^{76}Br ε decay (16.2 h) 1975VyZX,1974Na17,1969Dz01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 74,63 (1995)	22-Dec-1994

Parent: ^{76}Br: E=0.0; J$^{\pi}$=1^{-}; $T_{1/2}$=16.2 h *2*; Q(ε)=4963 *9*; %ε+%β^{+} decay=100.0

Additional information 1.

References: γ, γγ studies: 1974Na17, 1975VyZX, 1969Dz01, 1970Dz09, 1974MuZB, 1971La01, 1969Cl11. Compton suppression spectrometer used by 1974Na17. γγ results are from 1974Na17 (Ge(Li)-NaI detector system) and 1970Dz09 (Ge(Li)-Ge(Li) detector system). 1975VyZX, 1969Dz01, 1970Dz09 and 1971Dz08 are from the same group.

γ and ce (for E0): 1986Gi12, 1983Pa10.

γγ(θ): 1982MuZV. Ge(Li)-NaI system.

γ(θ,H,T): 1992Gr20 (also 1988Wh03,1988Gr26). γ(θ) of 1130γ and 2951γ used to deduce μ for ^{76}Br g.s..

β and βγ studies: 1971Dz08, 1971La01, 1969Dz01, 1963Sa26, 1962Ku06, 1959Gi46.

Hyperfine fields in iron through NMR studies: 1993Oh09.

Other γ-ray studies: 1971La01, 1971FuZP, 1971Dz08, 1970Dz09, 1962Ku06, 1960Bu22, 1959Gi46, 1955Th01, 1952Fu04.

ce data are from 1970Dz09 obtained with a magnetic spectrometer.

^{76}Se Levels

The following levels proposed by 1971La01 only have been omitted: 1883, 1942, 2048, 2890, 2990, 3910, 4140, 4420, 4570. In addition the 2374, 3669, 3913 levels proposed by 1974Na17 and the 4065 level from 1969Dz01 have been omitted. None of these levels is supported by other studies on ^{76}Se (see Adopted Levels).

E(level)†	J$^{\pi}$‡	E(level)†	J$^{\pi}$‡	E(level)†	J$^{\pi}$‡	E(level)†	J$^{\pi}$‡
0.0	0^{+}	2171.6 *4*	(0^{+})	3160.03 *7*	(2)	4084.63 *19*	(1,2)
559.05 *4*	2^{+}	2429.25 *10*	3^{-}	3351.60 *7*	(1,2)$^{+}$	4173.3? *9*	(1,2)
1122.32 *6*	0^{+}	2515.13 *11*	(2)$^{+}$	3459.48 *9*	(2^{+})	4198.8 *4*	(1,2)
1216.07 *4*	2^{+}	2631.0 *5*	(1,2)	3556.46 *9*	(1,2)	4215.6? *2*	(1^{+},2^{+})
1330.83 *16*	4^{+}	2655.66 *8*	1	3604.08 *8*	1^{+},2^{+}	4436.9? *10*	(1,2)
1688.98 *5*	3^{+}	2670.19 *7*	2^{-}	3929.03 *6*	(1,2)	4606.1 *6*	(1^{+},2^{+})
1787.69 *6*	2^{+}	2950.62 *6*	1^{+},2^{+}	3970.6 *4*	(1^{+},2^{+})		
2127.47 *8*	(2)$^{+}$	3069.71 *6*	(1,2)$^{+}$	4019.6? *5*			

† From least-squares fit to Eγ′s.
‡ From Adopted Levels.

ε,β^{+} radiations

E(decay)†‡	E(level)	Iβ^{+} #	Iε#	Log *ft*	I(ε+β^{+})#	Comments
(357 *9*)	4606.1		0.56 *12*	5.88 *12*	0.56 *12*	εK= 0.8739; εL= 0.1053 *3*; εM+= 0.02075 *6*
(526@ *9*)	4436.9?		0.067 *17*	7.2 *2*	0.067 *17*	εK= 0.8763; εL= 0.10340 *12*; εM+= 0.02032 *3*
(747@ *9*)	4215.6?		0.62 *5*	6.50 *4*	0.62 *5*	εK= 0.8777; εL= 0.10223; εM+=0.020058
(764 *9*)	4198.8		0.79 *20*	6.4 *2*	0.79 *20*	εK= 0.8778; εL= 0.10217; εM+=0.020044
(790@ *9*)	4173.3?		0.20 *2*	7.04 *5*	0.20 *2*	εK= 0.8779; εL= 0.10209; εM+=0.020025
(878 *9*)	4084.63		0.56 *5*	6.69 *5*	0.56 *5*	εK= 0.8782; εL= 0.10183; εM+=0.019966
(943@ *9*)	4019.6?		0.50 *6*	6.80 *6*	0.50 *6*	εK= 0.8784; εL= 0.10167; εM+=0.019931
(992 *9*)	3970.6		0.63 *7*	6.74 *5*	0.63 *7*	εK= 0.8785; εL= 0.10156; εM+=0.019907
(1034 *9*)	3929.03		0.28 *4*	7.13 *7*	0.28 *4*	av Eβ= 146 *7*; εK= 0.8786; εL= 0.10148; εM+=0.019889
(1359 *9*)	3604.08	0.03 *1*	1.75 *15*	6.58 *4*	1.78 *15*	av Eβ= 146 *7*; εK= 0.8667 *23*; εL= 0.0996 *3*; εM+= 0.01950 *6*

Continued on next page (footnotes at end of table)

^{76}Br ε decay (16.2 h) 1975VyZX,1974Na17,1969Dz01 (continued)

ϵ,β^+ radiations (continued)

E(decay)†‡	E(level)	$I\beta^+$ #	$I\varepsilon$ #	Log *ft*	$I(\varepsilon+\beta^+)$ #	Comments
(1407 *9*)	3556.46	0.04 *1*	1.77 *14*	6.60 *4*	1.81 *14*	av Eβ= 166 *7*; εK= 0.858 *4*; εL= 0.0986 *4*; εM+= 0.01931 *8*
(1504 *9*)	3459.48	0.13 *3*	2.4 *3*	6.54 *6*	2.5 *3*	av Eβ= 207 *7*; εK= 0.832 *6*; εL= 0.0955 *7*; εM+= 0.01869 *13*
(1611 *9*)	3351.60	0.92 *11*	7.7 *6*	6.09 *4*	8.6 *6*	av Eβ= 253 *7*; εK= 0.786 *8*; εL= 0.0901 *9*; εM+= 0.01763 *18*
(1803 *9*)	3160.03	1.44 *13*	4.5 *4*	6.42 *4*	5.9 *4*	av Eβ= 336 *7*; εK= 0.665 *11*; εL= 0.0762 *13*; εM+= 0.01491 *25*
(1893 *9*)	3069.71	6.3 *6*	13.5 *10*	5.98 *4*	19.8 *14*	av Eβ= 375 *7*; εK= 0.599 *12*; εL= 0.0685 *13*; εM+= 0.0134 *3*
(2012 *9*)	2950.62	5.2 *4*	7.1 *6*	6.31 *4*	12.3 *9*	av Eβ= 427 *7*; εK= 0.511 *11*; εL= 0.0584 *13*; εM+= 0.01143 *25*
(2293 *9*)	2670.19	1.24 *13*	0.76 *8*	7.40 *5*	2.0 *2*	av Eβ= 551 *7*; εK= 0.333 *8*; εL= 0.0380 *10*; εM+= 0.00744 *18*
(2307 *9*)	2655.66	0.20 *9*	0.11 *5*	8.2 *2*	0.31 *13*	av Eβ= 558 *7*; εK= 0.325 *8*; εL= 0.0371 *9*; εM+= 0.00727 *18*
(2332 *9*)	2631.0	0.30 *17*	0.17 *9*	8.1 *3*	0.47 *25*	av Eβ= 569 *7*; εK= 0.313 *8*; εL= 0.0357 *9*; εM+= 0.00699 *17*
(2448 *9*)	2515.13	0.35 *14*	0.14 *6*	8.2 *2*	0.49 *19*	av Eβ= 621 *7*; εK= 0.260 *7*; εL= 0.0297 *8*; εM+= 0.00581 *14*
(2534@ *9*)	2429.25	<0.96	<0.34	>7.84	<1.3	av Eβ= 659 *7*; εK= 0.227 *6*; εL= 0.0259 *7*; εM+= 0.00508 *12*
(2836@ *9*)	2127.47	<0.10	<0.02	>9.17	<0.12	av Eβ= 797 *7*; εK= 0.144 *4*; εL= 0.0165 *4*; εM+= 0.00322 *7*
(3175 *9*)	1787.69	1.0 *4*	0.10 *4*	8.5 *2*	1.1 *4*	av Eβ= 953 *7*; εK= 0.0909 *18*; εL= 0.01035 *21*; εM+= 0.00202 *4*
(3274@ *9*)	1688.98	<0.70	<0.20	>9.91^{1u}	<0.9	av Eβ= 1022 *7*; εK= 0.192 *4*; εL= 0.0220 *4*; εM+= 0.00430 *8*
(3747 *9*)	1216.07	2.8 *13*	0.15 *7*	8.5 *2*	2.9 *13*	av Eβ= 1221 *7*; εK= 0.0467 *8*; εL= 0.00531 *9*; εM+=0.001039 *17*
(3841 *9*)	1122.32	2.1 *7*	0.11 *4*	8.7 *2*	2.2 *7*	av Eβ= 1265 *7*; εK= 0.0424 *7*; εL= 0.00482 *8*; εM+=0.000943 *15*
4462 *50*	559.05	25.8 *19*	0.76 *6*	7.97 *4*	26.6 *19*	av Eβ= 1532 *8*; εK= 0.0250 *4*; εL= 0.00284 *4*; εM+=0.000555 *8*
5002 *20*	0.0	6 *1*	<0.15	8.9 *1*	6 *1*	av Eβ= 1800 *8*; εK= 0.01598 *18*; εL=0.001814 *21*; εM+=0.000355 *4*

† From 1971Dz08.
‡ For other ε branches, see drawing.
# Absolute intensity per 100 decays.
@ Existence of this branch is questionable.

γ(^{76}Se)

Iγ normalization: a 6% 2 $\varepsilon+\beta^+$ branch to g.s. Is deduced from the ratio Iβ(g.s.)/Iβ(559 level)=0.22 *3* (1971Dz08) and intensity balance at each level in the decay scheme. Results are consistent with ratio I$\gamma(\gamma^\pm)$/Iγ(559γ)=1.45 *5* (1971Dz08).

The following Eγ(Iγ)′s reported by different groups have been omitted by the evaluator for lack of confirmation: 1974MuZB: 575.1(1.3), 1069.1(0.42) 1971La01: 248, 832.0(4.5), 1050, 1074, 1088, 1342(0.8), 1489(3.9), 1689.5, 1997, 2555, 3625, 3860, 3910, 3940, 4140, 4420, 4570. 1969Dz01: 2947(1.5) 1969Cl11: 737.7, 831.1, 1488.5, 1578.7, 2281.2, 2329.2, 2334.0, 2348.7, 2439.0, 2617.6, 3023.4.

E$_\gamma$[†]	I$_\gamma$[‡c]	E$_i$(level)	J$^\pi_i$	E$_f$	J$^\pi_f$	Mult.[#]	δ	Comments
[x]209.7[af] *2*	0.08							
[x]281.4[af] *2*	0.22							
[x]309.2[af] *2*	0.19							
[x]318.4[af] *2*	0.18							
358.0 *3*	0.5 *2*	1688.98	3$^+$	1330.83	4$^+$			
399.5[e] *2*	0.46[e] *5*	3069.71	(1,2)$^+$	2670.19	2$^-$			Probably a doublet. Main intensity with 3070 level.
399.5[ef] *2*	[e]	3351.60	(1,2)$^+$	2950.62	1$^+$,2$^+$			
438.0[af] *3*	0.37	2127.47	(2)$^+$	1688.98	3$^+$			
457.3[@f] *5*	0.09 *2*	1787.69	2$^+$	1330.83	4$^+$			
472.89 *6*	2.51 *11*	1688.98	3$^+$	1216.07	2$^+$			
489.9 *2*	0.49 *6*	3160.03	(2)	2670.19	2$^-$			
498[&f] *1*	0.22 *9*	2670.19	2$^-$	2171.6	(0$^+$)			
505.0[&f] *5*	0.31 *2*	3160.03	(2)	2655.66	1			
[x]546.5[bf] *5*	0.22 *3*							
559.09 *5*	100	559.05	2$^+$	0.0	0$^+$	E2		
563.20 *5*	4.8 *8*	1122.32	0$^+$	559.05	2$^+$	E2		(563γ)(559γ)(θ): A$_2$=0.207 *11*, A$_4$=0.90 *5* (1982MuZV).
571.4 *5*	0.6 *3*	1787.69	2$^+$	1216.07	2$^+$			
[x]598.9 *2*	0.56 *22*							
[x]604.5 *3*	0.30 *10*							
636[&f] *1*	0.10 *3*	4606.1	(1$^+$,2$^+$)	3970.6	(1$^+$,2$^+$)			
641[&f] *1*	0.19 *5*	2429.25	3$^-$	1787.69	2$^+$			
657.02 *5*	21.5 *10*	1216.07	2$^+$	559.05	2$^+$	E2+M1(+E0)	+5.2 *2*	Mult.: from adopted gammas. α(K)exp=1.67×10^{-3} *15* (1970Dz09), 1.04×10^{-3} *6* (1986Gi12). (657γ)(559γ)(θ): A$_2$=−0.186 *10*, A$_4$=0.130 *16* (1982MuZV). These values give δ=+6 *1* or +0.65 *5*. ce(K)(E0/E2)≤0.058 (1986Gi12). X(E0/E2)≤0.14, ρ(E0)≤0.41 (1986Gi12).
665.1 *1*	0.95 *5*	1787.69	2$^+$	1122.32	0$^+$			
681.4 *2*	0.57 *3*	3351.60	(1,2)$^+$	2670.19	2$^-$			
695.9 *2*	0.66 *4*	3351.60	(1,2)$^+$	2655.66	1			
727.4 *1*	0.9 *2*	2515.13	(2)$^+$	1787.69	2$^+$			

γ(^{76}Se) (continued)

E_γ[†]	I_γ[‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[#]	δ	$I_{(\gamma+ce)}$[c]	Comments
730.5 2	0.78 10	3160.03	(2)	2429.25	3^-				
740.3 8	0.21 7	2429.25	3^-	1688.98	3^+				
771.8 2	0.56 3	1330.83	4^+	559.05	2^+				
789.1 2	0.63 4	3459.48	(2^+)	2670.19	2^-				
797[&f] 2	0.10 3	2127.47	$(2)^+$	1330.83	4^+				
803.5 2	0.71 5	3459.48	(2^+)	2655.66	1				
[x]812.5[bf] 5	0.19 6								
836.4 2	0.52 10	3351.60	$(1,2)^+$	2515.13	$(2)^+$				
867.6 2	0.41 4	2655.66	1	1787.69	2^+				
882.3 2	0.55 3	2670.19	2^-	1787.69	2^+				
886.2 2	0.45 3	3556.46	(1,2)	2670.19	2^-				
897[&f] 1	0.23 3	3069.71	$(1,2)^+$	2171.6	(0^+)				
901.0 7	0.21 2	3556.46	(1,2)	2655.66	1				
913[&f] 2	0.07 4	2127.47	$(2)^+$	1216.07	2^+				
923[&f]		3351.60	$(1,2)^+$	2429.25	3^-				
934.2 10	0.10 2	3604.08	$1^+,2^+$	2670.19	2^-				
942.3[d] 5	<0.25[d]	2631.0	(1,2)	1688.98	3^+				
942.3[d] 5	<0.25[d]	3069.71	$(1,2)^+$	2127.47	$(2)^+$				
980.9 2	0.45 4	2670.19	2^-	1688.98	3^+				
1029.9 5	0.77 8	3459.48	(2^+)	2429.25	3^-				
1032.6 5	0.79 8	3160.03	(2)	2127.47	$(2)^+$				
1040.7 10	0.10 5	4198.8	(1,2)	3160.03	(2)				
[x]1060[&f] 2	0.06 3								
1122.3 3		1122.32	0^+	0.0	0^+	E0		0.00082	E_γ,$I_{(\gamma+ce)}$: from 1986Gi12. I(γ+ce) is per 100 decays of ^{76}Br. ce(K)(1122)/ce(K)(563γ)=0.12 2 (1986Gi12); ce(K)(1122)/Iγ(563)= 2.6×10^{-4} 4 (1983Pa10). X(E0/E2)=0.023 4 (1986Gi12); ρ(E0)=0.17 4 (1986Gi12), 0.19 4 (1983Pa10).
1129.85 6	6.2 3	1688.98	3^+	559.05	2^+	M1+E2	+1.08 10		δ: from adopted gammas. α(K)exp=2.83×10^{-4} 34 (1986Gi12) gives M1,E2. (1130γ)(559γ)(θ): A_2=0.237 29, A_4=0.065 (1982MuZV). Deduced δ=+0.45 to +1.5.
1145[&f] 2	0.08 2	4606.1	$(1^+,2^+)$	3459.48	(2^+)				
[x]1158.2 5	0.20 2								
1161[f] 2	0.22 3	2950.62	$1^+,2^+$	1787.69	2^+				γ reported by 1969Dz01 and 1971La01 only.
1179 1	0.12 5	3351.60	$(1,2)^+$	2171.6	(0^+)				
[x]1193[&f] 2	0.14 6								
1213.1 1	2.3 7	2429.25	3^-	1216.07	2^+	D			(1213γ)(559γ): A_2=0.031 5, A_4=0.009 11 (1982MuZV).
1216.10 5	11.9 6	1216.07	2^+	0.0	0^+				
1224.3 5	0.38 14	3351.60	$(1,2)^+$	2127.47	$(2)^+$				
1228.65 6	2.82 12	1787.69	2^+	559.05	2^+	M1+E2	−0.51 5		δ: from adopted gammas.

$^{76}_{34}Se_{42}$-4

γ(^{76}Se) (continued)

E_γ [†]	I_γ [‡c]	E_i(level)	J^π_i	E_f	J^π_f	Mult. [#]	Comments
							(1229γ)(559γ)(θ): A_2=0.230 *22*, A_4=0.08 *5* (1982MuZV). Deduced δ=−2.5 *2* or 0.02 *2* disagrees with value from ^{76}As β^-.
1253[&f] *2*	0.11 *4*	4606.1	(1^+,2^+)	3351.60	$(1,2)^+$		
[x]1271[&f] *2*	0.08 *3*						
1280[&f] *2*	0.10 *4*	3069.71	$(1,2)^+$	1787.69	2^+		
1288[&f] *1*	0.07 *3*	3459.48	(2^+)	2171.6	(0^+)		
[x]1298[&f] *2*	0.12 *2*						
1300.5 *8*	0.21 *2*	3970.6	(1^+,2^+)	2670.19	2^-		
1308[&f] *1*	0.25 *3*	2429.25	3^-	1122.32	0^+		γ not included in adopted gammas.
1315.0[@f] *10*	0.07 *2*	3970.6	(1^+,2^+)	2655.66	1		
1324[&f] *2*	0.06 *3*	2655.66	1	1330.83	4^+		
1372.1 *2*	0.74 *6*	3160.03	(2)	1787.69	2^+		
1380.53 *8*	3.40 *17*	3069.71	$(1,2)^+$	1688.98	3^+		
1429.1[d] *2*	<0.36[d]	3556.46	(1,2)	2127.47	$(2)^+$		
1429.1[d] *2*	<0.36[d]	4084.63	(1,2)	2655.66	1		
1439.4 *2*	0.78 *4*	2655.66	1	1216.07	2^+		
1454.08 *10*	1.08 *6*	2670.19	2^-	1216.07	2^+		
[x]1461[&f] *2*	0.18 *4*						
1471.13 *7*	3.12 *16*	3160.03	(2)	1688.98	3^+		
1504.1[f] *5*	0.12 *5*	4019.6?		2515.13	$(2)^+$		
1532[&f] *2*	0.08 *5*	2655.66	1	1122.32	0^+		
1538[&f] *2*	0.23 *9*	4606.1	(1^+,2^+)	3069.71	$(1,2)^+$		
1560.0[f] *5*	0.62 *3*	4215.6?	(1^+,2^+)	2655.66	1		
1568.47[a] *8*	1.3 *1*	2127.47	$(2)^+$	559.05	2^+		1969Dz01 report a doublet near this energy but not confirmed by other groups.
1611.9 *5*	0.38 *8*	2171.6	(0^+)	559.05	2^+		
[x]1642[&f] *3*	0.18 *6*						
1654.7[@f] *5*	0.16 *3*	4084.63	(1,2)	2429.25	3^-		
1661[f] *2*	0.19 *7*	3351.60	$(1,2)^+$	1688.98	3^+		γ reported by 1969Dz01 and 1971La01 only.
1672.4 *5*	0.32 *10*	3459.48	(2^+)	1787.69	2^+		
[x]1741.9 *10*	0.16 *2*						
1769.9[d] *5*	<0.57[d]	3459.48	(2^+)	1688.98	3^+		
1769.9[d] *5*	<0.57[d]	4198.8	(1,2)	2429.25	3^-		
1787.8 *5*	0.77 *8*	1787.69	2^+	0.0	0^+		
1802[@f] *2*	0.04 *2*	3929.03	(1,2)	2127.47	$(2)^+$		
[x]1815[@f] *2*	0.20 *2*						
[x]1833.8 *8*	0.26 *13*						
1853.67 *5*	19.8 *10*	3069.71	$(1,2)^+$	1216.07	2^+	M1,E2	α(K)exp=0.95×10^{-4} *18* (1970Dz09). (1854γ)(559γ)(θ): A_2=0.086 *24*, A_4=0.02 *4* (1982MuZV).

From ENSDF

γ(^{76}Se) (continued)

E_γ [†]	I_γ [‡c]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [#]	Comments
1868.4 *10*	0.19 *3*	2429.25	3⁻	559.05	2⁺		
[x]1883[&f] *2*	0.18 *6*						
[x]1901[&f] *2*	0.16 *6*						
1944.2 *5*	0.64 *10*	3160.03	(2)	1216.07	2⁺		
1956.1 *5*	0.40 *7*	2515.13	(2)⁺	559.05	2⁺		
1976.0 *10*	0.14 *11*	4606.1	(1⁺,2⁺)	2631.0	(1,2)		I_γ: 0.03 *1*(1974Na17), 0.26 *8* (1969Dz01).
[x]1991[&f] *2*	0.11 *4*						
2046.1[@f] *10*	0.24 *2*	4173.3?	(1,2)	2127.47	(2)⁺		
2071.3 *15*	0.36 *30*	2631.0	(1,2)	559.05	2⁺		
[x]2082[&f] *2*	0.16 *5*						
2096.73 *11*	1.84 *10*	2655.66	1	559.05	2⁺		
2111.23 *11*	3.36 *16*	2670.19	2⁻	559.05	2⁺		
2127.2 *8*	0.27 *8*	2127.47	(2)⁺	0.0	0⁺		
2135.60 *10*	1.27 *10*	3351.60	(1,2)⁺	1216.07	2⁺		
[x]2170[&f] *2*	0.13 *5*						Possible J^π=(0⁺) for the 2171 level (see Adopted Levels) excludes placement of this γ with the 2171 level as proposed by 1969Dz01.
2183.5 *10*	0.17 *5*	3970.6	(1⁺,2⁺)	1787.69	2⁺		
2227.7 *20*	0.13 *8*	3351.60	(1,2)⁺	1122.32	0⁺		
[x]2235[&f] *2*	0.18 *8*						
[x]2299[&f] *2*	0.19 *6*						
[x]2309.6 *10*	0.14 *4*						
2338[&f] *2*	0.12 *5*	3556.46	(1,2)	1216.07	2⁺		
2391.25 *10*	6.4 *4*	2950.62	1⁺,2⁺	559.05	2⁺	M1,E2	α(K)exp=0.72×10⁻⁴ *24* (1970Dz09).
2411.8[@f] *20*	0.08 *4*	4198.8	(1,2)	1787.69	2⁺		
2429 *2*	0.14 *6*	2429.25	3⁻	0.0	0⁺		
2483.0 *12*	0.18 *3*	3604.08	1⁺,2⁺	1122.32	0⁺		
2510.79 *16*	2.63 *15*	3069.71	(1,2)⁺	559.05	2⁺		
[x]2546.7[@f] *20*	0.008 *5*						
2601.25 *15*	0.94 *5*	3160.03	(2)	559.05	2⁺		
2627[f] *2*	0.17 *5*	2631.0	(1,2)	0.0	0⁺		
2658.0 *20*	0.18 *6*	2655.66	1	0.0	0⁺		
2690.0[@f] *15*	0.48 *5*	4019.6?		1330.83	4⁺		
2714[&f] *3*	0.10 *3*	3929.03	(1,2)	1216.07	2⁺		
2757[&f] *3*	0.10 *3*	3970.6	(1⁺,2⁺)	1216.07	2⁺		
2792.69 *8*	7.6 *4*	3351.60	(1,2)⁺	559.05	2⁺	M1,E2	α(K)exp=0.56×10⁻⁴ *14* (1970Dz09).
[x]2837[&f] *3*	0.15 *6*						
[x]2844[&f] *3*	0.20 *6*						
2900.5 *1*	0.37 *13*	3459.48	(2⁺)	559.05	2⁺		
2950.53 *6*	10.0 *5*	2950.62	1⁺,2⁺	0.0	0⁺	(M1,E2)	α(K)exp=0.59×10⁻⁴ *12* (1970Dz09).

$^{76}_{34}Se_{42}$-6

$\gamma(^{76}Se)$ (continued)

E_γ[†]	I_γ[‡c]	E_i(level)	J^π_i	E_f	J^π_f	Comments
2981.5[f] 30	0.12 4	4198.8	(1,2)	1216.07	2^+	γ reported by 1969Dz01 and 1974MuZB only.
2997.34 9	1.3 1	3556.46	(1,2)	559.05	2^+	
3045[@f] 1	0.03 1	3604.08	$1^+,2^+$	559.05	2^+	
[x]3064[&f] 2	0.10 3					
3072[&f] 3	0.06 2	3069.71	$(1,2)^+$	0.0	0^+	
3093.2[f] 2	0.22 2	4215.6?	$(1^+,2^+)$	1122.32	0^+	
3159.0 2	0.20 2	3160.03	(2)	0.0	0^+	
3351.8 10	0.34 3	3351.60	$(1,2)^+$	0.0	0^+	
3370.0 10	0.12 2	3929.03	(1,2)	559.05	2^+	
3411.3 5	0.39 2	3970.6	$(1^+,2^+)$	559.05	2^+	
[x]3508[&f] 3	0.08 3					
3525.2 5	0.24 2	4084.63	(1,2)	559.05	2^+	
3603.98 8	2.10 15	3604.08	$1^+,2^+$	0.0	0^+	
3638.7 5	0.20 2	4198.8	(1,2)	559.05	2^+	
3881[&f] 3	0.02 1	4436.9?	(1,2)	559.05	2^+	
[x]3892 2	0.04 2					
[x]3913.5[@f] 10	0.02 1					
3929.2 7	0.12 2	3929.03	(1,2)	0.0	0^+	
[x]3963.5 10	0.03 1					
3971 2	0.014 6	3970.6	$(1^+,2^+)$	0.0	0^+	
4020.3[f] 10	0.08 2	4019.6?		0.0	0^+	
4044 2	0.07 2	4606.1	$(1^+,2^+)$	559.05	2^+	
[x]4065[bf] 3	0.03 1					
[x]4084[&f] 3	0.02 1					
4172[f] 2	0.03 1	4173.3?	(1,2)	0.0	0^+	
4436.4[f] 10	0.07 2	4436.9?	(1,2)	0.0	0^+	
[x]4455[bf] 3	0.009 3					
[x]4492[bf] 3	0.008 3					
4600 4	0.03 1	4606.1	$(1^+,2^+)$	0.0	0^+	

† Wherever possible weighted averages have been taken from 1974Na17, 1974MuZB, 1975VyZX, 1969Dz01 and 1969Cl11.

‡ Averages from 1974Na17, 1975VyZX and 1969Dz01.

\# From $\gamma\gamma(\theta)$ and ce data.

@ γ reported by 1974Na17 only.

& γ reported by 1969Dz01 only.

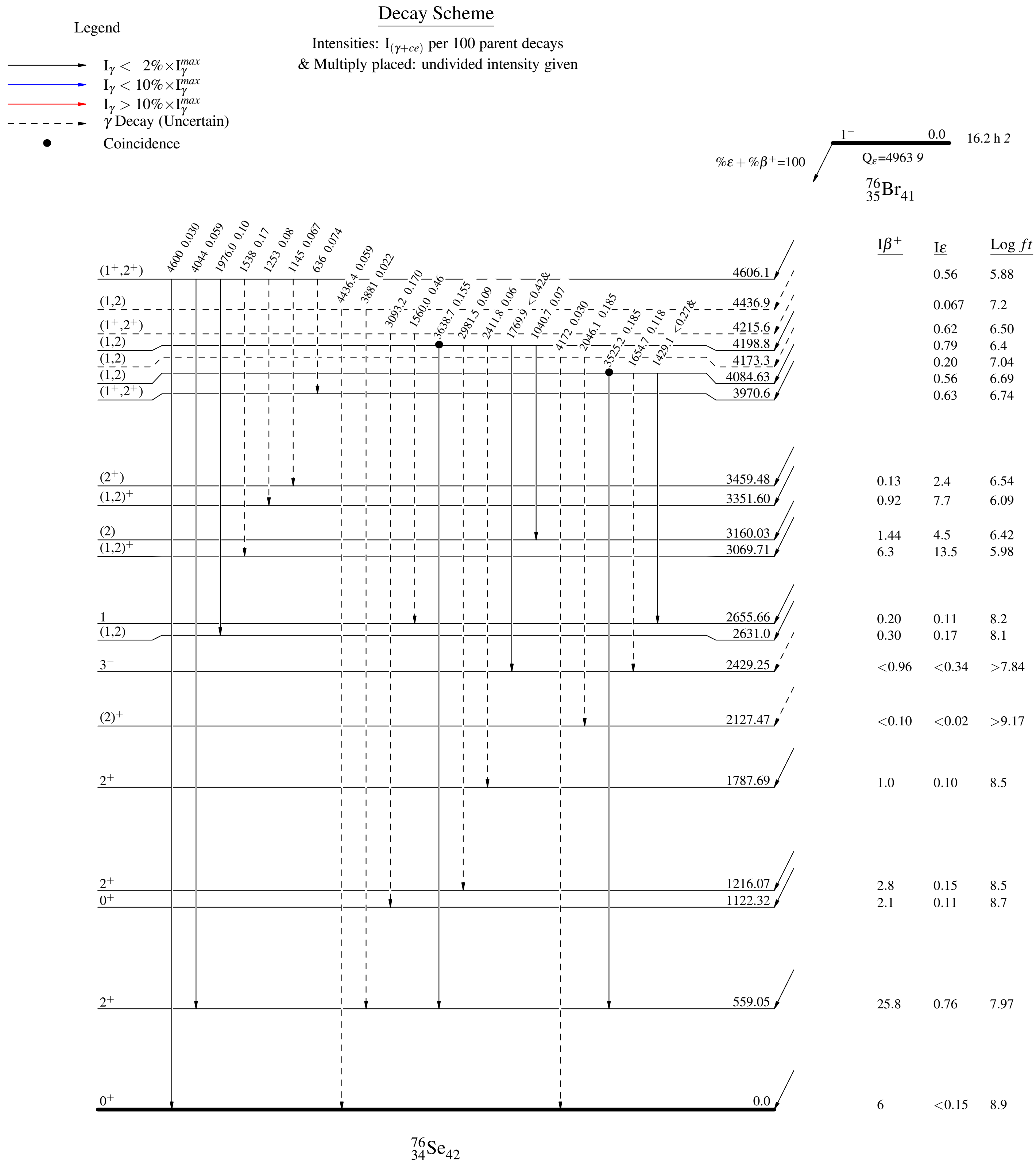
a γ reported by 1974MuZB only.

γ(^{76}Se) (continued)

[b] γ reported by 1975VyZX only.
[c] For absolute intensity per 100 decays, multiply by 0.74 *2*.
[d] Multiply placed with undivided intensity.
[e] Multiply placed with intensity suitably divided.
[f] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

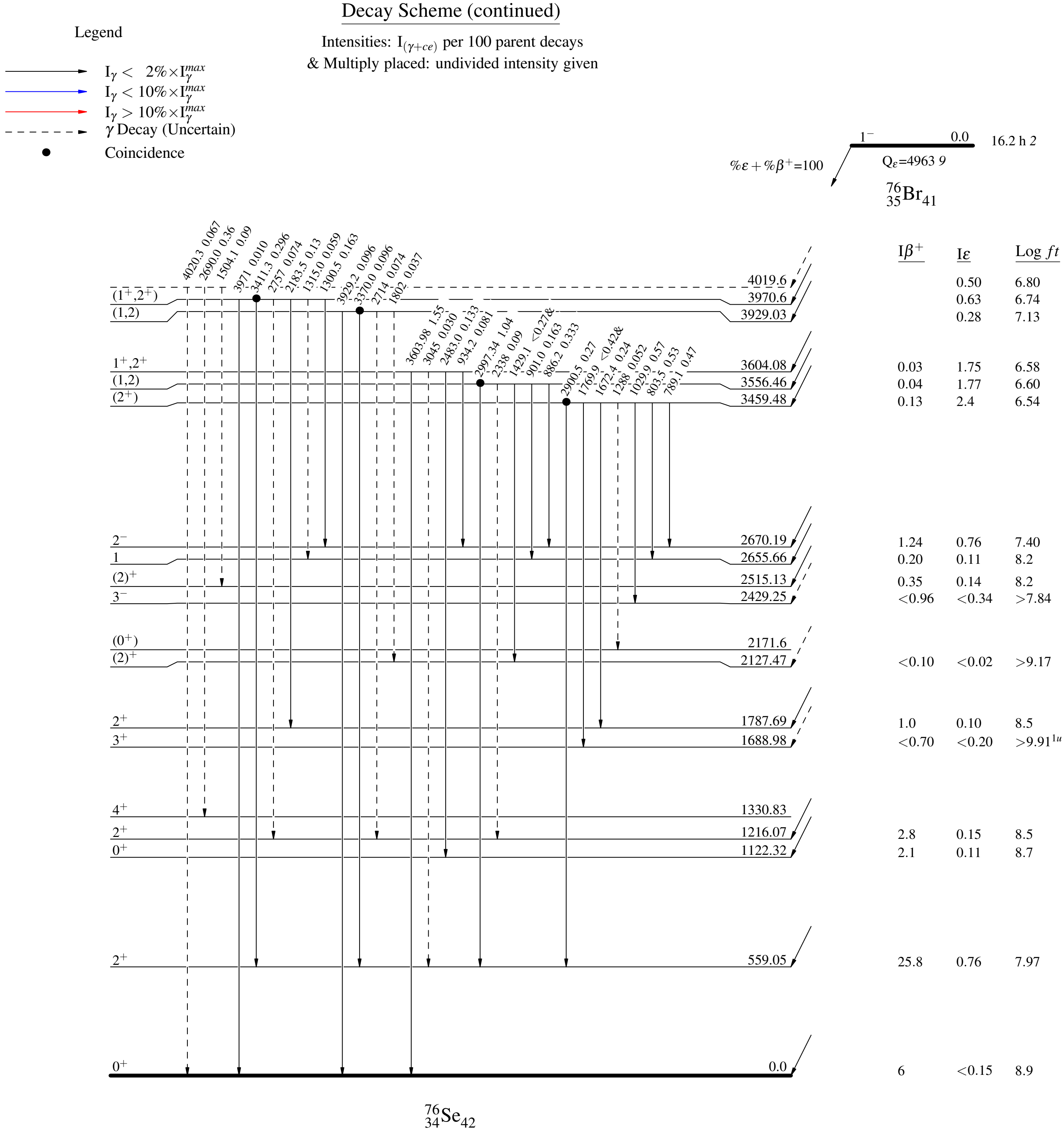
$^{76}_{34}$Se$_{42}$-8

^{76}Br ε decay (16.2 h) 1975VyZX,1974Na17,1969Dz01



^{76}Br ε decay (16.2 h) 1975VyZX,1974Na17,1969Dz01

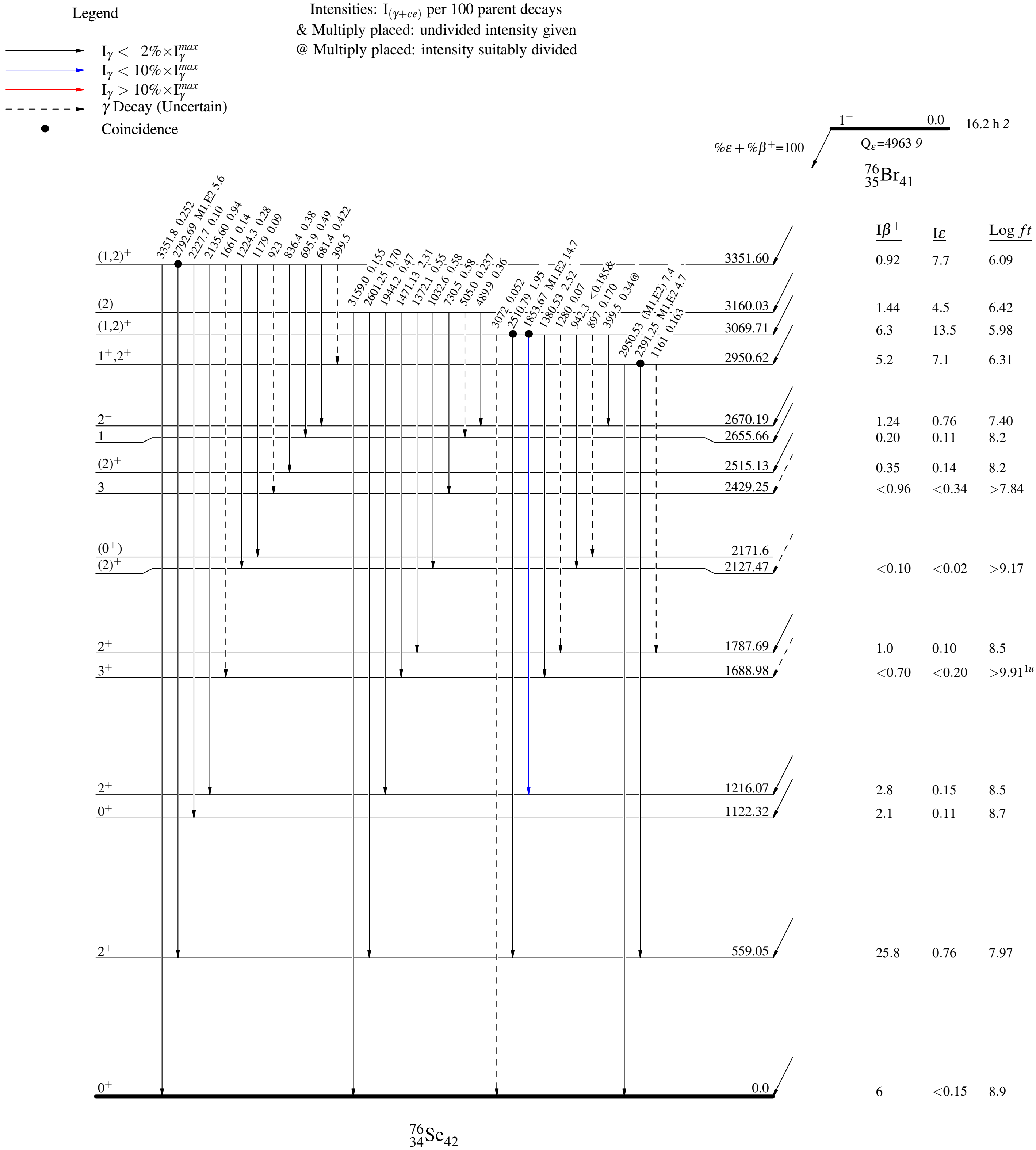
Decay Scheme (continued)



^{76}Br ε decay (16.2 h) 1975VyZX,1974Na17,1969Dz01

Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

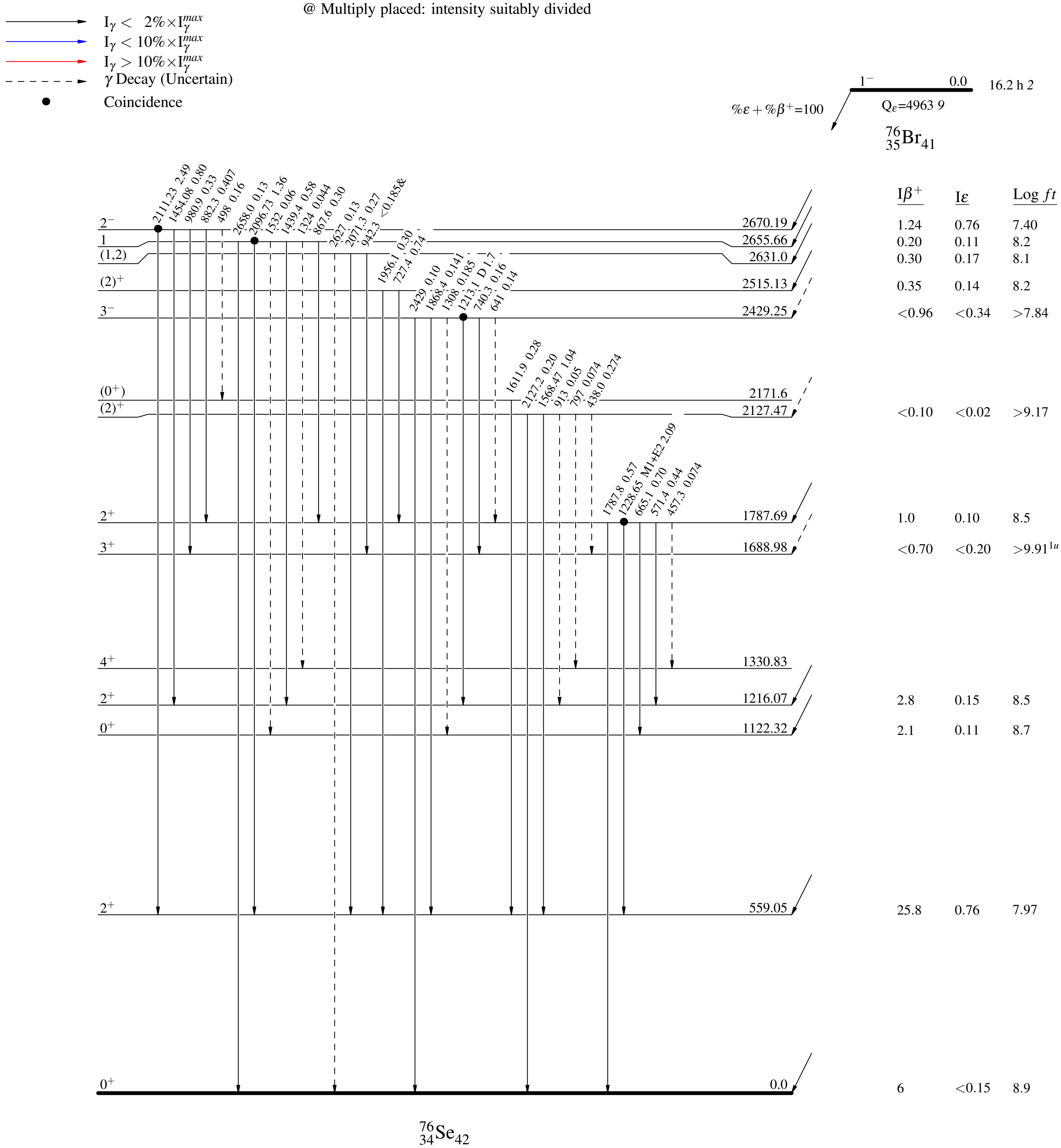


^{76}Br ε decay (16.2 h) 1975VyZX,1974Na17,1969Dz01

Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

Legend



^{76}Br ε decay (16.2 h) 1975VyZX,1974Na17,1969Dz01

Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided