

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 105,223 (2005)	22-Jun-2005

$Q(\beta^-) = -5717.8$ 20; $S(n) = 11522$ 4; $S(p) = 9114.2$ 14; $Q(\alpha) = -5066.3$ 7 [2012Wa38](#)

Note: Current evaluation has used the following Q record \$ -5720 7 11521 4 9112.9 24 -5065.422 [2003Au03](#).

Other reactions:

$^{79}\text{Br}(p,\gamma)$ $E = 1.7, 2.4$ MeV: [1983Ra02](#), prompt γ rays in ^{80}Kr at 617, 640, 820, 1172 and 1257 keV are reported. This suggests population of levels in ^{80}Kr at 617, 1256, 1436 and 1788.

$^{76}\text{Ge}(^{32}\text{S}, ^{28}\text{Mg})$ $E = 100$ MeV: [1974We04](#) (cross section data through measurement of ^{28}Mg activity).

$^{80}\text{Se}(\pi^+, \pi^-)$: [1995Hu09](#) ($E = 293.2$ MeV), [1991Fo02](#), [1988Mo01](#), [1987Gi04](#) ($E = 100$ -190 MeV); [1991Wi13](#) ($E = 450, 500$ MeV; cross section for g.s. and double IAS). Other: [1996Fo08](#).

$^{64}\text{Zn}(^{16}\text{O}, X)$ GDR study: [1985GuZZ](#).

Hyperfine structure and isotope-shift data: [1995Ke04](#), [1992Sc19](#), [1990Ca26](#), [1990Sc30](#), [1989Tr04](#), [1981Ge06](#) (also [1979Ge05](#), [1977Ge05](#)). Other: [1996Li25](#).

Mass measurement: [2002He23](#) (Penning-trap method), [1986Bu18](#) (from $^{80}\text{Kr}(d,p)$); [1978Di09](#), [1963Ri07](#).

Isotopic abundance: [1971Me13](#).

Additional information 1.

In ^{80}Rb ε decay, [1993Gi01](#) attempted to identify third 0^+ state around 2 MeV from ce data. From the absence of any conversion electron line in the range 1900-2100 keV, [1993Gi01](#) deduced $\text{Ice(K)}(\text{third } 0^+ \text{ to g.s.})/\text{Ice(K)}(\text{second } 0^+ \text{ to g.s.}) < 0.05$ (with 95% confidence limit).

 ^{80}Kr LevelsCross Reference (XREF) Flags

A	^{80}Br β^- decay (17.68 min)	F	$^{79}\text{Br}(^3\text{He}, d)$
B	^{80}Rb ε decay (34 s)	G	$^{80}\text{Kr}(p, p'), (p, p'\gamma)$
C	$^{65}\text{Cu}(^{18}\text{O}, p2n\gamma), ^{65}\text{Cu}(^{19}\text{F}, 2p2n\gamma)$	H	Coulomb excitation
D	$^{70}\text{Zn}(^{12}\text{C}, 2n\gamma)$	I	$^{82}\text{Kr}(p, t)$
E	$^{78}\text{Se}(\alpha, 2n\gamma), ^{80}\text{Se}(\alpha, 4n\gamma)$		

E(level) [#]	J ^{π}	T _{1/2} [†]	XREF	Comments
0.0 [@]	0 ⁺	stable	ABCDEFGH	$\langle r^2 \rangle^{1/2} = 4.1976$ fm 13 (2004An14).
616.60 [@] 10	2 ⁺	8.3 ps 5	ABCDEFGH	$\mu = +0.76$ 10 (2001Me20) J ^{π} : E2 γ to 0 ⁺ . T _{1/2} : weighted average of 8.3 ps 7(DSAM, 2001Mu25); 7.8 ps 5 (DSAM in Coul. ex.); 8.3 ps 7 (DSAM and RDM, 1981Fu03); 8.8 ps 5 (RDM, 1975Fr04). Evaluation by 2001Ra27 adopted 8.6 ps 5 from 1981Fu03 and 1975Fr04 . μ : transient-field technique in Coul. ex. (2001Me20). $\beta_2(p, p') = 0.28$ (1979Sa14). T _{1/2} : others: 9.4 ps (from B(E2)(Coul. ex.)=0.34). $\Delta \langle r^2 \rangle (^{80}\text{Kr} - ^{86}\text{Kr}) = 0.088$ fm ² 7 (1990Sc30), 0.0866 fm ² 9 (1981Ge06 , 1979Ge06), 0.144 fm ² 7 (1995Ke04). Uncertainties quoted are statistical only. The total uncertainties including the systematic errors are: 0.068 fm ² (1990Sc30), 0.044 fm ² (1995Ke04).
1256.24 ^{&} 12	2 ⁺	7.6 ps 14	ABCDEFGH	$\mu = +1.3$ 7 (2001Me20) J ^{π} : E2 γ to 2 ⁺ . μ : transient-field technique in Coul. ex. (2001Me20). $\beta_2(p, p') = 0.059$ (1979Sa14). J ^{π} : (704 γ)(617 γ)(θ) in ^{80}Br β^- ; E0 transition to 0 ⁺ . T _{1/2} : DSAM in (p, p' γ) (1993Gi01).
1320.51 22	0 ⁺	4.9 ps 21	AB FGH	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{80}Kr Levels (continued)

E(level) [#]	$J^{\pi\dagger}$	$T_{1/2}^{\dagger}$	XREF	Comments
1436.09 [@] 16	4 ⁺	1.07 ps 15	CDEFGH	$\mu=+1.8$ 6 (2001Me20) B(E4) $\uparrow=0.0015$ 3 (1978Ma11) J^{π} : $\gamma(\theta, \text{pol})$; E2 γ to 2 ⁺ . $T_{1/2}$: DSAM in Coul. ex. (2001Me20). Others: 1.7 ps 2 (1975Fr04), 1.6 ps 4 (1981Fu03). μ : transient-field technique in Coul. ex. (2001Me20). $\beta_4(p, p')=0.061$ (1979Sa14).
1787.99 ^{&} 14	3 ⁺	7.1 ps 9	CDE	J^{π} : 532 $\gamma(\theta)$, 1171 $\gamma(\theta, \text{pol})$; E2+M1 γ to 2 ⁺ .
2145.88 ^{&} 16	4 ⁺	0.76 ps 42	CDE H	J^{π} : $\gamma(\theta, \text{pol})$; E2 γ to 2 ⁺ .
2392.06 [@] 18	6 ⁺	0.56 ps 14	CDE	J^{π} : $\gamma(\theta, \text{pol})$; E2 γ to 4 ⁺ .
2439.21 ^a 22	3 ⁻	1.4 ps +14-5	CDE G I	B(E3) $\uparrow=0.043$ 15 (1978Ma11, 2002Ki06) XREF: G(2414)I(2424). J^{π} : L(p, p')=3.
2659.74 ^{&} 18	5 ⁺	0.83 ps 28	CDE	J^{π} : 871 $\gamma(\theta, \text{pol})$; E2 γ to 3 ⁺ .
2793.05 ^e 17	4 ⁻	2.1 ps 4	CDE	J^{π} : $\gamma(\theta, \text{pol})$.
2859.53 ^a 17	5 ⁻	2.4 ps 11	CDE	J^{π} : $\gamma(\theta, \text{pol})$; E1 γ to 4 ⁺ .
2969 15	3 ⁻		G I	B(E3) $\uparrow=0.00038$ 6 (1978Ma11) J^{π} : L(p, p')=L(p, t)=3.
2997.6? 4			DE	
3039.57 22	(5 ⁻)	1.5 ps 4	CDE	J^{π} : $\gamma(\theta, \text{pol})$.
3041.74 ^e 17	6 ⁻	2.2 ns 2	CDE	J^{π} : $\gamma(\theta, \text{pol})$; E2 γ to 4 ⁻ . $T_{1/2}$: from 1981Fu03. Other: 1.8 ns 2 ($\gamma(t)$ in ($\alpha, 2n\gamma$)) (1984Do02).
3110.21 ^{&} 21	(6 ⁺)	0.83 ps +62-35	CDE	J^{π} : $\gamma(\theta)$; (E2) γ to 4 ⁺ .
3172.81 24	(5, 6, 7 ⁻)		C	J^{π} : γ 's to 6 ⁺ and 5 ⁻ . $J^{\pi}=(5-)$ proposed by 1995Do15.
3345.81 ^d 18	6 ⁻	4.9 ps 21	CDE	J^{π} : $\gamma(\theta, \text{pol})$.
3409.98 [@] 23	8 ⁺	0.28 ps +28-14	CDE	J^{π} : $\gamma(\theta, \text{pol})$; E2 γ to 2 ⁺ .
3488.0 ^a 3	(6 ⁻)		CDE	J^{π} : γ 's to 5 ⁻ and 4 ⁻ . Greater $\sigma(\gamma)$ of 628 γ and 695 γ in ($\alpha, 4n\gamma$) as compared to those in ($\alpha, 2n\gamma$) favors J=6 (1981Fu03).
3530.31 19	7 ⁻		CDE	J^{π} : $\gamma(\theta, \text{pol})$; E2+M1 γ to 6 ⁻ .
3558.66 ^a 21	(7 ⁻)		CDE	J^{π} : $\gamma(\theta)$; E2+M1 γ to 6 ⁻ ; γ from (9 ⁻).
3581.69 ^c 19	7 ⁻	2.7 ps 3	CDE	J^{π} : $\gamma(\theta)$; E2 γ to 5 ⁻ .
3635.3 ^{&} 4	(7 ⁺)	≥ 0.7 ps	CDE	J^{π} : $\gamma(\theta)$; γ to 6 ⁺ .
3699.75 ^b 25	8 ⁺		CDE	J^{π} : $\gamma(\theta, \text{pol})$; M1 γ to 8 ⁺ .
3916.6 4	(8 ⁺)	≤ 0.14 ps	C E	J^{π} : γ to 6 ⁺ ; possible γ to 8 ⁺ .
4126.23 ^d 20	(8 ⁻)	≥ 1.7 ps	CDE	J^{π} : $\gamma(\theta)$; probable band assignment.
4153.2 ^b 11	(8 ⁺)		E	J^{π} : γ to (6 ⁺); probable band assignment.
4163.2 ^e 3	(8 ⁻)		C E	J^{π} : $\gamma(\theta)$; band assignment.
4377.9 ^b 3	10 ⁺	0.40 ps +8-7	CDE	J^{π} : $\Delta J=2$, E2 γ to 8 ⁺ ; band member.
4393.70 ^a 24	(9 ⁻)		CDE	J^{π} : $\gamma(\theta)$; band assignment.
4562.47 ^c 25	(9 ⁻)		CDE	J^{π} : $\gamma(\theta)$; band assignment.
4648.9 [@] 3	(10 ⁺)	0.49 ps 21	CDE	J^{π} : $\Delta J=2$, (E2) γ to 8 ⁺ ; (M1) γ to 10 ⁺ .
4975.1 6	(10 ⁺)		C	J^{π} : $\Delta J=(2)$ γ to 8 ⁺ ; possible γ to 10 ⁺ .
5159.0 ^d 4	(10 ⁻)		C E	J^{π} : γ to (8 ⁻); probable band assignment.
5374.6 ^e 5	(10 ⁻)		C	J^{π} : γ to (8 ⁻).
5397.4 ^a 4	(11 ⁻)		C	J^{π} : $\Delta J=2$ γ to (9 ⁻).
5437.8 ^b 4	12 ⁺	0.23 ps +4-5	CDE	J^{π} : $\Delta J=2$, E2 γ to 10 ⁺ ; band member.
5665.5 ^c 4	(11 ⁻)		C	J^{π} : γ to (9 ⁻).
5889.9 [@] 5	(12 ⁺)		C	J^{π} : $\Delta J=2$ γ to (10 ⁺); γ to (12 ⁺).
6181.2 ^d 6	(12 ⁻)		C	J^{π} : γ to (10 ⁻); band assignment.
6522.2 ^a 6	(13 ⁻)		C	J^{π} : $\Delta J=2$ γ to (11 ⁻).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{80}Kr Levels (continued)

E(level) [#]	J^π [‡]	$T_{1/2}$ [†]	XREF	Comments
6681.4 ^b 6	14 ⁺	0.18 ps +6-5	C E	J^π : $\Delta J=2$, E2 γ to 12 ⁺ ; band member.
7221.6 [@] 9	(14 ⁺)		C	J^π : $\Delta J=(2)$ γ to (12 ⁺).
7771.0 ^a 9	(15 ⁻)		C	J^π : $\Delta J=(2)$ γ to (13 ⁻).
8087.9 ^b 9	(16 ⁺)	0.21 ps 8	C	J^π : $\Delta J=2$, (E2) γ to (14 ⁺).
8564.6 [@] 13	(16 ⁺)		C	J^π : $\Delta J=(2)$ γ to (14 ⁺).
9195.2 ^a 11	(17 ⁻)		C	J^π : γ to (15 ⁻); band assignment.
9690.6 ^b 11	(18 ⁺)	0.12 ps 5	C	J^π : $\Delta J=2$, (E2) γ to (16 ⁺).
10844.3 ^a 15	(19 ⁻)		C	J^π : γ to (17 ⁻); band assignment.
11483.6 ^b 23	(20 ⁺)	<0.10 ps	C	J^π : $\Delta J=2$, (E2) γ to (18 ⁺).

[†] From recoil-distance method (RDM) and Doppler-shift attenuation methods (DSAM) (2001Mu25,1981Fu03,1975Fr04) in in-beam γ -ray experiments.

[‡] Based primarily on $\gamma(\theta)$, γ (linear polarization), $\gamma\gamma(\theta)$, and ce data in in-beam γ -ray studies. It is assumed that levels of ascending spins are populated in in-beam γ -ray spectroscopy as the excitation energy increases. The γ decay pattern, generally, supports this assumption.

[#] From least-squares fit to $E\gamma$'s.

[@] Band(A): g.s. band.

[&] Band(B): γ band.

^a Band(C): 3⁻ Octupole band.

^b Band(D): band based on 8⁺.

^c Band(E): γ cascade based on 7⁻.

^d Band(F): γ cascade based on 6⁻.

^e Band(G): γ cascade based on 4⁻.

 $\gamma(^{80}\text{Kr})$

$E_i(\text{level})$	J_i^π	E_γ [‡]	I_γ [‡]	E_f	J_f^π	Mult. [†]	δ [†]	Comments
616.60	2 ⁺	616.6 1	100	0.0	0 ⁺	E2		B(E2)(W.u.)=37.3 22
1256.24	2 ⁺	639.6 1	100 4	616.60	2 ⁺	E2+M1	+6 1	B(E2)(W.u.)= 25 5; B(M1)(W.u.)=0.00023 9
		1256.3 3	32.3 22	0.0	0 ⁺	E2		B(E2)(W.u.)=0.30 7
1320.51	0 ⁺	703.9 2	100	616.60	2 ⁺	E2 [#]		
		1320.5		0.0	0 ⁺	E0		E_γ : ce(K) and ce(L) from 1993Gi01 in ^{80}Rb ε decay. $\rho^2(\text{E0: to g.s.})=0.021$ 9; $X[(\text{B(E0):E0 to g.s.})/(\text{B(E2):E2 to 617,2}^+)] = 0.022$ 2 (1993Gi01).
1436.09	4 ⁺	819.5 2	100	616.60	2 ⁺	E2		B(E2)(W.u.)=70 10
1787.99	3 ⁺	351.8 2	12 2	1436.09	4 ⁺	E2(+M1)	>6	B(E2)(W.u.)=50 10; B(M1)(W.u.)<0.00016
		531.7 1	82 3	1256.24	2 ⁺	E2+M1	+3.0 4	B(E2)(W.u.)=34 5; B(M1)(W.u.)=0.00086 24
		1171.5 2	100 5	616.60	2 ⁺	E2+M1	+1.3 3	B(E2)(W.u.)=0.57 14; B(M1)(W.u.)=0.00037 12
2145.88	4 ⁺	709.8 2	27 4	1436.09	4 ⁺	E2+M1	+2.0 8	B(E2)(W.u.)=32 20; B(M1)(W.u.)=0.003 2
		889.7 2	100 4	1256.24	2 ⁺	E2		B(E2)(W.u.)=50 30
		1529.5 3	7.7 26	616.60	2 ⁺			If E2, B(E2)(W.u.)=0.26 18.
2392.06	6 ⁺	956.0 2	100	1436.09	4 ⁺	E2		B(E2)(W.u.)=62 16
2439.21	3 ⁻	1822.1 5	100	616.60	2 ⁺			If E1, B(E1)(W.u.)=4 $\times 10^{-5}$ 2.
2659.74	5 ⁺	871.6 2	100 4	1787.99	3 ⁺	E2		B(E2)(W.u.)=50 17
		1223.6 3	24 9	1436.09	4 ⁺	M1+E2	+0.8 3	B(E2)(W.u.)=1.2 7; B(M1)(W.u.)=0.0022 10
2793.05	4 ⁻	353.7 3	10	2439.21	3 ⁻			
		647.2 ^{&} 2	7 ^{&} 4	2145.88	4 ⁺			If E1, B(E1)(W.u.)=4 $\times 10^{-5}$ 3.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

$\gamma(^{80}\text{Kr})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult. [†]	δ^\dagger	$\alpha^@$	Comments
2793.05	4 ⁻	1005.0 2 1357.1 4	100 9 20 10	1787.99 3 ⁺ 1436.09 4 ⁺	3 ⁺ 4 ⁺	(E1)			B(E1)(W.u.)=1.6×10 ⁻⁴ 4
2859.53	5 ⁻	420.3 ^{&} 2 1423.6 3	4.9 ^{&} 16 100 11	2439.21 3 ⁻ 1436.09 4 ⁺	3 ⁻ 4 ⁺	E1			If E2, B(E2)(W.u.)=40 30. B(E1)(W.u.)=5.0×10 ⁻⁵ 25
2997.6?		605.5 ^a 3	100	2392.06 6 ⁺	6 ⁺				
3039.57	(5 ⁻)	647.4 ^{&} 2 893.8 3	47 ^{&} 18 100 12	2392.06 6 ⁺ 2145.88 4 ⁺	6 ⁺ 4 ⁺	(E1)			If E1, B(E1)(W.u.)=0.00029 14. B(E1)(W.u.)=0.00023 8
3041.74	6 ⁻	182.3 1	59 6	2859.53 5 ⁻	5 ⁻	M1+E2	+0.07 3	0.026	B(E2)(W.u.)=0.11 +16-6; B(M1)(W.u.)=0.00056 9 I _γ : from (α,2nγ),(α,4nγ). Values from heavy-ion reactions relative to I _γ for 248.6γ are too high.
		248.6 1 382.1 2 649.6 3	100 6 10.1 15 20	2793.05 4 ⁻ 2659.74 5 ⁺ 2392.06 6 ⁺	4 ⁻ 5 ⁺ 6 ⁺	E2		0.034	B(E2)(W.u.)=7.6 10 If E1, B(E1)(W.u.)=1.7×10 ⁻⁷ 4.
3110.21	(6 ⁺)	718.2 4	11 5	2392.06 6 ⁺	6 ⁺				If E2, B(E2)(W.u.)=17 15. If M1, B(M1)(W.u.)=0.007 6.
		964.4 2 1674 ^a	100 7 <9	2145.88 4 ⁺ 1436.09 4 ⁺	4 ⁺ 4 ⁺	(E2) [E2]			B(E2)(W.u.)=33 17 B(E2)(W.u.)<0.23
3172.81	(5,6,7 ⁻)	313.3 2 780.7 3	100 100	2859.53 5 ⁻ 2392.06 6 ⁺	5 ⁻ 6 ⁺				
3345.81	6 ⁻	486.1 2	23 7	2859.53 5 ⁻	5 ⁻				If E2, B(E2)(W.u.)=50 30. If M1, B(M1)(W.u.)=0.009 5.
		553.6 3 686.0 1 954 1	19 6 100 16 ≈32	2793.05 4 ⁻ 2659.74 5 ⁺ 2392.06 6 ⁺	4 ⁻ 5 ⁺ 6 ⁺	(E1)			If E2, B(E2)(W.u.)=21 11. B(E1)(W.u.)=0.00023 11 I _γ : not resolved from 955.8γ. If E1, B(E1)(W.u.)≈1.6×10 ⁻⁵ . B(E2)(W.u.)=90 +90-45
3409.98	8 ⁺	1017.9 2	100	2392.06 6 ⁺	6 ⁺	E2			
3488.0	(6 ⁻)	628.5 3 694.9 3 1096.1 5	53 13 100 27 <100	2859.53 5 ⁻ 2793.05 4 ⁻ 2392.06 6 ⁺	5 ⁻ 4 ⁻ 6 ⁺	D+Q	-1.0 7		
3530.31	7 ⁻	420.2 ^{&} 2 488.6 2 490.5 4	17 ^{&} 6 100 9 <17	3110.21 (6 ⁺) 3041.74 6 ⁻ 3039.57 (5 ⁻)	(6 ⁺) 6 ⁻ (5 ⁻)	E2+M1	-1.6 4		
3558.66	(7 ⁻)	1138.2 3 516.9 2 699.2 3	34 6 100 14 29 14	2392.06 6 ⁺ 3041.74 6 ⁻ 2859.53 5 ⁻	6 ⁺ 6 ⁻ 5 ⁻	D E2+M1	-1.2 5		I _γ : other: 67 17 in (α,2nγ),(α,4nγ). I _γ : other: 61 11 in (α,2nγ),(α,4nγ).
		1166.6 3	14	2392.06 6 ⁺	6 ⁺				If E2, B(E2)(W.u.)=24 8. If M1, B(M1)(W.u.)=0.0056 17.
3581.69	7 ⁻	539.8 ^a 2	22 6	3041.74 6 ⁻	6 ⁻				B(E2)(W.u.)=21 4 If E1, B(E1)(W.u.)=3.9×10 ⁻⁵ 6.
		722.1 1 1189.7 2	83 8 100 8	2859.53 5 ⁻ 2392.06 6 ⁺	5 ⁻ 6 ⁺	E2 D			If E2, B(E2)(W.u.)≤45. If E2, B(E2)(W.u.)≤2.6. If M1, B(M1)(W.u.)≤0.0032.
3635.3	(7 ⁺)	975.5 3 1242 ^a 1	100 14 ≈24	2659.74 5 ⁺ 2392.06 6 ⁺	5 ⁺ 6 ⁺				δ(E2/M1)=+0.3 in (¹² C,2nγ).
3699.75	8 ⁺	289.8 1 1308.2 5	100 5 21 5	3409.98 8 ⁺ 2392.06 6 ⁺	8 ⁺ 6 ⁺	M1			
3916.6	(8 ⁺)	216.8 ^a 4 507 ^a 1	100 <100	3699.75 8 ⁺ 3409.98 8 ⁺	8 ⁺ 8 ⁺				
		1524.6 8	100	2392.06 6 ⁺	6 ⁺				If E2, B(E2)(W.u.)≥24.
4126.23	(8 ⁻)	490.5 ^a 2	39 12	3635.3 (7 ⁺)	(7 ⁺)				If E1, B(E1)(W.u.)≤0.00044.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

$\gamma(^{80}\text{Kr})$ (continued)							Comments
$E_i(\text{level})$	J_i^π	E_γ^\ddagger	I_γ^\ddagger	E_f	J_f^π	Mult. [†]	
4126.23	(8 ⁻)	596.0 3	21 9	3530.31	7 ⁻		If E2, B(E2)(W.u.) \leq 28. If M1, B(M1)(W.u.) \leq 0.008. If E2, B(E2)(W.u.) \leq 35. If M1, B(M1)(W.u.) \leq 0.017. I_γ : complex line.
		780.4 1	100 6	3345.81	6 ⁻		
4153.2	(8 ⁺)	1043 1	100	3110.21	(6 ⁺)		
4163.2	(8 ⁻)	582 1	33	3581.69	7 ⁻		(Q)
		632.7 3	33	3530.31	7 ⁻		
		1121.6 3	100 33	3041.74	6 ⁻		
4377.9	10 ⁺	678.3 3	2.5	3699.75	8 ⁺		B(E2)(W.u.)=47 24
		967.8 2	100 5	3409.98	8 ⁺	E2	
4393.70	(9 ⁻)	811.8 3	57 14	3581.69	7 ⁻	Q	
		835.1 3	100 14	3558.66	(7 ⁻)	Q	(Q)
		863.3 3	70 10	3530.31	7 ⁻		
		984.1 4	14	3409.98	8 ⁺		
4562.47	(9 ⁻)	436.1 ^a 4	<25	4126.23	(8 ⁻)		
		980.6 3	100 11	3581.69	7 ⁻		
		1032.7 ^a & 4	39 & 11	3530.31	7 ⁻		
		1152.4 4	25	3409.98	8 ⁺		(M1)
4648.9	(10 ⁺)	271.0 2	56 14	4377.9	10 ⁺		
		949.4 3	67 33	3699.75	8 ⁺		
		1238.6 3	100 10	3409.98	8 ⁺	(E2)	B(E2)(W.u.)=10 5
4975.1	(10 ⁺)	326 ^a 1	<50	4648.9	(10 ⁺)		
		597 ^a 1	<50	4377.9	10 ⁺		
		1565.4 8	100 50	3409.98	8 ⁺	(Q)	
5159.0	(10 ⁻)	1032.8 ^a 3	100 &	4126.23	(8 ⁻)		
5374.6	(10 ⁻)	1211.4 4	100	4163.2	(8 ⁻)		
5397.4	(11 ⁻)	1003.7 3	100	4393.70	(9 ⁻)	Q	B(E2)(W.u.)=90 50
5437.8	12 ⁺	1059.9 3	100	4377.9	10 ⁺	E2	
5665.5	(11 ⁻)	1103.0 3	100	4562.47	(9 ⁻)		
5889.9	(12 ⁺)	452.0 5	33 17	5437.8	12 ⁺		Q
		1241.1 4	100 33	4648.9	(10 ⁺)		
6181.2	(12 ⁻)	1022.2 4	100	5159.0	(10 ⁻)		
6522.2	(13 ⁻)	1124.8 4	100	5397.4	(11 ⁻)	Q	B(E2)(W.u.)>13
6681.4	14 ⁺	1243.6 4	100	5437.8	12 ⁺	E2	
7221.6	(14 ⁺)	1331.7 7	100	5889.9	(12 ⁺)	(Q)	
7771.0	(15 ⁻)	1248.8 6	100	6522.2	(13 ⁻)	(Q)	(E2)
8087.9	(16 ⁺)	1406.5 6	100	6681.4	14 ⁺		
8564.6?	(16 ⁺)	1343 ^a 1	100	7221.6	(14 ⁺)	(Q)	
9195.2	(17 ⁻)	1424.2 7	100	7771.0	(15 ⁻)		(E2)
9690.6	(18 ⁺)	1602.6 7	100	8087.9	(16 ⁺)		
10844.3	(19 ⁻)	1649 1	100	9195.2	(17 ⁻)		
11483.6	(20 ⁺)	1793 2	100	9690.6	(18 ⁺)	(E2)	

[†] From $\gamma(\theta, \text{pol})$, ce, $\gamma\gamma(\theta)$ measurements in in-beam γ -ray studies. For levels of known $T_{1/2}$, RUL (for E2 and M2 transitions) is also used in the assignment of multipolarity.

[‡] Weighted averages taken when data of comparable precision available from more than one dataset. Most data are from in-beam γ -ray studies.

From ^{80}Br β^- decay.

@ 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.

& Multiply placed with intensity suitably divided.

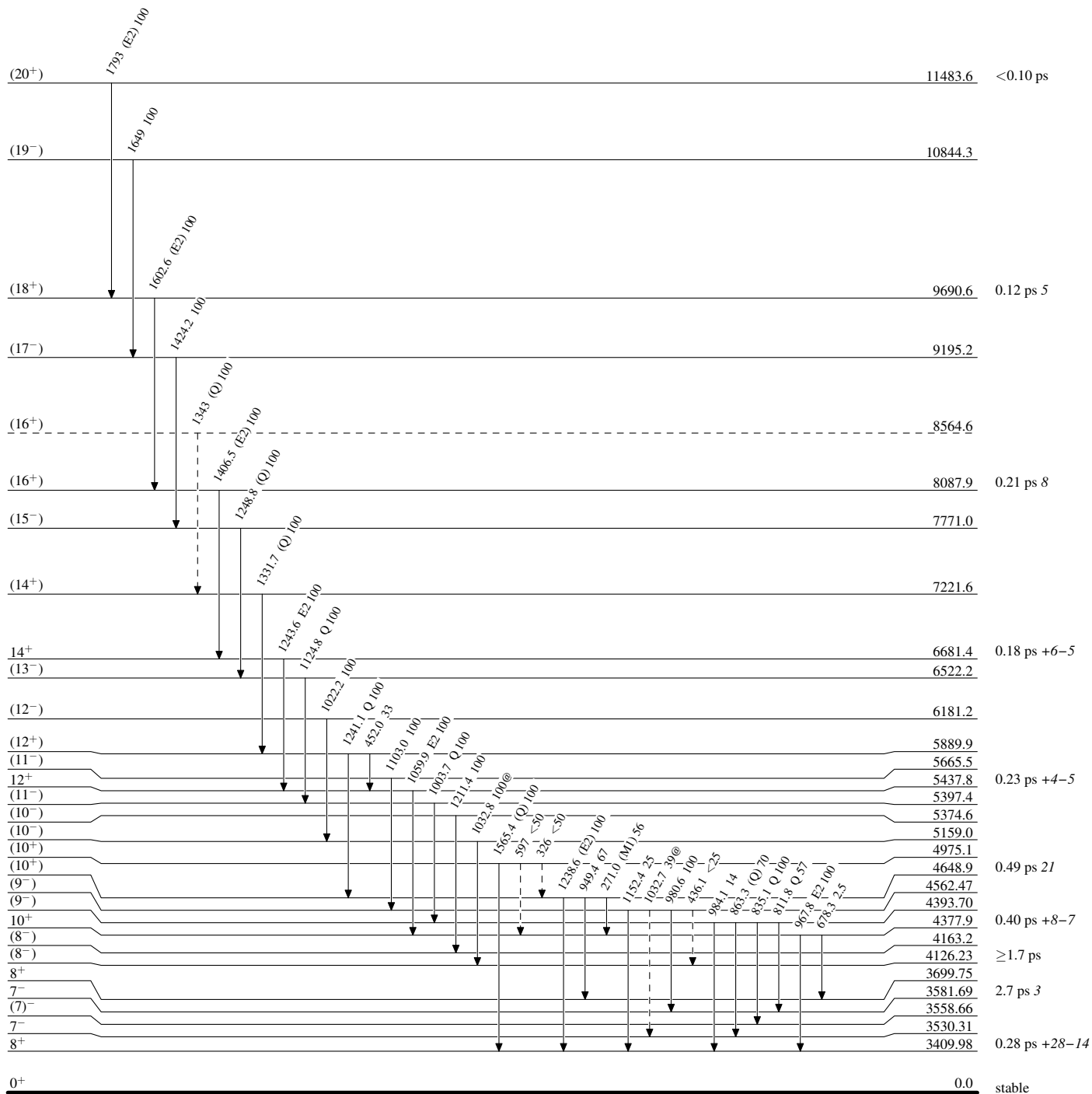
^a Placement of transition in the level scheme is uncertain.

Adopted Levels, Gammas

Legend

Level Scheme

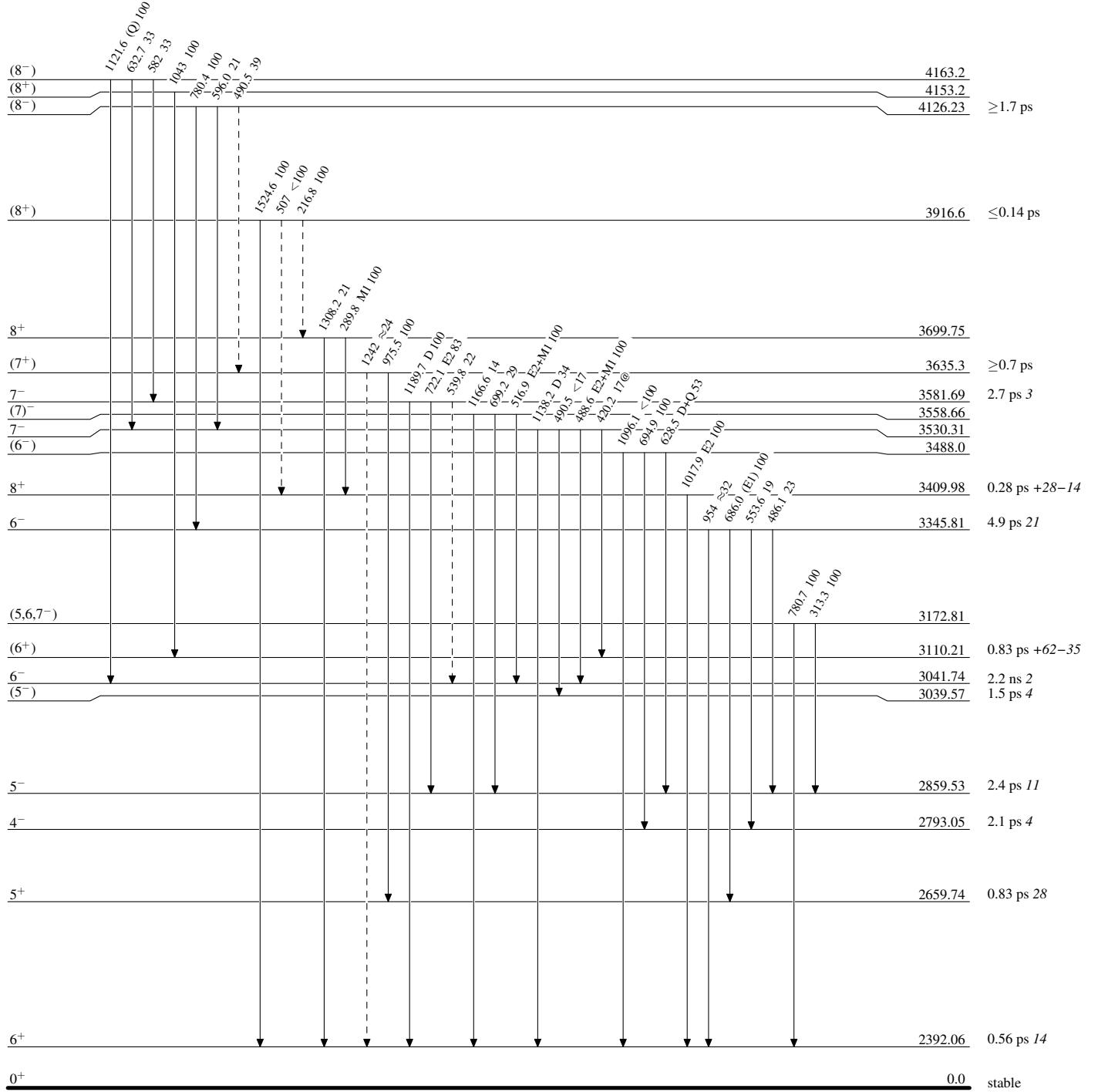
Intensities: Relative photon branching from each level
 @ Multiply placed: intensity suitably divided

-----► γ Decay (Uncertain)

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

Legend

Intensities: Relative photon branching from each level
 @ Multiply placed: intensity suitably divided

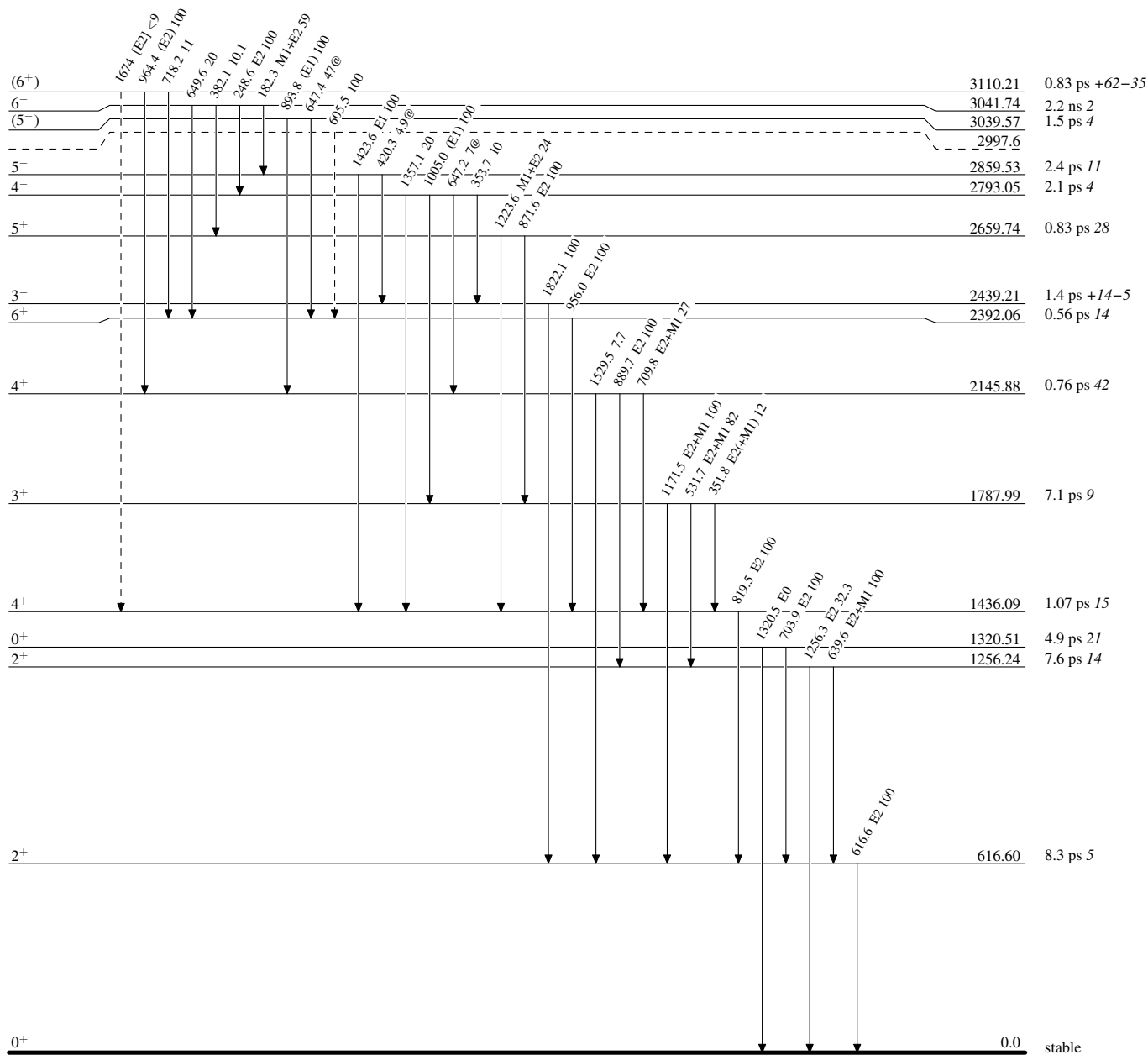
-----► γ Decay (Uncertain)

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

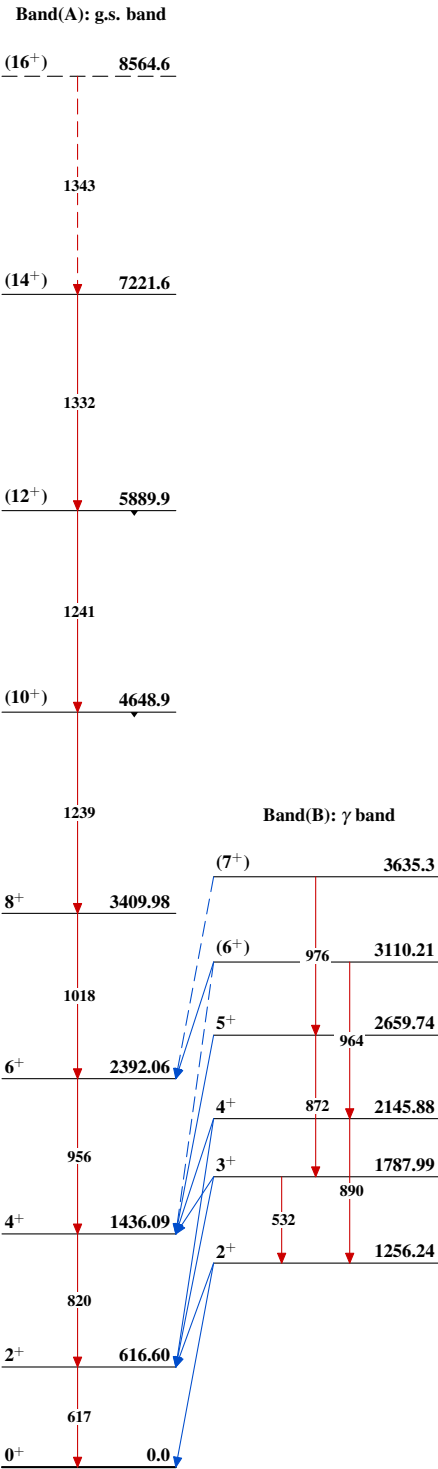
Legend

Intensities: Relative photon branching from each level

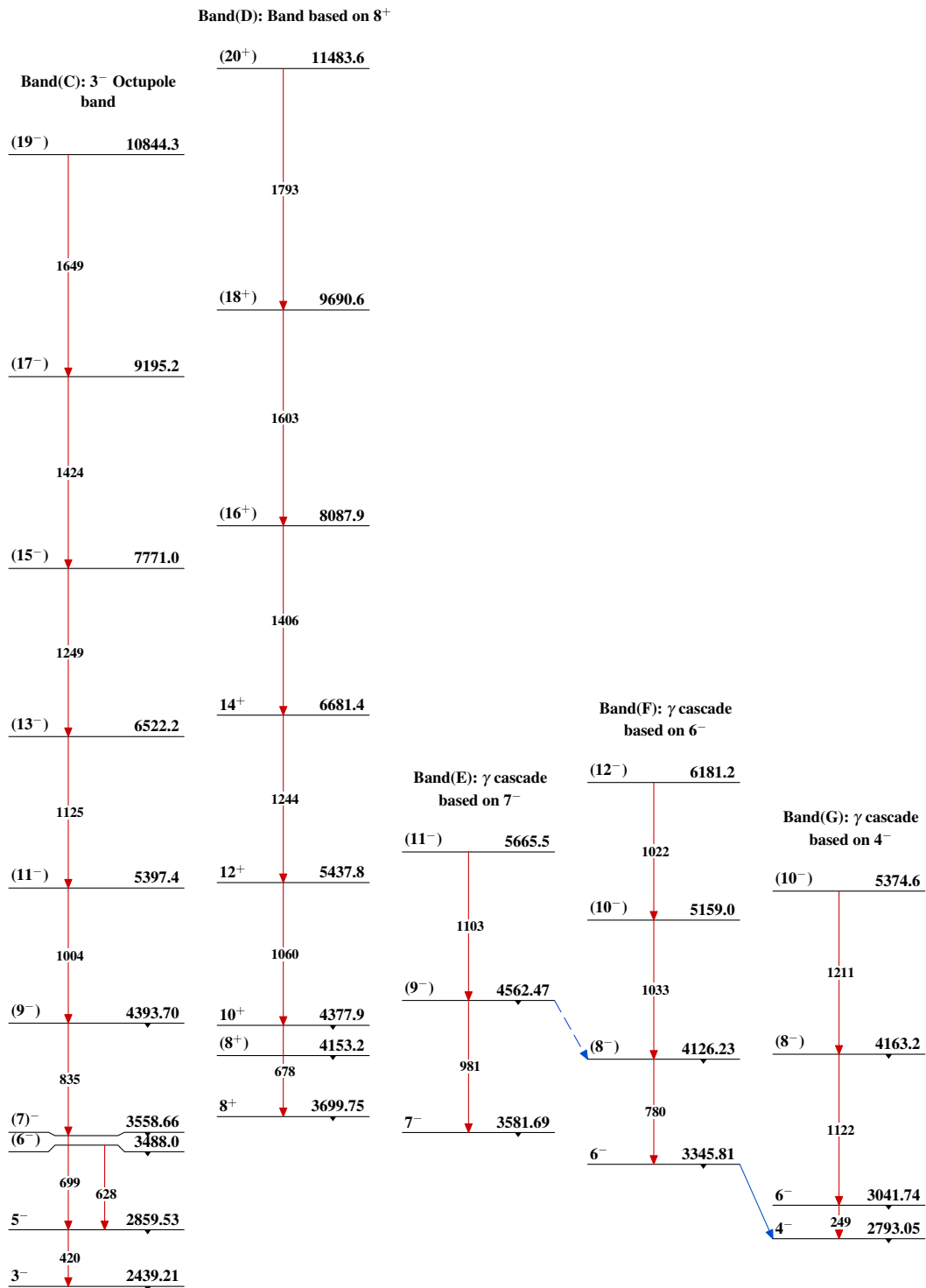
@ Multiplied: intensity suitably divided

-----► γ Decay (Uncertain)

Adopted Levels, Gammas



$^{80}_{36}\text{Kr}_{44}$

Adopted Levels, Gammas (continued) $^{80}_{36}\text{Kr}_{44}$