

^{79}Rb ε decay (22.9 min) 1978Li28

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 135, 193 (2016)	31-May-2016

Parent: ^{79}Rb : $E=0.0$; $J^\pi=5/2^+$; $T_{1/2}=22.9$ min 5; $Q(\varepsilon)=3639$ 4; $\% \varepsilon + \% \beta^+$ decay=100.0

^{79}Rb - $J^\pi, T_{1/2}$: From ^{79}Rb Adopted Levels.

^{79}Rb - $Q(\varepsilon)$: From 2012Wa38.

Measured γ , $\gamma\gamma$, $\gamma\gamma(t)$, ce.

Level scheme is from 1978Li28 which is based on earlier schemes proposed by 1971Li02 (11 levels) and 1972Br31 (17 levels).

The 922, 935, 951, 987, 1046, 1628, 1680 and 2060 levels suggested by 1972Br31 and 935 and 1089 levels suggested by 1971Li02 have been discarded since these are not confirmed by more detailed work of 1978Li28. A large number of γ rays remain unplaced.

Others:

1972Br31: γ , $\gamma\gamma$, $\gamma\gamma(t)$, $\beta\gamma$, $Q(\varepsilon)$ data. 47 γ rays reported and a level scheme is proposed with 17 levels. But the levels proposed at 922, 935, 951, 987, 1046, 1628, 1680 and 2060 have not been confirmed in the more detailed work of 1978Li28.

1971Li02: γ , $\gamma\gamma$, $\beta\gamma$, $T_{1/2}$, $Q(\varepsilon)$ data. 45 γ rays were reported and a level scheme proposed with 11 levels but levels proposed at 935 and 1089 have not been confirmed by 1978Li28.

1993Ai03: $Q(\varepsilon)$ measurement by total γ absorption method.

1981Ha37: $\gamma\gamma(\theta, H, t)$ technique for determination of quadrupole-coupling constants.

1975We23: β , $\beta\gamma$, $Q(\varepsilon)$ data.

1975Bu10: γ , $\gamma\gamma(t)$ data.

1968To05: γ , $T_{1/2}$ data. 19 γ rays reported.

1961Ch16: γ , $T_{1/2}$.

1957Ch31: γ , $T_{1/2}$, identification of ^{79}Rb isotope.

 ^{79}Kr Levels

E(level) [†]	J^π [‡]	$T_{1/2}$ [‡]	Comments
0.0	$1/2^-$	35.04 h 10	
129.76 5	$7/2^+$	50 s 3	$\%IT=100$
147.05 6	$5/2^-$	79.1 ns 15	$T_{1/2}$: from $\gamma\gamma(t)$ (1972Br31). Others: 78 ns 6 (1978Li28), 81.2 ns 32 (1975Bu10).
148.87 7	$9/2^+$		
182.77 5	$3/2^-$	≤ 0.6 ns	$T_{1/2}$: $\gamma\gamma(t)$ (1972Br31).
290.52 5	$5/2^+$		
384.10 6	$3/2^-$		
401.86 7	$5/2^-$		
449.80 18	$7/2^-$		
533.40 6	$1/2^+$		
635.78 8	$5/2^+$		
659.09 14	$(5/2)^-$		
673.14 11	$7/2^{(+)}$		
688.16 5	$3/2^+$		
752.03 6	$5/2^+$		
907.24 15	$(3/2, 5/2^-)$		
1064.67 7	$(5/2^+, 7/2)$		
1079.12 13	$(5/2^+, 7/2)$		
1132.25 8	$(3/2, 5/2^-)$		
1299.90 17	$(5/2^+)$		
1428.16 8	$(5/2^+)$		
1474.61 6	$(3/2)$		
1609.91 6	$(3/2^+, 5/2^+)$		
1707.34 10	$(5/2^+, 7/2)$		
1812.41 11	$(5/2^+)$		
2105.18 19	$(5/2^+, 7/2^-)$		
2366.56 19	$(3/2, 5/2)$		

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⁷⁹Rb ε decay (22.9 min) **1978Li28** (continued)

⁷⁹Kr Levels (continued)

E(level) [†]	J ^π [‡]
2583.82 14	(5/2 ⁺)
2586.29 11	(3/2 ⁺)

[†] From least-squares fit to E_γ data.

[‡] From Adopted Levels, unless otherwise stated.

ε,β⁺ radiations

Q(ε) data: 3650 70 (1993Al03, total γ absorption); 3770 290 (1975We23, β+γ); 3726 60 (1972Br31, β+γ); 3520 45 (1971Li02, β+γ).

E(decay)	E(level)	Iβ ⁺ [†]	Iε [†]	Log ft	I(ε+β ⁺) [†]	Comments
(1053 4)	2586.29		0.19 2	5.78 5	0.19 2	εK=0.8757; εL=0.1031; εM+=0.02121
(1055 4)	2583.82		0.20 2	5.76 5	0.20 2	εK=0.8757; εL=0.1031; εM+=0.02120
(1272 4)	2366.56	0.00044 8	0.12 2	6.15 8	0.12 2	av Eβ=113.8 17; εK=0.8729 2; εL=0.10233 3; εM+=0.021040 7
(1534 4)	2105.18	0.0031 7	0.053 12	6.67 11	0.056 13	av Eβ=224.8 17; εK=0.8284 13; εL=0.09678 16; εM+=0.01989 4
(1827 4)	1812.41	0.034 4	0.12 2	6.48 6	0.15 2	av Eβ=350.6 18; εK=0.681 3; εL=0.0793 3; εM+=0.01630 7
(1932 4)	1707.34	0.039 4	0.090 8	6.64 5	0.129 12	av Eβ=396.4 18; εK=0.610 3; εL=0.0711 4; εM+=0.01460 7
(2029 4)	1609.91	0.36 2	0.59 3	5.87 3	0.95 5	av Eβ=439.1 18; εK=0.543 3; εL=0.0632 4; εM+=0.01299 7
(2164 4)	1474.61	0.36 2	0.39 2	6.11 3	0.75 4	av Eβ=498.9 18; εK=0.454 3; εL=0.0528 3; εM+=0.01085 6
(2211 4)	1428.16	0.15 1	0.14 1	6.56 4	0.29 2	av Eβ=519.5 18; εK=0.4256 24; εL=0.0495 3; εM+=0.01016 6
(2339 4)	1299.90	0.078 12	0.052 8	7.04 7	0.13 2	av Eβ=576.7 18; εK=0.3539 21; εL=0.04112 25; εM+=0.00844 5
(2507 4)	1132.25	0.071 8	0.032 4	7.31 6	0.103 12	av Eβ=652.1 18; εK=0.2768 17; εL=0.03213 19; εM+=0.00660 4
(2560 4)	1079.12	0.15 1	0.061 6	7.05 5	0.21 2	av Eβ=676.1 19; εK=0.2561 15; εL=0.02972 18; εM+=0.00610 4
(2574 4)	1064.67	1.31 6	0.52 3	6.127 24	1.83 9	av Eβ=682.7 19; εK=0.2507 15; εL=0.02910 17; εM+=0.00598 4
(2732 4)	907.24	0.12 2	0.034 5	7.36 6	0.15 2	av Eβ=754.2 19; εK=0.1999 12; εL=0.02319 14; εM+=0.00476 3
(2887 4)	752.03	10.4 5	2.35 11	5.575 23	12.8 6	av Eβ=825.2 19; εK=0.1612 9; εL=0.01868 11; εM+=0.003836 21 E(decay): 3042 90 from (2010β)(622γ) (1972Br31). Other: (1860 480 β)(622γ) (1975We23).
(2951 4)	688.16	42.0 19	8.5 4	5.035 23	50.5 23	av Eβ=854.6 19; εK=0.1478 8; εL=0.01714 10; εM+=0.003519 19 E(decay): 2992 80 from (1970β)(688γ) (1972Br31). Others: (1825 50 β)(155γ), (1743 95 β)(688γ) (1971Li02); (2080 290 β)(688γ) (1975We23).
(2966 4)	673.14	0.48 5	0.096 10	6.99 5	0.58 6	av Eβ=861.5 19; εK=0.1449 8; εL=0.01680 9; εM+=0.003449 19
(2980 4)	659.09	0.10 3	0.019 5	7.68 11	0.12 3	av Eβ=867.9 19; εK=0.1422 8; εL=0.01648 9; εM+=0.003385 18

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^{79}Rb ε decay (22.9 min) **1978Li28** (continued) ε, β^+ radiations (continued)

<u>E(decay)</u>	<u>E(level)</u>	<u>$I\beta^+$</u> †	<u>$I\varepsilon$</u> †	<u>Log ft</u>	<u>$I(\varepsilon + \beta^+)$</u> †	<u>Comments</u>
(3003 4)	635.78	1.2 4	0.22 8	6.64 16	1.4 5	av $E\beta=878.7$ 19; $\varepsilon K=0.1379$ 8; $\varepsilon L=0.01598$ 9; $\varepsilon M+=0.003282$ 18
(3106‡ 4)	533.40	<0.3	<0.06	>7.3	<0.4	av $E\beta=925.9$ 19; $\varepsilon K=0.1208$ 7; $\varepsilon L=0.01399$ 8; $\varepsilon M+=0.002873$ 15 E(decay): 3040 490 from (2010 β)(351 γ) (1975We23).
(3189‡ 4)	449.80	<0.05	<0.007	>8.2	<0.06	av $E\beta=964.6$ 19; $\varepsilon K=0.1087$ 6; $\varepsilon L=0.01259$ 7; $\varepsilon M+=0.002585$ 13
(3237 4)	401.86	0.41 8	0.054 11	7.32 9	0.46 9	av $E\beta=986.8$ 19; $\varepsilon K=0.1025$ 5; $\varepsilon L=0.01187$ 6; $\varepsilon M+=0.002436$ 12
(3255 4)	384.10	0.28 8	0.037 10	7.49 13	0.32 9	av $E\beta=995.1$ 19; $\varepsilon K=0.1003$ 5; $\varepsilon L=0.01161$ 6; $\varepsilon M+=0.002384$ 12
(3348 4)	290.52	14.2 7	1.61 8	5.868 25	15.8 8	av $E\beta=1038.6$ 19; $\varepsilon K=0.0896$ 5; $\varepsilon L=0.01038$ 5; $\varepsilon M+=0.002131$ 11
(3456‡ 4)	182.77	<0.2	<0.02	>7.8	<0.2	av $E\beta=1088.8$ 19; $\varepsilon K=0.0791$ 4; $\varepsilon L=0.00916$ 5; $\varepsilon M+=0.001880$ 9 E(decay): 3260 380 from (2240 β)(183 γ) (1975We23).
(3490‡ 4)	148.87	<0.2	<0.02	>7.9	<0.2	av $E\beta=1104.6$ 19; $\varepsilon K=0.0761$ 4; $\varepsilon L=0.00881$ 4; $\varepsilon M+=0.001809$ 9
(3492 4)	147.05	0.8 5	0.08 5	7.2 3	0.9 6	av $E\beta=1105.5$ 19; $\varepsilon K=0.0760$ 4; $\varepsilon L=0.00879$ 4; $\varepsilon M+=0.001805$ 9
(3509 4)	129.76	10.9 12	1.01 11	6.11 5	11.9 13	av $E\beta=1113.6$ 19; $\varepsilon K=0.0745$ 4; $\varepsilon L=0.00862$ 4; $\varepsilon M+=0.001770$ 8
(3639‡ 4)	0.0	<1.1	<0.23	>8.5 ^{1u}	<1.3	av $E\beta=1193.9$ 19; $\varepsilon K=0.1519$ 7; $\varepsilon L=0.01771$ 8; $\varepsilon M+=0.003639$ 16

† Absolute intensity per 100 decays.

‡ Existence of this branch is questionable.

⁷⁹Rb ε decay (22.9 min) 1978Li28 (continued)

γ(⁷⁹Kr)

I_γ normalization: Σ Ti(gammas to g.s.)=99.3 7, assuming ε+β⁺ feeding to g.s. as less than 1.3% (for log f^{ult}>8.5). Many γ rays, with a total absolute intensity of ≈4%, remain unplaced in level scheme.

E _γ	I _γ ^a	E _i (level)	J _i ^π	E _f	J _f ^π	Mult. [†]	δ	α&	Comments
17.3 1	1.0 1	147.05	5/2 ⁻	129.76	7/2 ⁺	[E1]		13.4 3	α(K)=11.57 24; α(L)=1.53 4; α(M)=0.240 6 α(N)=0.0213 5
19.1 1	0.70 6	148.87	9/2 ⁺	129.76	7/2 ⁺	[M1]		15.2 4	α(K)=13.4 3; α(L)=1.54 4; α(M)=0.251 6 α(N)=0.0249 6
52.42 10	1.26 4	688.16	3/2 ⁺	635.78	5/2 ⁺	(M1)		0.794	α(K)exp=0.60 35 α(K)=0.700 11; α(L)=0.0795 12; α(M)=0.01291 20 α(N)=0.001289 20 Additional information 10.
63.84 10	0.36 1	752.03	5/2 ⁺	688.16	3/2 ⁺	(M1)		0.452	α(K)exp allows mult=E1 also. α(K)exp=0.47 25 α(K)=0.399 6; α(L)=0.0451 7; α(M)=0.00733 11 α(N)=0.000733 11 Additional information 15.
107.72 10	0.30 2	290.52	5/2 ⁺	182.77	3/2 ⁻	[E1]		0.0723	α(K)exp allows mult=E1 also. α(K)=0.0641 10; α(L)=0.00693 10; α(M)=0.001113 16 α(N)=0.0001095 16
111.0 [@] 10	0.17 [@]	401.86	5/2 ⁻	290.52	5/2 ⁺	[E1]		0.0661 21	α(K)=0.0587 18; α(L)=0.00633 20; α(M)=0.00102 4 α(N)=0.000100 3
116.25 10	0.90 3	752.03	5/2 ⁺	635.78	5/2 ⁺	[M1,E2]		0.31 23	α(K)=0.27 19; α(L)=0.036 28; α(M)=0.0059 45 α(N)=5.4×10 ⁻⁴ 41
129.72 10	46.5 10	129.76	7/2 ⁺	0.0	1/2 ⁻	E3		2.64	α(K)=2.09 3; α(L)=0.471 7; α(M)=0.0771 12; α(N)=0.00650 10 I _γ : intensity is in equilibrium with 50-s ⁷⁹ Kr isomer decay. Additional information 1.
141.65 10	2.9 1	290.52	5/2 ⁺	148.87	9/2 ⁺	[E2]		0.255	α(K)=2.10 used for normalization of ce data for other γ rays. α(K)=0.221 4; α(L)=0.0292 5; α(M)=0.00471 7 α(N)=0.000440 7
143.41 10	60.2 12	290.52	5/2 ⁺	147.05	5/2 ⁻	(E1)		0.0310	α(K)exp=0.038 17 α(K)=0.0275 4; α(L)=0.00295 5; α(M)=0.000475 7 α(N)=4.71×10 ⁻⁵ 7 Additional information 4.
147.06 10	45.4 10	147.05	5/2 ⁻	0.0	1/2 ⁻	E2		0.222	Mult.: α(K)exp allows mult=M1 also. α(K)exp=0.18 1 α(K)=0.193 3; α(L)=0.0252 4; α(M)=0.00407 6 α(N)=0.000381 6 Additional information 2.
149.34 10	2.9 1	533.40	1/2 ⁺	384.10	3/2 ⁻	[E1]		0.0275	α(K)=0.0244 4; α(L)=0.00262 4; α(M)=0.000422 6 α(N)=4.18×10 ⁻⁵ 6
154.82 10	34.2 8	688.16	3/2 ⁺	533.40	1/2 ⁺	M1(+E2)	<0.5	0.054 15	α(K)exp=0.051 15

⁷⁹Rb ε decay (22.9 min) **1978Li28** (continued)

γ(⁷⁹Kr) (continued)

<u>E_γ</u>	<u>I_γ^a</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.[†]</u>	<u>δ</u>	<u>α^{&}</u>	<u>Comments</u>
160.76 10	37.2 8	290.52	5/2 ⁺	129.76	7/2 ⁺	M1+E2	0.7 2	0.077 16	α(K)=0.048 13; α(L)=0.0055 17; α(M)=9.0×10 ⁻⁴ 27 α(N)=8.8×10 ⁻⁵ 25 Additional information 11.
182.77 10	83.0 16	182.77	3/2 ⁻	0.0	1/2 ⁻	M1		0.0256	α(K)exp=0.069 10 α(K)=0.067 14; α(L)=0.0082 19; α(M)=0.0013 3 α(N)=0.00013 3 Additional information 5.
201.2 2	0.77 8	384.10	3/2 ⁻	182.77	3/2 ⁻	[M1,E2]		0.045 26	α(K)=0.0227 4; α(L)=0.00250 4; α(M)=0.000405 6 α(N)=4.07×10 ⁻⁵ 6 Additional information 3.
218.8 [@] 4	2.2 [@] 3	752.03	5/2 ⁺	533.40	1/2 ⁺	(E2)		0.0520	α(K)=0.040 22; α(L)=0.0047 28; α(M)=7.6×10 ⁻⁴ 45 α(N)=7.4×10 ⁻⁵ 43
219.3 [@] 4	2.7 [@] 3	401.86	5/2 ⁻	182.77	3/2 ⁻	M1,E2		0.034 18	α(K)exp=0.026 2 α(K)=0.0456 7; α(L)=0.00548 9; α(M)=0.000885 14 α(N)=8.52×10 ⁻⁵ 14 Additional information 16.
^x 243.46 [‡] 40	0.4 1								
275.1 2	0.46 10	659.09	(5/2) ⁻	384.10	3/2 ⁻	M1(+E2)		0.0160 70	α(K)=0.030 16; α(L)=0.0035 20; α(M)=5.6×10 ⁻⁴ 32 α(N)=5.5×10 ⁻⁵ 30 Additional information 6.
286.2 1	3.9 1	688.16	3/2 ⁺	401.86	5/2 ⁻				α(K)=0.0141 62; α(L)=0.00161 75; α(M)=2.6×10 ⁻⁴ 12 α(N)=2.6×10 ⁻⁵ 12 Mult.: from (p,nγ).
302.4 ^{c@} 5	0.4 ^{c@} 2	449.80	7/2 ⁻	147.05	5/2 ⁻	M1,E2		0.0118 47	α(K)=0.0104 42; α(L)=0.00118 50; α(M)=1.91×10 ⁻⁴ 81 α(N)=1.89×10 ⁻⁵ 77
302.4 ^{c@} 5	0.7 ^{c@} 3	752.03	5/2 ⁺	449.80	7/2 ⁻				
304.0 2	0.45 8	688.16	3/2 ⁺	384.10	3/2 ⁻				
312.7 3	0.28 6	1064.67	(5/2 ⁺ ,7/2)	752.03	5/2 ⁺				
320.2 3	0.33 10	449.80	7/2 ⁻	129.76	7/2 ⁺				
^x 337.34 [‡] 10	2.7 5								
350.6 1	31.3 6	533.40	1/2 ⁺	182.77	3/2 ⁻	E1		0.00242	α(K)exp=0.0024 7 α(K)=0.00215 3; α(L)=0.000229 4; α(M)=3.69×10 ⁻⁵ 6 α(N)=3.71×10 ⁻⁶ 6 Additional information 8.
382.5 [@] 5	1.0 [@] 2	673.14	7/2 ⁽⁺⁾	290.52	5/2 ⁺				
384.1 1	5.1 3	384.10	3/2 ⁻	0.0	1/2 ⁻				
^x 388.3 ^{‡#} 4	0.9 [#] 3								
397.6 1	26.2 6	688.16	3/2 ⁺	290.52	5/2 ⁺	M1		0.00367	α(K)exp=0.0031 6

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⁷⁹Rb ε decay (22.9 min) 1978Li28 (continued)

γ(⁷⁹Kr) (continued)

<u>E_γ</u>	<u>I_γ^a</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.[†]</u>	<u>α^{&}</u>	<u>Comments</u>
								α(K)=0.00326 5; α(L)=0.000351 5; α(M)=5.69×10 ⁻⁵ 8 α(N)=5.74×10 ⁻⁶ 8
401.8 1	3.5 1	401.86	5/2 ⁻	0.0	1/2 ⁻	(E2)	0.00636	Additional information 12. α(K)exp=0.0070 30 α(K)=0.00562 8; α(L)=0.000632 9; α(M)=0.0001021 15 α(N)=1.009×10 ⁻⁵ 15 Additional information 7.
^x 417.1 [‡] 3	1.0 3							
428.7 2	0.6 1	1064.67	(5/2 ⁺ ,7/2)	635.78	5/2 ⁺			
461.5 1	5.3 1	752.03	5/2 ⁺	290.52	5/2 ⁺			
476.1 2	0.24 6	659.09	(5/2) ⁻	182.77	3/2 ⁻			
486.8 2	0.97 8	635.78	5/2 ⁺	148.87	9/2 ⁺			
505.4 1	46.0 20	688.16	3/2 ⁺	182.77	3/2 ⁻	E1	9.46×10 ⁻⁴	α(K)exp=0.0010 2 α(K)=0.000841 12; α(L)=8.92×10 ⁻⁵ 13; α(M)=1.441×10 ⁻⁵ 21 α(N)=1.450×10 ⁻⁶ 21 Additional information 13.
506.0 2	9 2	635.78	5/2 ⁺	129.76	7/2 ⁺	M1,E2	0.0026 5	α(K)exp=0.0010 2 α(K)=0.0023 5; α(L)=0.00025 6; α(M)=4.0×10 ⁻⁵ 9 α(N)=4.0×10 ⁻⁶ 8 E _γ and I _γ from γγ and level scheme. Additional information 9.
								α(K)exp for the doublet.
524.2 1	0.94 5	673.14	7/2 ⁽⁺⁾	148.87	9/2 ⁺			
533.3 1	5.6 1	533.40	1/2 ⁺	0.0	1/2 ⁻			
541.0 1	3.2 1	688.16	3/2 ⁺	147.05	5/2 ⁻			
543.7 2	0.60 6	673.14	7/2 ⁽⁺⁾	129.76	7/2 ⁺			
^x 548.70 [‡] 17	2.8 3							
558.3 1	1.10 6	688.16	3/2 ⁺	129.76	7/2 ⁺			
569.2 1	4.0 1	752.03	5/2 ⁺	182.77	3/2 ⁻			
603.2 1	2.9 1	752.03	5/2 ⁺	148.87	9/2 ⁺			
605.6 2	0.40 7	752.03	5/2 ⁺	147.05	5/2 ⁻			E _γ : somewhat poor fit, level-energy difference=605.0.
622.2 1	38.0 8	752.03	5/2 ⁺	129.76	7/2 ⁺	M1,E2	0.00149 20	α(K)exp=0.0013 2 α(K)=0.00132 17; α(L)=0.000143 20; α(M)=2.3×10 ⁻⁵ 4 α(N)=2.3×10 ⁻⁶ 3 Additional information 17.
^x 643.62 [‡] 30	1.00 5							
^x 654.49 [‡] 24	1.00 5							
663.1 2	0.3 1	1064.67	(5/2 ⁺ ,7/2)	401.86	5/2 ⁻			
688.1 1	100	688.16	3/2 ⁺	0.0	1/2 ⁻	E1	4.62×10 ⁻⁴	α(K)exp=0.0004 1 α(K)=0.000411 6; α(L)=4.33×10 ⁻⁵ 6; α(M)=7.00×10 ⁻⁶ 10 α(N)=7.07×10 ⁻⁷ 10 Additional information 14.

γ(⁷⁹Kr) (continued)

E _γ	I _γ ^a	E _i (level)	J _i ^π	E _f	J _f ^π	E _γ	I _γ ^a	E _i (level)	J _i ^π	E _f	J _f ^π
^x 706.0 2	0.25 3					1151.4 9	0.06 3	1299.90	(5/2 ⁺)	148.87	9/2 ⁺
724.4 2	0.27 3	907.24	(3/2,5/2 ⁻)	182.77	3/2 ⁻	1158.7 5	0.09 3	2586.29	(3/2 ⁺)	1428.16	(5/2 ⁺)
^x 728.1 [‡] 2	0.5 2					1161.7 6	0.06 4	1609.91	(3/2 ⁺ ,5/2 ⁺)	449.80	7/2 ⁻
774.1 1	2.60 8	1064.67	(5/2 ⁺ ,7/2)	290.52	5/2 ⁺	1170.1 2	0.18 3	1299.90	(5/2 ⁺)	129.76	7/2 ⁺
786.0 2	0.70 4	1474.61	(3/2)	688.16	3/2 ⁺	1184.1 1	1.08 2	1474.61	(3/2)	290.52	5/2 ⁺
788.3 2	0.80 4	1079.12	(5/2 ⁺ ,7/2)	290.52	5/2 ⁺	^x 1196.7 6	0.06 2				
792.3 3	0.10 2	1428.16	(5/2 ⁺)	635.78	5/2 ⁺	^x 1199.3 4	0.10 2				
815.1 3	0.09 3	1474.61	(3/2)	659.09	(5/2) ⁻	1208.0 1	0.32 3	1609.91	(3/2 ⁺ ,5/2 ⁺)	401.86	5/2 ⁻
^x 835.4 4	0.25 4					1225.8 1	0.36 4	1609.91	(3/2 ⁺ ,5/2 ⁺)	384.10	3/2 ⁻
841.6 1	0.25 3	1132.25	(3/2,5/2 ⁻)	290.52	5/2 ⁺	1245.6 2	0.16 2	1428.16	(5/2 ⁺)	182.77	3/2 ⁻
858.1 2	0.15 5	1609.91	(3/2 ⁺ ,5/2 ⁺)	752.03	5/2 ⁺	^x 1252.7 4	0.05 2				
^x 884.1 [‡] 6	0.4 1					1257.1 3	0.09 2	1707.34	(5/2 ⁺ ,7/2)	449.80	7/2 ⁻
892.5 7	0.08 4	2366.56	(3/2,5/2)	1474.61	(3/2)	^x 1267.9 4	0.08 2				
907.3 2	0.36 4	907.24	(3/2,5/2 ⁻)	0.0	1/2 ⁻	^x 1273.9 5	0.06 3				
^x 911.7 4	0.12 2					1279.7 ^{bd} 4	0.07 ^b 3	1428.16	(5/2 ⁺)	148.87	9/2 ⁺
915.8 1	2.60 5	1064.67	(5/2 ⁺ ,7/2)	148.87	9/2 ⁺	1279.7 ^{bd} 4	0.07 ^b 3	1812.41	(5/2 ⁺)	533.40	1/2 ⁺
921.6 1	1.92 5	1609.91	(3/2 ⁺ ,5/2 ⁺)	688.16	3/2 ⁺	1285.4 12	0.02	2586.29	(3/2 ⁺)	1299.90	(5/2 ⁺)
930.5 2	0.20 2	1079.12	(5/2 ⁺ ,7/2)	148.87	9/2 ⁺	1291.9 1	0.29 3	1474.61	(3/2)	182.77	3/2 ⁻
934.9 1	1.42 3	1064.67	(5/2 ⁺ ,7/2)	129.76	7/2 ⁺	1298.3 1	0.56 3	1428.16	(5/2 ⁺)	129.76	7/2 ⁺
941.2 1	0.75 6	1474.61	(3/2)	533.40	1/2 ⁺	^x 1308.5 3	0.11 2				
949.6 3	0.30 7	1079.12	(5/2 ⁺ ,7/2)	129.76	7/2 ⁺	^x 1316.7 3	0.12 2				
951.4 10	0.06 1	1609.91	(3/2 ⁺ ,5/2 ⁺)	659.09	(5/2) ⁻	^x 1337.5 6	0.03 1				
955.3 2	0.12 2	1707.34	(5/2 ⁺ ,7/2)	752.03	5/2 ⁺	^x 1357.0 4	0.06 2				
^x 964.1 5	0.03 1					^x 1366.8 3	0.09 2				
^x 968.9 3	0.07 1					^x 1372.6 11	0.08 2				
973.7 ^{bd} 2	0.15 ^b 2	1609.91	(3/2 ⁺ ,5/2 ⁺)	635.78	5/2 ⁺	^x 1379.1 11	0.05				
973.7 ^{bd} 2	0.15 ^b 2	2105.18	(5/2 ⁺ ,7/2 ⁻)	1132.25	(3/2,5/2 ⁻)	^x 1390.2 4	0.04 1				
973.7 ^{bd} 2	0.15 ^b 2	2583.82	(5/2 ⁺)	1609.91	(3/2 ⁺ ,5/2 ⁺)	^x 1395.1 2	0.11 1				
976.7 4	0.05 1	2586.29	(3/2 ⁺)	1609.91	(3/2 ⁺ ,5/2 ⁺)	^x 1404.4 7	0.03 1				
1009.4 4	0.16 4	1299.90	(5/2 ⁺)	290.52	5/2 ⁺	^x 1408.5 3	0.07 1				
^x 1017.8 4	0.12 3					^x 1412.4 3	0.07 1				
1072.3 ^{bd} 3	0.13 ^b 3	1474.61	(3/2)	401.86	5/2 ⁻	1416.9 1	0.18 2	1707.34	(5/2 ⁺ ,7/2)	290.52	5/2 ⁺
1072.3 ^{bd} 3	0.13 ^b 3	1707.34	(5/2 ⁺ ,7/2)	635.78	5/2 ⁺	1427.2 1	0.32 2	1609.91	(3/2 ⁺ ,5/2 ⁺)	182.77	3/2 ⁻
1076.0 2	0.22 3	1609.91	(3/2 ⁺ ,5/2 ⁺)	533.40	1/2 ⁺	1454.4 4	0.05 1	2586.29	(3/2 ⁺)	1132.25	(3/2,5/2 ⁻)
^x 1084.9 5	0.03 1					1474.7 1	0.32 2	1474.61	(3/2)	0.0	1/2 ⁻
1090.3 3	0.05 1	1474.61	(3/2)	384.10	3/2 ⁻	1480.3 1	0.72 2	1609.91	(3/2 ⁺ ,5/2 ⁺)	129.76	7/2 ⁺
1117.0 5	0.19 3	1299.90	(5/2 ⁺)	182.77	3/2 ⁻	^x 1485.2 3	0.08 2				
1124.5 6	0.04 2	1812.41	(5/2 ⁺)	688.16	3/2 ⁺	^x 1491.2 5	0.04 2				
1132.4 1	0.24 3	1132.25	(3/2,5/2 ⁻)	0.0	1/2 ⁻	^x 1498 [‡] 1	0.3 2				
1137.7 1	0.52 4	1428.16	(5/2 ⁺)	290.52	5/2 ⁺	1504.7 1	0.41 2	2583.82	(5/2 ⁺)	1079.12	(5/2 ⁺ ,7/2)
1140.7 11	0.05 2	1812.41	(5/2 ⁺)	673.14	7/2 ⁽⁺⁾	^x 1509.0 18	0.06 2				
^x 1148.1 6	0.10 4					^x 1517.6 3	0.07 1				

⁷⁹Rb ε decay (22.9 min) **1978Li28** (continued)

γ(⁷⁹Kr) (continued)

<u>E_γ</u>	<u>I_γ^a</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^a</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>
1521.8 2	0.15 3	1812.41	(5/2 ⁺)	290.52	5/2 ⁺	^x 1943.9 2	0.11 2				
^x 1529.9 6	0.03 2					1947.8 4	0.05 1	2583.82	(5/2 ⁺)	635.78	5/2 ⁺
^x 1536.2 6	0.05 2					^x 1951.4 4	0.05 1				
^x 1548.1 9	0.03 2					1955.9 4	0.04 1	2105.18	(5/2 ⁺ ,7/2 ⁻)	148.87	9/2 ⁺
^x 1553.4 9	0.06 2					^x 1961.9 2	0.06 1				
1558.8 5	0.09 2	1707.34	(5/2 ⁺ ,7/2)	148.87	9/2 ⁺	1974.7 11	0.08 4	2105.18	(5/2 ⁺ ,7/2 ⁻)	129.76	7/2 ⁺
^x 1563.2 6	0.06 2					1981.9 6	0.12 6	2366.56	(3/2,5/2)	384.10	3/2 ⁻
1576.6 4	0.07 2	1707.34	(5/2 ⁺ ,7/2)	129.76	7/2 ⁺	^x 1994.7 3	0.05 2				
^x 1592.8 4	0.07 2					^x 2000.4 5	0.03 1				
^x 1598.2 8	0.04 2					^x 2007.6 3	0.06 2				
^x 1606.5 2	0.09 1					^x 2020.6 15	0.03 3				
^x 1613.1 1	0.11 1					2052.7 3	0.11 2	2586.29	(3/2 ⁺)	533.40	1/2 ⁺
1629.7 2	0.07 1	1812.41	(5/2 ⁺)	182.77	3/2 ⁻	^x 2060 [‡] 1	0.3 1				
^x 1633.9 1	0.10 1					^x 2067.1 4	0.03 1				
^x 1636.3 6	0.02 1					^x 2084.9 4	0.03 1				
1663.0 4	0.06 2	1812.41	(5/2 ⁺)	148.87	9/2 ⁺	^x 2102.9 4	0.08 2				
1665.5 3	0.09 2	1812.41	(5/2 ⁺)	147.05	5/2 ⁻	^x 2112.9 10	0.03 2				
^x 1673.9 5	0.04 2					^x 2147.8 7	0.06 3				
1678.4 2	0.33 2	2366.56	(3/2,5/2)	688.16	3/2 ⁺	^x 2156.8 6	0.11 4				
1682.6 2	0.19 2	1812.41	(5/2 ⁺)	129.76	7/2 ⁺	^x 2169.7 4	0.06 3				
^x 1708.8 5	0.05 2					^x 2175.1 7	0.05 3				
^x 1716.5 4	0.07 2					2183.7 ^{bd} 2	0.17 ^b 2	2366.56	(3/2,5/2)	182.77	3/2 ⁻
^x 1723.4 4	0.08 2					2183.7 ^{bd} 2	0.17 ^b 2	2586.29	(3/2 ⁺)	401.86	5/2 ⁻
^x 1729.7 6	0.03 2					2201.9 2	0.10 3	2586.29	(3/2 ⁺)	384.10	3/2 ⁻
^x 1743.2 [‡] 9	0.3 1					^x 2214.6 5	0.07 2				
^x 1747.8 10	0.04 2					^x 2233.6 6	0.05 2				
^x 1752.5 10	0.04 2					^x 2238.2 10	0.04 2				
^x 1769.2 4	0.07 2					2293.9 4	0.08 3	2583.82	(5/2 ⁺)	290.52	5/2 ⁺
^x 1776.0 3	0.08 2					2296.1 3	0.16 4	2586.29	(3/2 ⁺)	290.52	5/2 ⁺
^x 1784.6 3	0.07 2					^x 2339.7 2	0.05 1				
^x 1792.5 4	0.06 2					^x 2357.6 3	0.04 1				
^x 1802.0 5	0.05 2					2400.2 5	0.10 3	2583.82	(5/2 ⁺)	182.77	3/2 ⁻
^x 1820.1 4	0.05 2					2402.7 12	0.02	2586.29	(3/2 ⁺)	182.77	3/2 ⁻
1833.6 ^{bd} 12	0.04 ^b 2	2366.56	(3/2,5/2)	533.40	1/2 ⁺	^x 2415.2 5	0.08 2				
1833.6 ^{bd} 12	0.04 ^b 2	2586.29	(3/2 ⁺)	752.03	5/2 ⁺	^x 2420.2 9	0.04 3				
^x 1853.7 12	0.15 5					^x 2432.3 6	0.15 3				
^x 1857.3 12	0.05 2					2434.1 6	0.14 3	2583.82	(5/2 ⁺)	148.87	9/2 ⁺
^x 1884.6 12	0.02 1					^x 2440.6 7	0.02 1				
1897.7 9	0.02 1	2586.29	(3/2 ⁺)	688.16	3/2 ⁺	^x 2446.9 4	0.05 1				
^x 1908.9 2	0.04 1					^x 2451.9 13	0.04 2				
1922.5 2	0.12 3	2105.18	(5/2 ⁺ ,7/2 ⁻)	182.77	3/2 ⁻	2453.7 16	0.03 2	2583.82	(5/2 ⁺)	129.76	7/2 ⁺
1925.3 7	0.05 2	2583.82	(5/2 ⁺)	659.09	(5/2) ⁻	2456.9 4	0.06 2	2586.29	(3/2 ⁺)	129.76	7/2 ⁺
^x 1929.3 5	0.05 1					^x 2486.9 7	0.05 2				

∞

γ(⁷⁹Kr) (continued)

<u>E_γ</u>	<u>I_γ^a</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^a</u>	<u>E_i(level)</u>
^x 2489.7 8	0.04 2					^x 2703.3 10	0.02	
^x 2539.4 3	0.04 1					^x 2742.1 3	0.06 1	
^x 2542.6 2	0.07 1					^x 2745.0 3	0.04 1	
^x 2582.6 5	0.04 1					^x 2750.3 3	0.03 1	
2586.1 2	0.11 1	2586.29	(3/2 ⁺)	0.0	1/2 ⁻	^x 2794.1 7	0.06 2	
^x 2591.2 6	0.03 1					^x 2813.1 14	0.02 1	
^x 2595.5 3	0.04 1					^x 2816.7 11	0.02 1	
^x 2608.8 4	0.02 1					^x 2861.4 3	0.03 1	
^x 2620.4 6	0.02 1					^x 2871.6 10	0.02 1	
^x 2632.1 7	0.04 2					^x 2875.6 5	0.04 1	
^x 2637.1 6	0.06 3					^x 2983.3 3	0.03 1	
^x 2657.2 12	0.05 2					^x 2995.6 7	0.03 1	
^x 2684.6 2	0.10 1					^x 3006.9 6	0.03 1	
^x 2693.8 3	0.05 1					^x 3021.5 3	0.04 1	
^x 2700.9 5	0.05 1							

† From ce data. 129.7γ with E3 mult. and α(K)=2.10 used for normalization of ce data.

‡ γ reported by [1972Br31](#) or [1971Li02](#); treated by the evaluator as questionable since it is not reported in more complete work of [1978Li28](#).

Reported by [1972Br31](#) and [1971Li02](#), value is taken from [1972Br31](#).

@ From γγ.

& From BrIcc v2.3b (16-Dec-2014) [2008Ki07](#), “Frozen Orbitals” appr. If No δ(E2/M1) value given, α overlaps pure M1 and pure E2.

^a For absolute intensity per 100 decays, multiply by 0.234 10.

^b Multiply placed with undivided intensity.

^c Multiply placed with intensity suitably divided.

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

^x γ ray not placed in level scheme.

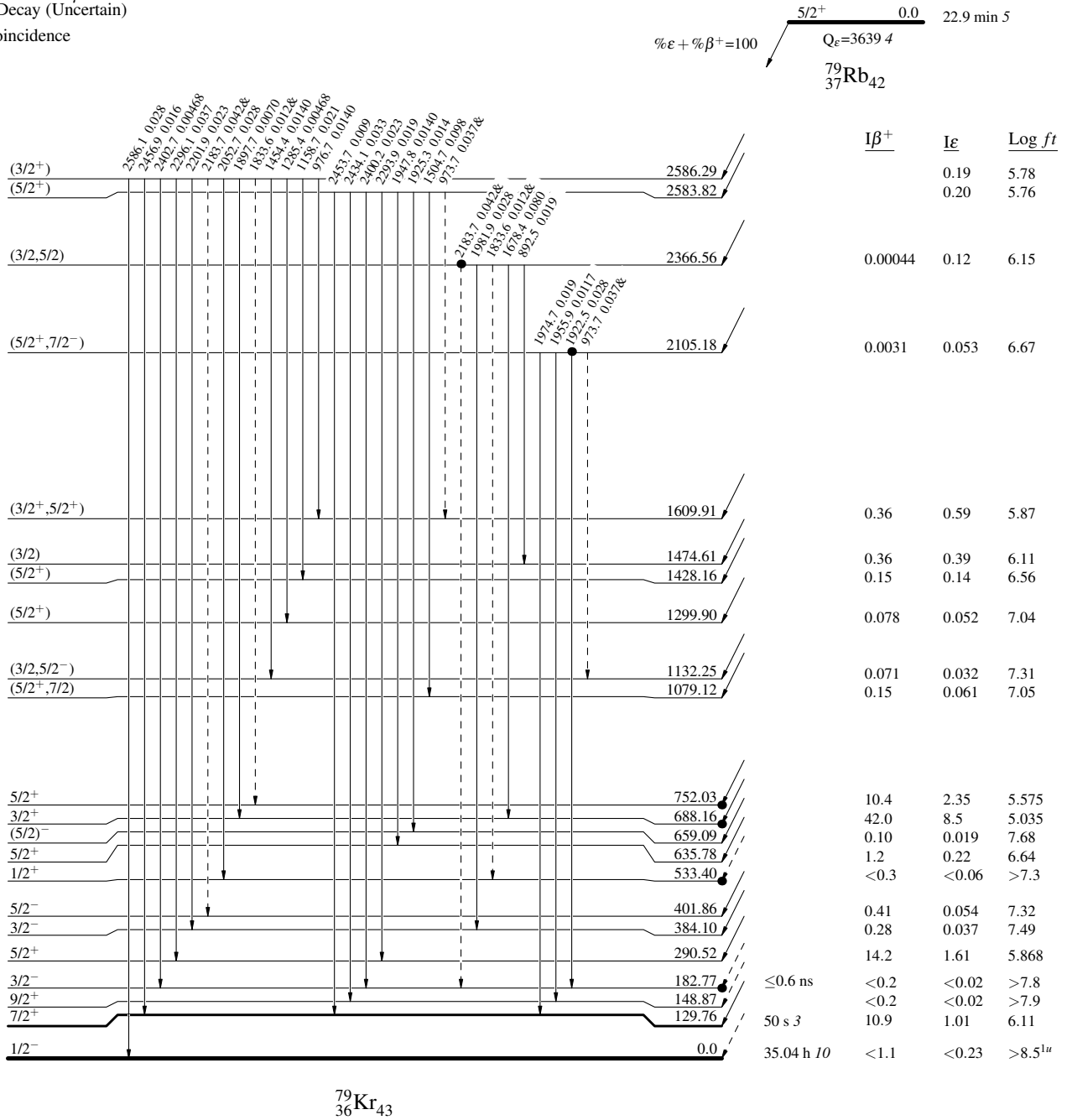
⁷⁹Rb ε decay (22.9 min) 1978Li28

Decay Scheme

Legend

- ▶ I_γ < 2% × I_γ^{max}
- ▶ I_γ < 10% × I_γ^{max}
- ▶ I_γ > 10% × I_γ^{max}
- - -▶ γ Decay (Uncertain)
- Coincidence

Intensities: I_(γ+ce) per 100 parent decays
& Multiply placed: undivided intensity given



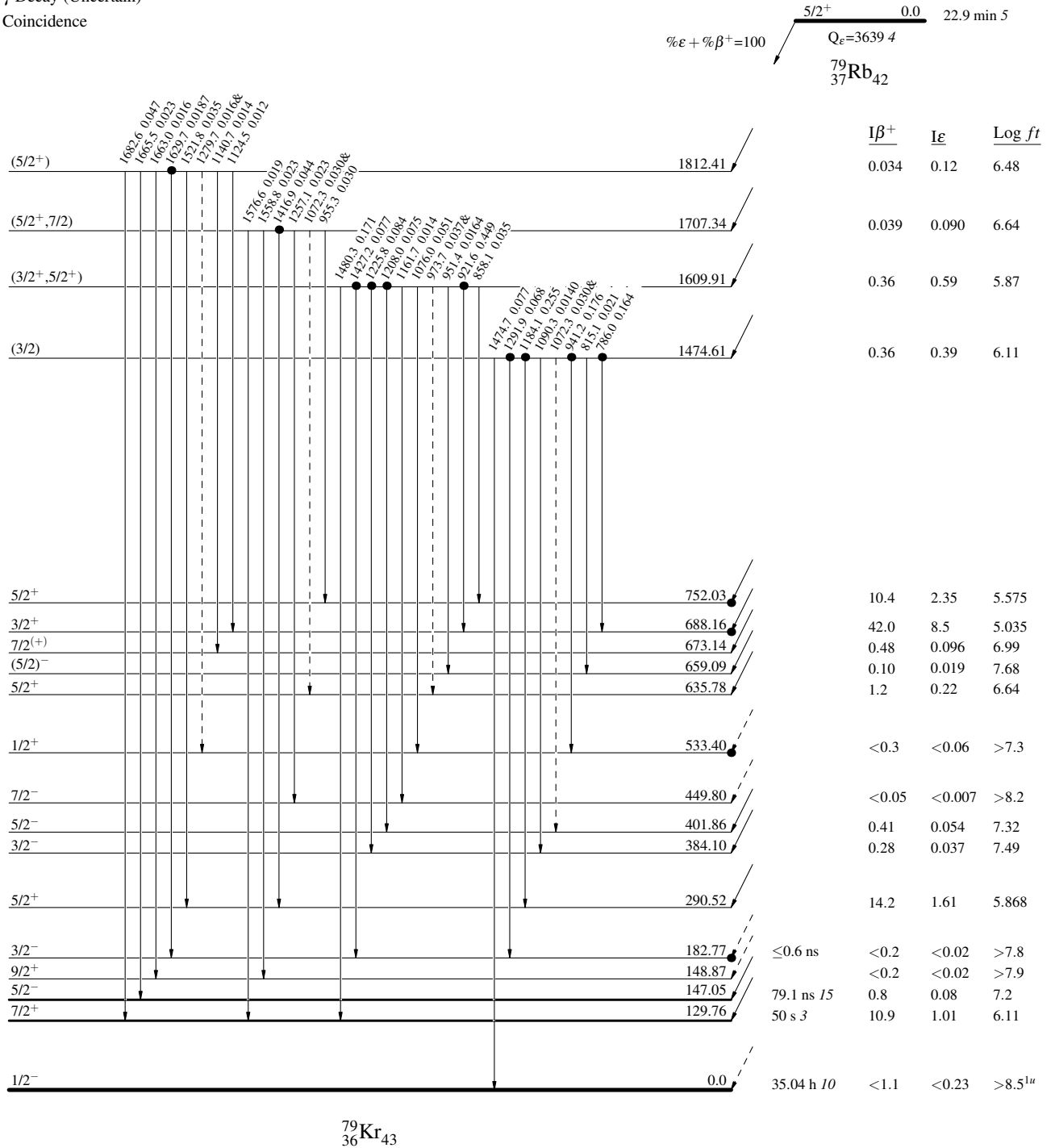
⁷⁹Rb ε decay (22.9 min) 1978Li28

Decay Scheme (continued)

Legend

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}
- - - - - γ Decay (Uncertain)
- Coincidence

Intensities: I(γ+ce) per 100 parent decays
& Multiply placed: undivided intensity given



⁷⁹Kr₃₆⁴³

^{79}Rb ϵ decay (22.9 min) 1978Li28

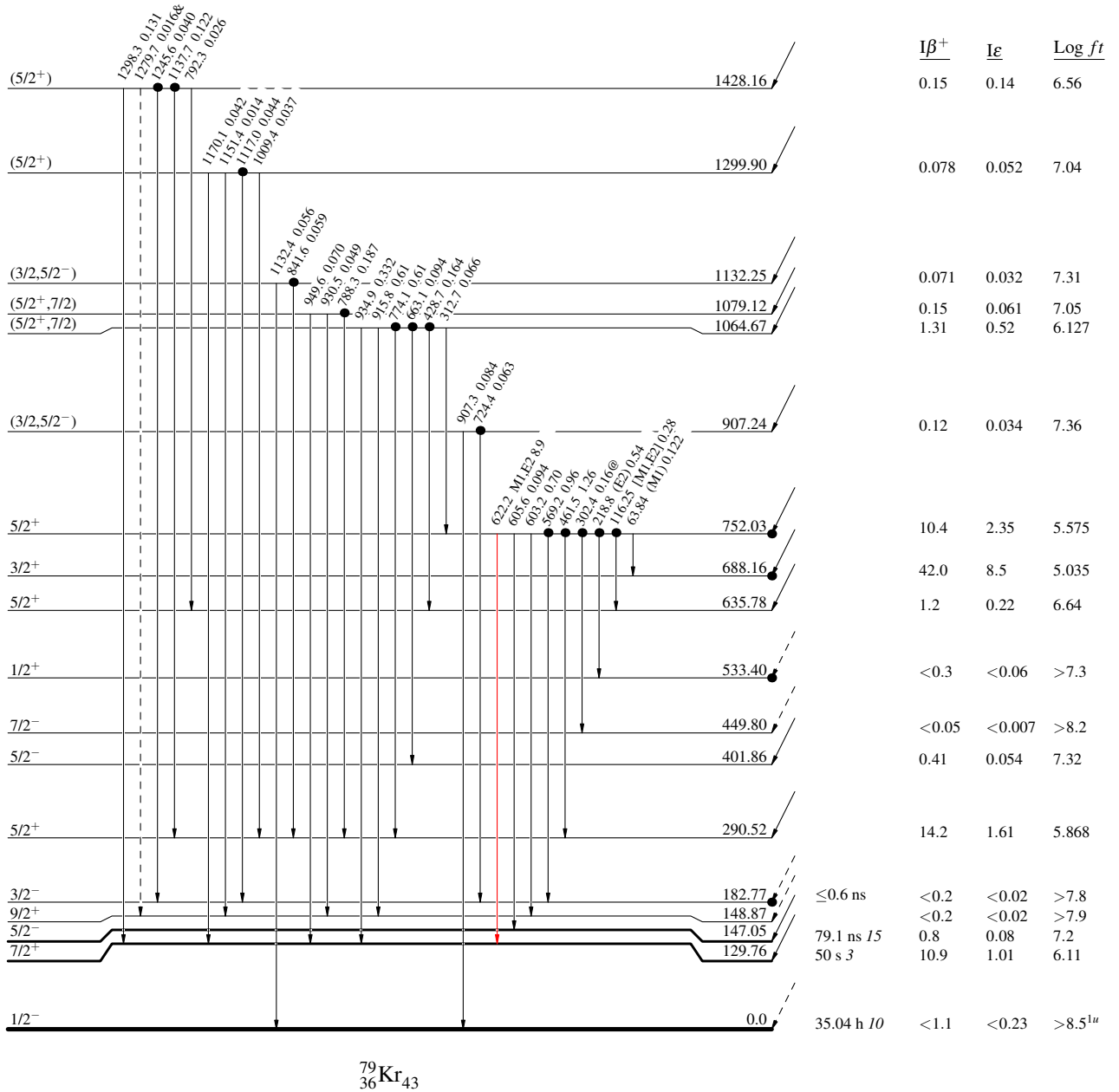
Decay Scheme (continued)

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
 @ Multiply placed: intensity suitably divided

$^{79}\text{Rb}_{42}$ $5/2^+$ 0.0 22.9 min 5
 $Q_\epsilon = 3639.4$
 $\% \epsilon + \% \beta^+ = 100$



⁷⁹Rb ε decay (22.9 min) 1978Li28

Decay Scheme (continued)

Intensities: I_(γ+ce) per 100 parent decays
 & Multiply placed: undivided intensity given
 @ Multiply placed: intensity suitably divided

Legend

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}
- Coincidence

