

**Adopted Levels, Gammas**

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

Q(β<sup>-</sup>)=-10416 4; S(n)=13851 7; S(p)=5973 8; Q(α)=-2827 3 [2012Wa38](#)

Note: Current evaluation has used the following Q record -10416.8 45 13851 7 5990 50 -2710 60 [2003Au03](#).

Q(β<sup>-</sup>): from [2004Ke10](#), [2003Au03](#) give 10414 4. Mass excess(<sup>74</sup>Kr)=-62332.0 21 ([2006Ro11](#), ISOLTRAP measurement).

[Additional information 1](#).

Hyperfine structure and isotope-shift measurements: [1995Ke04](#), [1992Li24](#), [1992Ne09](#).

Nuclear structure calculations (bands, levels, etc.): [2005Af04](#), [2005Pe01](#) (0<sup>+</sup> states), [2004Su08](#), [2003La18](#), [2001Pa14](#), [2000Tr04](#).

Mass measurement: [2006Ro11](#) (also [2005Ro39](#), [2004Ro32](#)), [2004Ke14](#), [2004Ke10](#), [2002He23](#), [1982Mo23](#).

<sup>74</sup>Kr Levels

Cross Reference (XREF) Flags

A	<sup>74</sup> Rb ε decay (64.776 ms)	D	<sup>58</sup> Ni( <sup>28</sup> Si,3αγ)
B	<sup>75</sup> Sr ep decay (88 ms)	E	Coulomb excitation
C	<sup>40</sup> Ca( <sup>40</sup> Ca,α2pγ)		

E(level)	J <sup>π</sup> †	T <sub>1/2</sub> ‡	XREF	Comments
0.0 <sup>#</sup>	0 <sup>+</sup>	11.50 min 11	ABCDE	%ε+%β <sup>+</sup> =100 Δ<r <sup>2</sup> >( <sup>86</sup> Kr- <sup>74</sup> Kr)=+0.03 fm <sup>2</sup> 11 ( <a href="#">1995Ke04</a> ). <r <sup>2</sup> > <sup>1/2</sup> =4.187 fm 4 ( <a href="#">2004An14</a> ). T <sub>1/2</sub> : from time decay of γ rays ( <a href="#">1975Sc07</a> ). Others: <a href="#">1974Co38</a> , <a href="#">1974Ro11</a> , <a href="#">1973HoYM</a> , <a href="#">1973DaYM</a> , <a href="#">1960Bu22</a> , <a href="#">1960Gr19</a> .
455.61 <sup>#</sup> 10	2 <sup>+</sup>	23.4 ps 4	ABCDE	XREF: B(?). J <sup>π</sup> : E2 γ to 0 <sup>+</sup> . T <sub>1/2</sub> : from recoil-distance (RDDS, <a href="#">2005Go43</a> ). Others: 16.3 ps 14 (RDDS, <a href="#">1990Ta12</a> ), 20 ps 4 (RDDS, <a href="#">1984Ro01</a> ), 9.7 ps 30 ( <a href="#">1976AIYY</a> ), <a href="#">2001Ra27</a> evaluation adopted 17.3 ps 21.
509 1	0 <sup>+</sup>	13.0 ns 7	AB DE	XREF: B(?). J <sup>π</sup> : E0 transition to 0 <sup>+</sup> . T <sub>1/2</sub> : from delayed ce spectra in <sup>9</sup> Be( <sup>78</sup> Kr,X) ( <a href="#">2003Bo05</a> ). Others: 23 ns 5 ( <a href="#">2000Ch07</a> , reanalyzed result of 29 ns 6 ( <a href="#">1997Ch46</a> ) using least-squares method and taking into account prompt component), 14 ns 7 ( <a href="#">1999Be11</a> , <a href="#">2000Be43</a> , <a href="#">2001Ko15</a> ). Interpreted as a state with oblate-prolate shape coexistence, dominated by oblate shape.
1013.32 <sup>#</sup> 14	4 <sup>+</sup>	3.60 ps 14	BCDE	XREF: B(?). T <sub>1/2</sub> : from recoil-distance (RDDS) method ( <a href="#">2005Go43</a> ). Other: 9.1 ps 5 ( <a href="#">1984Ro01</a> ). Note large discrepancy in the two measurements. The value from <a href="#">2005Go43</a> is preferred due to better reaction channel selection through the use of large gamma-ray detector array.
1121.2? 5			C	
1203.2 4	(2 <sup>+</sup> )		A DE	
1654?	(0 <sup>+</sup> )		A E	
1742 1	(2 <sup>+</sup> )		A E	J <sup>π</sup> : γ to 0 <sup>+</sup> ; possible excitation in Coul. ex.
1781.38 <sup>#</sup> 23	6 <sup>+</sup>	0.67 ps 7	CDE	T <sub>1/2</sub> : weighted average of 0.76 ps 16 ( <a href="#">2005Go43</a> ), 0.75 ps 10 ( <a href="#">2000AI02</a> ), 0.63 ps 7 ( <a href="#">1991He02</a> ), 0.62 ps 10 ( <a href="#">1990Ta12</a> ).
1941.4 <sup>@</sup> 3	(3 <sup>+</sup> )		D	
2112?	(4 <sup>+</sup> )		E	
2613.01 <sup>@</sup> 25	(5 <sup>+</sup> )		D	
2655.73 <sup>b</sup> 25	(4 <sup>-</sup> )		CD	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) $^{74}\text{Kr}$  Levels (continued)

E(level)	$J^{\pi}$	$T_{1/2}$	XREF	Comments
2747.93 <sup>#</sup> 25	8 <sup>+</sup>	0.195 ps 28	CDE	$T_{1/2}$ : weighted average of 0.243 ps 35 (2000A102), 0.166 ps 28 (1991He02), 0.194 ps 35 (1990Ta12).
2811.8 <sup>a</sup> 3	(5 <sup>-</sup> )		CD	
3005.1 <sup>c</sup> 7	(5 <sup>-</sup> )		D	
3139.00 <sup>b</sup> 25	(6 <sup>-</sup> )		CD	
3366.9 <sup>a</sup> 3	(7 <sup>-</sup> )		CD	
3452.4 <sup>@</sup> 5	(7 <sup>+</sup> )		D	
3698.4 <sup>c</sup> 7	(7 <sup>-</sup> )		D	
3761.3 <sup>&amp;</sup> 9	(8 <sup>+</sup> )		D	
3840.3 <sup>b</sup> 3	(8 <sup>-</sup> )		CD	
3892.3 <sup>#</sup> 3	10 <sup>+</sup>	0.083 ps 21	CD	$T_{1/2}$ : average of 0.111 ps 21 (2000A102), 0.069 ps 21 (1991He02), 0.069 ps 21 (1990Ta12).
4132.8 <sup>a</sup> 4	(9 <sup>-</sup> )	0.82 ps 8	CD	
4244? 1	(1 <sup>+</sup> )		A	
4469.4? <sup>@</sup> 11			D	
4556.5 <sup>&amp;</sup> 9	(10 <sup>+</sup> )		D	
4592.2 <sup>c</sup> 7	(9 <sup>-</sup> )		D	
4721.3 <sup>b</sup> 4	(10 <sup>-</sup> )		CD	
5086.3 <sup>a</sup> 5	(11 <sup>-</sup> )	0.270 ps 28	CD	
5179.6 <sup>#</sup> 4	12 <sup>+</sup>	0.084 ps 21	CD	$T_{1/2}$ : weighted average of 0.069 ps 21 (2000A102) and 0.125 ps 35 (1990Ta12). Other: $\leq 0.08$ ps (1991He02).
5570.3 <sup>&amp;</sup> 8	(12 <sup>+</sup> )		D	
5655.4? <sup>@</sup> 15			D	
5658.1 <sup>c</sup> 9	(11 <sup>-</sup> )		D	
5764.2 <sup>b</sup> 4	(12 <sup>-</sup> )		CD	
6210.6 <sup>a</sup> 5	(13 <sup>-</sup> )	0.112 ps 21	CD	
6515.7 <sup>#</sup> 5	14 <sup>+</sup>	0.090 ps 21	CD	
6853.1 <sup>&amp;</sup> 8	(14 <sup>+</sup> )		D	
6874.3 <sup>c</sup> 12	(13 <sup>-</sup> )		D	
6967.2 <sup>b</sup> 11	(14 <sup>-</sup> )		CD	
7487.6 <sup>a</sup> 6	(15 <sup>-</sup> )	0.062 ps 14	CD	
7858.4 <sup>#</sup> 6	16 <sup>+</sup>	0.083 ps 21	CD	
8219.3 <sup>c</sup> 16	(15 <sup>-</sup> )		D	
8318.2 <sup>b</sup> 15	(16 <sup>-</sup> )		CD	
8412.5 <sup>&amp;</sup> 12	(16 <sup>+</sup> )		D	
8898.0 <sup>a</sup> 7	(17 <sup>-</sup> )	0.035 ps 14	CD	
9305.9 <sup>#</sup> 8	18 <sup>+</sup>	0.055 ps 21	CD	
9684.3 <sup>c</sup> 19	(17 <sup>-</sup> )		D	
9803.2 <sup>b</sup> 18	(18 <sup>-</sup> )		CD	
9931.4 12	(18 <sup>+</sup> )		D	
10135.5 <sup>&amp;</sup> 15	(18 <sup>+</sup> )		D	
10430.4 <sup>a</sup> 8	(19 <sup>-</sup> )		CD	
10880.9 <sup>#</sup> 13	20 <sup>+</sup>		CD	
11051.9? <sup>&amp;</sup> 13			D	
11297.3 <sup>c</sup> 21	(19 <sup>-</sup> )		D	
11430.2 <sup>b</sup> 21	(20 <sup>-</sup> )		CD	
11985.5 <sup>&amp;</sup> 18	(20 <sup>+</sup> )		D	

Continued on next page (footnotes at end of table)

**Adopted Levels, Gammas (continued)**

<sup>74</sup>Kr Levels (continued)

E(level)	J <sup>π</sup> †	XREF	E(level)	J <sup>π</sup> †	XREF	E(level)	J <sup>π</sup> †	XREF
12088.4 <sup>a</sup> 13	(21 <sup>-</sup> )	CD	15126.3 <sup>b</sup> 25	(24 <sup>-</sup> )	CD	20735 <sup>a</sup> 3	(29 <sup>-</sup> )	CD
12649.9 <sup>#</sup> 16	22 <sup>+</sup>	CD	15907.5 <sup>a</sup> 19	(25 <sup>-</sup> )	CD	22575 <sup>b</sup> 4	(30 <sup>-</sup> )	C
13012 <sup>c</sup> 3	(21 <sup>-</sup> )	D	16011? <sup>&amp;</sup> 4	(24 <sup>+</sup> )	D	23127 <sup>#</sup> 3	(30 <sup>+</sup> )	C
13193.3 <sup>b</sup> 23	(22 <sup>-</sup> )	CD	17067.0 <sup>#</sup> 22	26 <sup>+</sup>	CD	23657 <sup>a</sup> 3	(31 <sup>-</sup> )	C
13896.4 <sup>a</sup> 16	(23 <sup>-</sup> )	CD	17299 <sup>b</sup> 4	(26 <sup>-</sup> )	CD	25854 <sup>b</sup> 4	(32 <sup>-</sup> )	C
13926 <sup>&amp;</sup> 3	(22 <sup>+</sup> )	D	18172.5 <sup>a</sup> 22	(27 <sup>-</sup> )	CD	26830 <sup>#</sup> 4	(32 <sup>+</sup> )	C
14686.9 <sup>#</sup> 19	24 <sup>+</sup>	CD	19750? <sup>b</sup> 4	(28 <sup>-</sup> )	CD	27030 <sup>a</sup> 4	(33 <sup>-</sup> )	C
14828? <sup>c</sup> 4	(23 <sup>-</sup> )	D	19859 <sup>#</sup> 3	28 <sup>+</sup>	CD	30936 <sup>a</sup> 4	(35 <sup>-</sup> )	C

† From  $\gamma\gamma(\theta)$ (DCO), lifetimes and band assignment in <sup>40</sup>Ca(<sup>40</sup>Ca, $\alpha$ 2p $\gamma$ ) and <sup>58</sup>Ni(<sup>28</sup>Si,3 $\alpha\gamma$ ).

‡ From DSA method (for T<sub>1/2</sub><1 ps) and recoil-distance methods (RDDS) (for T<sub>1/2</sub>>1 ps) in <sup>40</sup>Ca(<sup>40</sup>Ca, $\alpha$ 2p $\gamma$ ) and <sup>58</sup>Ni(<sup>28</sup>Si,3 $\alpha\gamma$ ). Values are from DSA method in 2000AI02, unless otherwise stated.

# Band(A): g.s. band, dominantly prolate. The irregularity around spin 14 interpreted as due to alignment of  $\pi g_{9/2}$   $\nu g_{9/2}$  orbitals. Q(transition)(top of the band)=2.1 (2005Va30).

@ Band(B): Band based on (3<sup>+</sup>).

& Band(C):  $\pi g_{9/2}^2$ ,  $\alpha=0$ .

<sup>a</sup> Band(D):  $\pi 3/2[431] \otimes \pi 3/2[312]$ ,  $\alpha=1$ . Q(transition)(top of the band)=2.3 (2005Va30).

<sup>b</sup> Band(d):  $\pi 3/2[431] \otimes \pi 3/2[312]$ ,  $\alpha=0$ . Q(transition)(top of the band)=2.4 (2005Va30).

<sup>c</sup> Band(E):  $\pi 3/2[431] \otimes \pi 1/2[310]$ ,  $\alpha=1$ .

$\gamma(^{74}\text{Kr})$

E <sub>i</sub> (level)	J <sub>i</sub> <sup>π</sup>	E <sub>γ</sub> <sup>†</sup>	I <sub>γ</sub> <sup>†</sup>	E <sub>f</sub>	J <sub>f</sub> <sup>π</sup>	Mult. <sup>‡</sup>	$\alpha^{\#}$	I <sub>(γ+ce)</sub>	Comments
455.61	2 <sup>+</sup>	455.6 1	100	0.0	0 <sup>+</sup>	E2			B(E2)(W.u.)=67 1
509	0 <sup>+</sup>	53 1		455.61	2 <sup>+</sup>	[E2]	10.2	67 15	B(E2)(W.u.)=60 17
		509 1		0.0	0 <sup>+</sup>	E0		100 10	E <sub>γ</sub> : seen as K-shell electrons in <sup>74</sup> Rb $\epsilon$ ; and as $\gamma$ ray in (HI,xn $\gamma$ ). q <sub>K</sub> <sup>2</sup> (E0/E2)=1.9 5, X(E0/E2)=0.017 4, $\rho^2$ (E0)=0.113 27 (2005Ki02, evaluation). $\rho_0^2$ =0.085 19 (2003Bo05). B(E0)=0.15 8 (2001Ko15). B(E2)(W.u.)=157 6
1013.32	4 <sup>+</sup>	557.7 1	100	455.61	2 <sup>+</sup>	E2			
1121.2?		665.6		455.61	2 <sup>+</sup>				
1203.2	(2 <sup>+</sup> )	694.0 5	42 26	509	0 <sup>+</sup>				
		747 1	100 18	455.61	2 <sup>+</sup>				
		1204 1	135 45	0.0	0 <sup>+</sup>				
1654?	(0 <sup>+</sup> )	1198 <sup>@</sup> 1	100	455.61	2 <sup>+</sup>				
1742	(2 <sup>+</sup> )	1233.0 5	100 14	509	0 <sup>+</sup>				
		1286 1	31 17	455.61	2 <sup>+</sup>				
1781.38	6 <sup>+</sup>	768.0 2	100	1013.32	4 <sup>+</sup>	E2			B(E2)(W.u.)=171 19
1941.4	(3 <sup>+</sup> )	738.3 3	28 5	1203.2	(2 <sup>+</sup> )				
		928 1	17 3	1013.32	4 <sup>+</sup>				
		1486.0 5	100 13	455.61	2 <sup>+</sup>				
2112?	(4 <sup>+</sup> )	910 <sup>@</sup>		1203.2	(2 <sup>+</sup> )				
2613.01	(5 <sup>+</sup> )	671.5 3	50 7	1941.4	(3 <sup>+</sup> )				
		831 1	11 4	1781.38	6 <sup>+</sup>				
		1599.6 3	100 11	1013.32	4 <sup>+</sup>				
2655.73	(4 <sup>-</sup> )	714.3 1	100 5	1941.4	(3 <sup>+</sup> )	D			
		1643 1	6.6 16	1013.32	4 <sup>+</sup>				
2747.93	8 <sup>+</sup>	966.5 1	100	1781.38	6 <sup>+</sup>	E2			B(E2)(W.u.)=185 27

Continued on next page (footnotes at end of table)

**Adopted Levels, Gammas (continued)**

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

$E_i(\text{level})$	$J_i^\pi$	$E_\gamma^\dagger$	$I_\gamma^\dagger$	$E_f$	$J_f^\pi$	Mult. <sup>‡</sup>	Comments
2811.8	(5 <sup>-</sup> )	1799 1	100	1013.32	4 <sup>+</sup>	D	
3005.1	(5 <sup>-</sup> )	1992 1	100	1013.32	4 <sup>+</sup>		
3139.00	(6 <sup>-</sup> )	327.3 3	22 3	2811.8	(5 <sup>-</sup> )	D	
		483.3 1	85 4	2655.73	(4 <sup>-</sup> )	Q	
		525.9 2	100 6	2613.01	(5 <sup>+</sup> )	D	
		1358 1	28 4	1781.38	6 <sup>+</sup>		
3366.9	(7 <sup>-</sup> )	555.1 2	42.0 20	2811.8	(5 <sup>-</sup> )		
		1585.7 3	100 10	1781.38	6 <sup>+</sup>	D	
3452.4	(7 <sup>+</sup> )	839.4 7	100 17	2613.01	(5 <sup>+</sup> )		
		1671 1	67 25	1781.38	6 <sup>+</sup>		
3698.4	(7 <sup>-</sup> )	693.3 3	52 9	3005.1	(5 <sup>-</sup> )	(Q)	
		1917 1	100 17	1781.38	6 <sup>+</sup>	D	
3761.3	(8 <sup>+</sup> )	1980 1	100	1781.38	6 <sup>+</sup>		
3840.3	(8 <sup>-</sup> )	387.9 5	10.0 15	3452.4	(7 <sup>+</sup> )		
		473.2 4	7.7 15	3366.9	(7 <sup>-</sup> )		
		701.3 2	100 8	3139.00	(6 <sup>-</sup> )	Q	
3892.3	10 <sup>+</sup>	1144.4 1	100	2747.93	8 <sup>+</sup>	E2	B(E2)(W.u.)=190 50
4132.8	(9 <sup>-</sup> )	766.9 5	100 18	3366.9	(7 <sup>-</sup> )	[E2]	B(E2)(W.u.)=110 30
		1384.3 4	24.7 24	2747.93	8 <sup>+</sup>	(E1)	B(E1)(W.u.)=3.5×10 <sup>-5</sup> 7
							Mult.: $\Delta J=1$ , dipole from $\gamma\gamma(\theta)$ (DCO); E1 from $\Delta J^\pi$ .
4244?	(1 <sup>+</sup> )	4244 1	100	0.0	0 <sup>+</sup>		
4469.4?		1017 1	100	3452.4	(7 <sup>+</sup> )		
4556.5	(10 <sup>+</sup> )	795.2 6	80 13	3761.3	(8 <sup>+</sup> )		
		1809 2	100 27	2747.93	8 <sup>+</sup>		
4592.2	(9 <sup>-</sup> )	893.9 3	100 8	3698.4	(7 <sup>-</sup> )	Q	
		1844 1	14 3	2747.93	8 <sup>+</sup>		
4721.3	(10 <sup>-</sup> )	881.0 2	100	3840.3	(8 <sup>-</sup> )	Q	
5086.3	(11 <sup>-</sup> )	953.5 2	100	4132.8	(9 <sup>-</sup> )	E2	B(E2)(W.u.)=144 15
5179.6	12 <sup>+</sup>	1287.2 2	100	3892.3	10 <sup>+</sup>	E2	B(E2)(W.u.)=100 30
5570.3	(12 <sup>+</sup> )	1014 1	100 22	4556.5	(10 <sup>+</sup> )	Q	
		1678 1	87 22	3892.3	10 <sup>+</sup>		
5655.4?		1186 1	100	4469.4?			
5658.1	(11 <sup>-</sup> )	1065.8 6	100	4592.2	(9 <sup>-</sup> )	Q	
5764.2	(12 <sup>-</sup> )	1042.9 2	100	4721.3	(10 <sup>-</sup> )	Q	
6210.6	(13 <sup>-</sup> )	1124.2 2	100	5086.3	(11 <sup>-</sup> )	E2	B(E2)(W.u.)=150 30
6515.7	14 <sup>+</sup>	1336.2 3	100	5179.6	12 <sup>+</sup>	E2	B(E2)(W.u.)=80 19
6853.1	(14 <sup>+</sup> )	1283 1	50 10	5570.3	(12 <sup>+</sup> )		
		1673 1	100 20	5179.6	12 <sup>+</sup>	Q	
6874.3	(13 <sup>-</sup> )	1216.2 8	100	5658.1	(11 <sup>-</sup> )	Q	
6967.2	(14 <sup>-</sup> )	1203 1	100	5764.2	(12 <sup>-</sup> )	Q	
7487.6	(15 <sup>-</sup> )	1277.0 3	100	6210.6	(13 <sup>-</sup> )	E2	B(E2)(W.u.)=150 40
7858.4	16 <sup>+</sup>	1342.6 4	100	6515.7	14 <sup>+</sup>	E2	B(E2)(W.u.)=85 22
8219.3	(15 <sup>-</sup> )	1345 1	100	6874.3	(13 <sup>-</sup> )		
8318.2	(16 <sup>-</sup> )	1351 1	100	6967.2	(14 <sup>-</sup> )	Q	
8412.5	(16 <sup>+</sup> )	1559 1	100 10	6853.1	(14 <sup>+</sup> )	(Q)	
		1898 2	23 5	6515.7	14 <sup>+</sup>		
8898.0	(17 <sup>-</sup> )	1410.4 3	100	7487.6	(15 <sup>-</sup> )	E2	B(E2)(W.u.)=160 70
9305.9	18 <sup>+</sup>	1447.5 4	100	7858.4	16 <sup>+</sup>	E2	B(E2)(W.u.)=90 40
9684.3	(17 <sup>-</sup> )	1465 1	100	8219.3	(15 <sup>-</sup> )		
9803.2	(18 <sup>-</sup> )	1485 1	100	8318.2	(16 <sup>-</sup> )	Q	
9931.4	(18 <sup>+</sup> )	2073 1	100	7858.4	16 <sup>+</sup>	(Q)	
10135.5	(18 <sup>+</sup> )	1723 1	100	8412.5	(16 <sup>+</sup> )		
10430.4	(19 <sup>-</sup> )	1532.4 4	100	8898.0	(17 <sup>-</sup> )	Q	
10880.9	20 <sup>+</sup>	1575 1	100	9305.9	18 <sup>+</sup>	Q	
11051.9?		1746 1	100	9305.9	18 <sup>+</sup>		

Continued on next page (footnotes at end of table)

**Adopted Levels, Gammas (continued)** $\gamma(^{74}\text{Kr})$  (continued)

$E_i(\text{level})$	$J_i^\pi$	$E_\gamma^\dagger$	$I_\gamma^\dagger$	$E_f$	$J_f^\pi$	Mult. <sup>‡</sup>
11297.3	(19 <sup>-</sup> )	1613	1	9684.3	(17 <sup>-</sup> )	
11430.2	(20 <sup>-</sup> )	1627	1	9803.2	(18 <sup>-</sup> )	Q
11985.5	(20 <sup>+</sup> )	1850	1	10135.5	(18 <sup>+</sup> )	
12088.4	(21 <sup>-</sup> )	1658	1	10430.4	(19 <sup>-</sup> )	Q
12649.9	22 <sup>+</sup>	1769	1	10880.9	20 <sup>+</sup>	Q
13012	(21 <sup>-</sup> )	1715	2	11297.3	(19 <sup>-</sup> )	
13193.3	(22 <sup>-</sup> )	1763	1	11430.2	(20 <sup>-</sup> )	Q
13896.4	(23 <sup>-</sup> )	1808	1	12088.4	(21 <sup>-</sup> )	(Q)
13926	(22 <sup>+</sup> )	1940	2	11985.5	(20 <sup>+</sup> )	
14686.9	24 <sup>+</sup>	2037	1	12649.9	22 <sup>+</sup>	Q
14828?	(23 <sup>-</sup> )	1816	2	13012	(21 <sup>-</sup> )	
15126.3	(24 <sup>-</sup> )	1933	1	13193.3	(22 <sup>-</sup> )	
15907.5	(25 <sup>-</sup> )	2011	1	13896.4	(23 <sup>-</sup> )	(Q)
16011?	(24 <sup>+</sup> )	2085	2	13926	(22 <sup>+</sup> )	
17067.0	26 <sup>+</sup>	2380	1	14686.9	24 <sup>+</sup>	Q
17299	(26 <sup>-</sup> )	2173	2	15126.3	(24 <sup>-</sup> )	
18172.5	(27 <sup>-</sup> )	2265	1	15907.5	(25 <sup>-</sup> )	(Q)
19750?	(28 <sup>-</sup> )	2451	2	17299	(26 <sup>-</sup> )	
19859	28 <sup>+</sup>	2792	2	17067.0	26 <sup>+</sup>	
20735	(29 <sup>-</sup> )	2562	2	18172.5	(27 <sup>-</sup> )	
22575	(30 <sup>-</sup> )	2825		19750?	(28 <sup>-</sup> )	
23127	(30 <sup>+</sup> )	3268		19859	28 <sup>+</sup>	
23657	(31 <sup>-</sup> )	2922		20735	(29 <sup>-</sup> )	
25854	(32 <sup>-</sup> )	3279		22575	(30 <sup>-</sup> )	
26830	(32 <sup>+</sup> )	3703		23127	(30 <sup>+</sup> )	
27030	(33 <sup>-</sup> )	3373		23657	(31 <sup>-</sup> )	
30936	(35 <sup>-</sup> )	3906		27030	(33 <sup>-</sup> )	

<sup>†</sup> Most values are from  $^{58}\text{Ni}(^{28}\text{Si},3\alpha\gamma)$ .

<sup>‡</sup> From  $\gamma\gamma(\theta)$  and/or lifetime data in  $^{40}\text{Ca}(^{40}\text{Ca},\alpha2p\gamma)$  and  $^{58}\text{Ni}(^{28}\text{Si},3\alpha\gamma)$ .

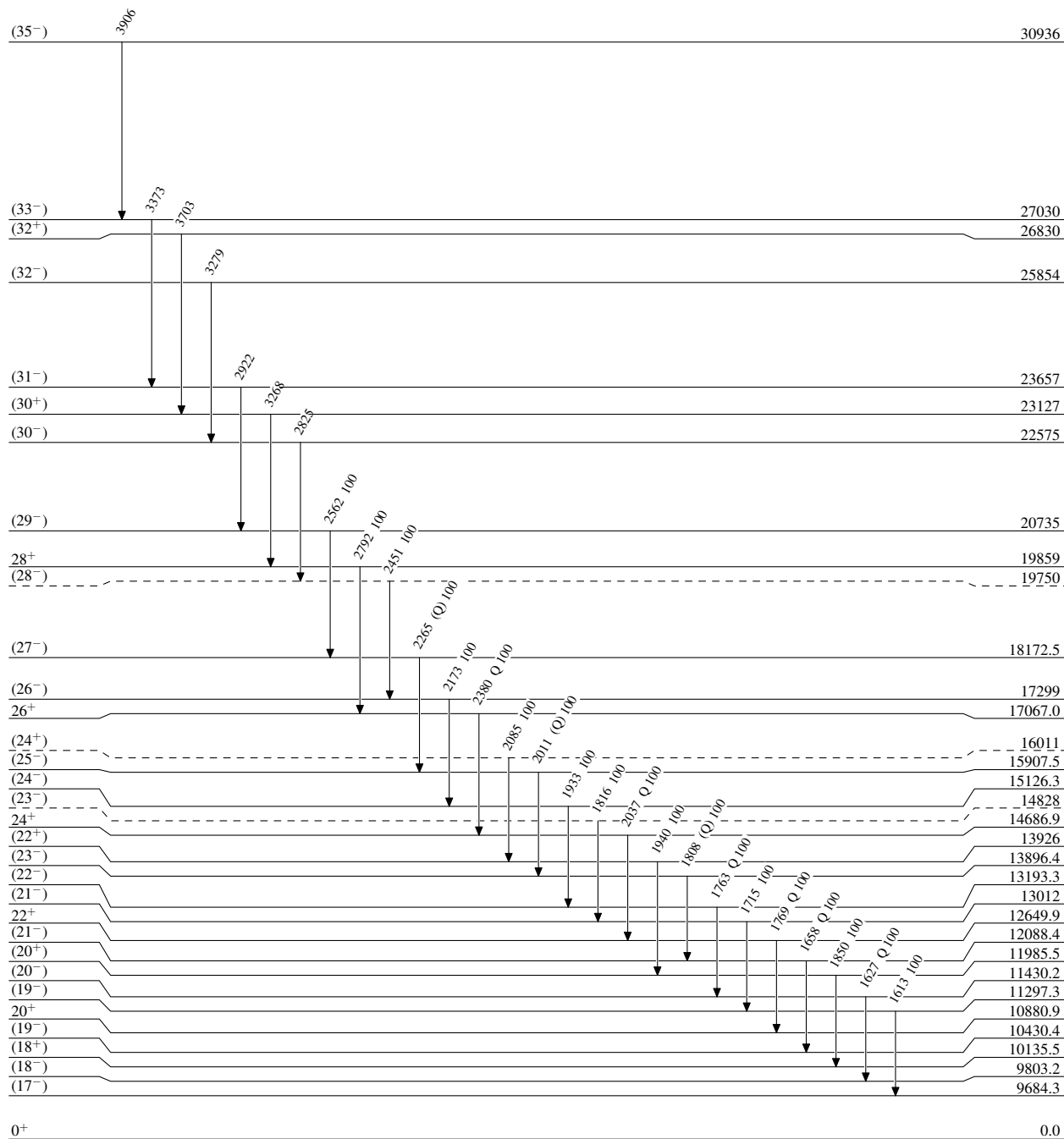
<sup>#</sup> Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on  $\gamma$ -ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

<sup>@</sup> Placement of transition in the level scheme is uncertain.

**Adopted Levels, Gammas**

Level Scheme

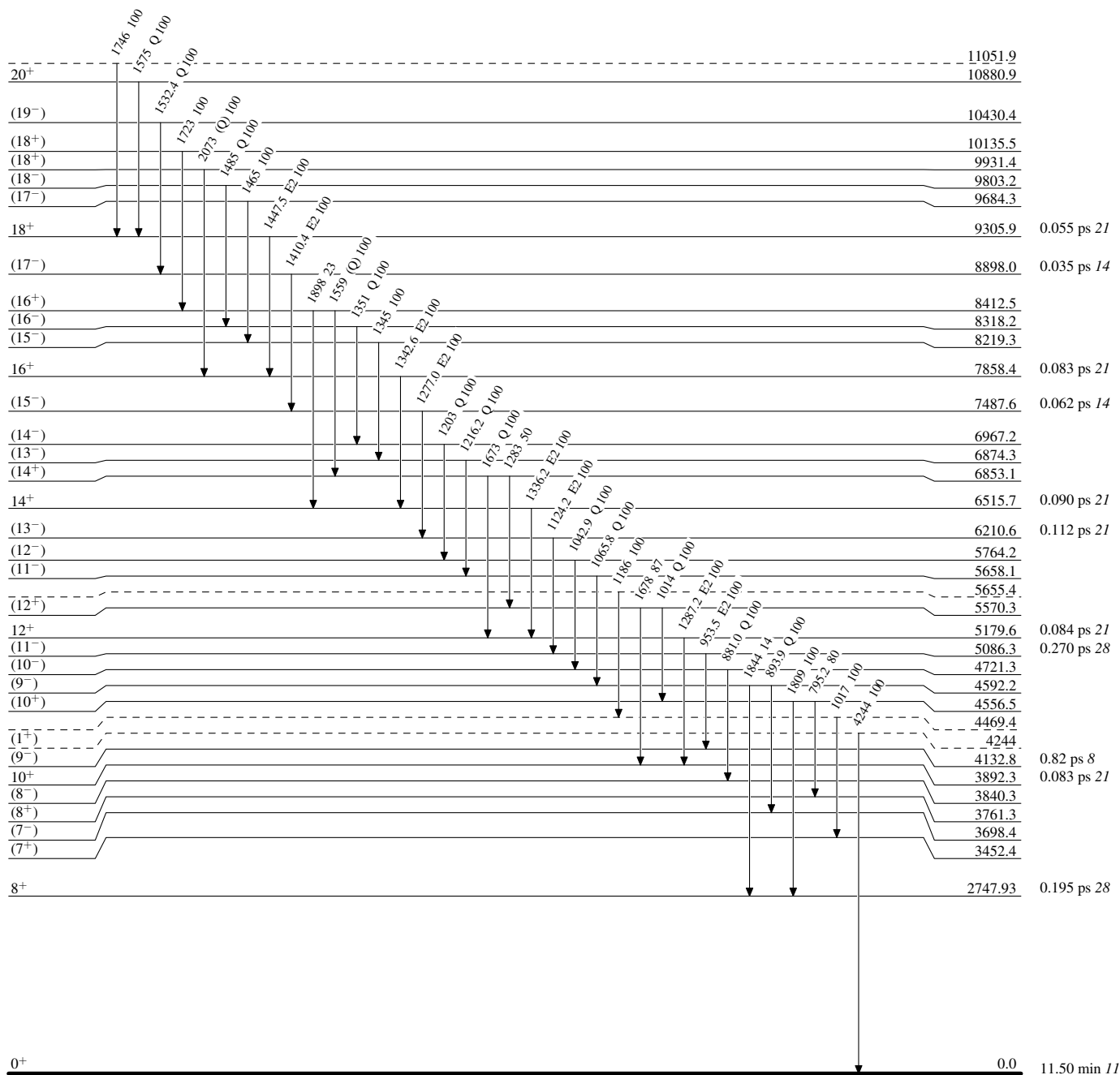
Intensities: Relative photon branching from each level



11.50 min 11

Adopted Levels, GammasLevel Scheme (continued)

Intensities: Relative photon branching from each level



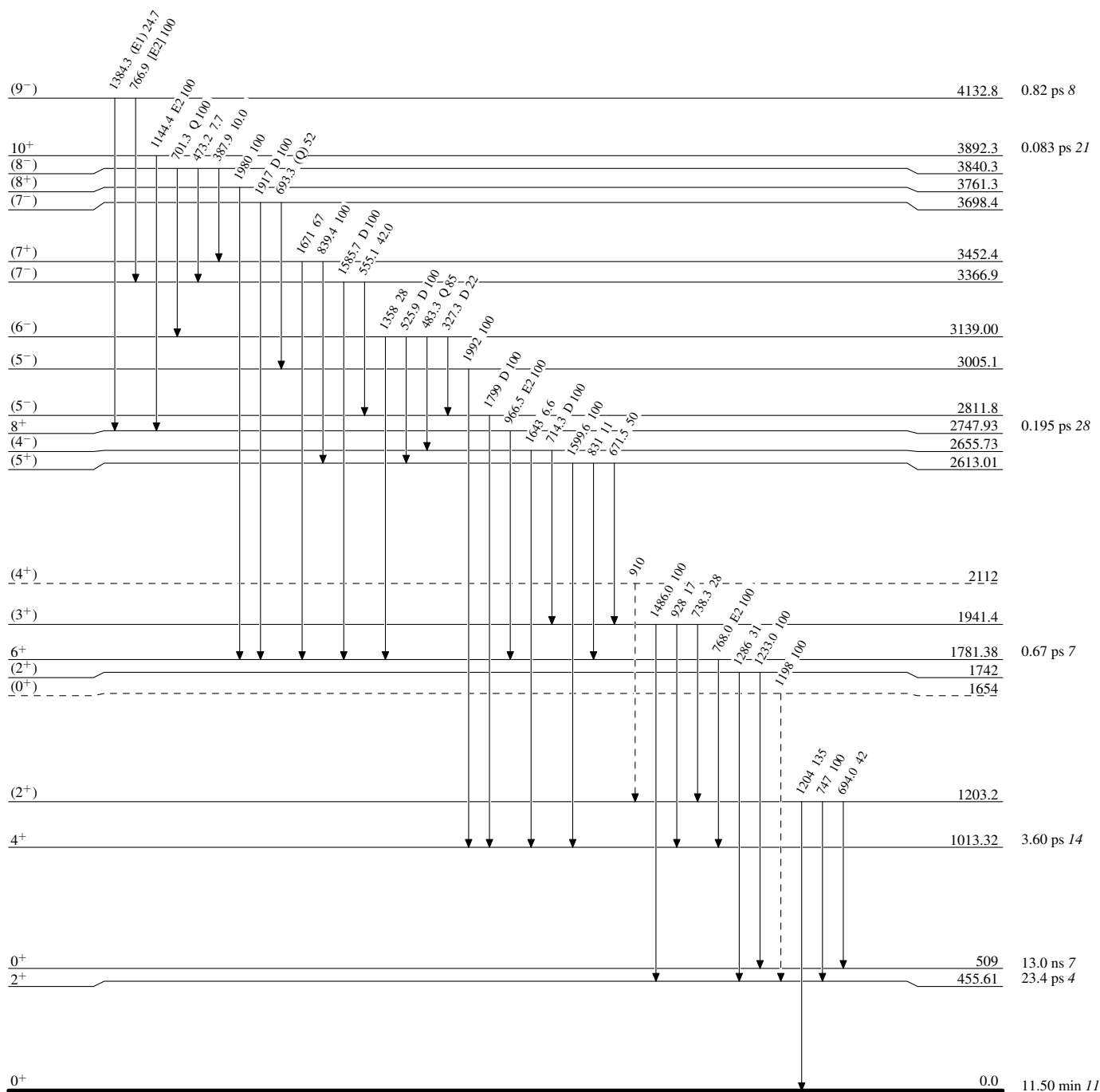
**Adopted Levels, Gammas**

Legend

**Level Scheme (continued)**

Intensities: Relative photon branching from each level

-----▶  $\gamma$  Decay (Uncertain)

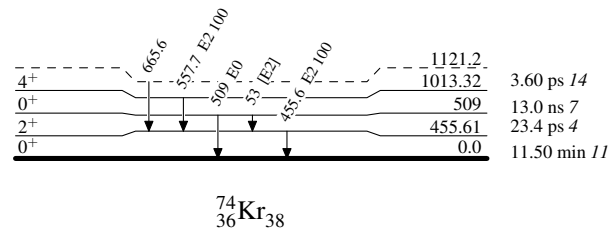


$^{74}_{36}\text{Kr}$



**Adopted Levels, Gammas****Level Scheme (continued)**

Intensities: Relative photon branching from each level



**Adopted Levels, Gammas**

