^{93}Nb(α,2nγ) 1978Ma05,1975Sh02,1977Wi11

History

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

1975Sa09: E=16.5 to 29.7 MeV. Measured γ's, γ-excitation functions, $\gamma\gamma$-coincidences, and $\gamma(\theta)$; Ge(Li). DSAM.
1975Sh02: E=20.5 to 24.5 MeV. Measured γ's, $\gamma(\theta)$, γ-excitation, $\gamma\gamma$-coincidences and $\alpha\gamma$(t) (Ge(Li)).
1977Wi11: E=23, 25, and 27 MeV. Measured γ's, $\gamma(\theta$=90°, 125°, 160°) and $\gamma\gamma$-coincidences (Ge(Li)) and ce′s (Si(Li)).
1978Ma05: E=17 to 27 MeV. Measured γ-excitation functions, γ's, $\gamma(\theta$=0° to 90°. 7 points), and $\gamma\gamma$-coincidences (Ge(Li)) and ce′s (mag spect).
The level scheme from 1978Ma05 has been adopted. The structure of the negative-parity band as given by 1978Ma05 is in good agreement with that proposed by 1977Wi11 but differs from that of 1975Sa09.

^{95}Tc Levels

note that there is a strong odd-even effect at low spins.

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$[#]	Comments
0.0[@]	9/2$^+$		
38.91[&] *9*	1/2$^-$		
336.43 *4*	7/2$^+$		
626.88 *5*	5/2$^+$		
646.73 *17*	3/2$^-$		
667.82[&] *6*	5/2$^-$		J$^\pi$: from stretched E2 γ or quadrupole cascade to 1/2$^-$.
882.44[@] *8*	13/2$^+$	1.2 ps *+11−5*	J$^\pi$: from stretched E2 γ or quadrupole cascade to 9/2$^+$ (1978Ma05).
927.88 *6*	3/2$^+$		J$^\pi$: ≠5/2$^-$ since $\gamma(\theta)$ would require a large δ(M2/E1) (1975Sa09).
957.15[@] *7*	11/2$^+$	1.3 ps *+5−3*	J$^\pi$: From M1+E2 γ to 9/2$^+$ ground state.
1085.02 *8*	(5/2)$^+$		
1178.70 *12*	7/2$^+$		
1213.13 *9*	9/2		
1214.53[&] *6*	9/2$^-$		J$^\pi$: from stretched E2 γ to 667.82 keV, 5/2$^-$ state.
1281.51 *6*	7/2$^{(-)}$		
1307.20 *9*	11/2$^+$	173 fs *+28−21*	J$^\pi$: 11/2 from $\gamma(\theta)$ (1975Sa09); D,E2 γ to 7/2$^+$ and D+Q γ to 9/2.
1515.47[@] *11*	17/2$^+$	<5 ns	J$^\pi$: from stretched E2 to 882.44, 13/2$^+$ state. T$_{1/2}$: from $\alpha\gamma$(t) (1975Sh02).
1549.62[@] *8*	15/2$^+$		J$^\pi$: from stretched E2 γ to 957.15 keV *11*/2$^+$ state. T$_{1/2}$: lower limit from DSAM (1975Sa09) and upper limit from $\alpha\gamma$(t) (1975Sh02).
1691.1 *8*	5/2$^+$,7/2$^+$		
1702.22[&] *8*	13/2$^-$		J$^\pi$: from stretched E2 γ to 1214.53 keV *9*/2$^-$ state.
2119.85 *16*	15/2$^{(+)}$	0.20 ps *+7−5*	J$^\pi$: 15/2 from $\gamma(\theta)$; $\pi\neq-$ from excit (1975Sa09).
2184.04[@] *11*	19/2$^+$	0.8 ps *+9−5*	J$^\pi$: from stretched E2 γ to 1549.62 keV *15*/2$^+$ state.
2213.05[&] *14*	(17/2$^-$)	≥1.4 ps	J$^\pi$: from stretched E2 γ to 1702.22 keV *13*/2$^-$ state.
2231.7 *3*	(17/2$^+$)	0.10 ps *3*	J$^\pi$: 13/2$^+$,15/2,17/2$^+$ from D,E2 γ's to 13/2$^+$ and 17/2$^+$. 15/2,17/2 from yield; ≠15/2 from $\gamma(\theta)$ (1975Sa09).
2474.9 *4*			
2547.20[@] *12*	21/2$^+$	2.1 ps *+14−7*	J$^\pi$: from stretched E2 γ to 2184.04 *19*/2$^+$ state.
2706.6 *5*	(15/2)		J$^\pi$: from $\gamma(\theta)$ (1978Ma05).
2847.0 *3*			
2906.68[@] *13*	(23/2$^+$)	0.28 ps *7*	J$^\pi$: from stretched E2 γ to 19/2$^+$ or crossover M1 γ to 21/2$^+$ states.
3024.19[&] *15*	(21/2$^-$)		J$^\pi$: from stretched E2 γ to 2213.05 keV (17/2$^-$) state.
3039.51 *13*	19/2	187 fs *+21−49*	J$^\pi$: 15/2,17/2,19/2 from $\gamma(\theta)$ (1975Sa09). 19/2,21/2,23/2 from D γ to 21/2$^+$.
3065.51 *19*	(17/2,19/2$^+$)	0.28 ps *+6−7*	J$^\pi$: 17/2,19/2,21/2$^+$ from $\gamma(\theta)$ (1975Sa09). ≠19/2$^-$,21/2$^+$ from possible D,E2 γ

Continued on next page (footnotes at end of table)

^{93}Nb(α,2nγ) 1978Ma05,1975Sh02,1977Wi11 (continued)

^{95}Tc Levels (continued)

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$[#]	Comments
			to $15/2^+$.
3210.5 *4*	$(21/2)^+$	0.38 ps *+6−7*	J$^\pi$: 21/2 from $\gamma(\theta)$ (1975Sa09); stretched or ΔJ=0 E2 γ to $17/2^+$.
3516.11[@] *16*	$25/2^+$	>5 ps	J$^\pi$: from stretched E2 γ to $21/2^+$. $T_{1/2}$: from DSAM in (α,2nγ).
3578.6 *7*	(23/2)		J$^\pi$: from $\gamma(\theta)$ (1978Ma05).
3821.96[&] *18*	$(25/2^-)$		J$^\pi$: from stretched E2 γ to $(21/2^-)$.
3918.42 *17*	$29/2^+$		
4081.7 *9*	$23/2^-$,$25/2^-$,$27/2^-$		J$^\pi$: from E1+M2 γ to $25/2^+$.
4127.53 *19*	$(27/2)^-$		J$^\pi$: 27/2,29/2 from $\gamma(\theta)$; M1+E2 or E2(+M3) γ to $25/2^-$.
4293.11 *20*	$27/2^+$		J$^\pi$: from M1γ to $29/2^+$ state.
4783.3 *4*			
4971.47[&] *20*	$(29/2^-)$		J$^\pi$: from stretched E2 γ to 3821.96 keV $(25/2^-)$ state.

[†] From least-squares fit to γ energies.
[‡] From the Adopted Levels.
[#] From DSAM (1975Sa09), except as noted.
[@] Band(A): positive-parity band (1975Sa09,1977Wi11,1978Ma05). 1978Ma05.
[&] Band(B): negative-parity band (1977Wi11,1978Ma05).

$\gamma(^{95}Tc)$

See figure 1 of 1978Ma05 for additional weak transitions which may belong to this reaction.
Coincidence data shown on the drawing are from 1975Sa09 and 1978Ma05.
α(K)exp: the normalization of 1978Ma05 is based on known E2 transitions. 1977Wi11 normalized their data to α(K)(336γ,theory)=0.0104.

E(G) TVWeighted averages of the following gamma energies:

E_x	Adopted	1975Sa09	1975Sh02	78Ma05
627	290.54 *5*	290.51 *6*	290.6 *2*	290.6 *1*
957	957.12 *10*	957.01 *7*	957.3 *2*	957.3 *1*
1085	748.68 *16*	748.6 *2*	748.8 *3*	748.8 *4*
1179	1178.80 *22*	1178.6 *3*	1179.0 *3*	
363.3 *1*				
1215	878.27 *24*	878.4 *2*	878.6 *2*	877.8 *2*
1282	613.73 *10*	613.69 *12*	613.9 *2*	613.6 *3*
1515	632.88 *18*	632.6 *1*	633.1 *2*	633.1 *1*
1550	592.50 *7*	592.5 *1*	592.5 *2*	592.5 *1*
	667.15 *9*	667.1 *1*	667.2 *2*	667.3 *2*
1702	487.75 *7*	487.7 *1*		487.8 *1*
	744.97 *9*	744.9 *1*	745.1 *2*	745.1 *2*

E(P) TVUnweighted averages of the following gamma energies:

E_x	Adopted	1975Sa09	1975Sh02
882	882.36 *10*	882.19 *4*	882.4 *2*	882.5 *1*
1215	1214.55 *11*	1214.34 *10*	1214.7 *3*	1214.6 *3*
2213	663.43 *12*	663.5 *1*	663.6 *2*	663.2 *1*

E_x	Adopted	1975Sa09	1975Sh02	1978Ma05
2120	604.29 *26*	604.4 *3*		604.0 *5*
	1237.44 *16*	1237.4 *2*	1237.5 *3*	1237.5 *5*
2184	668.57 *9*	668.5 *1*	668.7 *2*	668.7 *2*
	2547	363.26 *7*	363.2 *1*	363.3 *2*
3024	811.14 *7*	811.1 *1*	811.0 *3*	811.2 *1*
3040	492.40 *9*	492.4 *1*		492.4 *2*
3516	968.90 *10*	968.8 *1*	969.1 *2*	969.1 *2*
3822	797.76 *9*	797.7 *1*	797.9 *2*	797.9 *2*
3918	402.31 *7*	402.3 *1*	402.4 *2*	402.3 *1*
4128	305.57 *7*	305.6 *1*	305.7 *2*	305.5 *1*

E_x	Adopted	1975Sa09	1975Sh02	1978Ma05
2232	716.2 *4*	716.3 *1*	716.7 *2*	715.5 *2*
2547	1031.77 *9*	1031.6 *1*	1031.9 *2*	1031.8 *2*
4293	374.7 *1*	374.7 *1*		374.5 *2*

E_i(level)	J_i^π	E_γ[†]	I_γ[†‡]	E_f	J_f^π	Mult.[#]	δ[#]	Comments
336.43	7/2$^+$	336.48 *5*	100	0.0	9/2$^+$	M1+E2[@]	+0.37 *7*	α(K)exp=0.0088 *10* (1978Ma05) δ: +0.37 *7* or −3.8 *+12−8* from $\gamma(\theta)$ (1978Ma05). ≠−3.8 *+12−8* from α(K)exp (evaluator).
626.88	5/2$^+$	290.54 *5*	17.8 *2*	336.43	7/2$^+$	D+Q[&]	+0.17[&] *17*	
		626.8 *1*	82.2 *6*	0.0	9/2$^+$	Q(+O)	0.9 *7*	α(K)exp=0.0090 *50* (1978Ma05) Mult.: stretched or ΔJ=0 Q (1975Sa09). δ: from α(K)exp assuming E2+M3 (evaluator). Sign may be negative since δ=−0.58 ∞ from $\gamma(\theta)$ (1978Ma05).
646.73	3/2$^-$	607.82 *15*	100	38.91	1/2$^-$	D(+Q)[a]		
667.82	5/2$^-$	331.39[b] *9*	1.9[b] *2*	336.43	7/2$^+$			Possibly observed in singles spectra of 1978Ma05 but not confirmed by $\gamma\gamma$-coincidence data.
		629.0[c] *1*	98.1[d] *9*	38.91	1/2$^-$	E2(+M3)[@&e]	0.08[&] *17*	α(K)exp=0.0024 *4* (1978Ma05) E_γ: other: 628.9 *2* from weighted av of data from 1973Xe01, 1974Kr02, and 1974Sa19 (1975Sa09). δ: from α(K)exp (evaluator). Sign may be negative since δ=−0.11 ∞ from $\gamma(\theta)$ (1978Ma05).

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^{93}Nb(α,2nγ) 1978Ma05,1975Sh02,1977Wi11 (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†‡]	E_f	J_f^π	Mult.[#]	δ[#]	Comments
882.44	13/2$^+$	882.36 *10*	100	0.0	9/2$^+$	Q(+O)	−0.03 *5*	
927.88	3/2$^+$	301.11[b] *6*	45.2[d] *3*	626.88	5/2$^+$			
		(591.36[b] *7*)	24.3[b] *2*	336.43	7/2$^+$			
		(888.86[b] *11*)	30.5[b] *5*	38.91	1/2$^-$			
957.15	11/2$^+$	620.2[l] *5*	2 *1*	336.43	7/2$^+$			Possibly observed in singles spectra of 1978Ma05 but not confirmed by $\gamma\gamma$-coincidence data.
		957.12 *10*	98 *2*	0.0	9/2$^+$	M1+E2[f]	−2.1 *1*	α(K)exp=0.00064 *19* (1977Wi11)
1085.02	(5/2)$^+$	157.4[bl] *3*	<1.0	927.88	3/2$^+$			
		(458.0[b] *2*)	3.2[b] *4*	626.88	5/2$^+$			
		748.68 *16*	95[d] *6*	336.43	7/2$^+$			
		(1084.98[b] *10*)	1.8[b] *2*	0.0	9/2$^+$			
1178.70	7/2$^+$	551.8 *2*	25.9[d] *19*	626.88	5/2$^+$			
		842.2 *2*	19.2[d] *20*	336.43	7/2$^+$			
		1178.80 *22*	54.9[d] *29*	0.0	9/2$^+$			
1213.13	9/2	876.8 *2*	90.7[g] *14*	336.43	7/2$^+$			
		(1213.10[b] *10*)	9.3[g] *3*	0.0	9/2$^+$			
1214.53	9/2$^-$	546.73 *5*	66.5[g] *9*	667.82	5/2$^-$	E2(+M3)[@&e]	−0.16[&] *20*	α(K)exp=0.0033 *3* (1978Ma05) δ: −0.16 *20* from $\gamma(\theta)$ (1978Ma05). ≤0.096 from α(K)exp (evaluator).
		878.27 *24*	16.4[g] *16*	336.43	7/2$^+$	D(+Q)		δ: −0.25 *+60*−Infnt. Mult.,δ: other solutions to $\gamma(\theta)$ excluded by additional decay modes from the initial state (1978Ma05).
		1214.55 *11*	15.1[g] *21*	0.0	9/2$^+$			
1281.51	7/2$^{(-)}$	613.73 *10*	75.6[g] *4*	667.82	5/2$^-$			
		(945.06[b] *6*)	9.8[g] *4*	336.43	7/2$^+$			
		1281.6 *3*	14.6[g] *4*	0.0	9/2$^+$			
1307.20	11/2$^+$	970.8[b] *2*	18[g] *4*	336.43	7/2$^+$	E2[h]		Unresolved doublet (1975Sa09). E_γ: from (p,nγ). 973.6 *6* (1978Ma05) discrepant.
		1307.18 *10*	82[g] *3*	0.0	9/2$^+$	D+Q[a]		δ: −0.14 *+11−9* or −3.5 *+5−9*.
1515.47	17/2$^+$	632.88 *18*	100	882.44	13/2$^+$	E2(+M3)[@]	−0.03 *5*	α(K)exp=0.0024 *3* (1978Ma05) Mult.: stretched or ΔJ=0 Q γ (1978Ma05).
1549.62	15/2$^+$	592.50 *7*	52.6[i] *21*	957.15	11/2$^+$	E2(+M3)[&]	−0.14[&] *20*	α(K)exp=0.0024 *2* (1977Wi11)
		667.15 *9*	47.4[i] *18*	882.44	13/2$^+$	M1(+E2)[@]	+0.76[a] *20*	α(K)exp=0.0022 *4* (1978Ma05) Mult.: ΔJ=1 γ (1978Ma05).
1691.1	5/2$^+$,7/2$^+$	1354.7[c] *8*	100[c]	336.43	7/2$^+$			Alternate placement from 2907 state suggested by 1975Sa09 not consistent with adopted level scheme.
1702.22	13/2$^-$	487.75 *7*	38[j] *8*	1214.53	9/2$^-$	E2(+M3)[@&e]	+0.02[&] *7*	α(K)exp=0.0046 *4* (1978Ma05)
		744.97 *9*	62[j] *6*	957.15	11/2$^+$	D(+Q)[a]	0.00[a] *5*	

^{93}Nb(α,2nγ) 1978Ma05,1975Sh02,1977Wi11 (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†‡]	E_f	J_f^π	Mult.[#]	δ[#]	Comments
2119.85	15/2$^{(+)}$	604.29 *26*	17 *2*	1515.47	17/2$^+$	D,E2[h]		
		1237.44 *16*	83 *8*	882.44	13/2$^+$	D+Q[a]	−0.08[a] *+3−5*	
2184.04	19/2$^+$	634.5[c] *1*	46[c] *3*	1549.62	15/2$^+$	E2(+M3)[@]	−0.01 *16*	α(K)exp=0.0024 *3* (1978Ma05) E_γ,I_γ: 633.8 *1*, Iγ(634γ)/Iγ(689γ)=1.13 *16* (1975Sa09) discrepant probably since 634γ unresolved from 634γ from 2847. Mult.: stretched or ΔJ=0 Q (1978Ma05).
		668.57 *9*	54[c] *3*	1515.47	17/2$^+$	M1+E2[@]	+0.28[a] *+2−3*	α(K)exp=0.0015 *5* (1978Ma05) Mult.: ΔJ=1 γ (1978Ma05). α(K)exp: Other: 0.0012 *1* (1977Wi11).
2213.05	(17/2$^-$)	510.8[c] *5*	17.2[c] *36*	1702.22	13/2$^-$	(E2)		α(K)exp=0.0044 *12* (1978Ma05) Mult.: from α(K)exp (1978Ma05). α(K)(M1)=0.00356, α(K)(E2)=0.00413, α(K)(E1)=0.00132, α(K)(M2)=0.0114.
		663.43[k] *12*	75.6[c] *35*	1549.62	15/2$^+$	(E1(+M2))[@]	+0.07 *9*	α(K)exp=0.001 *3* (1978Ma05) Mult.,δ: other solutions to $\gamma(\theta)$ excluded by additional decay modes from the initial state (1978Ma05). Evaluator's Note: M1(+E2) does does not appear to be excluded by α(K)exp.
		697.6[c] *4*	7.1[c] *8*	1515.47	17/2$^+$			
2231.7	(17/2$^+$)	682.1 *4*	10 *3*	1549.62	15/2$^+$	D,E2[h]		
		716.2 *4*	85 *4*	1515.47	17/2$^+$	D(+Q)[&a]	−0.06[&a] *+8−17*	
		1349.1 *5*	5 *2*	882.44	13/2$^+$	E2[h]		
2474.9		959.4 *4*	100	1515.47	17/2$^+$			
2547.20	21/2$^+$	363.26 *7*	63.8[i] *21*	2184.04	19/2$^+$	D(+Q)		Mult.: ΔJ=1 γ (1978Ma05). δ: +0.07 *3* if J_i=17/2$^+$ or −0.02 *3* if J_i=21/2$^+$. Other: −0.05 *+2−3* if J_i=21/2$^+$ from $\gamma(\theta)$ (1975Sa09).
		1031.77 *9*	36.2[i] *20*	1515.47	17/2$^+$	E2(+M3)[&ef]	−0.07[&] *10*	α(K)exp=0.00047 *27* (1977Wi11)
2706.6	(15/2)	1004.4[c] *5*	100[c] *3*	1702.22	13/2$^-$			
2847.0		633.9[c] *3*	100[c]	2213.05	(17/2$^-$)			
2906.68	(23/2$^+$)	359.6 *1*	33 *4*	2547.20	21/2$^+$	D+Q		α(K)exp=0.019 *8* (1978Ma05) δ: +0.46 +∞−24. Mult.,δ: other: D+Q, −0.48 *12* if J_i=21/2$^+$; D+Q, −0.24 *4* if J_i=19/2$^+$; Q(+O), +0.07 *4* if J_i=17/2$^+$ from $\gamma(\theta)$ (1975Sa09).
		722.5 *1*	51 *6*	2184.04	19/2$^+$			E_γ: 723.2 *1* (1978Ma05) discrepant. Mult.,δ: d(+Q); δ=−0.03 *+3−5* if J_i=21/2$^+$, −1.3 *+4−13* if J_i=19/2$^+$, +0.14 *+8−10* if J_i=17/2$^+$ (1975Sa09).
3024.19	(21/2$^-$)	811.14[k] *7*	100[c]	2213.05	(17/2$^-$)	E2(+M3)[@&e]	−0.09[&] *10*	α(K)exp=0.0012 *2* (1978Ma05)
3039.51	19/2	492.40 *9*	39 *4*	2547.20	21/2$^+$	D[h]		
		1523.9 *1*	61 *5*	1515.47	17/2$^+$	D+Q[a]	+0.18[a] *+4−5*	δ: −0.65 *7* if J_i=17/2 excluded by adopted J.

$^{95}_{43}Tc_{52}$-5

^{93}Nb(α,2nγ) 1978Ma05,1975Sh02,1977Wi11 (continued)

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

E_i(level)	J_i^π	E_γ[†]	I_γ[†‡]	E_f	J_f^π	Mult.[#]	δ[#]	Comments
3065.51	(17/2,19/2$^+$)	1515.5[l] *3*	26 *10*	1549.62	15/2$^+$	D,E2[h]		
		1550.2 *2*	74 *18*	1515.47	17/2$^+$			Mult.,δ: D+Q, −0.04 *10* if J_i=17/2; D+Q, +0.63 *+5−10* if J_i=19/2; E2 if J_i=21/2$^+$ (comparison to RUL excludes M2).
3210.5	(21/2)$^+$	1695.0 *4*	100	1515.47	17/2$^+$	E2		Mult.: from $\gamma(\theta)$ (1975Sa09) and comparison to RUL (evaluator). Stretched or ΔJ=0 Q (1975Sa09).
3516.11	25/2$^+$	968.90 *10*	100	2547.20	21/2$^+$	E2(+M3)[&ef]	−0.03[&] *8*	α(K)exp=0.00064 *20* (1977Wi11)
3578.6	(23/2)	554.4 *7*	2.2 *3*	3024.19	(21/2$^-$)	D(+Q)[&]		α(K)exp=0.0028 *5* (1978Ma05) δ: +0.53 +∞−40.
3821.96	(25/2$^-$)	797.76[k] *9*	100[c]	3024.19	(21/2$^-$)	E2(+M3)[@e]	−0.11 *11*	α(K)exp=0.0011 *2* (1978Ma05)
3918.42	29/2$^+$	402.31 *7*	100	3516.11	25/2$^+$	E2(+M3)[@]	−0.07 *7*	α(K)exp=0.0090 *10* (1978Ma05) Mult.: stretched or ΔJ=0 Q γ (1978Ma05).
4081.7	23/2$^-$,25/2$^-$,27/2$^-$	565.6[c] *9*	100[c]	3516.11	25/2$^+$	E1+M2	0.34 *13*	α(K)exp=0.0018 *5* (1978Ma05) Mult.,δ: from α(K)exp (evaluator). α(K)(M1,E2)≥0.0028.
4127.53	(27/2)$^-$	305.57[k] *7*	100[c]	3821.96	(25/2$^-$)			α(K)exp=0.021 *4* (1977Wi11) Mult.,δ: E2(+M3), +0.05 *12* if J_i=29/2$^-$ or M1+E2, +0.36 *17* if J_i=27/2$^-$. α(K)exp excludes M2(+E3) and E1+M2 (evaluator).
4293.11	27/2$^+$	374.7 *1*	31[c] *3*	3918.42	29/2$^+$	M1[@]		α(K)exp=0.0054 *20* (1978Ma05) Mult.,δ: Pure M1 from δ=+0.09 *1* and α(K)exp.
		776[c] *1*	69[c] *3*	3516.11	25/2$^+$			
4783.3		655.8[c] *3*	100[c]	4127.53	(27/2)$^-$			α(K)exp=0.006 *4* (1978Ma05)
4971.47	(29/2$^-$)	844.0[cl] *3*	22[c] *5*	4127.53	(27/2)$^-$	D(+Q)[&]		δ: −0.8 *29* if J_f=29/2$^-$ or +0.14 *22* if J_f=27/2$^-$.
		1149.5[k] *1*	78[c] *5*	3821.96	(25/2$^-$)	Q(+O)[&e]	−0.14[&] *44*	

† From 1975Sa09, except as noted.
‡ % photon branching from each level.
# From $\gamma(\theta)$ (1978Ma05), except as noted.
@ From α(K)exp and $\gamma(\theta)$ (1978Ma05).
& Other spin sequences yield acceptable $\gamma(\theta)$ results (1978Ma05).
[a] From $\gamma(\theta)$ (1975Sa09).
[b] Weighted average of data from 1973Xe01, 1974Kr02, and 1974Sa19 (1975Sa09). Transitions with parentheses energies were not directly observed in (α,2nγ) but are expected based on the results of other experiments.
[c] From 1978Ma05.
[d] Weighted average of data from 1973Xe01, 1974Kr02, 1974Sa19, and 1975Sa09 (1975Sa09).
[e] Stretched quadrupole transition (1978Ma05).

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γ(^{95}Tc) (continued)

[f] From α(K)exp and $\gamma(\theta)$ (evaluator).
[g] From 1974Sa19 (1975Sa09).
[h] From comparison to RUL (evaluator).
[i] Weighted average of Iγ(592γ)/Iγ(667γ)=50 *5*/50 *3* (1975Sa09), 20.1 *11*/16.5 *18* (1975Sh02), and 21.5 *25*/20.0 *15* (1978Ma05) and Iγ(363γ)/Iγ(1032γ)=65 *3*/35 *2* (1975Sa09), 14.1 *8*/9.3 *6* (1975Sh02), and 24.4 *14*/12.2 *10* (1978Ma05).
[j] Iγ(488γ)/Iγ(745γ)=9.2 *6*/6.5 *6* (1978Ma05) discrepant. However, 1975Sa09 appears to have corrected for contamination from the (α,nγ) reaction for the 488γ.
[k] Placement from 1978Ma05.
[l] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

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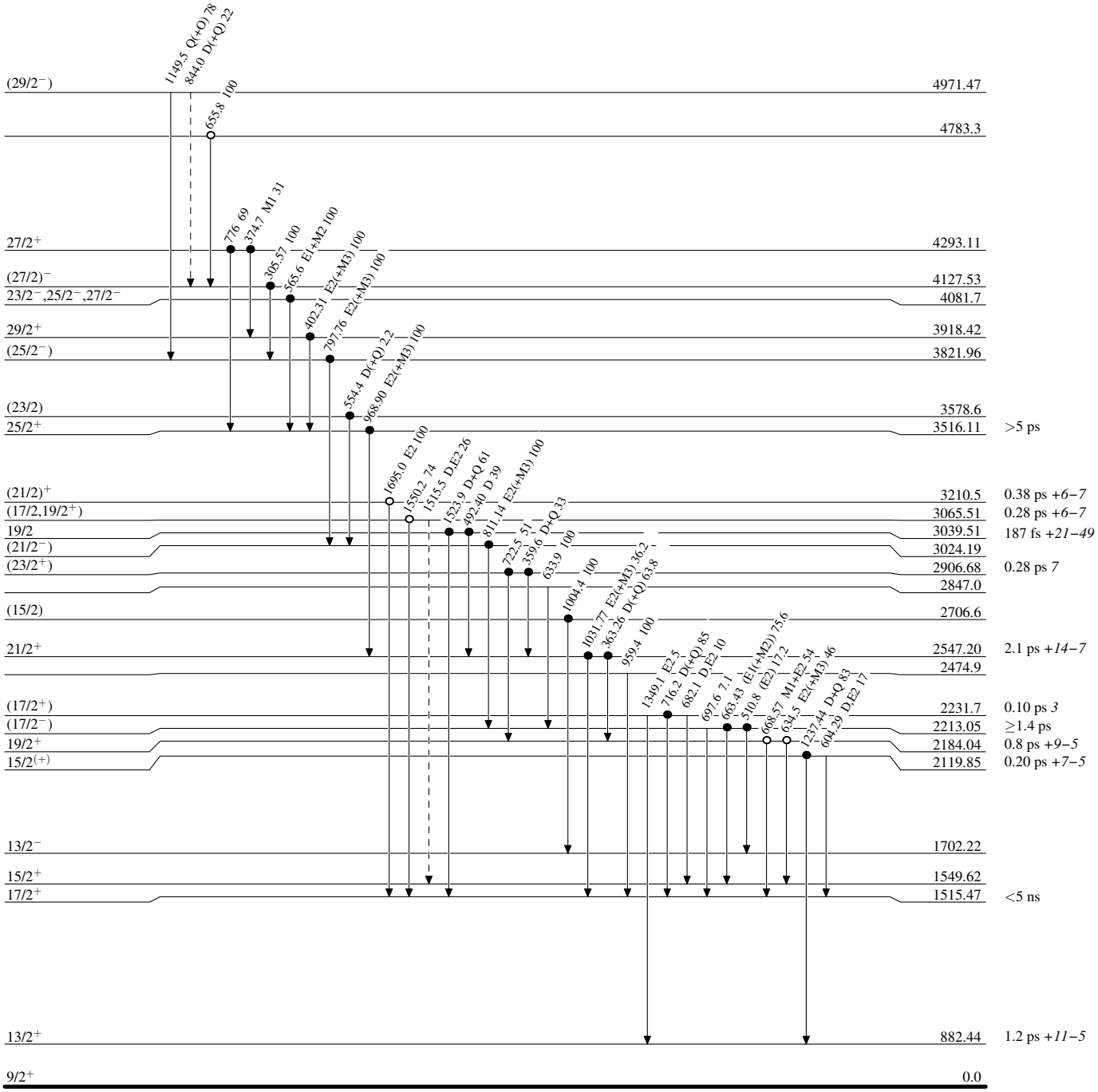
Legend

^{93}Nb(α,2nγ) 1978Ma05,1975Sh02,1977Wi11

Level Scheme

Intensities: % photon branching from each level

γ Decay (Uncertain)
Coincidence
Coincidence (Uncertain)



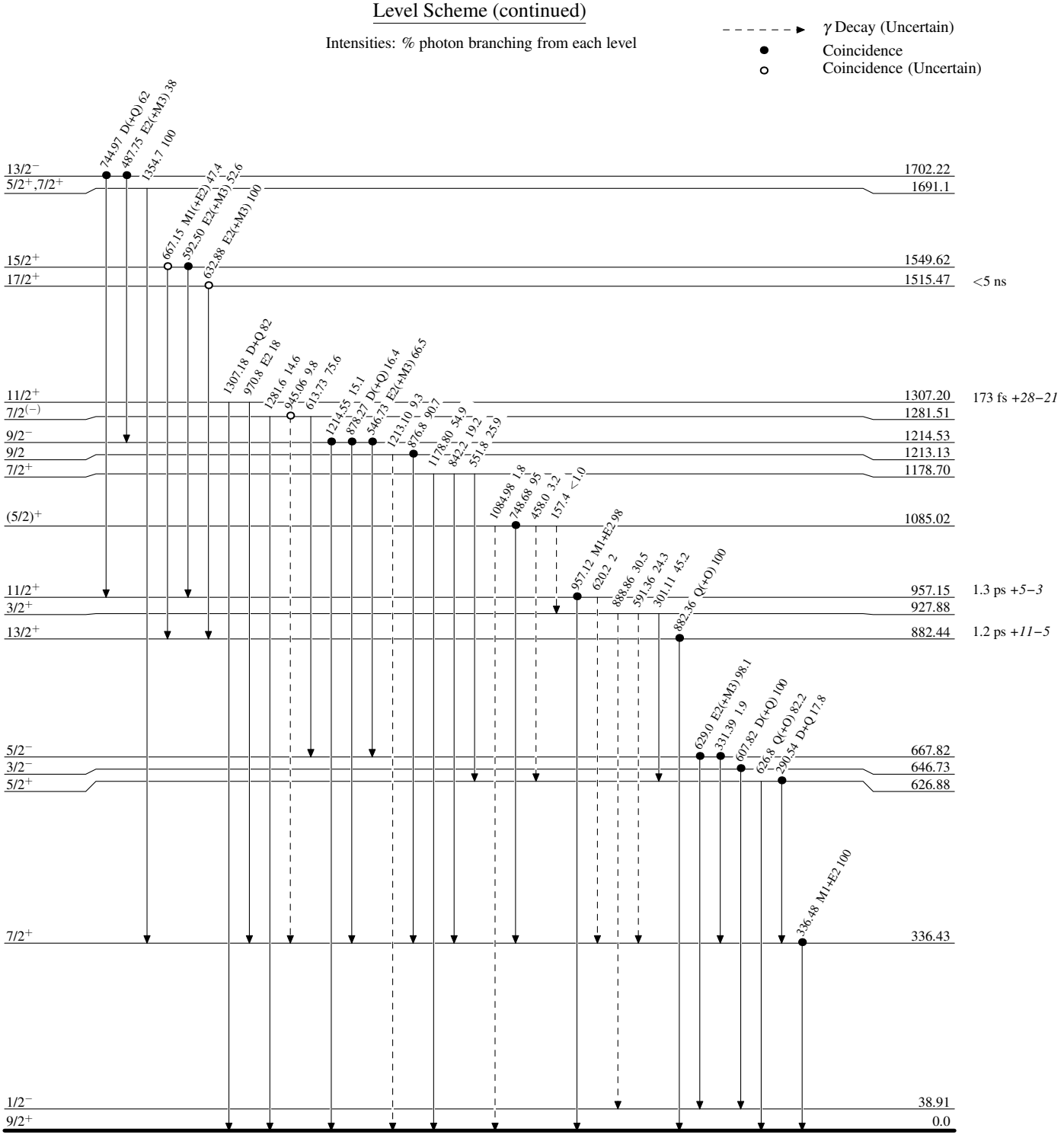
$^{95}_{43}Tc_{52}$

Legend

^{93}Nb(α,2nγ) 1978Ma05,1975Sh02,1977Wi11

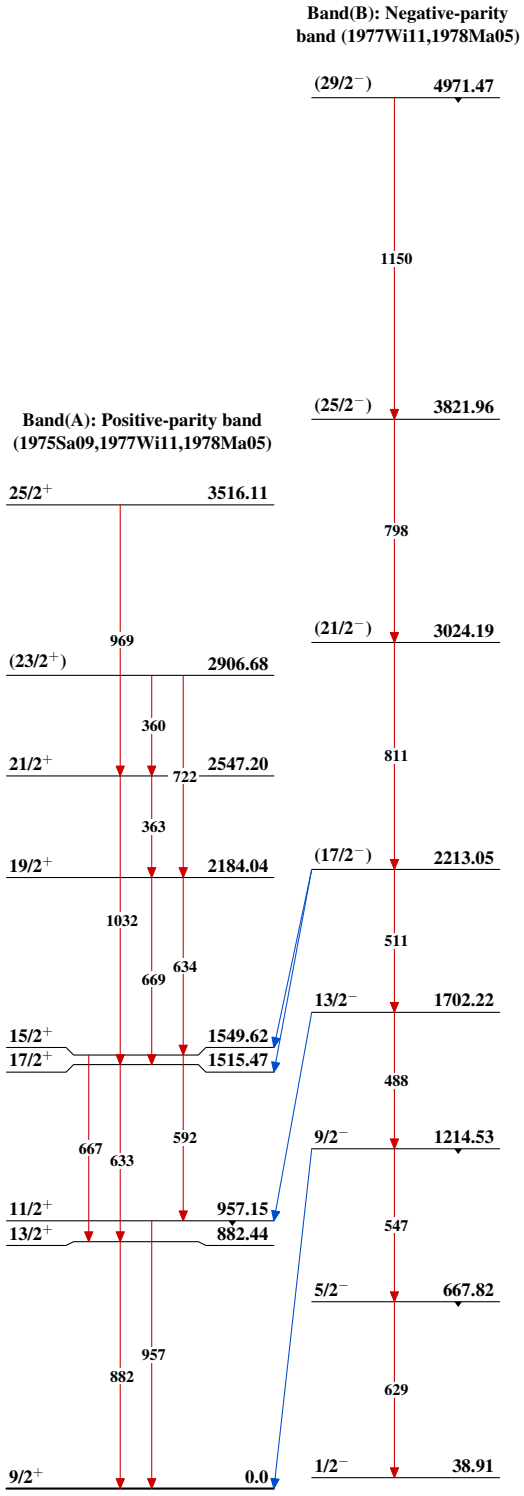
Level Scheme (continued)

Intensities: % photon branching from each level



$^{95}_{43}Tc_{52}$

^{93}Nb(α,2nγ) 1978Ma05,1975Sh02,1977Wi11



$^{95}_{43}Tc_{52}$