

^{145}Gd ε decay (23.0 min) 1982Fi01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS	110, 507 (2009)	1-Oct-2008

Parent: ^{145}Gd : $E=0.0$; $J^\pi=1/2^+$; $T_{1/2}=23.0$ min 4; $Q(\varepsilon)=5071$ 19; $\% \varepsilon + \% \beta^+$ decay=100.0

Measured: γ , $\gamma\gamma$, $X\gamma$, $\gamma\gamma^\pm$, ε/β^+ , $Q(\beta^-)$ (1982Fi01), γ , $\gamma\gamma$, $\gamma\gamma^\pm$ (1971Ep01) γ , $Q(\beta^-)$ (1977Ho18).

Other measurements: 1975Fi04, 1975Fi05, 1970SeZP, 1970Ne04, 1970Ar04, 1968Ke14, 1959Ol23, 1959Gr10.

Decay scheme is from 1982Fi01.

 ^{145}Eu Levels

E(level)	$J^\pi^\dagger$	E(level)	$J^\pi^\dagger$	E(level)	$J^\pi^\dagger$	E(level)	$J^\pi^\dagger$
0.0	$5/2^+$	2562.5 2	$3/2^+$	3451.6 20		4156.7 3	
329.92 7	$7/2^+$	2585.7 1	$(3/2^+)$	3507.4? 20	$3/2^+$	4184.0 1	
808.33 5	$1/2^+$	2606.1 2		3520.0? 6	$(3/2^+)$	4258.6 2	$3/2^+$
1041.71 6	$3/2^+$	2642.2 1	$3/2^+$	3525.6? 7		4275.9 1	$(3/2^+)$
1459.7 1		2699.7 1		3547.1? 5		4281.8 3	$3/2^+$
1567.12 7	$3/2^{(-)}, 5/2^{(-)}$	2742.7 1		3561.9 30		4308.6 1	$3/2^+$
1600.26 6	$3/2^-$	2754.1 1		3578.4? 4		4364.8 3	
1758.03 6	$3/2^+$	2779.9 1		3598.6? 3		4390.7 2	
1761.32 8	$3/2^-$	2819.1 1		3620.2 4	$3/2^+$	4410.1 1	$3/2^+$
1765.8 1	$5/2^-$	2838.7 1		3628.3 2	$3/2^+$	4424.0? 4	
1845.32 9	$(5/2)^+$	2859.2 1		3643.8 3		4428.3 1	$(3/2^+)$
1880.62 5	$3/2^+, 1/2^+$	2918.9 1		3675.7 2		4432.0? 4	
1915.5 2		2971.8 1		3705.4 2		4436.1 1	$3/2^+$
2027.8 1		2988.1? 4		3738.9 20		4454.44 9	$(3/2^+)$
2042.9 1		3001.5 2		3747.2 3	$(3/2^+)$	4463.8 5	
2048.8 1	$3/2^+$	3062.14 8	$(3/2^+)$	3768.9 4		4472.8 3	
2054.1 1		3092.0 2		3847.9 2		4496.6 1	$(3/2^+, 1/2^+)$
2079.1 1		3101.1 2		3879.8 30		4502.8 1	$(3/2^+, 1/2^+)$
2114.3 1	$(5/2)^+$	3176.3 2		3888.9 4		4517.9 4	$3/2^+$
2149.6 1		3199.1 2		3920.7 5		4536.9 5	
2188.4 1		3220.6 1		3931.7 6		4547.2 1	$3/2^+$
2203.4 1	$3/2^+$	3228.7 10		3939.3 7		4555.4 1	$(3/2^+)$
2318.68 8	$5/2^+$	3238.0 3		3944.6 30		4566.4 1	
2321.72 7	$3/2^-$	3253.6? 3		3949.8 4		4577.9? 9	
2327.3 6		3261.1 2		3962.9 5	$3/2^+$	4593.0 2	$(3/2^+)$
2349.0 1		3267.2 3		3988.9 30		4634.6 2	$(3/2^+)$
2402.25 9		3280.9 2		4003.9 30		4645.6 9	$3/2^+$
2416.8 1		3312.5 2		4014.1 3	$3/2^+$	4656.3 9	
2422.3 1		3343.5 3		4021.6 4		4663.8 2	
2463.5 1		3383.0 20	$3/2^+$	4023.8 9		4685.4 6	
2487.2 2	$3/2^+$	3389.1? 4		4044.5 3		4700.3 3	$3/2^+$
2494.88 8	$1/2^+$	3397.6 2		4047.9 30		4709.9 4	$3/2^+$
2504.41 9		3408.9 2	$3/2^+$	4051.7 1	$(3/2^+)$		
2525.2 2		3411.6 2		4069.9 1	$(3/2^+)$		
2544.9 7		3444.2 2	$3/2^+$	4131.4 3	$3/2^+$		

† Adopted values.

^{145}Gd ε decay (23.0 min) **1982Fi01** (continued) ε, β^+ radiations

E(decay) [†]	E(level)	I $\varepsilon^{\ddagger}$	Log ft	I($\varepsilon + \beta^+$) [‡]	Comments
(361 19)	4709.9	0.139 14	5.86 17	0.139 14	$\varepsilon\text{K}=0.807$ 9; $\varepsilon\text{L}=0.149$ 6; $\varepsilon\text{M}+=0.0444$ 21
(371 19)	4700.3	0.059 11	6.26 18	0.059 11	$\varepsilon\text{K}=0.808$ 8; $\varepsilon\text{L}=0.148$ 6; $\varepsilon\text{M}+=0.0441$ 20
(386 19)	4685.4	0.008 1	7.17 16	0.008 1	$\varepsilon\text{K}=0.810$ 7; $\varepsilon\text{L}=0.146$ 5; $\varepsilon\text{M}+=0.0437$ 18
(407 19)	4663.8	0.044 5	6.49 15	0.044 5	$\varepsilon\text{K}=0.812$ 6; $\varepsilon\text{L}=0.145$ 5; $\varepsilon\text{M}+=0.0431$ 16
(415 19)	4656.3	0.008 1	7.25 15	0.008 1	$\varepsilon\text{K}=0.813$ 6; $\varepsilon\text{L}=0.144$ 5; $\varepsilon\text{M}+=0.0429$ 15
(425 19)	4645.6	0.493 16	5.48 13	0.493 16	$\varepsilon\text{K}=0.814$ 6; $\varepsilon\text{L}=0.143$ 4; $\varepsilon\text{M}+=0.0426$ 14
(436 19)	4634.6	0.042 4	6.58 14	0.042 4	$\varepsilon\text{K}=0.815$ 5; $\varepsilon\text{L}=0.143$ 4; $\varepsilon\text{M}+=0.0424$ 13
(478 19)	4593.0	0.101 9	6.29 12	0.101 9	$\varepsilon\text{K}=0.818$ 4; $\varepsilon\text{L}=0.140$ 3; $\varepsilon\text{M}+=0.0416$ 10
(493 [#] 19)	4577.9?	0.004 1	7.72 16	0.004 1	$\varepsilon\text{K}=0.819$ 4; $\varepsilon\text{L}=0.140$ 3; $\varepsilon\text{M}+=0.0413$ 10
(505 19)	4566.4	0.129 14	6.24 12	0.129 14	$\varepsilon\text{K}=0.820$ 4; $\varepsilon\text{L}=0.139$ 3; $\varepsilon\text{M}+=0.0411$ 9
(516 19)	4555.4	0.149 15	6.20 11	0.149 15	$\varepsilon\text{K}=0.820$ 4; $\varepsilon\text{L}=0.1386$ 24; $\varepsilon\text{M}+=0.0410$ 9
(524 19)	4547.2	0.377 18	5.81 11	0.377 18	$\varepsilon\text{K}=0.821$ 3; $\varepsilon\text{L}=0.1382$ 23; $\varepsilon\text{M}+=0.0408$ 8
(534 19)	4536.9	0.019 2	7.13 11	0.019 2	$\varepsilon\text{K}=0.821$ 3; $\varepsilon\text{L}=0.1378$ 22; $\varepsilon\text{M}+=0.0407$ 8
(553 19)	4517.9	0.033 4	6.92 11	0.033 4	$\varepsilon\text{K}=0.822$ 3; $\varepsilon\text{L}=0.1371$ 20; $\varepsilon\text{M}+=0.0405$ 7
(568 19)	4502.8	0.528 23	5.74 10	0.528 23	$\varepsilon\text{K}=0.823$ 3; $\varepsilon\text{L}=0.1366$ 19; $\varepsilon\text{M}+=0.0403$ 7
(574 19)	4496.6	0.218 12	6.14 10	0.218 12	$\varepsilon\text{K}=0.8234$ 25; $\varepsilon\text{L}=0.1364$ 19; $\varepsilon\text{M}+=0.0402$ 7
(598 19)	4472.8	0.026 4	7.10 11	0.026 4	$\varepsilon\text{K}=0.8244$ 23; $\varepsilon\text{L}=0.1356$ 17; $\varepsilon\text{M}+=0.0400$ 6
(607 19)	4463.8	0.006 2	7.75 17	0.006 2	$\varepsilon\text{K}=0.8248$ 22; $\varepsilon\text{L}=0.1354$ 16; $\varepsilon\text{M}+=0.0399$ 6
(617 19)	4454.44	0.443 25	5.90 9	0.443 25	$\varepsilon\text{K}=0.8251$ 21; $\varepsilon\text{L}=0.1351$ 16; $\varepsilon\text{M}+=0.0398$ 6
(635 19)	4436.1	0.452 19	5.92 9	0.452 19	$\varepsilon\text{K}=0.8258$ 20; $\varepsilon\text{L}=0.1346$ 15; $\varepsilon\text{M}+=0.0396$ 5
(639 [#] 19)	4432.0?	0.066 6	6.76 9	0.066 6	$\varepsilon\text{K}=0.8259$ 19; $\varepsilon\text{L}=0.1345$ 15; $\varepsilon\text{M}+=0.0396$ 5
(643 19)	4428.3	0.166 11	6.36 9	0.166 11	$\varepsilon\text{K}=0.8261$ 19; $\varepsilon\text{L}=0.1344$ 14; $\varepsilon\text{M}+=0.0395$ 5
(647 19)	4424.0?	0.062 9	6.80 10	0.062 9	$\varepsilon\text{K}=0.8262$ 19; $\varepsilon\text{L}=0.1343$ 14; $\varepsilon\text{M}+=0.0395$ 5
(661 19)	4410.1	0.276 15	6.17 8	0.276 15	$\varepsilon\text{K}=0.8267$ 18; $\varepsilon\text{L}=0.1340$ 13; $\varepsilon\text{M}+=0.0394$ 5
(680 19)	4390.7	0.161 17	6.43 9	0.161 17	$\varepsilon\text{K}=0.8273$ 17; $\varepsilon\text{L}=0.1335$ 13; $\varepsilon\text{M}+=0.0392$ 5
(706 19)	4364.8	0.048 5	6.99 9	0.048 5	$\varepsilon\text{K}=0.8280$ 15; $\varepsilon\text{L}=0.1330$ 12; $\varepsilon\text{M}+=0.0390$ 4
(762 19)	4308.6	0.236 15	6.37 7	0.236 15	$\varepsilon\text{K}=0.8294$ 13; $\varepsilon\text{L}=0.1319$ 10; $\varepsilon\text{M}+=0.0387$ 4
(789 19)	4281.8	0.56 4	6.03 7	0.56 4	$\varepsilon\text{K}=0.8300$ 12; $\varepsilon\text{L}=0.1315$ 9; $\varepsilon\text{M}+=0.0385$ 3
(795 19)	4275.9	0.358 22	6.23 7	0.358 22	$\varepsilon\text{K}=0.8302$ 12; $\varepsilon\text{L}=0.1314$ 9; $\varepsilon\text{M}+=0.0385$ 3
(812 19)	4258.6	0.498 22	6.11 7	0.498 22	$\varepsilon\text{K}=0.8305$ 11; $\varepsilon\text{L}=0.1311$ 8; $\varepsilon\text{M}+=0.0384$ 3
(887 19)	4184.0	0.326 17	6.38 6	0.326 17	$\varepsilon\text{K}=0.8319$ 9; $\varepsilon\text{L}=0.1301$ 7; $\varepsilon\text{M}+=0.03804$ 23
(914 19)	4156.7	0.029 4	7.46 8	0.029 4	$\varepsilon\text{K}=0.8323$ 9; $\varepsilon\text{L}=0.1297$ 7; $\varepsilon\text{M}+=0.03792$ 22
(940 19)	4131.4	0.083 8	7.02 7	0.083 8	$\varepsilon\text{K}=0.8327$ 8; $\varepsilon\text{L}=0.1295$ 6; $\varepsilon\text{M}+=0.03783$ 20
(1001 19)	4069.9	0.095 14	7.02 8	0.095 14	$\varepsilon\text{K}=0.8336$ 7; $\varepsilon\text{L}=0.1288$ 5; $\varepsilon\text{M}+=0.03761$ 18
(1019 19)	4051.7	0.33 5	6.50 9	0.33 5	$\varepsilon\text{K}=0.8338$ 7; $\varepsilon\text{L}=0.1287$ 5; $\varepsilon\text{M}+=0.03755$ 17
(1023 19)	4047.9	0.057 5	7.27 6	0.057 5	$\varepsilon\text{K}=0.8338$ 7; $\varepsilon\text{L}=0.1286$ 5; $\varepsilon\text{M}+=0.03754$ 17
(1027 19)	4044.5	0.050 5	7.33 7	0.050 5	$\varepsilon\text{K}=0.8339$ 7; $\varepsilon\text{L}=0.1286$ 5; $\varepsilon\text{M}+=0.03753$ 17
(1047 19)	4023.8	0.023 3	7.68 8	0.023 3	$\varepsilon\text{K}=0.8341$ 7; $\varepsilon\text{L}=0.1284$ 5; $\varepsilon\text{M}+=0.03747$ 16
(1049 19)	4021.6	0.033 3	7.53 6	0.033 3	$\varepsilon\text{K}=0.8341$ 7; $\varepsilon\text{L}=0.1284$ 5; $\varepsilon\text{M}+=0.03746$ 16
(1057 19)	4014.1	0.124 8	6.96 6	0.124 8	$\varepsilon\text{K}=0.8342$ 6; $\varepsilon\text{L}=0.1283$ 5; $\varepsilon\text{M}+=0.03744$ 16
(1067 19)	4003.9	0.022 7	7.72 15	0.022 7	$\varepsilon\text{K}=0.8344$ 6; $\varepsilon\text{L}=0.1282$ 5; $\varepsilon\text{M}+=0.03741$ 15
(1082 19)	3988.9	0.064 9	7.27 8	0.064 9	$\varepsilon\text{K}=0.8345$ 6; $\varepsilon\text{L}=0.1281$ 5; $\varepsilon\text{M}+=0.03737$ 15
(1108 19)	3962.9	0.063 9	7.30 8	0.063 9	$\varepsilon\text{K}=0.8348$ 6; $\varepsilon\text{L}=0.1279$ 4; $\varepsilon\text{M}+=0.03729$ 14
(1121 19)	3949.8	0.075 9	7.23 7	0.075 9	$\varepsilon\text{K}=0.8349$ 6; $\varepsilon\text{L}=0.1278$ 4; $\varepsilon\text{M}+=0.03726$ 14
(1126 19)	3944.6	0.09 2	7.16 11	0.09 2	$\varepsilon\text{K}=0.8350$ 6; $\varepsilon\text{L}=0.1278$ 4; $\varepsilon\text{M}+=0.03725$ 14
(1132 19)	3939.3	0.087 20	7.18 11	0.087 20	$\varepsilon\text{K}=0.8350$ 6; $\varepsilon\text{L}=0.1277$ 4; $\varepsilon\text{M}+=0.03723$ 14
(1139 19)	3931.7	0.014 3	7.98 11	0.014 3	$\varepsilon\text{K}=0.8351$ 5; $\varepsilon\text{L}=0.1277$ 4; $\varepsilon\text{M}+=0.03722$ 13
(1150 19)	3920.7	0.097 22	7.14 11	0.097 22	$\varepsilon\text{K}=0.8352$ 5; $\varepsilon\text{L}=0.1276$ 4; $\varepsilon\text{M}+=0.03719$ 13
(1182 19)	3888.9	0.036 7	7.60 10	0.036 7	$\varepsilon\text{K}=0.8355$ 5; $\varepsilon\text{L}=0.1274$ 4; $\varepsilon\text{M}+=0.03711$ 12
(1191 19)	3879.8	0.008 4	8.26 22	0.008 4	$\varepsilon\text{K}=0.8356$ 5; $\varepsilon\text{L}=0.1273$ 4; $\varepsilon\text{M}+=0.03709$ 12
(1223 19)	3847.9	0.145 17	7.02 7	0.145 17	$\varepsilon\text{K}=0.8358$ 5; $\varepsilon\text{L}=0.1271$ 4; $\varepsilon\text{M}+=0.03702$ 12
(1302 19)	3768.9	0.114 14	7.19 7	0.114 14	$\varepsilon\text{K}=0.8363$ 3; $\varepsilon\text{L}=0.1266$ 3; $\varepsilon\text{M}+=0.03686$ 11
(1324 19)	3747.2	0.105 17	7.24 8	0.105 17	$\varepsilon\text{K}=0.8364$ 3; $\varepsilon\text{L}=0.1265$ 3; $\varepsilon\text{M}+=0.03682$ 10
(1332 19)	3738.9	0.10 2	7.26 10	0.10 2	$\varepsilon\text{K}=0.8364$ 2; $\varepsilon\text{L}=0.1265$ 3; $\varepsilon\text{M}+=0.03680$ 10
(1366 19)	3705.4	0.139 10	7.14 5	0.139 10	$\varepsilon\text{K}=0.8365$ 2; $\varepsilon\text{L}=0.1263$ 3; $\varepsilon\text{M}+=0.03673$ 10
(1395 19)	3675.7	0.117 9	7.24 5	0.117 9	$\varepsilon\text{K}=0.8365$ 2; $\varepsilon\text{L}=0.1261$ 3; $\varepsilon\text{M}+=0.03668$ 10

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^{145}Gd ε decay (23.0 min) 1982Fi01 (continued) ε, β^+ radiations (continued)

E(decay) [†]	E(level)	$I\beta^+$ [‡]	$I\varepsilon$ [‡]	Log <i>ft</i>	$I(\varepsilon + \beta^+)$ [‡]	Comments
(1427 19)	3643.8	7×10^{-5} 5	0.064 8	7.52 7	0.064 8	av $E\beta=186$ 23; $\varepsilon K=0.8364$ 4; $\varepsilon L=0.1259$ 3; $\varepsilon M+=0.03661$ 10
(1443 19)	3628.3	6×10^{-5} 4	0.045 7	7.68 8	0.045 7	av $E\beta=193$ 23; $\varepsilon K=0.8363$ 4; $\varepsilon L=0.1258$ 4; $\varepsilon M+=0.03658$ 11
(1451 19)	3620.2	6×10^{-5} 4	0.045 5	7.69 6	0.045 5	av $E\beta=197$ 23; $\varepsilon K=0.8363$ 5; $\varepsilon L=0.1258$ 4; $\varepsilon M+=0.03657$ 11
(1472 [#] 19)	3598.6?	4×10^{-5} 3	0.026 3	7.94 6	0.026 3	av $E\beta=206$ 23; $\varepsilon K=0.8361$ 6; $\varepsilon L=0.1256$ 4; $\varepsilon M+=0.03652$ 11
(1493 [#] 19)	3578.4?	2.7×10^{-5} 15	0.013 2	8.25 8	0.013 2	av $E\beta=215$ 23; $\varepsilon K=0.8359$ 7; $\varepsilon L=0.1255$ 4; $\varepsilon M+=0.03648$ 11
(1509 19)	3561.9	2×10^{-5} 1	0.007 3	8.53 19	0.007 3	av $E\beta=223$ 23; $\varepsilon K=0.8357$ 8; $\varepsilon L=0.1254$ 4; $\varepsilon M+=0.03645$ 11
(1524 [#] 19)	3547.1?	0.00015 7	0.054 9	7.66 8	0.054 9	av $E\beta=229$ 23; $\varepsilon K=0.8356$ 9; $\varepsilon L=0.1253$ 4; $\varepsilon M+=0.03642$ 12
(1545 [#] 19)	3525.6?	3.2×10^{-5} 15	0.0100 10	8.40 6	0.010 1	av $E\beta=239$ 22; $\varepsilon K=0.8352$ 10; $\varepsilon L=0.1252$ 4; $\varepsilon M+=0.03637$ 12
(1551 [#] 19)	3520.0?	0.00030 15	0.089 20	7.45 11	0.089 20	av $E\beta=241$ 22; $\varepsilon K=0.8351$ 11; $\varepsilon L=0.1251$ 4; $\varepsilon M+=0.03636$ 12
(1564 19)	3507.4?	0.0003 1	0.07 2	7.57 13	0.07 2	av $E\beta=247$ 22; $\varepsilon K=0.8349$ 11; $\varepsilon L=0.1250$ 4; $\varepsilon M+=0.03633$ 12
(1619 19)	3451.6	0.00010 5	0.018 5	8.19 13	0.018 5	av $E\beta=271$ 22; $\varepsilon K=0.8337$ 16; $\varepsilon L=0.1246$ 5; $\varepsilon M+=0.03619$ 14
(1627 19)	3444.2	0.00030 11	0.051 4	7.74 5	0.051 4	av $E\beta=274$ 22; $\varepsilon K=0.8335$ 16; $\varepsilon L=0.1245$ 5; $\varepsilon M+=0.03618$ 14
(1659 19)	3411.6	0.00037 15	0.052 11	7.75 10	0.052 11	av $E\beta=289$ 22; $\varepsilon K=0.8325$ 19; $\varepsilon L=0.1243$ 5; $\varepsilon M+=0.03609$ 15
(1662 19)	3408.9	0.00047 16	0.064 5	7.66 5	0.064 5	av $E\beta=290$ 22; $\varepsilon K=0.8324$ 19; $\varepsilon L=0.1242$ 5; $\varepsilon M+=0.03608$ 15
(1673 19)	3397.6	0.00037 16	0.048 13	7.79 13	0.048 13	av $E\beta=295$ 22; $\varepsilon K=0.8320$ 20; $\varepsilon L=0.1241$ 5; $\varepsilon M+=0.03605$ 15
(1682 19)	3389.1?	0.00018 7	0.022 4	8.14 9	0.022 4	av $E\beta=299$ 22; $\varepsilon K=0.8317$ 21; $\varepsilon L=0.1241$ 5; $\varepsilon M+=0.03603$ 15
(1688 19)	3383.0	0.0015 6	0.18 3	7.23 8	0.18 3	av $E\beta=301$ 22; $\varepsilon K=0.8315$ 21; $\varepsilon L=0.1240$ 5; $\varepsilon M+=0.03601$ 15
(1728 19)	3343.5	0.00051 16	0.047 4	7.82 5	0.048 4	av $E\beta=319$ 22; $\varepsilon K=0.8299$ 25; $\varepsilon L=0.1236$ 6; $\varepsilon M+=0.03589$ 17
(1759 19)	3312.5	0.00064 18	0.050 4	7.81 5	0.051 4	av $E\beta=332$ 22; $\varepsilon K=0.828$ 3; $\varepsilon L=0.1233$ 6; $\varepsilon M+=0.03579$ 18
(1790 19)	3280.9	0.0010 3	0.068 9	7.70 7	0.069 9	av $E\beta=346$ 22; $\varepsilon K=0.827$ 3; $\varepsilon L=0.1229$ 7; $\varepsilon M+=0.03569$ 19
(1804 19)	3267.2	0.0024 7	0.153 21	7.36 7	0.155 21	av $E\beta=352$ 22; $\varepsilon K=0.826$ 4; $\varepsilon L=0.1228$ 7; $\varepsilon M+=0.03564$ 19
(1810 19)	3261.1	0.0015 4	0.092 6	7.58 4	0.094 6	av $E\beta=355$ 22; $\varepsilon K=0.826$ 4; $\varepsilon L=0.1227$ 7; $\varepsilon M+=0.03562$ 20
(1817 [#] 19)	3253.6?	0.00045 12	0.027 3	8.12 6	0.027 3	av $E\beta=358$ 22; $\varepsilon K=0.825$ 4; $\varepsilon L=0.1226$ 7; $\varepsilon M+=0.03559$ 20
(1833 19)	3238.0	0.0021 5	0.116 9	7.49 5	0.118 9	av $E\beta=365$ 22; $\varepsilon K=0.824$ 4; $\varepsilon L=0.1224$ 7; $\varepsilon M+=0.03553$ 20
(1842 19)	3228.7	0.00047 15	0.025 5	8.17 10	0.025 5	av $E\beta=369$ 22; $\varepsilon K=0.824$ 4; $\varepsilon L=0.1223$ 7; $\varepsilon M+=0.03549$ 21
(1850 19)	3220.6	0.0025 13	0.13 6	7.46 21	0.13 6	av $E\beta=372$ 22; $\varepsilon K=0.823$ 4; $\varepsilon L=0.1222$ 7; $\varepsilon M+=0.03546$ 21
(1872 19)	3199.1	0.0019 5	0.086 14	7.64 8	0.088 14	av $E\beta=382$ 22; $\varepsilon K=0.822$ 4; $\varepsilon L=0.1219$ 8; $\varepsilon M+=0.03538$ 22
(1895 19)	3176.3	0.0018 4	0.077 8	7.70 6	0.079 8	av $E\beta=392$ 22; $\varepsilon K=0.820$ 5; $\varepsilon L=0.1216$ 8;

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^{145}Gd ε decay (23.0 min) 1982Fi01 (continued) ε, β^+ radiations (continued)

E(decay) [†]	E(level)	$I\beta^+$ [‡]	$I\varepsilon$ [‡]	Log ft	$I(\varepsilon + \beta^+)$ [‡]	Comments
(1970 19)	3101.1	0.0066 18	0.20 4	7.31 9	0.21 4	$\varepsilon M^+ = 0.03528$ 23 av $E\beta = 425$ 22; $\varepsilon K = 0.813$ 5; $\varepsilon L = 0.1204$ 9; $\varepsilon M^+ = 0.0349$ 3
(1979 19)	3092.0	0.0071 14	0.212 13	7.30 4	0.219 13	av $E\beta = 429$ 22; $\varepsilon K = 0.813$ 5; $\varepsilon L = 0.1203$ 9; $\varepsilon M^+ = 0.0349$ 3
(2009 19)	3062.14	0.022 4	0.58 3	6.87 4	0.60 3	av $E\beta = 442$ 22; $\varepsilon K = 0.810$ 6; $\varepsilon L = 0.1198$ 10; $\varepsilon M^+ = 0.0347$ 3
(2070 19)	3001.5	0.0039 8	0.085 10	7.73 6	0.089 10	av $E\beta = 469$ 22; $\varepsilon K = 0.803$ 7; $\varepsilon L = 0.1186$ 11; $\varepsilon M^+ = 0.0344$ 3
(2083 19)	2988.1?	0.0011 2	0.022 3	8.33 7	0.023 3	av $E\beta = 475$ 22; $\varepsilon K = 0.801$ 7; $\varepsilon L = 0.1184$ 11; $\varepsilon M^+ = 0.0343$ 3
(2099 19)	2971.8	0.0090 16	0.177 14	7.43 5	0.186 15	av $E\beta = 482$ 22; $\varepsilon K = 0.799$ 7; $\varepsilon L = 0.1180$ 11; $\varepsilon M^+ = 0.0342$ 4
(2152 19)	2918.9	0.0065 14	0.108 16	7.66 7	0.115 17	av $E\beta = 505$ 22; $\varepsilon K = 0.792$ 8; $\varepsilon L = 0.1169$ 12; $\varepsilon M^+ = 0.0339$ 4
(2212 19)	2859.2	0.00067 22	0.009 3	8.75 14	0.010 3	av $E\beta = 531$ 22; $\varepsilon K = 0.784$ 8; $\varepsilon L = 0.1155$ 13; $\varepsilon M^+ = 0.0335$ 4
(2232 19)	2838.7	0.027 4	0.352 20	7.18 4	0.379 21	av $E\beta = 540$ 22; $\varepsilon K = 0.781$ 8; $\varepsilon L = 0.1150$ 13; $\varepsilon M^+ = 0.0333$ 4
(2252 19)	2819.1	0.0007 3	0.009 4	8.77 18	0.010 4	av $E\beta = 549$ 22; $\varepsilon K = 0.778$ 9; $\varepsilon L = 0.1145$ 13; $\varepsilon M^+ = 0.0332$ 4
(2291 19)	2779.9	0.0103 15	0.115 8	7.69 4	0.125 9	av $E\beta = 566$ 23; $\varepsilon K = 0.771$ 9; $\varepsilon L = 0.1135$ 14; $\varepsilon M^+ = 0.0329$ 4
(2317 19)	2754.1	0.0038 5	0.039 3	8.17 4	0.043 3	av $E\beta = 578$ 23; $\varepsilon K = 0.767$ 9; $\varepsilon L = 0.1128$ 14; $\varepsilon M^+ = 0.0327$ 5
(2328 19)	2742.7	0.0146 21	0.147 11	7.60 5	0.162 12	av $E\beta = 583$ 23; $\varepsilon K = 0.765$ 10; $\varepsilon L = 0.1125$ 15; $\varepsilon M^+ = 0.0326$ 5
(2371 19)	2699.7	0.093 11	0.84 4	6.86 4	0.93 4	av $E\beta = 602$ 23; $\varepsilon K = 0.757$ 10; $\varepsilon L = 0.1113$ 15; $\varepsilon M^+ = 0.0322$ 5
(2429 19)	2642.2	0.25 3	1.99 11	6.51 4	2.24 12	av $E\beta = 627$ 23; $\varepsilon K = 0.746$ 11; $\varepsilon L = 0.1096$ 16; $\varepsilon M^+ = 0.0317$ 5 $\varepsilon/\beta^+ = 8.0$ 18.
(2465 19)	2606.1	0.0154 19	0.112 8	7.77 4	0.127 9	av $E\beta = 643$ 23; $\varepsilon K = 0.739$ 11; $\varepsilon L = 0.1084$ 17; $\varepsilon M^+ = 0.0314$ 5
(2485 19)	2585.7	0.046 5	0.316 19	7.33 4	0.362 21	av $E\beta = 652$ 23; $\varepsilon K = 0.734$ 11; $\varepsilon L = 0.1078$ 17; $\varepsilon M^+ = 0.0312$ 5
(2509 19)	2562.5	0.0171 25	0.112 12	7.79 6	0.129 14	av $E\beta = 663$ 23; $\varepsilon K = 0.730$ 11; $\varepsilon L = 0.1070$ 17; $\varepsilon M^+ = 0.0310$ 5
(2526 19)	2544.9	0.0074 14	0.047 8	8.17 8	0.054 9	av $E\beta = 671$ 23; $\varepsilon K = 0.726$ 11; $\varepsilon L = 0.1064$ 17; $\varepsilon M^+ = 0.0308$ 5
(2546 19)	2525.2	0.014 11	0.08 6	7.9 4	0.099 75	av $E\beta = 679$ 23; $\varepsilon K = 0.721$ 12; $\varepsilon L = 0.1058$ 18; $\varepsilon M^+ = 0.0306$ 5
(2567 19)	2504.41	0.0210 24	0.121 9	7.77 4	0.142 10	av $E\beta = 689$ 23; $\varepsilon K = 0.717$ 12; $\varepsilon L = 0.1051$ 18; $\varepsilon M^+ = 0.0304$ 5
(2576 19)	2494.88	0.215 23	1.22 7	6.77 4	1.43 8	av $E\beta = 693$ 23; $\varepsilon K = 0.715$ 12; $\varepsilon L = 0.1048$ 18; $\varepsilon M^+ = 0.0303$ 5 $\varepsilon/\beta^+ = 5.2$ 14.
(2584 19)	2487.2	0.0183 25	0.102 10	7.85 5	0.120 12	av $E\beta = 696$ 23; $\varepsilon K = 0.713$ 12; $\varepsilon L = 0.1045$ 18; $\varepsilon M^+ = 0.0303$ 6
(2608 19)	2463.5	0.011 2	0.058 8	8.10 7	0.069 10	av $E\beta = 707$ 23; $\varepsilon K = 0.708$ 12; $\varepsilon L = 0.1037$ 18; $\varepsilon M^+ = 0.0300$ 6
(2649 19)	2422.3	0.039 4	0.191 13	7.60 4	0.230 15	av $E\beta = 725$ 23; $\varepsilon K = 0.698$ 12; $\varepsilon L = 0.1022$ 19; $\varepsilon M^+ = 0.0296$ 6
(2654 19)	2416.8	0.058 6	0.280 18	7.44 4	0.338 21	av $E\beta = 728$ 23; $\varepsilon K = 0.697$ 12; $\varepsilon L = 0.1020$ 19; $\varepsilon M^+ = 0.0295$ 6
(2669 19)	2402.25	0.031 3	0.145 9	7.73 4	0.176 11	av $E\beta = 734$ 23; $\varepsilon K = 0.693$ 13; $\varepsilon L = 0.1015$ 19; $\varepsilon M^+ = 0.0294$ 6

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^{145}Gd ε decay (23.0 min) **1982Fi01** (continued) ε, β^+ radiations (continued)

E(decay) [†]	E(level)	$I\beta^+$ [‡]	$I\varepsilon$ [‡]	Log <i>ft</i>	$I(\varepsilon + \beta^+)$ [‡]	Comments
(2722 19)	2349.0	0.0096 14	0.040 5	8.30 6	0.050 6	av $E\beta=758$ 23; $\varepsilon K=0.680$ 13; $\varepsilon L=0.0995$ 19; $\varepsilon M+=0.0288$ 6
(2744 [#] 19)	2327.3	<0.0063	<0.026	>8.5	<0.032	av $E\beta=768$ 23; $\varepsilon K=0.675$ 13; $\varepsilon L=0.0987$ 19; $\varepsilon M+=0.0286$ 6
(2749 19)	2321.72	0.084 9	0.34 2	7.39 4	0.42 3	av $E\beta=770$ 23; $\varepsilon K=0.673$ 13; $\varepsilon L=0.0985$ 19; $\varepsilon M+=0.0285$ 6
(2752 19)	2318.68	0.022 3	0.086 12	7.98 7	0.108 15	av $E\beta=772$ 23; $\varepsilon K=0.673$ 13; $\varepsilon L=0.0984$ 19; $\varepsilon M+=0.0285$ 6
(2868 19)	2203.4	0.12 1	0.37 3	7.38 5	0.49 4	av $E\beta=823$ 23; $\varepsilon K=0.643$ 14; $\varepsilon L=0.0939$ 20; $\varepsilon M+=0.0272$ 6
(2883 19)	2188.4	0.010 7	0.03 2	8.5 4	0.04 3	av $E\beta=830$ 23; $\varepsilon K=0.639$ 14; $\varepsilon L=0.0934$ 20; $\varepsilon M+=0.0270$ 6
(2921 19)	2149.6	0.033 3	0.097 7	7.98 4	0.130 9	av $E\beta=847$ 23; $\varepsilon K=0.629$ 14; $\varepsilon L=0.0918$ 20; $\varepsilon M+=0.0266$ 6
(2957 19)	2114.3	0.087 12	0.24 3	7.59 6	0.33 4	av $E\beta=863$ 23; $\varepsilon K=0.619$ 14; $\varepsilon L=0.0904$ 20; $\varepsilon M+=0.0262$ 6 $\varepsilon/\beta^+=13$ 6.
(2992 19)	2079.1	0.01 1	0.04 2	8.4 3	0.05 3	av $E\beta=879$ 23; $\varepsilon K=0.610$ 14; $\varepsilon L=0.0890$ 20; $\varepsilon M+=0.0258$ 6
(3017 19)	2054.1	0.016 4	0.040 10	8.39 12	0.056 14	av $E\beta=891$ 23; $\varepsilon K=0.603$ 14; $\varepsilon L=0.0880$ 21; $\varepsilon M+=0.0255$ 6
(3022 19)	2048.8	0.25 3	0.64 6	7.20 5	0.89 8	av $E\beta=893$ 23; $\varepsilon K=0.602$ 14; $\varepsilon L=0.0878$ 21; $\varepsilon M+=0.0254$ 6 $\varepsilon/\beta^+=3.8$ 19.
(3028 19)	2042.9	0.026 4	0.064 9	8.19 7	0.090 13	av $E\beta=896$ 23; $\varepsilon K=0.600$ 14; $\varepsilon L=0.0876$ 21; $\varepsilon M+=0.0253$ 6
(3043 19)	2027.8	0.048 4	0.116 9	7.94 4	0.164 12	av $E\beta=902$ 23; $\varepsilon K=0.596$ 14; $\varepsilon L=0.0869$ 21; $\varepsilon M+=0.0252$ 6
(3156 19)	1915.5	0.056 7	0.11 1	7.98 6	0.17 2	av $E\beta=953$ 23; $\varepsilon K=0.566$ 14; $\varepsilon L=0.0824$ 21; $\varepsilon M+=0.0238$ 6
(3190 19)	1880.62	11.8 9	23.0 14	5.69 4	34.8 20	av $E\beta=969$ 23; $\varepsilon K=0.556$ 14; $\varepsilon L=0.0810$ 21; $\varepsilon M+=0.0234$ 6 $\varepsilon/\beta^+=2.14$ 20.
(3226 [#] 19)	1845.32	<0.039	<0.071	>8.2	<0.11	av $E\beta=985$ 23; $\varepsilon K=0.547$ 14; $\varepsilon L=0.0796$ 20; $\varepsilon M+=0.0230$ 6
(3305 [#] 19)	1765.8	<0.008	<0.01	>9.0	<0.02	av $E\beta=1021$ 23; $\varepsilon K=0.525$ 14; $\varepsilon L=0.0764$ 20; $\varepsilon M+=0.0221$ 6
(3310 19)	1761.32	0.47 4	0.78 7	7.19 5	1.25 10	av $E\beta=1023$ 23; $\varepsilon K=0.524$ 14; $\varepsilon L=0.0763$ 20; $\varepsilon M+=0.0221$ 6 $\varepsilon/\beta^+=2.9$ 13.
(3313 19)	1758.03	13.0 9	21.3 14	5.75 4	34.3 20	av $E\beta=1024$ 23; $\varepsilon K=0.523$ 14; $\varepsilon L=0.0761$ 20; $\varepsilon M+=0.0220$ 6 $\varepsilon/\beta^+=1.93$ 20.
(3471 19)	1600.26	0.54 6	0.71 7	7.27 5	1.25 12	av $E\beta=1096$ 23; $\varepsilon K=0.482$ 13; $\varepsilon L=0.0700$ 20; $\varepsilon M+=0.0202$ 6
(3504 19)	1567.12	0.029 3	0.038 4	8.56 6	0.067 7	av $E\beta=1111$ 23; $\varepsilon K=0.473$ 13; $\varepsilon L=0.0687$ 19; $\varepsilon M+=0.0199$ 6
(3611 [#] 19)	1459.7	<0.05	<0.05	>8.4	<0.1	av $E\beta=1160$ 23; $\varepsilon K=0.446$ 13; $\varepsilon L=0.0648$ 19; $\varepsilon M+=0.0187$ 6
(4029 19)	1041.71	4.7 4	3.4 3	6.73 4	8.1 6	av $E\beta=1352$ 23; $\varepsilon K=0.351$ 11; $\varepsilon L=0.0509$ 16; $\varepsilon M+=0.0147$ 5 $\varepsilon/\beta^+=0.91$ 14.
(4263 [#] 19)	808.33	<0.70	<0.40	>7.7	<1.1	av $E\beta=1460$ 24; $\varepsilon K=0.306$ 10; $\varepsilon L=0.0443$ 14; $\varepsilon M+=0.0128$ 4

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^{145}Gd ε decay (23.0 min) **1982Fi01** (continued) ε, β^+ radiations (continued)

[†] $E_{\beta^+}=2500$ 200 (**1970Ar04**), 2500 150 (**1959OI23**), 2400 200 (**1959Gr10**); $Q_+=5070$ 60 (**1982Fi01**), 5000 70 (**1977Ho18**).

[‡] Absolute intensity per 100 decays.

[#] Existence of this branch is questionable.

 $\gamma(^{145}\text{Eu})$

I_γ normalization: $\Sigma I_\gamma(\text{g.s.})=100$.

E_γ	$I_\gamma^{\ddagger}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	$\alpha^{\dagger}$	Comments
287.2 20	0.007 1	2048.8	3/2 ⁺	1761.32	3/2 ⁻			
305.5 30	0.007 2	2416.8		2114.3	(5/2) ⁺			
310.1 30	0.011 2	2422.3		2114.3	(5/2) ⁺			
329.9 1	2.7 2	329.92	7/2 ⁺	0.0	5/2 ⁺			
514.0 [#] 20	0.007 2	2114.3	(5/2) ⁺	1600.26	3/2 ⁻			
589.0 20	0.015 3	2048.8	3/2 ⁺	1459.7				
646.0 20	0.019 4	2562.5	3/2 ⁺	1915.5				
716.2 2	0.071 6	1758.03	3/2 ⁺	1041.71	3/2 ⁺			
719.9 1	0.105 10	1761.32	3/2 ⁻	1041.71	3/2 ⁺			
722.0 [#] 20	0.020 6	2321.72	3/2 ⁻	1600.26	3/2 ⁻			
751.0 20	0.015 3	2318.68	5/2 ⁺	1567.12	3/2 ⁽⁻⁾ , 5/2 ⁽⁻⁾			
754.6 2	0.034 6	2321.72	3/2 ⁻	1567.12	3/2 ⁽⁻⁾ , 5/2 ⁽⁻⁾			
808.4 1	8.6 5	808.33	1/2 ⁺	0.0	5/2 ⁺			
818.0 20	0.120 13	2699.7		1880.62	3/2 ⁺ , 1/2 ⁺			
838.8 1	0.30 2	1880.62	3/2 ⁺ , 1/2 ⁺	1041.71	3/2 ⁺			
854.1 20	0.034 5	2422.3		1567.12	3/2 ⁽⁻⁾ , 5/2 ⁽⁻⁾			
933.7 20	0.013 3	2779.9		1845.32	(5/2) ⁺			
949.7 1	0.68 4	1758.03	3/2 ⁺	808.33	1/2 ⁺			
952.6 3	1.50 9	1761.32	3/2 ⁻	808.33	1/2 ⁺	[E1]	0.001187 17	$\alpha=0.001187$ 17; $\alpha(\text{K})=0.001019$ 15; $\alpha(\text{L})=0.0001322$ 19; $\alpha(\text{M})=2.82 \times 10^{-5}$ 4; $\alpha(\text{N}+..)=7.57 \times 10^{-6}$ 9; $\alpha(\text{N})=6.45 \times 10^{-6}$ 9; $\alpha(\text{O})=1.022 \times 10^{-6}$ 15; $\alpha(\text{P})=1.018 \times 10^{-7}$ 15
961.0 [#] 20	0.032 5	2562.5	3/2 ⁺	1600.26	3/2 ⁻			
973.8 20	0.010 4	2819.1		1845.32	(5/2) ⁺			
984.0 [#] 20	0.032 5	2585.7	(3/2 ⁺)	1600.26	3/2 ⁻			
992.5 20	0.010 4	2838.7		1845.32	(5/2) ⁺			
1013.9 20	0.010 3	2859.2		1845.32	(5/2) ⁺			
1014.2 2	0.071 6	2779.9		1765.8	5/2 ⁻			
1041.8 1	9.9 6	1041.71	3/2 ⁺	0.0	5/2 ⁺			
1072.3 1	2.8 2	1880.62	3/2 ⁺ , 1/2 ⁺	808.33	1/2 ⁺			
1082.4 20	0.029 5	2838.7		1758.03	3/2 ⁺			
1129.8 1	0.024 3	1459.7		329.92	7/2 ⁺			
1181.5 1	0.074 13	3062.14	(3/2 ⁺)	1880.62	3/2 ⁺ , 1/2 ⁺			
1215.0 20	0.046 7	2971.8		1758.03	3/2 ⁺			
1220.3 20	0.016 4	2027.8		808.33	1/2 ⁺			
1234.4 20	0.041 7	2042.9		808.33	1/2 ⁺			
1366.1 [#] 20	0.082 11	3768.9		2402.25				
1380.1 1	0.07 2	2188.4		808.33	1/2 ⁺			
1381.0 20	0.054 8	2422.3		1041.71	3/2 ⁺			
1416.3 20	0.008 4	3879.8		2463.5				

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^{145}Gd ε decay (23.0 min) **1982Fi01** (continued) $\gamma(^{145}\text{Eu})$ (continued)

E_γ	$I_\gamma^\dagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	$\alpha^\dagger$	Comments
1421.7 1	0.042 6	2463.5		1041.71	3/2 ⁺			
1427.9 20	0.12 3	1758.03	3/2 ⁺	329.92	7/2 ⁺			
1430.8 4	0.061 12	1761.32	3/2 ⁻	329.92	7/2 ⁺			
1436.2 2	0.30 2	1765.8	5/2 ⁻	329.92	7/2 ⁺	[E1]	0.000727 11	$\alpha=0.000727$ 11; $\alpha(\text{K})=0.000487$ 7; $\alpha(\text{L})=6.23\times 10^{-5}$ 9; $\alpha(\text{M})=1.329\times 10^{-5}$ 19; $\alpha(\text{N}+..)=0.0001642$ $\alpha(\text{N})=3.04\times 10^{-6}$ 5; $\alpha(\text{O})=4.83\times 10^{-7}$ 7; $\alpha(\text{P})=4.90\times 10^{-8}$ 7; $\alpha(\text{IPF})=0.0001606$ 23
1441.5 20	0.016 7	3768.9		2327.3				
1459.6 3	0.081 9	1459.7		0.0	5/2 ⁺			
1461.6 1	0.28 2	3062.14	(3/2 ⁺)	1600.26	3/2 ⁻			
1462.9 20	0.025 5	3228.7		1765.8	5/2 ⁻			
1466.6 [#] 20	0.029 8	3547.1?		2079.1				
1467.6 20	0.007 3	3931.7		2463.5				
1513.2 20	0.017 5	3628.3	3/2 ⁺	2114.3	(5/2 ⁺)			
1513.4 2	0.35 2	2321.72	3/2 ⁻	808.33	1/2 ⁺	[E1]	0.000734 11	$\alpha=0.000734$ 11; $\alpha(\text{K})=0.000446$ 7; $\alpha(\text{L})=5.69\times 10^{-5}$ 8; $\alpha(\text{M})=1.214\times 10^{-5}$ 17; $\alpha(\text{N}+..)=0.000219$ 3 $\alpha(\text{N})=2.78\times 10^{-6}$ 4; $\alpha(\text{O})=4.41\times 10^{-7}$ 7; $\alpha(\text{P})=4.48\times 10^{-8}$ 7; $\alpha(\text{IPF})=0.000216$ 3
1561.9 20	0.014 6	3888.9		2327.3				
1567.2 1	0.97 6	1567.12	3/2 ⁽⁻⁾ , 5/2 ⁽⁻⁾	0.0	5/2 ⁺			
1576.0 20	0.025 6	3176.3		1600.26	3/2 ⁻			
1576.0 20	0.019 6	4275.9	(3/2 ⁺)	2699.7				
1593.8 1	0.176 11	2402.25		808.33	1/2 ⁺			
1598.6 20	0.095 11	2642.2	3/2 ⁺	1041.71	3/2 ⁺			
1599.0 20	0.039 10	3199.1		1600.26	3/2 ⁻			
1600.1 1	1.76 10	1600.26	3/2 ⁻	0.0	5/2 ⁺	[E1]	0.000753 11	$\alpha=0.000753$ 11; $\alpha(\text{K})=0.000406$ 6; $\alpha(\text{L})=5.18\times 10^{-5}$ 8; $\alpha(\text{M})=1.104\times 10^{-5}$ 16; $\alpha(\text{N}+..)=0.000284$ 4 $\alpha(\text{N})=2.52\times 10^{-6}$ 4; $\alpha(\text{O})=4.01\times 10^{-7}$ 6; $\alpha(\text{P})=4.08\times 10^{-8}$ 6; $\alpha(\text{IPF})=0.000281$ 4
1613.9 1	0.130 11	2422.3		808.33	1/2 ⁺			
1620.3 1	0.10 6	3220.6		1600.26	3/2 ⁻			
1648.9 20	0.024 8	3705.4		2054.1				
1658.0 1	0.38 2	2699.7		1041.71	3/2 ⁺			
1678.6 2	0.052 8	2487.2	3/2 ⁺	808.33	1/2 ⁺			
1686.6 1	0.105 12	2494.88	1/2 ⁺	808.33	1/2 ⁺			
1696.4 2	0.043 7	2504.41		808.33	1/2 ⁺			
1719.1 2	1.05 7	2048.8	3/2 ⁺	329.92	7/2 ⁺			
1750.1 [#] 20	0.033 5	2079.1		329.92	7/2 ⁺			
1755.0 20	0.046 11	4281.8	3/2 ⁺	2525.2				
1757.9 1	34.2 20	1758.03	3/2 ⁺	0.0	5/2 ⁺			
1782.9 20	0.036 10	4308.6	3/2 ⁺	2525.2				

Continued on next page (footnotes at end of table)

^{145}Gd ε decay (23.0 min) $^{1982}\text{Fi01}$ (continued) $\gamma(^{145}\text{Eu})$ (continued)

E_γ	$I_\gamma^\dagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	$\alpha^\dagger$	Comments
1784.4 1	0.40 3	2114.3	(5/2) ⁺	329.92	7/2 ⁺	[M1,E2]	0.00117 15	$\alpha=0.00117$ 15; $\alpha(\text{K})=0.00083$ 12; $\alpha(\text{L})=0.000110$ 15; $\alpha(\text{M})=2.4\times 10^{-5}$ 4; $\alpha(\text{N}+..)=0.000207$ 13 $\alpha(\text{N})=5.4\times 10^{-6}$ 8; $\alpha(\text{O})=8.6\times 10^{-7}$ 12; $\alpha(\text{P})=8.7\times 10^{-8}$ 14; $\alpha(\text{IPF})=0.000200$ 13
1788.5 20	0.075 10	4709.9	3/2 ⁺	2918.9				
1796.1 20	0.007 3	3561.9		1765.8	5/2 ⁻			
1844.0# 20	0.007 3	4308.6	3/2 ⁺	2463.5				
1845.4 1	0.53 4	1845.32	(5/2) ⁺	0.0	5/2 ⁺			
1858.3 20	0.10 2	3738.9		1880.62	3/2 ⁺ ,1/2 ⁺			
1872.6 20	0.109 11	2203.4	3/2 ⁺	329.92	7/2 ⁺			
1880.6 1	32.6 19	1880.62	3/2 ⁺ ,1/2 ⁺	0.0	5/2 ⁺			
1891.0 2	0.43 2	2699.7		808.33	1/2 ⁺			
1915.5 2	0.19 2	1915.5		0.0	5/2 ⁺			
1934.8# 20	0.048 9	2742.7		808.33	1/2 ⁺			
1988.5 1	0.090 10	2318.68	5/2 ⁺	329.92	7/2 ⁺	[M1]	0.001188 17	$\alpha=0.001188$ 17; $\alpha(\text{K})=0.000744$ 11; $\alpha(\text{L})=9.78\times 10^{-5}$ 14; $\alpha(\text{M})=2.09\times 10^{-5}$ 3; $\alpha(\text{N}+..)=0.000325$ 5 $\alpha(\text{N})=4.80\times 10^{-6}$ 7; $\alpha(\text{O})=7.66\times 10^{-7}$ 11; $\alpha(\text{P})=7.89\times 10^{-8}$ 11; $\alpha(\text{IPF})=0.000319$ 5
1999.0 20	0.057 5	4047.9		2048.8	3/2 ⁺			
2021.7 20	0.105 8	3062.14	(3/2 ⁺)	1041.71	3/2 ⁺			
2027.8 1	0.148 11	2027.8		0.0	5/2 ⁺			
2040.9 20	0.07 2	3920.7		1880.62	3/2 ⁺ ,1/2 ⁺			
2042.9 1	0.049 10	2042.9		0.0	5/2 ⁺			
2049.1 4	0.15 2	2048.8	3/2 ⁺	0.0	5/2 ⁺			
2054.1 1	0.080 11	2054.1		0.0	5/2 ⁺			
2056.7 20	0.08 2	3939.3		1880.62	3/2 ⁺ ,1/2 ⁺			
2064.0 20	0.09 2	3944.6		1880.62	3/2 ⁺ ,1/2 ⁺			
2073.9 20	0.018 7	3920.7		1845.32	(5/2) ⁺			
2077.9 20	0.066 14	4281.8	3/2 ⁺	2203.4	3/2 ⁺			
2079.1 1	0.11 2	2079.1		0.0	5/2 ⁺			
2083.7 1	0.099 8	4547.2	3/2 ⁺	2463.5				
2083.9 20	0.027 7	3962.9	3/2 ⁺	1880.62	3/2 ⁺ ,1/2 ⁺			
2087.2 20	0.076 14	3847.9		1761.32	3/2 ⁻			
2091.4# 2	0.049 10	4410.1	3/2 ⁺	2318.68	5/2 ⁺			
2100.4 1	0.205 13	4502.8	(3/2 ⁺ ,1/2 ⁺)	2402.25				
2110.6 1	0.138 13	2918.9		808.33	1/2 ⁺			
2144.2# 3	0.037 5	4258.6	3/2 ⁺	2114.3	(5/2) ⁺			
2149.0 20	0.070 15	3747.2	(3/2 ⁺)	1600.26	3/2 ⁻			
2149.6 1	0.130 9	2149.6		0.0	5/2 ⁺			
2157.9 20	0.032 4	2487.2	3/2 ⁺	329.92	7/2 ⁺			
2158.6 20	0.022 7	4003.9		1845.32	(5/2) ⁺			
2163.4 1	0.119 12	2971.8		808.33	1/2 ⁺			
2175.8 20	0.032 10	4700.3	3/2 ⁺	2525.2				
2181.2# 1	0.105 9	4502.8	(3/2 ⁺ ,1/2 ⁺)	2321.72	3/2 ⁻			

Continued on next page (footnotes at end of table)

^{145}Gd ε decay (23.0 min) **1982Fi01** (continued) $\gamma(^{145}\text{Eu})$ (continued)

E_γ	$I_\gamma^{\pm}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π
2187.8 3	0.018 8	2188.4		0.0	$5/2^+$
2192.0 20	0.034 8	3001.5		808.33	$1/2^+$
2195.2 2	0.099 10	2525.2		329.92	$7/2^+$
2202.0 20	0.063 15	4281.8	$3/2^+$	2079.1	
2203.0 20	0.052 13	4390.7		2188.4	
2203.4 1	0.45 3	2203.4	$3/2^+$	0.0	$5/2^+$
2227.0 1	0.140 13	4275.9	$(3/2^+)$	2048.8	$3/2^+$
2232.6 2	0.035 10	2562.5	$3/2^+$	329.92	$7/2^+$
2239.7 3	0.016 7	3280.9		1041.71	$3/2^+$
2253.9 2	0.078 9	3062.14	$(3/2^+)$	808.33	$1/2^+$
2276.1# 6	0.006 2	4390.7		2114.3	$(5/2)^+$
2283.5 3	0.026 3	4044.5		1761.32	$3/2^-$
2292.0 4	0.05 3	3101.1		808.33	$1/2^+$
2293.5 2	0.10 3	4051.7	$(3/2^+)$	1758.03	$3/2^+$
2302.0 20	0.015 5	4184.0		1880.62	$3/2^+, 1/2^+$
2313.0# 20	0.056 8	2642.2	$3/2^+$	329.92	$7/2^+$
2318.9 1	0.052 4	2318.68	$5/2^+$	0.0	$5/2^+$
2322.0 4	0.118 14	2321.72	$3/2^-$	0.0	$5/2^+$
2327.3 7	0.04 2	2327.3		0.0	$5/2^+$
2349.0 1	0.050 6	2349.0		0.0	$5/2^+$
2360.9# 4	0.022 5	4410.1	$3/2^+$	2048.8	$3/2^+$
2387.3# 2	0.054 13	4436.1	$3/2^+$	2048.8	$3/2^+$
2390.9 2	0.032 8	3199.1		808.33	$1/2^+$
2396.5 4	0.035 6	4275.9	$(3/2^+)$	1880.62	$3/2^+, 1/2^+$
2409.9 20	0.018 5	3451.6		1041.71	$3/2^+$
2413.3 2	0.34 2	4258.6	$3/2^+$	1845.32	$(5/2)^+$
2416.8 1	0.33 2	2416.8		0.0	$5/2^+$
2422.9 1	0.074 8	4184.0		1761.32	$3/2^-$
2425.6 1	0.192 13	4184.0		1758.03	$3/2^+$
2429.6 1	0.091 8	3238.0		808.33	$1/2^+$
2451.9 2	0.15 3	4051.7	$(3/2^+)$	1600.26	$3/2^-$
2453.0# 20	0.019 6	4502.8	$(3/2^+, 1/2^+)$	2048.8	$3/2^+$
2458.9 1	0.035 5	3267.2		808.33	$1/2^+$
2463.3 8	0.042 6	2463.5		0.0	$5/2^+$
2469.6 1	0.080 13	4069.9	$(3/2^+)$	1600.26	$3/2^-$
2487.8 3	0.036 7	2487.2	$3/2^+$	0.0	$5/2^+$
2494.8 1	1.33 8	2494.88	$1/2^+$	0.0	$5/2^+$
2504.3 1	0.099 7	2504.41		0.0	$5/2^+$
2508.0 20	0.023 7	4390.7		1880.62	$3/2^+, 1/2^+$
2509.2 20	0.018 7	4275.9	$(3/2^+)$	1765.8	$5/2^-$
2521.5 20	0.04 2	4281.8	$3/2^+$	1761.32	$3/2^-$
2539.0 20	0.010 5	4308.6	$3/2^+$	1765.8	$5/2^-$
2544.9 7	0.054 9	2544.9		0.0	$5/2^+$
2554.8 7	0.061 12	4436.1	$3/2^+$	1880.62	$3/2^+, 1/2^+$
2562.7 7	0.043 7	2562.5	$3/2^+$	0.0	$5/2^+$
2573.9 1	0.102 8	4454.44	$(3/2^+)$	1880.62	$3/2^+, 1/2^+$
2585.7 1	0.33 2	2585.7	$(3/2^+)$	0.0	$5/2^+$
2589.2 2	0.048 13	3397.6		808.33	$1/2^+$
2591.3 20	0.006 3	4472.8		1880.62	$3/2^+, 1/2^+$
2597.3# 2	0.039 4	4645.6	$3/2^+$	2048.8	$3/2^+$
2603.2 2	0.052 11	3411.6		808.33	$1/2^+$
2606.1 2	0.127 9	2606.1		0.0	$5/2^+$
2609.6 2	0.051 8	4454.44	$(3/2^+)$	1845.32	$(5/2)^+$
2622.1 1	0.052 11	4502.8	$(3/2^+, 1/2^+)$	1880.62	$3/2^+, 1/2^+$

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^{145}Gd ε decay (23.0 min) **1982Fi01** (continued) $\gamma(^{145}\text{Eu})$ (continued)

E_γ	$I_\gamma^{\pm}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π
2624.7 [#] 2	0.017 6	4390.7		1765.8	5/2 ⁻
2633.1 20	0.033 4	3675.7		1041.71	3/2 ⁺
2642.2 1	2.09 12	2642.2	3/2 ⁺	0.0	5/2 ⁺
2662.7 [#] 2	0.062 9	4424.0?		1761.32	3/2 ⁻
2670.0 20	0.039 9	4428.3	(3/2 ⁺)	1758.03	3/2 ⁺
2670.7 [#] 2	0.066 6	4432.0?		1761.32	3/2 ⁻
2675.2 3	0.064 10	4275.9	(3/2 ⁺)	1600.26	3/2 ⁻
2677.9 2	0.085 10	4436.1	3/2 ⁺	1758.03	3/2 ⁺
2691.0 9	0.021 4	4258.6	3/2 ⁺	1567.12	3/2 ⁽⁻⁾ , 5/2 ⁽⁻⁾
2697.2 9	0.08 2	4454.44	(3/2 ⁺)	1758.03	3/2 ⁺
2700.9 9	0.021 4	2699.7		0.0	5/2 ⁺
2708.5 1	0.064 6	4308.6	3/2 ⁺	1600.26	3/2 ⁻
2714.4 5	0.079 6	4281.8	3/2 ⁺	1567.12	3/2 ⁽⁻⁾ , 5/2 ⁽⁻⁾
2738.7 1	0.068 5	4496.6	(3/2 ⁺ , 1/2 ⁺)	1758.03	3/2 ⁺
2742.7 1	0.114 7	2742.7		0.0	5/2 ⁺
2754.1 1	0.043 3	2754.1		0.0	5/2 ⁺
2764.8 1	0.072 5	4645.6	3/2 ⁺	1880.62	3/2 ⁺ , 1/2 ⁺
2779.9 1	0.041 5	2779.9		0.0	5/2 ⁺
2789.5 2	0.069 8	4547.2	3/2 ⁺	1758.03	3/2 ⁺
2797.4 2	0.037 6	4555.4	(3/2 ⁺)	1758.03	3/2 ⁺
2800.7 2	0.039 10	4566.4		1765.8	5/2 ⁻
2804.9 2	0.062 9	4566.4		1761.32	3/2 ⁻
2809.9 2	0.034 6	4410.1	3/2 ⁺	1600.26	3/2 ⁻
2819.8 2	0.021 2	3628.3	3/2 ⁺	808.33	1/2 ⁺
2828.2 1	0.087 6	4428.3	(3/2 ⁺)	1600.26	3/2 ⁻
2831.0 20	0.024 8	4709.9	3/2 ⁺	1880.62	3/2 ⁺ , 1/2 ⁺
2836.0 2	0.20 2	4436.1	3/2 ⁺	1600.26	3/2 ⁻
2838.7 1	0.34 2	2838.7		0.0	5/2 ⁺
2842.9 2	0.060 5	4410.1	3/2 ⁺	1567.12	3/2 ⁽⁻⁾ , 5/2 ⁽⁻⁾
2853.2 2	0.048 5	4454.44	(3/2 ⁺)	1600.26	3/2 ⁻
2860.9 2	0.027 4	4428.3	(3/2 ⁺)	1567.12	3/2 ⁽⁻⁾ , 5/2 ⁽⁻⁾
2867.4 2	0.084 8	3675.7		808.33	1/2 ⁺
2884.1 2	0.109 9	4645.6	3/2 ⁺	1761.32	3/2 ⁻
2887.9 6	0.045 4	4645.6	3/2 ⁺	1758.03	3/2 ⁺
2896.9 2	0.083 5	3705.4		808.33	1/2 ⁺
2902.3 2	0.029 3	4663.8		1761.32	3/2 ⁻
2907.2 7	0.035 8	3949.8		1041.71	3/2 ⁺
2918.6 2	0.052 4	2918.9		0.0	5/2 ⁺
2947.1 3	0.098 10	4547.2	3/2 ⁺	1600.26	3/2 ⁻
2947.2 20	0.064 9	3988.9		1041.71	3/2 ⁺
2955.4 2	0.041 9	4555.4	(3/2 ⁺)	1600.26	3/2 ⁻
2971.9 4	0.021 5	2971.8		0.0	5/2 ⁺
2980.1 [#] 3	0.028 7	4547.2	3/2 ⁺	1567.12	3/2 ⁽⁻⁾ , 5/2 ⁽⁻⁾
2988.1 [#] 4	0.023 3	2988.1?		0.0	5/2 ⁺
2992.9 [#] 3	0.026 6	4593.0	(3/2 ⁺)	1600.26	3/2 ⁻
3001.5 2	0.055 6	3001.5		0.0	5/2 ⁺
3009.7 [#] 2	0.051 5	4051.7	(3/2 ⁺)	1041.71	3/2 ⁺
3034.0 3	0.028 3	4634.6	(3/2 ⁺)	1600.26	3/2 ⁻
3039.5 2	0.059 9	3847.9		808.33	1/2 ⁺
3053.0 20	0.18 3	3383.0	3/2 ⁺	329.92	7/2 ⁺
3063.1 2	0.068 5	3062.14	(3/2 ⁺)	0.0	5/2 ⁺
3079.0 2	0.041 3	3408.9	3/2 ⁺	329.92	7/2 ⁺
3092.0 2	0.219 13	3092.0		0.0	5/2 ⁺
3101.2 2	0.160 10	3101.1		0.0	5/2 ⁺

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^{145}Gd ε decay (23.0 min) **1982Fi01** (continued) $\gamma(^{145}\text{Eu})$ (continued)

E_γ	$I_\gamma^{\pm}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π
3114.2 2	0.051 4	3444.2	3/2 ⁺	329.92	7/2 ⁺
3141.3# 7	0.031 3	3949.8		808.33	1/2 ⁺
3176.3 2	0.054 5	3176.3		0.0	5/2 ⁺
3177.4# 20	0.07 2	3507.4?	3/2 ⁺	329.92	7/2 ⁺
3188.0# 20	0.08 2	3520.0?	(3/2 ⁺)	329.92	7/2 ⁺
3198.3# 4	0.017 3	3199.1		0.0	5/2 ⁺
3217.2# 6	0.014 2	4258.6	3/2 ⁺	1041.71	3/2 ⁺
3220.7 3	0.035 2	3220.6		0.0	5/2 ⁺
3239.4# 7	0.027 4	3238.0		0.0	5/2 ⁺
3243.2# 7	0.019 3	4051.7	(3/2 ⁺)	808.33	1/2 ⁺
3253.6# 3	0.027 3	3253.6?		0.0	5/2 ⁺
3261.1 2	0.094 6	3261.1		0.0	5/2 ⁺
3266.0 20	0.12 2	3267.2		0.0	5/2 ⁺
3280.7 2	0.053 5	3280.9		0.0	5/2 ⁺
3290.4 4	0.015 4	3620.2	3/2 ⁺	329.92	7/2 ⁺
3299.2 4	0.007 3	3628.3	3/2 ⁺	329.92	7/2 ⁺
3312.5 2	0.051 4	3312.5		0.0	5/2 ⁺
3324.9 20	0.006 2	4131.4	3/2 ⁺	808.33	1/2 ⁺
3343.5 3	0.048 3	3343.5		0.0	5/2 ⁺
3348.4 3	0.023 3	4156.7		808.33	1/2 ⁺
3376.9 7	0.023 5	4184.0		808.33	1/2 ⁺
3389.1# 4	0.022 4	3389.1?		0.0	5/2 ⁺
3394.5 3	0.018 2	4436.1	3/2 ⁺	1041.71	3/2 ⁺
3408.3# 20	0.023 3	3408.9	3/2 ⁺	0.0	5/2 ⁺
3413.1 3	0.059 3	4454.44	(3/2 ⁺)	1041.71	3/2 ⁺
3454.3 3	0.015 5	4496.6	(3/2 ⁺ , 1/2 ⁺)	1041.71	3/2 ⁺
3460.9 3	0.069 8	4502.8	(3/2 ⁺ , 1/2 ⁺)	1041.71	3/2 ⁺
3473.9 5	0.179 10	4281.8	3/2 ⁺	808.33	1/2 ⁺
3505.3 4	0.031 4	4547.2	3/2 ⁺	1041.71	3/2 ⁺
3512.8 3	0.054 10	4555.4	(3/2 ⁺)	1041.71	3/2 ⁺
3520.9# 7	0.009 1	3520.0?	(3/2 ⁺)	0.0	5/2 ⁺
3525.6# 7	0.010 1	3525.6?		0.0	5/2 ⁺
3547.4# 5	0.025 4	3547.1?		0.0	5/2 ⁺
3550.7 3	0.057 5	4593.0	(3/2 ⁺)	1041.71	3/2 ⁺
3556.5# 3	0.017 4	4364.8		808.33	1/2 ⁺
3578.4# 4	0.013 2	3578.4?		0.0	5/2 ⁺
3582.9 3	0.041 3	4390.7		808.33	1/2 ⁺
3598.6# 3	0.026 3	3598.6?		0.0	5/2 ⁺
3601.5 3	0.051 4	4410.1	3/2 ⁺	808.33	1/2 ⁺
3604.2 3	0.141 9	4645.6	3/2 ⁺	1041.71	3/2 ⁺
3619.8 7	0.030 3	3620.2	3/2 ⁺	0.0	5/2 ⁺
3623.1 7	0.010 4	4663.8		1041.71	3/2 ⁺
3626.2 9	0.025 3	4436.1	3/2 ⁺	808.33	1/2 ⁺
3632.7 3	0.015 2	3962.9	3/2 ⁺	329.92	7/2 ⁺
3643.8 3	0.064 8	3643.8		0.0	5/2 ⁺
3645.8 3	0.076 6	4454.44	(3/2 ⁺)	808.33	1/2 ⁺
3656.2 7	0.004 2	4463.8		808.33	1/2 ⁺
3664.1 4	0.013 2	4472.8		808.33	1/2 ⁺
3684.3 3	0.117 8	4014.1	3/2 ⁺	329.92	7/2 ⁺
3687.7 3	0.135 9	4496.6	(3/2 ⁺ , 1/2 ⁺)	808.33	1/2 ⁺
3694.3 3	0.046 4	4502.8	(3/2 ⁺ , 1/2 ⁺)	808.33	1/2 ⁺
3705.8 3	0.032 2	3705.4		0.0	5/2 ⁺

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^{145}Gd ε decay (23.0 min) **1982Fi01** (continued) $\gamma(^{145}\text{Eu})$ (continued)

E_γ	$I_\gamma^\pm$	$E_i(\text{level})$	J_i^π	E_f	J_f^π
3738.7# 3	0.024 2	4547.2	3/2 ⁺	808.33	1/2 ⁺
3746.9 3	0.035 8	3747.2	(3/2 ⁺)	0.0	5/2 ⁺
3757.7 4	0.009 1	4566.4		808.33	1/2 ⁺
3769.0 4	0.016 5	3768.9		0.0	5/2 ⁺
3785.4 6	0.014 2	4593.0	(3/2 ⁺)	808.33	1/2 ⁺
3801.3 3	0.077 7	4131.4	3/2 ⁺	329.92	7/2 ⁺
3826.8# 4	0.009 2	4634.6	(3/2 ⁺)	808.33	1/2 ⁺
3848.0# 4	0.010 1	3847.9		0.0	5/2 ⁺
3888.8# 4	0.022 3	3888.9		0.0	5/2 ⁺
3891.7 4	0.019 3	4700.3	3/2 ⁺	808.33	1/2 ⁺
3901.7 4	0.028 3	4709.9	3/2 ⁺	808.33	1/2 ⁺
3920.8# 5	0.009 2	3920.7		0.0	5/2 ⁺
3928.8 4	0.049 3	4258.6	3/2 ⁺	329.92	7/2 ⁺
3931.8# 6	0.007 2	3931.7		0.0	5/2 ⁺
3940.2# 7	0.007 2	3939.3		0.0	5/2 ⁺
3950.7# 7	0.009 2	3949.8		0.0	5/2 ⁺
3953.3 20	0.015 3	4281.8	3/2 ⁺	329.92	7/2 ⁺
3962.9 5	0.021 4	3962.9	3/2 ⁺	0.0	5/2 ⁺
3977.9 5	0.041 5	4308.6	3/2 ⁺	329.92	7/2 ⁺
4012.3 9	0.007 1	4014.1	3/2 ⁺	0.0	5/2 ⁺
4021.6 4	0.033 3	4021.6		0.0	5/2 ⁺
4023.8 9	0.023 3	4023.8		0.0	5/2 ⁺
4043.8 4	0.024 4	4044.5		0.0	5/2 ⁺
4051.2 9	0.013 2	4051.7	(3/2 ⁺)	0.0	5/2 ⁺
4068.9 6	0.015 2	4069.9	(3/2 ⁺)	0.0	5/2 ⁺
4081.2# 4	0.027 3	4410.1	3/2 ⁺	329.92	7/2 ⁺
4107.0 5	0.008 1	4436.1	3/2 ⁺	329.92	7/2 ⁺
4155.0# 15	0.006 1	4156.7		0.0	5/2 ⁺
4184.6 4	0.022 2	4184.0		0.0	5/2 ⁺
4188.2 4	0.025 3	4517.9	3/2 ⁺	329.92	7/2 ⁺
4217.2 4	0.013 2	4547.2	3/2 ⁺	329.92	7/2 ⁺
4258.4 9	0.037 4	4258.6	3/2 ⁺	0.0	5/2 ⁺
4275.9 9	0.082 9	4275.9	(3/2 ⁺)	0.0	5/2 ⁺
4281.7 9	0.070 7	4281.8	3/2 ⁺	0.0	5/2 ⁺
4307.3 4	0.078 5	4308.6	3/2 ⁺	0.0	5/2 ⁺
4316.3 4	0.041 3	4645.6	3/2 ⁺	329.92	7/2 ⁺
4364.5 5	0.031 2	4364.8		0.0	5/2 ⁺
4370.7# 6	0.006 1	4700.3	3/2 ⁺	329.92	7/2 ⁺
4379.9 7	0.012 2	4709.9	3/2 ⁺	329.92	7/2 ⁺
4390.7 5	0.022 2	4390.7		0.0	5/2 ⁺
4409.8 5	0.033 2	4410.1	3/2 ⁺	0.0	5/2 ⁺
4427.8 5	0.013 1	4428.3	(3/2 ⁺)	0.0	5/2 ⁺
4453.8 7	0.027 4	4454.44	(3/2 ⁺)	0.0	5/2 ⁺
4463.1 6	0.002 1	4463.8		0.0	5/2 ⁺
4473.3# 5	0.007 1	4472.8		0.0	5/2 ⁺
4502.6 6	0.032 5	4502.8	(3/2 ⁺ , 1/2 ⁺)	0.0	5/2 ⁺
4517.5# 5	0.008 1	4517.9	3/2 ⁺	0.0	5/2 ⁺
4536.8 5	0.019 2	4536.9		0.0	5/2 ⁺
4547.1 5	0.015 1	4547.2	3/2 ⁺	0.0	5/2 ⁺
4554.5 6	0.017 1	4555.4	(3/2 ⁺)	0.0	5/2 ⁺
4566.6 5	0.019 2	4566.4		0.0	5/2 ⁺
4577.8# 9	0.004 1	4577.9?		0.0	5/2 ⁺

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^{145}Gd ε decay (23.0 min) [1982Fi01](#) (continued) $\gamma(^{145}\text{Eu})$ (continued)

<u>E_γ</u>	<u>$I_\gamma^{\ddagger}$</u>	<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>E_γ</u>	<u>$I_\gamma^{\ddagger}$</u>	<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>
4593.4 [#] 6	0.004 1	4593.0	(3/2 ⁺)	0.0	5/2 ⁺	4663.8 9	0.005 1	4663.8		0.0	5/2 ⁺
4634.9 [#] 9	0.005 1	4634.6	(3/2 ⁺)	0.0	5/2 ⁺	4685.3 6	0.008 1	4685.4		0.0	5/2 ⁺
4645.7 5	0.046 3	4645.6	3/2 ⁺	0.0	5/2 ⁺	4699.6 9	0.002 1	4700.3	3/2 ⁺	0.0	5/2 ⁺
4656.2 9	0.008 1	4656.3		0.0	5/2 ⁺						

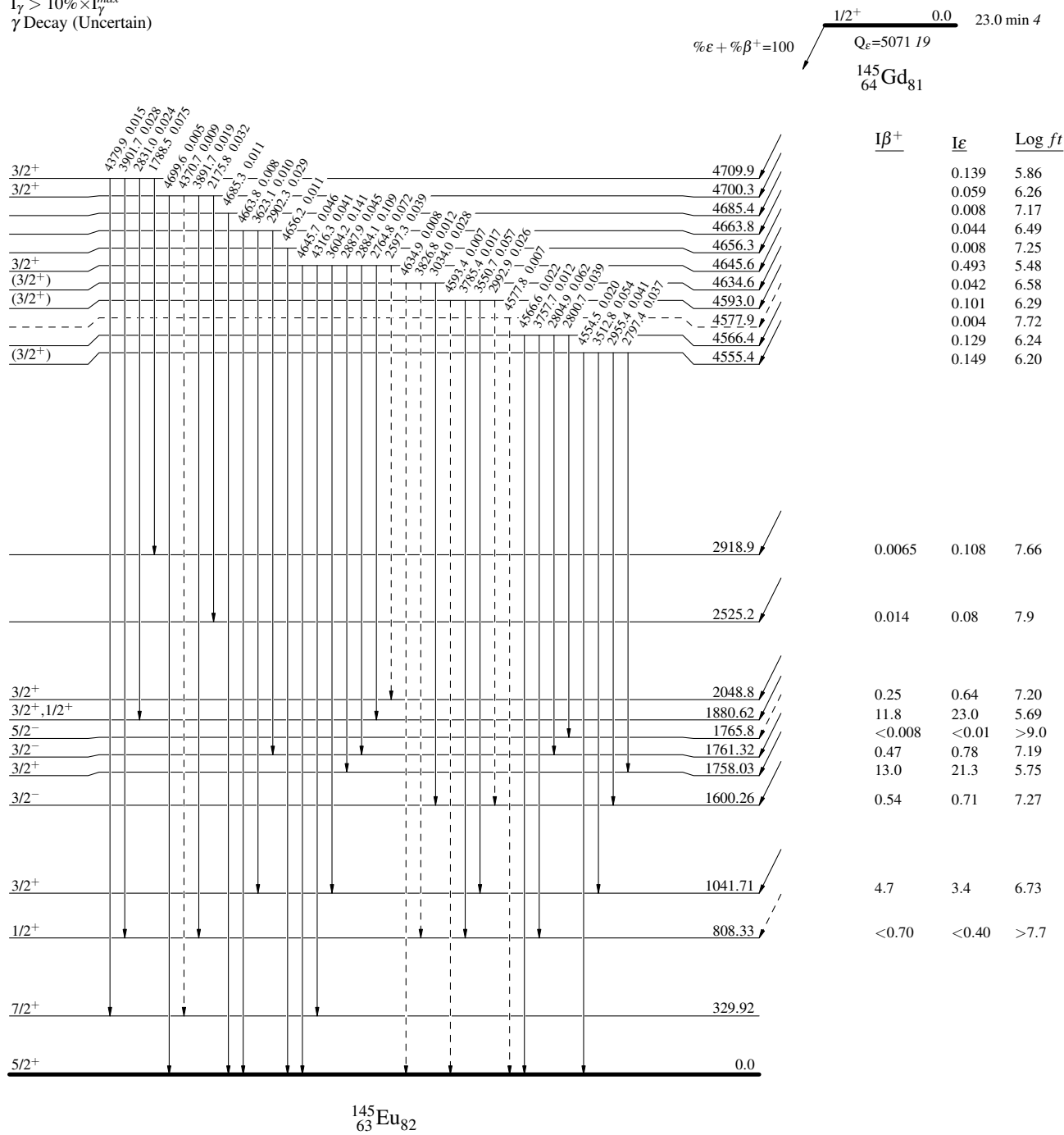
[†] [Additional information 1.](#)[‡] Absolute intensity per 100 decays.[#] Placement of transition in the level scheme is uncertain.

^{145}Gd ε decay (23.0 min) 1982Fi01

Decay Scheme

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$
 $-----$ γ Decay (Uncertain)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

^{145}Gd ε decay (23.0 min) 1982Fi01

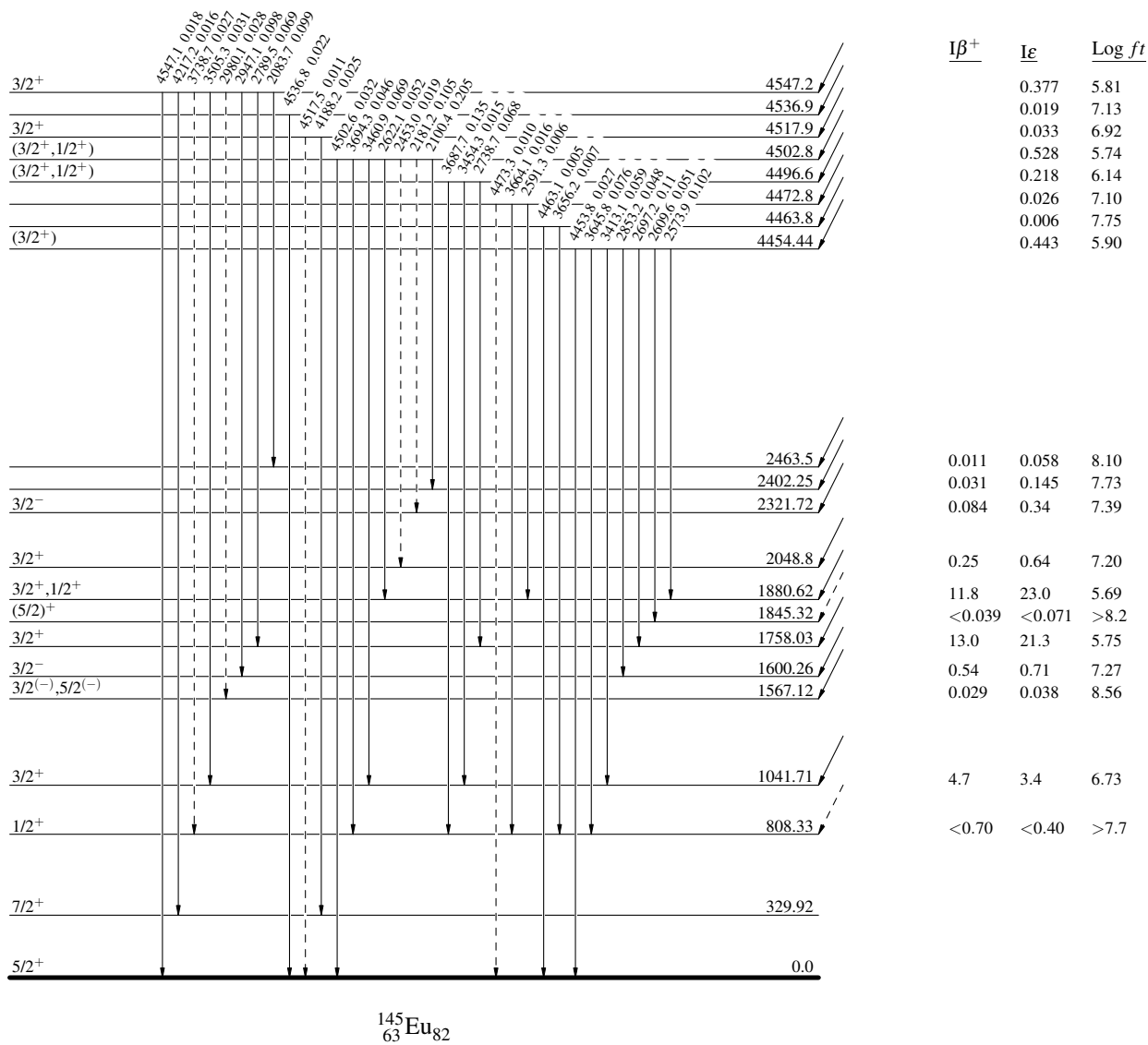
Decay Scheme (continued)

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$
 $\cdots$ γ Decay (Uncertain)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

$1/2^+$ 0.0 23.0 min 4
 $Q_\varepsilon = 5071.19$
 $^{145}_{64}\text{Gd}_{81}$

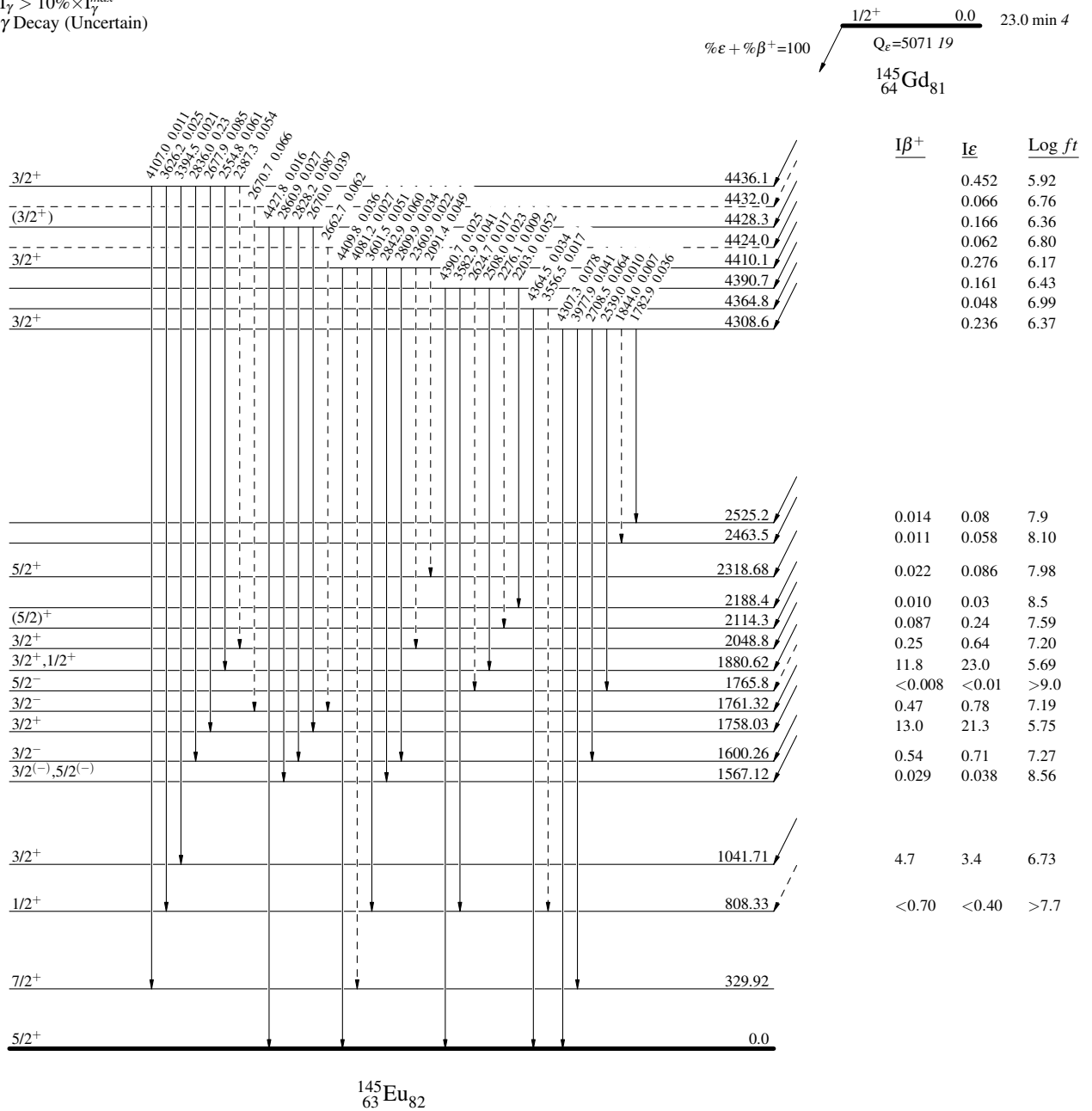


^{145}Gd ε decay (23.0 min) 1982Fi01

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)

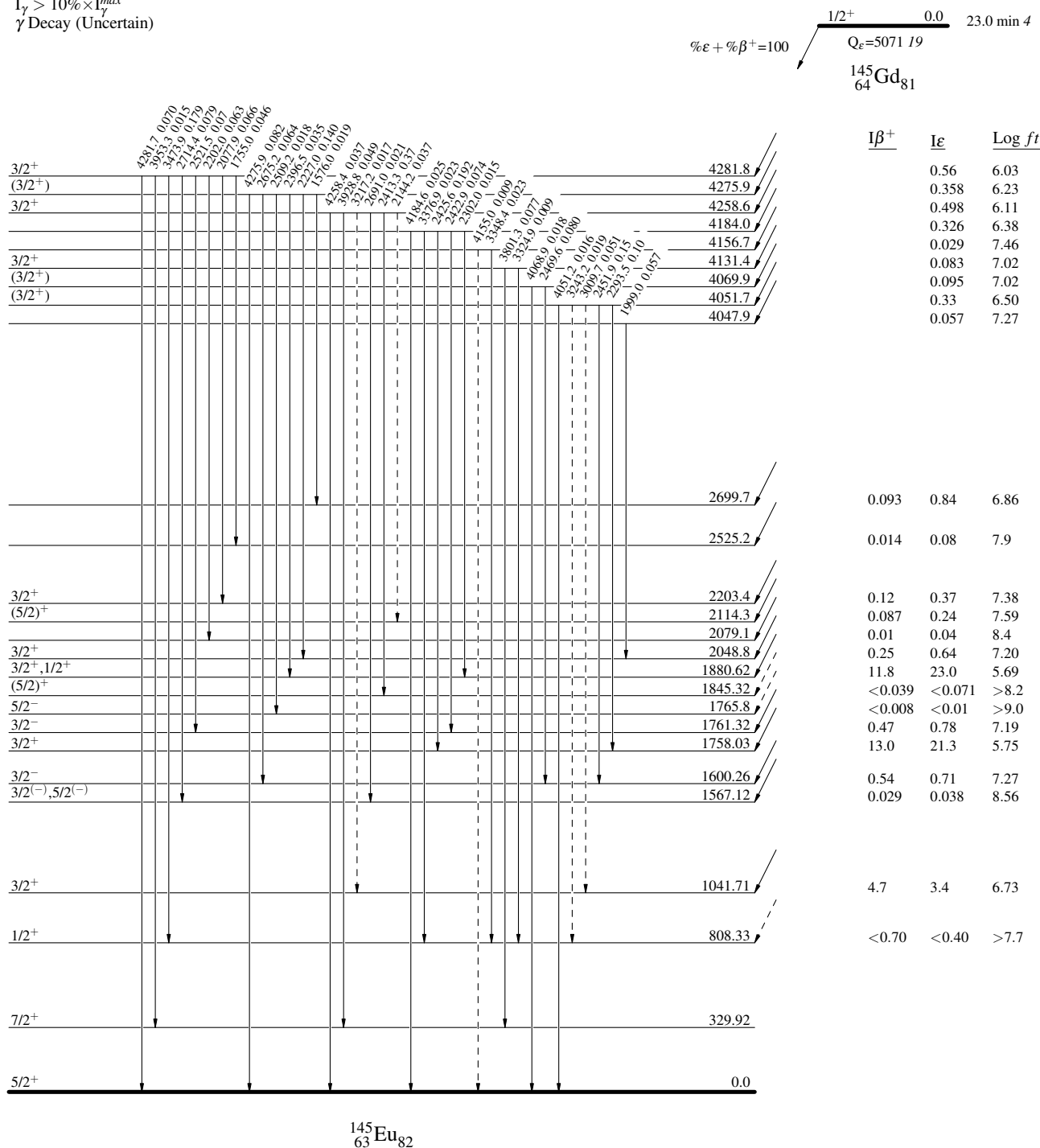
Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

^{145}Gd ϵ decay (23.0 min) **1982Fi01****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)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

^{145}Gd ε decay (23.0 min) 1982Fi01

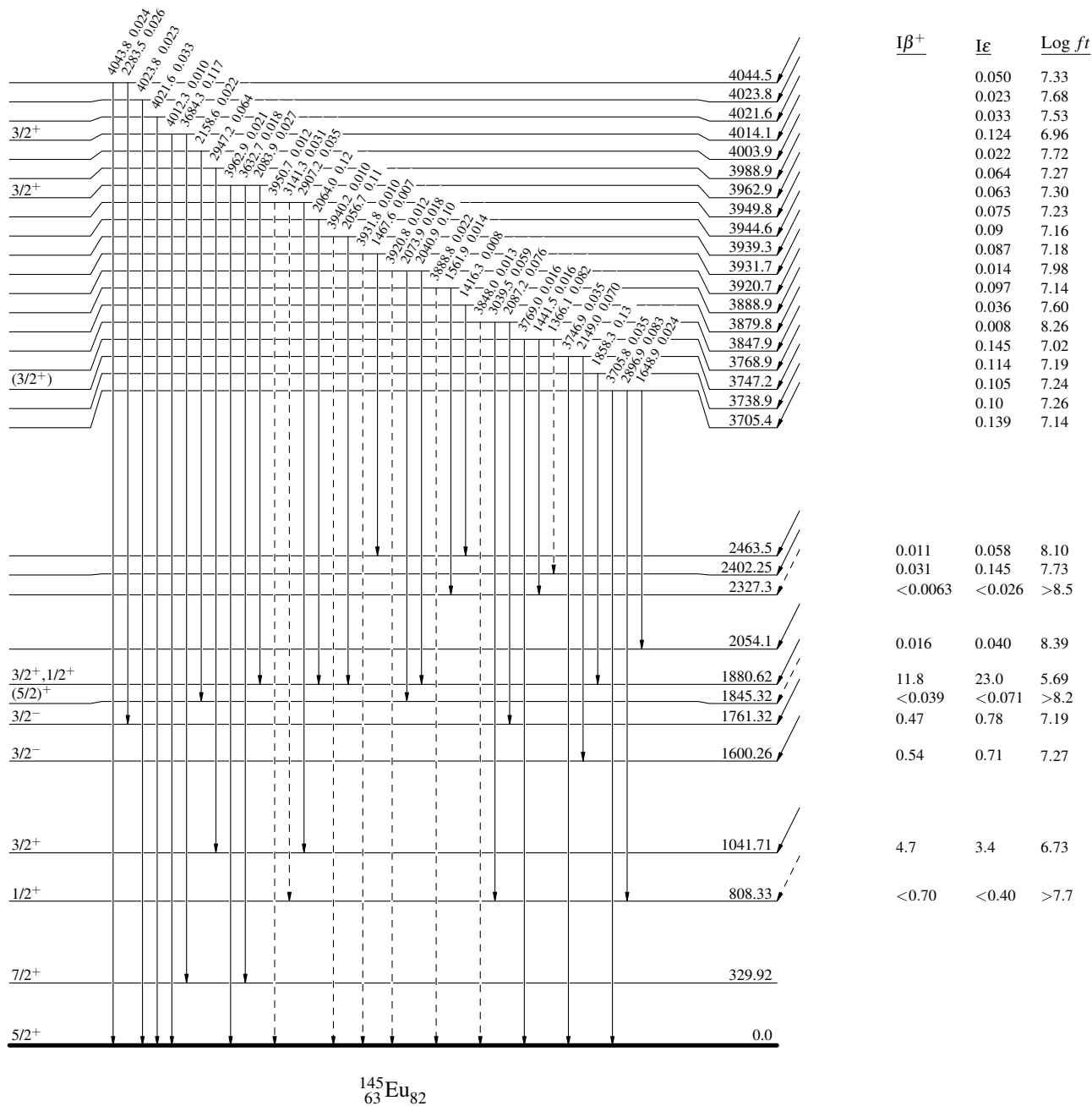
Decay Scheme (continued)

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\max}$
 $\cdots$ γ Decay (Uncertain)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

$1/2^+$ 0.0 23.0 min 4
 $Q_\varepsilon=5071.19$
 $^{145}\text{Gd}_{81}$



^{145}Gd ε decay (23.0 min) 1982Fi01

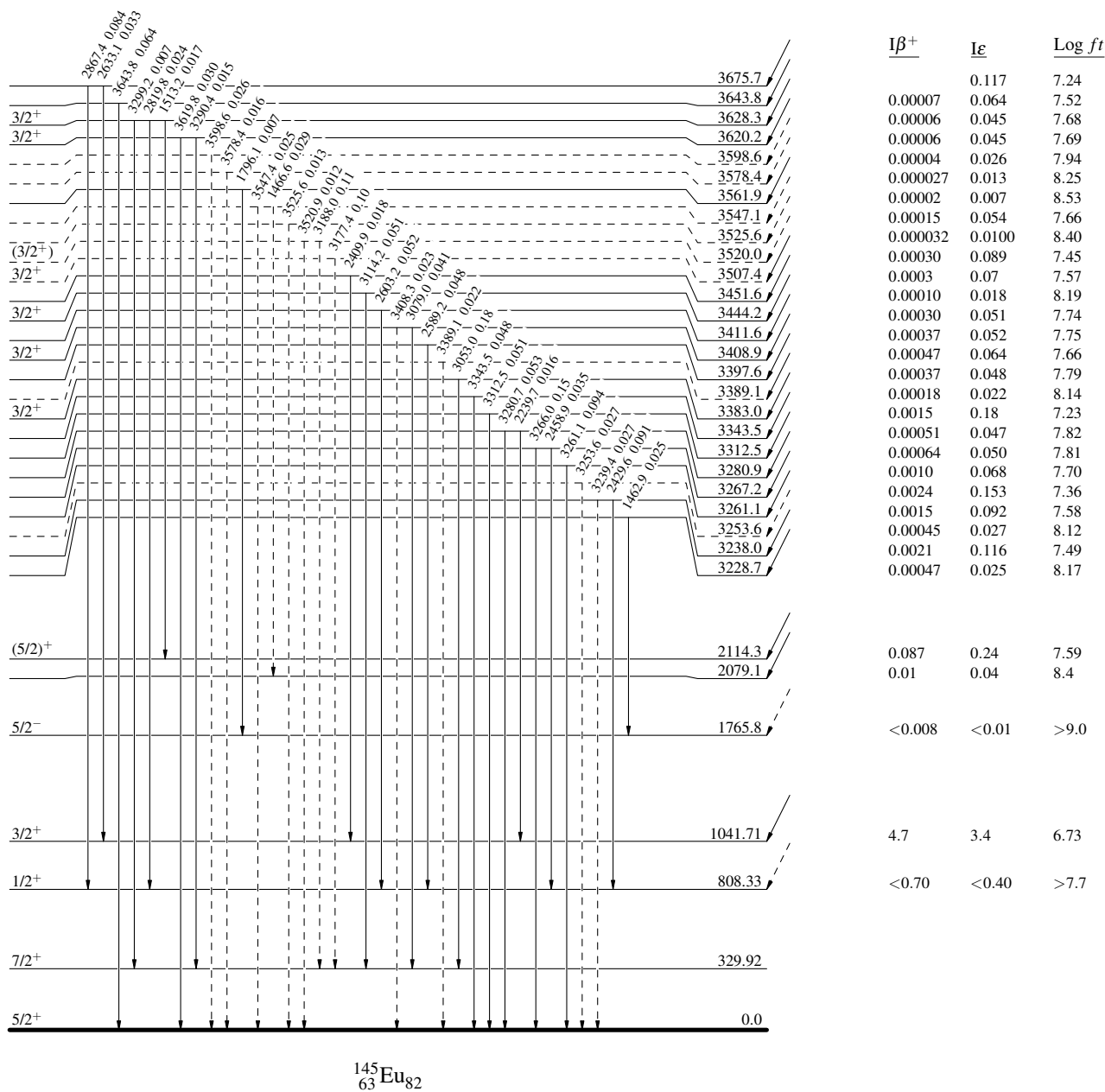
Decay Scheme (continued)

Legend

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

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

$1/2^+$ 0.0 23.0 min 4
 $Q_\varepsilon = 5071.19$
 $^{145}_{64}\text{Gd}_{81}$



^{145}Gd ε decay (23.0 min) 1982Fi01

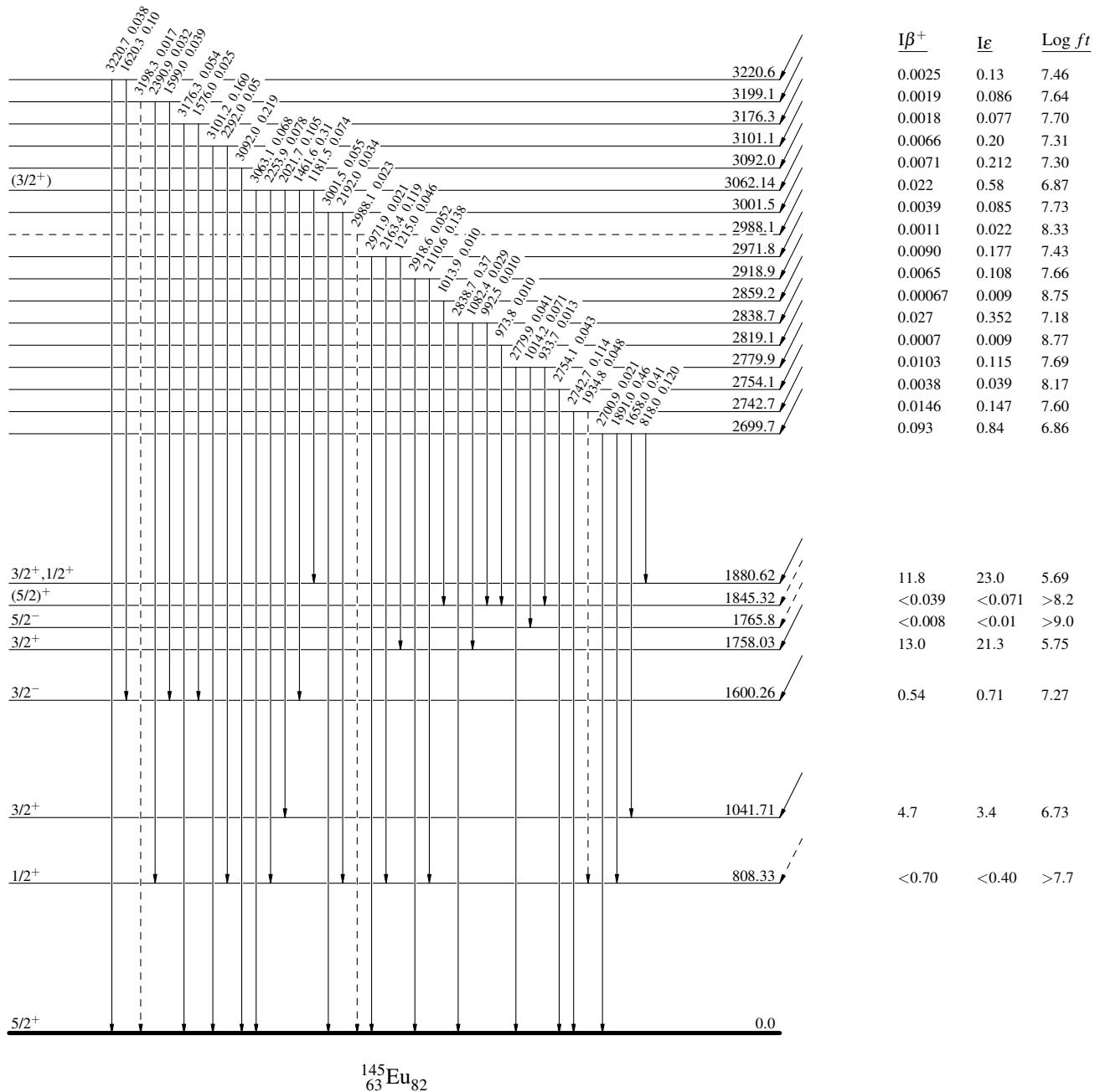
Decay Scheme (continued)

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\max}$
 $\cdots$ γ Decay (Uncertain)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

$1/2^+$ 0.0 23.0 min 4
 $Q_\varepsilon=5071.19$
 $^{145}_{64}\text{Gd}_{81}$



^{145}Gd ε decay (23.0 min) $^{1982}\text{Fi01}$

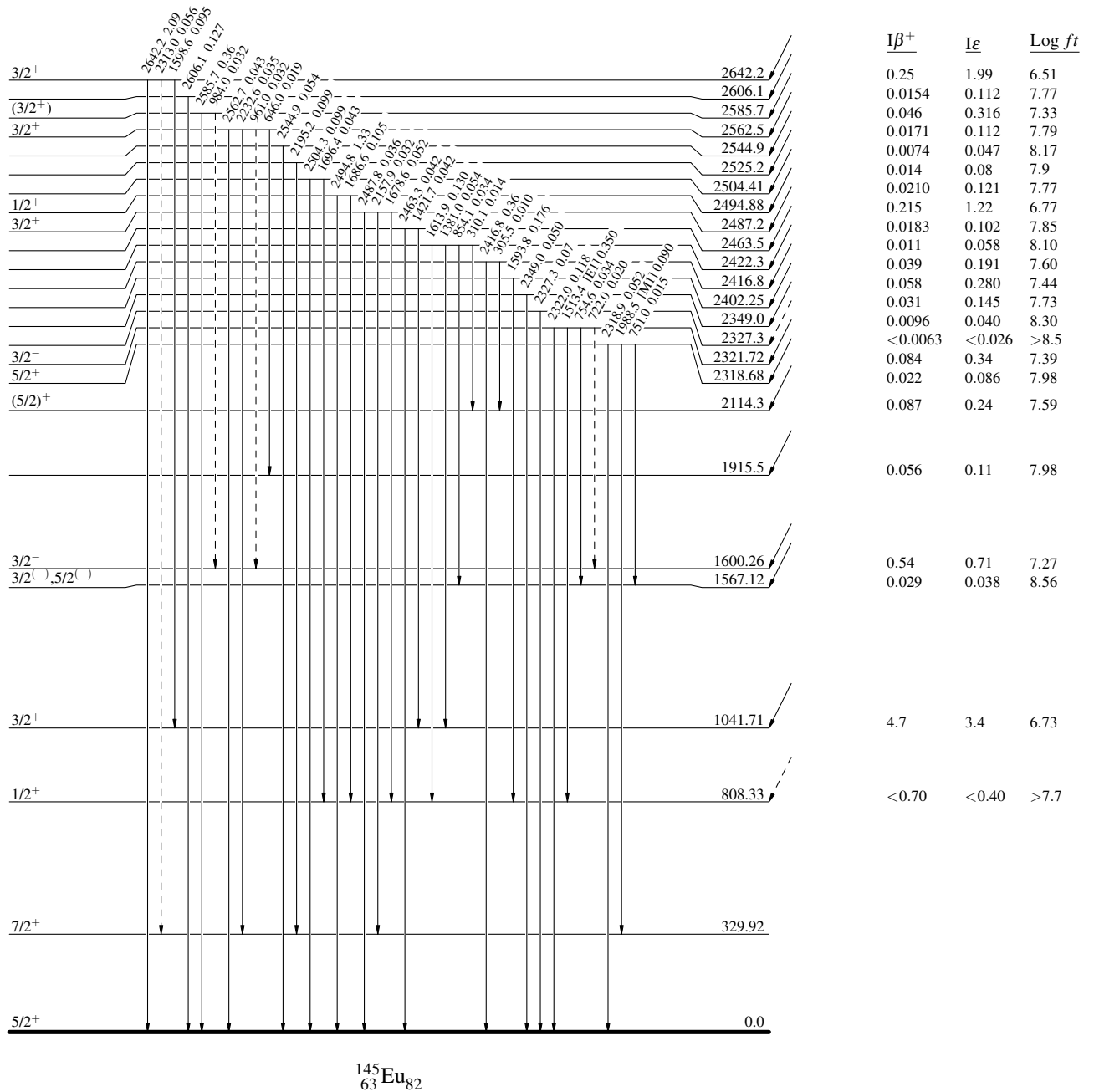
Decay Scheme (continued)

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$
 $\cdots$ γ Decay (Uncertain)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

$1/2^+$ 0.0 23.0 min 4
 $Q_\varepsilon=5071.19$
 $^{145}\text{Gd}_{81}$



^{145}Gd ε decay (23.0 min) $^{1982}\text{Fi01}$ **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)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

$^{145}\text{Gd}_{81}$ $1/2^+$ 0.0 23.0 min 4
 $Q_\varepsilon = 5071.19$
 $\% \varepsilon + \% \beta^+ = 100$

