Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 113,2187 (2012)	15-Sep-2012

Q(β^-)=−4624 *5*; S(n)=11011 *4*; S(p)=4006 *7*; Q(α)=−5.17×10^3 *6* 2012Wa38
Note: Current evaluation has used the following Q record −4624 5 *11009* 5 *4005* 12 −5174 *52* 2011AuZZ.
Q(β^-),S(n),S(p),Q(α) from 2011AuZZ; −4530 syst (300keV uncertainty), 11020 *200*, 4019 *28*, −5290 *100*, respectively, from 2003Au03.
Q(εp)=426 *5* (2011AuZZ).
Other Reactions:

^{46}Ti(^{54}Fe,5p3nγ), E(^{54}Fe)=225 MeV (1990IsZY): measured Eγ, $\gamma\gamma$ coin; searched for ns isomers; attributed a 257γ-500γ-1347γ cascade to ^{92}Tc, implying levels at 1347, 1847 and 2104. None of these transitions has been confirmed in subsequent (^{40}Ca,5pnγ) or (^{35}Cl,4p3nγ) studies, and the evaluator does not adopt them as transitions in ^{92}Tc. Furthermore, 1995Gh02 have reassigned all three transitions to ^{94}Ru.

For shell-model calculations see, e.g., 1974Gr36, 1976Se01, 1976Gr07, 1992Si15, 1995Gh02, 1996Tu03.

^{92}Tc Levels

The adopted level scheme is based on that of 1994Ar33 in (^{40}Ca,5pnγ). However, the evaluator has adopted several of the modifications suggested by 1995Gh02 in (^{35}Cl,4p3nγ): (i) the order of the 663 and 636 cascade gammas has been reversed, so the weaker γ lies higher in the cascade; (ii) the 1786γ is placed so it directly feeds the (15$^+$) 3588 level (an alternative placement given by 1994Ar33) because 1995Gh02 suggest that a 627γ (not the 1786γ) lies immediately above the 2058γ, and the placement is shown as tentative because the 1786γ was not observed by 1995Gh02; (iii) an 1108γ-1938γ cascade is added feeding the (17$^-$) 4787 level (as in 1995Gh02) but, owing to the strength of the 1108γ in 1995Gh02, the evaluator allows that it may be a doublet there and retains 1994Ar33's placement of an 1108γ from the (15$^-$) 4048 level; (iv) the 1986γ is placed feeding the (15$^-$) 4048 level (as in 1995Gh02), instead of the (16$^-$) 4716 level (1994Ar33); (v) addition of 1015.2γ, 1051.6γ. Additional inconsistencies between the level schemes of 1994Ar33 and 1995Gh02 center on whether there are two levels near 2002 keV and whether the 647γ is a doublet (see comment on E(2002 levels)).
See 1994Ar33, 1995Gh02, 1996Tu03 for further discussion of possible configuration assignments for ^{92}Tc levels.

Cross Reference (XREF) Flags

A	^{92}Ru ε decay	D	^{92}Mo(p,nγ)
B	^{92}Mo(^{3}He,2npγ)	E	^{58}Ni(^{40}Ca,5pnγ),
C	^{92}Mo(^{3}He,t)	F	^{64}Zn(^{35}Cl,4p3nγ)

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0[a]	(8)$^+$	4.25 min *15*	ABCDEF	%ε+%β^+=100 J$^\pi$: log *ft*=5.4 for ^{92}Tc ε decay to 8$^+$ (89% branch); log *ft*=5.7 to 7$^+$; ε decay to 6$^+$ 2612 level is weak or nonexistent; $\sigma(\theta)$ systematics in (^{3}He,t). T$_{1/2}$: weighted average of 4.5 min *5* (1948Mo18), 4.0 min *1* and 4.4 min *4* (1964Va05), 4.52 min *12* (1985Be12), using method of limitation of relative statistical weights.
213.75[a] *7*	(6$^+$)	<1 ns	ABCD	T$_{1/2}$: from (p,nγ). J$^\pi$: 5,6$^+$ from (^{3}He,t); J=6 based on Hauser-Feshbach analysis in (p,nγ).
270.09[a] *8*	(4$^+$)	1.03 μs *7*	ABCD	J$^\pi$: 3$^+$,4$^+$ from (^{3}He,t); J=4 based on Hauser-Feshbach analysis in (p,nγ); E2 56γ to J=(6) 214 level. T$_{1/2}$: from (p,nγ).
389.19[a] *22*	(5$^+$)		BCD	J$^\pi$: 5,6$^+$ from (^{3}He,t); J=5 based on Hauser-Feshbach analysis in (p,nγ); π=+ probable, by analogy to ^{88}Y and ^{90}Nb.
529.42[a] *13*	(3$^+$)	≤0.1 μs	ABCD	J$^\pi$: 259γ is D to (4$^+$); 2241γ from 1$^+$ 2771; 3$^+$,4$^+$ from (^{3}He,t); J^π=1,2$^-$,3$^+$

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{92}Tc Levels (continued)

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
				based on Hauser-Feshbach analysis in (p,nγ). T$_{1/2}$: from ^{92}Ru ε decay.
576.88[a] *13*	(2$^+$)	<2 ns	ABCD	J$^\pi$: 134γ is D from 1$^+$ 711; M1 47γ to (3$^+$). T$_{1/2}$: from (p,nγ).
626.3 *3*	(4,6$^+$)		B	J$^\pi$: J=(4,6) from ΔJ=1 237γ to (5$^+$) 389; 6$^+$ favored by shell-model calculations (1976Se01) which predict a configuration=((π g$_{9/2}$)^{3}7/2 $\otimes$ (ν g$_{9/2}$)$^{-1}$)6$^+$ level near this energy (1983Fi08).
686.14[a] *17*	(9$^+$)		BC EF	J$^\pi$: from (^{3}He,t); 686γ is D to (8)$^+$.
711.33 *15*	1$^+$	≤0.1 μs	AB D	J$^\pi$: from log *ft*=4.9 from 0$^+$ ^{92}Ru parent. T$_{1/2}$: from ^{92}Ru ε decay.
965.6 *3*	(6$^+$)		BC	J$^\pi$: D 576γ to (5$^+$); J probably not 5, from $\gamma(\theta)$ in (^{3}He,2npγ); 5,6$^+$ favored in (^{3}He,t).
1119.3 *4*			B	J$^\pi$: γ to J=(4,6$^+$) 626 level. See comment on J(1129 level).
1129 *20*	≤3		C	J$^\pi$: from (^{3}He,t). If J(626 level) were 4, this level would presumably correspond to 1119 level in (^{3}He,2npγ) whose J would then be limited to (2,3).
1161.91 *16*	(0$^+$,1)		AB	J$^\pi$: γ from 1$^+$; log *ft*=6.3 *3* (log $f^{1u}t$=7.6 *2*) for weak ε branch from 0$^+$; 585γ to (2$^+$) 577. Possible candidate for 0$^+$ anti-analog state (1976Se01).
1163.6 *11*			B	J$^\pi$: γ ray to (6$^+$).
1222 *20*	≤3		C	J$^\pi$: from (^{3}He,t).
1324 *25*	≤3		C	J$^\pi$: from (^{3}He,t).
1355.48[@] *17*	(10$^+$)		B EF	J$^\pi$: D 669γ to (9$^+$); (E2) 1355γ to (8)$^+$; π=(+) based on branching in (^{3}He,2npγ); yrast selectivity in (^{3}He,2npγ) favors J=10.
1443.86 *16*	1$^+$		A C	XREF: C(1453). J$^\pi$: from log *ft*=5.2 from 0$^+$ parent; (1$^+$,2$^+$,4$^-$) from (^{3}He,t).
1487.19 *15*	≤3		A	J$^\pi$: 910γ to (2$^+$) 577; γ from 1$^+$.
1502.86 *22*	(6,8$^+$)		B	J$^\pi$: ΔJ=0 or 2 to (6$^+$) in (^{3}He,2npγ); branching and Iγ favor π=+ if J=8 (1983Fi08).
1589.1 *4*	(7,8)		B	J$^\pi$: γ to J≤6; $\gamma(\theta)$ in (^{3}He,2npγ) allows J=4 to 8 if J(626 level)=6, but strong population in (^{3}He,2npγ) favors high spin (1983Fi08).
1613 *25*	≤3		C	J$^\pi$: from (^{3}He,t).
1796.54 *16*	1$^+$		A	J$^\pi$: from log *ft*=5.1 from 0$^+$ ^{92}Ru parent.
1980.49 *17*	≤3		A	J$^\pi$: γ rays to 1$^+$ and (2$^+$).
2001.8[#@] *11*	(12$^+$)[‡]		EF	
2002.7[#&] *3*	(11$^-$)	3.15 ns *20*	B E	μ=+8.87 *22* (1996Tu03) μ: from g−factor=+0.806 *20* measured using TDPAD, assuming J=11. J$^\pi$: measured g-factor is close to that calculated for a configuration=((π p$_{1/2}$)(π g$_{9/2}$)^4(ν g$_{9/2}$)$^{-1}$) state, and to that known for analogous 11$^-$ state in ^{90}Nb (1996Tu03). T$_{1/2}$: from time differential perturbed angular distribution in (^{28}Si,p3nγ) (1996Tu03). Other T$_{1/2}$: 1.9 ns *4* (DSAM, after corrections for prompt component and deorientation effects; 1994Ar33).
2106.9 *4*	1$^+$		A	J$^\pi$: from log *ft*=5.1 from 0$^+$ parent.
2316.02 *18*	1$^+$		A	J$^\pi$: from log *ft*=4.8 from 0$^+$ parent.
2390.92 *15*	1$^+$		A	J$^\pi$: from log *ft*=4.1 from 0$^+$ parent.
2548.9[&] *4*	(12$^-$)		B EF	J$^\pi$: D+Q 546γ to (11$^-$) with δ favoring M1+E2; J$_i$>J$_f$ likely in (^{40}Ca,5pnγ).
2664.7[@] *15*	(13$^+$)[‡]		EF	XREF: E(2638). E(level): the adopted order of the 636γ-663γ cascade is based on Iγ in (^{35}Cl,4p3nγ); E(level)=2637.6 in (^{40}Ca,5pnγ) because, there, the order of the cascade γ's is reversed.
2770.96 *19*	1$^+$		A	J$^\pi$: from log *ft*=4.4 from 0$^+$ parent.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{92}Tc Levels (continued)

E(level)[†]	J^π	XREF	Comments
2940.0[&] *4*	(13^-)[‡]	B EF	J^π: (12^+) suggested in (^{35}Cl,4p3nγ).
3004.7 *3*	1^+	A	J^π: from log *ft*=4.5 from 0^+ parent.
3048.0 *3*	1^+	A	J^π: from log *ft*=4.8 from 0^+ parent.
3069.4 *7*	(13^-)[‡]	EF	
3301.0[@] *18*	(14^+)[‡]	EF	
3563.4[&] *7*	(14^-)[‡]	EF	
3587.9[@] *20*	(15^+)[‡]	EF	
3709.1? *4*	1^+	A	J^π: log *ft*=4.7 from 0^+ parent.
3813 *30*	0^+	C	J^π: from (^{3}He,t); isobaric analog of ^{92}Mo g.s.
4048.0[&] *9*	(15^-)[‡]	EF	
4615.0 *12*		F	J^π: 1052γ to (14^-) 3563.
4716.4 *12*	(16^-)[‡]	EF	
4786.8[&] *12*	(17^-)[‡]	EF	
5373.5?[@] *23*	$(16^+,17^+)$[‡]	E	E(level): an alternative placement of the 1786γ (between a 7431-keV $(18^+,19^+)$ level and the 5646 level) was suggested in (^{40}Ca,5pnγ); however, a 627γ? feeds the 5646 level and the 1786γ is absent in (^{35}Cl,4p3nγ).
5646.2 *23*	(17^+)	EF	J^π: Q γ to (15^+); possible configuration is $((\pi\ g_{9/2})^5 25/2^+)\otimes(\nu\ g_{9/2})^{-1}$ (1994Ar33).
6033.7 *13*		EF	E(level),J^π: 6701.7 *25*, $(17^-,18^-)$ in (^{40}Ca,5pnγ) because, there, the 1986γ was placed feeding the (16^-) 4716 level.
6272.9? *25*		F	
6725.2 *16*	(19^-)	F	J^π: from (^{35}Cl,4p3nγ); Q γ to (17^-).
7833.1 *19*	(21^-)	F	J^π: Q γ to (19^-) in (^{35}Cl,4p3nγ).

[†] From least-squares fit to Eγ, allowing 1 keV uncertainty in Eγ data for which authors did not quote uncertainty, except for levels excited only in (^{3}He,t).

[‡] From (^{40}Ca,5pnγ), based on γ anisotropy and the assumptions that all observed γ′s have $J_i \geq J_f$, most have $J_i > J_f$ and that crossover transitions are E2, unless noted otherwise.

[#] Two levels at or near 2002 keV, each deexcited by an Eγ≈647 keV transition, are proposed in (^{40}Ca,5pnγ) to account for observed Doppler splitting of 1355γ in coin spectra gated by 394γ, 485γ, 495γ, 545γ, 622γ and 1067γ. Alternatively, an isomeric level slightly above the 2001 level may deexcite to the latter via an unobserved, highly converted low-energy transition. However, the inconsistency between 647γ(θ) in (^{3}He,2pnγ), 647γ anisotropy in (^{40}Ca,5pnγ) and DCO ratio in (^{35}Cl,4p3nγ) suggests that the 647γ is indeed a doublet whose components deexcite states which have been populated to differing extents in the different reactions. The evaluator adopts this scenario, even though 1995Gh02 conclude from their (^{35}Cl,4p3nγ) data that the 646γ is not a doublet.

[@] Band(A): Seniority ≥4, yrast π=+ states. Probable configuration=$((\pi\ p_{1/2})^2(\pi\ g_{9/2})^3(\nu\ g_{9/2})^{-1})$ for J=10 to J≤15 levels (1994Ar33).

[&] Band(B): Yrast π=− states. Probable configuration=$((\pi\ p_{1/2})(\pi\ g_{9/2})^4(\nu\ g_{9/2})^{-1})$ for J≤17 levels (1994Ar33).

[a] Band(C): π=+, seniority 2 states. Configuration=$((\pi\ 1g_{9/2})(\nu\ 1g^{-1}_{9/2}))$ (1973Ha02). Dominance of this seniority=2 configuration based on population in (^{3}He,t).

γ(^{92}Tc)

E_i(level)	J^π_i	E_γ[#]	I_γ[#]	E_f	J^π_f	Mult.[†]	α[a]	Comments
213.75	(6$^+$)	213.75 *7*	100	0.0	(8)$^+$	(E2)	0.0822	B(E2)(W.u.)>47 E_γ: weighted average of 213.8 *2* from (^{3}He,2npγ), 213.81 *12* from ε decay and 213.7 *1* from (p,nγ). Mult.: D,E2 from RUL; adopted ΔJ=(2).
270.09	(4$^+$)	56.34 *2*	100	213.75	(6$^+$)	E2	9.79	B(E2)(W.u.)=3.6 *3* Mult.: from α(exp), ^{92}Ru ε decay.
389.19	(5$^+$)	119.1[@] *2*	100	270.09	(4$^+$)	[M1]	0.172	
529.42	(3$^+$)	259.32 *12*	100	270.09	(4$^+$)	(M1)	0.0216	B(M1)(W.u.)≥1.2×10^{-5} E_γ: weighted average of 259.4 *2* from (^{3}He,2npγ) and 259.27 *15* from ε decay. Mult.: 259γ is D from (^{3}He,2npγ); adopted Δπ=(no).
576.88	(2$^+$)	47.46 *3*	100 *10*	529.42	(3$^+$)	M1	2.35	B(M1)(W.u.)>0.030 Mult.: from α(exp), ^{92}Ru ε decay. D from RUL.
		306.8 *2*	1.14 *10*	270.09	(4$^+$)	(E2)	0.0237	B(E2)(W.u.)>0.014 Mult.: D,E2 from RUL; level scheme requires ΔJ=2 and Δπ=no.
626.3	(4,6$^+$)	237.1[@] *2*	100	389.19	(5$^+$)	D		Mult.: ΔJ=1 from $\gamma(\theta)$ in (^{3}He,2npγ).
686.14	(9$^+$)	686.2[@] *2*	100	0.0	(8)$^+$	(M1)		Mult.: D from (^{40}Ca,5pnγ) and (^{3}He,2npγ); Δπ from level scheme.
711.33	1$^+$	134.57 *8*	100	576.88	(2$^+$)	(M1)	0.1228	B(M1)(W.u.)≥8.0×10^{-5} E_γ: weighted average of 134.4 *2* from (^{3}He,2npγ) and 134.60 *9* from ε decay. Mult.: D from (^{3}He,2npγ); adopted Δπ=(no).
965.6	(6$^+$)	576.4[@] *2*	100	389.19	(5$^+$)	D		Mult.: ΔJ=1 from $\gamma(\theta)$ in (^{3}He,2npγ).
1119.3		493.0[@] *2*	100	626.3	(4,6$^+$)			
1161.91	(0$^+$,1)	450.7 *1*	100 *3*	711.33	1$^+$			
		585.0 *2*	8.6 *10*	576.88	(2$^+$)			
1163.6		198[@]	100	965.6	(6$^+$)			
1355.48	(10$^+$)	669.4[@] *2*	29[@] *3*	686.14	(9$^+$)	D		Mult.: from $\gamma(\theta)$ in (^{3}He,2npγ).
		1355.4[@] *2*	100[@] *11*	0.0	(8)$^+$	(E2)		Mult.: Q from (^{40}Ca,5pnγ) and (^{3}He,2npγ); Δπ from level scheme.
1443.86	1$^+$	867.0 *1*	100	576.88	(2$^+$)			
1487.19	≤3	910.2 *1*	100	576.88	(2$^+$)			
1502.86	(6,8$^+$)	1289.1[@] *2*	100	213.75	(6$^+$)			
1589.1	(7,8)	962.8[@] *2*	100	626.3	(4,6$^+$)			
1796.54	1$^+$	634.8 *5*	4.6 *6*	1161.91	(0$^+$,1)			
		1219.6 *1*	100 *5*	576.88	(2$^+$)			
1980.49	≤3	1268.9 *3*	21 *3*	711.33	1$^+$			
		1403.6 *2*	100 *6*	576.88	(2$^+$)			
2001.8	(12$^+$)	646.3[&] *10*	100	1355.48	(10$^+$)	(Q)		E_γ,Mult.: γ unresolved from D 647.2γ in (^{40}Ca,5pnγ) where anisotropy of doublet is consistent with stretched Q; thus, mult=Q is favored for this component.

$^{92}_{43}$Tc$_{49}$-4

Adopted Levels, Gammas (continued)

$\gamma(^{92}Tc)$ (continued)

E_i(level)	J^{π}_i	E_{γ}[#]	I_{γ}[#]	E_f	J^{π}_f	Mult.[†]	δ[‡]	Comments
2002.7	(11⁻)	647.2 *2*	100	1355.48	(10⁺)	(E1+M2)	+0.10 *3*	B(E1)(W.u.)=3.85×10^{-7} *25*; B(M2)(W.u.)=0.04 *3* E_{γ}: from (^{3}He,2npγ); Eγ given as 646.8 *10* in (^{40}Ca,5pnγ) for unresolved component of doublet. Mult.,δ: D+Q from $\gamma(\theta)$ in (^{3}He,2npγ); however, 647γ is a doublet in (^{40}Ca,5pnγ), so δ may not be reliable. E1 is favored over M1 because B(M1)(W.u.)=2.55×10^{-5} 17 would be atypically small.
2106.9	1⁺	945.0 *3*	100	1161.91	(0⁺,1)			
2316.02	1⁺	1604.7 *1*	100 *4*	711.33	1⁺			
		1738.5 *5*	8.9 *18*	576.88	(2⁺)			
2390.92	1⁺	410.4 *1*	19.5 *4*	1980.49	≤3			
		594.3 *2*	6.4 *7*	1796.54	1⁺			
		903.6 *1*	8.5 *5*	1487.19	≤3			
		947.2 *3*	29 *3*	1443.86	1⁺			
		1229.1 *1*	36.5 *21*	1161.91	(0⁺,1)			
		1679.6 *1*	100 *4*	711.33	1⁺			
		1814.0 *6*	2.1 *5*	576.88	(2⁺)			
2548.9	(12⁻)	546.2 *2*	100	2002.7	(11⁻)	(M1+E2)	−0.18 *10*	E_{γ}: from (^{3}He,2npγ). Eγ=545.0 *10* in (^{40}Ca,5pnγ). Mult.: D+Q from $\gamma(\theta)$ in (^{3}He,2npγ); $\Delta\pi$ from level scheme.
2664.7	(13⁺)	662.9[&] *10*	100	2001.8	(12⁺)	D		
2770.96	1⁺	974.3 *2*	9.2 *14*	1796.54	1⁺			
		2059.7 *2*	100 *6*	711.33	1⁺			
		2194.3 *5*	23.3 *22*	576.88	(2⁺)			
		2241.3 *5*	7.5 *25*	529.42	(3⁺)			
2940.0	(13⁻)	391.1 *2*	100	2548.9	(12⁻)	D		E_{γ}: from (^{3}He,2npγ). Eγ=393.6 *10* in (^{40}Ca,5pnγ), 393.4 in (^{35}Cl,4p3nγ).
3004.7	1⁺	1517.6 *3*	100 *5*	1487.19	≤3			
		2427.5 *5*	36 *4*	576.88	(2⁺)			
3048.0	1⁺	656.3 *10*	26 *13*	2390.92	1⁺			
		1560.7 *5*	100 *10*	1487.19	≤3			
		2471.2 *3*	27 *5*	576.88	(2⁺)			
		2519.3 *10*	12 *5*	529.42	(3⁺)			
3069.4	(13⁻)	521.0[&] *10*	85[&] *15*	2548.9	(12⁻)	D		Other Iγ: 28 *5* in (^{35}Cl,4p3nγ), but see comment on 1066.7γ. Mult.: from (^{35}Cl,4p3nγ).
		1066.7[&] *10*	100[&] *15*	2002.7	(11⁻)	Q		Mult.: Q from (^{40}Ca,5pnγ). D from unenumerated DCO ratio in (^{35}Cl,4p3nγ), where I(1067γ)/I(521γ) is much larger than in (^{40}Ca,5pnγ); this may indicate that 1067γ is a doublet in (^{35}Cl,4p3nγ).
3301.0	(14⁺)	636.3[&] *10*	100	2664.7	(13⁺)	D		Mult.: from (^{35}Cl,4p3nγ).
3563.4	(14⁻)	494.6	100 *8*	3069.4	(13⁻)	D		E_{γ},I_{γ},Mult.: from (^{35}Cl,4p3nγ); doublet in (^{40}Ca,5pnγ).
		622.2[&] *10*	<49	2940.0	(13⁻)			I_{γ}: from (^{35}Cl,4p3nγ); however, Iγ<52 *10* from (^{40}Ca,5pnγ) (where γ is complex).

Adopted Levels, Gammas (continued)

$\gamma(^{92}$Tc) (continued)

E_i(level)	J_i^π	E_γ[#]	I_γ[#]	E_f	J_f^π	Mult.[†]	α[a]	Comments
								Mult.: Q (interpreted as M2) in (^{35}Cl,4p3nγ), but D from (^{40}Ca,5pnγ). However, if M2 and I$\gamma\approx$50, $T_{1/2}$(3563 level) exceeds $\approx$5 ns (based on RUL).
3563.4	(14$^-$)	1015.2	10	2548.9	(12$^-$)			E_γ,I_γ: from (^{35}Cl,4p3nγ); not reported in (^{40}Ca,5pnγ).
3587.9	(15$^+$)	286.9[&] *10*	100	3301.0	(14$^+$)	D		Mult.: from (^{35}Cl,4p3nγ).
3709.1?	1$^+$	938.1[b] *4*	100 *40*	2770.96	1$^+$			
		2997.4[b] *10*	36 *16*	711.33	1$^+$			
		3133.0[b] *10*	40 *20*	576.88	(2$^+$)			
4048.0	(15$^-$)	484.6[&] *10*	100[&] *11*	3563.4	(14$^-$)	D		
		1108.0[&] *10*	22[&] *5*	2940.0	(13$^-$)			Placement from (^{40}Ca,5pnγ) only.
4615.0		1051.6	100	3563.4	(14$^-$)			E_γ: from (^{35}Cl,4p3nγ).
4716.4	(16$^-$)	668.5[&] *10*	100	4048.0	(15$^-$)			
4786.8	(17$^-$)	70.6[&] *10*	41[&] *7*	4716.4	(16$^-$)	(M1)	0.75 *4*	Mult.: D from (^{40}Ca,5pnγ); Q crossover γ from same level.
		738.6[&] *10*	100[&] *15*	4048.0	(15$^-$)	Q		
5373.5?	(16$^+$,17$^+$)	1785.6[&b] *10*	100	3587.9	(15$^+$)			
5646.2	(17$^+$)	2058.3[&] *10*	100	3587.9	(15$^+$)	Q		Mult.: from (^{35}Cl,4p3nγ).
6033.7		1985.6[&] *10*	100	4048.0	(15$^-$)			
6272.9?		626.7[b]	100	5646.2	(17$^+$)			E_γ: from (^{35}Cl,4p3nγ).
6725.2	(19$^-$)	1938.4	100	4786.8	(17$^-$)	Q		E_γ,Mult.: from (^{35}Cl,4p3nγ).
7833.1	(21$^-$)	1107.9	100	6725.2	(19$^-$)	Q		Eγ from (^{35}Cl,4p3nγ). Based on strength of this γ, the evaluator suggests that it might be a doublet in this reaction.

† From γ anisotropy ratio and reaction systematics in (^{40}Ca,5pnγ), except when noted otherwise.

‡ From $\gamma(\theta)$ in (^{3}He,2npγ).

From ε decay, except as noted.

@ From (^{3}He,2npγ).

& From (^{40}Ca,5pnγ); evaluator assigns authors′ upper limit of ΔE=1 keV to Eγ.

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.

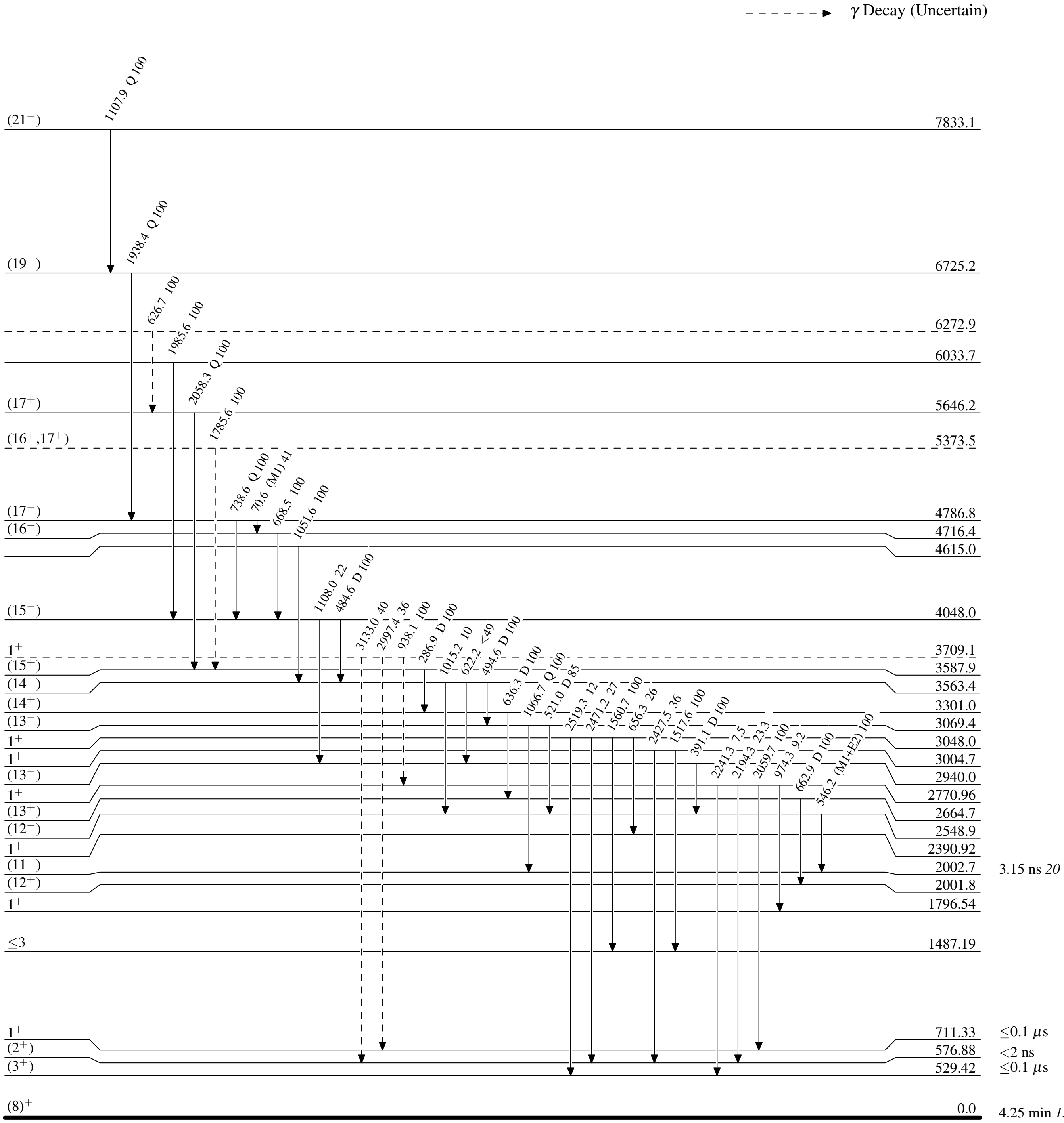
b Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

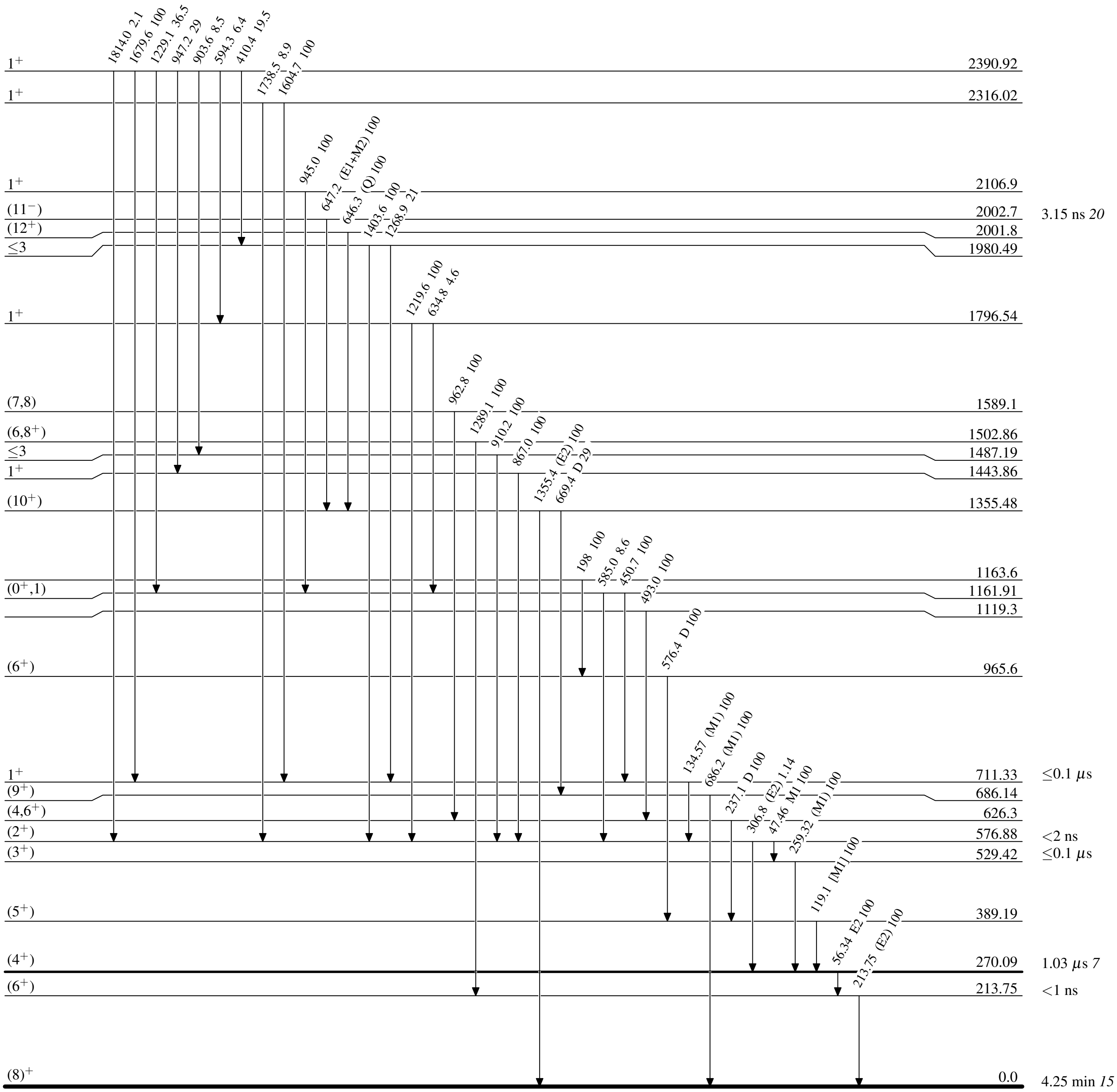


$^{92}_{43}Tc_{49}$

Adopted Levels, Gammas

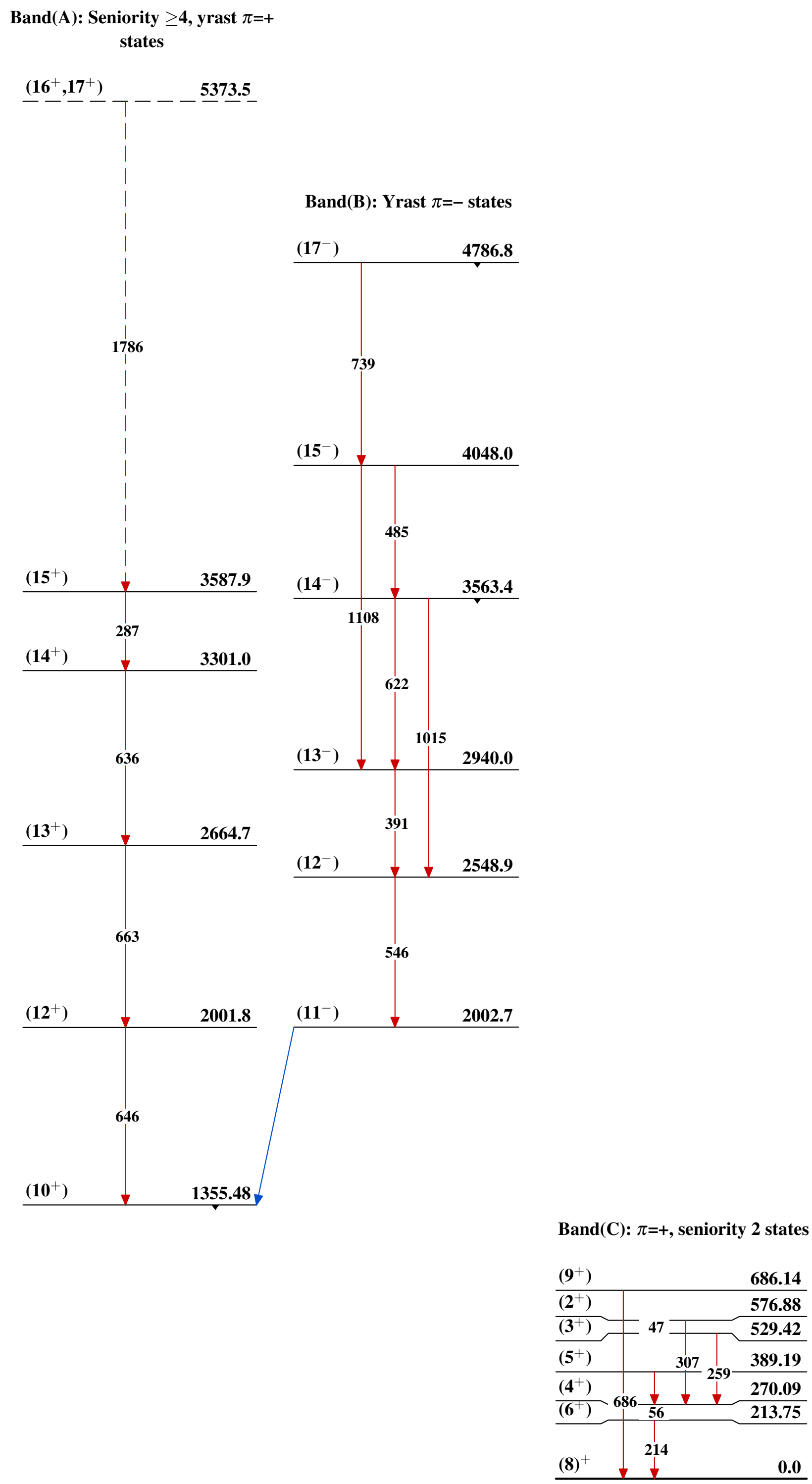
Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{92}_{43}Tc_{49}$

Adopted Levels, Gammas



$^{92}_{43}Tc_{49}$