^{36}S(p,γ),(p,p) 1984No05,1984No06

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	John Cameron, Jun Chen and Balraj Singh, Ninel Nica	NDS 113, 365 (2012)	15-Jan-2012

1984No05,1984No06: E=0.5-2 MeV proton beam from the Utrecht 3 MV Van de Graaff accelerator. Targets of Ag_2S (81% in ^{36}S) on a silver layer evaporated onto a tantalum backing. Three Ge(Li) detectors of 100, 95 and 80 cm^3, FWHM=2.2, 1.95 and 1.8 keV at 1.33 MeV. Measured $\sigma(E_p)$, Eγ, Iγ, $\gamma(\theta)$. Deduced levels, J, π, resonance strengths, widths, branchings, mixing ratios, half-lives using the Doppler Shift Attenuation Method (DSAM).

1965Ko16,1966Ko23: E=1.4-2.1 MeV protons produced from the 4-MeV electrostatic accelerator of the Physico-technical Institute of the Ukrainian Academy of sciences. Targets of natural sulfur (0.014% ^{36}S). A 70-mm by 50-mm NaI(Tl) detector. Measured $\sigma(E_p)$, Eγ, Iγ, $\gamma(\theta)$. Deduced levels, J^π, mixing ratios.

1967Ie01: E=1.147 MeV proton . Target of enriched CdS (2.4% ^{36}S). Scintillation spectrometer for detecting γ-rays. Measured Eγ, Iγ, $\gamma(\theta)$. Deduced levels, J^π, branchings.

1967Ie02: E=2.05-2.30 MeV protons. $\sigma(E_p)$, Eγ, Iγ. Deduced levels.

1968Hy01: E=0.80-1.94 MeV protons produced from the ARL 2-MeV Van de Graaff accelerator. Targets of enriched CdS (2.4% ^{36}S). NaI(Tl) and Ge(Li) detectors. Measured $\sigma(E_p)$, Eγ, Iγ, $\gamma(\theta)$. Deduced levels, J^π, resonance strengths, branchings, mixing ratios.

1970Ha41: E=1.147 and 1.189 MeV protons produced from the Aerospace Research Laboratories (ARL) 2 MeV Van de Graaff, FWHM=1 keV. Targets of elemental sulfur (3.51% ^{36}S). A 40-cc and a 60-cc Ge(Li) detectors. Measured Eγ, Iγ, $\gamma(\theta)$. Deduced levels, J^π, branchings, $T_{1/2}$ using Doppler Shift Attenuation Method (DSAM).

1973Pi10: E=1.0-1.9 MeV protons produced from the Helsinki University 2.5 MV van de Graaff accelerator. Targets of natural sulfur (0.014% ^{36}S). Ge(Li) detector. Measured $\sigma(E_p)$, Eγ, Iγ. Deduced levels, branchings, $T_{1/2}$ using DSAM.

1975Ke01: ^{36}S(p,p), E=1.89 MeV proton produced from the Helsinki University. Silicon surface barrier detectors. Measured $\sigma(E_p)$. Deduced resonance strength, widths.

1975Ke11: E=1.887 MeV proton produced from the Helsinki University 2.5 MV van de Graaff accelerator. Targets of ZnS and CdS. A 120 cm^3 Ge(Li), FWHM=2.9 keV at 2.6 MeV. Measured Eγ, Iγ. Deduced resonance strength, widths.

1998Ka52: E=0.5-2.0 MeV protons produced from the ESU-4 accelerator of the Kharkov Physics and Engineering Institute. Target of ^{36}S. A 60 cm^3 Ge(Li) detector. Measured $\sigma(E_p)$, Eγ, Iγ, $\gamma(\theta)$. Deduced levels, resonance strengths, mixing ratios, transition strengths.

2002Vo17: E=1.887 MeV proton produced from the the ESU-4 accelerator (NSC KhPEI). Enriched ^{36}S target. A 63 cm^3 Ge(Li) detector. Measured Eγ, Iγ. Deduced levels, resonance strengths, widths.

2008Ka10: E=0.8-2.8 MeV protons produced from the ESU-5 accelerator at the National Scientific Center Kharkov Institute of Physics and Technology. Target of Ag_2S. A 60 cm^3 Ge(Li) detector. Measured $\sigma(E_p)$, Eγ, Iγ, $\gamma(\theta)$. Deduced levels, resonance strengths, transition strengths.

Others: 1967Hy02, 1967Ie03, 1968Pe14, 1981Va02, 1996Vo24, 2001Ka69.

^{37}Cl Levels

Resonance strength $\omega\gamma=(2J+1)\Gamma_\gamma\Gamma_p/\Gamma$.

E(level)[†]	J$^\pi$[a]	$T_{1/2}$ or $\omega\gamma$[e]	Comments
0	3/2$^+$[b]		
1726.58 *4*	1/2	97 fs *42*	J$^\pi$: from $\gamma(\theta)$ in 1970Ha41. $T_{1/2}$ or $\omega\gamma$: from 1973Pi10. 118 fs *+62−35* from DSAM in 1970Ha41.
3086.12 *7*	5/2	23 fs *8*	$T_{1/2}$ or $\omega\gamma$: weighted average of 24 fs *8* from 1984No06 and 21 fs *8* from 1973Pi10.
3103.59 *8*	7/2$^-$[b]	>0.55 ps	
3626.82 *6*	3/2$^{(+)}$	35 fs *14*	
3707.79 *9*	3/2$^+$	35 fs *14*	
3741.05 *15*	5/2	21 fs *7*	
3911? *4*			E(level): from 1970Ha41.
4011.3 *6*			
4016.27 *9*	3/2	0.10 ps *4*	

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

^{37}Cl Levels (continued)

E(level)[†]	Jπ[a]	$T_{1/2}$ or ωγ[e]	E_p	Comments
4176.64 *9*	3/2(−)	>0.21 ps		
4268.87 *9*	1/2	42 fs *14*		
4272.52 *17*	7/2−	76 fs *28*		
4396.3 *7*	5/2	13 fs *5*		
4459.97 *15*	7/2−	0.06 ps *2*		
4546				
4801.21 *11*	5/2+	<7 fs		
4810.9 *3*	7/2	40 fs *10*		$T_{1/2}$ or ωγ: weighted average of 35 fs *14* from 1984No06 and 42 fs *10* from 1973Pi10.
4837.61 *10*	5/2	4 fs *2*		
4853.96 *13*	3/2	<3.5 fs		
4904.2 *7*	7/2+	24 fs *10*		
4960.8 *5*	3/2	14 fs *6*		
5009.3 *8*		5 fs *3*		
5055.2 *5*				
5059.1 *7*				
5143?[&] *5*				
5228.7 *7*		<7 fs		
5282.5[&] *25*				
5307.4 *5*				
5317.1 *7*				
5372.5 *6*				
5490.68 *11*	5/2+	15 fs *6*		
5528.4 *6*	9/2	0.21 ps *7*		
5570.1 *3*		12 fs *6*		$T_{1/2}$ or ωγ: from DSAM in 1973Pi10.
5617.9 *9*				
5645.3 *3*	3/2+,5/2+	<8 fs		
5700.9 *5*	9/2−	<0.2 ps		
5726.3 *3*	7/2−	15 fs *6*		
5909.3 *6*				
5915.0 *5*				
5944 *2*				
5978 *2*				
5985.9 *8*				
6015.3 *5*	(3/2,5/2)	6 fs *5*		
6042.2 *5*		14 fs *8*		
6305.1 *8*				
6323.8 *4*				
6358 *3*				
6372 *2*				
6415 *2*				
6488.3 *8*				
6668.9 *8*				
6701.8 *4*	5/2	<3.5 fs		
6732 *5*				
7079.4 *12*				
7150 *2*				
7224.4 *5*	(5/2,3/2+)	<7 fs		
7254.5 *18*				
7300 *2*				
7686.8 *5*		13 fs *5*		
8884.5 *5*	(1/2,3/2,5/2+)	0.032 eV *6*	512.1 *4*	
8928.8 *5*		0.020 eV *4*	557.6 *4*	
8938.2 *5*		0.046 eV *9*	567.3 *4*	
8948.94 *28*		0.0070 eV *14*	578.3 *2*	
8987.85 *28*		0.018 eV *6*	618.3 *2*	

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

^{37}Cl Levels (continued)

E(level)[†]	Jπ[a]	$T_{1/2}$ or ωγ[e]	E_p	Comments
9027.15 *28*	(3/2,5/2$^+$)	0.12 eV *2*	658.7 *2*	
9034.83 *28*		0.038 eV *9*	666.6 *2*	
9046.31 *28*	3/2	0.17 eV *10*	678.4 *2*	
9066.06 *28*	3/2	0.82 eV *13*	698.7 *2*	
9090.7 *4*		0.14 eV *4*	724.0 *3*	
9100.39 *28*	(1/2,3/2,5/2$^+$)	0.94 eV *15*	734.0 *2*	
9112.26 *28*	(1/2,3/2,5/2$^+$)	0.30 eV *5*	746.2 *2*	
9133.86 *28*	3/2	0.40 eV *7*	768.4 *2*	
9137.65 *28*	3/2	0.49 eV *8*	772.3 *2*	
9147.18 *28*		0.062 eV *12*	782.1 *2*	
9170.04 *28*		0.078 eV *16*	805.6 *2*	ωγ=0.11 eV from 1968Hy01.
9170.92 *28*		0.078 eV *16*	806.5 *2*	E(level): Doublet of 9170.04 and 9170.92.
9187.55 *28*	(1/2$^+$,3/2,5/2$^+$)	0.043 eV *9*	823.6 *2*	
9194[@] *3*		0.22 eV	830 *2*	
9203.31 *28*	3/2$^+$,5/2$^+$	0.014 eV *5*	839.8 *2*	
9208.76 *28*	3/2,5/2$^+$	0.014 eV *5*	845.4 *2*	
9215.37 *28*	3/2	0.11 eV *2*	852.2 *2*	
9220.92 *28*	1/2	0.83 eV *13*	857.9 *2*	
9234.63 *28*	(1/2$^+$,3/2,5/2$^+$)	0.85 eV *14*	872.0 *2*	
9260.51 *28*	(3/2,5/2$^+$)	0.81 eV *16*	898.6 *2*	
9285.21 *28*	1/2	0.22 eV *4*	924.0 *2*	
9293.58 *28*	(3/2$^-$,5/2,7/2$^+$)	0.062 eV *15*	932.6 *2*	
9297.57 *28*	(3/2$^-$,5/2$^+$)	0.25 eV *5*	936.7 *2*	
9300.19 *28*	3/2[d]	2.0 eV *3*	939.4 *2*	
9309.83 *28*	(1/2$^+$,3/2,5/2$^+$)	0.26 eV *5*	949.3 *2*	
9326.95 *28*	(1/2$^+$,3/2,5/2$^+$)	1.4 eV *2*	966.9 *2*	
9329.18 *28*	(3/2,5/2)[d]	1.7 eV *3*	969.2 *2*	
9341.15 *28*	(1/2,3/2)[d]	1.6 eV *3*	981.5 *2*	
9355.45 *28*	(3/2$^-$,5/2,7/2$^+$)	0.18 eV *5*	996.2 *2*	
9360.60 *28*		0.19 eV *5*	1001.5 *2*	
9373.25 *28*	5/2	0.9 eV *2*	1014.5 *2*	
9377.63 *28*	(1/2 to 5/2$^+$)	1.5 eV *3*	1019.0 *2*	
9385.41 *28*		0.09 eV *3*	1027.0 *2*	
9386.77 *28*		0.64 eV *14*	1028.4 *2*	
9393.38 *28*	(1/2$^+$,3/2,5/2$^+$)	0.21 eV *5*	1035.2 *2*	
9402.82 *28*		0.11 eV *3*	1044.9 *2*	
9411.87 *28*		0.10 eV *2*	1054.2 *2*	
9434.92 *28*	5/2[d]	3.4 eV *6*	1077.9 *2*	
9435.79 *28*	5/2[d]	3.4 eV *6*	1078.8 *2*	
9436.48 *28*		3.4 eV *6*	1079.5 *2*	
9448.25 *28*	(1/2$^+$,3/2,5/2$^+$)	0.19 eV *4*	1091.6 *2*	
9452.53 *28*	(1/2$^+$,3/2,5/2$^+$)	1.7 eV *3*	1096.0 *2*	
9461.96 *28*	5/2	0.9 eV *2*	1105.7 *2*	
9473.54 *28*	(1/2,3/2,5/2$^+$)	2.0 eV *5*	1117.6 *2*	
9475.97 *28*	3/2[d]	1.8 eV *5*	1120.1 *2*	
9494.65 *28*	(3/2,5/2$^+$)	0.43 eV *9*	1139.3 *2*	
9500.09 *28*	5/2$^+$[b]	5.2 eV *10*	1144.9 *2*	Jπ: 3/2$^{(+)}$ from γ(θ) in 1970Ha41.
9501.16 *28*	(3/2$^-$,5/2,7/2$^+$)	5.2 eV *10*	1146.0 *2*	decay corrected for contributions from E(p)=1144.9.
9509[@] *3*		0.9 eV	1154 *3*	
9518.09 *28*	(1/2,3/2,5/2$^+$)	0.43 eV *8*	1163.4 *2*	
9522.08 *28*		0.72 eV *13*	1167.5 *2*	
9540?[@]		0.5 eV	1186	
9546.69 *28*	(5/2,7/2$^+$)	0.41 eV *7*	1192.8 *2*	
9548.44 *28*		1.03 eV *16*	1194.6 *2*	

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

^{37}Cl Levels (continued)

E(level)†	Jπa	$T_{1/2}$ or ωγe	E_p	E(level)†	Jπa	$T_{1/2}$ or ωγe	E_p
9549.12 *28*			1195.3 *2*	9841.2 *3*		6.0 eV *14*	1495.6 *2*
9563& *2*			1211 *2*	9845.6 *4*	(3/2,5/2)c	0.51 eV *14*	1500.1 *3*
9568& *2*			1215 *2*	9858.6 *4*		0.51 eV *14*	1513.5 *3*
9572.37 *28*	1/2	2.1 eV *3*	1219.2 *2*	9859.7 *4*		1.9 eV *4*	1514.6 *3*
9578?@		2.2 eV	1225	9864‡ *2*	c		1519 *2*
9581.9 *3*		1.4 eV *3*	1229.0 *2*	9868.5 *4*		3.6 eV *8*	1523.6 *3*
9583?@		1.7 eV	1230	9872‡ *2*	c		1527 *2*
9587.7 *3*		0.43 eV *10*	1235.0 *2*	9875.3 *4*		0.56 eV *13*	1530.6 *3*
9592.4 *3*		3.5 eV *8*	1239.8 *2*	9887.6 *4*		0.36 eV *9*	1543.3 *3*
9600?@		0.44 eV	1247	9893.4 *4*		3.2 eV *7*	1549.2 *3*
9613.3 *3*		0.77 eV *17*	1261.3 *2*	9898.2 *4*		1.9 eV *4*	1554.2 *3*
9614.1 *3*		0.77 eV *17*	1262.1 *2*	9904.7 *4*		1.2 eV *3*	1560.8 *3*
9616.5 *3*		0.77 eV *17*	1264.6 *2*	9911.7 *4*		1.2 eV *3*	1568.0 *3*
9620& *2*			1268 *2*	9912.4 *4*		2.1 eV *5*	1568.8 *3*
9622.0 *3*		0.77 eV *17*	1270.2 *2*	9928.5 *4*		0.58 eV *13*	1585.3 *3*
9634.4 *3*		1.3 eV *3*	1283.0 *2*	9932.7 *4*		0.83 eV *19*	1589.6 *3*
9642.5 *3*		1.2 eV *3*	1291.3 *2*	9940.6 *4*		0.67 eV *15*	1597.7 *3*
9643.3 *3*		1.2 eV *3*	1292.1 *2*	9944.7 *4*		1.4 eV *3*	1602.0 *3*
9647.3 *3*		0.21 eV *5*	1296.2 *2*	9949.4 *3*		3.5 eV *8*	1606.8 *2*
9657.6 *4*		0.25 eV *6*	1306.8 *3*	9953.7 *4*		0.17 eV *9*	1611.2 *3*
9659.1 *4*		0.36 eV *11*	1308.4 *3*	9960.3 *3*		7.2 eV *16*	1618.0 *2*
9670.9 *4*		0.21 eV *7*	1320.5 *3*	9974.4 *3*		3.6 eV *8*	1632.5 *2*
9671.3 *4*		0.21 eV *7*	1320.9 *3*	9983.8 *3*		1.1 eV *3*	1642.2 *2*
9698.4 *4*		1.6 eV *4*	1348.8 *3*	9986.3 *3*		1.1 eV *3*	1644.7 *2*
9700.2 *4*		1.3 eV *3*	1350.6 *3*	9987.2 *3*		3.1 eV *7*	1645.7 *2*
9707.4 *4*		0.15 eV *5*	1358.0 *3*	9992.1 *3*		1.8 eV *4*	1650.7 *2*
9712.1 *4*		4.8 eV *11*	1362.8 *3*	9995.6 *3*		1.0 eV *2*	1654.3 *2*
9712.9 *4*		4.8 eV *11*	1363.7 *3*	10001.8 *3*		0.85 eV *19*	1660.7 *2*
9718.8 *4*		0.26 eV *7*	1369.7 *3*	10010.6 *3*		3.0 eV *6*	1669.7 *2*
9722.4 *4*		0.26 eV *7*	1373.4 *3*	10018.2 *3*		0.18 eV *6*	1677.5 *2*
9726.5 *4*		4.6 eV *10*	1377.6 *3*	10025.7 *3*		0.80 eV *18*	1685.2 *2*
9727.8 *4*		4.6 eV *10*	1379.0 *3*	10029.4 *3*		7 eV *2*	1689.0 *2*
9734.8 *4*		1.0 eV *2*	1386.2 *3*	10041.0 *3*		0.7 eV *2*	1701.0 *2*
9744.4 *4*		1.0 eV *2*	1396.1 *3*	10042.8 *3*		0.7 eV *2*	1702.8 *2*
9751.1 *4*		0.50 eV *11*	1402.9 *3*	10049.0 *3*		0.23 eV *7*	1709.2 *2*
9758.2 *4*		0.8 eV *2*	1410.2 *3*	10050.3 *3*		1.8 eV *5*	1710.5 *2*
9764.4 *4*		0.76 eV *19*	1416.6 *3*	10058.8 *3*		0.33 eV *3*	1719.3 *2*
9768.6 *4*	7/2c	8.2 eV *19*	1420.9 *3*	10060.1 *3*		1.0 eV *3*	1720.6 *2*
9772‡ *2*	c		1424 *2*	10068.1 *3*		0.38 eV *10*	1728.8 *2*
9776.0 *4*		0.43 eV *10*	1428.5 *3*	10071.4 *3*		1.9 eV *5*	1732.2 *2*
9777.9 *4*		0.85 eV *19*	1430.5 *3*	10080.7 *3*	(3/2,5/2)c	0.9 eV *2*	1741.8 *2*
9781.3 *4*		0.61 eV *14*	1434.0 *3*	10084.8 *3*		0.14 eV *5*	1746.0 *2*
9784‡ *2*	c		1437 *2*	10086.2 *3*		1.2 eV *3*	1747.4 *2*
9796@ *3*		0.82 eV	1449 *3*	10091.9 *3*		0.56 eV *14*	1753.3 *2*
9803.7 *4*		1.1 eV *3*	1457.0 *3*	10096.4 *3*		3.4 eV *8*	1757.9 *2*
9807.5 *4*		0.9 eV *2*	1460.9 *3*	10103.6 *4*		0.4 eV *2*	1765.3 *3*
9809.9 *4*		1.2 eV *3*	1463.4 *3*	10105.4 *3*		6.8 eV *15*	1767.2 *2*
9812.7 *4*		3.3 eV *7*	1466.3 *3*	10109.0 *3*		3.7 eV *8*	1770.9 *2*
9815.4 *4*	(1/2 to 5/2)c	7.3 eV *16*	1469.0 *3*	10116‡ *3*	c		1778 *3*
9818@ *3*		6.3 eV	1471 *3*	10123‡ *3*	c		1785 *3*
9822.3 *4*		0.81 eV *19*	1476.1 *3*	10137.1 *3*		0.80 eV *13*	1799.8 *2*
9827.9 *4*		1.1 eV *3*	1481.9 *3*	10139.9 *4*		2.7 eV *6*	1802.6 *3*
9833.5 *4*		0.83 eV *18*	1487.6 *3*	10142.5 *4*		6.2 eV *13*	1805.3 *3*
9838.2 *4*		0.50 eV *12*	1492.5 *3*	10144.0 *4*		6.2 eV *13*	1806.9 *3*

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

^{37}Cl Levels (continued)

E(level)[†]	Jπ[a]	$T_{1/2}$ or ωγ[e]	E_p	Comments
10151.4 *4*		1.6 eV *4*	1814.5 *3*	
10169.3 *4*		3.7 eV *8*	1832.9 *3*	
10174.9 *4*	(1/2 to 5/2$^+$)	1.1 eV *2*	1838.6 *3*	
10179.6 *4*		1.02 eV *17*	1843.4 *3*	
10183.2 *4*	7/2[c]	10.0 eV *16*	1847.1 *3*	
10184.5 *4*	(1/2$^+$,3/2,5/2$^+$)	10.0 eV *16*	1848.5 *3*	
10190.9 *4*	(3/2,5/2$^+$)	2.0 eV *3*	1855.1 *3*	
10197.3 *4*		1.6 eV *3*	1861.6 *3*	
10200.7 *4*		3.5 eV *6*	1865.1 *3*	
10201.3 *4*			1865.8 *3*	
10207.8 *4*	3/2	1.9 eV *3*	1872.4 *3*	
10212.4 *4*		1.6 eV *3*	1877.2 *3*	
10217.7 *4*		4.2 eV *7*	1882.6 *3*	
10220.6 *4*	(3/2$^-$,5/2$^+$)	2.3 eV *4*	1885.6 *3*	
10221.9 *4*	7/2$^-$[d]	32 eV *3*	1886.9 *3*	T=5/2 Γ=35 eV *8*, Γ_p=23 eV *5*, Γ_γ=12 eV *5* (1975Ke01). Γ=12.1 eV *25*, Γ_p=7.9 eV *15*, Γ_γ=4.2 eV *15* (1975Ke01). Γ_p=13.3 eV *26*, Γ_γ=6.25 *13* (2002Vo17). ωγ=130 eV *20* from 1968Hy01, 59 eV *9* from 1970Ha41, 22 eV *3* from 1975Ke11, 31 eV *3* from 2002Vo17. decay corrected for contributions from E(p)=1885.6.
10225.8 *4*	(3/2$^-$,5/2,7/2$^+$)	2.5 eV *4*	1890.9 *3*	decay corrected for contributions from E(p)=1886.9.
10227.6 *4*	(3/2$^-$,5/2$^+$)	2.7 eV *4*	1892.8 *3*	decay corrected for contributions from E(p)=1890.9.
10233.6 *4*	(1/2$^+$,3/2,5/2$^+$)	0.29 eV *7*	1899.0 *3*	
10236.1 *4*	7/2	6.9 eV *11*	1901.5 *3*	
10247.5 *4*		0.88 eV *15*	1913.3 *3*	
10251.3 *4*		1.5 eV *3*	1917.2 *3*	
10255.3 *4*	(3/2,5/2)[c]	1.9 eV *3*	1921.3 *3*	
10258.2 *4*	(3/2$^-$,5/2,7/2$^+$)	5.2 eV *8*	1924.3 *3*	
10262.7 *4*	(3/2$^-$,5/2,7/2$^+$)	1.3 eV *2*	1928.9 *3*	
10268.5 *4*	1/2	4.0 eV *6*	1934.8 *3*	
10273.2 *4*	3/2	3.2 eV *5*	1939.7 *3*	
10275.3 *4*	7/2$^-$	4.7 eV *8*	1941.8 *3*	decay corrected for contributions from E(p)=1939.7.
10285.8 *4*	(1/2$^+$,3/2,5/2$^+$)	1.6 eV *3*	1952.6 *3*	
10289.8 *4*		0.23 eV *5*	1956.7 *3*	
10292.7 *4*		0.36 eV *7*	1959.7 *3*	
10294.5 *4*	3/2	4.2 eV *7*	1961.6 *3*	
10296.9 *4*	(5/2$^-$,7/2$^+$)	1.3 eV *2*	1964.0 *3*	decay corrected for contributions from E(p)=1961.6.
10305.2 *4*	(1/2,3/2,5/2$^+$)	0.83 eV *16*	1972.6 *3*	
10308.1 *4*		0.21 eV *6*	1975.5 *3*	
10312.3 *4*	3/2$^+$,5/2$^+$[c]	1.01 eV *19*	1979.9 *3*	
10314.5 *4*	(1/2$^+$,3/2,5/2$^+$)	5.9 eV *9*	1982.1 *3*	
10318.3 *4*		3.7 eV *6*	1986.0 *3*	E(level): multiplet.
10322 *3*			1990 *3*	
10346[‡] *3*	(3/2,5/2)[c]		2014 *3*	
10361[‡] *3*	[c]		2030 *3*	
10369[‡] *3*	[c]	9.3 eV *9*	2038 *3*	ωγ normalized to 32 eV *3* at E_p=1887 (2008Ka10). ωγ=40 eV *2* from 1998Ka52.
10392[‡] *3*	[c]		2061 *3*	
10413[‡] *3*	(3/2,5/2)[c]	23.2 eV *9*	2083 *3*	ωγ normalized to 32 eV *3* at E_p=1887 (2008Ka10). ωγ=20 eV *2* from 1998Ka52.
10424[#] *3*			2095 *3*	
10454[#] *3*		21.7 eV *9*	2126 *3*	ωγ normalized to 32 eV *3* at E_p=1887 (2008Ka10). ωγ=23 eV *3* from 1998Ka52.

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

^{37}Cl Levels (continued)

E(level)[†]	$T_{1/2}$ or $\omega\gamma$[e]	E_p	Comments
10459[#] *3*		2131 *3*	
10489[#] *3*		2162 *3*	
10494[#] *3*	14.5 eV *6*	2167 *3*	$\omega\gamma$ normalized to 32 eV *3* at E_p=1887 (2008Ka10). $\omega\gamma$=23 eV *3* from 1998Ka52.
10497[#] *3*		2170 *3*	
10514[#] *3*		2187 *3*	
10522[#] *3*		2195 *3*	
10528[#] *3*		2202 *3*	
10532[#] *3*		2206 *3*	
10539[#] *3*		2213 *3*	
10556[#] *3*	11.8 eV *13*	2230 *3*	$\omega\gamma$ normalized to 32 eV *3* at E_p=1887 (2008Ka10). $\omega\gamma$=22 eV *2* from 1998Ka52.
10559[#] *3*		2233 *3*	
10564[#] *3*		2239 *3*	
10567[#] *3*		2242 *3*	
10575[#] *3*		2250 *3*	
10587[#] *3*		2262 *3*	
10593[#] *3*		2268 *3*	
10598[#] *3*		2274 *3*	
10713	13.6 eV *8*	2392	E(level): from 1998Ka52 and 2008Ka10. $\omega\gamma$ normalized to 32 eV *3* at E_p=1887 (2008Ka10). $\omega\gamma$=27 eV *3* from 1998Ka52.
10748	18.8 eV *12*	2428	E(level): from 1998Ka52 and 2008Ka10. $\omega\gamma$ normalized to 32 eV *3* at E_p=1887 (2008Ka10). $\omega\gamma$=19 keV *2* from 1998Ka52.
10778	25.7 eV *48*	2459	E(level): from 1998Ka52 and 2008Ka10. $\omega\gamma$ normalized to 32 eV *3* at E_p=1887 (2008Ka10). $\omega\gamma$=25 eV *3* from 1998Ka52.

[†] From $E_x=E_{cm}+S(p)$ for unbound states, where E_{cm} is deduced from E_p and S(p)=8386.39 *19* for ^{37}Cl (2011AuZZ). E_p from 1984No05, unless otherwise noted. E_x for bound states from Eγ's in 1984No05, unless otherwise noted.
[‡] From 1966Ko23.
[#] From 1967Ie02.
[@] From 1968Hy01 (including resonance strength).
[&] From 1973Pi10.
[a] From the comparison of experimental angular distributions of γ-rays with theoretical predictions and/or RUL's of γ-feeding and γ-decay. Primarily from 1984No06, unless otherwise noted.
[b] From Adopted Levels.
[c] From γ(θ) in 1966Ko23.
[d] From γ(θ) in 1968Hy01.
[e] From measurements using Doppler Shift Attenuation Method (DSAM), primarily from 1984No06, unless otherwise noted.

^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

$\gamma(^{37}Cl)$

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	δ	Comments
1726.58	1/2	1726.5	100	0	$3/2^+$			A_2=−0.06 *9*, A_4=−0.02 *11* (1970Ha41).
3086.12	5/2	1359.5	<0.5	1726.58	1/2			
		3086.0	100	0	$3/2^+$	D+Q	+0.74 *2*	Mult.,δ: or +2.7 *1*; A_2=+0.53 *1* At E(p)=1940.
3103.59	$7/2^-$	1377.0	<0.1	1726.58	1/2			
		3103.5	100	0	$3/2^+$	M2+E3[#]	+0.18[#] *1*	pol=−0.90 *27* (1968Hy01).
3626.82	$3/2^{(+)}$	523.2	<0.5	3103.59	$7/2^-$			
		540.7	<1	3086.12	5/2			
		1900.2	43 *2*	1726.58	1/2	D(+Q)	+0.033 *10*	Mult.,δ: or +3.5 *11*; A_2=−0.32 *1* At E(p)=1105.
		3626.6	57 *2*	0	$3/2^+$	D(+Q)	+0.018 *10*	Mult.,δ: or +3.6 *2*; A_2=+0.33 *1* At E(p)=1105.
3707.79	$3/2^+$	604.2	<1	3103.59	$7/2^-$			
		621.7	10 *1*	3086.12	5/2	D(+Q)	+0.19 *16*	Mult.,δ: A_2=−0.06 *3* At E(p)=1872.
		1981.2	17 *3*	1726.58	1/2	D+Q	+1.1 *4*	Mult.,δ: or +6 *4*; A_2=+0.16 *3* At E(p)=1872.
		3707.6	73 *3*	0	$3/2^+$	D+Q	−0.45 *4*	Mult.,δ: or +5.8 *11*; A_2=−0.19 *3* 1 At E(p)=1015.
3741.05	5/2	637.5	<1	3103.59	$7/2^-$			
		654.9	<1	3086.12	5/2			
		2014.4	<1	1726.58	1/2			
		3740.8	100	0	$3/2^+$	D(+Q)	+0.024 *16*	Mult.,δ: A_2=−0.22 *2* At E(p)=1015.
4011.3		384.5	<3	3626.82	$3/2^{(+)}$			
		907.7	64 *6*	3103.59	$7/2^-$			
		925.2	<1	3086.12	5/2			
		2284.6	<2	1726.58	1/2			
		4011.1	36 *6*	0	$3/2^+$			
4016.27	3/2	275.2	<1	3741.05	5/2			
		308.5	<1	3707.79	$3/2^+$			
		389.4	<1	3626.82	$3/2^{(+)}$			
		912.7	<1	3103.59	$7/2^-$			
		930.1	48 *3*	3086.12	5/2	D(+Q)	−0.16 *6*	Mult.,δ: A_2=+0.04 *3*, +0.01 *1* At E(p)=699, 1872.
		2289.6	19 *2*	1726.58	1/2	D+Q	−0.20 *12*	Mult.,δ: or −1.1 *3*; A_2=−0.15 *3* At E(p)=1872.
		4016.0	33 *3*	0	$3/2^+$	D+Q	−0.49 *12*	Mult.,δ: or −5 *3*; A_2=−0.06 *2* At E(p)=1872.
4176.64	$3/2^{(-)}$	435.6	2 *1*	3741.05	5/2			
		468.8	<2	3707.79	$3/2^+$			
		549.8	26 *2*	3626.82	$3/2^{(+)}$	D(+Q)	+0.01 *3*	Mult.,δ: or +3.5 *4*; A_2=+0.09 *4*, −0.01 *4*,+0.11 *4* At E(p)=678,1105,1872.
		1073.0	9 *2*	3103.59	$7/2^-$	Q(+O)	+0.06 *12*	Mult.,δ: A_2=+0.09 *10*, +0.04 *13*, −0.01 *10* At E(p)=678,1105,1872.
		1090.5	21 *2*	3086.12	5/2	D(+Q)	−0.03 *5*	Mult.,δ: A_2=+0 *5*, −0.06 *5*, −0.13 *7* At E(p)=678,1105,1872.
		2450.0	<4	1726.58	1/2			
		4176.4	42 *2*	0	$3/2^+$	D+Q	+0.13 *20*	Mult.,δ: or +2.5 *12*; A_2=+0.09 *6*,+0.26 *10*,+0.15 *7* At E(p)=678,1105,1872.
4268.87	1/2	527.8	<1	3741.05	5/2			
		561.1	<2	3707.79	$3/2^+$			
		642.0	<2	3626.82	$3/2^{(+)}$			
		1165.3	<1	3103.59	$7/2^-$			
		1182.7	<1	3086.12	5/2			
		2542.2	100	1726.58	1/2	D		Mult.: A_2=−0.03 *4*, +0.01 *7*, +0.01 *4* At E(p)=772,852,1940.
		4268.6	<3	0	$3/2^+$			
4272.52	$7/2^-$	531.5	2 *1*	3741.05	5/2			
		564.7	<1	3707.79	$3/2^+$			
		645.7	<1	3626.82	$3/2^{(+)}$			
		1168.9	95 *1*	3103.59	$7/2^-$	D+Q	−0.06 *2*	Mult.,δ: A_2=+0.35 *2* At E(p)=1015.
		1186.4	3 *1*	3086.12	5/2			

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ †	I_γ ‡	E_f	J_f^π	Mult.	δ	Comments
4272.52	7/2$^-$	2545.8	<2	1726.58	1/2			
		4272.3	<2	0	3/2$^+$			
4396.3	5/2	655.2	2 *1*	3741.05	5/2			
		688.5	<2	3707.79	3/2$^+$			
		769.5	<2	3626.82	3/2$^{(+)}$			
		1292.7	<2	3103.59	7/2$^-$			
		1310.2	<2	3086.12	5/2			
		2669.6	<3	1726.58	1/2			
		4396.0	98 *1*	0	3/2$^+$	D(+Q)	+0.04 *3*	Mult.,δ: A_2=−0.21 *6*, +0.10 *30*, −0.11 *6*, −031 *4* At E(p)=699,1105,1872,1942.
4459.97	7/2$^-$	718.9	<1	3741.05	5/2			
		752.2	<1	3707.79	3/2$^+$			
		833.1	<1	3626.82	3/2$^{(+)}$			
		1356.4	57 *1*	3103.59	7/2$^-$	D+Q	−0.16 *3*	Mult.,δ: or −1.27 *8*; A_2=+0.31 *2*, A_4=−0.06 *3* At E(p)=1015 also δ=−0.16 *4* or +1.26 *10*; A_2=+0.28 *3* At E(p)=1105.
		1373.8	43 *1*	3086.12	5/2	D(+Q)	+0.02 *2*	Mult.,δ: A_2=−0.30 *3*, −0.22 *3* At E(p)=1015,1105.
		2733.3	<4	1726.58	1/2			
		4459.7	<4	0	3/2$^+$			
4801.21	5/2$^+$	1060.1	<2	3741.05	5/2			
		1093.4	<2	3707.79	3/2$^+$			
		1174.4	<2	3626.82	3/2$^{(+)}$			
		1697.6	<2	3103.59	7/2$^-$			
		1715.0	<1	3086.12	5/2			
		3074.5	<2	1726.58	1/2			
		4800.9	100	0	3/2$^+$	D+Q	−0.236 *14*	Mult.,δ: A_2=−0.53 *2* At E(p)=1015.
4810.9	7/2	1069.8	21 *3*	3741.05	5/2	D(+Q)	+0.03 *2*	Mult.,δ: A_2=−0.22 *2* At E(p)=1902.
		1103.1	<1	3707.79	3/2$^+$			
		1184.1	<1	3626.82	3/2$^{(+)}$			
		1707.3	79 *3*	3103.59	7/2$^-$	D(+Q)	−0.03 *2*	Mult.,δ: A_2=+0.34 *1* At E(p)=1902.
		1724.7	<1	3086.12	5/2			
		3084.2	<1	1726.58	1/2			
		4810.6	<10	0	3/2$^+$			
4837.61	5/2	1096.5	<1	3741.05	5/2			
		1129.8	<1	3707.79	3/2$^+$			
		1210.8	<1	3626.82	3/2$^{(+)}$			
		1734.0	5 *2*	3103.59	7/2$^-$			
		1751.4	23 *3*	3086.12	5/2			
		3110.9	<1	1726.58	1/2			
		4837.3	72 *4*	0	3/2$^+$	D+Q	+0.047 *13*	Mult.,δ: A_2=+0.20 *2* At E(p)=1015.
4853.96	3/2	1112.9	8 *1*	3741.05	5/2			
		1146.2	<3	3707.79	3/2$^+$			
		1227.1	20 *2*	3626.82	3/2$^{(+)}$			
		1750.3	<5	3103.59	7/2$^-$			
		1767.8	17 *2*	3086.12	5/2			
		3127.2	32 *9*	1726.58	1/2	D(+Q)	0.00 *8*	Mult.,δ: A_2=−0.38 *11* At E(p)=1015.
		4853.6	23 *6*	0	3/2$^+$			
4904.2	7/2$^+$	1163.1	<3	3741.05	5/2			
		1196.4	<3	3707.79	3/2$^+$			
		1277.4	<3	3626.82	3/2$^{(+)}$			
		1800.6	<4	3103.59	7/2$^-$			
		1818.0	20 *7*	3086.12	5/2	D(+Q)	+0.03 *5*	Mult.,δ: A_2=−0.23 *7* At E(p)=1942.
		3177.5	<8	1726.58	1/2			
		4903.9	80 *7*	0	3/2$^+$	Q(+O)	+0.04 *5*	Mult.,δ: A_2=+0.52 *8*, A_4=+0.19 *7* At E(p)=1015.
4960.8	3/2	1219.7	<4	3741.05	5/2			

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

$\gamma(^{37}Cl)$ (continued)

E_i(level)	J_i^π	E_γ †	I_γ ‡	E_f	J_f^π	Comments
4960.8	3/2	1253.0	<2	3707.79	$3/2^+$	
		1334.0	<2	3626.82	$3/2^{(+)}$	
		1857.2	<3	3103.59	$7/2^-$	
		1874.6	85 *5*	3086.12	5/2	
		3234.1	<5	1726.58	1/2	
		4960.4	15 *5*	0	$3/2^+$	
5009.3		1268.2	<2	3741.05	5/2	
		1301.5	<2	3707.79	$3/2^+$	
		1382.5	<2	3626.82	$3/2^{(+)}$	
		1905.7	<3	3103.59	$7/2^-$	
		1923.1	<3	3086.12	5/2	
		3282.6	<5	1726.58	1/2	
		5008.9	100	0	$3/2^+$	Mult.,δ: A_2=+0.07 *7* At E(p)=1940.
5055.2		1314.1	<3	3741.05	5/2	
		1347.4	<3	3707.79	$3/2^+$	
		1428.4	<10	3626.82	$3/2^{(+)}$	
		1951.6	<5	3103.59	$7/2^-$	
		1969.0	<10	3086.12	5/2	
		3328.5	30 *8*	1726.58	1/2	
		5054.8	70 *8*	0	$3/2^+$	
5059.1		1318.0	<5	3741.05	5/2	
		1351.3	<5	3707.79	$3/2^+$	
		1432.3	10 *5*	3626.82	$3/2^{(+)}$	
		1955.5	15 *5*	3103.59	$7/2^-$	
		1972.9	20 *5*	3086.12	5/2	
		3332.4	<5	1726.58	1/2	
		5058.7	55 *8*	0	$3/2^+$	
5228.7		1487.6	<4	3741.05	5/2	
		1520.9	<4	3707.79	$3/2^+$	
		1601.8	10 *3*	3626.82	$3/2^{(+)}$	
		2125.0	<4	3103.59	$7/2^-$	
		2142.5	<4	3086.12	5/2	
		3501.9	<7	1726.58	1/2	
		5228.3	90 *3*	0	$3/2^+$	
5282.5		3555.7	100 @	1726.58	1/2	
5307.4		1566.3	<10	3741.05	5/2	
		1599.6	<10	3707.79	$3/2^+$	
		1680.5	<10	3626.82	$3/2^{(+)}$	
		2203.7	<10	3103.59	$7/2^-$	
		2221.2	50 *10*	3086.12	5/2	
		3580.6	25 *7*	1726.58	1/2	
		5307.0	25 *7*	0	$3/2^+$	
5317.1		1576.0	30 *7*	3741.05	5/2	
		1609.3	<2	3707.79	$3/2^+$	
		1690.2	<4	3626.82	$3/2^{(+)}$	
		2213.4	<3	3103.59	$7/2^-$	
		2230.9	45 *10*	3086.12	5/2	
		3590.3	<3	1726.58	1/2	
		5316.7	25 *7*	0	$3/2^+$	
5372.5		x	20			
		1631.4	40 *5*	3741.05	5/2	
		1664.7	<8	3707.79	$3/2^+$	
		1745.6	<6	3626.82	$3/2^{(+)}$	
		2268.8	<6	3103.59	$7/2^-$	
		2286.3	<6	3086.12	5/2	

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	δ	Comments
5372.5		3645.7	40 *5*	1726.58	1/2			
		5372.1	<15	0	$3/2^+$			
5490.68	$5/2^+$	x	15					
		1749.6	<5	3741.05	5/2			
		1782.8	30 *9*	3707.79	$3/2^+$	D+Q	+0.09 *5*	Mult.,δ: or −7 *2*; A_2=−0.12 *8* At E(p)=1015.
		1863.8	<10	3626.82	$3/2^{(+)}$			
		2387.0	20 *5*	3103.59	$7/2^-$	D+Q	−0.71 *15*	Mult.,δ: or<−6; A_2=−0.16 *6* At E(p)=1015.
		2404.5	20 *5*	3086.12	5/2			
		3763.9	<5	1726.58	1/2			
		5490.2	15 *5*	0	$3/2^+$			
5528.4	9/2	x	20					
		1517.1	80 *10*	4011.3		D(+Q)	−0.04 *4*	Mult.,δ: or −0.5 *6*; A_2=+0.44 *2* At E(p)=1902.
		1787.3	<10	3741.05	5/2			
		1820.6	<20	3707.79	$3/2^+$			
		1901.5	<10	3626.82	$3/2^{(+)}$			
		2424.7	<10	3103.59	$7/2^-$			
		2442.2	<10	3086.12	5/2			
		3801.6	<15	1726.58	1/2			
		5528.0	<5	0	$3/2^+$			
5570.1		1110.1	9 *2*	4459.97	$7/2^-$			
		1829.0	9 *2*	3741.05	5/2			
		1862.3	<2	3707.79	$3/2^+$			
		1943.2	<2	3626.82	$3/2^{(+)}$			
		2466.4	75 *2*	3103.59	$7/2^-$			
		2483.9	7 *2*	3086.12	5/2			
		3843.3	<6	1726.58	1/2			
		5569.6	<2	0	$3/2^+$			
5617.9		1876.8	12 *5*	3741.05	5/2			
		1910.1	<4	3707.79	$3/2^+$			
		1991.0	<4	3626.82	$3/2^{(+)}$			
		2514.2	<4	3103.59	$7/2^-$			
		2531.7	<4	3086.12	5/2			
		3891.1	<5	1726.58	1/2			
		5617.4	88 *5*	0	$3/2^+$			
5645.3	$3/2^+$,$5/2^+$	x	15					
		1904.2	<6	3741.05	5/2			
		1937.5	15 *5*	3707.79	$3/2^+$			
		2018.4	<5	3626.82	$3/2^{(+)}$			
		2541.6	<15	3103.59	$7/2^-$			
		2559.1	70 *10*	3086.12	5/2			Mult.,δ: A_2=−0.11 *5* At E(p)=1872.
		3918.5	<8	1726.58	1/2			
		5644.8	<10	0	$3/2^+$			
5700.9	$9/2^-$	x	25					
		1154.9	25 *5*	4546		D(+Q)	+0.03 *6*	Mult.,δ: A_2=−0.20 *8* At E(p)=1942.
		1240.9	30 *5*	4459.97	$7/2^-$	D(+Q)	−0.01 *3*	Mult.,δ: A_2=−0.27 *7* At E(p)=1942.
		1428.4	20 *5*	4272.52	$7/2^-$			
		1959.8	<10	3741.05	5/2			
		2074.0	<5	3626.82	$3/2^{(+)}$			
		2597.2	<10	3103.59	$7/2^-$			
		2614.7	<10	3086.12	5/2			
		3974.1	<5	1726.58	1/2			
		5700.4	<10	0	$3/2^+$			
5726.3	$7/2^-$	x	30					
		1715.0	10 *5*	4011.3		D(+Q)	−0.09 *12*	Mult.,δ: A_2=−0.02 *15* At E(p)=1902.
		1985.2	60 *5*	3741.05	5/2	D+Q	+0.30 *6*	Mult.,δ: A_2=+0.18 *8* At E(p)=1902.
		2018.5	<4	3707.79	$3/2^+$			

Continued on next page (footnotes at end of table)

^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	δ	Comments
5726.3	7/2$^-$	2099.4	<5	3626.82	3/2$^{(+)}$			
		2622.6	<5	3103.59	7/2$^-$			
		2640.1	<5	3086.12	5/2			
		3999.5	<5	1726.58	1/2			
		5725.8	<8	0	3/2$^+$			
5909.3		2805.6	40 *10*	3103.59	7/2$^-$			
		2823.1	60 *10*	3086.12	5/2			
5915.0		2173.9	10 *5*	3741.05	5/2			
		4188.2	30 *5*	1726.58	1/2			
		5914.5	60 *5*	0	3/2$^+$			
5944		x	30					
		5943.5	70 *10*	0	3/2$^+$			
5978		2351.1	20 *10*	3626.82	3/2$^{(+)}$			
		2891.8	20 *10*	3086.12	5/2			
		5977.5	60 *10*	0	3/2$^+$			
5985.9		x	20					
		2278.0	25 *5*	3707.79	3/2$^+$			
		2899.7	40 *7*	3086.12	5/2			
		5985.4	15 *5*	0	3/2$^+$			
6015.3	(3/2,5/2)	x	12					
		2274.2	25 *5*	3741.05	5/2			
		2388.4	35 *5*	3626.82	3/2$^{(+)}$			
		2929.1	8 *3*	3086.12	5/2			
		6014.8	20 *5*	0	3/2$^+$			
6042.2		2415.3	70 *10*	3626.82	3/2$^{(+)}$			
		6041.7	30 *10*	0	3/2$^+$			
6305.1		x	10					
		4578.2	20 *10*	1726.58	1/2			
		6304.5	70 *10*	0	3/2$^+$			
6323.8		x	30					
		2582.7	35 *5*	3741.05	5/2			
		3237.5	<15	3086.12	5/2			
		6323.2	35 *5*	0	3/2$^+$			
6358		x	40					
		2731.1	30 *10*	3626.82	3/2$^{(+)}$			
		3271.7	30 *10*	3086.12	5/2			
6372		x	30					
		6371.4	70 *5*	0	3/2$^+$			
6415		2146.1	35 *10*	4268.87	1/2			
		2707.1	25 *10*	3707.79	3/2$^+$			
		2788.1	40 *10*	3626.82	3/2$^{(+)}$			
6488.3		x	30					
		6487.7	70 *20*	0	3/2$^+$			
6668.9		x	25					
		6668.3	75 *10*	0	3/2$^+$			
6701.8	5/2	x	30					
		2241.8	40 *5*	4459.97	7/2$^-$	D(+Q)	+0.09 *10*	Mult.,δ: A_2=−0.18 *10* At E(p)=1015.
		6701.1	30 *5*	0	3/2$^+$	D(+Q)	−0.01 *5*	Mult.,δ: A_2=−0.27 *10* At E(p)=1015.
6732		x	30					
		6731.3	70 *10*	0	3/2$^+$			
7079.4		7078.7	100	0	3/2$^+$			
7150		x	30					
		7149.3	70 *10*	0	3/2$^+$			
7224.4	(5/2,3/2$^+$)	x	15					
		5497.4	30 *15*	1726.58	1/2			
		7223.6	55 *15*	0	3/2$^+$			Mult.,δ: A_2=−0.36 *14* At E(p)=1015.

Continued on next page (footnotes at end of table)

^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ †	I_γ ‡	E_f	J_f^π	Mult.	δ	Comments
7254.5		x	20					
		7253.7	80 *10*	0	$3/2^+$			
7300		x	20					
		5573.0	20 *10*	1726.58	1/2			
		7299.2	60 *10*	0	$3/2^+$			
7686.8		x	40					
		7685.9	60 *10*	0	$3/2^+$			Mult.,δ: A_2=+0.01 *13* At E(p)=1015.
8884.5	(1/2,3/2,5/2$^+$)	x	30					
		7157.2	45	1726.58	1/2			
		8883.4	25	0	$3/2^+$			
8928.8		x	25					
		5842.2	30	3086.12	5/2			
		8927.6	45	0	$3/2^+$			
8938.2		x	15					
		3977.2	5	4960.8	3/2			
		5311.0	15	3626.82	$3/2^{(+)}$			
		8937.0	65	0	$3/2^+$			
8987.85		5360.6	20	3626.82	$3/2^{(+)}$			
		8986.7	80	0	$3/2^+$			
9027.15	(3/2,5/2$^+$)	x	10					
		3381.7	2	5645.3	$3/2^+$,$5/2^+$			
		4850.2	4	4176.64	$3/2^{(-)}$			
		5010.5	5	4016.27	3/2			
		5285.7	10	3741.05	5/2			
		5318.9	8	3707.79	$3/2^+$			
		5940.5	12	3086.12	5/2			
		7299.8	5	1726.58	1/2			
		9026.0	44	0	$3/2^+$			
9046.31	3/2	x	15					
		3400.8	2	5645.3	$3/2^+$,$5/2^+$			
		4036.8	5	5009.3				
		4649.7	3	4396.3	5/2			
		4869.3	7	4176.64	$3/2^{(-)}$	D(+Q)	0.00 *2*	Mult.,δ: or +3.8 *3*; A_2=+0.39 *3*.
		5304.9	3	3741.05	5/2			
		5338.1	6	3707.79	$3/2^+$	D(+Q)	−0.02 *7*	Mult.,δ: or +4.3 *14*; A_2=+0.35 *10*;
		5419.1	5	3626.82	$3/2^{(+)}$	D+Q	+0.23 *5*	Mult.,δ: or +2.0 *14*; A_2=+0.68 *9*.
		9045.1	54	0	$3/2^+$	D+Q	+0.08 *2*	Mult.,δ: or +2.87 *17*; A_2=+0.52 *5*.
9066.06	3/2	x	8					
		3837.1	1	5228.7				
		4211.8	1	4853.96	3/2			
		4228.2	1	4837.61	5/2			
		4264.6	3	4801.21	$5/2^+$			
		4669.4	2	4396.3	5/2	D+Q	−0.17 *5*	Mult.,δ: A_2=+0.09 *4*.
		5049.4	2	4016.27	3/2	D(+Q)	0.00 *5*	Mult.,δ: or +3.9 *8*; A_2=+0.38 *7*.
		5324.6	5	3741.05	5/2			
		5357.9	8	3707.79	$3/2^+$			
		5438.8	9	3626.82	$3/2^{(+)}$			
		5979.4	7	3086.12	5/2	D(+Q)	+0.02 *2*	Mult.,δ: or −5.2 *5*; A_2=−0.12 *2*.
		7338.7	3	1726.58	1/2			
		9064.9	50	0	$3/2^+$	D+Q	+0.042 *8*	Mult.,δ: or +3.3 *1*; A_2=+0.44 *1*.
9100.39	(1/2,3/2,5/2$^+$)	x	10					
		2431.4	1	6668.9				
		2742.3	2	6358				
		3482.3	1	5617.9				
		4090.8	2	5009.3				
		4831.2	2	4268.87	1/2			

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	δ	Comments
9100.39	(1/2,3/2,5/2$^+$)	5083.7	11	4016.27	3/2			
		5392.2	1	3707.79	3/2$^+$			
		7373.0	4	1726.58	1/2			
		9099.2	66	0	3/2$^+$			
9112.26	(1/2,3/2,5/2$^+$)	x	10					
		2788.3	2	6323.8				
		3883.3	1	5228.7				
		4056.8	3	5055.2				
		4258.0	2	4853.96	3/2			
		4843.0	2	4268.87	1/2			
		4935.3	11	4176.64	3/2$^{(-)}$			
		5095.6	3	4016.27	3/2			
		5485.0	1	3626.82	3/2$^{(+)}$			
		7384.9	8	1726.58	1/2			
		9111.1	57	0	3/2$^+$			
9133.86	3/2	x	5					
		2718.8	8	6415				
		3643.0	8	5490.68	5/2$^+$			
		3761.2	2	5372.5				
		4124.3	7	5009.3				
		4279.6	6	4853.96	3/2	D(+Q)	+0.01 *4*	Mult.,δ: or +3.7 *6*; A_2=+0.41 *6*.
		4864.6	1	4268.87	1/2			
		5392.4	11	3741.05	5/2	D(+Q)	+0.07 *5*	Mult.,δ: A_2=−0.18 *5*.
		5425.6	2	3707.79	3/2$^+$			
		5506.6	3	3626.82	3/2$^{(+)}$			
		6047.2	10	3086.12	5/2	D(+Q)	−0.04 *4*	Mult.,δ: or −3.9 *7*; A_2=−0.06 *4*.
		7406.5	2	1726.58	1/2			
		9132.6	35	0	3/2$^+$	D(+Q)	+0.03 *2*	Mult.,δ: or +3.4 *3*; A_2=+0.44 *3*.
9137.65	3/2	x	10					
		3095.3	1	6042.2				
		3228.2	3	5909.3				
		4128.1	1	5009.3				
		4299.8	1	4837.61	5/2			
		4336.2	2	4801.21	5/2$^+$			
		4868.4	9	4268.87	1/2	D(+Q)	−0.01 *2*	Mult.,δ: A_2=−0.52 *3*.
		4960.7	1	4176.64	3/2$^{(-)}$			
		5121.0	1	4016.27	3/2			
		5429.4	4	3707.79	3/2$^+$			
		6051.0	2	3086.12	5/2			
		9136.4	65	0	3/2$^+$	D(+Q)	0.00 *2*	Mult.,δ: or +4.1 *4*; A_2=+0.37 *2*.
9147.18		x	8					
		9146.0	92	0	3/2$^+$			
9170.92		x	10					
		4774.3	2	4396.3	5/2			
		4901.7	2	4268.87	1/2			
		5154.3	2	4016.27	3/2			
		6084.3	2	3086.12	5/2			
		7443.5	10	1726.58	1/2			
		9169.7	72	0	3/2$^+$			
9187.55	(1/2$^+$,3/2,5/2$^+$)	x	14					
		2518.6	8	6668.9				
		2815.4	4	6372				
		3272.4	6	5915.0				
		3569.5	8	5617.9				
		3814.8	6	5372.5				
		3879.9	6	5307.4				

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	δ	Comments
9187.55	(1/2$^+$,3/2,5/2$^+$)	4128.2	2	5059.1				
		5010.5	6	4176.64	3/2$^{(-)}$			
		5170.9	7	4016.27	3/2			
		5479.3	5	3707.79	3/2$^+$			
		5560.3	2	3626.82	3/2$^{(+)}$			
		6100.9	4	3086.12	5/2			
		7460.2	11	1726.58	1/2			
		9186.3	11	0	3/2$^+$			
9203.31	3/2$^+$,5/2$^+$	x	8					
		4242.2	8	4960.8	3/2			
		4934.1	5	4268.87	1/2			
		5461.8	11	3741.05	5/2			
		5495.1	4	3707.79	3/2$^+$			
		6116.6	9	3086.12	5/2			
		7475.9	6	1726.58	1/2			
		9202.1	49	0	3/2$^+$			
9215.37	3/2	x	15					
		2546.4	3	6668.9				
		3237.2	5	5978				
		3271.2	2	5944				
		3569.9	1	5645.3	3/2$^+$,5/2$^+$			
		3842.7	4	5372.5				Mult.,δ: A_2=+0.32 *8*.
		3907.7	1	5307.4				
		3986.4	5	5228.7				
		4377.5	2	4837.61	5/2			
		4946.1	8	4268.87	1/2			
		5038.4	2	4176.64	3/2$^{(-)}$	D(+Q)	+0.01 *4*	Mult.,δ: or −1.8 *2*; A_2=−0.43 *5*.
		5198.7	2	4016.27	3/2			
		5473.9	1	3741.05	5/2			
		6128.7	3	3086.12	5/2			
		7488.0	2	1726.58	1/2			
		9214.1	44	0	3/2$^+$	D(+Q)	−0.005 *13*	Mult.,δ: or +4.0 *2*; A_2=+0.38 *2*.
9220.92	1/2	x	2					
		2551.9	1	6668.9				
		3848.2	4	5372.5				
		4211.4	2	5009.3				
		4366.7	4	4853.96	3/2			Mult.,δ: A_2=+0.03 *4*.
		4951.7	3	4268.87	1/2			
		5204.3	4	4016.27	3/2			
		5593.6	7	3626.82	3/2$^{(+)}$			Mult.,δ: A_2=+0.03 *4*.
		6134.3	1	3086.12	5/2			
		7493.5	11	1726.58	1/2			Mult.,δ: A_2=−0.03 *3*.
		9219.7	61	0	3/2$^+$			Mult.,δ: A_2=+0.01 *2*.
9234.63	(1/2$^+$,3/2,5/2$^+$)	x	10					
		4005.7	3	5228.7				
		5057.6	9	4176.64	3/2$^{(-)}$			
		5607.4	6	3626.82	3/2$^{(+)}$			
		6148.0	12	3086.12	5/2			
		7507.2	41	1726.58	1/2			
		9233.4	19	0	3/2$^+$			
9260.51	(3/2,5/2$^+$)	x	18					
		2888.4	1	6372				
		3218.2	1	6042.2				Mult.,δ: A2=+0.04 6 NOTE: in table 2 of 1984No06, this A_2 seems erroneously lsited with a gamma from

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	δ	Comments
								9.29 MeV level (924 keV resonance) to 6.04 MeV level. No such gamma was listed in their 1984No05 paper, from which most data are taken here.
9260.51	(3/2,5/2$^+$)	3274.5	1	5985.9				
		3316.4	1	5944				
		3642.4	2	5617.9				
		4031.6	1	5228.7				
		4205.1	3	5055.2				
		4422.6	3	4837.61	5/2			
		4459.0	1	4801.21	5/2$^+$			
		4863.9	1	4396.3	5/2			
		5083.5	6	4176.64	3/2$^{(-)}$			
		5519.0	3	3741.05	5/2			
		5552.3	7	3707.79	3/2$^+$			
		7533.1	35	1726.58	1/2			
		9259.3	16	0	3/2$^+$			
9285.21	1/2	x	8					
		2980.0	3	6305.1				
		3667.1	3	5617.9				
		3912.5	3	5372.5				
		4056.3	4	5228.7				
		4324.1	3	4960.8	3/2			
		4447.3	3	4837.61	5/2			
		5016.0	4	4268.87	1/2			
		5108.2	2	4176.64	3/2$^{(-)}$			
		5268.5	25	4016.27	3/2			Mult.,δ: A_2=−0.01 *3*.
		5577.0	3	3707.79	3/2$^+$			
		5657.9	16	3626.82	3/2$^{(+)}$			Mult.,δ: A_2=+0.02 *4*.
		7557.8	5	1726.58	1/2			Mult.,δ: A_2=+0.03 *8*.
		9284.0	18	0	3/2$^+$			Mult.,δ: A_2=0.00 *2*.
9293.58	(3/2$^-$,5/2,7/2$^+$)	x	25					
		3920.9	9	5372.5				
		3976.3	10	5317.1				
		5276.9	10	4016.27	3/2			
		5585.3	19	3707.79	3/2$^+$			
		5666.3	12	3626.82	3/2$^{(+)}$			
		6189.4	12	3103.59	7/2$^-$			
		9292.3	3	0	3/2$^+$			
9297.57	(3/2$^-$,5/2$^+$)	x	15					
		2218.1	6	7079.4				
		4837.3	6	4459.97	7/2$^-$			
		5556.1	9	3741.05	5/2			
		5589.3	11	3707.79	3/2$^+$			
		5670.3	11	3626.82	3/2$^{(+)}$			
		6193.4	12	3103.59	7/2$^-$			
		6210.9	3	3086.12	5/2			
		7570.2	4	1726.58	1/2			
		9296.3	23	0	3/2$^+$			
9300.19	3/2	x	15					
		3654.7	2	5645.3	3/2$^+$,5/2$^+$			
		4240.8	3	5059.1				
		4445.9	2	4853.96	3/2			
		4462.3	5	4837.61	5/2			
		6196.0	1	3103.59	7/2$^-$			
		6213.5	14	3086.12	5/2			
		7572.8	14	1726.58	1/2	(D+Q)[#]	+0.11[#] *6*	δ: or −2.2 *5* (1968Hy01).

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	δ	Comments
9300.19	3/2	9298.9	44	0	$3/2^+$	(D+Q)[#]	−0.04[#] *3*	δ: or +5.6 *11* (1968Hy01).
9309.83	$(1/2^+,3/2,5/2^+)$	x	6					
		6223.1	5	3086.12	5/2			
		7582.4	4	1726.58	1/2			
		9308.6	85	0	$3/2^+$			
9326.95	$(1/2^+,3/2,5/2^+)$	x	10					
		2911.8	1	6415				
		3681.5	1	5645.3	$3/2^+,5/2^+$			
		3954.2	3	5372.5				
		4098.0	3	5228.7				
		4267.6	1	5059.1				
		5057.7	1	4268.87	1/2			
		5310.3	1	4016.27	3/2			
		5585.4	1	3741.05	5/2			
		5618.7	1	3707.79	$3/2^+$			
		5699.7	3	3626.82	$3/2^{(+)}$			
		6240.3	1	3086.12	5/2			
		7599.5	72	1726.58	1/2			
		9325.7	1	0	$3/2^+$			δ: δ(Q/D)=+0.08 *3* or −2.1 *2* in 1968Hy01.
9329.18	(3/2,5/2)	x	10					
		3419.7	3	5909.3				
		4021.5	2	5307.4				
		4527.7	2	4801.21	$5/2^+$			
		5056.3	2	4272.52	$7/2^-$			
		5587.7	4	3741.05	5/2			
		5701.9	3	3626.82	$3/2^{(+)}$			
		6225.0	20	3103.59	$7/2^-$			δ: δ(Q/D)=+0.09 *3* for J=5/2 in 1968Hy01.
		7601.8	27	1726.58	1/2			I_γ: possible contribution from E(p)=966.9.
		9327.9	27	0	$3/2^+$			
9341.15	(1/2,3/2)	x	7					
		3968.4	1	5372.5				
		4033.5	1	5307.4				
		4331.6	4	5009.3				
		4380.1	1	4960.8	3/2			
		4486.9	3	4853.96	3/2			
		4503.2	1	4837.61	5/2			
		5324.5	1	4016.27	3/2			
		5599.6	1	3741.05	5/2			
		5632.9	1	3707.79	$3/2^+$			
		5713.9	13	3626.82	$3/2^{(+)}$			
		7613.7	19	1726.58	1/2			δ: δ(Q/D)=+0.28 *6* or −3.7 *5* for J=3/2 in 1968Hy01.
		9339.9	47	0	$3/2^+$			δ: δ(Q/D)=−0.26 *6* or δ≥10 for J=3/2 in 1968Hy01.
9355.45	$(3/2^-,5/2,7/2^+)$	x	30					
		3982.7	2	5372.5				
		4394.4	7	4960.8	3/2			
		4517.5	16	4837.61	5/2			
		4895.1	2	4459.97	$7/2^-$			
		5082.6	5	4272.52	$7/2^-$			
		5338.8	4	4016.27	3/2			
		5613.9	8	3741.05	5/2			
		5728.2	2	3626.82	$3/2^{(+)}$			

Continued on next page (footnotes at end of table)

^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

$\gamma(^{37}Cl)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	δ	Comments
9355.45	(3/2$^-$,5/2,7/2$^+$)	6251.3	17	3103.59	7/2$^-$			
		9354.2	7	0	3/2$^+$			
9373.25	5/2	x	5					
		1686.4		7686.8				Mult.,δ: A_2=+0.34 *5*.
		2148.8		7224.4	(5/2,3/2$^+$)			Mult.,δ: A_2=+0.42 *8*.
		2671.3		6701.8	5/2	D(+Q)	0.00 *4*	Mult.,δ: A_2=+0.46 *5*.
		3001.1	2	6372				
		3049.3	1	6323.8				
		3357.8	1	6015.3	(3/2,5/2)			Mult.,δ: A_2=−0.36 *4*.
		3395.1	1	5978				
		3882.4	3	5490.68	5/2$^+$	D+Q	+0.13 *7*	Mult.,δ: or +0.95 *17*; A_2=+0.56 *6*.
		4065.6	2	5307.4				
		4313.9	1	5059.1				
		4412.2	4	4960.8	3/2	D+Q	+0.031 *12*	Mult.,δ: A_2=−0.33 *3*.
		4468.8	2	4904.2	7/2$^+$			
		4519.0	3	4853.96	3/2	D(+Q)	−0.001 *16*	Mult.,δ: A_2=−0.39 *3*.
		4535.3	14	4837.61	5/2	D(+Q)	−0.011 *15*	Mult.,δ: A_2=+0.43 *2*.
		4562.0	1	4810.9	7/2	D(+Q)	−0.08 *10*	Mult.,δ: A_2=−0.03 *14*.
		4571.7	5	4801.21	5/2$^+$	D+Q	−0.04 *2*	Mult.,δ: A_2=+0.40 *3*.
		4912.9	2	4459.97	7/2$^-$	D+Q	−0.05 *2*	Mult.,δ: A_2=−0.06 *4*.
		5100.4	5	4272.52	7/2$^-$	D(+Q)	−0.018 *13*	Mult.,δ: A_2=−0.09 *3*.
		5356.6	4	4016.27	3/2			
		5631.7	2	3741.05	5/2	D(+Q)	+0.07 *6*	Mult.,δ: A_2=+0.51 *7*.
		5665.0	1	3707.79	3/2$^+$	D(+Q)	0.00 *2*	Mult.,δ: A_2=−0.35 *5*.
		6269.1	12	3103.59	7/2$^-$	D+Q	+0.027 *10*	Mult.,δ: A_2=−0.17 *2*.
		6286.6	5	3086.12	5/2	D+Q	+0.08 *3*	Mult.,δ: A_2=+0.52 *2*, A_4=−0.06 *2*.
		9372.0	18	0	3/2$^+$	D+Q	+0.020 *6*	Mult.,δ: A_2=−0.37 *2*.
9377.63	(1/2 to 5/2$^+$)	x	4					
		3399.5	2	5978				
		3468.2	1	5909.3				
		3732.1	1	5645.3	3/2$^+$,5/2$^+$			
		3886.7	1	5490.68	5/2$^+$			
		4539.7	2	4837.61	5/2			
		4576.1	1	4801.21	5/2$^+$			
		5108.4	1	4268.87	1/2			
		5200.6	1	4176.64	3/2$^{(-)}$			
		5360.9	1	4016.27	3/2			
		6273.5	1	3103.59	7/2$^-$			
		6290.9	1	3086.12	5/2			
		7650.2	3	1726.58	1/2			
		9376.4	80	0	3/2$^+$			
9386.77		x	7					
		2654.7	1	6732				
		2898.3	4	6488.3				
		2971.6	3	6415				
		4157.8	2	5228.7				
		4327.4	2	5059.1				
		4425.7	2	4960.8	3/2			
		4548.9	2	4837.61	5/2			
		4990.1	7	4396.3	5/2			
		5117.5	2	4268.87	1/2			
		5209.7	2	4176.64	3/2$^{(-)}$			
		5370.1	4	4016.27	3/2			
		5645.3	1	3741.05	5/2			
		5678.5	9	3707.79	3/2$^+$			
		5759.5	4	3626.82	3/2$^{(+)}$			

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

$\gamma(^{37}Cl)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Comments
9386.77		6300.1	2	3086.12	5/2	
		7659.3	22	1726.58	1/2	
		9385.5	17	0	$3/2^+$	
9393.38	$(1/2^+,3/2,5/2^+)$	x	15			
		3021.2	3	6372		
		3351.0	2	6042.2		
		3377.9	3	6015.3	(3/2,5/2)	
		3449.2	3	5944		
		4020.6	2	5372.5		
		4164.4	6	5228.7		
		4432.3	8	4960.8	3/2	
		4539.1	2	4853.96	3/2	
		4555.5	3	4837.61	5/2	
		5124.1	2	4268.87	1/2	
		5216.3	3	4176.64	$3/2^{(-)}$	
		5376.7	1	4016.27	3/2	
		5685.1	16	3707.79	$3/2^+$	
		6306.7	2	3086.12	5/2	
		7665.9	9	1726.58	1/2	
		9392.1	20	0	$3/2^+$	
9435.79	5/2	x	20			
		3526.3	2	5909.3		
		4128.1	3	5307.4		
		4380.3	2	5055.2		
		5039.1	2	4396.3	5/2	
		5166.5	4	4268.87	1/2	
		5694.3	5	3741.05	5/2	
		7708.3	31	1726.58	1/2	δ: δ(Q/D)=+0.37 *6* or −6.3 *+27−18* for J=3/2 in 1968Hy01.
		9434.5	31	0	$3/2^+$	δ: δ(Q/D)=0.00 *6* or +3.8 *5* for J=3/2 in 1968Hy01.
9448.25	$(1/2^+,3/2,5/2^+)$	x	40			
		6361.5	15	3086.12	5/2	
		7720.8	15	1726.58	1/2	
		9447.0	30	0	$3/2^+$	
9452.53	$(1/2^+,3/2,5/2^+)$	x	6			
		2720.4	1	6732		
		3474.4	1	5978		
		3537.3	1	5915.0		
		4397.0	3	5055.2		
		4442.9	1	5009.3		
		4491.4	1	4960.8	3/2	
		4598.3	3	4853.96	3/2	
		4651.0	2	4801.21	$5/2^+$	
		5275.5	3	4176.64	$3/2^{(-)}$	
		5435.8	3	4016.27	3/2	
		5711.0	1	3741.05	5/2	
		5825.2	1	3626.82	$3/2^{(+)}$	
		7725.1	5	1726.58	1/2	
		9451.2	68	0	$3/2^+$	
9461.96	5/2	x	15			
		2973.5	1	6488.3		
		3446.5	2	6015.3	(3/2,5/2)	
		3483.8	1	5978		
		3517.8	1	5944		
		4089.2	1	5372.5		
		4402.6	1	5059.1		

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ †	I_γ ‡	E_f	J_f^π	Mult.	δ	Comments
9461.96	5/2	4500.9	1	4960.8	3/2	D+Q	−0.19 *4*	Mult.,δ: A_2=−0.73 *7*.
		4557.5	2	4904.2	$7/2^+$			
		4660.4	1	4801.21	$5/2^+$			
		5001.6	3	4459.97	$7/2^-$	D(+Q)	−0.01 *5*	Mult.,δ: A_2=−0.08 *6*.
		5065.3	3	4396.3	5/2	D+Q	−0.11 *7*	Mult.,δ: A_2=+0.32 *7*, A_4=−0.15 *6*.
		5284.9	6	4176.64	$3/2^{(-)}$	D(+Q)	−0.013 *9*	Mult.,δ: A_2=−0.41 *2*.
		5445.3	2	4016.27	3/2			
		5720.4	1	3741.05	5/2			
		5834.6	45	3626.82	$3/2^{(+)}$	D(+Q)	−0.011 *4*	Mult.,δ: A_2=−0.40 *1*.
		6375.2	2	3086.12	5/2	D+Q	−0.17 *5*	Mult.,δ: or +1.8 *2*; A_2=+0.26 *7*.
		9460.7	10	0	$3/2^+$			
9473.54	(1/2,3/2,5/2^+)	x	20					
		3828.0	2	5645.3	$3/2^+$,$5/2^+$			
		3855.4	1	5617.9				
		4100.8	2	5372.5				
		4619.3	2	4853.96	3/2			
		5204.3	5	4268.87	1/2			
		5456.8	6	4016.27	3/2			
		5846.2	3	3626.82	$3/2^{(+)}$			
		7746.1	9	1726.58	1/2			
		9472.2	5	0	$3/2^+$			
9475.97	3/2	x	5					
		2325.9	1	7150				
		3460.5	1	6015.3	(3/2,5/2)			
		3857.9	1	5617.9				
		4247.0	1	5228.7				
		4466.4	3	5009.3				
		4621.7	1	4853.96	3/2			
		4638.0	1	4837.61	5/2			
		5079.3	4	4396.3	5/2			
		5206.7	1	4268.87	1/2			
		5459.3	1	4016.27	3/2			
		5734.4	1	3741.05	5/2			
		5767.7	6	3707.79	$3/2^+$			
		5848.7	1	3626.82	$3/2^{(+)}$			
		6389.3	6	3086.12	5/2			
		7748.5	20	1726.58	1/2	(D+Q)	+0.04 *4*	δ: or −1.9 *3* (1968Hy01).
		9474.7	46	0	$3/2^+$	(D+Q)#	−0.05# *6*	δ: or +5.1 *+12−10* (1968Hy01).
9494.65	(3/2,5/2^+)	x	22					
		2825.6	3	6668.9				
		3122.5	2	6372				
		4121.9	2	5372.5				
		4439.2	4	5055.2				
		4656.7	1	4837.61	5/2			
		4693.1	2	4801.21	$5/2^+$			
		5098.0	1	4396.3	5/2			
		5225.4	5	4268.87	1/2			
		5753.1	2	3741.05	5/2			
		5786.4	12	3707.79	$3/2^+$			
		6407.9	1	3086.12	5/2			
		7767.2	3	1726.58	1/2			
		9493.3	40	0	$3/2^+$			
9500.09	$5/2^+$	x	10					
		3141.9	1	6358				
		3854.6	1	5645.3	$3/2^+$,$5/2^+$			
		4539.0	1	4960.8	3/2			

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	δ	Comments
9500.09	5/2$^+$	5230.8	2	4268.87	1/2			
		5791.8	2	3707.79	3/2$^+$			
		5872.8	3	3626.82	3/2$^{(+)}$			
		7772.6	35	1726.58	1/2	Q+O	−0.21 *6*	Mult.,δ: or 3.1 *5* from γ(θ) in 1970Ha41. A$_2$=−0.1 *1*, A$_4$=−0.48 *17* (1967Ie01). A$_2$=−0.17 *9*, A$_4$=+0.11 *12* (1970Ha41).
		9498.8	45	0	3/2$^+$	Q+O	−0.12 *8*	Mult.,δ: from 1967Ie01. Other: 0.44 *5* or 6.5 *+16−12* in 1970Ha41. A$_2$=−0.13 *11*, A$_4$=−0.08 *18* (1967Ie01). A$_2$=−0.19 *6*, A$_4$=−0.07 *7* (1970Ha41). B(M1)(W.u.)=0.024, B(E2)(W.u.)=0.12 or B(M1)(W.u.)=0.001, B(E2)(W.u.)=0.6 (1967Ie01).
9501.16	(3/2$^-$,5/2,7/2$^+$)	x	13					
		4596.7	1	4904.2	7/2$^+$			
		5228.2	1	4272.52	7/2$^-$			
		6397.0	5	3103.59	7/2$^-$			
		6414.4	5	3086.12	5/2			
		9499.8	75	0	3/2$^+$			
9518.09	(1/2,3/2,5/2$^+$)	x	13					
		2438.6	3	7079.4				
		2849.1	2	6668.9				
		3532.0	2	5985.9				
		3872.6	3	5645.3	3/2$^+$,5/2$^+$			
		4145.3	5	5372.5				
		4289.1	1	5228.7				
		4462.6	1	5055.2				
		5248.8	11	4268.87	1/2			
		5341.0	1	4176.64	3/2$^{(-)}$			
		5501.4	10	4016.27	3/2			
		6431.4	1	3086.12	5/2			
		7790.6	24	1726.58	1/2			
		9516.8	23	0	3/2$^+$			
9522.08		x	20					
		3536.0	6	5985.9				
		3577.9	2	5944				
		3795.6	2	5726.3	7/2$^-$			
		4561.0	2	4960.8	3/2			
		4617.6	3	4904.2	7/2$^+$			
		4684.2	2	4837.61	5/2			
		4720.5	4	4801.21	5/2$^+$			
		5061.7	9	4459.97	7/2$^-$			
		5505.4	30	4016.27	3/2			
		6435.4	10	3086.12	5/2			
		7794.6	3	1726.58	1/2			I$_\gamma$: possible contribution from E(p)=1163.4.
		9520.8	7	0	3/2$^+$			
9546.69	(5/2,7/2$^+$)	x	15					
		4537.1	1	5009.3				
		4585.6	3	4960.8	3/2			
		4642.2	6	4904.2	7/2$^+$			
		4735.5	1	4810.9	7/2			
		5150.0	1	4396.3	5/2			
		5273.8	5	4272.52	7/2$^-$			
		5530.0	3	4016.27	3/2			
		9545.4	65	0	3/2$^+$			
9549.12		4493.6	4[@]	5055.2				

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Comments
9549.12		4737.9	6[@]	4810.9	7/2	
		5152.4	15[@]	4396.3	5/2	
		5921.8	28[@]	3626.82	3/2$^{(+)}$	
		6444.9	6[@]	3103.59	7/2$^-$	
		7821.7	15[@]	1726.58	1/2	
		9547.8	26[@]	0	3/2$^+$	
9572.37	1/2	x	6			
		3530.0	2	6042.2		Mult.,δ: A_2=−0.06 *5*.
		3556.9	3	6015.3	(3/2,5/2)	Mult.,δ: A_2=−0.02 *2*.
		3586.3	1	5985.9		
		3954.2	1	5617.9		
		4343.4	3	5228.7		Mult.,δ: A_2=−0.10 *6*.
		5303.1	10	4268.87	1/2	Mult.,δ: A_2=+0.01 *2*.
		5864.1	3	3707.79	3/2$^+$	Mult.,δ: A_2=0.00 *4*.
		5945.0	1	3626.82	3/2$^{(+)}$	
		9571.0	70	0	3/2$^+$	Mult.,δ: A_2=0.00 *1*.
9768.6	7/2	9769		0	3/2$^+$	Mult.,δ: A_2=+0.52 *3*,A_4=−0.37 *4* (1966Ko23).
9815.4	(1/2 to 5/2)	9815		0	3/2$^+$	Mult.,δ: δ(Q/D)=+0.139 *8* for J=3/2, −0.292 *8* for J=5/2 (1966Ko23). A_2=+0.199 *5*,A_4=+0.19 *9* (1966Ko23).
9845.6	(3/2,5/2)	9845		0	3/2$^+$	Mult.,δ: δ(Q/D)=+0.18 *3* for J=3/2, −0.156 *22* for J=5/2 (1966Ko23). A_2=+0.06 *5*,A_4=−0.05 *8* (1966Ko23).
9949.4		4806.1	5[@]	5143?		
		5932.6	2[@]	4016.27	3/2	
		6862.6	11[@]	3086.12	5/2	
		8221.8	2[@]	1726.58	1/2	
		9948.0	80[@]	0	3/2$^+$	
9960.3		4904.8	2[@]	5055.2		
		8232.7	90[@]	1726.58	1/2	
		9958.9	8[@]	0	3/2$^+$	
9974.4		6887.6	5[@]	3086.12	5/2	
		8246.8	17[@]	1726.58	1/2	
		9973.0	78[@]	0	3/2$^+$	
10029.4		4973.8	1[@]	5055.2		
		8301.8	97[@]	1726.58	1/2	
		10027.9	2[@]	0	3/2$^+$	
10080.7	(3/2,5/2)	10081		0	3/2$^+$	Mult.,δ: δ(Q/D)=+0.64 *3* for J=3/2, +0.058 *22* for J=5/2 (1966Ko23). A_2=−0.57 *4*,A_4=+0.04 *6* (1966Ko23).
10142.5		10143		0	3/2$^+$	Mult.,δ: A_2=−0.380 *15*,A_4=−0.46 *3* (1966Ko23).
10174.9	(1/2 to 5/2$^+$)	x	15			
		4259.6	5	5915.0		
		4556.7	7	5617.9		
		5213.7	3	4960.8	3/2	
		6158.1	9	4016.27	3/2	
		6547.5	4	3626.82	3/2$^{(+)}$	
		8447.3	6	1726.58	1/2	
		10173.4	48	0	3/2$^+$	
10179.6		x	30			
		5341.6	7	4837.61	5/2	

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Comments
10179.6		5378.0	2	4801.21	$5/2^+$	
		5906.6	4	4272.52	$7/2^-$	
		6437.9	9	3741.05	5/2	
		7075.3	14	3103.59	$7/2^-$	
		7092.7	28	3086.12	5/2	
		8452.0	2	1726.58	1/2	I_γ: possible contribution from E(p)=1838.6.
		10178.1	4	0	$3/2^+$	
10183.2	7/2	x	15			
		5173.5	1	5009.3		
		6006.0	1	4176.64	$3/2^{(-)}$	
		6166.4	1	4016.27	3/2	
		6474.8	4	3707.79	$3/2^+$	
		7096.3	16	3086.12	5/2	
		8455.6	45	1726.58	1/2	
		10181.7	17	0	$3/2^+$	Mult.,δ: A_2=+0.43 *4*,A_4=−0.53 *6* (1966Ko23).
10184.5	$(1/2^+,3/2,5/2^+)$	x	20			
		5279.9	2	4904.2	$7/2^+$	
		5346.5	2	4837.61	5/2	
		5787.7	3	4396.3	5/2	
		5911.5	5	4272.52	$7/2^-$	
		6007.3	2	4176.64	$3/2^{(-)}$	
		6167.7	2	4016.27	3/2	
		6476.1	3	3707.79	$3/2^+$	
		6557.1	4	3626.82	$3/2^{(+)}$	
		7097.6	11	3086.12	5/2	
		8456.9	22	1726.58	1/2	I_γ: possible contribution from E(p)=1847.1.
		10183.0	24	0	$3/2^+$	
10190.9	$(3/2,5/2^+)$	x	20			
		5389.3	2	4801.21	$5/2^+$	
		5794.1	4	4396.3	5/2	
		6449.2	2	3741.05	5/2	
		6482.5	2	3707.79	$3/2^+$	
		6563.5	2	3626.82	$3/2^{(+)}$	
		8463.3	21	1726.58	1/2	
		10189.4	47	0	$3/2^+$	
10197.3		x	30			
		5800.5	2	4396.3	5/2	
		6180.5	10	4016.27	3/2	
		6488.9	1	3707.79	$3/2^+$	
		6569.9	1	3626.82	$3/2^{(+)}$	
		7093.0	1	3103.59	$7/2^-$	
		7110.4	21	3086.12	5/2	
		10195.8	34	0	$3/2^+$	
10200.7		x	25			
		4214.5	3	5985.9		
		4630.3	2	5570.1		
		4672.0	1	5528.4	9/2	
		5362.7	9	4837.61	5/2	
		5389.4	5	4810.9	7/2	
		5803.9	4	4396.3	5/2	
		5927.7	1	4272.52	$7/2^-$	
		5931.3	1	4268.87	1/2	
		6183.9	1	4016.27	3/2	
		6188.8	2	4011.3		
		6459.0	1	3741.05	5/2	
		6492.3	1	3707.79	$3/2^+$	

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	δ	Comments
10200.7		6573.3	20	3626.82	$3/2^{(+)}$			
		7096.4	18	3103.59	$7/2^-$			
		7113.8	1	3086.12	5/2			
		10199.2	5	0	$3/2^+$			
10207.8	3/2	x	18					
		4562.2	2	5645.3	$3/2^+,5/2^+$			Mult.,δ: A_2=+0.33 *5*.
		4716.8	2	5490.68	$5/2^+$			
		5152.2	1	5055.2				
		5246.6	2	4960.8	3/2	D+Q	+0.13 *6*	Mult.,δ: or +2.5 *5*; A_2=+0.56 *8*.
		5369.8	5	4837.61	5/2			
		5811.0	2	4396.3	5/2	D(+Q)	+0.01 *9*	Mult.,δ: A_2=−0.13 *10*.
		6030.6	3	4176.64	$3/2^{(-)}$	D(+Q)	−0.02 *2*	Mult.,δ: or +4.2 *6*; A_2=+0.35 *5*.
		6191.0	15	4016.27	3/2	D(+Q)	−0.002 *11*	Mult.,δ: or +3.9 *2*; A_2=+0.38 *2*.
		6499.4	13	3707.79	$3/2^+$	D(+Q)	−0.009 *12*	Mult.,δ: or +4.0 *2*; A_2=+0.37 *2*.
		6580.4	4	3626.82	$3/2^{(+)}$			
		7120.9	2	3086.12	5/2			
		8480.2	3	1726.58	1/2			
		10206.3	28	0	$3/2^+$	D+Q	+0.067 *12*	Mult.,δ: or +3.02 *12*; A_2=+0.48 *2*.
10212.4		x	20					
		2957.8	2	7254.5				
		4268.1	1	5944				
		4566.8	1	5645.3	$3/2^+,5/2^+$			
		5374.4	6	4837.61	5/2			
		5401.1	1	4810.9	7/2			
		5410.8	1	4801.21	$5/2^+$			
		5815.6	2	4396.3	5/2			
		6195.6	2	4016.27	3/2			
		6470.7	2	3741.05	5/2			
		6504.0	9	3707.79	$3/2^+$			
		10210.9	53	0	$3/2^+$			
10217.7		x	13					
		4308.1	2	5909.3				
		4572.1	1	5645.3	$3/2^+,5/2^+$			
		4726.7	3	5490.68	$5/2^+$			
		4910.0	2	5307.4				
		5406.4	1	4810.9	7/2			
		5757.2	1	4459.97	$7/2^-$			
		5944.7	1	4272.52	$7/2^-$			
		6476.0	1	3741.05	5/2			
		6509.3	20	3707.79	$3/2^+$			
		6590.2	1	3626.82	$3/2^{(+)}$			
		7130.8	17	3086.12	5/2			
		10216.2	32	0	$3/2^+$			
10220.6	$(3/2^-,5/2^+)$	x	10					
		3915.3	1	6305.1				
		4729.6	3	5490.68	$5/2^+$			
		5165.0	2	5055.2				
		5366.2	3	4853.96	3/2			
		6478.9	1	3741.05	5/2			
		6512.2	6	3707.79	$3/2^+$			
		7116.3	6	3103.59	$7/2^-$			
		7133.7	2	3086.12	5/2			
		8493.0	2	1726.58	1/2			
		10219.1	64	0	$3/2^+$			
10221.9	$7/2^-$	x	10					

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	δ	Comments
10221.9	7/2⁻	3863.7	2	6358				δ: δ(Q/D)=−0.06 *24* (2002Vo17). A_2=+0.49 *17*, A_4=−0.06 *14* (2002Vo17).
		4495.3	2	5726.3	7/2⁻			δ: δ(Q/D)=+0.03 *27* (2002Vo17). A_2=+0.43 *22*, A_4=−0.05 *20* (2002Vo17).
		4651.5	4	5570.1				δ: δ(Q/D)=+0.29 *8* (2002Vo17). A_2=+0.19 *8*, A_4=+0.04 *8* (2002Vo17).
		4849		5372.5				E_γ: from 2002Vo17. δ: δ(Q/D)=−0.02 *12* (2002Vo17). A_2=+0.22 *3*, A_4=−0.09 *3* (2002Vo17).
		5163		5059.1				E_γ: from 2002Vo17. δ: δ(Q/D)=+0.14 *10* (2002Vo17). A_2=+0.45 *39*, A_4=−0.02 *26* (2002Vo17).
		5410.6	4	4810.9	7/2			δ: δ(Q/D)=+0.27 *20* or +1 *1* (2002Vo17). A_2=+0.14 *5*, A_4=−0.18 *6* (2002Vo17).
		5420.3	1	4801.21	5/2⁺			
		5761.4	1	4459.97	7/2⁻			δ: δ(Q/D)=+0.07 *5* or +2 *2* (2002Vo17). A_2=−0.43 *17*, A_4=+0.03 *16* (2002Vo17).
		5826		4396.3	5/2			E_γ: from 2002Vo17. δ: δ(Q/D)=−0.7 *3* (2002Vo17). A_2=−0.42 *2*, A_4=0.00 *15* (2002Vo17).
		6480.2	1	3741.05	5/2			δ: δ(Q/D)=−0.8 *3* or +4 *1* (2002Vo17). A_2=+0.05 *3*, A_4=0.01 *12* (2002Vo17).
		7117.6	74	3103.59	7/2⁻	M1(+E2)[#]	0.00[#] *2*	δ: δ(Q/D)=+0.02 *2* (2002Vo17). B(M1)(W.u.)=1.7 *3* (1968Hy01), 0.47 *17* (1975Ke11). pol=+0.95 *43* (1968Hy01). A_2=+0.43 *8*, A_4=+0.02 *2* (2002Vo17).
		7135.0	1	3086.12	5/2			
10225.8	(3/2⁻,5/2,7/2⁺)	x	20					
		4655.4	2	5570.1				
		4734.8	2	5490.68	5/2⁺			
		5216.1	2	5009.3				
		5765.3	2	4459.97	7/2⁻			
		6209.0	7	4016.27	3/2			
		6517.4	20	3707.79	3/2⁺			
		7121.5	3	3103.59	7/2⁻			
		7138.9	31	3086.12	5/2			
		10224.3	11	0	3/2⁺			
10227.6	(3/2⁻,5/2⁺)	x	30					
		4283.3	3	5944				
		4736.6	3	5490.68	5/2⁺			
		5266.4	6	4960.8	3/2			
		5389.6	4	4837.61	5/2			
		5426.0	2	4801.21	5/2⁺			
		5830.8	2	4396.3	5/2			
		6210.8	4	4016.27	3/2			
		6519.2	3	3707.79	3/2⁺			
		6600.1	4	3626.82	3/2⁽⁺⁾			
		7123.3	11	3103.59	7/2⁻			
		7140.7	20	3086.12	5/2			
		8500.0	2	1726.58	1/2			
		10226.1	6	0	3/2⁺			
10233.6	(1/2⁺,3/2,5/2⁺)	x	25					
		5004.5	6	5228.7				
		6525.2	20	3707.79	3/2⁺			

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

$\gamma(^{37}Cl)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	δ	Comments
10233.6	(1/2$^+$,3/2,5/2$^+$)	7146.7	9	3086.12	5/2			
		8506.0	6	1726.58	1/2			
		10232.1	34	0	3/2$^+$			
10236.1	7/2	x	30					
		4509.5	1	5726.3	7/2$^-$	D(+Q)	−0.02 *5*	Mult.,δ: A_2=+0.43 *4*.
		4707.4	3	5528.4	9/2	D(+Q)	−0.01 *1*	Mult.,δ: A_2=−0.17 *2*.
		5424.8	6	4810.9	7/2	D+Q	−0.19 *1*	Mult.,δ: A_2=+0.28 *1*.
		5839.3	2	4396.3	5/2	D+Q	−0.04 *1*	Mult.,δ: A_2=−0.42 *2*.
		6494.4	1	3741.05	5/2	D+Q	+0.15 *2*	Mult.,δ: A_2=+0.03 *3*.
		7131.8	57	3103.59	7/2$^-$	D+Q	−0.03 *1*	Mult.,δ: A_2=+0.43 *1*.
10251.3		x	25					
		4336.0	4	5915.0				
		4605.7	4	5645.3	3/2$^+$,5/2$^+$			
		5241.6	2	5009.3				
		5396.9	7	4853.96	3/2			
		5440.0	1	4810.9	7/2			
		5981.9	5	4268.87	1/2			
		6542.9	10	3707.79	3/2$^+$			
		6623.8	4	3626.82	3/2$^{(+)}$			
		7164.4	6	3086.12	5/2			
		8523.7	1	1726.58	1/2			
		10249.8	31	0	3/2$^+$			
10255.3	(3/2,5/2)	x	18					
		4340.0	2	5915.0				
		5417.3	3	4837.61	5/2			
		5444.0	4	4810.9	7/2			
		5982.3	5	4272.52	7/2$^-$			
		6238.5	6	4016.27	3/2			
		6546.9	5	3707.79	3/2$^+$			
		7151.0	6	3103.59	7/2$^-$			
		7168.4	30	3086.12	5/2			
		10253.8	21	0	3/2$^+$			Mult.,δ: δ(Q/D)=+0.54 *1* or +3.85 *3* for J=3/2, −0.035 *6* for J=5/2 (1966Ko23). A_2=−0.326 *7*,A_4=+0.013 *12* (1966Ko23).
10258.2	(3/2$^-$,5/2,7/2$^+$)	x	12					
		5446.9	1	4810.9	7/2			
		5797.7	1	4459.97	7/2$^-$			
		5985.2	2	4272.52	7/2$^-$			
		6241.4	10	4016.27	3/2			
		6630.7	1	3626.82	3/2$^{(+)}$			
		7153.9	4	3103.59	7/2$^-$			
		7171.3	11	3086.12	5/2			
		10256.7	58	0	3/2$^+$			
10262.7	(3/2$^-$,5/2,7/2$^+$)	x	30					
		4945.2	9	5317.1				
		5461.1	3	4801.21	5/2$^+$			
		5802.2	3	4459.97	7/2$^-$			
		5989.7	19	4272.52	7/2$^-$			
		6085.5	18	4176.64	3/2$^{(-)}$			
		6521.0	3	3741.05	5/2			
		7158.4	7	3103.59	7/2$^-$			
		7175.8	5	3086.12	5/2			
		10261.2	3	0	3/2$^+$			
10268.5	1/2	x	10					
		4622.9	1	5645.3	3/2$^+$,5/2$^+$			
		5258.8	2	5009.3				Mult.,δ: A_2=+0.06 *7*.

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	δ	Comments
10268.5	1/2	5307.3	4	4960.8	3/2			Mult.,δ: A_2=+0.01 *6*.
		8540.9	83	1726.58	1/2			Mult.,δ: A_2=+0.01 *1*.
10273.2	3/2	x	2					
		5217.6	1	5055.2				
		5263.5	2	5009.3				Mult.,δ: A_2=−0.50 *7*.
		5418.8	1	4853.96	3/2			
		5435.2	2	4837.61	5/2			
		5471.6	1	4801.21	$5/2^+$			
		5876.4	1	4396.3	5/2			
		6003.8	7	4268.87	1/2	D(+Q)	−0.01 *1*	Mult.,δ: or −1.70 *4*; A_2=−0.50 *2*.
		6096.0	1	4176.64	$3/2^{(-)}$			
		6256.4	1	4016.27	3/2			
		6531.5	2	3741.05	5/2			
		7186.3	47	3086.12	5/2	D+Q	−0.016 *7*	Mult.,δ: A_2=−0.08 *1*.
		8545.6	10	1726.58	1/2			
		10271.7	22	0	$3/2^+$	D+Q	+0.081 *8*	Mult.,δ: or +2.89 *7*; A_2=+0.50 *1*.
10275.3	$7/2^-$	x	35					
		4574.1	6	5700.9	$9/2^-$	D+Q	−0.22 *3*	Mult.,δ: A_2=+0.16 *3*.
		4704.9	11	5570.1				
		5370.7	5	4904.2	$7/2^+$	D(+Q)	−0.05 *7*	Mult.,δ: A_2=+0.49 *6*.
		5473.7	5	4801.21	$5/2^+$			
		5878.5	7	4396.3	5/2	D+Q	+0.05 *2*	Mult.,δ: A_2=−0.24 *1*.
		6002.3	11	4272.52	$7/2^-$			
		6533.6	7	3741.05	5/2			
		7171.0	4	3103.59	$7/2^-$	D+Q	−0.96 *6*	Mult.,δ: or +7 *3*; A_2=−0.22 *4*; A_4=−0.26 *4*.
		7188.4	9	3086.12	5/2			
10285.8	$(1/2^+,3/2,5/2^+)$	x	50					
		4307.5	5	5978				
		5324.6	2	4960.8	3/2			
		5431.4	16	4853.96	3/2			
		5889.0	4	4396.3	5/2			
		6658.3	3	3626.82	$3/2^{(+)}$			
		7198.9	3	3086.12	5/2			
		8558.2	5	1726.58	1/2			
		10284.3	12	0	$3/2^+$			
10294.5	3/2	x	20					
		5456.5	3	4837.61	5/2			
		5492.9	1	4801.21	$5/2^+$	D(+Q)	−0.11 *9*	δ: or −0.29 *9*; A_2=+0.03 *8*.
		5897.7	2	4396.3	5/2			
		6025.1	3	4268.87	1/2	D(+Q)	+0.02 *3*	A_2=−0.46 *6*.
		8566.9	25	1726.58	1/2	D+Q	+0.04 *2*	δ: or −1.9 *1*; A_2=−0.40 *2*.
		10293.0	46	0	$3/2^+$	D+Q	−0.06 *1*	δ: or +5.2 *2*. A_2=+0.29 *1* (1984No06); A_2=+0.210 *13*, A_4=+0.230 *2* (1966Ko23).
10296.9	$(5/2^-,7/2^+)$	x	20					
		4318.6	4	5978				
		4726.5	9	5570.1				
		5237.4	6	5059.1				
		5485.6	7	4810.9	7/2			
		5836.4	16	4459.97	$7/2^-$			
		6023.9	20	4272.52	$7/2^-$			
		6285.0	8	4011.3				
		10295.4	10	0	$3/2^+$			
10305.2	$(1/2,3/2,5/2^+)$	x	40					
		4687.0	3	5617.9				
		5249.6	8	5055.2				

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^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Comments
10305.2	(1/2,3/2,5/2$^+$)	6288.4	11	4016.27	3/2	
		6677.7	19	3626.82	3/2$^{(+)}$	
		8577.6	10	1726.58	1/2	
		10303.7	9	0	3/2$^+$	
10312.3	3/2$^+$,5/2$^+$	x	40			
		4585.7	6	5726.3	7/2$^-$	
		4994.8	6	5317.1		
		5407.7	5	4904.2	7/2$^+$	
		6295.5	13	4016.27	3/2	
		6603.9	3	3707.79	3/2$^+$	
		7225.4	3	3086.12	5/2	
		8584.6	4	1726.58	1/2	
		10310.8	20	0	3/2$^+$	Mult.,δ: δ(Q/D)=+0.12 *14* or −7 *3* for J=3/2, −0.27 *9* for J=5/2 (1966Ko23). A_2=+0.19 *8*, A_4=+0.37 *14* (1966Ko23).
10314.5	(1/2$^+$,3/2,5/2$^+$)	x	10			
		5512.8	2	4801.21	5/2$^+$	
		5917.7	4	4396.3	5/2	
		6297.7	2	4016.27	3/2	
		7227.6	1	3086.12	5/2	
		8586.8	41	1726.58	1/2	
		10313.0	40	0	3/2$^+$	
10318.3		x	25			
		8590.6	3	1726.58	1/2	
		10316.8	72	0	3/2$^+$	
10346	(3/2,5/2)	10346		0	3/2$^+$	Mult.,δ: δ(Q/D)=0.00 *3* or −3.17 *13* for J=3/2, −0.23 *2* for J=5/2 (1966Ko23). A_2=+0.39 *4*, A_4=+0.07 *6* (1966Ko23).
10369		x	30			δ: δ(Q/D)=0.0 *1* (1998Ka52). B(M1)↑=0.031 *3* (2008Ka10), 0.21 *4* (1998Ka52). A_2=+0.25 *12*, A_4=−0.14 *12*, A_6=−0.01 *13* (1998Ka52).
		8641.3	53[&]	1726.58	1/2	δ: δ(Q/D)=+0.26 *15* (1998Ka52). A_2=−0.40 *10*, A_4=+0.05 *10*, A_6=−0.11 *11* (1998Ka52). B(M1)↑=1.7 *5* (1998Ka52).
		10367.4	17[&]	0	3/2$^+$	
10413	(3/2,5/2)	x	4			
		8686	3[&]	1726.58	1/2	B(M1)↑=0.04 *1* (1998Ka52).
		10413	93[&]	0	3/2$^+$	Mult.,δ: δ(Q/D)=−0.035 *7* or −3.33 *4* for J=3/2, −0.45 *1* or −7.4 *5* for J=5/2 (1966Ko23), −0.17 *15* for J=3/2 (1998Ka52). A_2=+0.448 *8*, A_4=+0.12 *9* (1966Ko23). A_2=+0.38 *9*, A_4=−0.05 *8*, A_6=+0.06 *9* (1998Ka52). B(M1)↑=0.421 *14* (2008Ka10), 0.36 (1998Ka52).
10454		x	11			
		7367.1	7[&]	3086.12	5/2	
		8726.3	21[&]	1726.58	1/2	δ: δ(Q/D)=+0.3 *2* (1998Ka52). A_2=−0.32 *12*, A_4=−0.11 *12*, A_6=−0.03 *10* (1998Ka52). B(M1)↑=0.21 *6* (1998Ka52).
		10452.4	61[&]	0	3/2$^+$	δ: δ(Q/D)=−0.7 *5* (1998Ka52). A_2=+0.42 *15*, A_4=+0.41 *15*, A_6=+0.14 *17* (1998Ka52). B(M1)↑=0.251 *10* (2008Ka10), 0.13 *4* (1998Ka52).
10494		x	35			
		8767	31[&]	1726.58	1/2	δ: δ(Q/D)=−0.28 *20* (1998Ka52). A_2=−0.12 *12*, A_4=+0.09 *13*, A_6=+0.07 *12* (1998Ka52). B(M1)↑=0.44 *12* (1998Ka52).

Continued on next page (footnotes at end of table)

^{36}S(p,γ),(p,p) 1984No05,1984No06 (continued)

γ(^{37}Cl) (continued)

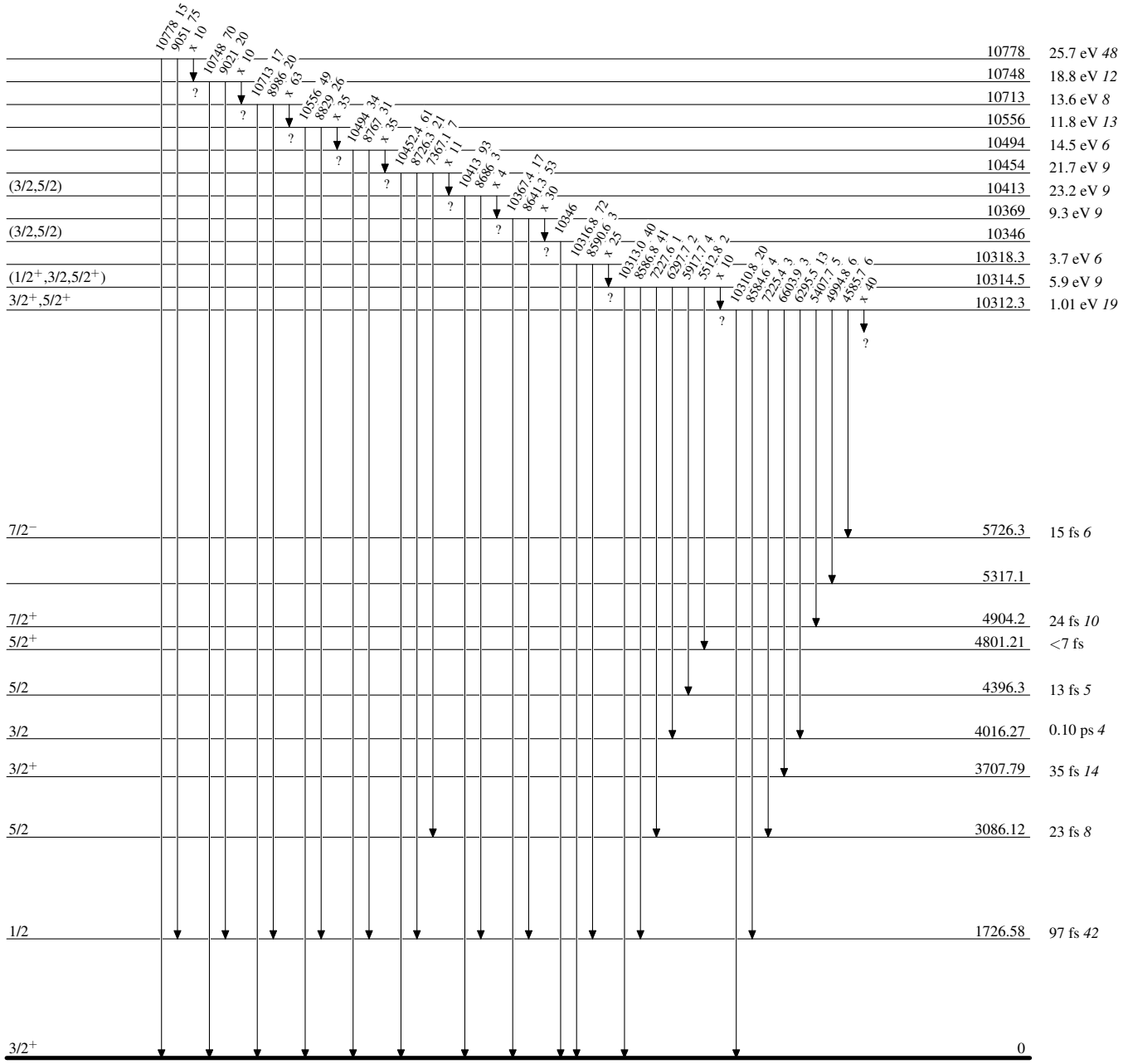
E_i(level)	E_γ[†]	I_γ[‡]	E_f	J^π_f	Comments
10494	10494	34[&]	0	3/2$^+$	δ: δ(Q/D)=+0.26 *15* (1998Ka52). A_2=+0.01 *11*, A_4=−0.04 *12*, A_6=0.08 *13* (1998Ka52). B(M1)↑=0.092 *4* (2008Ka10), 0.14 *4* (1998Ka52).
10556	x	35			
	8829	26[&]	1726.58	1/2	δ: δ(Q/D)=0.0 *1* (1998Ka52). A_2=−0.35 *13*, A_4=+0.12 *12*, A_6=−0.11 *12* (1998Ka52). B(M1)↑=0.39 *4* (1998Ka52).
	10556	49[&]	0	3/2$^+$	δ: δ(Q/D)=0.0 *1* (1998Ka52). A_2=+0.09 *11*, A_4=+0.12 *12*, A_6=+0.15 *16* (1998Ka52). B(M1)↑=0.109 *5* (2008Ka10), 0.22 *2* (1998Ka52).
10713	x	63			
	8986	20[&]	1726.58	1/2	δ: δ(Q/D)=+0.27 *20* (1998Ka52). A_2=−0.39 *14*, A_4=+0.04 *13*, A_6=0.00 *14* (1998Ka52). B(M1)↑=0.95 *28* (1998Ka52).
	10713	17[&]	0	3/2$^+$	δ: δ(Q/D)=+0.46 *20* (1998Ka52). A_2=−0.09 *14*, A_4=−0.09 *15*, A_6=+0.12 *16* (1998Ka52). B(M1)↑=0.042 *2* (2008Ka10), 0.16 *4* (1998Ka52).
10748	x	10			
	9021	20[&]	1726.58	1/2	δ: δ(Q/D)=+0.57 *30* (1998Ka52). A_2=−0.23 *26*, A_4=+0.24 *28*, A_6=−0.21 *30* (1998Ka52). B(M1)↑=0.26 *5* (1998Ka52).
	10748	70[&]	0	3/2$^+$	δ: δ(Q/D)=−0.21 *15* (1998Ka52). A_2=+0.29 *12*, A_4=+0.07 *12*, A_6=+0.13 *14* (1998Ka52). B(M1)(W.u.)=0.229 *15* (2008Ka10), 0.18 *3* (1998Ka52).
10778	x	10			
	9051	75[&]	1726.58	1/2	δ: δ(Q/D)=+0.52 *30* (1998Ka52). A_2=−0.44 *12*, A_4=+0.02 *11*, A_6=−0.02 *11* (1998Ka52). B(M1)↑=0.87 *16* (1998Ka52).
	10778	15[&]	0	3/2$^+$	δ: δ(Q/D)=−0.07 *10* (1998Ka52). A_2=−0.04 *11*, A_4=+0.35 *13*, A_6=−0.10 *12* (1998Ka52). B(M1)(W.u.)=0.067 *13* (2008Ka10), 0.06 *1* (1998Ka52).

[†] From level-energy differences, unless otherwise noted. Symbol 'X' represents unidentified γ-transition.
[‡] From 1984No05 (including A_2 and A_4), unless otherwise noted.
[#] From $\gamma(\theta)$ in 1968Hy01.
[@] From 1973Pi10.
[&] From 2008Ka10.

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme

Intensities: % photon branching from each level

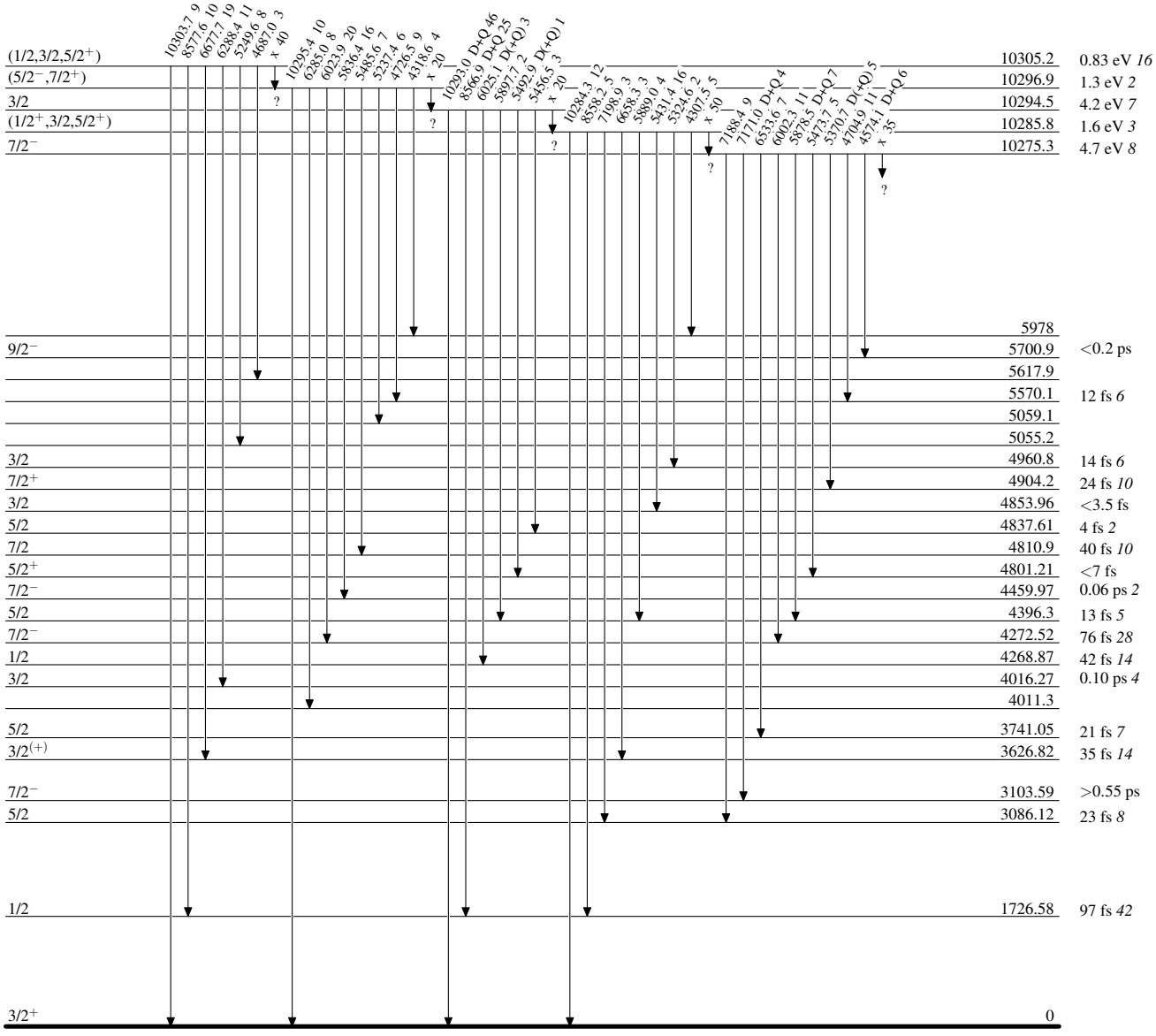


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

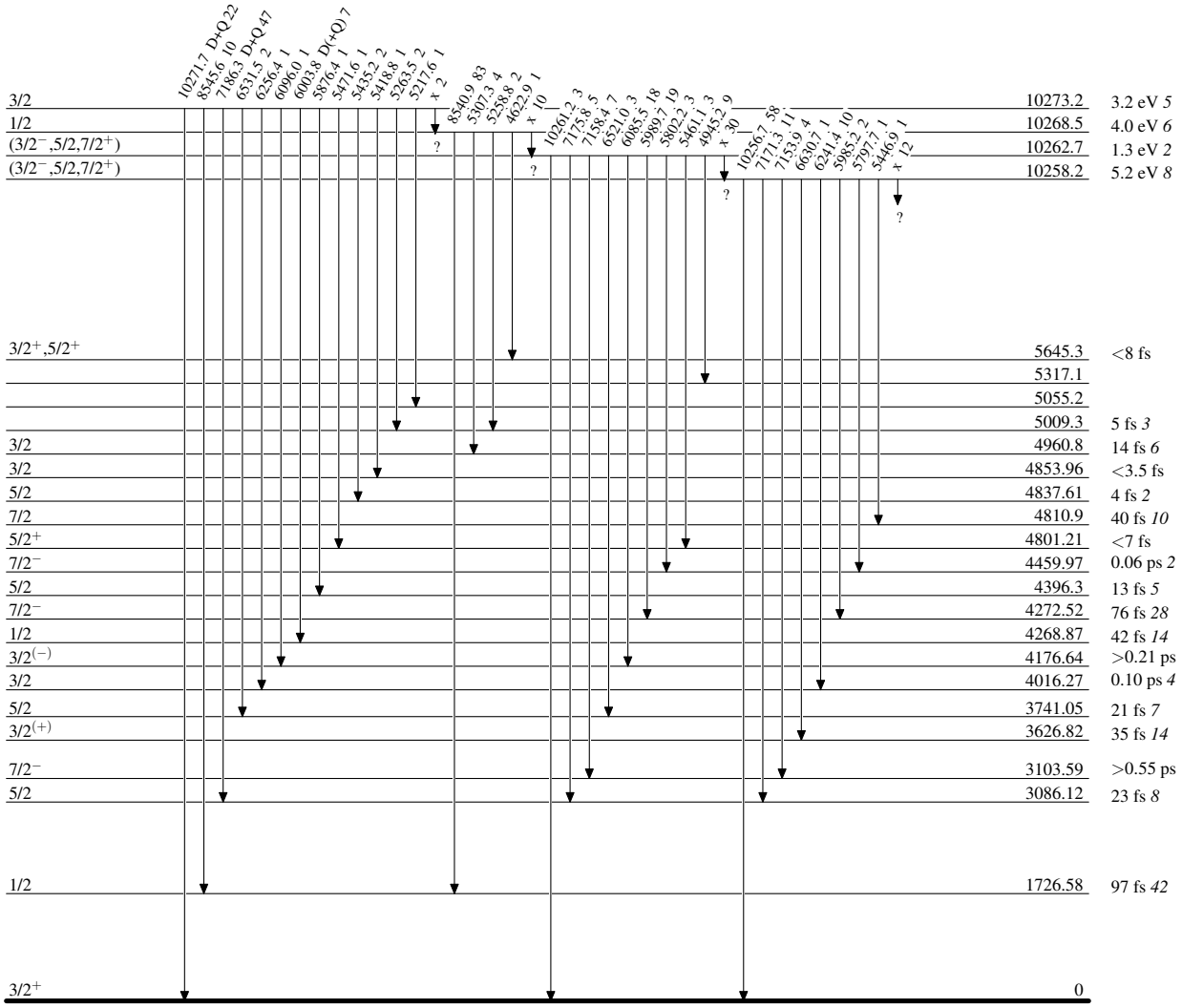
Intensities: % photon branching from each level



^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

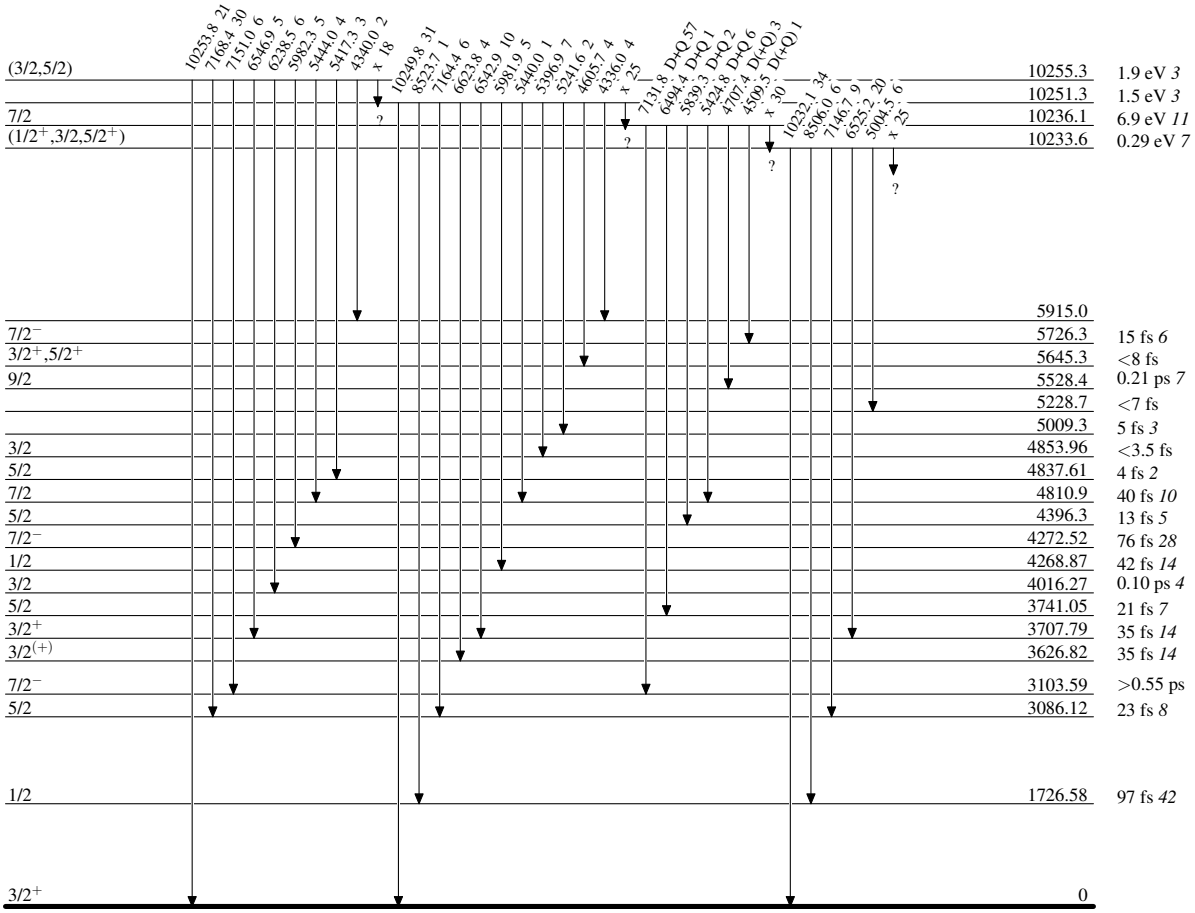


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

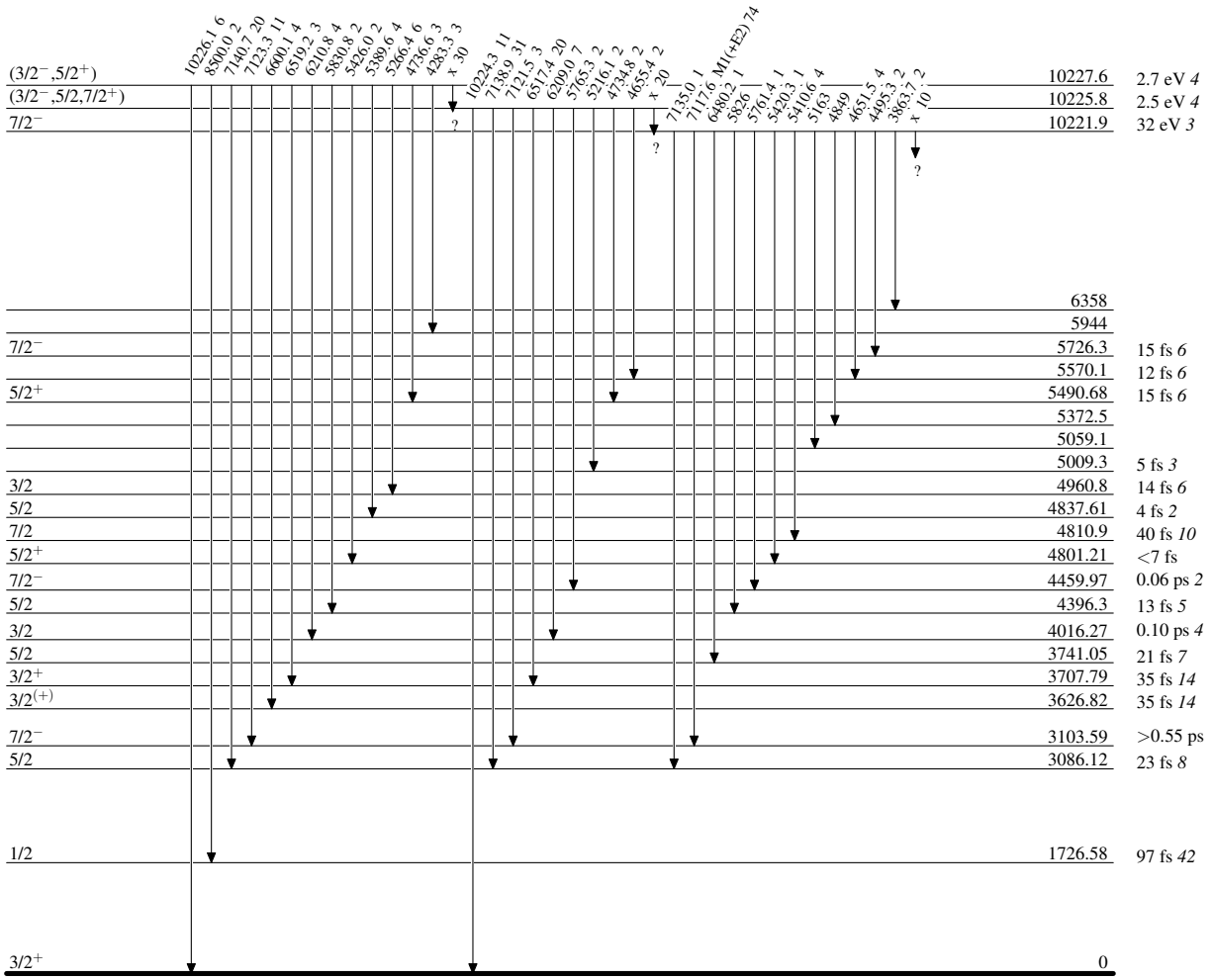


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

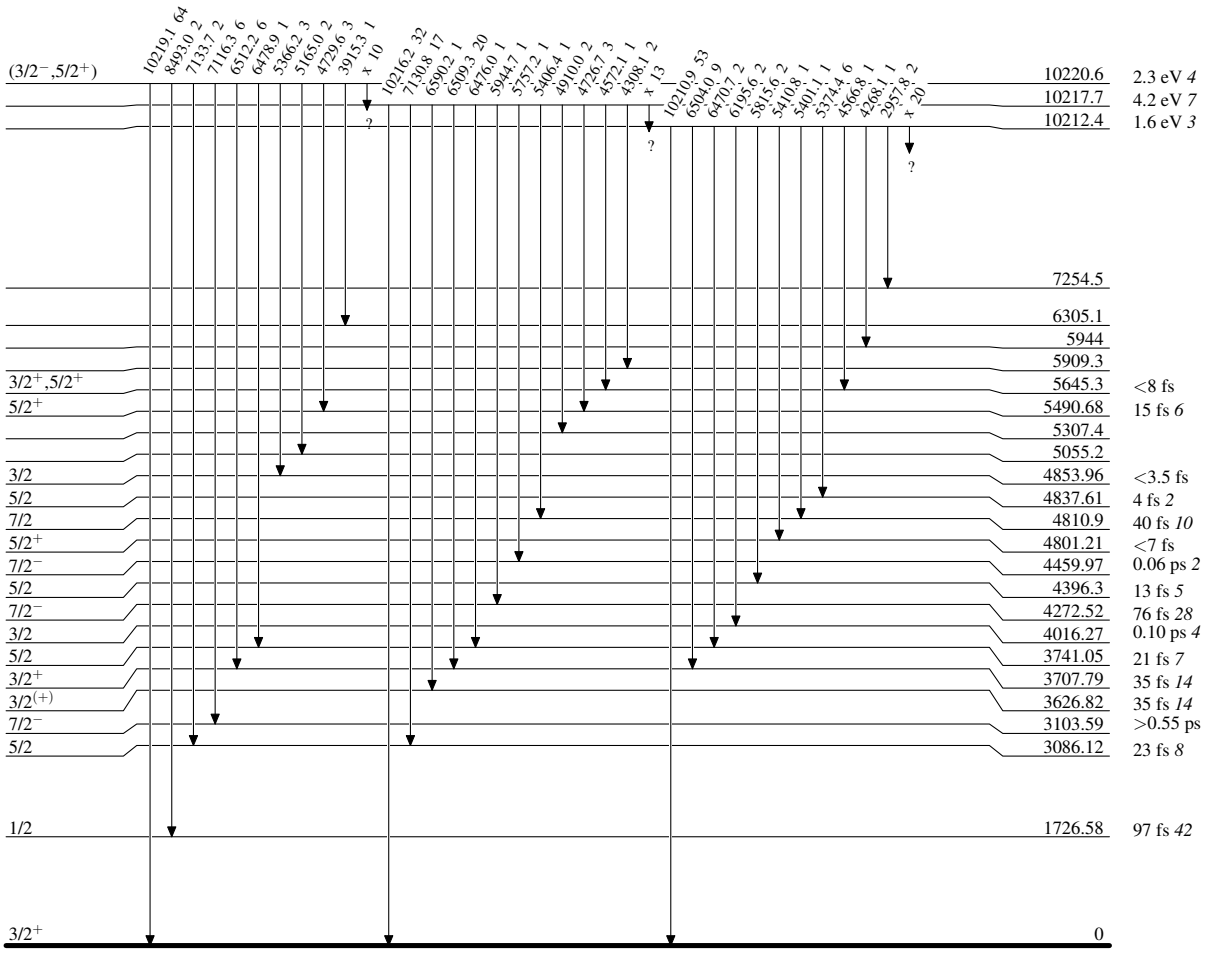


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

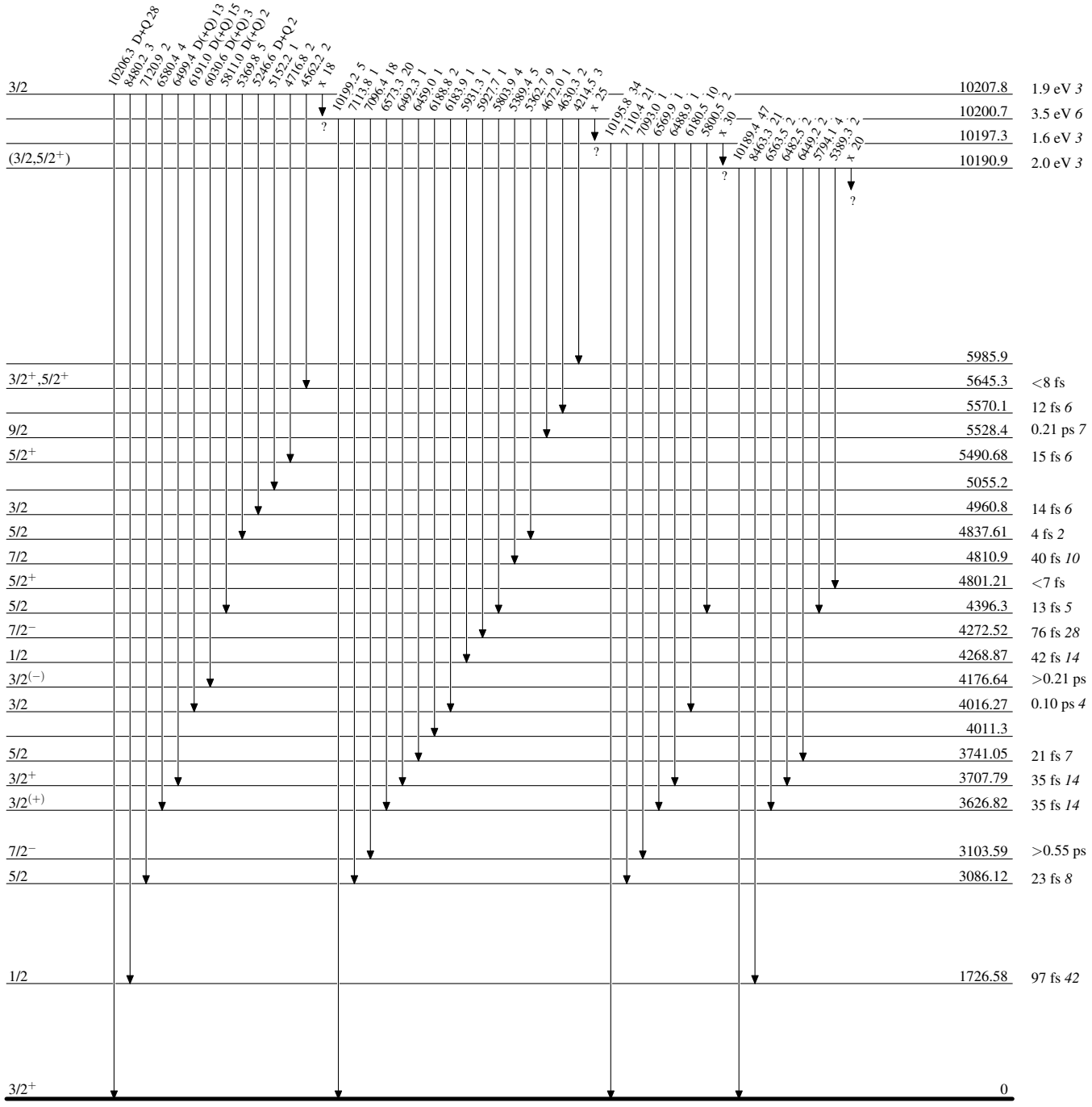


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

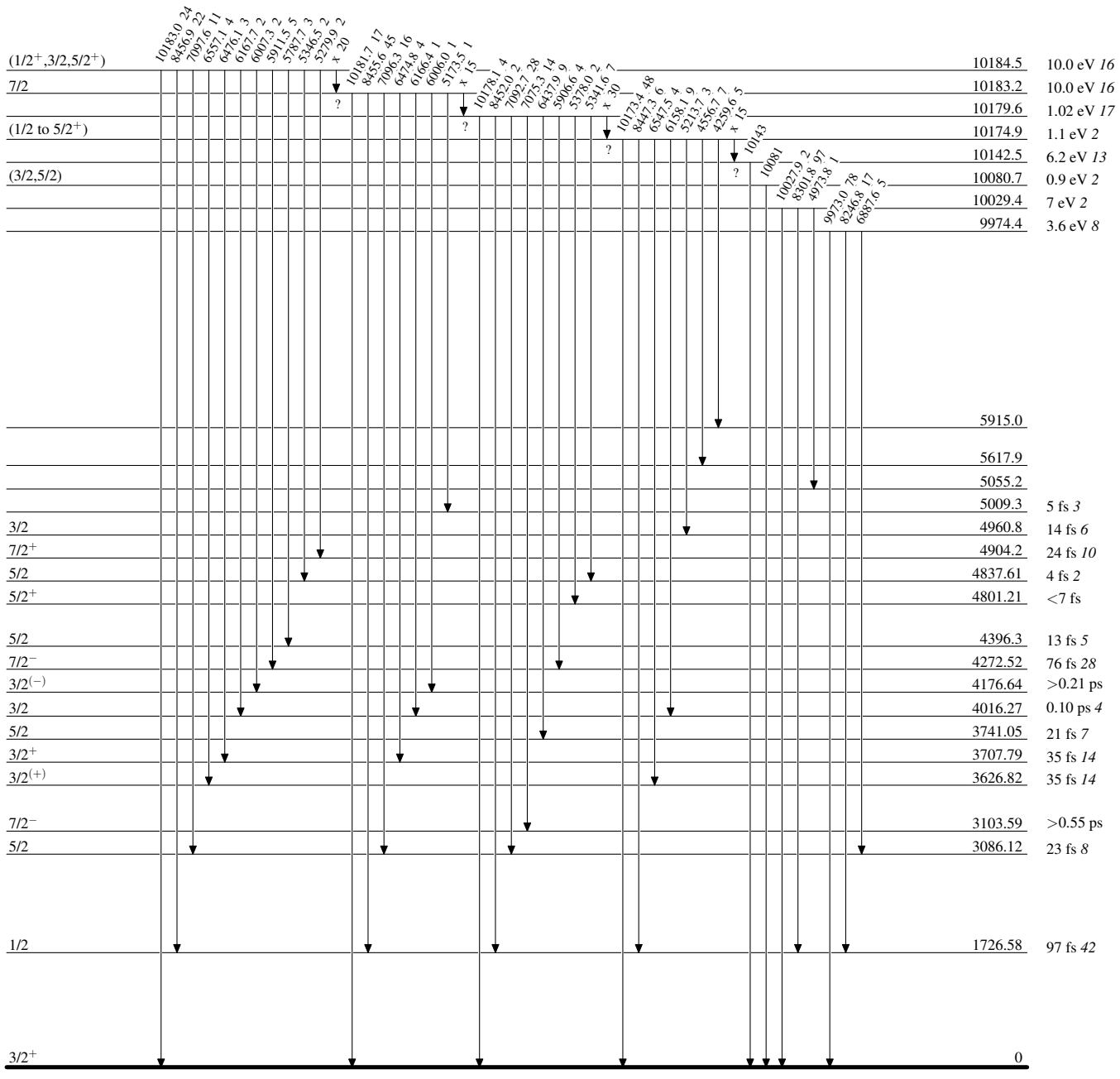


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

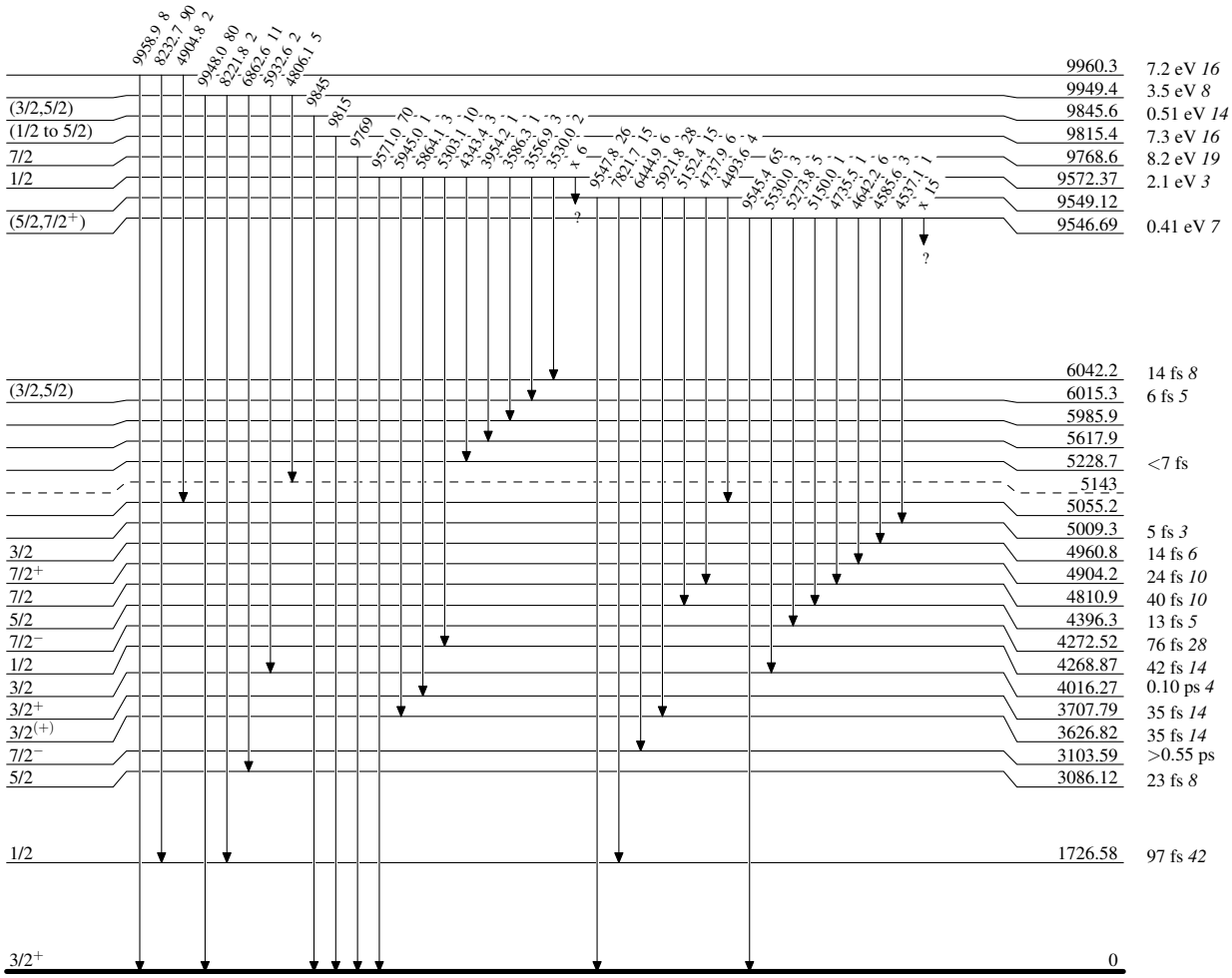


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

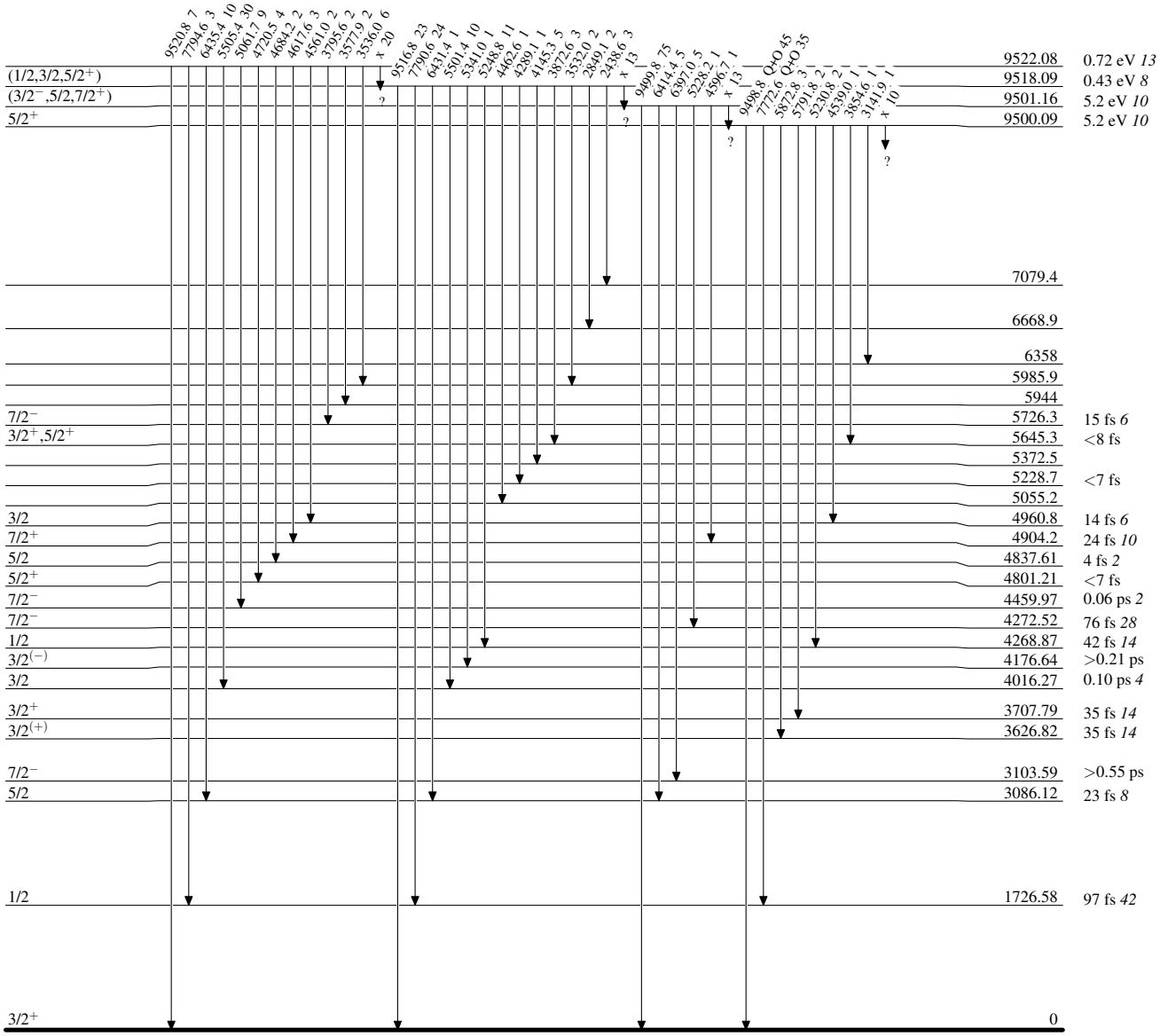


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

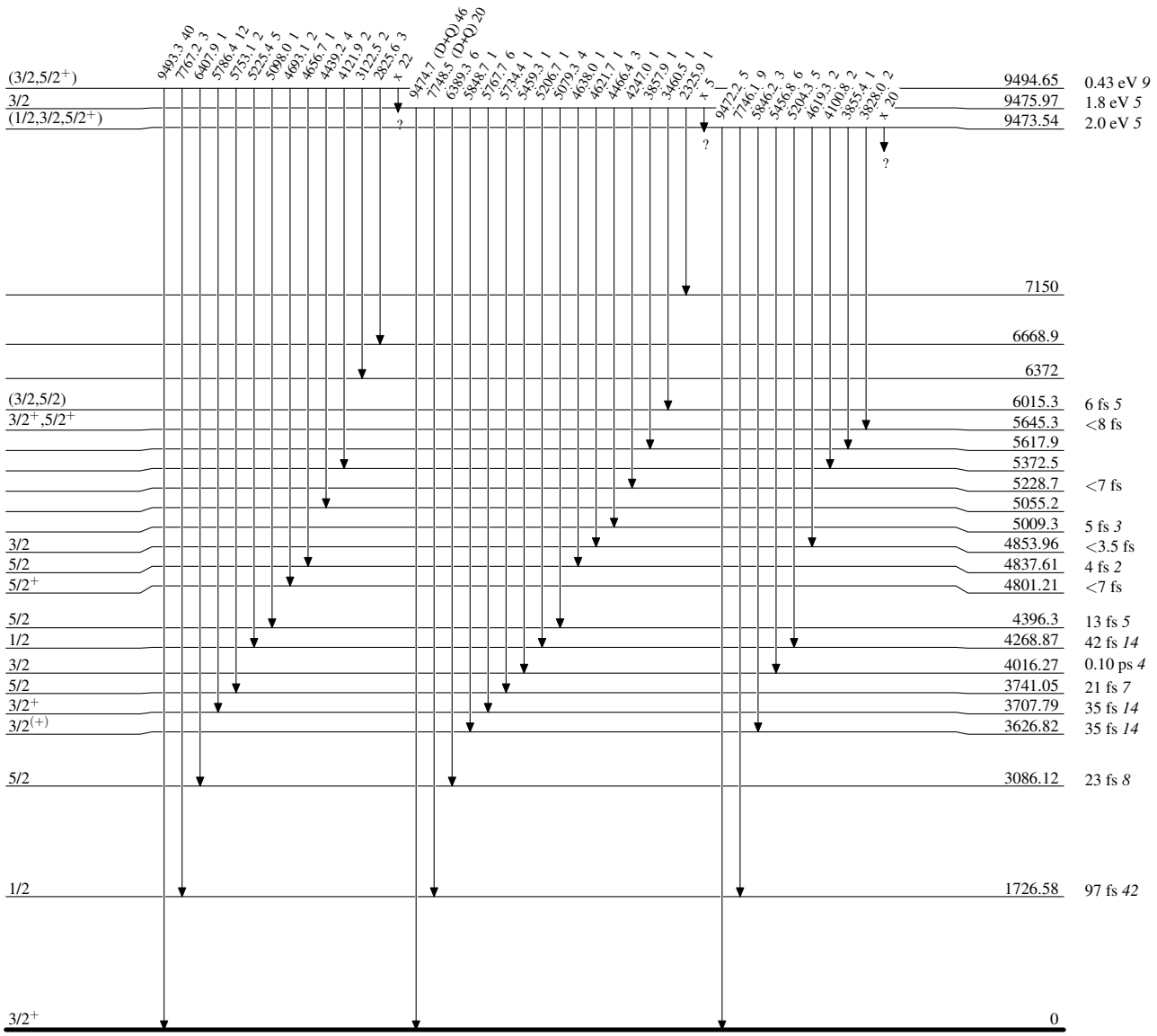


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

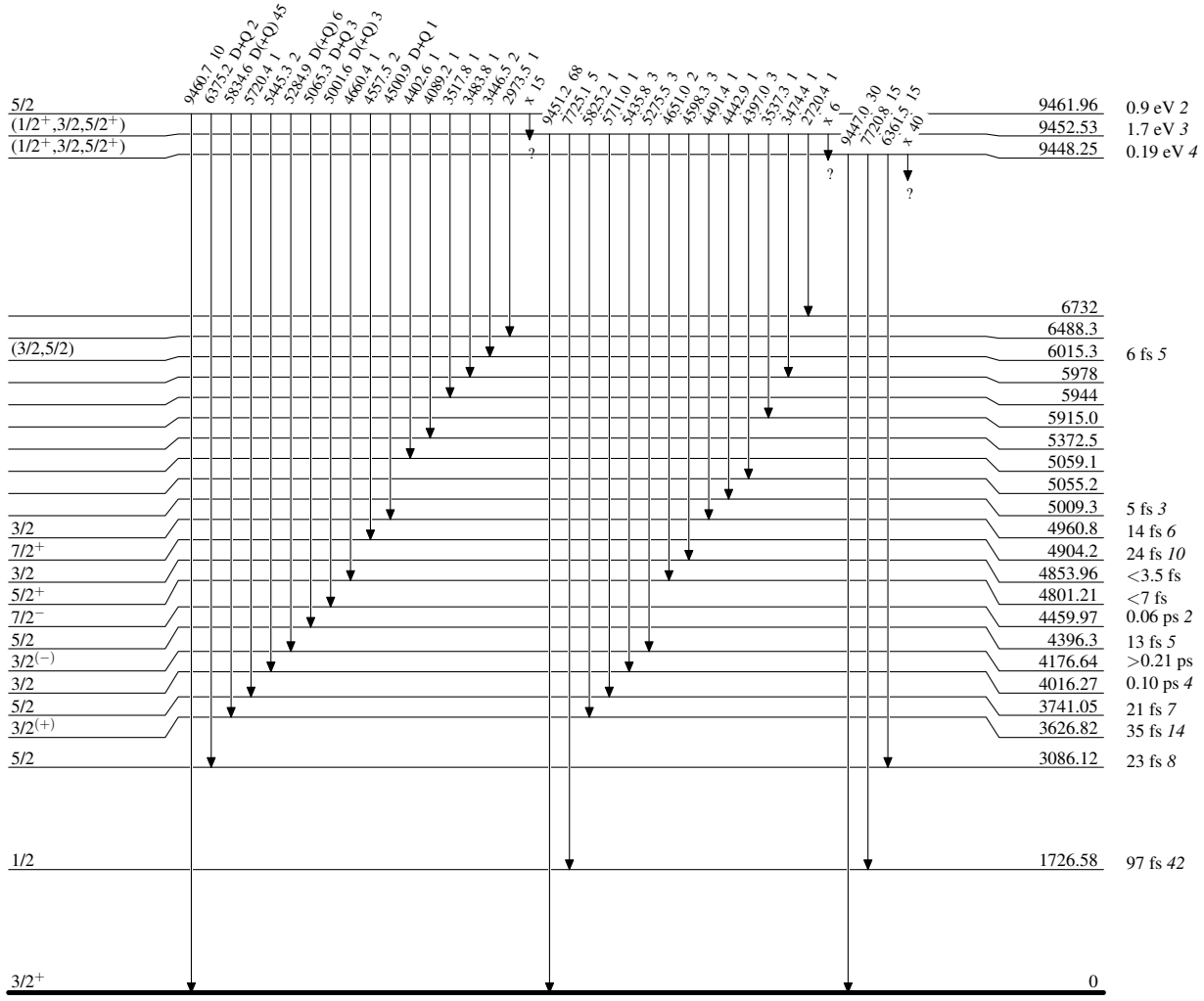


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

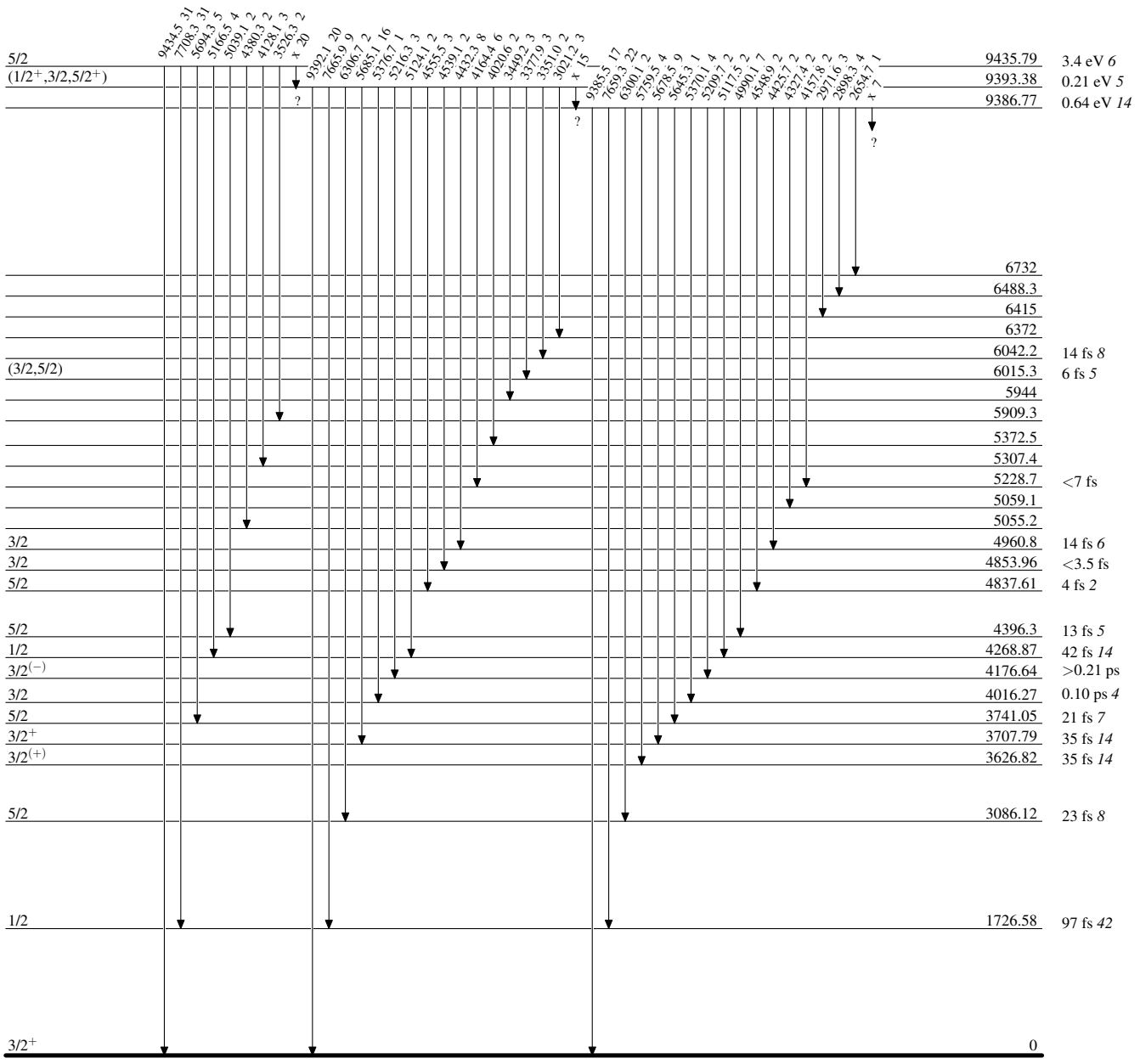


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

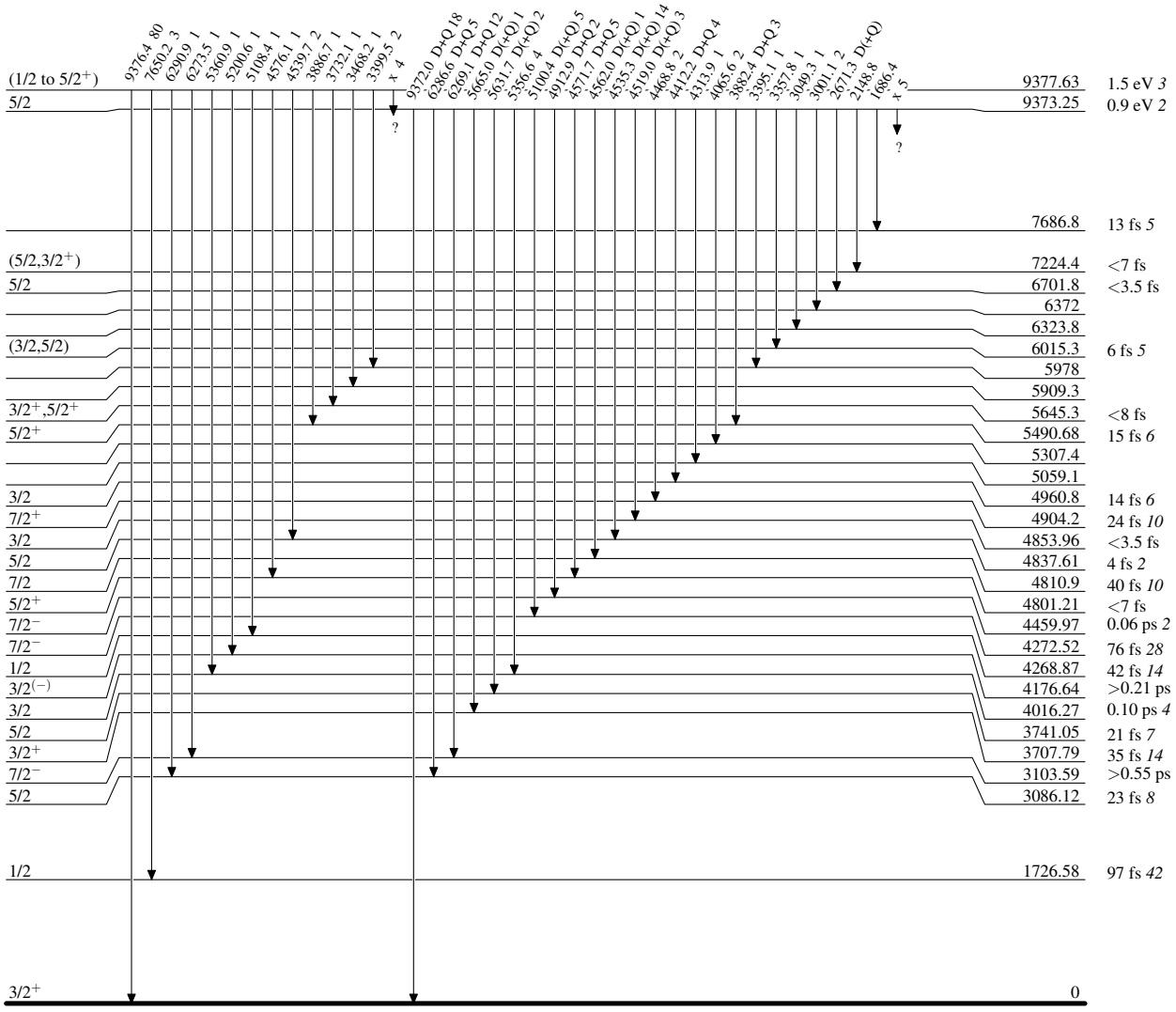


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

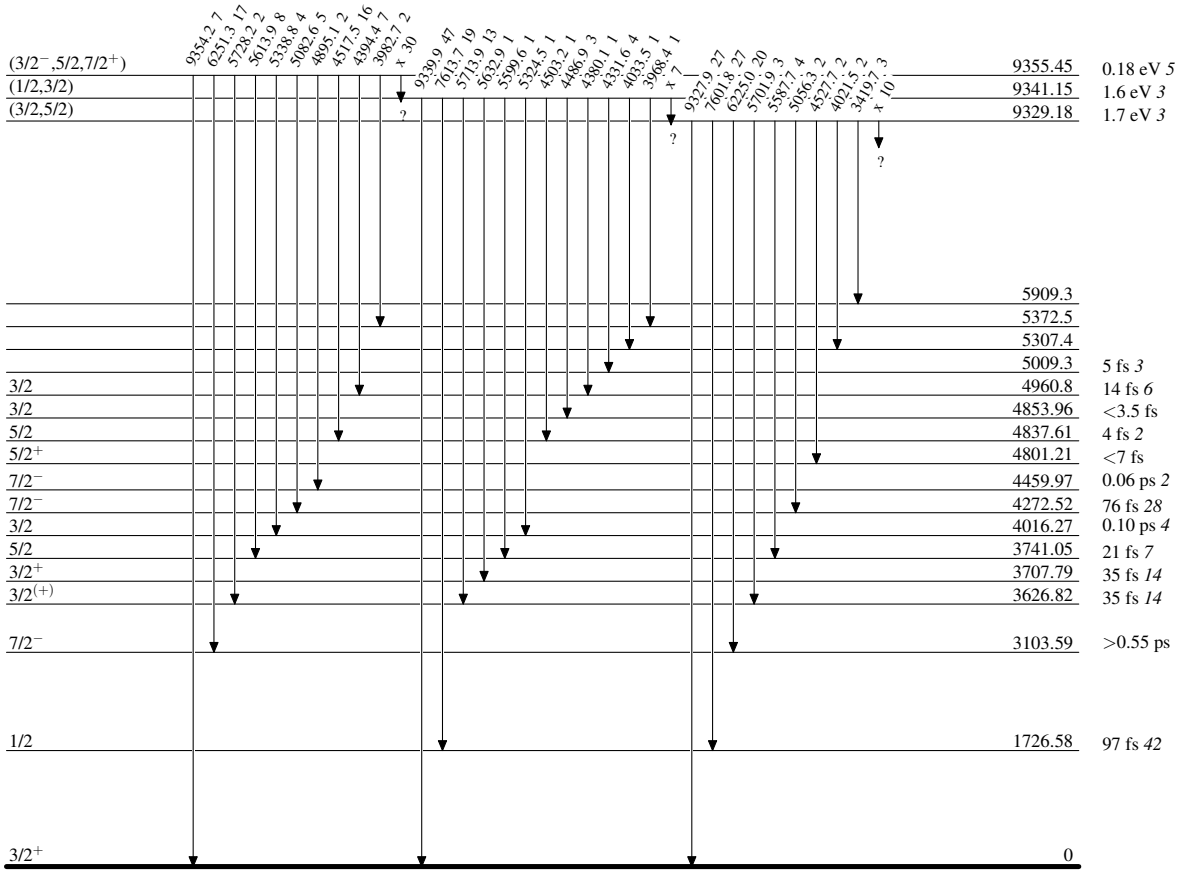


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

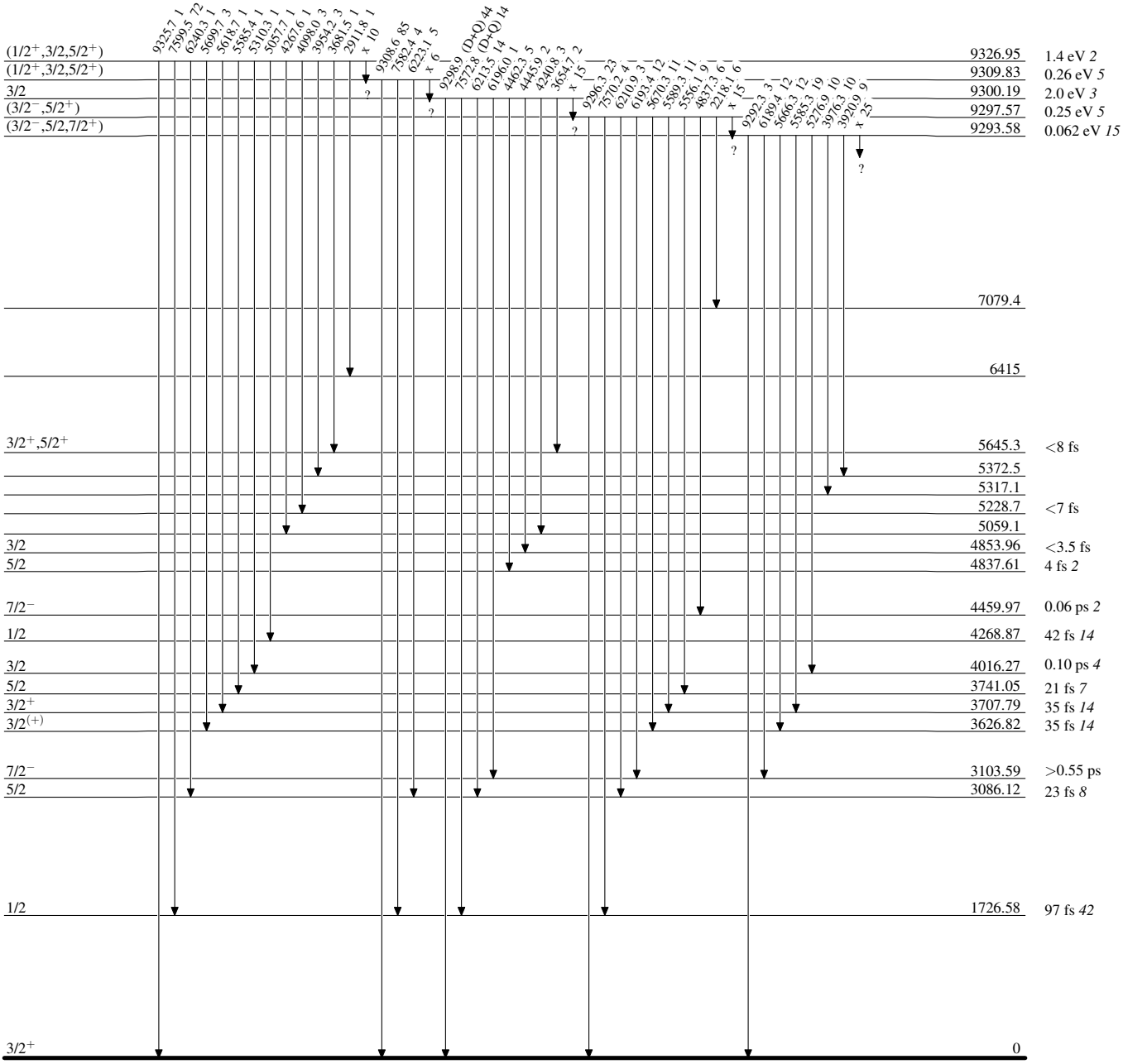


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

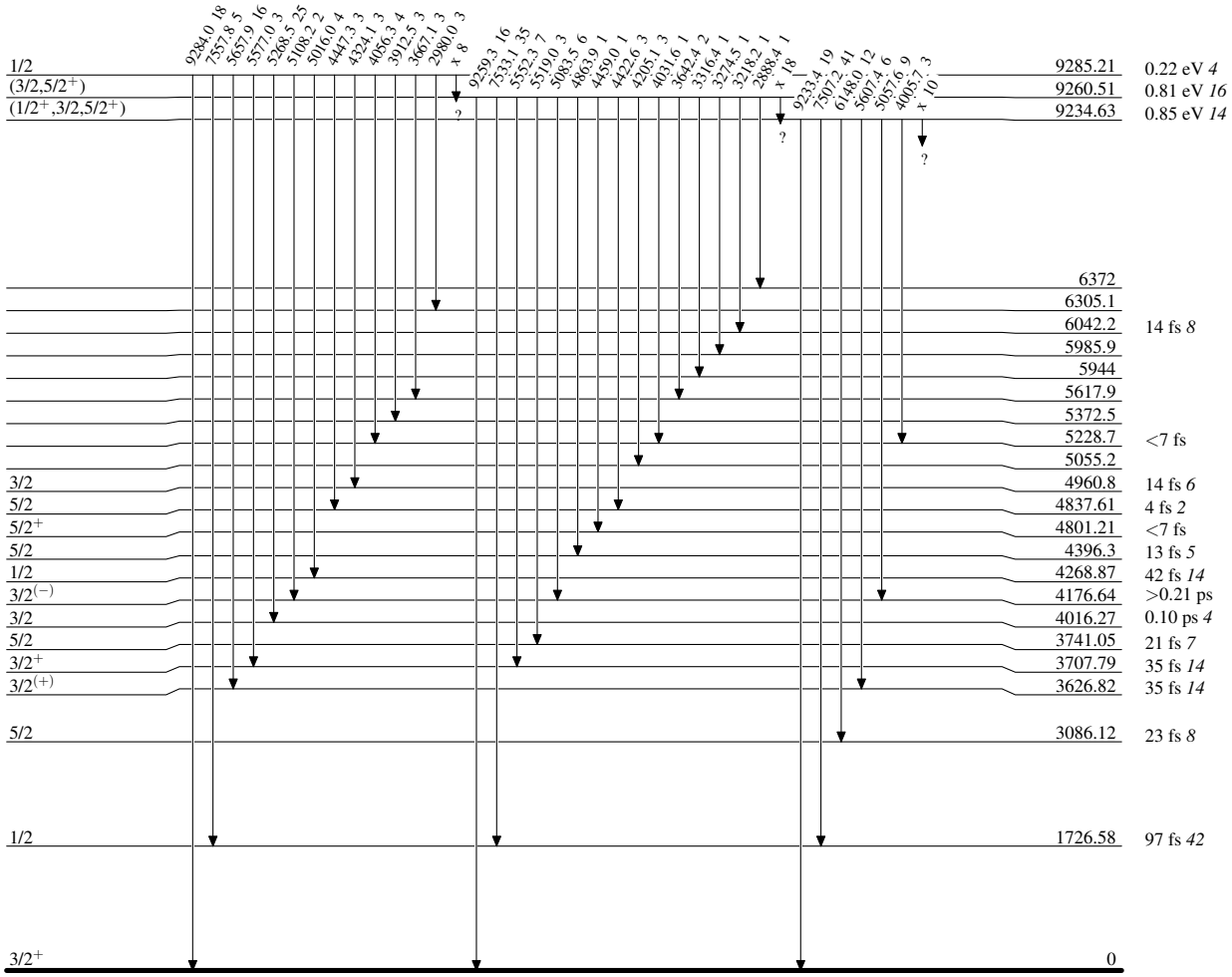


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

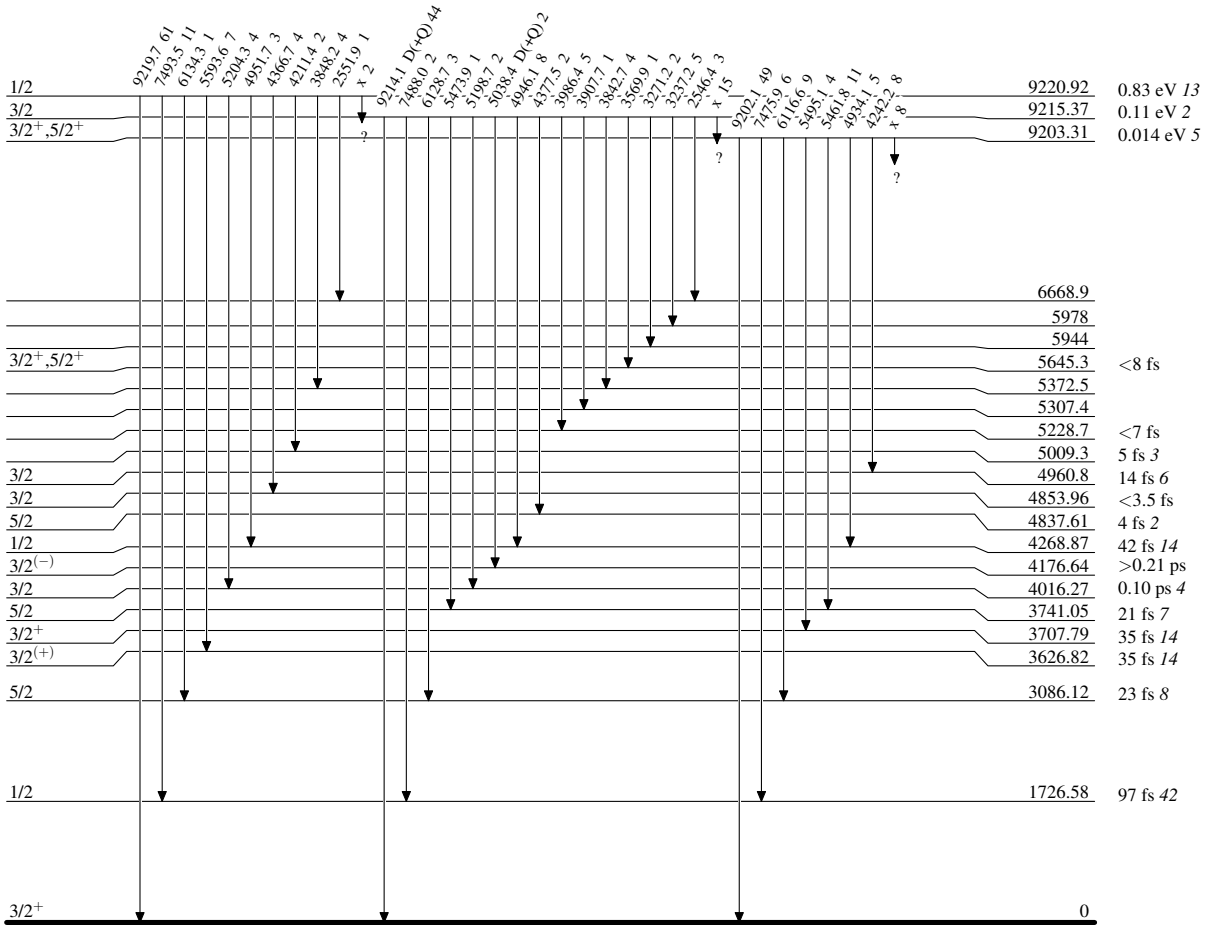


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

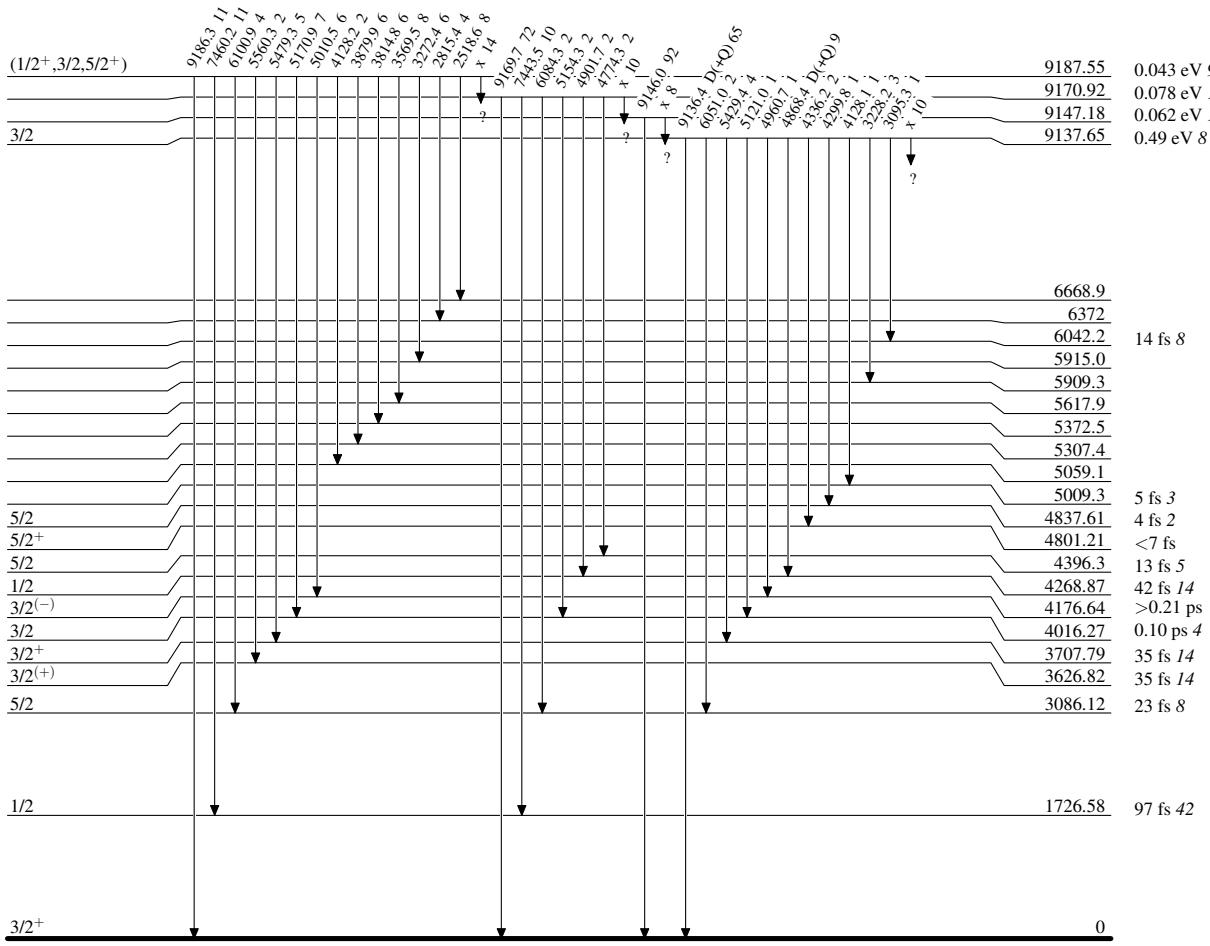


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

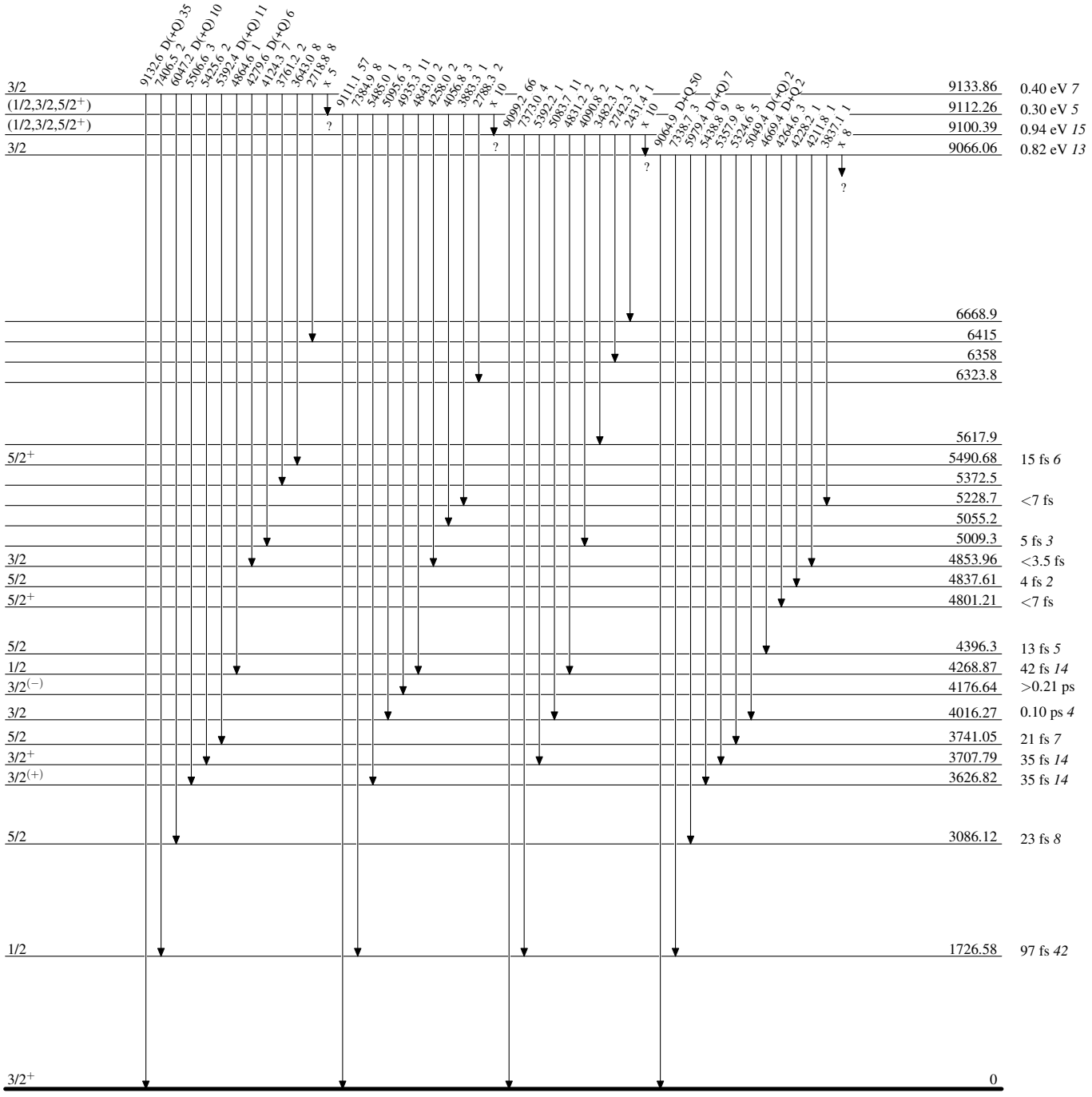


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

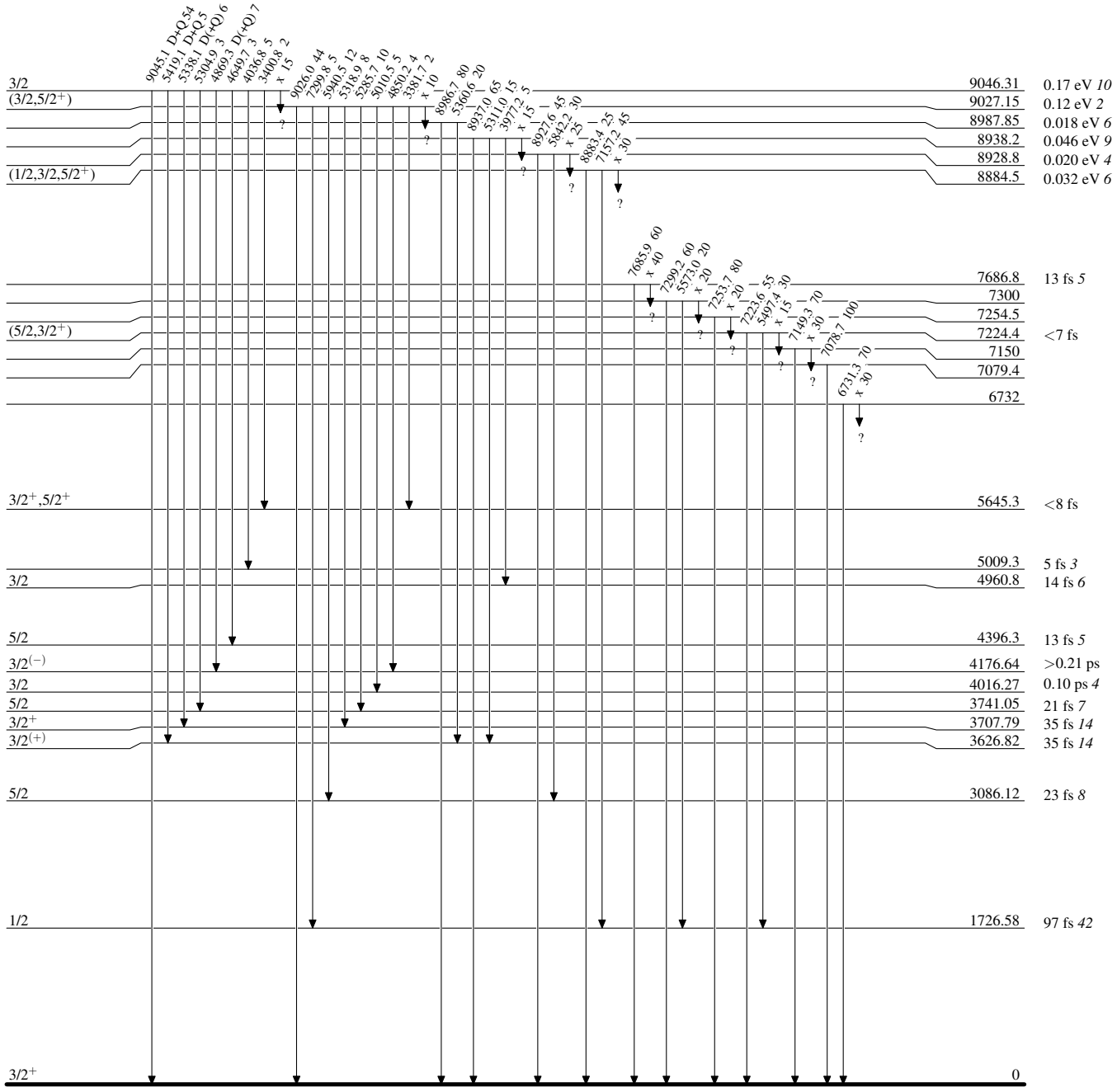


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

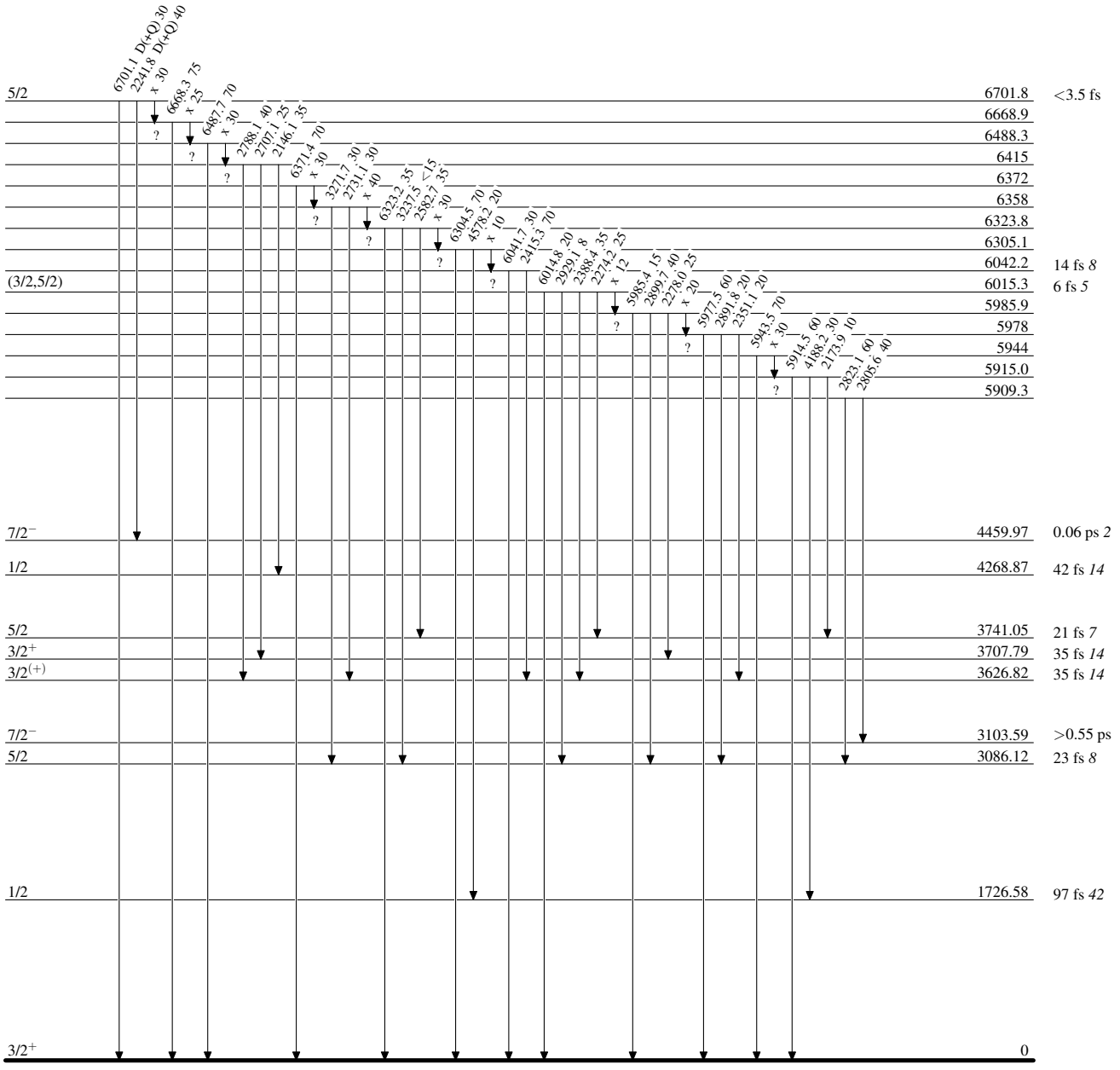


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

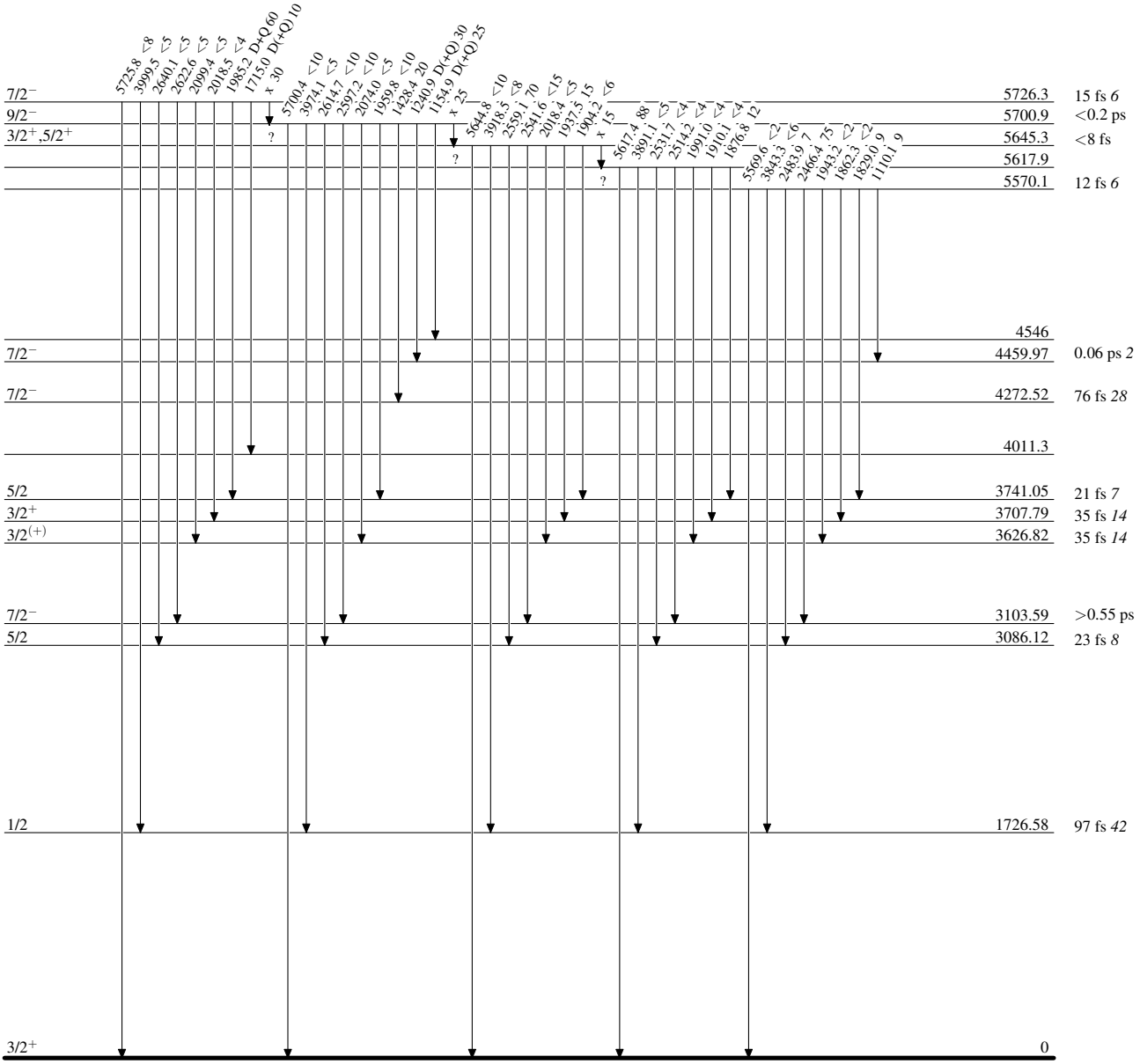


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

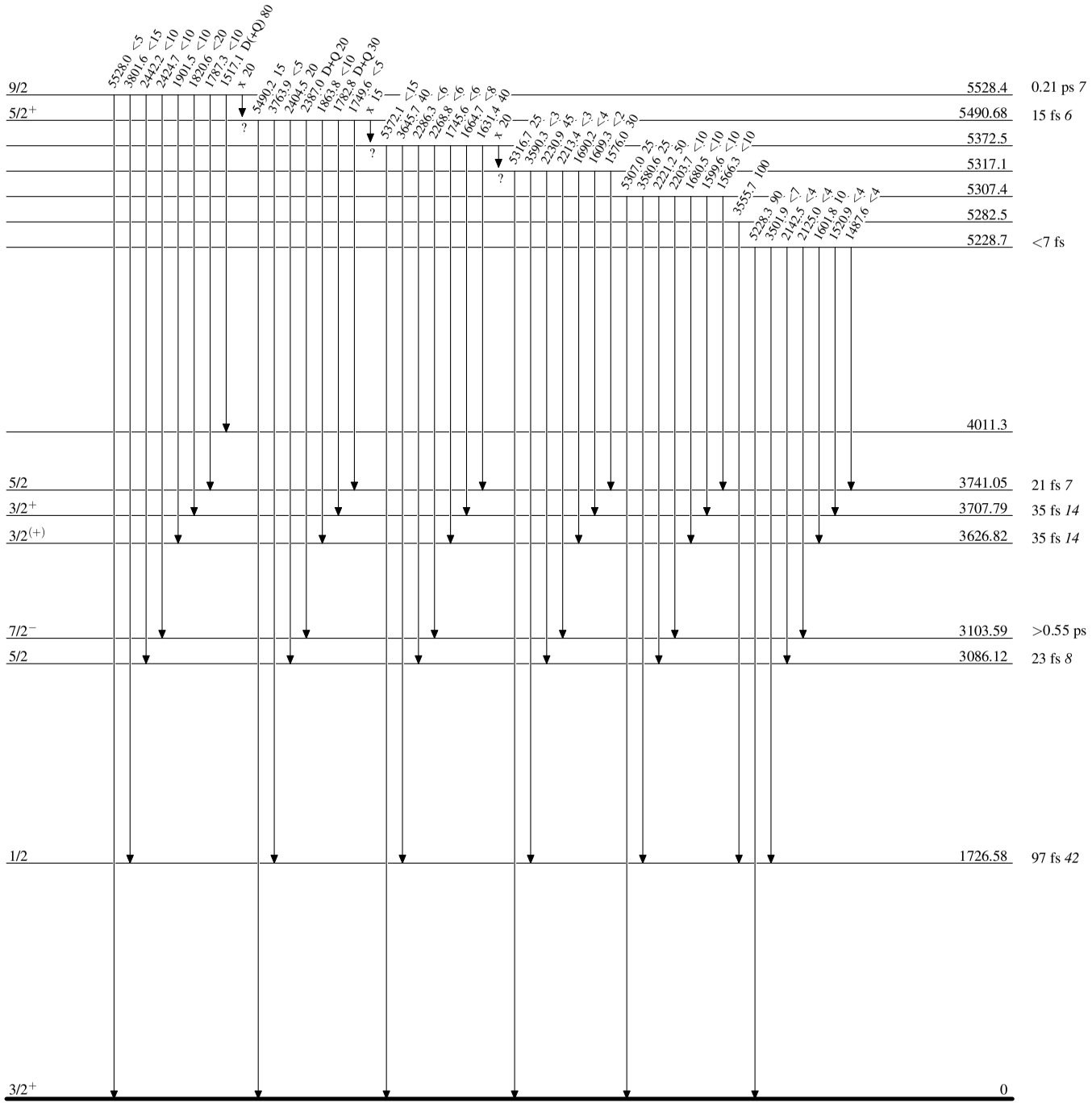
Intensities: % photon branching from each level



^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

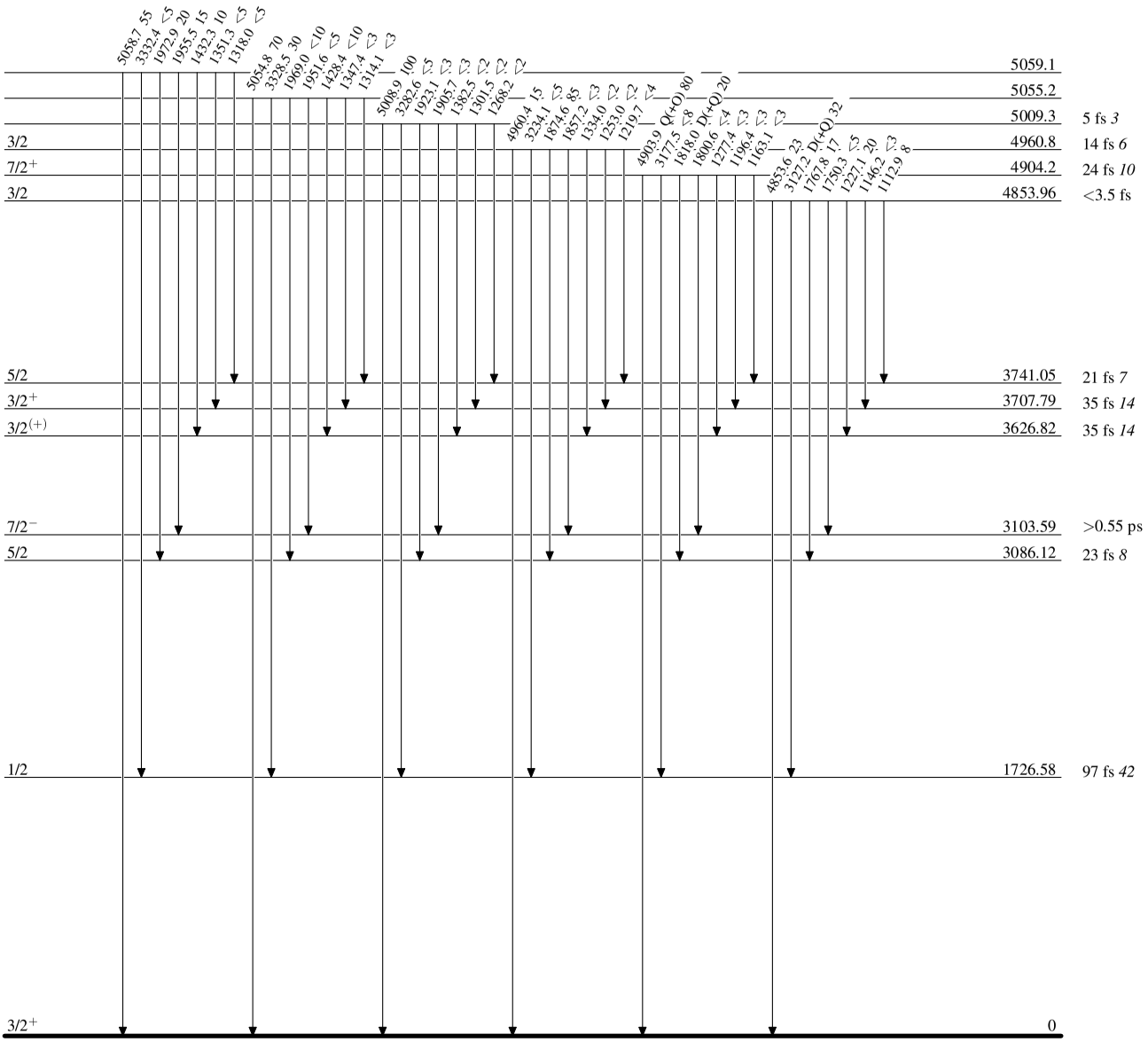
Intensities: % photon branching from each level



^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level

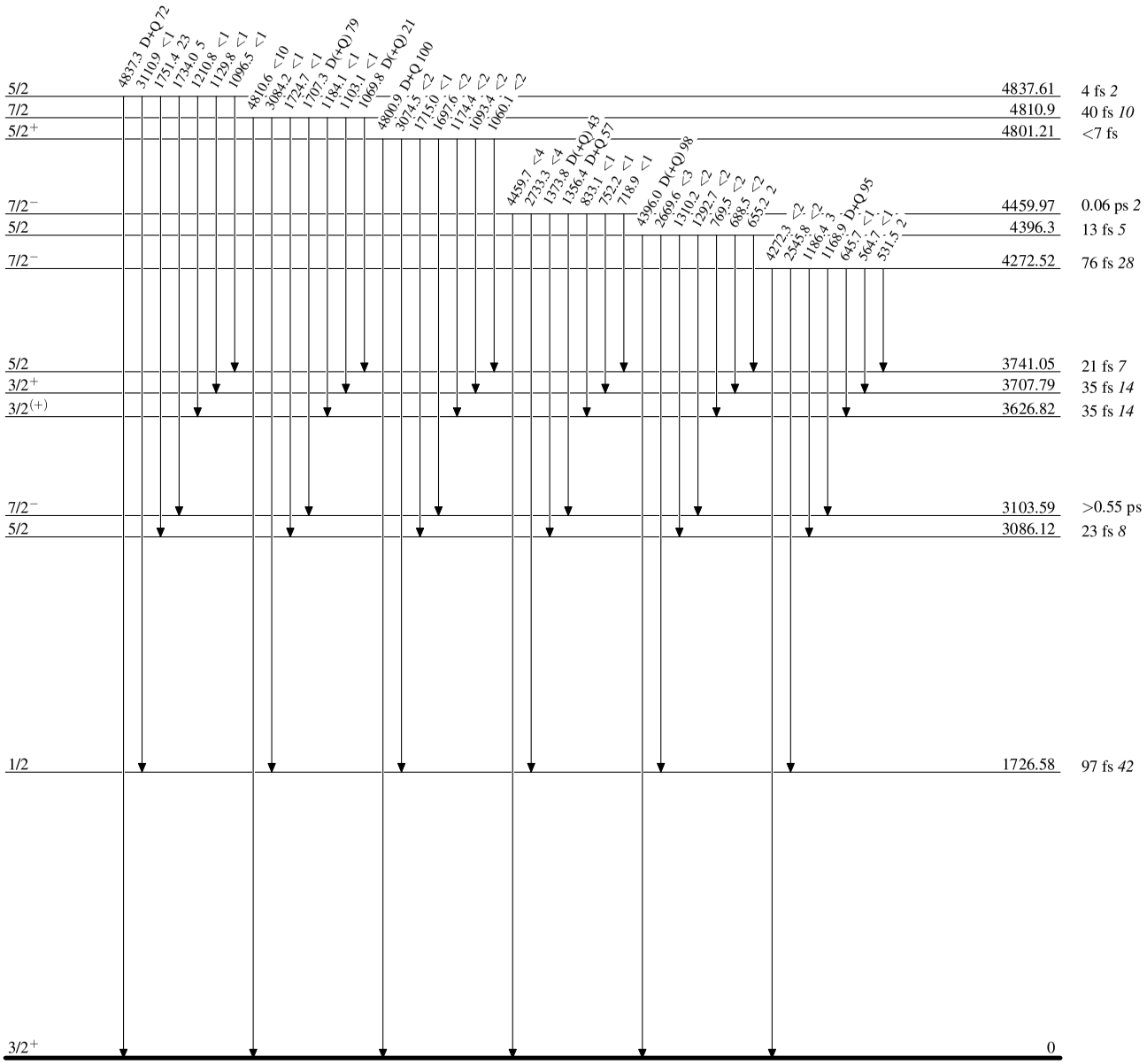


$^{37}_{17}Cl_{20}$

^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

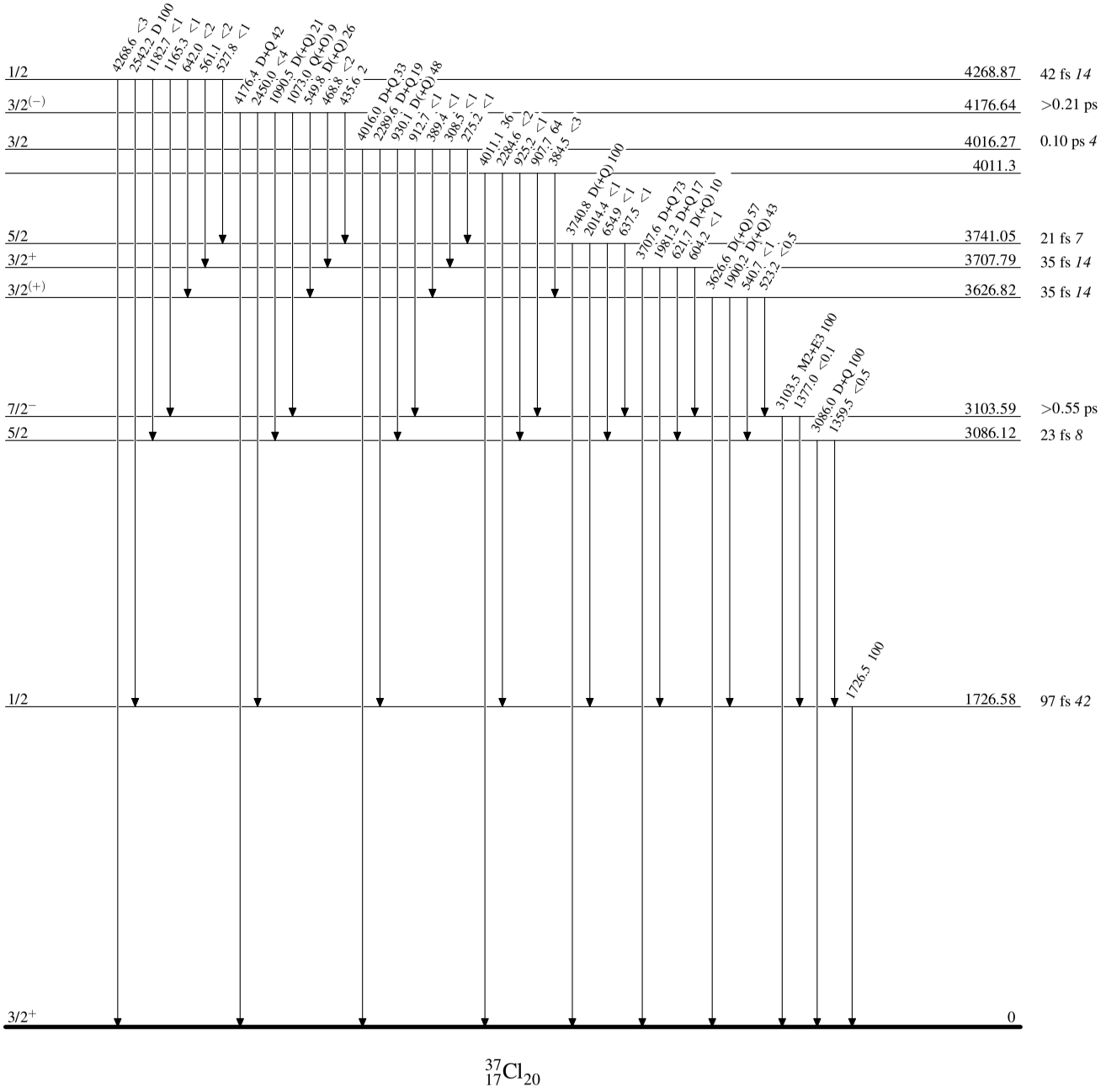
Intensities: % photon branching from each level



^{36}S(p,γ),(p,p) 1984No05,1984No06

Level Scheme (continued)

Intensities: % photon branching from each level



$^{37}_{17}Cl_{20}$