc,^{95}Tc. $T_{1/2}$: from 1976SvZY, 1974SvZZ (ce)(γ)(t) s-scin.
207.526& *20*	1/2$^-$	636 μs *8*	A CDEF	%IT=100 E(level): syst with 1/2$^-$ isomerism in ^{99}Tc(143 keV, 6.0 h), ^{97}Tc(96 keV, 90 d), and ^{95}Tc(39 keV, 61 d). Jπ: from M2 γ decay to 5/2$^+$ state and L=1 (^{3}He,d). $T_{1/2}$: 636 μs *8* (1978Ba18) 192γ(t) pulsed beam. Others: 760 μs *50* (1970Uy01), 710 μs *120* (1964Br27), 850 μs *120* (1968Ga17), 862 μs (1968Io01).
288.47& *3*	3/2$^-$		A CDEF	Jπ: from L(^{3}He,d)=1 and M1 γ decay to 1/2$^-$ state.
394.65& *6*	5/2$^-$		A CDE	Jπ: from L=3 (^{3}He,d) and log *ft*=9.5 from 1/2$^+$.
500.47 *4*	5/2$^-$‡		A DE	E(level): only the 211.9γ is seen in all work, evaluator has adopted the scheme from decay, more measurements than in (^{3}He,pnγ).
515.251 *19*	5/2$^+$		A C E	Jπ: from L=2 (^{3}He,d) and dominant γ decay to 7/2$^+$ state.
520.62 *12*			A	
533.55 *5*	7/2$^+$‡		A E	
589.25@ *21*	11/2$^+$‡		DEF	
606.47 *4*	1/2$^+$,3/2$^+$		A E	Jπ: consistent with γ decays to 1/2$^-$,5/2$^+$ states and log *ft*=6.9 from 1/2$^+$.
616.21 *4*	3/2$^-$,5/2$^-$		A E	Jπ: γ to 1/2$^-$,7/2$^+$.
618.61& *6*	7/2$^-$‡		DEF	
622.24 *5*	(1/2$^-$,3/2$^-$)		A C E	XREF: C(620). Jπ: (^{3}He,d) L=1 excitation at 620 keV may correspond to this level.
642.32@ *20*	13/2$^+$‡		DEF	
669.69 *5*	5/2$^-$		A C E	Jπ: L=3 (^{3}He,d) and log *ft*=9.5 from 1/2$^+$.
676.59 *5*	5/2$^-$‡		E	

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Adopted Levels, Gammas (continued)

^{101}Tc Levels (continued)

E(level)†	Jπ#	XREF	Comments
711.205 *24*	3/2+,5/2+‡	A E	
742.32 *7*		A	
777.97 *8*		DE	
884.58& *11*	9/2−‡	DEF	Jπ: Also stretched E2 γ to 5/2−.
886.70 *3*		A C	E(level): (^{3}He,d) excitation at 890 keV, L=(2,4), probably correspond to this level.
911.60 *24*		A	
946.8 *3*	11/2−	D	
980.73 *5*	3/2−,5/2−‡	E	
1028.09 *3*	(3/2+)	A E	Jπ: based on γ decays to 5/2+,7/2+ states and log *ft* from 1/2+.
1034.34 *6*	5/2−,(7/2−)‡	E	
1042.77 *7*	(9/2−)	E	Jπ: γ to 5/2−,7/2−.
1045 *10*	1/2−,3/2−	C	Jπ: L=1 (^{3}He,d).
1103.63 *7*		A E	E(level): only the 602.9γ is seen in all work, evaluator has adopted the scheme from decay, more measurements than in (^{3}He,pnγ).
1122.03 *9*		A	
1170.84& *22*	11/2−‡	DEF	
1175.07 *11*		E	
1188.05 *12*	1/2−,3/2−	A C E	XREF: C(1197). Jπ: L=1 (^{3}He,d).
1191.49 *11*	5/2−,7/2−‡	E	
1197	(1/2−,3/2−)	C	Jπ: J^π=1 in (^{3}He,d).
1232.37 *9*		A E	
1249.74 *9*		E	
1264.79 *21*	13/2+,(15/2+)‡	E	
1271.04 *10*		E	
1280 *10*	3/2+,5/2+	C	Jπ: L=2 (^{3}He,d).
1295.22 *23*	9/2+,11/2+‡	E	
1319.57 *3*	3/2+	A C E	Jπ: L=2 (^{3}He,d), log *ft*=6.1 from 1/2+.
1322.95 *12*		E	
1331.4@ *3*	(15/2+)	DEF	
1400.0@ *3*	(17/2+)	DEF	
1421.66 *6*	7/2−,9/2−,11/2−‡	E	
1429 *10*	3/2+,5/2+	C	Jπ: L=2 (^{3}He,d).
1442.19 *11*		E	
1477.97 *11*	7/2−	E	
1490 *7*	3/2,5/2+	C	Jπ: L=2 (^{3}He,d).
1499.5& *5*	13/2−	DEF	Jπ: Stretched E2 γ to 9/2−.
1521.10 *11*		E	
1534.95 *23*	9/2+,13/2+‡	E	
1559.1 *4*		E	
1565.06 *11*		E	
1578 *10*	3/2+,5/2+	C	Jπ: L=2 (^{3}He,d).
1594.72 *5*		A E	
1599.08 *6*		A	
1614.83 *4*		A	
1617.75 *12*	1/2+	A C	XREF: C(1608). Jπ: (^{3}He,d) L=0 excitation at 1608 keV probably corresponds to this level; observed γ decays to J≤3/2 states.
1644.34 *7*		A	
1678.09 *6*		A	
1703 *10*	3/2+,5/2+	C	Jπ: L=2 (^{3}He,d).

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Adopted Levels, Gammas (continued)

^{101}Tc Levels (continued)

E(level)[†]	Jπ[#]	XREF	Comments
1775.46 *5*		A	
1806.40 *4*	1/2+,3/2+	A E	Jπ: log *ft*=5.8 from 1/2+ parent.
1808.51 *12*		A	
1836.6 *4*		D	
1844.31[&] *23*	(15/2−)	EF	
1892.5 *10*		E	
1897.96 *4*	1/2+,3/2+	A	Jπ: log *ft*=5.7 from 1/2+ parent.
1928.96 *11*		E	
1962.34 *3*	1/2+,3/2+	A	Jπ: log *ft*=4.8 from 1/2+.
2001.33 *6*		A	
2047.716 *24*	1/2+,3/2+	A	Jπ: log *ft*=4.5, from 1/2+ parent.
2056.83 *5*	(1/2+,3/2+)	A	Jπ: based on γ decays to 3/2+,5/2+,7/2+ states and log *ft*=5.4.
2129.83 *5*	(1/2+,3/2+)	A	Jπ: based on allowed log *ft*=5.3 from 1/2+ parent.
2170.8[@] *5*	(19/2+)	F	
2170.8 *3*		D F	
2173.7 *6*		D	
2218.30 *19*	(1/2+,3/2+)	A	Jπ: based on allowed log *ft*=5.8 from 1/2+ parent.
2237.88 *12*	(1/2+,3/2+)	A	Jπ: based on allowed log *ft*=5.6 from 1/2+ parent.
2250.1[&] *4*	(17/2−)	F	
2271.7[@] *6*	(21/2+)	D F	
2401.1 *6*	(19/2+)	D	Jπ: From (^{7}Li,*α*n*γ*).
2413.0[a] *3*	(19/2−)	F	
2442.28 *7*	(1/2+,3/2+)	A	Jπ: based on allowed log *ft*=5.0 from 1/2+ parent.
2557.99 *10*	(1/2+,3/2+)	A	Jπ: based on allowed log *ft*=4.0 from 1/2+ parent.
2573.52 *25*	(1/2+,3/2+)	A	Jπ: log *ft*=4.6 from 1/2+ parent.
2615.7[a] *4*	(21/2−)	F	
2870.9[a] *5*	(23/2−)	F	
2918.1[b] *6*	(21/2+,23/2+)	F	
3096.1[a] *6*	(25/2−)	F	
3135.3[b] *6*	(23/2+,25/2+)	F	
3499.5[b] *7*	(25/2+,27/2+)	F	
3887.1[b] *7*	(27/2+,29/2+)	F	
4231.0[b] *7*	(29/2+,31/2+)	F	

[†] From least squares fit to gammas.
[‡] Excitation function and DCO in (^{3}He,pn*γ*).
[#] J^{π} for levels seen only in ^{100}Mo(^{7}Li,*α*n*γ*) are based on the gammas decay properties and band consideration.
[@] Band(A): $\pi g_{9/2}$ band.
[&] Band(B): $\pi p_{1/2}$ band.
[a] Band(C): Band based on (19/2−).
[b] Band(D): Band based on (21/2+,23/2+).

Adopted Levels, Gammas (continued)

$\gamma(^{101}Tc)$

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[†]	δ	α[@]	$I_{(\gamma+ce)}$	Comments
9.320	$7/2^+$	9.317 *10*	100	0.0	$9/2^+$	M1+E2	0.015 *2*	43.7 *10*		B(M1)(W.u.)=0.0426 *19*; B(E2)(W.u.)=1.0×10^2 *3*
15.602	$5/2^+$	6.281 *7*	100	9.320	$7/2^+$	M1+E2	0.010 *+2−3*	142 *4*		B(M1)(W.u.)=0.0226 *17*; B(E2)(W.u.)=53 *22*
		15.606 *15*	0.25	0.0	$9/2^+$	E2		1440	110	B(E2)(W.u.)=13.9 *9*
207.526	$1/2^-$	191.92 *2*	100	15.602	$5/2^+$	M2		0.29		B(M2)(W.u.)=0.00669 *10*
288.47	$3/2^-$	80.92 *3*	100	207.526	$1/2^-$	M1(+E2)		0.51		α(K)= 0.445; α(L)= 0.0534; α(M)=0.00969; α(N+..)=0.00188
394.65	$5/2^-$	107.1 *3*		288.47	$3/2^-$					
		378.99 *21*	100	15.602	$5/2^+$	D[‡]				
500.47	$5/2^-$	211.98 *3*	100 *5*	288.47	$3/2^-$					
		491.5 *3*	14 *2*	9.320	$7/2^+$					
515.251	$5/2^+$	499.65 *3*	12 *1*	15.602	$5/2^+$					
		505.92 *3*	100 *5*	9.320	$7/2^+$					
520.62		505.05 *18*	100	15.602	$5/2^+$					
533.55	$7/2^+$	523.83 *12*	43 *3*	9.320	$7/2^+$					
		533.57 *7*	100 *5*	0.0	$9/2^+$					
589.25	$11/2^+$	589.8 *3*	100	0.0	$9/2^+$	D[‡]				
606.47	$1/2^+,3/2^+$	398.84 *7*	5.5 *5*	207.526	$1/2^-$					
		590.10 *19*	100 *5*	15.602	$5/2^+$					
616.21	$3/2^-,5/2^-$	115.76 *13*	2.0 *3*	500.47	$5/2^-$					
		327.70 *7*	13.3 *6*	288.47	$3/2^-$					
		408.69 *6*	100 *5*	207.526	$1/2^-$					
		606.8 *3*	13.3 *22*	9.320	$7/2^+$					
618.61	$7/2^-$	118.9 *5*	20 *4*	500.47	$5/2^-$	D[‡]				
		224.1 *3*	100 *10*	394.65	$5/2^-$	D[‡]				
		330.1 *5*	25	288.47	$3/2^-$	Q[‡]				
622.24	$(1/2^-,3/2^-)$	333.61 *6*	100	288.47	$3/2^-$					
642.32	$13/2^+$	642.3 *3*	100	0.0	$9/2^+$	Q[‡]				
669.69	$5/2^-$	274.97 *20*	30.0 *4*	394.65	$5/2^-$					
		381.12 *10*	100 *5*	288.47	$3/2^-$					
		660.64 *7*	73.5 *60*	9.320	$7/2^+$					
676.59	$5/2^-$	176.3 *1*	13.1	500.47	$5/2^-$					
		282.0 *1*	17.5	394.65	$5/2^-$					
		469.07 *5*	100	207.526	$1/2^-$					
711.205	$3/2^+,5/2^+$	195.93 *4*	40 *2*	515.251	$5/2^+$					
		695.56 *6*	100 *8*	15.602	$5/2^+$					
		701.80 *13*	5.2 *4*	9.320	$7/2^+$					
742.32		221.80 *20*	38 *4*	520.62						
		732.98 *7*	100 *10*	9.320	$7/2^+$					
777.97		277.5 *5*	100	500.47	$5/2^-$					

$^{101}_{43}Tc_{58}$-4

Adopted Levels, Gammas (continued)

γ(^{101}Tc) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[†]
777.97		383.0 *5*	61	394.65	5/2$^-$	
884.58	9/2$^-$	265.8 *5*	90 *15*	618.61	7/2$^-$	D[‡]
		489.6 *5*	100 *15*	394.65	5/2$^-$	E2[‡]
886.70		352.97 *9*	4.1 *4*	533.55	7/2$^+$	
		371.6 *8*	5.4 *12*	515.251	5/2$^+$	
		871.08 *5*	53 *6*	15.602	5/2$^+$	
		877.39 *4*	100 *8*	9.320	7/2$^+$	
		887.0 *3*	6.8 *8*	0.0	9/2$^+$	
911.60		377.9 *5*	100	533.55	7/2$^+$	
946.8	11/2$^-$	328.2 *3*	100	618.61	7/2$^-$	E2[‡]
980.73	3/2$^-$,5/2$^-$	311.16 *5*	100	669.69	5/2$^-$	
		358.37 *5*	23	622.24	(1/2$^-$,3/2$^-$)	
		362.1 *1*	13	618.61	7/2$^-$	
		586.1 *1*	15	394.65	5/2$^-$	
1028.09	(3/2$^+$)	421.67 *10*	4.4 *5*	606.47	1/2$^+$,3/2$^+$	
		512.83 *5*	13.7 *8*	515.251	5/2$^+$	
		739.54 *13*	2.4 *5*	288.47	3/2$^-$	
		1012.47 *38*	100 *6*	15.602	5/2$^+$	
		1018.58 *25*	5 *1*	9.320	7/2$^+$	
1034.34	5/2$^-$,(7/2$^-$)	256.4 *1*	22.2	777.97		
		364.6 *1*	48.1	669.69	5/2$^-$	
		415.79 *5*	100	618.61	7/2$^-$	
		533.6 *1*	44.4	500.47	5/2$^-$	
		639.7 *1*	59.3	394.65	5/2$^-$	
1042.77	(9/2$^-$)	265.0 *1*	20.7	777.97		
		424.13 *5*	100	618.61	7/2$^-$	
		542.2 *1*	58.6	500.47	5/2$^-$	
1103.63		497.0 *8*	63 *6*	606.47	1/2$^+$,3/2$^+$	
		582.9 *9*	43 *4*	520.62		
		602.98 *23*	48 *5*	500.47	5/2$^-$	
		815.29 *8*	84 *8*	288.47	3/2$^-$	
		895.89 *20*	100 *9*	207.526	1/2$^-$	
1122.03		452.5 *3*	14.5 *8*	669.69	5/2$^-$	
		515.42 *10*	100 *8*	606.47	1/2$^+$,3/2$^+$	
1170.84	11/2$^-$	286.3 *5*		884.58	9/2$^-$	
		551.8 *3*		618.61	7/2$^-$	
1175.07		674.6 *1*	100	500.47	5/2$^-$	
1188.05	1/2$^-$,3/2$^-$	571.62 *17*	100	616.21	3/2$^-$,5/2$^-$	
1191.49	5/2$^-$,7/2$^-$	514.9 *1*	100	676.59	5/2$^-$	
1232.37		562.7[#] *1*		669.69	5/2$^-$	
		625.3 *6*	66 *6*	606.47	1/2$^+$,3/2$^+$	

Adopted Levels, Gammas (continued)

γ(^{101}Tc) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[†]
1232.37		943.98 *21*	100 *7*	288.47	3/2$^-$	
1249.74		631.1 *1*	83.3	618.61	7/2$^-$	
		749.3 *1*	100	500.47	5/2$^-$	
1264.79	13/2$^+$,(15/2$^+$)	622.4 *1*	80.9	642.32	13/2$^+$	
		675.6 *1*	100	589.25	11/2$^+$	
1271.04		386.2 *1*	22.6	884.58	9/2$^-$	
		594.7 *1*	100	676.59	5/2$^-$	
1295.22	9/2$^+$,11/2$^+$	652.9 *1*	100	642.32	13/2$^+$	
1319.57	3/2$^+$	608.34 *4*	32 *2*	711.205	3/2$^+$,5/2$^+$	
		713.04 *9*	100 *7*	606.47	1/2$^+$,3/2$^+$	
		804.29 *5*	29 *2*	515.251	5/2$^+$	
		1304.00 *4*	82 *6*	15.602	5/2$^+$	
1322.95		789.4 *1*	100	533.55	7/2$^+$	
1331.4	(15/2$^+$)	690.2 *5*	100 *16*	642.32	13/2$^+$	D[‡]
		742.1 *5*	58 *10*	589.25	11/2$^+$	Q[‡]
1400.0	(17/2$^+$)	757.8 *3*	100	642.32	13/2$^+$	Q[‡]
1421.66	7/2$^-$,9/2$^-$,11/2$^-$	393.6 *1*	24.3	1028.09	(3/2$^+$)	
		815.18 *5*	100	606.47	1/2$^+$,3/2$^+$	
1442.19		772.5 *1*	100	669.69	5/2$^-$	
1477.97	7/2$^-$	977.5 *1*	100	500.47	5/2$^-$	
1499.5	13/2$^-$	328.39 *23*		1170.84	11/2$^-$	
		614.1 *5*	100	884.58	9/2$^-$	E2[‡]
1521.10		844.5 *1*	100	676.59	5/2$^-$	
1534.95	9/2$^+$,13/2$^+$	945.7 *1*	100	589.25	11/2$^+$	
1559.1		940.0 *5*	66.6	618.61	7/2$^-$	
		1164.9 *5*	100	394.65	5/2$^-$	
1565.06		1049.8 *1*	100	515.251	5/2$^+$	
1594.72		566.62 *5*	100 *7*	1028.09	(3/2$^+$)	
		707.8 *8*	9 *3*	886.70		
		883.49 *8*	95 *7*	711.205	3/2$^+$,5/2$^+$	
		988.25 *20*	26 *4*	606.47	1/2$^+$,3/2$^+$	
		1594.8 *9*	4.1 *18*	0.0	9/2$^+$	
1599.08		1065.9 *4*	57 *11*	533.55	7/2$^+$	
		1310.7 *13*	21 *12*	288.47	3/2$^-$	
		1583.1 *3*	30 *3*	15.602	5/2$^+$	
		1589.67 *9*	100 *5*	9.320	7/2$^+$	
1614.83		903.55 *9*	11.5 *9*	711.205	3/2$^+$,5/2$^+$	
		1599.26 *5*	100 *5*	15.602	5/2$^+$	
		1605.3 *6*	2.6 *4*	9.320	7/2$^+$	
		1615.0 *4*	3.3 *3*	0.0	9/2$^+$	
1617.75	1/2$^+$	514.1 *4*	14.3 *13*	1103.63		

$^{101}_{43}Tc_{58}$-6

Adopted Levels, Gammas (continued)

γ(^{101}Tc) (continued)

E_i(level)	J_i^π	E_γ †	I_γ	E_f	J_f^π
1617.75	1/2+	590.10 *19*	100 *23*	1028.09	(3/2+)
		1011.05 *14*	40 *4*	606.47	1/2+,3/2+
1644.34		933.3 *3*	100 *9*	711.205	3/2+,5/2+
		1249.4 *5*	38 *3*	394.65	5/2−
1678.09		358.2 *5*	6.3 *10*	1319.57	3/2+
		650.9 *7*	3.6 *8*	1028.09	(3/2+)
		1662.49 *6*	100 *3*	15.602	5/2+
1775.46		888.7 *3*	23.6 *14*	886.70	
		1064.59 *11*	27.4 *14*	711.205	3/2+,5/2+
		1169.23 *17*	21.9 *16*	606.47	1/2+,3/2+
		1260.21 *15*	14.7 *13*	515.251	5/2+
		1380.4 *8*	11.40 *11*	394.65	5/2−
		1759.72 *6*	100 *4*	15.602	5/2+
1806.40	1/2+,3/2+	778.29 *5*	54.2 *21*	1028.09	(3/2+)
		1184.19 *23*	10.1 *7*	622.24	(1/2−,3/2−)
		1199.94 *4*	100 *3*	606.47	1/2+,3/2+
		1290.7 *3*	6.3 *4*	515.251	5/2+
		1517.8 *4*	12.0 *9*	288.47	3/2−
1808.51		686.0 *3*	29.6 *24*	1122.03	
		1293.29 *17*	93 *4*	515.251	5/2+
		1308.13 *20*	38 *4*	500.47	5/2−
		1520.4 *5*	100 *13*	288.47	3/2−
1836.6		1194.3 *3*	100	642.32	13/2+
1844.31	(15/2−)	673.4 *1*	100	1170.84	11/2−
1892.5		1286 *1*	100	606.47	1/2+,3/2+
1897.96	1/2+,3/2+	869.7 *3*	25.5 *16*	1028.09	(3/2+)
		1186.76 *4*	90 *3*	711.205	3/2+,5/2+
		1382.71 *6*	100 *3*	515.251	5/2+
		1882.26 *25*	7.6 *5*	15.602	5/2+
		1888.3 *5*	3.9 *6*	9.320	7/2+
1928.96		1413.7 *1*	100	515.251	5/2+
1962.34	1/2+,3/2+	318.00 *6*	4.9 *23*	1644.34	
		347.56 *9*	2.2 *2*	1614.83	
		368.4 *5*	2.4 *8*	1594.72	
		642.71 *7*	2.1 *3*	1319.57	3/2+
		859.13 *18*	2.6 *2*	1103.63	
		934.21 *3*	87 *5*	1028.09	(3/2+)
		1251.10 *4*	100 *3*	711.205	3/2+,5/2+
		1346.09 *7*	20.0 *8*	616.21	3/2−,5/2−
		1355.89 *5*	35.9 *15*	606.47	1/2+,3/2+
		1673.91 *6*	35.5 *15*	288.47	3/2−
		1754.90 *8*	7.9 *3*	207.526	1/2−
1962.34	1/2+,3/2+	1946.54 *24*	1.69 *11*	15.602	5/2+
2001.33		1394.86 *6*	100 *4*	606.47	1/2+,3/2+
		1485.9 *2*	16.0 *9*	515.251	5/2+
		1712.93 *15*	31.8 *17*	288.47	3/2−
2047.716	1/2+,3/2+	370.0 *8*	1.79 *22*	1678.09	
		448.60 *6*	10.2 *4*	1599.08	
		728.19 *16*	1.49 *13*	1319.57	3/2+
		1020.0 *3*	5.85 *24*	1028.09	(3/2+)
		1160.98 *4*	61.0 *19*	886.70	
		1336.40 *13*	2.32 *11*	711.205	3/2+,5/2+
		1377.95 *17*	3.61 *19*	669.69	5/2−
		1431.68 *18*	5.49 *19*	616.21	3/2−,5/2−
		1440.84 *11*	2.29 *13*	606.47	1/2+,3/2+
		1514.10 *22*	2.67 *16*	533.55	7/2+
		1532.49 *4*	93 *3*	515.251	5/2+
		1653.3 *4*	1.16 *8*	394.65	5/2−
		1840.24 *5*	21.3 *14*	207.526	1/2−
		2032.10 *5*	100 *3*	15.602	5/2+
2056.83	(1/2+,3/2+)	442.0 *3*	2.5 *3*	1614.83	
		737.3 *8*	1.3 *3*	1319.57	3/2+
		1314.28 *25*	9.9 *5*	742.32	
		1435.1 *4*	3.8 *3*	622.24	(1/2−,3/2−)
		1768.22 *19*	6.6 *4*	288.47	3/2−
		2041.24 *5*	100 *3*	15.602	5/2+
		2047.31 *14*	4.2 *3*	9.320	7/2+
2129.83	(1/2+,3/2+)	1007.4 *3*	19.4 *16*	1122.03	
		1218.0 *5*	6.3 *8*	911.60	
		1387.6 *3*	8.1 *6*	742.32	
		1418.56 *6*	100 *4*	711.205	3/2+,5/2+
		1523.0 *3*	31.4 *14*	606.47	1/2+,3/2+
		1609.2 *3*	10.0 *8*	520.62	
		1629.4 *5*	5.5 *6*	500.47	5/2−
		2114.34 *8*	64 *3*	15.602	5/2+
2170.8	(19/2+)	770.8 *3*		1400.0	(17/2+)
2170.8		325.9 *3*		1844.31	(15/2−)
		670.9 *3*		1499.5	13/2−
		839.8 *3*		1331.4	(15/2+)
2173.7		673.8 *5*	100	1499.5	13/2−
2218.30	(1/2+,3/2+)	540.1 *5*	63 *8*	1678.09	
		1030.1 *4*	46 *5*	1188.05	1/2−,3/2−
		1507.0 *7*	33 *9*	711.205	3/2+,5/2+
		1548.68 *24*	100 *7*	669.69	5/2−

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Adopted Levels, Gammas (continued)

γ(^{101}Tc) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[†]
2237.88	(1/2$^+$,3/2$^+$)	560.3 *3*	19.9 *21*	1678.09		
		1049.80 *6*	100 *5*	1188.05	1/2$^-$,3/2$^-$	
		1209.92 *21*	38 *3*	1028.09	(3/2$^+$)	
		1350.8 *7*	14.1 *16*	886.70		
		1526.6 *5*	28 *3*	711.205	3/2$^+$,5/2$^+$	
		1722.1 *6*	9 *3*	515.251	5/2$^+$	
2250.1	(17/2$^-$)	750.2 *3*	100	1499.5	13/2$^-$	
2271.7	(21/2$^+$)	871.7 *5*	100	1400.0	(17/2$^+$)	Q[‡]
2401.1	(19/2$^+$)	1001.1 *5*	100	1400.0	(17/2$^+$)	Q[‡]
2413.0	(19/2$^-$)	162.7 *3*		2250.1	(17/2$^-$)	
		242.1 *3*		2170.8	(19/2$^+$)	
		1013.2 *3*		1400.0	(17/2$^+$)	
2442.28	(1/2$^+$,3/2$^+$)	847.24 *24*	15.1 *18*	1594.72		
		1414.20 *6*	100 *5*	1028.09	(3/2$^+$)	
		1921.4 *5*	10.7 *15*	520.62		
2557.99	(1/2$^+$,3/2$^+$)	510.21 *12*	88 *12*	2047.716	1/2$^+$,3/2$^+$	
		1325.65 *15*	100 *12*	1232.37		
		1530.3 *5*	52 *20*	1028.09	(3/2$^+$)	
		1646.4 *3*	28 *3*	911.60		
		1941.8 *4*	19.6 *20*	616.21	3/2$^-$,5/2$^-$	
		2024.4 *8*	24 *3*	533.55	7/2$^+$	
2573.52	(1/2$^+$,3/2$^+$)	611.6 *5*	100 *14*	1962.34	1/2$^+$,3/2$^+$	
		675.9 *6*	34 *5*	1897.96	1/2$^+$,3/2$^+$	
		798.0 *5*	52 *7*	1775.46		
		1451.1 *4*	48 *5*	1122.03		
2615.7	(21/2$^-$)	202.4 *3*		2413.0	(19/2$^-$)	
		365.9 *3*		2250.1	(17/2$^-$)	
2870.9	(23/2$^-$)	255.2 *3*	100	2615.7	(21/2$^-$)	
2918.1	(21/2$^+$,23/2$^+$)	646.48 *24*	100	2271.7	(21/2$^+$)	
3096.1	(25/2$^-$)	225.2 *3*	100	2870.9	(23/2$^-$)	
3135.3	(23/2$^+$,25/2$^+$)	217.15 *21*		2918.1	(21/2$^+$,23/2$^+$)	
		863.62 *24*		2271.7	(21/2$^+$)	
3499.5	(25/2$^+$,27/2$^+$)	364.19 *23*		3135.3	(23/2$^+$,25/2$^+$)	
		581.33 *24*		2918.1	(21/2$^+$,23/2$^+$)	
3887.1	(27/2$^+$,29/2$^+$)	387.6 *3*		3499.5	(25/2$^+$,27/2$^+$)	
		751.8 *4*		3135.3	(23/2$^+$,25/2$^+$)	
4231.0	(29/2$^+$,31/2$^+$)	344.1 *3*		3887.1	(27/2$^+$,29/2$^+$)	

† From ^{101}Mo β^- decay, if it is possible.
‡ From ^{100}Mo(^{7}Li,$\alpha n\gamma$).

$^{101}_{43}Tc_{58}$-8

Adopted Levels, Gammas (continued)

$\gamma(^{101}Tc)$ (continued)

Seen only in (^{3}He,pnγ).

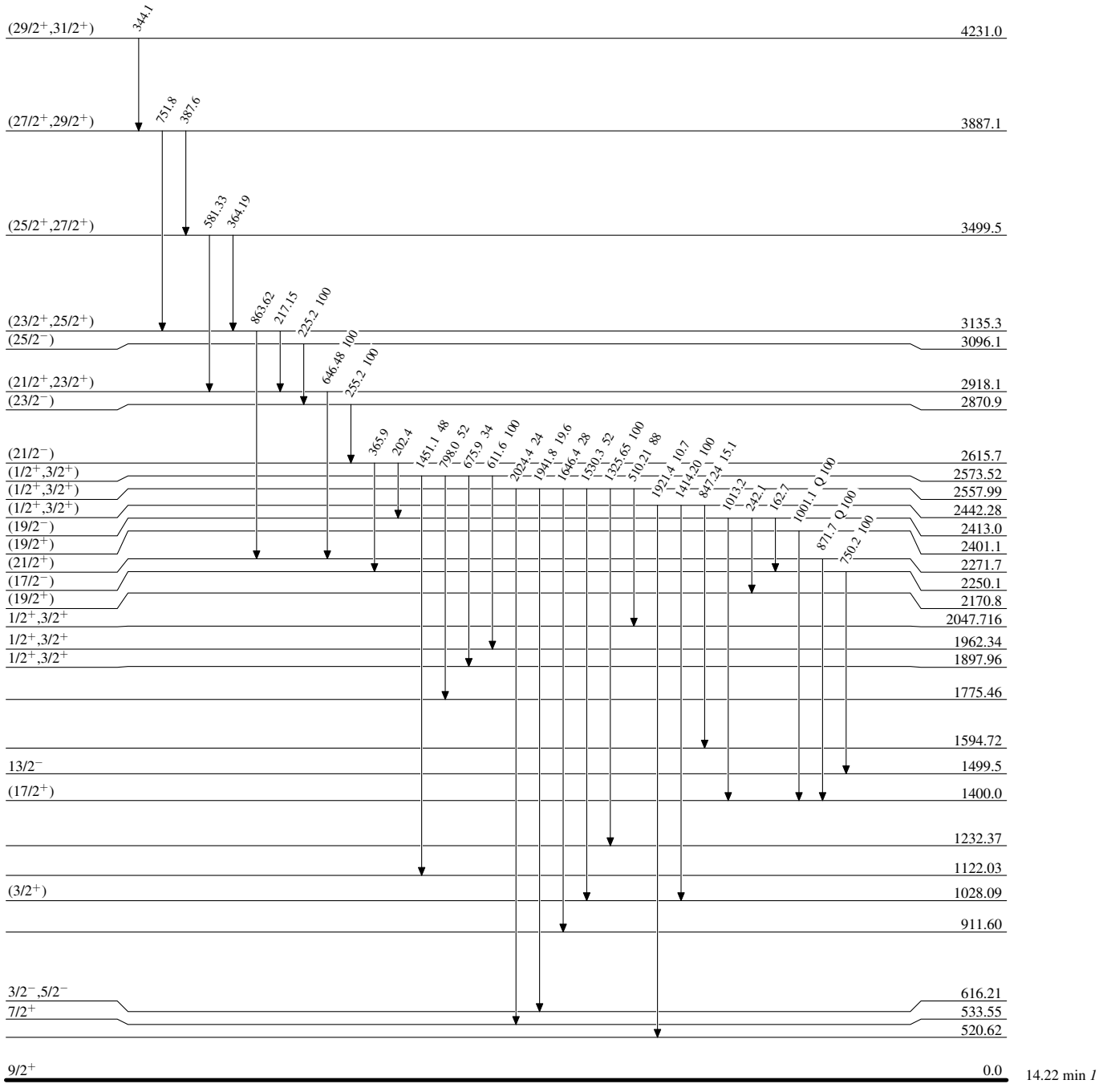
@ Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

$^{101}_{43}Tc_{58}$-9

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

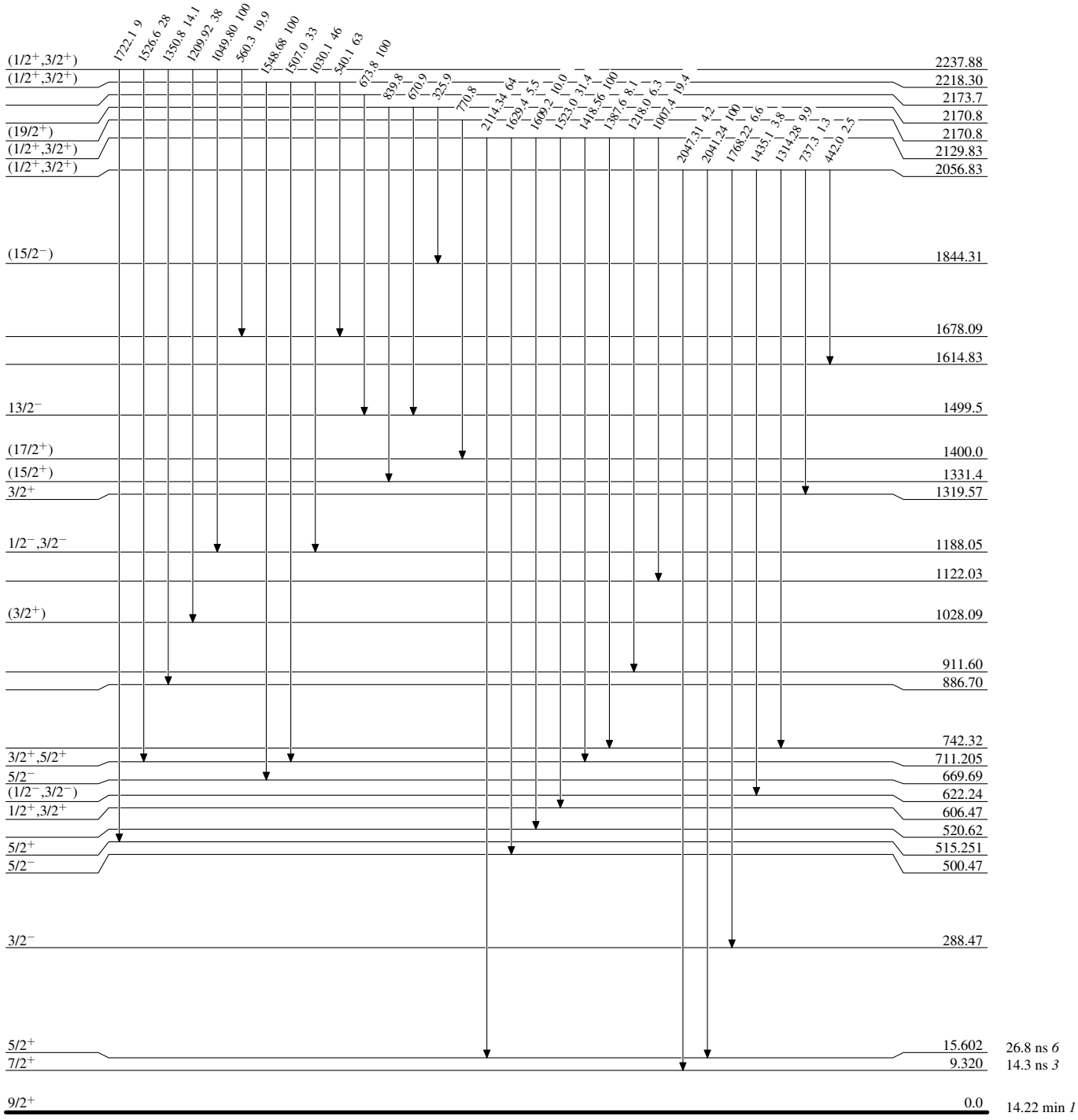


$^{101}_{43}Tc_{58}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

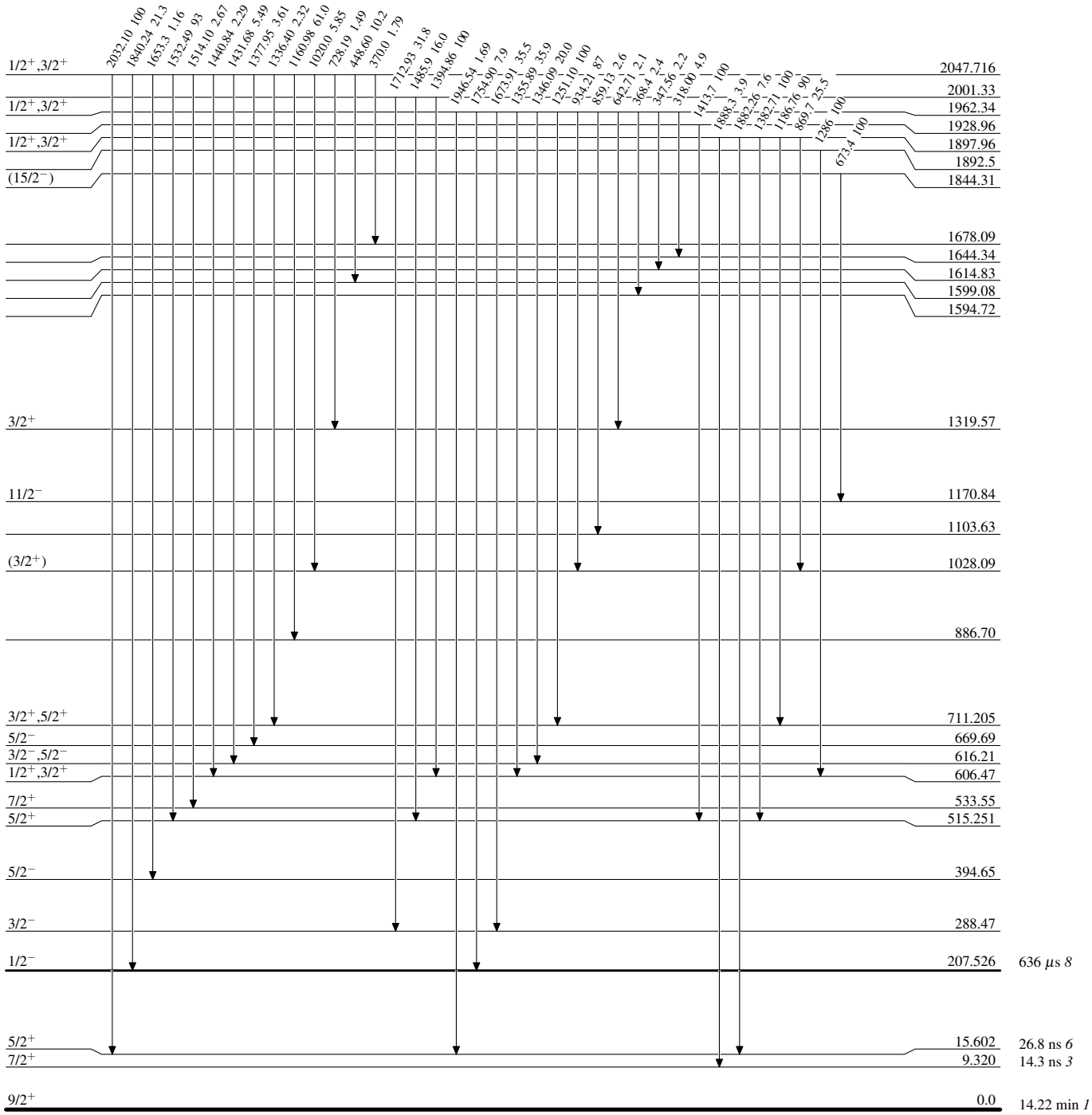


$^{101}_{43}Tc_{58}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

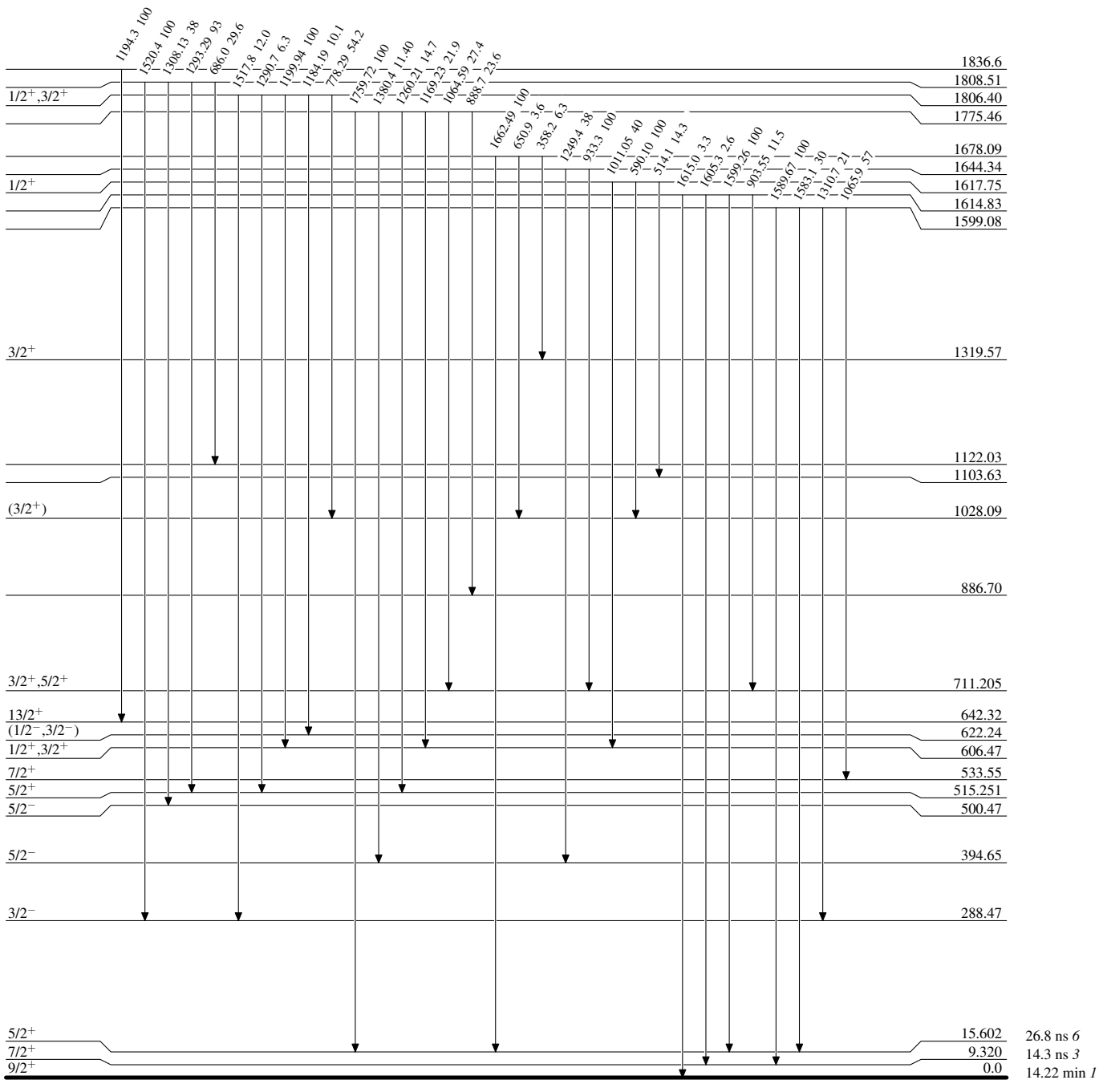


$^{101}_{43}Tc_{58}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

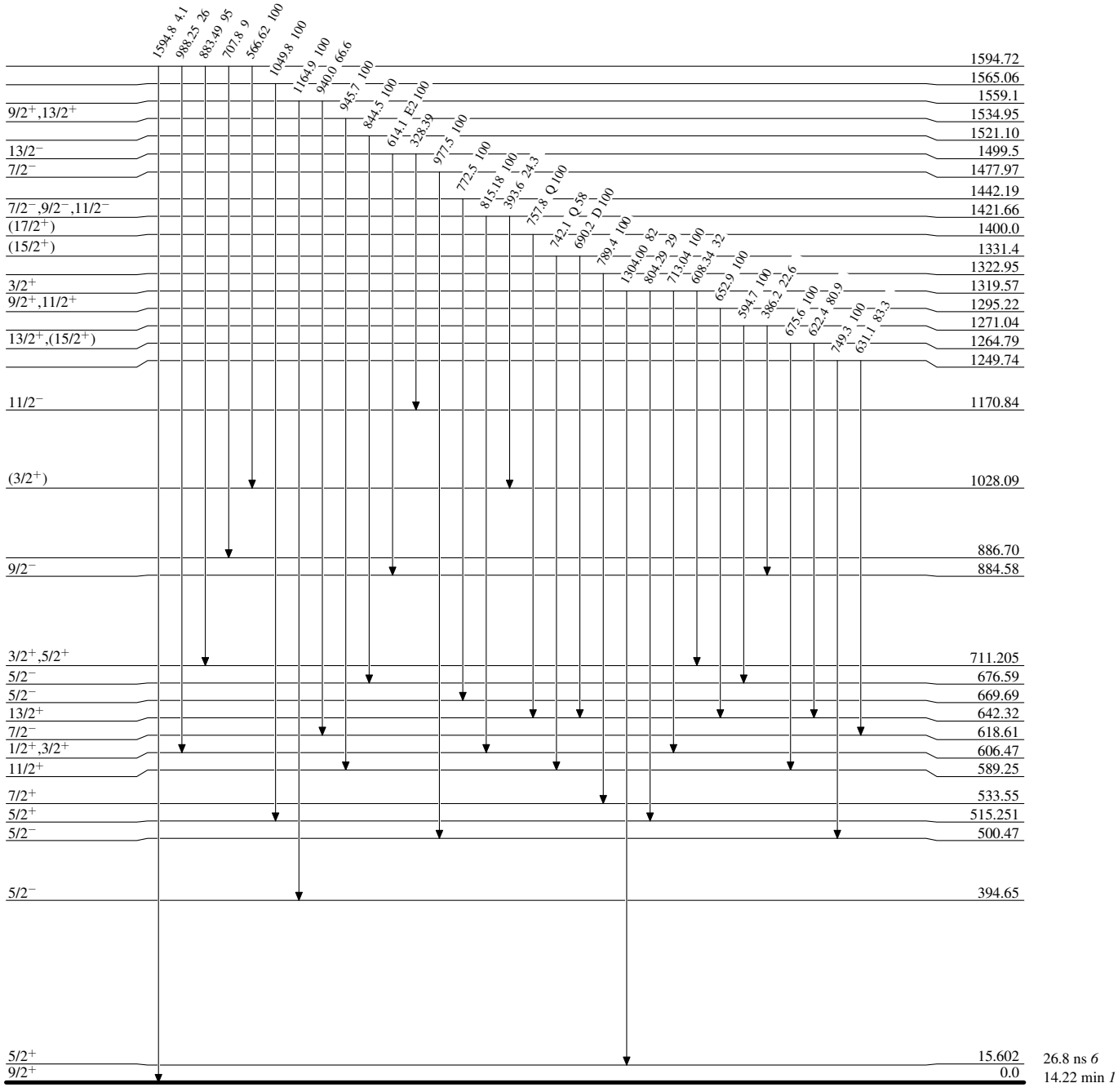


$^{101}_{43}Tc_{58}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

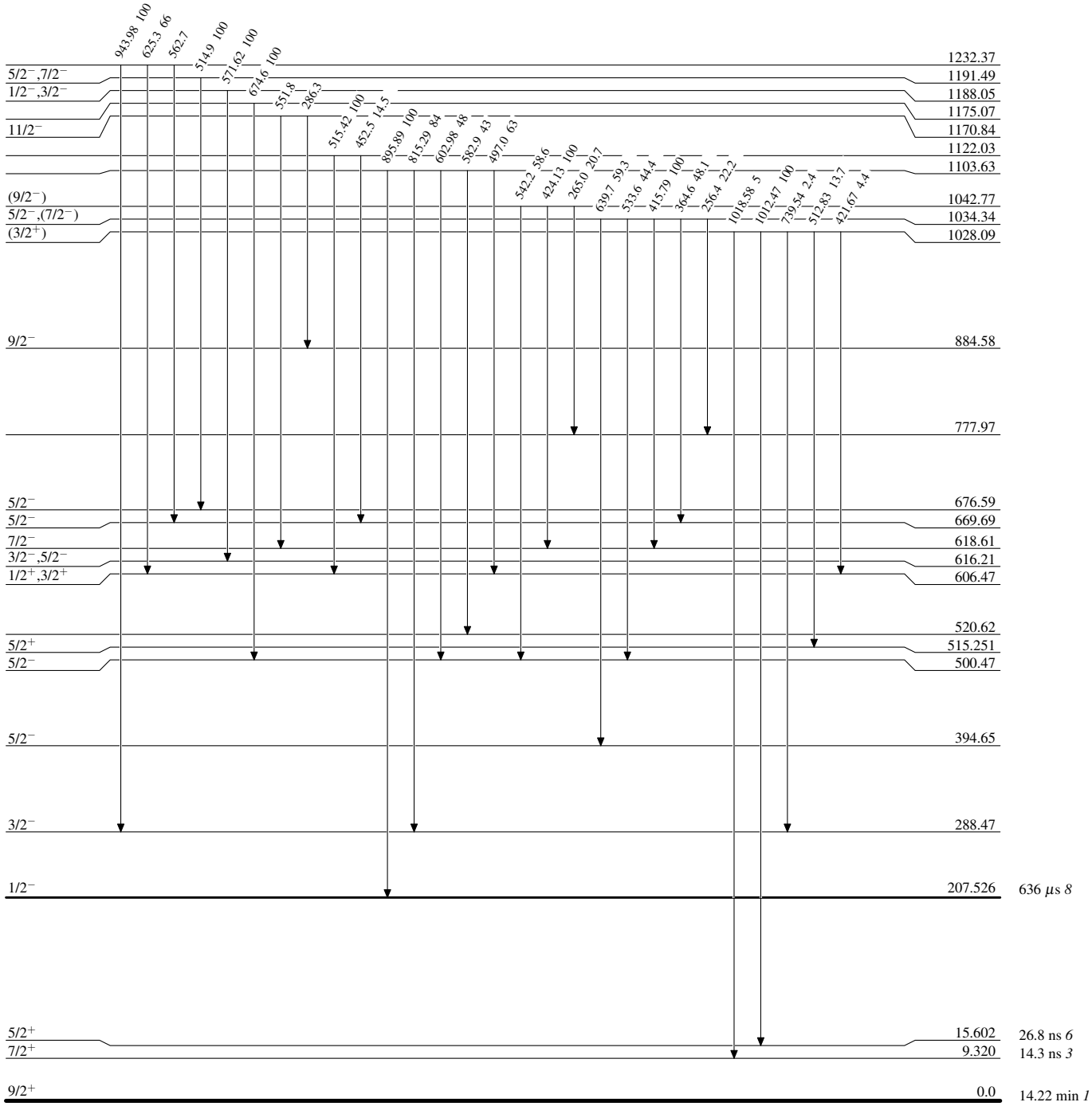


$^{101}_{43}Tc_{58}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

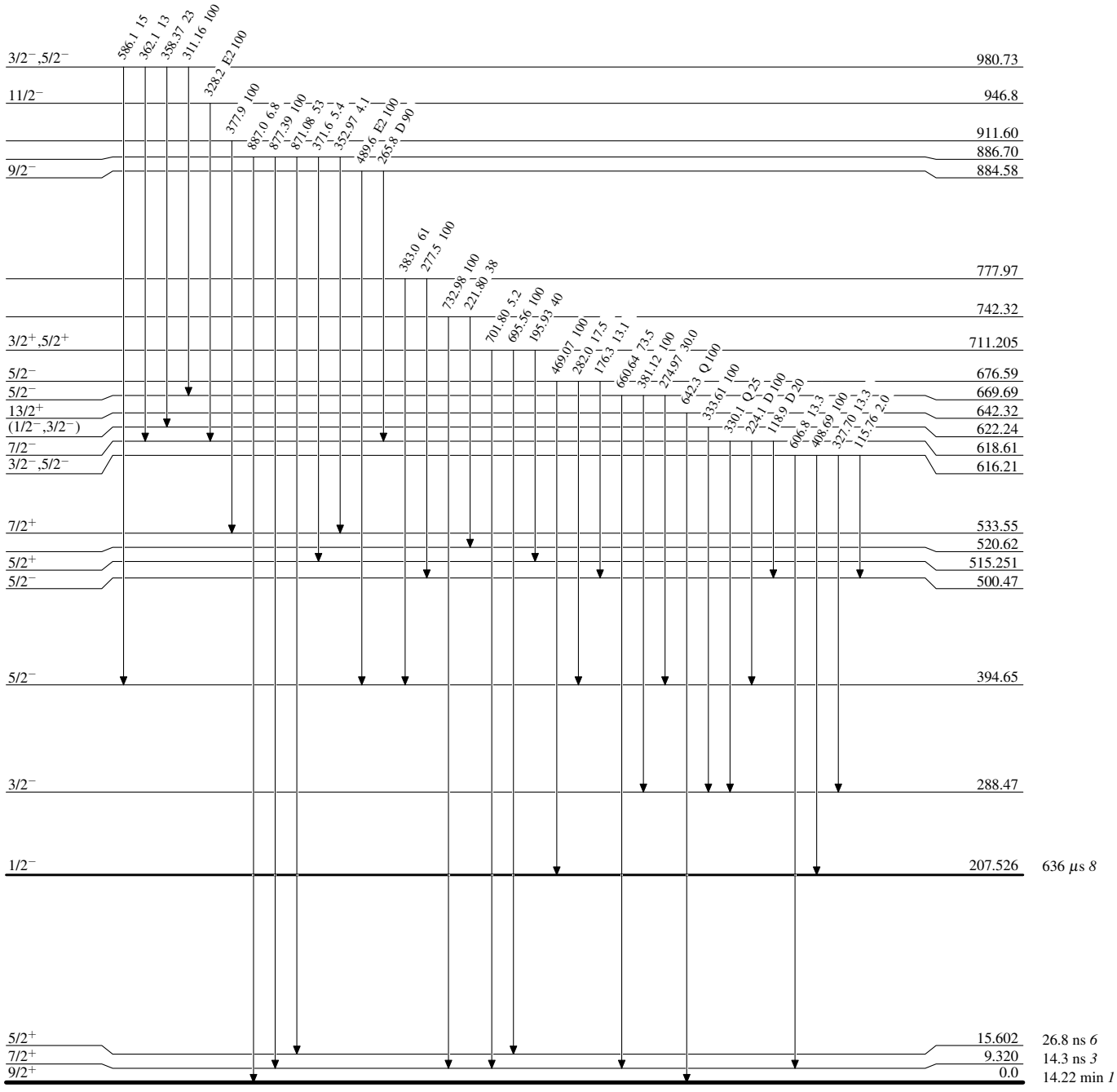


$^{101}_{43}Tc_{58}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

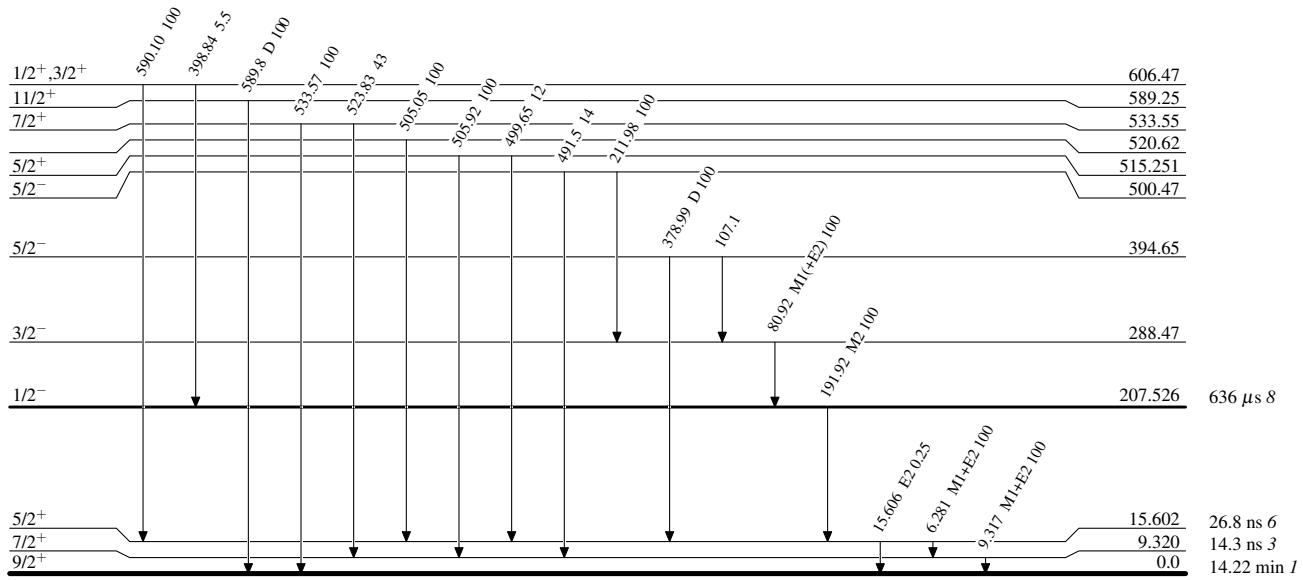


$^{101}_{43}Tc_{58}$

Adopted Levels, Gammas

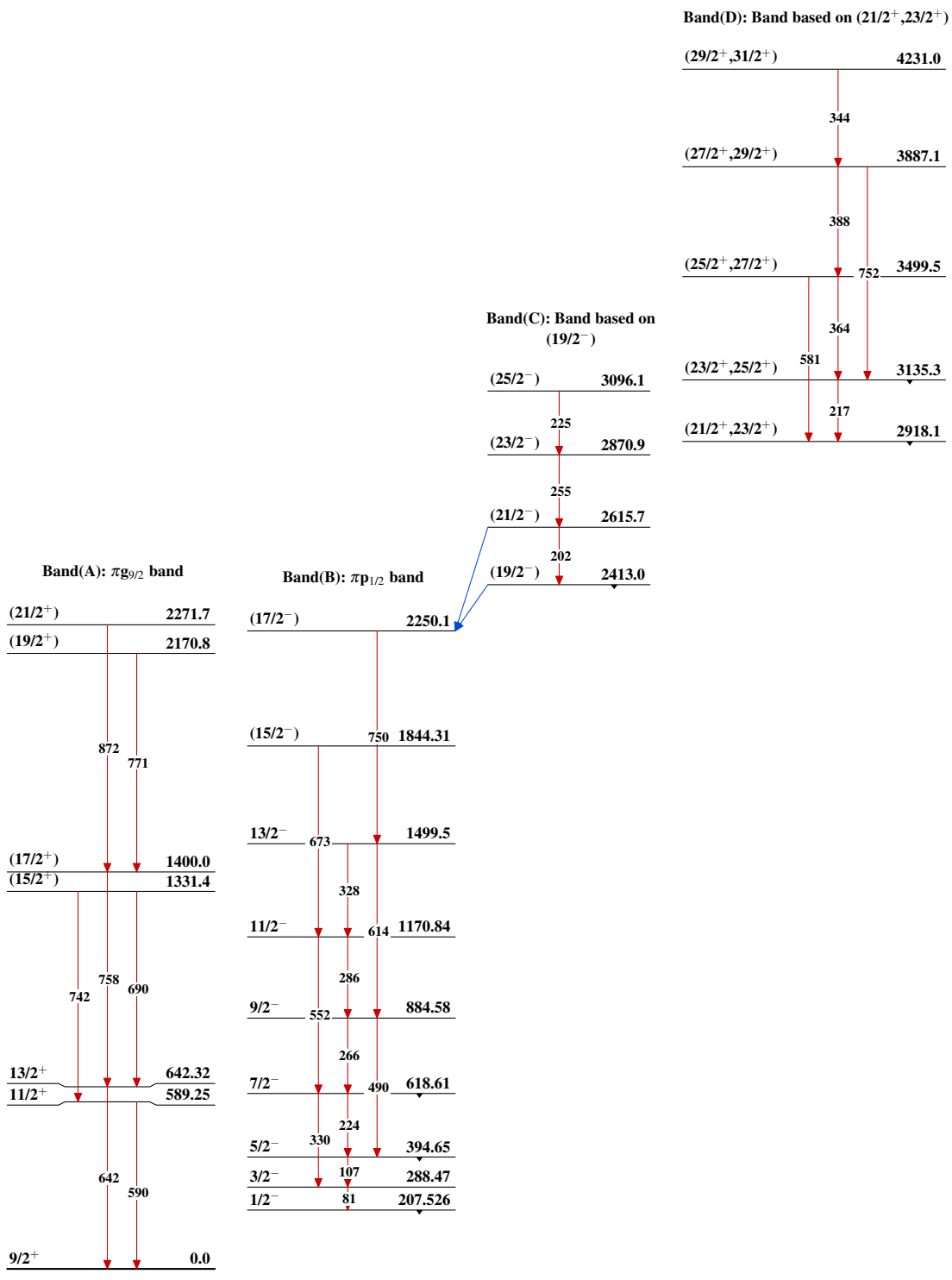
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{101}_{43}Tc_{58}$

Adopted Levels, Gammas



$^{101}_{43}Tc_{58}$