^{207}Pb(d,pγ),^{209}Bi(t,αγ)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. J. Martin	NDS 108,1583 (2007)	1-Jun-2007

(d,pγ).

1987Ju06 E=10 MeV. Data also quoted In 1990Tr01.

1993ScZQ see 1997Sc21.

1996Ra07 E=10 MeV. Authors′ data are presented In. ^{208}Pb(p,p′),^{207}Pb(d,pγ).

1997Ra17 revised data from 1996Ra07.

1997Sc21 E=10.0 MeV, FWHM(P)=107 keV.

Others:1970EaZZ,1970Ea03.

(t,αγ).

1989Ro04 E=11.5 MeV.

1997Sc21 E=11.5 MeV, FWHM(α)≤120 keV.

1997Sc21 report a single set of Eγ and Iγ data for the (d,pγ) and (t,αγ) reactions, all data are from these authors, except where noted otherwise. They also deduce spectroscopic factors for both reactions. The (d,pγ) values are deduced from the measured population of the levels and are compared with those from (d,p) data of 1973Vo11. The (t,αγ) values are deduced from αγ coincidence data normalized to values of 1987Gr21 In (d,^{3}He). 1996Ra07 studied both (p,p′γ) and (d,pγ), but also quote only one set of data. Data of these authors are given In (p,p′γ).

^{208}Pb Levels

E(level)†	Jπa	$T_{1/2}$b	Comments
0	0^+		
2614.527 *10*	3^-		
3197.721 *13*	5^-		
3475.076 *13*	4^-		
3708.48 *5*	5^-		
3919.96 *7*	6^-		
3946.59 *11*	4^-		
3961.11 *5*	5^-		
3995.55 *6*	4^-		
4037.49 *8*	7^-		
4051.16 *4*	3^-		
4085.43 *12*	2^+		
4125.42 *5*	5^-		
4180.17 *10*	5^-		
4206.16 *9*	6^-		
4229.59‡ *5*	2^-		
4254.84 *5*	3^-		
4261.97 *6*	4^-		
4296.67 *8*	5^-		
4323.89 *13*	4^+		
4358.75 *6*	4^-		
4383.22 *7*	6^-		
4423.60 *8*	6^+		
4480.69 *9*	6^-		
4610.76 *7*	8^+	3.2 ns *5*	
4680.28 *25*			E(level): considered tentative by the authors and proposed on the basis of the single 760γ seen In (n,n′γ) work of 1990Go33. The level is now well established.
4698.34 *4*	3^-		
4709.48# *23*	(5^-)		
4711.3# *7*	(4^-)		

Continued on next page (footnotes at end of table)

^{207}Pb(d,pγ),^{209}Bi(t,$\alpha\gamma$) (continued)

^{208}Pb Levels (continued)

E(level)[†]	J$^{\pi}$[a]	T$_{1/2}$[b]	Comments
4761.8[&] *3*	(6$^-$)		
4841.44[‡] *8*	1$^-$		
4857.5? *4*			E(level): suggested by the authors As questionable since it is based on only a single weak transition In (d,pγ). IT is not seen In any other reaction.
4860.80 *8*	8$^+$		
4867.79[‡&] *8*	7$^+$		
4870[‡] *3*	0$^+$		E(level): from 1987Ju06. See comment on 4870γ.
4895.24[#] *8*	10$^+$	0.50 μs *5*	
4937.51 *20*	3$^-$		
4953.28[@] *23*	3$^-$		
4974.00[‡] *4*	3$^-$		
5010.51[#] *9*	9$^+$		
5037.48[‡] *5*	2$^-$,3$^-$		
5069.35[#] *13*	10$^+$		
5075.77[#] *18*			
5085.52[#] *21*	(7$^-$)		
5093.08[#] *18*	8$^+$		
5127.39[‡&] *9*	2$^-$,3$^-$		
5134.7? *5*			E(level): suggested As questionable by the authors since the deexciting 2520γ is seen In (d,pγ) only As a shoulder on the much stronger 2513 peak. This level is not seen In any other reaction.
5162.07[#] *9*	9$^+$		
5193.36[#] *16*	5$^+$		
5195.30[#] *14*	7$^+$		
5212.96[#] *19*	6$^+$		
5216.3[#] *4*	4$^+$		
5239.4[#] *4*			E(level): In (n,n$'\gamma$), a 2626.5 *4* transition is seen from the 5241, 0$^+$ level to the 3$^-$ level. This energy is sufficiently different from the 2625.2 *5* transition seen here that this transition defines a different level. The transition to the 3$^-$ from the 0$^+$ level is not seen here.
5241 *3*	0$^+$		E(level): see comment on 5239 level.
5245.25[‡] *7*	3$^-$		
5254.12[‡] *15*			
5280.28[‡] *8*	0$^-$		
5291.97[‡] *14*	1$^-$		
5316.98[#] *22*	(3$^+$)		
5317.2[‡] *6*			
5339.43[#] *16*	8$^+$		
5347.10[‡] *23*	3$^-$		
5380.6[#] *8*			
5383.4[#] *10*			
5384.74[‡] *10*	2$^-$,3$^-$		
5482.0[#] *10*	5$^-$		
5490.29 *14*	6$^-$		
5512.1[‡] *3*	1$^-$		
5516.6[‡] *4*	3$^-$		
5536.62[#] *20*	10$^+$		
5543.01[#] *18*	7$^-$		

Continued on next page (footnotes at end of table)

^{207}Pb(d,pγ),^{209}Bi(t,αγ) (continued)

^{208}Pb Levels (continued)

E(level)†	Jπa	E(level)†	Jπa	E(level)†	Jπa	E(level)†	Jπa
5545.43# *11*	5^-	5846.1 *11*		6263.4‡ *3*	1^-	6820.2‡ *4*	2^+
5548.04‡ *20*		5873.50‡ *10*	3^-	6274.2‡ *3*	3^-	6897.6‡ *4*	
5563.54‡ *14*	3^-,4^-	5885.20 *19*		6313.7‡ *3*	1^-	6920.7‡ *8*	
5566.0‡ *6*		5923.69‡ *5*	2^-	6340# *5*		6929.6‡ *5*	2^-
5599.34‡ *8*	0^-	5928.0# *3*	10^+	6354.6‡ *4*		6969.5‡ *5*	
5641.1‡ *5*		5947.5‡ *5*	1^-	6360.4‡ *4*	1^-	7001.1‡ *4*	
5649.6# *3*	(5^-)	5965.9‡ *6*		6485.9‡ *4*	1^-,2^-	7020.2‡ *4*	1^-,3^-
5675.2# *3*	(4^-)	5968.57‡ *6*	4^-	6535# *5*		7063.4‡ *5*	1^-
5686.8# *6*	6^-	5972.9‡ *4*	2^+	6545.2‡ *11*		7080.6‡ *20*	1^-,2^-
5690.0# *3*	4^+	5992.6‡ *3*	6^+	6552.26‡ *20*		7137.3‡ *4*	
5695.1# *5*	7^-	6009.58‡ *10*	3^-	6617.2‡ *4*	3^-	7196.6‡ *10*	3^-
5715.9@ *9*	(2^+)	6026.0‡ *6*		6658.4‡ *4*	4^+	7206.9‡ *5*	
5777.86 *11*	3^-	6086.66‡ *5*	$(2)^-$	6682.62‡ *19*	5^-	7216# *5*	
5782.0‡ *6*		6099.9‡ *4*		6699.80‡ *24*	1^-,3^-	7238.7‡ *6*	1^-
5799.3‡ *5*		6104.1‡ *6*		6716.2‡ *4*		7264.3‡ *10*	3^-,4^-
5805.9‡ *9*	1	6147.9‡ *8*		6766.6‡ *10*		7315.4‡ *20*	2^+,3^+
5813.17‡ *17*	3^-,4^-	6242.4‡ *9*		6773.4‡ *15*		7332.4‡ *8*	1^-
5826.2# *5*	(8^+)	6251# *5*		6789.1‡ *6*	2^-	7389.0‡ *10*	1^-,3^-

† Except where noted otherwise, all levels have been directly populated In both (d,pγ) and (t,αγ), that is, the deduced spectroscopic factors are >0. Note, however, that In (t,αγ) gammas were recorded only up to 4 MeV, so levels that decay only via transitions with Eγ>4 MeV would not have been seen, even if they could Be populated In that reaction.

‡ Populated directly In (d,pγ).

Populated directly In (t,αγ).

@ Populated indirectly In (d,pγ).

& Populated indirectly In (t,pγ).

a From Adopted Levels.

b From 1989Ro04 (same group As 1997Sc21) based on Ag(t).

γ(^{208}Pb)

E_i(level)	J_i^π	E_γ†	I_γ‡	E_f	J_f^π
2614.527	3^-	2614.51 *1*		0	0^+
3197.721	5^-	583.19 *1*		2614.527	3^-
3475.076	4^-	277.35 *1*	34.7 *13*	3197.721	5^-
		860.55 *1*	65.3 *21*	2614.527	3^-
3708.48	5^-	233.1 *3*	1.8 *6*	3475.076	4^-
		510.70 *7*	95 *5*	3197.721	5^-
		1093.95 *24*	3.0 *9*	2614.527	3^-
3919.96	6^-	211.45 *20*	45 *4*	3708.48	5^-
		722.21 *10*	55 *6*	3197.721	5^-
3946.59	4^-	238.13 *15*	16.7 *12*	3708.48	5^-
		471.6 *4*	17.4 *13*	3475.076	4^-
		748.93 *15*	66 *5*	3197.721	5^-
3961.11	5^-	252.58 *10*	29.8 *21*	3708.48	5^-
		486.0 *10*	1.6 *6*	3475.076	4^-

Continued on next page (footnotes at end of table)

^{207}Pb(d,pγ),^{209}Bi(t,$\alpha\gamma$) (continued)

γ(^{208}Pb) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π	Mult.	Comments
3961.11	5^-	763.39 *5*	69 *5*	3197.721	5^-		
3995.55	4^-	797.91 *11*	18 *4*	3197.721	5^-		
		1380.98 *8*	82 *20*	2614.527	3^-		
4037.49	7^-	117.51 *20*	12 *4*	3919.96	6^-		
		839.74 *10*	88 *14*	3197.721	5^-		
4051.16	3^-	576.06 *10*	15.5 *15*	3475.076	4^-		
		1436.63 *5*	84 *5*	2614.527	3^-		
4085.43	2^+	4085.4 *3*		0	0^+		E_γ: the authors take Eγ from 1986Ma17 where the value came from (n,n$'\gamma$).
4125.42	5^-	164.34 *20*	3.7 *5*	3961.11	5^-		
		179.5 *6*	0.71 *20*	3946.59	4^-		
		416.89 *20*	3.7 *8*	3708.48	5^-		
		650.30 *10*	15 *3*	3475.076	4^-		
		927.69 *5*	77 *9*	3197.721	5^-		
4180.17	5^-	705.18 *23*	16 *4*	3475.076	4^-		
		982.43 *11*	84 *9*	3197.721	5^-		
4206.16	6^-	498.03 *25*	17.8 *24*	3708.48	5^-		
		1008.37 *10*	82 *6*	3197.721	5^-		
4229.59	2^-	1614.98 *10*	89 *9*	2614.527	3^-		
		4229.4 *3*	11 *3*	0	0^+	M2	Mult.: deduced by the evaluator from Iγ and Ice(K) relative to the 4084 E2 transition from a figure In 1984JuZZ.
4254.84	3^-	779.2 *4*	3.8 *10*	3475.076	4^-		
		1640.30 *15*	96 *7*	2614.527	3^-		
4261.97	4^-	553.50 *10*	22.4 *19*	3708.48	5^-		
		786.84 *10*	27.0 *22*	3475.076	4^-		
		1064.35 *20*	2.1 *3*	3197.721	5^-		
		1647.45 *20*	48 *4*	2614.527	3^-		
4296.67	5^-	171.00 *20*	3.1 *8*	4125.42	5^-		
		588.2 *3*	58 *6*	3708.48	5^-		
		821.59 *10*	33 *4*	3475.076	4^-		
		1099.1 *3*	5.2 *16*	3197.721	5^-		
4323.89	4^+	362.5 *5*	12 *6*	3961.11	5^-		
		1126.29 *20*	88 *28*	3197.721	5^-		
4358.75	4^-	178.5 *5*	1.3 *7*	4180.17	5^-		
		362.8 *5*	1.7 *5*	3995.55	4^-		
		883.64 *8*	61 *6*	3475.076	4^-		
		1161.09 *10*	24 *4*	3197.721	5^-		
		1744.3 *4*	11.7 *17*	2614.527	3^-		
4383.22	6^-	176.8 *5*	0.80 *23*	4206.16	6^-		
		257.7 *5*	0.63 *23*	4125.42	5^-		
		463.20 *10*	4.8 *8*	3919.96	6^-		
		1185.53 *8*	94 *18*	3197.721	5^-		
4423.60	6^+	715.2 *3*	9.1 *23*	3708.48	5^-		
		1225.84 *10*	91 *29*	3197.721	5^-		
4480.69	6^-	771.6 *4*	6.0 *25*	3708.48	5^-		
		1282.98 *10*	94 *9*	3197.721	5^-		
4610.76	8^+	573.8 *5*	3.2 *8*	4037.49	7^-		
		1413.14 *10*	97 *9*	3197.721	5^-		
4680.28		760.32 *25*		3919.96	6^-		
4698.34	3^-	436.31 *9*	3.6 *3*	4261.97	4^-		
		443.57 *8*	16.8 *8*	4254.84	3^-		
		468.76 *7*	4.1 *4*	4229.59	2^-		
		612.88 *15*	0.69 *22*	4085.43	2^+		
		647.28 *17*	1.8 *4*	4051.16	3^-		
		702.86 *14*	1.68 *25*	3995.55	4^-		
		1223.29 *5*	40.9 *20*	3475.076	4^-		

Continued on next page (footnotes at end of table)

^{207}Pb(d,pγ),^{209}Bi(t,$\alpha\gamma$) (continued)

γ(^{208}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	δ	Comments
4698.34	3$^-$	1500.42 *13*	17.7 *11*	3197.721	5$^-$			
		2083.75 *11*	11.2 *12*	2614.527	3$^-$			
		4699.4 *8*	1.58 *19*	0	0$^+$			
4709.48	(5$^-$)	413.0 *10*	5 *3*	4296.67	5$^-$			
		714.0 *10*	4.7 *24*	3995.55	4$^-$			
		748.3 *5*	29 *4*	3961.11	5$^-$			
		1000.8 *4*	40 *6*	3708.48	5$^-$			
		1511.9 *4*	21 *4*	3197.721	5$^-$			
4711.3	(4$^-$)	1236.0 *10*	28 *3*	3475.076	4$^-$			
		2096.9 *10*	72 *20*	2614.527	3$^-$			
4761.8	(6$^-$)	1564.05 *25*		3197.721	5$^-$			
4841.44	1$^-$	4841.2 *4*		0	0$^+$			
4857.5?		772.0[&] *3*		4085.43	2$^+$			
4860.80	8$^+$	250.04 *5*	74 *8*	4610.76	8$^+$			
		823.30 *20*	26 *5*	4037.49	7$^-$			
4867.79	7$^+$	257.09 *9*	31 *5*	4610.76	8$^+$			
		386.7 *3*	20 *7*	4480.69	6$^-$			
		444.15 *10*	30 *6*	4423.60	6$^+$			
		484.6 *3*	10 *4*	4383.22	6$^-$			
		830.0 *4*	10 *4*	4037.49	7$^-$			
4870	0$^+$	4870 *3*		0	0$^+$	E0		E_γ,Mult.: from ce spectrum (1987Ju06). The authors′ energy value of 4866 *2* has been corrected to 4870 *3* (private communication to the evaluator from R. Julin, May, 2004) the E0 character is based on observation of strong ce lines with No corresponding photon transition. The data are from (p,p′γ) but the transition was also seen In (d,pγ). K/L=6.4 *9* (1990Tr01).
4895.24	10$^+$	284.48[#] *5*	[#]	4610.76	8$^+$			
4937.51	3$^-$	2323.5 *6*		2614.527	3$^-$			
4953.28	3$^-$	2338.74 *23*		2614.527	3$^-$			
4974.00	3$^-$	275.72 *24*	0.58 *23*	4698.34	3$^-$			
		615.7 *5*	0.64 *21*	4358.75	4$^-$			
		712.13 *25*	1.16 *22*	4261.97	4$^-$			
		719.11 *7*	7.0 *4*	4254.84	3$^-$			
		1265.0 *6*	1.3 *5*	3708.48	5$^-$			
		1499.01 *10*	8.0 *5*	3475.076	4$^-$			
		1776.18 *15*	39.9 *15*	3197.721	5$^-$			
		2359.45 *6*	40.6 *14*	2614.527	3$^-$			
		4974.0 *8*	0.92 *26*	0	0$^+$			
5010.51	9$^+$	115.20 *20*	3.6 *11*	4895.24	10$^+$			
		399.75 *5*	96 *7*	4610.76	8$^+$			
5037.48	2$^-$,3$^-$	807.90 *9*	3.8 *4*	4229.59	2$^-$			
		986.36 *10*	3.26 *21*	4051.16	3$^-$			
		1562.32 *10*	6.4 *5*	3475.076	4$^-$			
		2422.98 *8*	85 *6*	2614.527	3$^-$			
		5037.5 *6*	1.15 *15*	0	0$^+$			
5069.35	10$^+$	174.10[#] *10*	[#]	4895.24	10$^+$	M1(+E2)	<0.6	Mult.: 1989Ro04 determine α=2.4 *7* based on Iγ and Iα feeding the 5069 level.
5075.77		1367.0 *10*		3708.48	5$^-$			
5085.52	(7$^-$)	702.1 *10*	11 *4*	4383.22	6$^-$			
		879.3 *3*	89 *10*	4206.16	6$^-$			
5093.08	8$^+$	232.2 *3*	6.5 *24*	4860.80	8$^+$			
		482.35 *20*	93 *8*	4610.76	8$^+$			

Continued on next page (footnotes at end of table)

^{207}Pb(d,pγ),^{209}Bi(t,αγ) (continued)

γ(^{208}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Mult.	Comments
5127.39	$2^-,3^-$	1652.18 *17*	5.8 *7*	3475.076	4^-		
		2512.96 *10*	88 *3*	2614.527	3^-		
		5126.7 *7*	6.6 *7*	0	0^+		
5134.7?		2520.2[&] *5*		2614.527	3^-		
5162.07	9^+	151.50 *20*	25.2 *26*	5010.51	9^+		
		266.70 *20*	9.0 *16*	4895.24	10^+		
		301.25 *10*	11.8 *18*	4860.80	8^+		
		551.32 *5*	54 *5*	4610.76	8^+		
5193.36	5^+	769.82 *20*	45 *13*	4423.60	6^+		
		869.43 *20*	45 *5*	4323.89	4^+		
		1995.5 *5*	10 *4*	3197.721	5^-		
5195.30	7^+	327.44 *20*	14.3 *17*	4867.79	7^+		
		334.5 *4*	2.0 *7*	4860.80	8^+		
		584.4[&] *10*		4610.76	8^+		
		715.0 *6*	1.68 *17*	4480.69	6^-		
		771.73 *20*	76 *11*	4423.60	6^+		
		1275.5 *5*	5.7 *24*	3919.96	6^-		
5212.96	6^+	789.34 *20*	61 *5*	4423.60	6^+		
		2015.5 *5*	39 *8*	3197.721	5^-		
5216.3	4^+	892.4 *4*	24 *7*	4323.89	4^+		
		2602.0 *10*	76 *15*	2614.527	3^-		
5239.4		2625.2 *5*		2614.527	3^-		
5241	0^+	5241 *3*		0	0^+	E0	E_γ,Mult.: from ce spectrum (1987Ju06). The authors' energy value of 5237 *2* has been corrected to 5241 *3* (private communication to the evaluator from R. Julin, May, 2004) the E0 character is based on observation of strong ce lines with No corresponding photon transition. The data are from (p,p′γ) but the transition was also seen In (d,pγ).
5245.25	3^-	307.80 *20*	1.2 *5*	4937.51	3^-		
		921.8 *4*	1.4 *4*	4323.89	4^+		
		1193.9 *4*	1.7 *6*	4051.16	3^-		
		1770.5 *4*	5.5 *10*	3475.076	4^-		
		2630.76 *10*	90.1 *22*	2614.527	3^-		
5254.12		178.34 *10*	16 *4*	5075.77			
		1779.04 *15*	84 *10*	3475.076	4^-		
5280.28	0^-	438.83 *5*	21.6 *10*	4841.44	1^-		
		1050.74 *8*	78.4 *22*	4229.59	2^-		
5291.97	1^-	5291.79 *15*		0	0^+		
5316.98	(3^+)	993.16 *20*	80 *8*	4323.89	4^+		
		2702.0 *5*	20 *5*	2614.527	3^-		
5317.2		2119.5 *6*		3197.721	5^-		
5339.43	8^+	478.70 *20*	34[@] *4*	4860.80	8^+		
		728.59 *20*	53[@] *6*	4610.76	8^+		
		1302.0 *10*	13[@] *4*	4037.49	7^-		
5347.10	3^-	1295.8 *5*	16 *6*	4051.16	3^-		
		2732.59 *25*	84 *11*	2614.527	3^-		
5380.6		2766.1 *8*		2614.527	3^-		
5383.4		1387.8 *10*		3995.55	4^-		
5384.74	$2^-,3^-$	1155.09 *12*	34 *5*	4229.59	2^-		
		1333.48 *22*	10.1 *24*	4051.16	3^-		
		2770.45 *20*	44 *4*	2614.527	3^-		
		5384.5 *8*	11.8 *23*	0	0^+		
5482.0	5^-	2867.5 *10*		2614.527	3^-		
5490.29	6^-	1107.0 *5*	15.3 *25*	4383.22	6^-		

Continued on next page (footnotes at end of table)

^{207}Pb(d,pγ),^{209}Bi(t,αγ) (continued)

γ(^{208}Pb) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ [‡]	E_f	J_f^π
5490.29	6^-	1193.52 *20*	10.9 *17*	4296.67	5^-
		1283.5 *10*	6.4 *12*	4206.16	6^-
		1365.0 *5*	18.4 *24*	4125.42	5^-
		1529.0 *5*	13.9 *24*	3961.11	5^-
		1570.8 *5*	7.3 *16*	3919.96	6^-
		1781.5 *5*	12.8 *27*	3708.48	5^-
		2292.73 *25*	15 *4*	3197.721	5^-
5512.1	1^-	5512.0 *3*		0	0^+
5516.6	3^-	2902.3 *5*		2614.527	3^-
5536.62	10^+	467.30[#] *20*	19[#] *5*	5069.35	10^+
		641.3[#] *3*	81[#] *9*	4895.24	10^+
5543.01	7^-	457.45 *20*	12.3 *14*	5085.52	(7^-)
		1062.9 *5*	6.9 *11*	4480.69	6^-
		1119.1 *10*	2.9 *12*	4423.60	6^+
		1159.6 *3*	43 *4*	4383.22	6^-
		1336.5 *5*	18.3 *21*	4206.16	6^-
		1505.9 *5*	10.8 *19*	4037.49	7^-
		1623.2 *5*	6.1 *19*	3919.96	6^-
5545.43	5^-	1248.5 *5*	4.9 *10*	4296.67	5^-
		1283.48 *10*	13.0 *26*	4261.97	4^-
		1420.3 *5*	11.3 *23*	4125.42	5^-
		1583.8 *5*	7.5 *26*	3961.11	5^-
		1599.1 *5*	11.3 *17*	3946.59	4^-
		1836.6 *5*	30 *4*	3708.48	5^-
		2347.0 *10*	22 *5*	3197.721	5^-
5548.04		2933.49 *20*		2614.527	3^-
5563.54	$3^-,4^-$	2948.99 *14*		2614.527	3^-
5566.0		2090.3 *10*		3475.076	4^-
5599.34	0^-	757.93 *7*	33 *4*	4841.44	1^-
		1369.72 *7*	67 *6*	4229.59	2^-
5641.1		5641.0 *5*		0	0^+
5649.6	(5^-)	1387.4 *10*	12 *3*	4261.97	4^-
		1523.8 *10*	27 *5*	4125.42	5^-
		1654.2 *5*	20 *4*	3995.55	4^-
		2451.3 *8*	33 *5*	3197.721	5^-
		3034.5 *10*	8.4 *26*	2614.527	3^-
5675.2	(4^-)	1317.0 *10*	3.6 *15*	4358.75	4^-
		1413.0 *10*	7.3 *15*	4261.97	4^-
		1420.0 *10*	16 *3*	4254.84	3^-
		3060.6 *3*	73 *7*	2614.527	3^-
5686.8	6^-	1561.0 *10*	33 *9*	4125.42	5^-
		1726.0 *10*	35 *11*	3961.11	5^-
		1767.0 *10*	31 *6*	3919.96	6^-
5690.0	4^+	3075.4 *3*		2614.527	3^-
5695.1	7^-	1775.1 *5*		3919.96	6^-
5715.9	(2^+)	5715.8 *9*		0	0^+
5777.86	3^-	1523.03 *15*	12.7 *16*	4254.84	3^-
		1726.66 *17*	11.9 *18*	4051.16	3^-
		3163.5 *3*	72 *6*	2614.527	3^-
		5777.2 *6*	3.6 *8*	0	0^+
5782.0		1398.8 *6*		4383.22	6^-
5799.3		2324.2 *5*		3475.076	4^-
5805.9	1	5805.8 *9*		0	0^+
5813.17	$3^-,4^-$	2338.18 *26*	46 *6*	3475.076	4^-
		3198.55 *21*	54 *6*	2614.527	3^-

Continued on next page (footnotes at end of table)

^{207}Pb(d,pγ),^{209}Bi(t,$\alpha\gamma$) (continued)

γ(^{208}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	Comments
5826.2	(8$^+$)	1215.4 *5*		4610.76	8$^+$	
5846.1		5846.0 *11*		0	0$^+$	
5873.50	3$^-$	2398.41 *10*		3475.076	4$^-$	
5885.20		1588.5 *5*	13 *6*	4296.67	5$^-$	
		3270.65 *20*	87 *9*	2614.527	3$^-$	
5923.69	2$^-$	631.3 *3*	1.03 *19*	5291.97	1$^-$	
		678.50 *8*	8.6 *4*	5245.25	3$^-$	
		796.7 *4*	1.10 *19*	5127.39	2$^-$,3$^-$	
		886.35 *25*	2.22 *25*	5037.48	2$^-$,3$^-$	
		949.69 *6*	27.9 *9*	4974.00	3$^-$	
		1225.41 *7*	27.4 *13*	4698.34	3$^-$	
		1668.58 *20*	7.4 *5*	4254.84	3$^-$	
		1694.08 *17*	3.0 *3*	4229.59	2$^-$	
		1872.43 *8*	14.6 *8*	4051.16	3$^-$	
		3309.09 *21*	3.8 *5*	2614.527	3$^-$	
		5922.5 *10*	3.1 *6*	0	0$^+$	
5928.0	10$^+$	858.4[#] *4*	35[#] *13*	5069.35	10$^+$	
		1033.0[#] *4*	65[#] *8*	4895.24	10$^+$	
5947.5	1$^-$	5947.1 *5*		0	0$^+$	
5965.9		749.6 *4*		5216.3	4$^+$	
5968.57	4$^-$	1644.1 *8*	0.7 *4*	4323.89	4$^+$	
		1762.6 *3*	2.42 *23*	4206.16	6$^-$	
		2260.02 *8*	24.7 *15*	3708.48	5$^-$	
		2770.88 *8*	72 *4*	3197.721	5$^-$	
5972.9	2$^+$	1648.5 *5*	29 *10*	4323.89	4$^+$	
		5973.5 *8*	71 *17*	0	0$^+$	
5992.6	6$^+$	779.8 *5*	13 *6*	5212.96	6$^+$	
		797.4 *5*	16 *6*	5195.30	7$^+$	
		1511.6 *6*	20 *6*	4480.69	6$^-$	
		1609.3 *6*	22 *7*	4383.22	6$^-$	
		2795.0 *6*	30 *8*	3197.721	5$^-$	E_γ,I_γ: this transition is missing In 1997Sc21 but is included In 1993ScZQ. Note that the branchings for this level In 1997Sc21 do not add up to 100% without this missing transition.
6009.58	3$^-$	1685.8 *4*	9.2 *14*	4323.89	4$^+$	
		1924.19 *20*	21 *3*	4085.43	2$^+$	
		2534.47 *10*	70 *7*	3475.076	4$^-$	
6026.0		2030.4 *6*		3995.55	4$^-$	
6086.66	(2)$^-$	841.40 *20*	2.17 *23*	5245.25	3$^-$	
		959.5 *3*	1.05 *23*	5127.39	2$^-$,3$^-$	
		1112.64 *8*	11.9 *9*	4974.00	3$^-$	
		1388.28 *7*	22.9 *11*	4698.34	3$^-$	
		1831.84 *10*	17.3 *14*	4254.84	3$^-$	
		1856.99 *11*	12.0 *11*	4229.59	2$^-$	
		2035.58 *10*	23.0 *14*	4051.16	3$^-$	
		3472.4 *4*	8.4 *11*	2614.527	3$^-$	
6099.9		860.50 *6*	69 *19*	5239.4		
		1802.8 *5*	31 *13*	4296.67	5$^-$	
6104.1		538.0 *4*	61 *16*	5566.0		
		1807.6 *6*	39 *18*	4296.67	5$^-$	
6147.9		2672.8 *8*		3475.076	4$^-$	
6242.4		3627.8 *9*		2614.527	3$^-$	
6251		3636 *5*		2614.527	3$^-$	
6263.4	1$^-$	6263.3 *3*		0	0$^+$	
6274.2	3$^-$	757.8 *4*	12 *4*	5516.6	3$^-$	
		2278.3 *5*	21 *4*	3995.55	4$^-$	

Continued on next page (footnotes at end of table)

^{207}Pb(d,pγ),^{209}Bi(t,$\alpha\gamma$) (continued)

γ(^{208}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π	E_i(level)	J_i^π	E_γ[†]	I_γ[‡]	E_f	J_f^π
6274.2	3^-	3659.7 *4*	66 *11*	2614.527	3^-	6789.1	2^-	4174.5 *6*		2614.527	3^-
6313.7	1^-	6313.6 *3*		0	0^+	6820.2	2^+	872.2 *7*	54 *36*	5947.5	1^-
6340		3725 *5*		2614.527	3^-			2873.8 *4*	46 *10*	3946.59	4^-
6354.6		2303.4 *4*		4051.16	3^-	6897.6		2188.1 *5*	34 *9*	4709.48	(5^-)
6360.4	1^-	6360.3 *4*		0	0^+			2668.1 *5*	66 *11*	4229.59	2^-
6485.9	$1^-,2^-$	512.98 *25*	14 *4*	5972.9	2^+	6920.7		4306.1 *8*		2614.527	3^-
		3871.7 *7*	15 *9*	2614.527	3^-	6929.6	2^-	4315.0 *5*		2614.527	3^-
		6485.9 *12*	71 *6*	0	0^+	6969.5		3771.7 *5*		3197.721	5^-
6535		3920 *5*		2614.527	3^-	7001.1		3803.3 *4*		3197.721	5^-
6545.2		3930.6 *11*		2614.527	3^-	7020.2	$1^-,3^-$	1052.3 *6*	16 *5*	5968.57	4^-
6552.26		3937.69 *20*		2614.527	3^-			2660.3 *6*	42 *8*	4358.75	4^-
6617.2	3^-	2436.8 *5*	34 *7*	4180.17	5^-			2696.7 *7*	19 *5*	4323.89	4^+
		4002.8 *5*	66 *13*	2614.527	3^-			2758.6 *7*	23 *6*	4261.97	4^-
6658.4	4^+	2478.7 *5*	25 *6*	4180.17	5^-	7063.4	1^-	7063.3 *5*		0	0^+
		4043.4 *5*	75 *11*	2614.527	3^-	7080.6	$1^-,2^-$	7080.5 *20*		0	0^+
6682.62	5^-	2324.2 *5*	32 *8*	4358.75	4^-	7137.3		4522.7 *4*		2614.527	3^-
		2974.10 *20*	17 *4*	3708.48	5^-	7196.6	3^-	4582.0 *10*		2614.527	3^-
		4067.5 *8*	51 *8*	2614.527	3^-	7206.9		7206.8 *5*		0	0^+
6699.80	$1^-,3^-$	1049.9 *4*	16 *4*	5649.6	(5^-)	7216		4018 *5*		3197.721	5^-
		2470.1 *6*	15 *5*	4229.59	2^-	7238.7	1^-	7238.6 *6*		0	0^+
		4085.4 *3*	70 *5*	2614.527	3^-	7264.3	$3^-,4^-$	4066.5 *10*		3197.721	5^-
6716.2		6716.1 *4*		0	0^+	7315.4	$2^+,3^+$	7315.3 *20*		0	0^+
6766.6		4152.0 *10*		2614.527	3^-	7332.4	1^-	7332.3 *8*		0	0^+
6773.4		6773.3 *15*		0	0^+	7389.0	$1^-,3^-$	3913.9 *10*		3475.076	4^-

[†] From 1997Sc21. The data have been adjusted by the evaluator to correct for a new value for the 2614γ. The authors′ value of 2614.55 *1* has been adjusted to 2614.511 *10* (2000He14). The authors′ value for the other calibration standard, 583.187 *2* needs No adjustment. The evaluator has applied a linear correction with the two energies mentioned held fixed.

[‡] Values are percent branchings from each level, deduced from pγ and $\alpha\gamma$ coincidences. Data are from 1997Sc21.

[#] From 1989Ro04.

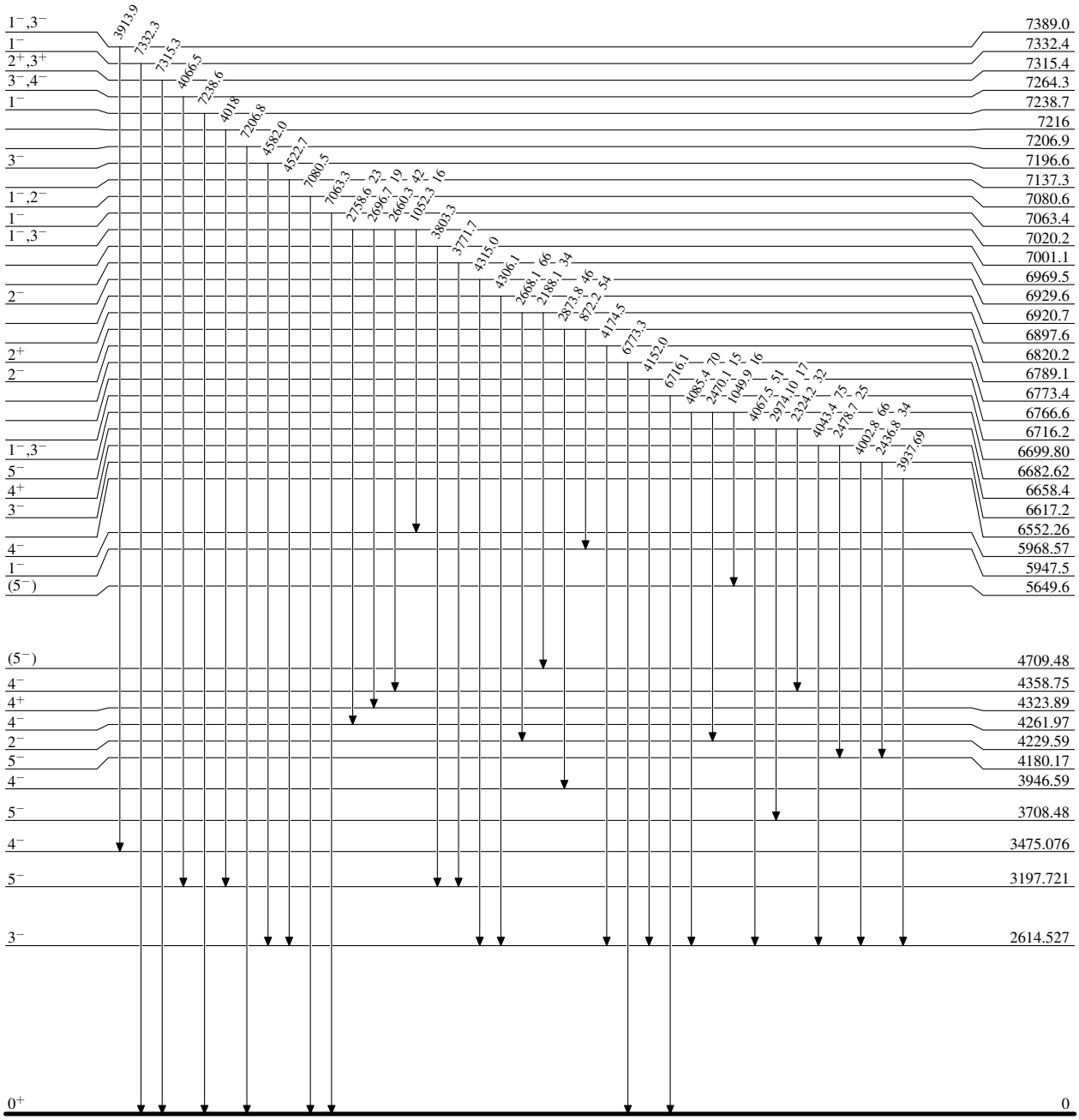
[@] See comment In Adopted Gammas on branching from the 5339 level.

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

^{207}Pb(d,pγ),^{209}Bi(t,$\alpha\gamma$)

Level Scheme

Intensities: % photon branching from each level

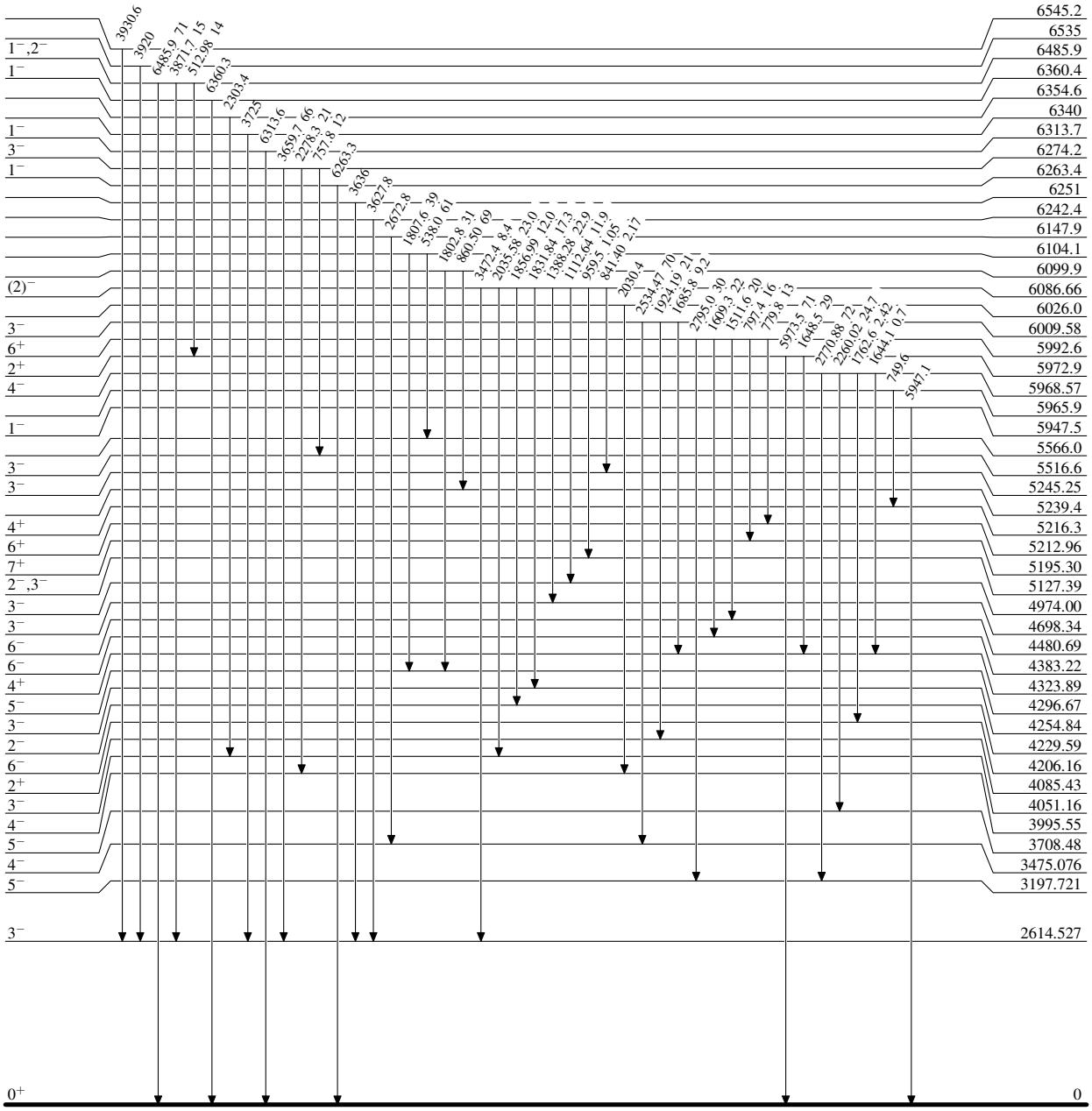


$^{208}_{82}Pb_{126}$

^{207}Pb(d,pγ),^{209}Bi(t,$\alpha\gamma$)

Level Scheme (continued)

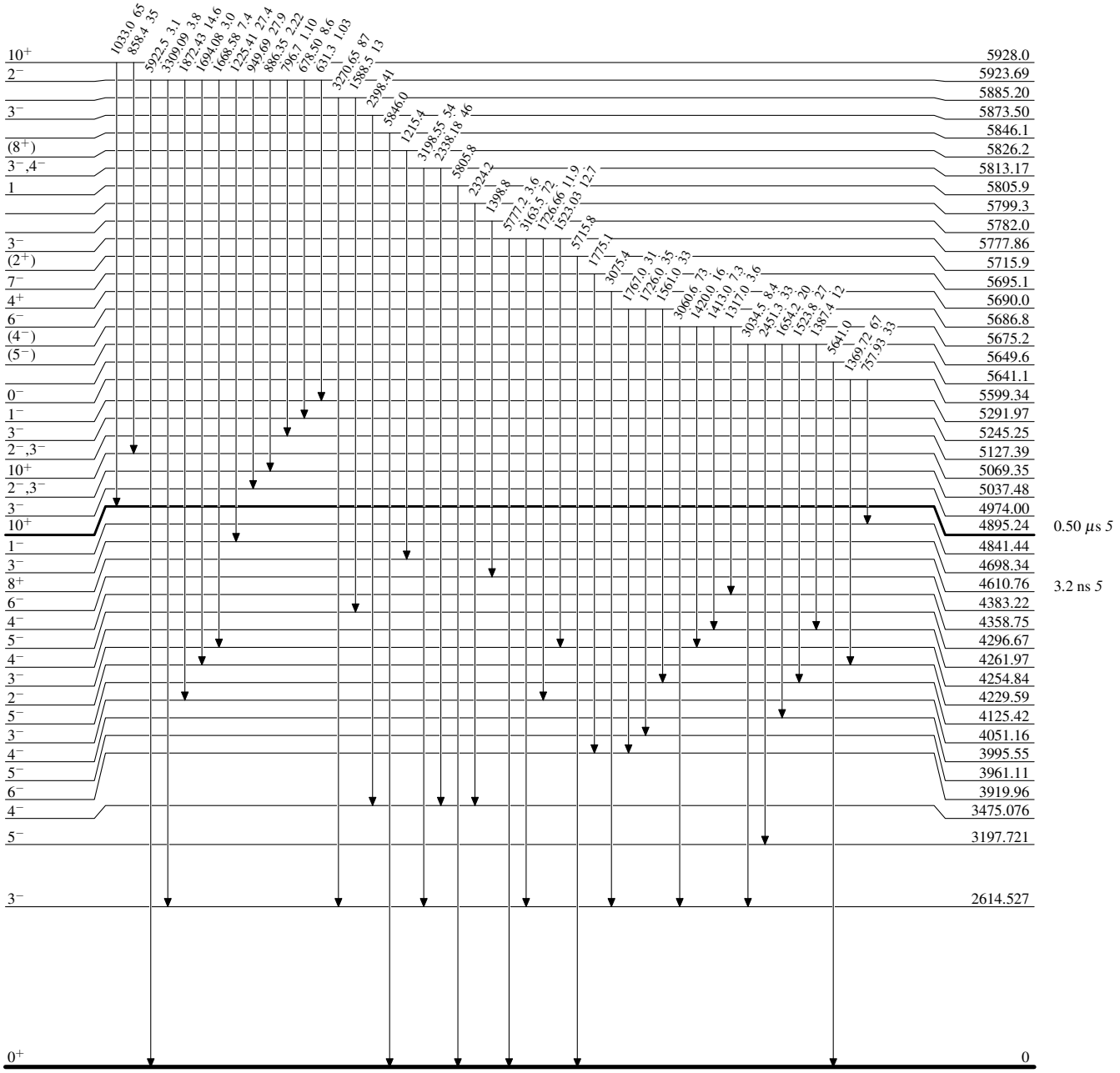
Intensities: % photon branching from each level



^{207}Pb(d,pγ),^{209}Bi(t,$\alpha\gamma$)

Level Scheme (continued)

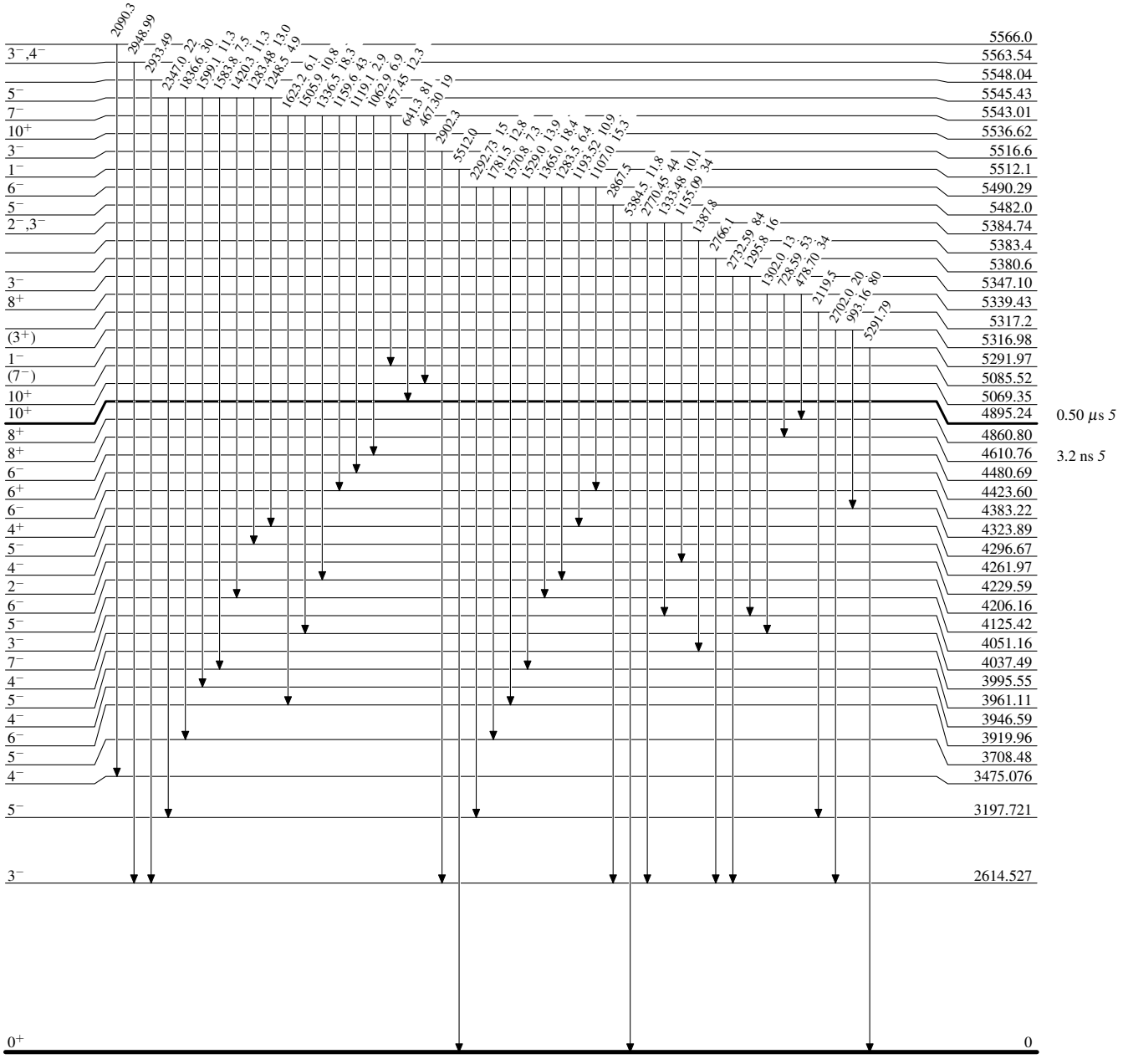
Intensities: % photon branching from each level



^{207}Pb(d,pγ),^{209}Bi(t,$\alpha\gamma$)

Level Scheme (continued)

Intensities: % photon branching from each level



$^{208}_{82}Pb_{126}$

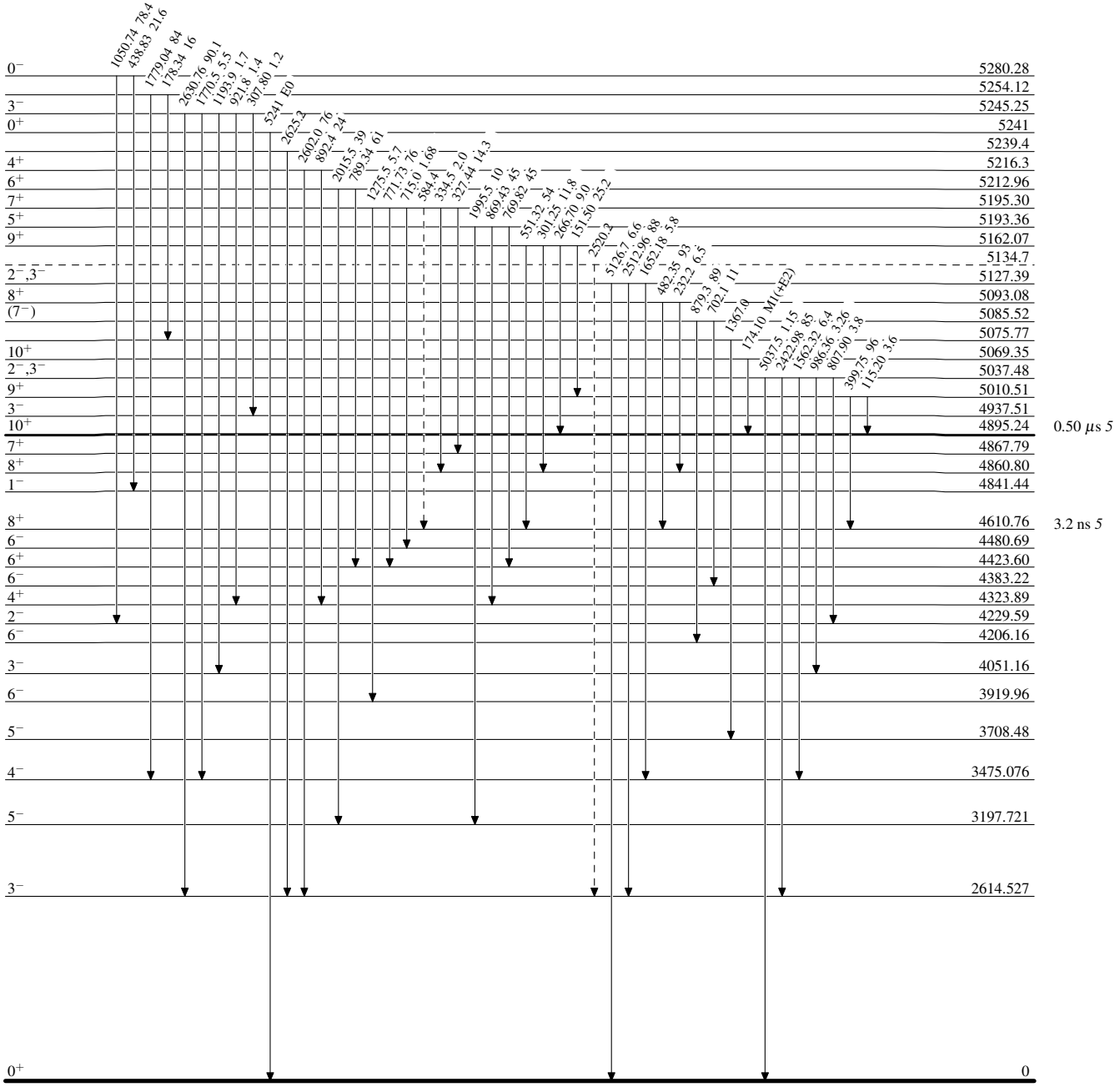
^{207}Pb(d,pγ),^{209}Bi(t,$\alpha\gamma$)

Legend

Level Scheme (continued)

Intensities: % photon branching from each level

γ Decay (Uncertain)



$^{208}_{82}Pb_{126}$

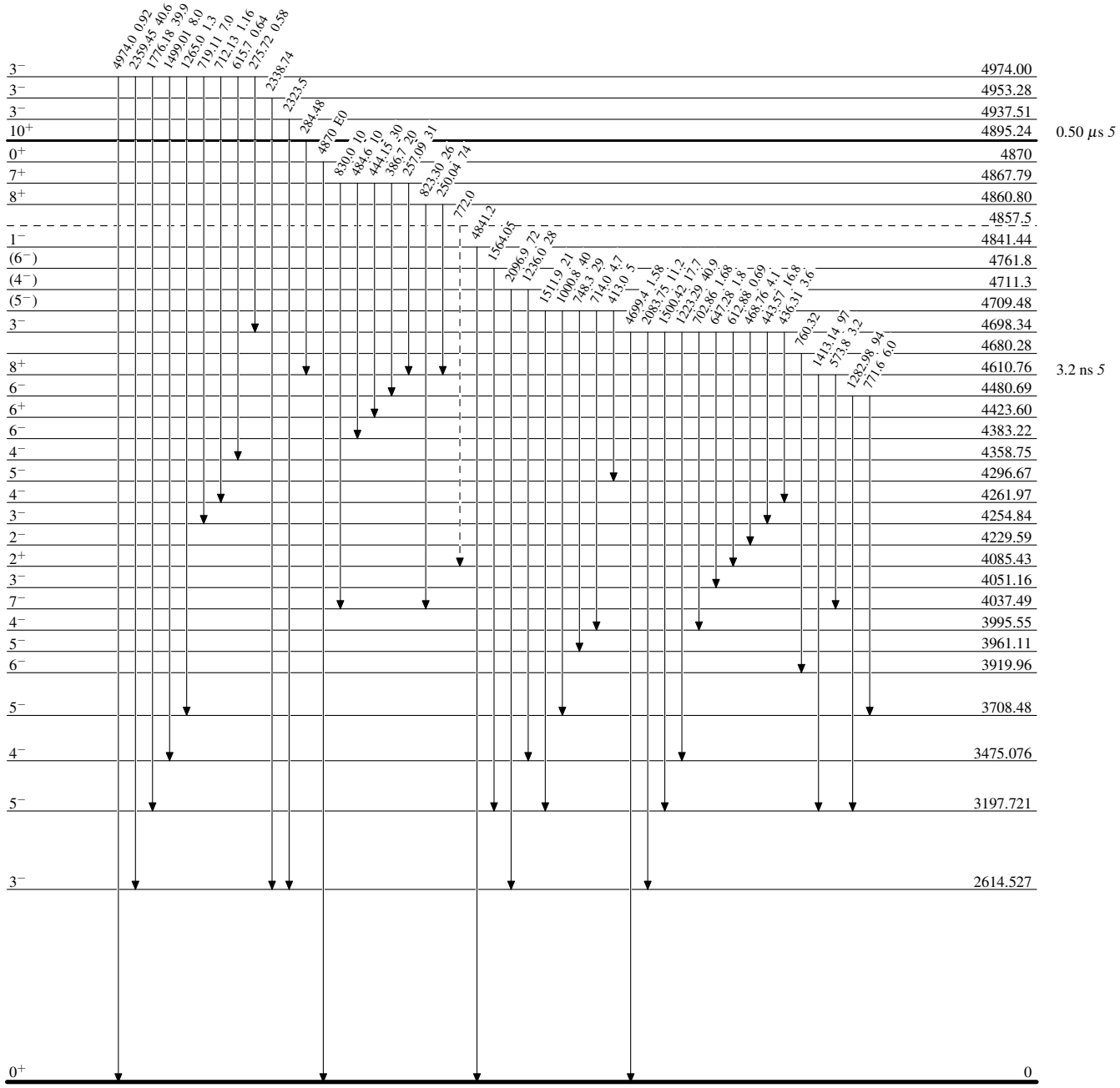
^{207}Pb(d,pγ),^{209}Bi(t,$\alpha\gamma$)

Legend

Level Scheme (continued)

Intensities: % photon branching from each level

γ Decay (Uncertain)

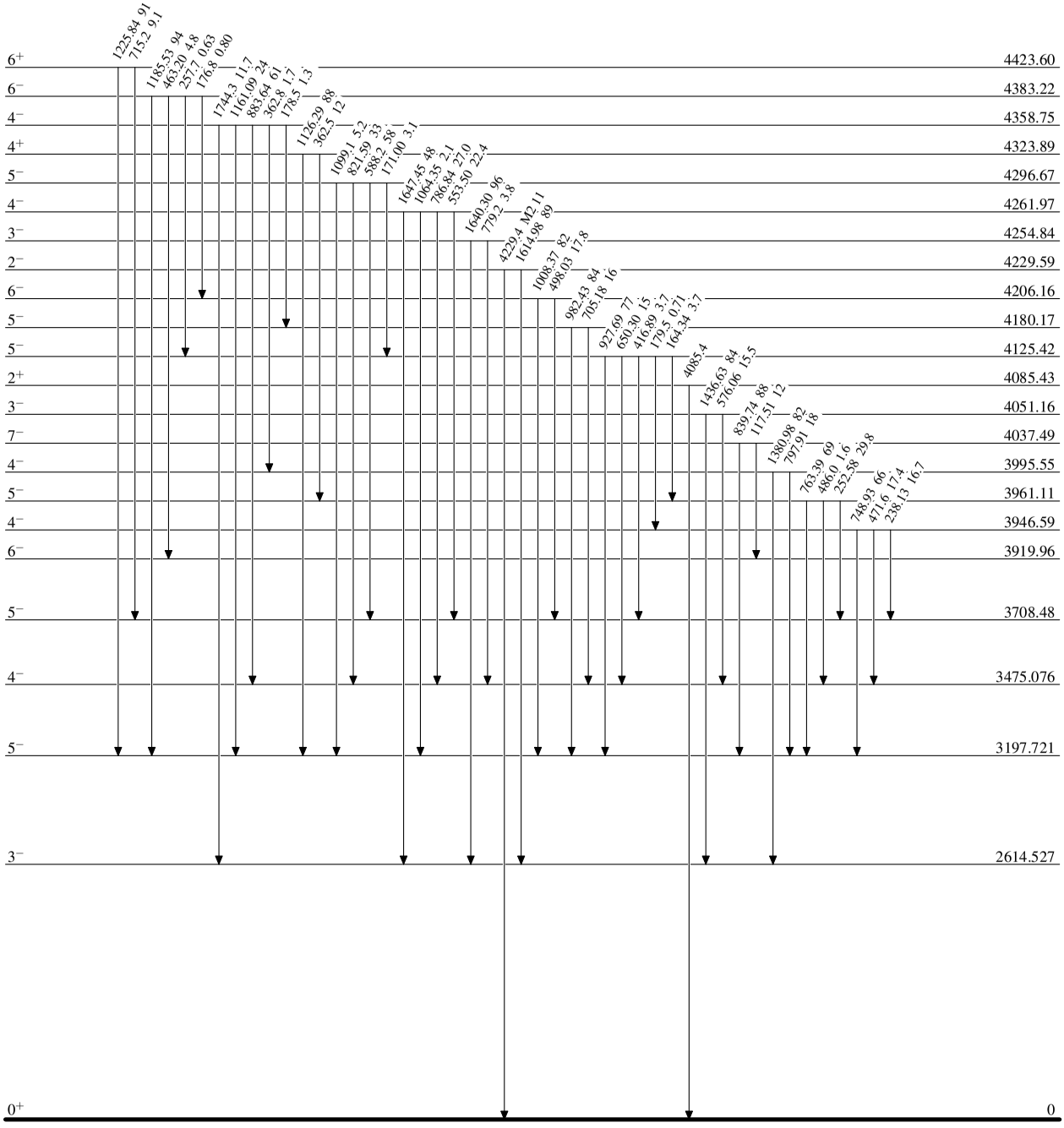


$^{208}_{82}Pb_{126}$

^{207}Pb(d,pγ),^{209}Bi(t,αγ)

Level Scheme (continued)

Intensities: % photon branching from each level

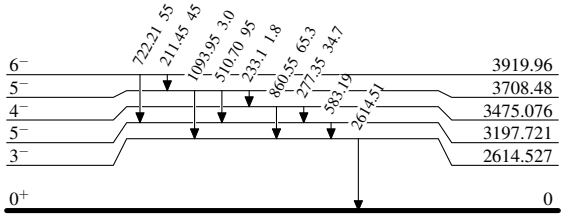


$^{208}_{82}Pb_{126}$

^{207}Pb(d,pγ),^{209}Bi(t,$\alpha\gamma$)

Level Scheme (continued)

Intensities: % photon branching from each level



$^{208}_{82}Pb_{126}$