^{97}Mo(p,nγ) 1979Xe01,1980La07,1982Ka26

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 111, 525 (2010)	19-Nov-2009

^{97}Tc Levels

1979Xe01: E(p)=1.5-8.0 MeV; measured Eγ, Iγ, γγ, γ(θ) θ=0° to 90°, excit;Ge(Li) detectors FWHM=1.9 keV at 1.33 MeV.
1980La07, 1982Ka26: E(p)=2.0-5.2 MeV; measured Eγ, Iγ, nγ, γγ, excit, γ(θ) θ=0° to 90°;Ge(Li) detectors with FWHM=2.0-2.3 keV at 1.33 MeV. 1980La07 covers E(level)<1 MeV, 1982Ka26 covers E(level)>1 MeV.
1972Pi04: E(p)=3.0-6.0 MeV; measured Eγ, Iγ, γγ;Ge(Li) detectors with FWHM=4.0 keV at 1.0 MeV.
1984Ad06: E(p)=3.5 MeV; measured $T_{1/2}$ with DSA (Doppler shift attenuation);Ge(Li) detectors with FWHM=1.74 keV at 1332 keV.
Level scheme is based on the work of 1979Xe01, 1980La07, and 1982Ka26. The levels below≈1 MeV are supported by the data from ^{97}Ru ε decay and other reactions and are reasonably well established. However, there is some disagreement between these authors about some of the higher levels. Because of the large number of levels proposed (65 by 1982Ka26, and 48 by 1979Xe01 for E(level)>1 MeV) a number of the more questionable levels have been omitted from this table. For additional levels, see 1979Xe01 and 1982Ka26.

E(level)[†]	J^π[‡]	$T_{1/2}$	Comments
0.0	$9/2^+$		
96.57 *9*	$1/2^-$		
215.71 *4*	$7/2^+$		J^π: not 5/2 from γγ(θ) (1979Xe01).
324.46 *4*	$5/2^+$		
580.17 *9*	$3/2^-$		J^π: 3/2 from γ(θ).
656.90 *9*	$5/2^-$	≥0.76 ps	$T_{1/2}$: DSA of 560.4γ (1984Ad06).
772.60 *10*	$13/2^+$	≥0.35 ps	J^π: 13/2 from 772.6γ excit (1980La07). $T_{1/2}$: DSA of 773.0γ (1984Ad06).
785.08 *5*	$5/2^+$	0.33 ps *+17−10*	$T_{1/2}$: DSA of 460.5γ, 569.3γ (1984Ad06).
832.76 *10*	$11/2^{(+)}$	≥0.35 ps	J^π: γ(θ); γ excit J<13/2. $T_{1/2}$: DSA of 832.9γ (1984Ad06).
855.44 *6*	$7/2^+$	≥0.37 ps	J^π: 7/2 from γ(θ). $T_{1/2}$: DSA of 639.7γ, 855.6γ (1984Ad06).
861.58 *9*	$(9/2^+)$	≥0.38 ps	J^π: excit suggests high spin. $T_{1/2}$: DSA of 861.8γ (1984Ad06).
946.69 *13*	$3/2^-$	0.22 ps *+9−6*	J^π: 3/2 from γ(θ). $T_{1/2}$: DSA of 850.4γ (1984Ad06).
969.65 *9*	$7/2^+$		J^π: γ(θ), γ excit (1980La07).
994.65 *11*	$(3/2^+)$	0.17 ps *+7−4*	J^π: γ(θ) agrees with J=3/2 (1979Xe01). $T_{1/2}$: DSA of 670.2γ (1984Ad06).
1049.21 *9*	$3/2^-$	≥0.21 ps	J^π: (392γ, 469γ) excit support 3/2 assignment (1982Ka26). $T_{1/2}$: DSA of 392.3γ, 469.0γ, 724.9γ (1984Ad06).
1126.63 *9*	$11/2^{(+)}$		J^π: 1127γ(θ) establishes 11/2 assignment (1982Ka26).
1141.22 *8*	$(7/2^+)$	0.28 ps *+25−10*	J^π: 7/2 from γ(θ) of 356γ and 817γ. $T_{1/2}$: DSA of 816.9γ (1984Ad06).
1165.2 *5*	(9/2,7/2)		J^π: from γ(θ), excit.
1199.50 *15*	$(9/2^+)$	0.24 ps *+37−10*	J^π: from γ(θ). $T_{1/2}$: DSA of 875.4γ, 983.9γ (1984Ad06).
1219.86 *12*	$(7/2^+)$		J^π: 895γ(θ) favors J=7/2 (1982Ka26).
1240.02 *9*	$(7/2^-)$	≥0.26 ps	J^π: (916γ, 583γ)(θ) favor J=7/2. $T_{1/2}$: DSA of 583.2γ (1984Ad06).
1274.5 *3*			
1277.79 *13*	$(9/2^-)$		J^π: γ(θ), γ excit (1982Ka26).
1310.2 *2*	$9/2^+$		J^π: from γ(θ) and excit.
1348.9 *2*			

Continued on next page (footnotes at end of table)

^{97}Mo(p,nγ) 1979Xe01,1980La07,1982Ka26 (continued)

^{97}Tc Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$	Comments
1372.3 *4*	(3/2,5/2⁻)		
1379?	3/2⁺,5/2⁺		
1379.9 *2*	(9/2⁺)	0.09 ps *+5–3*	Jπ: from γ(θ) and excit. $T_{1/2}$: DSA of 547.3γ, 1164.4γ (1984Ad06).
1396.88 *14*			
1409.5 *3*	(7/2⁻)		Jπ: 7/2, 9/2 favored by γ(θ).
1441.1 *10*		≥0.21 ps	$T_{1/2}$: DSA of 1116.6γ (1984Ad06).
1480.3 *6*			
1512.36 *11*		0.25 ps *+18–9*	$T_{1/2}$: DSA of 1188.3γ (1984Ad06).
1518.5 *3*	(3/2⁻)	0.21 ps *+22–8*	Jπ: 3/2 suggested by γ(θ). $T_{1/2}$: DSA of 938.5γ (1984Ad06).
1523.1 *4*	(5/2⁺,7/2,9/2⁺)	0.044 ps *+14–10*	$T_{1/2}$: DSA of 1198.9γ (1984Ad06).
1580.5 *4*	(5/2,7/2⁻)		
1649.4 *2*	3/2⁺,5/2⁺	0.4 ps *3*	Jπ: excit suggests 3/2. $T_{1/2}$: 0.08 ps≤$T_{1/2}$≤0.69 ps from DSA of 1325.5γ (1984Ad06).
1677.2 *7*			
1692.9 *3*	(3/2⁺,5/2,7/2)		Jπ: γ(θ) favor 7/2, 9/2.
1707.7 *3*	(7/2)	0.025 ps *+9–6*	Jπ: γ(θ) and excit. $T_{1/2}$: DSA of 1383.8γ (1984Ad06).
1722.4 *8*	(3/2⁺,5/2,7/2)		
1733.3 *4*	(3/2⁺,5/2,7/2⁻)	≥0.54 ps	$T_{1/2}$: DSA of 1517.8γ (1984Ad06).
1779.1 *5*	(5/2,7/2)		Jπ: excit, γ(θ) favor 5/2,7/2.
1796.7 *4*	(3/2,5/2,7/2)		
1815.7 *4*	(9/2⁺)		Jπ: 1600.2γ(θ) suggests 9/2.
1850.6 *3*	(3/2)	0.21 ps *+22–8*	Jπ: from 1754γ γ(θ) and excit (1982Ka26). $T_{1/2}$: DSA of 1754.3γ (1984Ad06).
1856.1 *5*	(3/2⁺,5/2⁻)		
1864.8 *2*	(9/2⁺)		Jπ: 1640.5γ(θ) suggests 9/2.
1895.9 *7*	(5/2⁺,7/2⁺,9/2⁺)		Jπ: from (1680γ)(θ) and deexciting mode (1982Ka26).
1914.1 *4*	(3/2,5/2)		Jπ: from γ excit.
1924.6 *4*	(3/2,5/2)		Jπ: from γ excit.
1940.6 *7*	(7/2)		Jπ: from γ excit.
1949.4 *4*	(9/2⁺)		Jπ: from 1624γ, 1733γ γ(θ); γ excit.
1987.0 *5*	(3/2)		Jπ: from γ excit.
1994.9 *6*			
2001.3 *5*			
2023.7 *6*			
2036.0 *6*	(1/2⁻,3/2,5/2⁻)		
2059.9 *7*	(9/2,11/2)		Jπ: from γ(θ), γ excit.
2069.0 *5*			
2150.1 *5*	(3/2⁺,5/2,7/2)		
2168.8 *6*			
2208.2 *7*			
2217.4 *6*			
2255.0 *5*	(5/2⁺,7/2⁻)		

† From least squares fit to Eγ.

‡ From Adopted Levels. If the adopted Jπ assignment depends on data from this data set, then the specific arguments are given.

^{97}Mo(p,nγ) 1979Xe01,1980La07,1982Ka26 (continued)

γ(^{97}Tc)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[#]	δ[#]	Comments
215.71	7/2+	215.70 *5*	100	0.0	9/2+	M1+E2	+0.27 *2*	δ: from adopted gammas; δ=+0.31 *5* (1979Xe01), +0.50 *+11−8* (1980La07).
324.46	5/2+	108.8	5 *1*	215.71	7/2+	M1+E2	+1.6[@] *5*	
		324.46 *5*	100	0.0	9/2+	E2		
580.17	3/2−	483.60 *4*	100	96.57	1/2−	M1+E2	−0.6 *5*	
656.90	5/2−	332.4 *3*	0.6 *1*	324.46	5/2+			
		441.2	<3	215.71	7/2+			
		560.35 *5*	100	96.57	1/2−	E2		
772.60	13/2+	772.6 *1*	100	0.0	9/2+	E2		δ: δ(M3/E2)=−0.05 *8* (1979Xe01), −0.12 *+8−9* (1980La07).
785.08	5/2+	460.59 *7*	11.7 *7*	324.46	5/2+	M1+E2	−0.6[@] *+4−3*	δ: other: +0.5 *+1−4* (1979Xe01).
		569.37 *5*	100 *2*	215.71	7/2+	M1+E2	+0.128[@] *14*	δ: other: +0.7 *+2−7* (1979Xe01).
		785.3 *2*	11 *3*	0.0	9/2+			
832.76	11/2(+)	832.8 *1*	100	0.0	9/2+	(M1+E2)		δ: +0.45 *11* or +4.4 *1* (1984Ad06, based on the measurements of 1979Xe01, 1980La07).
855.44	7/2+	531.05 *10*	7.9 *2*	324.46	5/2+			
		639.7 *1*	17.2 *7*	215.71	7/2+	(M1+E2)	−2.3 *+6−1*	
		855.4 *1*	100 *2*	0.0	9/2+	M1+E2	+0.3 *2*	
861.58	(9/2+)	645.8 *2*	15.1 *19*	215.71	7/2+			
		861.6 *1*	100 *1*	0.0	9/2+	(M1+E2)	−0.51[&] *21*	
946.69	3/2−	290.0	2.4 *5*	656.90	5/2−	D[e]		E_γ,I_γ: γ only seen by 1980La07.
		366.6 *2*	19.0 *25*	580.17	3/2−	D[e]		
		622.4	4	324.46	5/2+	(E1)[f]		E_γ,I_γ: γ seen in coin only (1980La07).
		850.1 *1*	100 *2*	96.57	1/2−	M1+E2		δ: −10.5<δ<3.0 (1980La07).
969.65	7/2+	114.3 *3*		855.44	7/2+			
		184.7 *4*	5.4 *11*	785.08	5/2+			
		645.2 *2*	76 *7*	324.46	5/2+	M1+E2	−1.15 *+81−87*	
		753.9 *1*	100 *4*	215.71	7/2+	M1+E2	−2.2 *8*	
		969.9 *3*	1.7 *4*	0.0	9/2+			
994.65	(3/2+)	670.2 *1*	100 *3*	324.46	5/2+	D[e]		
		898.0 *3*	11 *2*	96.57	1/2−	(E1)[f]		
1049.21	3/2−	392.2 *1*	100 *5*	656.90	5/2−	D		
		469.2 *1*	61 *5*	580.17	3/2−	D		
		724.7 *1*	84 *18*	324.46	5/2+			
1126.63	11/2(+)	911.0 *2*	48 *13*	215.71	7/2+			
		1126.6 *1*	100 *4*	0.0	9/2+	(M1+E2)	−0.8 *+3−5*	
1141.22	(7/2+)	356.2 *1*	47 *10*	785.08	5/2+	(M1+E2)	−0.3[&] *2*	
		816.7 *1*	100 *5*	324.46	5/2+	(M1+E2)	−0.8 *+4−9*	
		925.5 *3*	5.7 *14*	215.71	7/2+			
1165.2	(9/2,7/2)	949.5 *5*	100	215.71	7/2+			
1199.50	(9/2+)	366.8		832.76	11/2(+)			E_γ,I_γ: weaker member of the 366.8-keV doublet.
		875.3 *2*	49 *9*	324.46	5/2+	(E2)		δ: δ(M3/E2)=+0.4 *+5−9* (1984Ad06).
		983.5 *2*	100 *6*	215.71	7/2+	(M1+E2)	−0.58[&] *4*	
1219.86	(7/2+)	895.4 *2*	93 *7*	324.46	5/2+	(M1+E2)	−0.8 *+4−7*	
		1004.2 *2*	22 *7*	215.71	7/2+			E_γ,I_γ: weaker member of a doublet where the stronger member is of unknown origin (1982Ka26).
		1219.8 *2*	100 *7*	0.0	9/2+			E_γ,I_γ: strongest member of a triplet (1982Ka26).

Continued on next page (footnotes at end of table)

^{97}Mo(p,nγ) 1979Xe01,1980La07,1982Ka26 (continued)

γ(^{97}Tc) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[#]	δ[#]	Comments
1240.02	(7/2$^-$)	293.6	35	946.69	3/2$^-$			
		583.16 *5*	100 *3*	656.90	5/2$^-$	(M1+E2)	−0.34[&] *24*	
		659.6 *1*	88 *4*	580.17	3/2$^-$			I_γ: γ is a doublet with Coul. ex. in ^{97}Mo (1982Ka26).
		915.7 *2*	20 *6*	324.46	5/2$^+$	D		
		1024.4 *2*	29 *8*	215.71	7/2$^+$			I_γ: γ is a triplet with γ from 1349 level and with a γ in ^{97}Mo.
1274.5		617.5 *3*	100 *4*	656.90	5/2$^-$			
		694.8 *6*	32 *2*	580.17	3/2$^-$			
		1179[g]		96.57	1/2$^-$			
1277.79	(9/2$^-$)	422.6	17	855.44	7/2$^+$	D+Q		δ: δ=−0.38 *+8−11* or −1.7 *3* (1982Ka26).
		620.9 *1*	100 *3*	656.90	5/2$^-$	Q		
		1062.0 *4*	≤6	215.71	7/2$^+$			E_γ,I_γ: doublet (1982Ka26).
1310.2	9/2$^+$	1094.5 *2*	100 *4*	215.71	7/2$^+$	M1+E2		Mult.,δ: from γ(θ), δ=−0.14 *+4−5* or −3.1 *+4−5* (1982Ka26).
		1310.0 *3*	97 *12*	0.0	9/2$^+$	M1+E2	−0.63 *+11−14*	
1348.9		1024.4 *2*	100 *8*	324.46	5/2$^+$			E_γ,I_γ: doublet (1982Ka26).
1372.3	(3/2,5/2$^-$)	715.9 *5*	100 *15*	656.90	5/2$^-$			
		1048.0 *6*	65 *12*	324.46	5/2$^+$			
		1275.0 *5*	68 *9*	96.57	1/2$^-$			E_γ,I_γ: γ is a triplet (1982Ka26).
1379?	3/2$^+$,5/2$^+$	1054[g]		324.46	5/2$^+$			
		1379[g]		0.0	9/2$^+$			
1379.9	(9/2$^+$)	547.2 *2*	84 *4*	832.76	11/2$^{(+)}$	(M1+E2)	+0.33 *+10−8*	
		1163.9 *3*	100 *4*	215.71	7/2$^+$	(M1+E2)		δ: +0.31 *+4−3* or −1.96 *+12−18* (1982Ka26).
1396.88		816.7 *1*	100	580.17	3/2$^-$			
1409.5	(7/2$^-$)	752.7 *4*	65 *6*	656.90	5/2$^-$			I_γ: from 1979Xe01, 1982Ka26 observed this γ as part of a doublet.
		830.0	28	580.17	3/2$^-$			
		1084.9 *4*	52 *7*	324.46	5/2$^+$			
		1193.8	100 *3*	215.71	7/2$^+$			
1441.1		1116.6	100	324.46	5/2$^+$			
1480.3		823.4 *6*	100	656.90	5/2$^-$			
1512.36		855.45 *7*	61 *4*	656.90	5/2$^-$	D,E2[e]		
		932.8	18	580.17	3/2$^-$	D,E2[e]		
		1188.0 *3*	100 *3*	324.46	5/2$^+$	D,E2[e]		
1518.5	(3/2$^-$)	938.2 *3*	100 *3*	580.17	3/2$^-$			
		1422.0 *4*	76 *24*	96.57	1/2$^-$			
1523.1	(5/2$^+$,7/2,9/2$^+$)	1198.7 *4*	100 *3*	324.46	5/2$^+$	D,E2[e]		
		1307.2 *6*	36 *20*	215.71	7/2$^+$	D,E2[e]		
		1523.5	25	0.0	9/2$^+$	D,E2[e]		
1580.5	(5/2,7/2$^-$)	340.4	20 *9*	1240.02	(7/2$^-$)			I_γ: from 1982Ka26, unweighted average of Iγ relative to Iγ(1255.7) and Iγ(1364.9).
		924.2	100 *4*	656.90	5/2$^-$			
		1000.0 *10*	65 *4*	580.17	3/2$^-$			
		1255.7 *6*	24 *2*	324.46	5/2$^+$			
		1364.9 *5*	28 *2*	215.71	7/2$^+$			
1649.4	3/2$^+$,5/2$^+$	679.9 *3*	100	969.65	7/2$^+$	D,E2[e]		

Continued on next page (footnotes at end of table)

^{97}Mo(p,nγ) 1979Xe01,1980La07,1982Ka26 (continued)

γ(^{97}Tc) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.[#]	Comments
1649.4	3/2$^+$,5/2$^+$	793.7 *5*	19	855.44	7/2$^+$	D,E2[e]	
		1324.9 *4*	16	324.46	5/2$^+$	D,E2[e]	
1677.2		1097.1 *10*	100 *10*	580.17	3/2$^-$		
		1352.7 *10*	47 *6*	324.46	5/2$^+$		
		1462.0[g]		215.71	7/2$^+$		
1692.9	(3/2$^+$,5/2,7/2)	698.5		994.65	(3/2$^+$)		
		1368.2 *6*	38 *14*	324.46	5/2$^+$		
		1477.2 *3*	100 *5*	215.71	7/2$^+$		
1707.7	(7/2)	922.7 *5*	100 *16*	785.08	5/2$^+$	D,E2[e]	
		1383.0 *5*	89 *13*	324.46	5/2$^+$	D,E2[e]	
		1492.2 *5*	46 *13*	215.71	7/2$^+$	D,E2[e]	
1722.4	(3/2$^+$,5/2,7/2)	727.9		994.65	(3/2$^+$)		
		752.6		969.65	7/2$^+$		
1733.3	(3/2$^+$,5/2,7/2/2$^-$)	1153.0 *6*	31 *21*	580.17	3/2$^-$		
		1517.6 *4*	100 *5*	215.71	7/2$^+$		
1779.1	(5/2,7/2)	993.5 *8*	100 *8*	785.08	5/2$^+$		
		1563.5 *6*	61 *3*	215.71	7/2$^+$		
		1779.4		0.0	9/2$^+$		
1796.7	(3/2,5/2,7/2)	1011.1 *6*	100 *10*	785.08	5/2$^+$		
		1141.3 *10*	60 *10*	656.90	5/2$^-$		
		1472.3 *6*	90 *13*	324.46	5/2$^+$		
1815.7	(9/2$^+$)	615.9		1199.50	(9/2$^+$)		
		1491.1 *5*	100 *9*	324.46	5/2$^+$		
		1600.2 *6*	43 *6*	215.71	7/2$^+$	D+Q	Mult.: δ=−0.14 *7* or −3.1 *7*.
1850.6	(3/2)	1193.7 *3*		656.90	5/2$^-$		
		1754.2		96.57	1/2$^-$		
1856.1	(3/2$^+$,5/2$^-$)	1276.3		580.17	3/2$^-$		
		1530.8 *10*	47 *4*	324.46	5/2$^+$		
		1640.5 *8*	100 *7*	215.71	7/2$^+$		
		1759.8		96.57	1/2$^-$		
1864.8	(9/2$^+$)	1009.6 *3*		855.44	7/2$^+$		
		1539.8 *6*	100 *7*	324.46	5/2$^+$		
		1648.9 *5*	16 *3*	215.71	7/2$^+$		
1895.9	(5/2$^+$,7/2$^+$,9/2$^+$)	1063.2		832.76	11/2$^{(+)}$		
		1680.2		215.71	7/2$^+$	D+Q	δ: −0.21 *11* or −2.48 *−11+6*.
		1896[g]		0.0	9/2$^+$		
1914.1	(3/2,5/2)	944.3		969.65	7/2$^+$		
		1058.7		855.44	7/2$^+$		
		1128.8 *5*	100 *7*	785.08	5/2$^+$		
		1589.9 *6*	33 *4*	324.46	5/2$^+$		Mult.: $\gamma(\theta)$ is isotropic.
		1698.5		215.71	7/2$^+$		
1924.6	(3/2,5/2)	1267.7 *6*	100 *5*	656.90	5/2$^-$		Mult.: $\gamma(\theta)$ is isotropic.
		1344.3 *7*	24 *4*	580.17	3/2$^-$		
		1599.8 *10*	8 *4*	324.46	5/2$^+$		
		1709.4		215.71	7/2$^+$		
1940.6	(7/2)	1616.1		324.46	5/2$^+$		
		1724.9		215.71	7/2$^+$		
1949.4	(9/2$^+$)	1094.9[g]		855.44	7/2$^+$		
		1164.8 *6*	100 *6*	785.08	5/2$^+$		
		1624.7 *5*	47 *6*	324.46	5/2$^+$		
		1733.5		215.71	7/2$^+$		
1987.0	(3/2)	1330.1 *6*	96 *8*	656.90	5/2$^-$		
		1406.8 *7*	100 *8*	580.17	3/2$^-$		
		1890.4		96.57	1/2$^-$		
1994.9		1025.2		969.65	7/2$^+$		

Continued on next page (footnotes at end of table)

^{97}Mo(p,nγ) 1979Xe01,1980La07,1982Ka26 (continued)

γ(^{97}Tc) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π
1994.9		1670.4		324.46	$5/2^+$
		1779.2		215.71	$7/2^+$
2001.3		1344.2 *7*	39 *4*	656.90	$5/2^-$
		1421.2 *6*	100 *7*	580.17	$3/2^-$
2023.7		1443.5 *6*	100	580.17	$3/2^-$
2036.0	$(1/2^-,3/2,5/2^-)$	1379.0 *6*		656.90	$5/2^-$
		1939.5		96.57	$1/2^-$
2059.9	(9/2,11/2)	1198.2		861.58	$(9/2^+)$
		1844.2		215.71	$7/2^+$
2069.0		1412.1 *5*		656.90	$5/2^-$
2150.1	$(3/2^+,5/2,7/2)$	1493.0 *7*		656.90	$5/2^-$
		1825.8		324.46	$5/2^+$
		1934.6		215.71	$7/2^+$
2168.8		858.4		1310.2	$9/2^+$
		1953.3		215.71	$7/2^+$
		2168.9		0.0	$9/2^+$
2208.2		1628.0 *7*		580.17	$3/2^-$
2217.4		1362.0		855.44	$7/2^+$
		1892.9		324.46	$5/2^+$
		2001.7		215.71	$7/2^+$
2255.0	$(5/2^+,7/2^-)$	1393.8		861.58	$(9/2^+)$
		1675.4		580.17	$3/2^-$
		1930.5		324.46	$5/2^+$
		2038.3		215.71	$7/2^+$

[†] From 1979Xe01 for E(level)<1.5 MeV, unless otherwise noted; unweighted average of measurements by 1979Xe01 and 1982Ka26 (where available) for E(level)>1.5 MeV.

[‡] Relative intensity from each level given. Weighted average of measurements by 1972Pi04, 1979Xe01, 1980La07 for E(level)<1.0 MeV and unweighted average of measurements by 1979Xe01, 1982Ka26 for E(level)> 1.0 MeV, where available.

[#] From γ(θ) (1979Xe01,1980La07,1982Ka26), unless otherwise noted. The sign of δ as quoted in 1980La07 and 1982Ka26 has been amended to comply with the sign convention used in Nuclear Data Sheets (1970Kr03). D+Q transitions with significant admixture of Q (δ≥0.3) are assumed to have M1+E2 multipolarity.

[@] From ^{97}Ru ε decay data set.

[&] From 1984Ad06, reanalysis of measurements of 1979Xe01, 1982Ka26, and others.

[a] Observed by 1979Xe01, and placed in the level scheme proposed by the authors.

[b] Observed by 1972Pi04.

[c] Observed by 1982Ka26, and placed in the level scheme proposed by the authors.

[d] Observed by 1979Xe01 and 1982Ka26 but authors do not agree on placement in the level scheme.

[e] Deduced from RUL.

[f] D,E2 deduced from RUL, E1 from level scheme.

[g] Placement of transition in the level scheme is uncertain.

[x] γ ray not placed in level scheme.

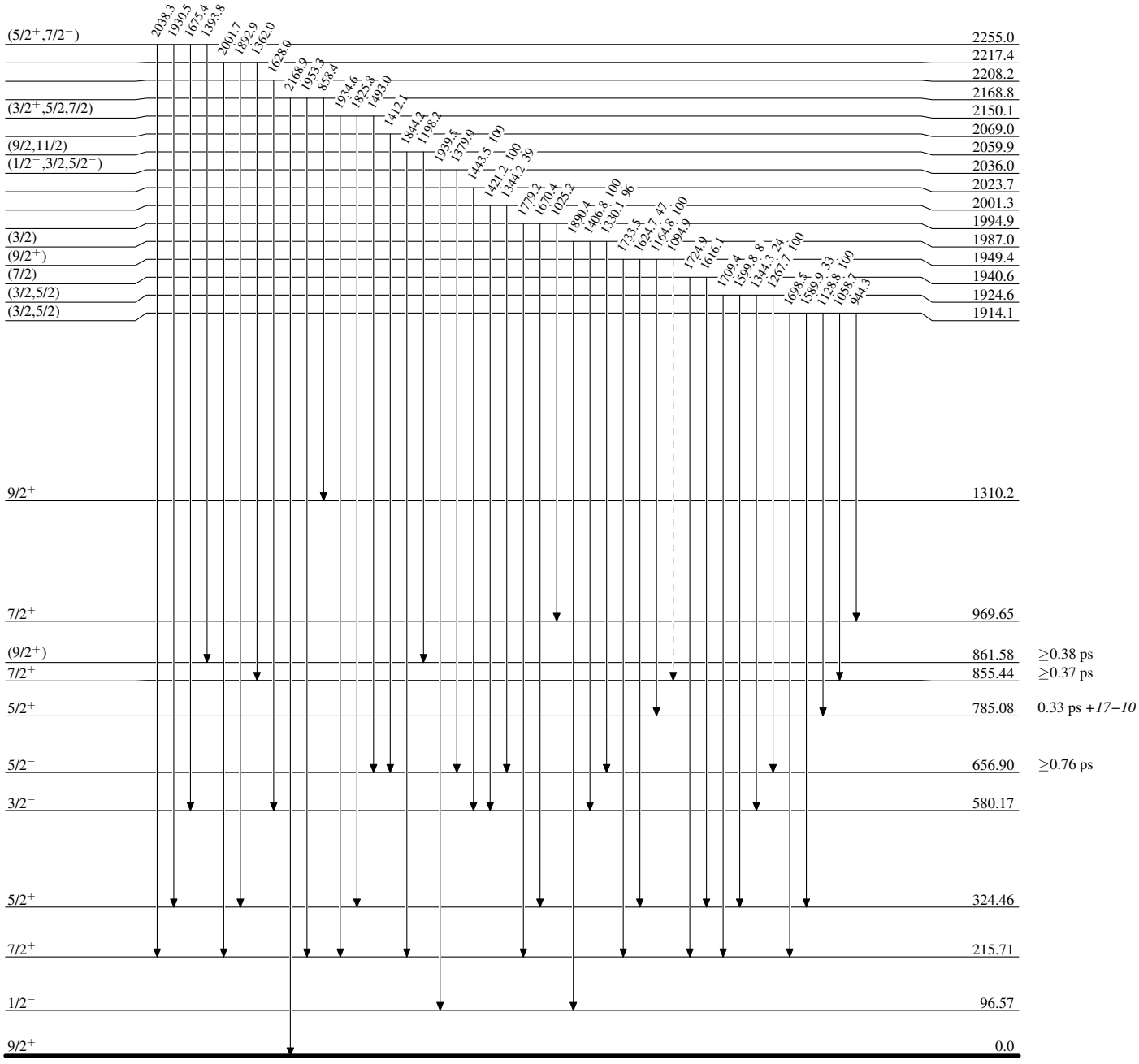
^{97}Mo(p,nγ) 1979Xe01,1980La07,1982Ka26

Legend

Level Scheme

Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)



$^{97}_{43}Tc_{54}$

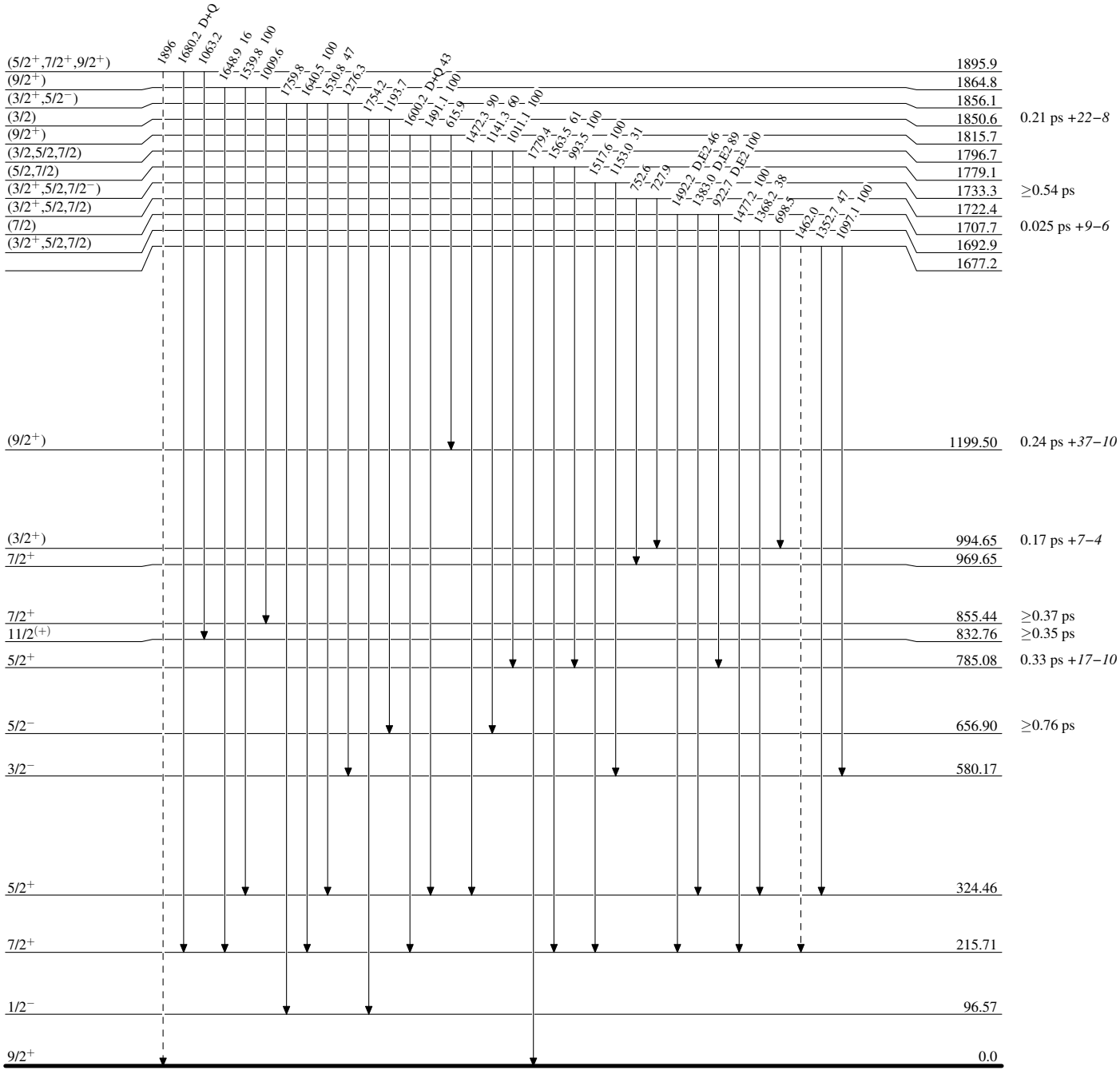
^{97}Mo(p,nγ) 1979Xe01,1980La07,1982Ka26

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

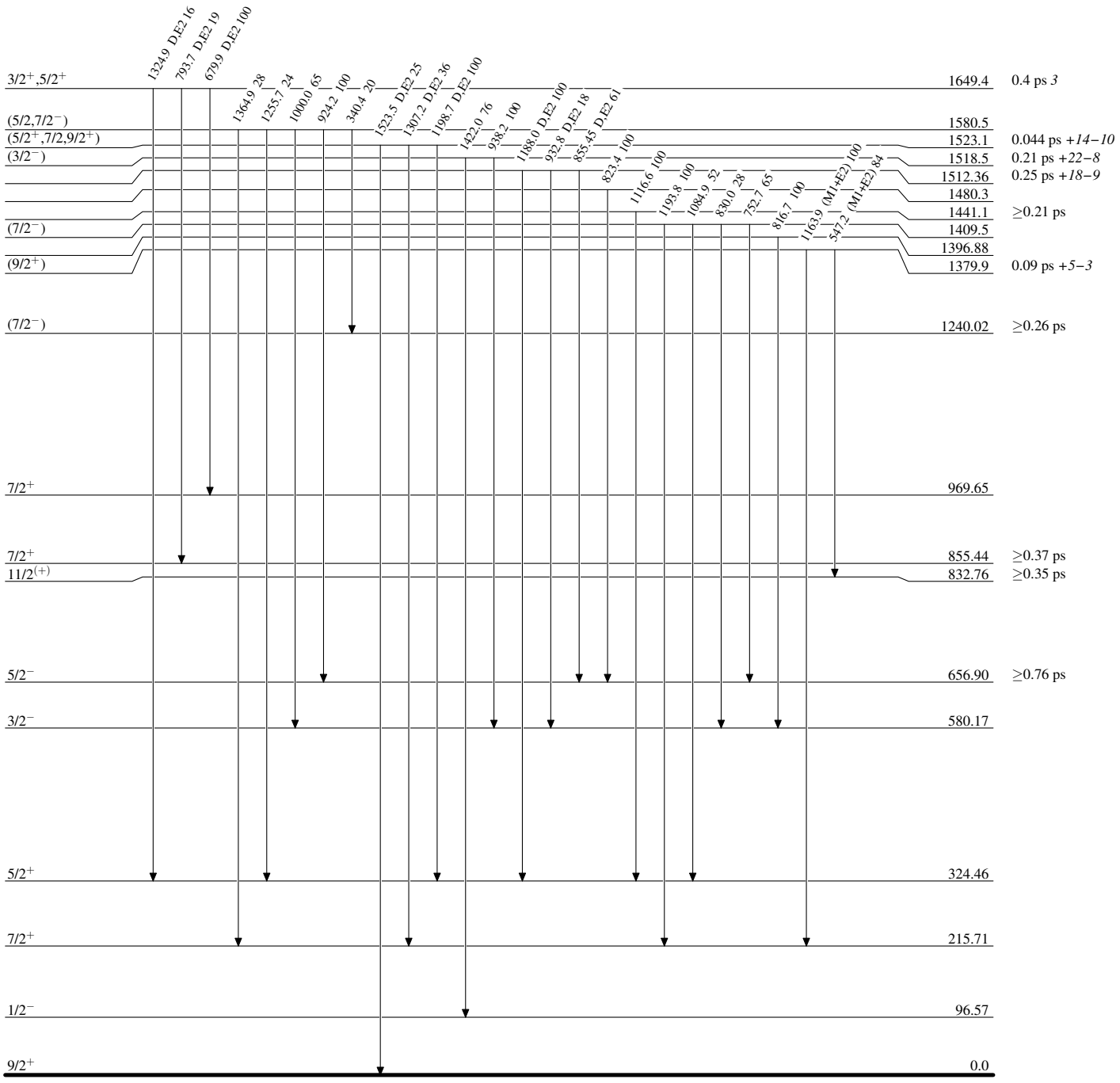


$^{97}_{43}Tc_{54}$

^{97}Mo(p,nγ) 1979Xe01,1980La07,1982Ka26

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{97}_{43}Tc_{54}$

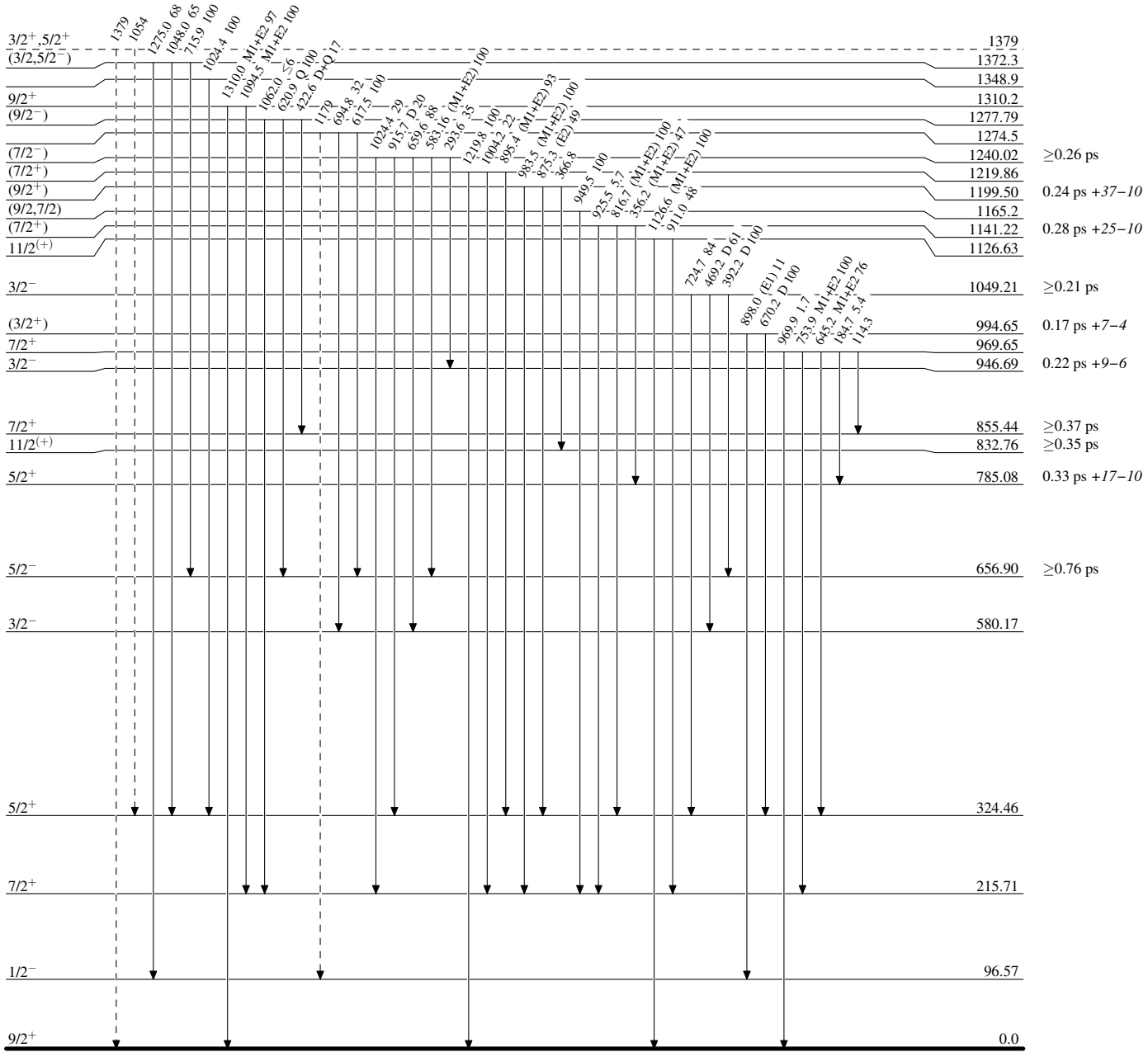
^{97}Mo(p,nγ) 1979Xe01,1980La07,1982Ka26

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)

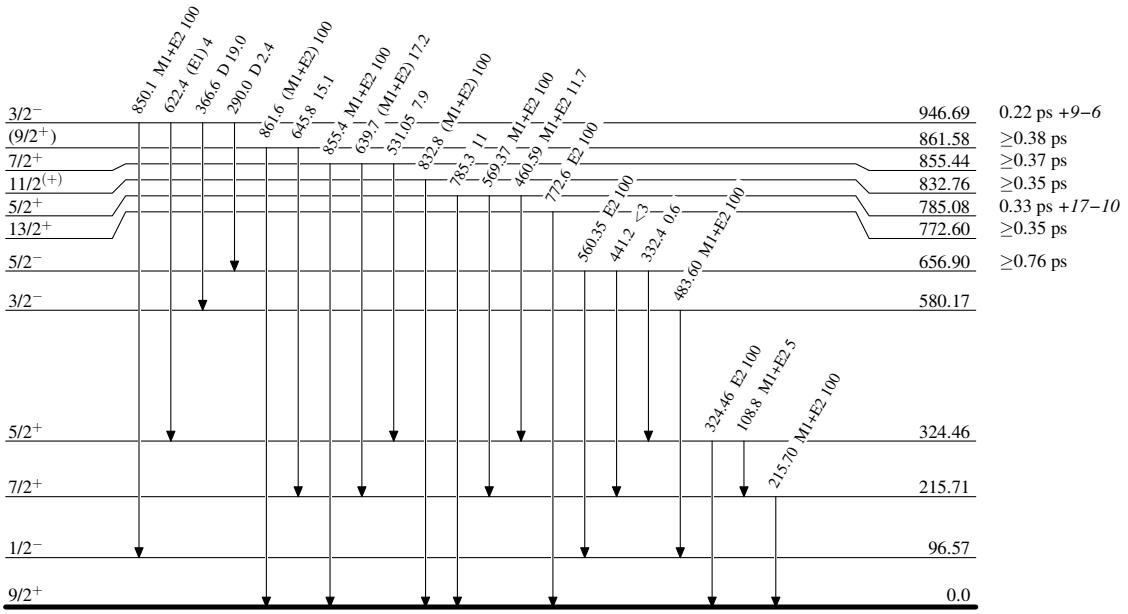


$^{97}_{43}Tc_{54}$

^{97}Mo(p,nγ) 1979Xe01,1980La07,1982Ka26

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{97}_{43}Tc_{54}$