

^{74}Br ε decay (46 min) **1972Co32,1970Go24**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Ameenah R. Farhan		NDS 107, 1923 (2006)	30-Apr-2006

Parent: ^{74}Br : $E=13.8$; $J^\pi=4^{(+)}$; $T_{1/2}=46$ min 2; $Q(\varepsilon)=6907$ 15; $\% \varepsilon + \% \beta^+$ decay=100.0

Level scheme is from 1972Co32.

Others: 1984Ma35, 1983Pa10, 1981Ga11, 1974Ro14, 1974Ro11, 1971RoZV, 1969La15, 1968Be44, 1966Be17, 1957Be46, 1953Ho53.

γ : 1984Ma35, 1974Ro14, 1974Ro11, 1972Co32, 1971RoZV, 1970Go24, 1969La15, 1968Be44, 1966Be17, 1957Be46.

$\gamma\gamma$: 1972Co32, 1970Go24.

$\gamma(\theta, T)$: orientation of ^{74}Br : 1992Ba68.

$\gamma\gamma(\theta)$: 1972Co32.

ce: 1984Ma35, 1983Pa10, 1972Co32, 1970Go24.

$T_{1/2}$ of ^{74}Br isotope: 1984Ma35, 1981Ga11, 1974Ro11, 1972Co32, 1971RoZV, 1969La15, 1968Be44, 1966Be17, 1957Be46, 1953Ho53.

 ^{74}Se Levels

E(level) [‡]	J^π [†]	E(level) [‡]	J^π [†]	E(level) [‡]	J^π [†]	E(level) [‡]	J^π [†]
0.0	0 ⁺	2349.65 24	3 ⁻	3250.97 22	(1,2 ⁺)	4441.87 22	(3,4 ⁺)
634.80 9	2 ⁺	2563.63 14	(2 ⁺ ,3,4 ⁺)	3253.3 4	(2 to 6)	4496.54 22	(3,4 ⁺)
853.84 13	0 ⁺	2662.46 18	5 ⁺	3306.1 3	(2 to 6)	4516.46 20	(3,4 ⁺)
1269.12 11	2 ⁺	2818.61 19	(2 ⁺ ,3,4 ⁺)	3379.58 24	(2 ⁺)	4580.0 3	(3,4,5)
1363.25 11	4 ⁺	2831.87 23	4 ⁻	3580.4 3	(2 ⁺)	4586.28 22	(3,4 ⁺)
1838.74 17	(2 ⁺)	2918.71 19	(2 ⁺ ,3,4 ⁺)	3675.02 20	(2 ⁺ ,3,4 ⁺)	4592.21 18	(4 ⁺)
1884.39 12	3 ⁺	3037.3 4	(2 ⁺)	3771.99 18	(4 ⁺)	4661.98 21	(3,4 ⁺)
2107.99 12	4 ⁺	3078.19 17	(4) ⁺	3928.8 3	(2 to 6)	4699.6 3	(3,4 ⁺)
2231.36 23	6 ⁺	3112.7 3	(2 ⁺ ,3,4 ⁺)	3931.1? 5	(0 ⁺ ,1)	4757.3 4	(3,4 ⁺)
2314.43 16	(2 ⁺)	3200.9 4	(4)	4309.37 20	(3,4 ⁺)	4794.52 22	(3,4,5)

[†] From 'Adopted Levels'.

[‡] From least square fit to E_γ 's.

 ε, β^+ radiations

E(decay)	E(level)	I_{β^+} [†]	I_ε [†]	Log f_t	$I(\varepsilon + \beta^+)$ [†]	Comments
(2126 15)	4794.52	0.86 12	0.82 11	5.98 6	1.68 19	av $E_\beta=480$ 7; $\varepsilon K=0.427$ 10; $\varepsilon L=0.0488$ 12; $\varepsilon M+=0.00955$ 23
(2164 15)	4757.3	0.36 7	0.30 6	6.43 9	0.66 11	av $E_\beta=497$ 7; $\varepsilon K=0.404$ 10; $\varepsilon L=0.0461$ 11; $\varepsilon M+=0.00902$ 22
(2221 15)	4699.6	0.80 13	0.58 9	6.16 7	1.38 19	av $E_\beta=522$ 7; $\varepsilon K=0.369$ 9; $\varepsilon L=0.0421$ 10; $\varepsilon M+=0.00824$ 20
(2259 15)	4661.98	2.0 4	1.2 2	5.83 8	3.2 4	av $E_\beta=539$ 7; $\varepsilon K=0.348$ 9; $\varepsilon L=0.0397$ 10; $\varepsilon M+=0.00776$ 19
(2329 15)	4592.21	3.8 5	2.0 3	5.65 7	5.8 6	av $E_\beta=570$ 7; $\varepsilon K=0.311$ 8; $\varepsilon L=0.0355$ 9; $\varepsilon M+=0.00695$ 17
(2335 15)	4586.28	1.8 3	0.9 2	5.99 8	2.7 3	av $E_\beta=573$ 7; $\varepsilon K=0.308$ 8; $\varepsilon L=0.0352$ 9; $\varepsilon M+=0.00688$ 17
(2341 15)	4580.0	0.96 14	0.50 8	6.26 7	1.46 13	av $E_\beta=576$ 7; $\varepsilon K=0.305$ 8; $\varepsilon L=0.0348$ 9; $\varepsilon M+=0.00681$ 17
(2404 15)	4516.46	1.9 2	0.8 1	6.03 6	2.7 3	av $E_\beta=604$ 7; $\varepsilon K=0.276$ 7; $\varepsilon L=0.0315$ 8; $\varepsilon M+=0.00616$ 15
(2424 15)	4496.54	2.4 4	1.1 2	5.98 7	3.5 4	av $E_\beta=613$ 7; $\varepsilon K=0.267$ 7; $\varepsilon L=0.0305$ 8; $\varepsilon M+=0.00596$ 15
(2479 15)	4441.87	2.2 2	0.8 1	6.10 5	3.0 3	av $E_\beta=638$ 7; $\varepsilon K=0.245$ 6; $\varepsilon L=0.0280$ 7; $\varepsilon M+=0.00547$ 14
(2611 15)	4309.37	1.0 3	0.30 14	6.60 21	1.3 3	av $E_\beta=698$ 7; $\varepsilon K=0.199$ 5; $\varepsilon L=0.0227$ 6; $\varepsilon M+=0.00445$ 11
(2990 [‡] 15)	3931.1?	0.52 18	0.08 3	7.29 16	0.60 19	av $E_\beta=871$ 7; $\varepsilon K=0.1151$ 24; $\varepsilon L=0.0131$ 3; $\varepsilon M+=0.00256$ 6
(2992 15)	3928.8	0.72 9	0.10 1	7.16 6	0.82 10	av $E_\beta=872$ 7; $\varepsilon K=0.1148$ 24; $\varepsilon L=0.0131$ 3; $\varepsilon M+=0.00256$ 6
(3149 15)	3771.99	1.6 4	0.20 5	6.93 11	1.8 4	av $E_\beta=944$ 7; $\varepsilon K=0.0932$ 19; $\varepsilon L=0.01061$ 21; $\varepsilon M+=0.00207$ 4
(3246 15)	3675.02	3.8 8	0.4 1	6.67 10	4.2 6	av $E_\beta=989$ 7; $\varepsilon K=0.0824$ 16; $\varepsilon L=0.00938$ 18;

Continued on next page (footnotes at end of table)

^{74}Br ε decay (46 min) [1972Co32,1970Go24](#) (continued) ε, β^+ radiations (continued)

E(decay)	E(level)	$I\beta^+{}^\dagger$	$I\varepsilon{}^\dagger$	Log ft	$I(\varepsilon + \beta^+)^\dagger$	Comments
(3340 15)	3580.4	0.54 12	0.05 2	7.60 13	0.59 12	$\varepsilon M^+=0.00183$ 4 av $E\beta=1033$ 7; $\varepsilon K=0.0733$ 14; $\varepsilon L=0.00834$ 16; $\varepsilon M^+=0.00163$ 3
(3541 15)	3379.58	0.65 10	0.12 2	8.93 ^{1u} 7	0.77 11	av $E\beta=1148$ 7; $\varepsilon K=0.1390$ 24; $\varepsilon L=0.0159$ 3; $\varepsilon M^+=0.00312$ 6
(3615 15)	3306.1	0.94 13	0.06 1	7.57 7	1.00 13	av $E\beta=1162$ 7; $\varepsilon K=0.0535$ 9; $\varepsilon L=0.00608$ 11; $\varepsilon M^+=0.001189$ 20
(3667 15)	3253.3	0.69 10	0.040 6	7.74 7	0.73 10	av $E\beta=1187$ 7; $\varepsilon K=0.0505$ 9; $\varepsilon L=0.00574$ 10; $\varepsilon M^+=0.001123$ 19
(3670 15)	3250.97	2.3 3	0.10 2	7.22 6	2.4 3	av $E\beta=1188$ 7; $\varepsilon K=0.0503$ 9; $\varepsilon L=0.00572$ 10; $\varepsilon M^+=0.001120$ 19
(3720 15)	3200.9	0.78 10	0.04 1	7.74 6	0.82 10	av $E\beta=1211$ 7; $\varepsilon K=0.0477$ 8; $\varepsilon L=0.00543$ 9; $\varepsilon M^+=0.001061$ 18
(3808 15)	3112.7	1.09 15	0.05 2	7.64 12	1.14 15	av $E\beta=1253$ 7; $\varepsilon K=0.0435$ 7; $\varepsilon L=0.00495$ 8; $\varepsilon M^+=0.000968$ 16
(3843 [‡] 15)	3078.19	<4.5	<0.2	>7.0	<4.7	av $E\beta=1269$ 7; $\varepsilon K=0.0420$ 7; $\varepsilon L=0.00477$ 8; $\varepsilon M^+=0.000934$ 15
(3883 15)	3037.3	0.89 19	0.11 2	9.14 ^{1u} 10	1.00 19	av $E\beta=1307$ 7; $\varepsilon K=0.0959$ 15; $\varepsilon L=0.01097$ 18; $\varepsilon M^+=0.00215$ 4
(4002 15)	2918.71	3.5 4	0.10 2	7.27 6	3.6 4	av $E\beta=1344$ 8; $\varepsilon K=0.0358$ 6; $\varepsilon L=0.00407$ 6; $\varepsilon M^+=0.000797$ 12
(4089 15)	2831.87	0.53 10	0.020 4	8.15 9	0.55 10	av $E\beta=1386$ 8; $\varepsilon K=0.0330$ 5; $\varepsilon L=0.00375$ 6; $\varepsilon M^+=0.000733$ 11
(4102 15)	2818.61	2.2 3	0.10 1	7.54 7	2.3 3	av $E\beta=1392$ 8; $\varepsilon K=0.0326$ 5; $\varepsilon L=0.00370$ 6; $\varepsilon M^+=0.000724$ 11
(4258 15)	2662.46	0.82 17	0.030 6	8.06 10	0.85 17	av $E\beta=1466$ 8; $\varepsilon K=0.0282$ 4; $\varepsilon L=0.00321$ 5; $\varepsilon M^+=0.000627$ 9
(4357 15)	2563.63	7.8 7	0.20 3	7.14 5	8.0 7	av $E\beta=1513$ 8; $\varepsilon K=0.0259$ 4; $\varepsilon L=0.00294$ 4; $\varepsilon M^+=0.000575$ 8
(4571 15)	2349.65	4.1 16	0.10 8	7.6 4	4.2 16	av $E\beta=1615$ 8; $\varepsilon K=0.0216$ 3; $\varepsilon L=0.00245$ 3; $\varepsilon M^+=0.000479$ 6
(4606 15)	2314.43	1.15 20	0.08 1	9.65 ^{1u} 8	1.23 17	av $E\beta=1646$ 7; $\varepsilon K=0.0484$ 7; $\varepsilon L=0.00553$ 8; $\varepsilon M^+=0.001081$ 14
(4689 15)	2231.36	0.65 10	0.04 1	9.95 ^{1u} 7	0.69 10	av $E\beta=1685$ 7; $\varepsilon K=0.0451$ 6; $\varepsilon L=0.00515$ 7; $\varepsilon M^+=0.001008$ 13
(4813 15)	2107.99	4.9 8	0.10 2	7.60 8	5.0 8	av $E\beta=1731$ 8; $\varepsilon K=0.01780$ 21; $\varepsilon L=0.002021$ 24; $\varepsilon M^+=0.000395$ 5
(5036 15)	1884.39	6.7 11	0.10 2	7.58 8	6.8 11	av $E\beta=1838$ 8; $\varepsilon K=0.01505$ 17; $\varepsilon L=0.001709$ 19; $\varepsilon M^+=0.000334$ 4
(5082 15)	1838.74	1.8 6	0.070 24	9.80 ^{1u} 15	1.8 6	av $E\beta=1871$ 8; $\varepsilon K=0.0329$ 4; $\varepsilon L=0.00376$ 5; $\varepsilon M^+=0.000735$ 9
(5558 15)	1363.25	8 3	0.10 5	7.74 22	8 3	av $E\beta=2089$ 8; $\varepsilon K=0.01053$ 11; $\varepsilon L=0.001195$ 12; $\varepsilon M^+=0.00023$
(5652 [‡] 15)	1269.12	<9	<0.2	>9.5 ^{1u}	<9	av $E\beta=2142$ 8; $\varepsilon K=0.02193$ 23; $\varepsilon L=0.00250$ 3; $\varepsilon M^+=0.000489$ 5
(6286 [‡] 15)	634.80	<11	<0.2	>9.7 ^{1u}	<11	av $E\beta=2445$ 8; $\varepsilon K=0.01472$ 13; $\varepsilon L=0.001676$ 15; $\varepsilon M^+=0.000328$ 3

[†] Absolute intensity per 100 decays.[‡] Existence of this branch is questionable.

γ(⁷⁴Se)

Iγ normalization: from decay scheme. Assumed No ε+β⁺ feeding to g.s..

E _γ [†]	I _γ ^{‡g}	E _i (level)	J _i ^π	E _f	J _f ^π	Mult.	δ	α ^h	I _(γ+ce) ^g	Comments
219.0 1	5.5 2	853.84	0 ⁺	634.80	2 ⁺	E2		0.047		α(K)=0.0404; α(L)=0.00464 α(K) _{exp} =0.036 10 (1972Co32), 0.069 11 (1984Ma35). (219γ)(635γ)(θ): A ₂ =+0.29 5, A ₄ =+1.32 7 (1972Co32).
^x 368.5 3	0.17 5									
521.2 2	0.7 1	1884.39	3 ⁺	1363.25	4 ⁺					
615.15 10	7.3 8	1884.39	3 ⁺	1269.12	2 ⁺					
634.3 ^a 2	18.0 25	1269.12	2 ⁺	634.80	2 ⁺	D+Q	-5.6 16			δ: (634γ)(635γ)(θ): A ₂ =+0.059 36, A ₄ =+0.35 5 (1972Co32).
634.8 ^a 1	100	634.80	2 ⁺	0.0	0 ⁺					
679.1 2	0.7 1	2563.63	(2 ⁺ ,3,4 ⁺)	1884.39	3 ⁺					
724.9 5	0.7 3	2563.63	(2 ⁺ ,3,4 ⁺)	1838.74	(2 ⁺)					
728.3 1	39 2	1363.25	4 ⁺	634.80	2 ⁺	E2		0.00094		α=0.00094; α(K)=0.00083 α(K) _{exp} =0.00086 14 (1984Ma35) (728γ)(635γ)(θ): A ₂ =+0.09 4, A ₄ =+0.02 5 (1972Co32).
744.7 1	2.7 4	2107.99	4 ⁺	1363.25	4 ⁺					
763.6 [#] 2	0.25 5	3078.19	(4) ⁺	2314.43	(2 ⁺)					
777.6 2	0.7 1	2662.46	5 ⁺	1884.39	3 ⁺					
838.96 15	5.6 6	2107.99	4 ⁺	1269.12	2 ⁺					
850.6 2	0.9 1	3928.8	(2 to 6)	3078.19	(4) ⁺					
853.8		853.84	0 ⁺	0.0	0 ⁺	E0			0.045 5	observed In ce spectrum (1984Ma35,1983Pa10). I _(γ+ce) : deduced from weighted average of Ice(854K)/Iγ(219γ)=0.0078 6 (1983Pa10) and Ice(854K)/Ice(219K)=0.26 4. X(E0/E2)=0.13 2 (1984Ma35). Monopole strength=0.16 2 (1984Ma35), 0.18 1 (1983Pa10).
868.1 2	0.76 10	2231.36	6 ⁺	1363.25	4 ⁺					
^x 935.6 [@] 9	0.4 2									
979.5 [#] 2	0.5 1	2818.61	(2 ⁺ ,3,4 ⁺)	1838.74	(2 ⁺)					
984.7 ^a 3	3.7 5	1838.74	(2 ⁺)	853.84	0 ⁺					(985γ)(219γ)(θ): A ₂ =+0.09 15, A ₄ =0.0 2 (1972Co32).
986.5 ^a 5	0.8 5	2349.65	3 ⁻	1363.25	4 ⁺					
1022.7 [#] 2	0.44 5	4794.52	(3,4,5)	3771.99	(4 ⁺)					
1044.8 3	0.40 5	2314.43	(2 ⁺)	1269.12	2 ⁺					
1080.1 ^a 4	0.5 1	2918.71	(2 ⁺ ,3,4 ⁺)	1838.74	(2 ⁺)					
1080.5 ^a 4	0.5 1	2349.65	3 ⁻	1269.12	2 ⁺					
^x 1145.8 ^{&} 8	0.56 10									

$\gamma(^{74}\text{Se})$ (continued)

E_γ †	I_γ ‡g	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ †	I_γ ‡g	$E_i(\text{level})$	J_i^π	E_f	J_f^π
1194.0# 3	0.10 2	3078.19	(4) ⁺	1884.39	3 ⁺	2217.1# 3	0.5 1	3580.4	(2 ⁺)	1363.25	4 ⁺
1198.0# 5	0.4 1	3306.1	(2 to 6)	2107.99	4 ⁺	^x 2228.6& 8	0.29 15				
1200.5 2	5.7 6	2563.63	(2 ⁺ ,3,4 ⁺)	1363.25	4 ⁺	2283.8 3	2.7 4	2918.71	(2 ⁺ ,3,4 ⁺)	634.80	2 ⁺
1204.0 3	0.50 7	1838.74	(2 ⁺)	634.80	2 ⁺	2312.1 3	3.7 5	3675.02	(2 ⁺ ,3,4 ⁺)	1363.25	4 ⁺
1249.5 2	7.3 7	1884.39	3 ⁺	634.80	2 ⁺	2333.5 3	0.9 1	4441.87	(3,4 ⁺)	2107.99	4 ⁺
1269.1 2	9.7 4	1269.12	2 ⁺	0.0	0 ⁺	2388.3 3	1.3 2	4496.54	(3,4 ⁺)	2107.99	4 ⁺
1294.6 2	2.2 3	2563.63	(2 ⁺ ,3,4 ⁺)	1269.12	2 ⁺	2396.9# 5	0.15 5	3250.97	(1,2 ⁺)	853.84	0 ⁺
1299.7# 4	0.23 4	2662.46	5 ⁺	1363.25	4 ⁺	2408.7 3	1.0 4	3771.99	(4 ⁺)	1363.25	4 ⁺
1366.6 2	2.5 3	3250.97	(1,2 ⁺)	1884.39	3 ⁺	2443.7# 4	0.4 1	3078.19	(4) ⁺	634.80	2 ⁺
1421.7 3	0.7 1	3306.1	(2 to 6)	1884.39	3 ⁺	2472.2# 4	0.8 1	4580.0	(3,4,5)	2107.99	4 ⁺
1455.7 2	2.0 3	2818.61	(2 ⁺ ,3,4 ⁺)	1363.25	4 ⁺	2478.4 ⁱ 4	<0.5 ⁱ	3112.7	(2 ⁺ ,3,4 ⁺)	634.80	2 ⁺
1460.5# 2	0.9 1	2314.43	(2 ⁺)	853.84	0 ⁺	2478.4 ⁱ 4	<0.5 ⁱ	4586.28	(3,4 ⁺)	2107.99	4 ⁺
1468.6# 2	0.6 1	2831.87	4 ⁻	1363.25	4 ⁺	2485.6 ^d 4	0.4 1	4592.21	(4 ⁺)	2107.99	4 ⁺
1473.1 2	1.6 2	2107.99	4 ⁺	634.80	2 ⁺	2502.3# 5	0.19 5	3771.99	(4 ⁺)	1269.12	2 ⁺
1494.5# 3	0.44 6	3379.58	(2 ⁺)	1884.39	3 ⁺	^x 2558.0 4	0.4 1				
1508.0# 3	0.24 5	4586.28	(3,4 ⁺)	3078.19	(4) ⁺	2615.8# ^j 5	≤0.1	3250.97	(1,2 ⁺)	634.80	2 ⁺
^x 1515.7 3	0.29 5					2661.9 ^j 4	0.7 2	3931.1?	(0 ⁺ ,1)	1269.12	2 ⁺
1555.4# 3	0.35 6	2918.71	(2 ⁺ ,3,4 ⁺)	1363.25	4 ⁺	^x 2679.8# 3	0.8 1				
1566.4# 3	0.36 6	3675.02	(2 ⁺ ,3,4 ⁺)	2107.99	4 ⁺	2695.5# 3	0.8 1	4580.0	(3,4,5)	1884.39	3 ⁺
1649.6 3	0.39 6	2918.71	(2 ⁺ ,3,4 ⁺)	1269.12	2 ⁺	2701.8 3	1.3 2	4586.28	(3,4 ⁺)	1884.39	3 ⁺
1679.8 3	0.8 1	2314.43	(2 ⁺)	634.80	2 ⁺	2708.5 3	0.6 1	4592.21	(4 ⁺)	1884.39	3 ⁺
1714.8 ⁱ 3	<6.7 ^{ib}	2349.65	3 ⁻	634.80	2 ⁺	2745.4# 3	0.4 1	3379.58	(2 ⁺)	634.80	2 ⁺
1714.8 ⁱ 3	<6.7 ⁱ	3078.19	(4) ⁺	1363.25	4 ⁺	^x 2754.5 5	0.3 1				
1746.1# 4	0.14 5	4309.37	(3,4 ⁺)	2563.63	(2 ⁺ ,3,4 ⁺)	2825.1 ^j 10		4661.98	(3,4 ⁺)	1838.74	(2 ⁺)
^x 1769.9 4	0.17 5					2945.5 ⁱ 4	<0.3 ⁱ	3580.4	(2 ⁺)	634.80	2 ⁺
1837.6 3	0.9 1	3200.9	(4)	1363.25	4 ⁺	2945.5 ⁱ 4	<0.3 ⁱ	4309.37	(3,4 ⁺)	1363.25	4 ⁺
1843.2 3	1.0 1	3112.7	(2 ⁺ ,3,4 ⁺)	1269.12	2 ⁺	^x 3032.3 6	≤0.1				
1853.8# 3	0.5 1	4516.46	(3,4 ⁺)	2662.46	5 ⁺	3040.4 ⁱ 3	<1.2 ^{ic}	3675.02	(2 ⁺ ,3,4 ⁺)	634.80	2 ⁺
1890.0 3	0.8 1	3253.3	(2 to 6)	1363.25	4 ⁺	3040.4 ⁱ 3	<1.2 ⁱ	4309.37	(3,4 ⁺)	1269.12	2 ⁺
1928.7 ^a 5	0.7 1	2563.63	(2 ⁺ ,3,4 ⁺)	634.80	2 ⁺	3137.1 3	0.7 1	3771.99	(4 ⁺)	634.80	2 ⁺
1933.8# 3	0.5 1	3771.99	(4 ⁺)	1838.74	(2 ⁺)	3153.3 3	1.1 2	4516.46	(3,4 ⁺)	1363.25	4 ⁺
1952.8 3	0.35 6	4516.46	(3,4 ⁺)	2563.63	(2 ⁺ ,3,4 ⁺)	3173.1 3	1.2 2	4441.87	(3,4 ⁺)	1269.12	2 ⁺
1994.8# 3	0.5 1	4309.37	(3,4 ⁺)	2314.43	(2 ⁺)	3227.5 ⁱ 3	0.9 ⁱ 2	4496.54	(3,4 ⁺)	1269.12	2 ⁺
2028.2 ⁱ 3	0.5 ⁱ 1	2662.46	5 ⁺	634.80	2 ⁺	3227.5 ^{ie} 3	<0.9 ⁱ	4592.21	(4 ⁺)	1363.25	4 ⁺
2028.2 ⁱ 3	<0.5 ⁱ	4592.21	(4 ⁺)	2563.63	(2 ⁺ ,3,4 ⁺)	3247.5 10	≤0.5	4516.46	(3,4 ⁺)	1269.12	2 ⁺
2098.7# 3	0.5 1	4661.98	(3,4 ⁺)	2563.63	(2 ⁺ ,3,4 ⁺)	3297.7 ^f 3	1.5 3	4661.98	(3,4 ⁺)	1363.25	4 ⁺
^x 2158.2& 8	0.5 2					3323.2 4	0.6 1	4592.21	(4 ⁺)	1269.12	2 ⁺
^x 2167.4& 8	0.7 2					3336.3 3	1.3 2	4699.6	(3,4 ⁺)	1363.25	4 ⁺
2183.4 3	1.1 2	3037.3	(2 ⁺)	853.84	0 ⁺	3393.8 ⁱ 4	<0.6 ⁱ	4661.98	(3,4 ⁺)	1269.12	2 ⁺

⁷⁴Br ε decay (46 min) **1972Co32,1970Go24** (continued)

γ(⁷⁴Se) (continued)

<u>E_γ[†]</u>	<u>I_γ^{‡g}</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>E_γ[†]</u>	<u>I_γ^{‡g}</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>
3393.8 ⁱ 4	0.6 ⁱ 1	4757.3	(3,4 ⁺)	1363.25	4 ⁺	^x 3910.0 14	0.03 2				
3430.8 3	1.4 2	4794.52	(3,4,5)	1363.25	4 ⁺	3951.5 [#] 7	1.2 2	4586.28	(3,4 ⁺)	634.80	2 ⁺
^x 3625.0 15	0.15 5					3957.6 6	4.1 5	4592.21	(4 ⁺)	634.80	2 ⁺
^x 3633.2 15	0.10 5					^x 3972.8 15	0.08 4				
^x 3684.6 6	0.19 6					4027.1 7	1.2 2	4661.98	(3,4 ⁺)	634.80	2 ⁺
^x 3786.7 15	0.25 7					4064.4 11	0.21 6	4699.6	(3,4 ⁺)	634.80	2 ⁺
3806.7 5	1.2 2	4441.87	(3,4 ⁺)	634.80	2 ⁺	4123.5 [#] 12	0.12 5	4757.3	(3,4 ⁺)	634.80	2 ⁺
3861.8 5	1.6 3	4496.54	(3,4 ⁺)	634.80	2 ⁺	^x 4200.4 15	0.13 5				
3881.6 5	0.8 1	4516.46	(3,4 ⁺)	634.80	2 ⁺	^x 4344.0 20	0.10 5				
^x 3902.4 14	0.09 4					^x 4380.4 12	0.22 6				

[†] Average from **1972Co32** and **1970Go24**. Weak γ's are reported by **1972Co32** only.

[‡] Weighted average of **1972Co32** and **1970Go24**. Data of **1984Ma35** given for a few strong γ-rays were also considered. In obtaining weighted average. Unless otherwise stated, γ's with I_γ<0.5 are from **1972Co32**.

[#] From **1972Co32** only.

@ From **1970Go24** only.

& From **1974Ro14** only.

^a Doublet. Energy from γγ (**1972Co32**).

^b Total intensity=6.7 7.

^c Total intensity=1.2 2.

^d Level-energy difference=2484.2.

^e Level-energy difference=3228.9.

^f Level-energy difference=3298.7.

^g For absolute intensity per 100 decays, multiply by 0.912 4.

^h Total theoretical internal conversion coefficients, calculated using the BrIcc code (**2008Ki07**) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

ⁱ Multiply placed with undivided intensity.

^j Placement of transition in the level scheme is uncertain.

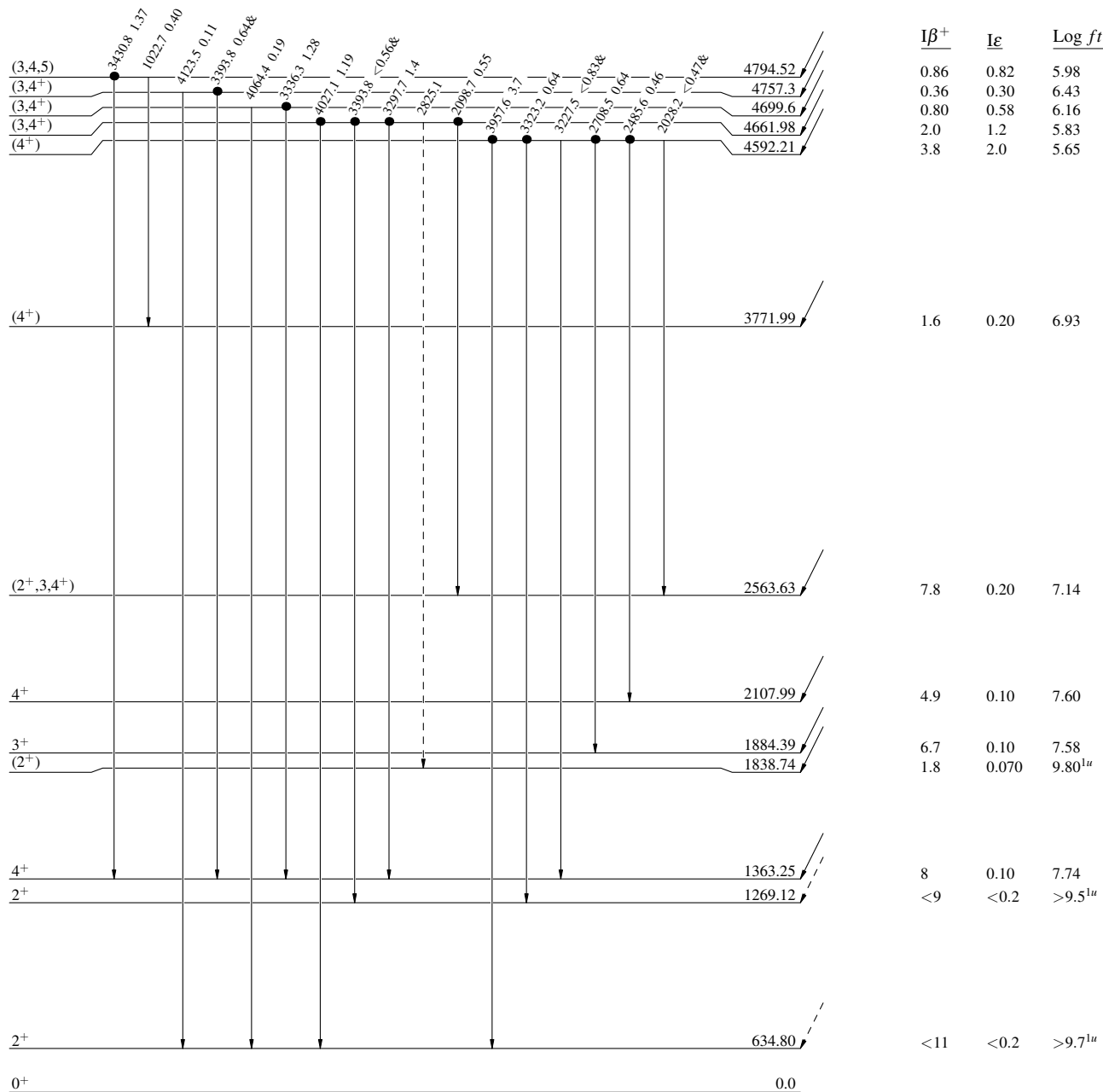
^x γ ray not placed in level scheme.

^{74}Br ε decay (46 min) 1972Co32,1970Go24**Decay Scheme****Legend**

- $I_\gamma < 2\% \times I_\gamma^{\max}$
 —→ $I_\gamma < 10\% \times I_\gamma^{\max}$
 —→ $I_\gamma > 10\% \times I_\gamma^{\max}$
 - - - - - γ Decay (Uncertain)
 • Coincidence

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

$^{74}_{35}\text{Br}_{39}$
 $4(+) \quad 13.8 \quad 46 \text{ min } 2$
 $Q_\varepsilon = 6907.15$
 $\% \varepsilon + \% \beta^+ = 100.0$

 $^{74}_{34}\text{Se}_{40}$

^{74}Br ε decay (46 min) 1972Co32,1970Go24

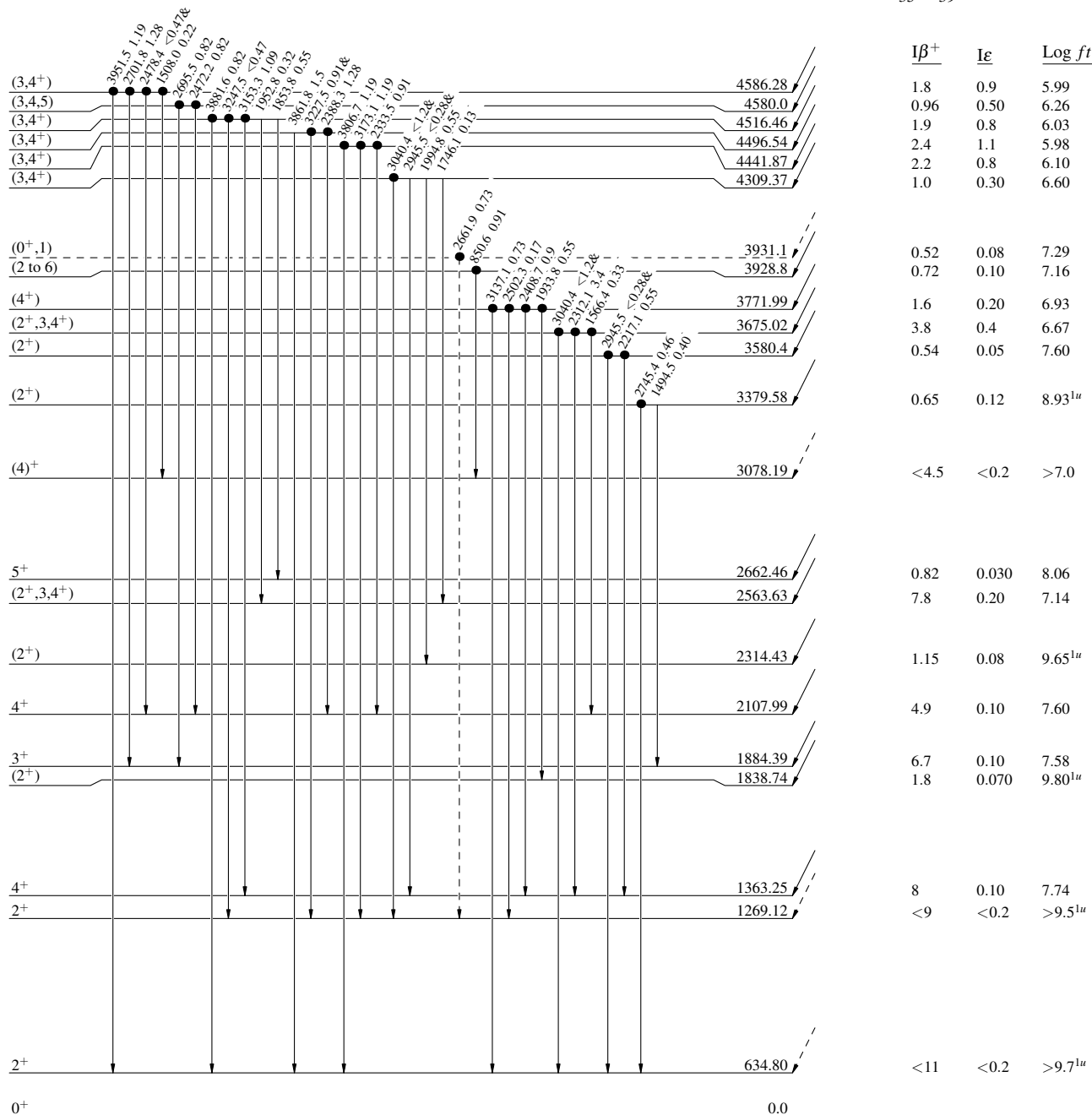
Decay Scheme (continued)

Legend

- $I_\gamma < 2\% \times I_\gamma^{\max}$
 —→ $I_\gamma < 10\% \times I_\gamma^{\max}$
 —→ $I_\gamma > 10\% \times I_\gamma^{\max}$
 - - - - - γ Decay (Uncertain)
 • Coincidence

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

$4^{(+)}$ 13.8 46 min 2
 $Q_\varepsilon = 6907.15$
 $^{74}\text{Br}_{39}$
 $\% \varepsilon + \% \beta^+ = 100.0$



^{74}Br ε decay (46 min) 1972Co32,1970Go24

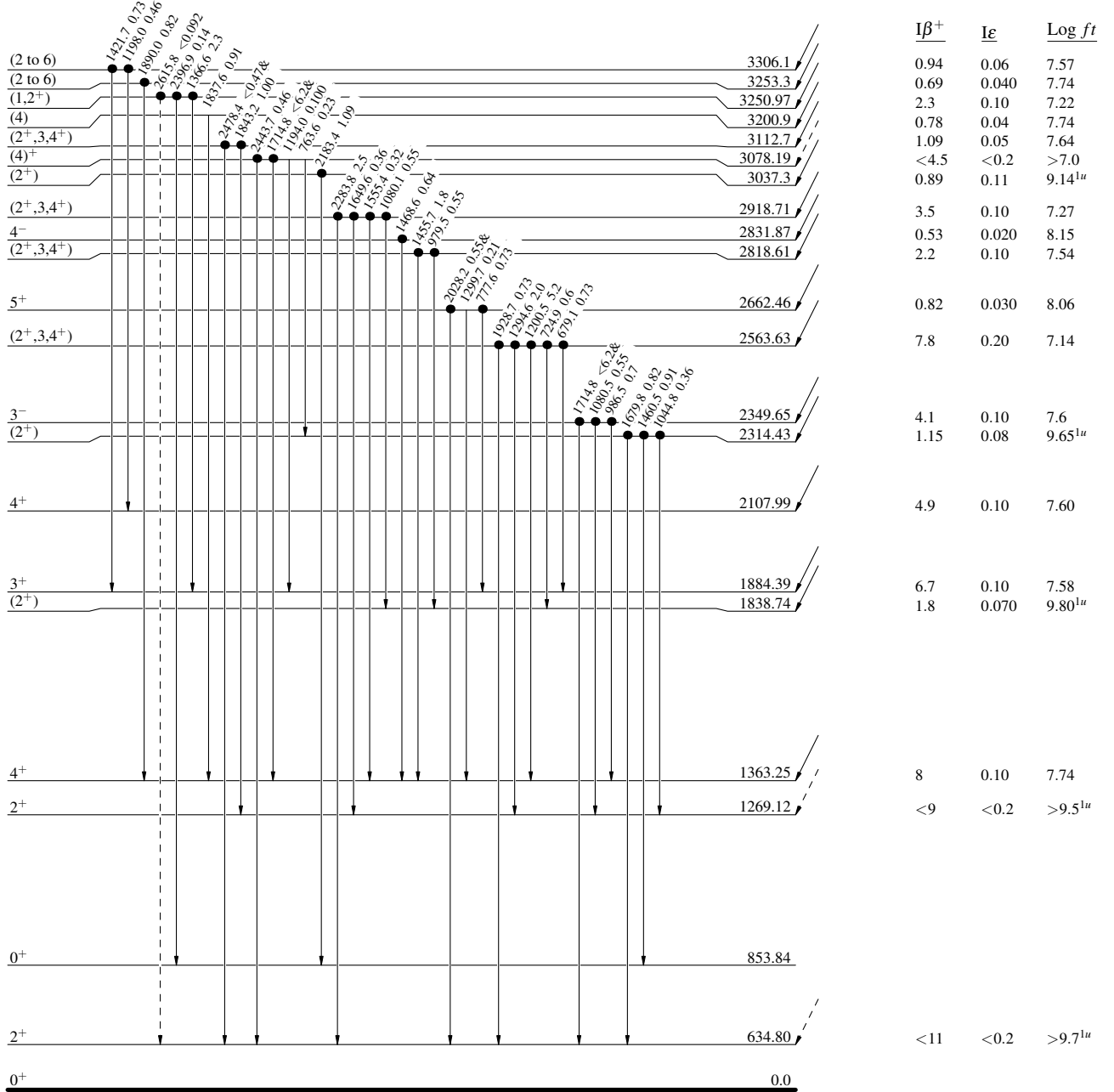
Decay Scheme (continued)

Legend

- $I_\gamma < 2\% \times I_\gamma^{\max}$
 —→ $I_\gamma < 10\% \times I_\gamma^{\max}$
 —→ $I_\gamma > 10\% \times I_\gamma^{\max}$
 - - - - - γ Decay (Uncertain)
 • Coincidence

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

$^{74}_{35}\text{Br}_{39}$
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^{74}Br ϵ decay (46 min) 1972Co32,1970Go24

Decay Scheme (continued)

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\max}$
 $\bullet$ Coincidence

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

