Adopted Levels, Gammas

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Jun Chen and Ameenah R. Farhan	NDS 194,3 (2024)	8-Jan-2024

Q(β^-)=−921.5 *9*; S(n)=9427.24 *5*; S(p)=12041.2 *7*; Q(α)=−7492.3 *21* 2021Wa16
Q($2\beta^-$)=2039.06 *1*, S(2n)=15933.08 *2*, S(2p)=22034.1 *25* (2021Wa16).
^{76}Ge $2\beta^-$ decay (to ^{76}Se) by $0\nu\beta\beta$ or $2\nu\beta\beta$ decay modes:
^{76}Ge $2\beta^-$ decay (experimental): 2013Ag11 (also 2013Ag02), 2013Ac01, 2008Me06, 2008Ra09, 2006Gr17, 2005Ba60, 2004Kl03 (also 2005Kl02,2003Do12,2002Kl12,2001Kl11), 2003Aa01 (also 2000Aa01,1999Aa01, 1999Aa02,1996Aa02), 2001Kl12 (also 2002Kl10,2001Va29,2000Va23), 2000Go25, 1999Bb30, 1997Ba70, 1997Gu13, 1996He31, 1995Ba44, 1995Ba84 (also 1994Ba15), 1994Ma70, 1993Br22, 1993Be14, 1992Re03 (also 1991Tr07, 1987Fi05,1984Fo06), 1992Be20 (also 1992Ba25), 1991Mo28 (also 1991Mo27, 1991Mo23,1988Mo35,1985Hu01,1983Le27), 1991Ca34 (also 1987Ca21, 1986Ca07), 1991Av04 (also 1991Av01,1990Mi23,1987Av05,1987Av01,1986Av03, 1985Av02,1983Av01,1979Av01,1978Pi07), 1991Hy01 (also 1993Hy02, 1984El01), 1990Bu15, 1990Va18, 1988Ok01 (also 1987Ej01,1986Ka33, 1986Ej01), 1986Zd01 (also 1985Zd01), 1984Si08, 1984Fi16 (also 1984Be48, 1983Be65, 1982Be20,1973Fi01,1970Fi09,1967Fi14), 1952Fr23.
Additional information 1.
^{76}Ge(e,e),E=225 MeV: 1990Kh03.
^{76}Ge(γ,α) E=18-25 MeV: 1990An13, measured emission of α particles in GDR region.
Giant dipole resonances in (γ,xn): 1976Ca06.
Mass measurement: 2010Mo03, 2008Ra09, 2001Do08, 2001Fr25, 1977De20, 197 1964Ba03, 1963Ri07.
Measurement of mass difference (^{76}Ge-^{76}Se): 1991Hy01 (also 1993Hy02, 1985El01, 1984El01, 1984ElZY).

^{76}Ge Levels

Cross Reference (XREF) Flags

A	^{76}Ga β^- decay (30.5 s)	G	^{76}Ge(n,n′γ)	M	^{80}Se(d,^{6}Li)
B	^{76}As ε decay (26.254 h)	H	^{76}Ge(p,p′),(pol p,p′)	N	^{192}Os(^{82}Se,Xγ)
C	^{74}Ge(t,p)	I	^{76}Ge(pol d,d′)	O	Pb(^{76}Ge,^{76}Ge′γ):inelastic
D	^{74}Ge(^{18}O,^{16}O)	J	^{76}Ge(α,α')	P	^{238}U(^{76}Ge,^{76}Ge′γ)
E	^{76}Ge(γ,γ')	K	^{76}Ge(^{16}O,^{16}O′),(^{18}O,^{18}O′)		
F	^{76}Ge(n,n′)	L	Coulomb excitation		

E(level)†	Jπ‡	$T_{1/2}$ or Γ#	XREF	Comments
0.0[b]	0^+	1.926×10^{21} y *94*	ABCDEFGHIJKLMNOP	%$2\beta^-$=100 XREF: B(?). RMS charge radius ($<r^2>)^{1/2}$=4.0811 fm *12* (2013An02 evaluation). Spin 0 is consistent with microwave absorption measurement (1949To09). $T_{1/2}$: for $2\nu\beta\beta$ decay, from GERDA collaboration (2015Ag06, see also 2015Ag10, 2015Ag01,2013Ag02). Others: 1.5×10^{21} y *1* (as recommended in evaluation by 2010Ba07 and 2011Ba28; see values and references therein for input data), 1.43×10^{21} y *53* in $\beta\beta$ decay database at NNDC-BNL, 1.88×10^{21} y *8* in 2021Ko07; $>7.5\times10^{23}$ y (2021Ar01); $>2.022\times10^{21}$ y (2023Ag05). $T_{1/2}$ for $0\nu\beta\beta$ decay mode: $>8.3\times10^{25}$ y (2023Ar02); $>5.62\times10^{22}$ y (2022Da13); $>9.0\times10^{25}$ y (2020Da08); $>1.8\times10^{26}$ (2020Ag05); $>4.8\times10^{25}$ y (2019Al24); $>1.9\times10^{25}$ y (2018Aa02); $>8.0\times10^{25}$ y (2018Ag03,2017Ag04); $>2.1\times10^{25}$ y (2013Ag11, GERDA) at 90% confidence level, authors give $T_{1/2}>3.0\times10^{25}$ y by combining results from measurements by 2001Kl11 and 2002Aa01. 2012Zu07 compilation lists $T_{1/2}>1.9\times10^{25}$ or 2.23×10^{25} *+44−31*, both at 90% confidence level. First value is also quoted in article

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Adopted Levels, Gammas (continued)

^{76}Ge Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$ or Γ[#]	XREF	Comments
				by 2013Ac01. The source reference for the second value needs to be confirmed. $T_{1/2}$ for one Majoron emission $0\nu\beta\beta$ decay mode, measured $T_{1/2}>4.2\times10^{23}$ y (2015He19, GERDA collaboration). See also 2011Ba28 for a review of experimental half-life measurements for different 2β decay modes. Consult NSR database at www.nndc.bnl.gov for an extensive list of experimental and theoretical articles on 2β decay of ^{76}Ge. Additional information 2. 2009Ka06: deduced occupancy of valence neutron and proton orbitals from single-particle transfer reaction studies using ^{76}Ge target.
562.917[b] *23*	2^+	18.14 ps *13*	ABCDEFGHIJKLMNOP	μ=+0.53 *8* (2013Gu23,2020StZV) Q=−0.19 *6* (2001To13,2021StZZ) XREF: B(?). Jπ: L(t,p)=2 from 0^+. μ: transient-field technique in Coulomb excitation (2019Mc05), measured $g^{76}Ge/g^{74}Ge=0.88$ *5* for the first 2^+ states. Other: +0.64 *2* (transient-field technique in Coulomb excitation, 2013Gu23); +0.838 *46* from γ(θ,H) in Coul. ex. (1984Pa20), +0.67 *8* (γ(θ,H) in Coul. ex.,1987La20); +0.56 *12* (IMPAC,1969He11,1974Hu01,1977Fa07). Weighted average (NRM method) of all the four values is 0.67 5. Q: reorientation effect in Coul. ex. (2001To13, previous value from authors was −0.19 *2* in 2000To12). Other: −0.19 *6* for constructive interference and −0.03 *6* for destructive interference (1980Le16), 1972Gr37, 1969Si15. 2016St14 give −0.19 *6* from 1980Le16 and 2000To12. β_2(pol p,p′)=0.25 *1* (1993Mo05). See also other values in (p,p′). β_2(pol d,d′)=0.197 *10* (1985Se05). $\beta_2(\alpha,\alpha')$=0.265 (1988Ba70), deduced from β_2R=1.313. $\beta_2((^{16}O,^{16}O'),(^{18}O,^{18}O'))$=0.26 (Coulomb), 0.23 (nuclear) (1976Co04). β_2(Coul.ex.)=0.267 (1980Le24). $T_{1/2}$: from B(E2)↑=0.276 *2*, weighted average of 0.277 *2* (2023Ay02), 0.278 *3* (1980Le16), 0.27 *2* (1972Sa27), 0.260 *5* (1969Si15), 0.263 *+32−24* (1962St02), 0.29 *3* (1960Wi18), 0.230 *35* (1956Te26) from various Coulomb excitation measurements. Other Coulomb excitation measurements with beam energies above the Coulomb barrier: B(E2)↑=0.299 *27* (2006Pe13), 0.292 *35* (2005Di05), 0.280 *42* (1962Er05). Lifetime measurements $T_{1/2}$=18.4 ps *21* (2013Lo04,RDM), and 18.2 ps *21* (1988DoZU,γγ(t)) are in a good agreement. 2008StZT: measured attenuation parameters G_2 and G_4.
1108.416[c] *27*	2^+	9.9 ps *9*	A C E GH J LM OP	μ=+0.64 *10* (2013Gu23,2020StZV) Q=+0.28 *6* (2001To13) Jπ: L(t,p)=2. $T_{1/2}$: from B(E2) in Coul. ex. and adopted γ branching ratios. β_2(pol p,p′)=0.058 (1993Mo05,1986MoZR). See (p,p′) for other values. $\beta_2(\alpha,\alpha')$=−0.057 (1988Ba70). β_2(coul.ex.)=0.047 (1980Le24). μ: transient-field method in Coul. ex. (2013Gu23), measured value of +0.78 *10* is re−evaluated to +0.64 *10* in 2020StZV. Q: reorientation effect in Coul. ex. (2001To13).
1409.982[b] *34*	4^+	1.86 ps *4*	A C GH J LMNOP	μ=+0.8 *6* (2013Gu23,2020StZV)

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Adopted Levels, Gammas (continued)

^{76}Ge Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$ or Γ[#]	XREF	Comments
				Q=−0.01 *5* (2001To13) Jπ: L(t,p)=4. $T_{1/2}$: from B(E2) in Coul. ex. β_4(pol p,p′)=0.064 *11*, 0.024 *6*, 0.020 *20*, 0.001 (1993Mo05,1986MoZR), 0.02 ((p,p′),1983Ra32). μ: transient-field method in Coul. ex. (2013Gu23), measured value of +1.0 *7* is re−evaluated to +0.8 *6* in 2020StZV. Q: reorientation effect in Coul. ex. (2001To13).
1539.383[d] *33*	3+	35 ps *7*	A GH L P	Jπ: spin from 976γ(θ) in (n,n′γ); M1+E2 gammas to 2+. $T_{1/2}$: from B(E2) in Coul. ex.
1911.12 *6*	0+	1.77 ps *8*	A C GH J L	Jπ: L(t,p)=0. $T_{1/2}$: from B(E2) in Coul. ex. Other: 1.25 ps *+62−35* from DSAM in (n,n′γ). Intruder spherical state based on very small value of expectation value of $<Q^2>$=0.01 *2* deduced by 2001To13 in their Coul. ex. experiment.
2021.68[c] *4*	4+	1.6 ps *4*	A C GH LM P	XREF: M(1970). Jπ: γγ(θ) (^{76}Ge,^{76}Ge′γ); E2 γ to 2+. $T_{1/2}$: from B(E2) in Coul. ex. Other: 1.5 ps *+10−4* from DSAM in (n,n′γ).
2203.84 *5*	(1,2+)	0.010 ps *4*	G	Jπ: γ to 0+.
2284.22 *24*	(3)−		A H	Jπ: L(p,p′)=3.
2453.74[b] *6*	6+	0.47 ps *+19−16*	GH L N P	Jπ: E2 γ to 4+; g.s. band member. $T_{1/2}$: weighted average of 0.59 ps *+19−12* from B(E2) in Coul. ex. and 0.26 ps *+29−10* from DSAM in (n,n′γ).
2478.2 *5*	(1,2+)		G	Jπ: γ to 0+.
2487.07[d] *9*	5+	1.04 ps *+55−28*	G L P	Jπ: E2 γ to 3+; M1+E2 γ to 4+.
2504.10 *4*	2+	0.7 ps *5*	C E GH L	Jπ: L(t,p)=2. $T_{1/2}$: other: 0.15 ps *2* from B(E2)↓ of 2504γ in Coul. ex.
2554? *5*			H	
2591.04 *16*	(1+,2+)		A G	Jπ: γ rays to 0+ and 3+.
2624? *5*			H	
2654.51 *20*	(0+,1+)		A G	Jπ: γ to 2+ suggests 0+,1,2,3,4+. *Jπ*=0+,1+ suggested (1984KoZN) from (n,n′γ) excitation functions.
2655.15 *30*	(1)		E	Jπ: from γγ(θ) in (γ,γ′).
2669.12 *5*	3+,4+	1.9 ps *+14−6*	G P	Jπ: M1+E2 γs to 3+ and 4+.
2692.347 *33*	3−	0.162 ps *14*	A C GH J L	Jπ: L(t,p)=L(α,α′)=3. $T_{1/2}$: other: values from B(E1)↓ in Coul. ex. are about 3 fs, which are discrepant. β_3(pol p,p′)=0.15 *1* (1993Mo05,1986MoZR). See also other values in (p,p′). β_3(α,α′)=0.11 (1988Ba70).
2697.20 *4*	(0)+	0.70 ps *+36−18*	G	Jπ: proposed in (n,n′γ); E2 γ to 2+.
2733.23 *5*	4+	0.33 ps *8*	C GH j L P	Jπ: L(t,p)=L(p,p′)=4. $T_{1/2}$ from DSAM in (n,n′γ) (1987Do14,1990DoZU).
2747.75 *5*	(2)+	0.182 ps *21*	A GH j	Jπ: M1+E2 γs to 2+ and 3+. Excitation function analysis in (n,n′γ) supports 2+,4+.
2766.68 *5*	2+	14.6 fs *21*	c Gh j l	XREF: c(2766)h(2768)j(2769)l(2767). Jπ: L(t,p)=L(α,α′)=2.
2768.73 *14*	2+		A c h j l	XREF: c(2766)h(2768)j(2769)l(2767). E(level): 2766.7 and 2768.8 levels could be the same level. Jπ: L(t,p)=L(α,α′)=2.
2841.61 *10*	2+	0.0277 ps *28*	A C GH L	Jπ: L(t,p)=L(p,p′)=2.
2856.79 *10*	4+	97 fs *8*	G	Jπ: M1(+E2) γ to 4+; 4+ proposed in (n,n′γ) based on excitation function.

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Adopted Levels, Gammas (continued)

^{76}Ge Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$ or Γ[#]	XREF	Comments
2897.55 *9*	0^+	0.310 ps *+56−44*	C GH L	Jπ: L(t,p)=0.
2919.74 *8*	1^+	0.154 ps *14*	A E G	Jπ: M1γ to 0^+; γγ(θ) in (γ,γ′). $T_{1/2}$: other: 0.30 ps *+20−9* from Γ=0.0015 eV *6* from (γ,γ′).
2921 *5*	3^-		H J	Jπ: L(α,α′)=L(p,p′)=3. 2921 level is treated as different from 2920 level since an intense g.s. transition from 2920 level is inconsistent with L(α,α′)=3 for a 2921 group.
2958.06[e] *16*	5^-		C GH J P	Jπ: E2 γ to 3^-, E1 γ to 4^+. Also supported by L(t,p)=5 and L(α,α′)=(5). But L(p,p′)=3 suggests 3^-.
2986.08 *7*	$(2^+,3^+)$	99.8 fs *62*	G	Jπ: proposed in (n,n′γ) based on excitation functions.
2988.09 *21*			P	Jπ: γs to 5^+ and 6^+.
2993.89 *4*	4^+	0.50 ps *+13−8*	C GH J	Jπ: L(t,p)=L(α,α′)=4.
3004.73 *8*	$(0)^+$	0.214 ps *+38−28*	G	Jπ: proposed in (n,n′γ); E2 γ to 2^+.
3007.16 *6*	1^+	19 fs *7*	E G	Jπ: M1 γ to 0^+.
3014.2 *4*	1[&]	0.0016 eV *2*	E	
3021.14 *7*	$(2^+,3^+)$[a]	0.340 ps *+47−36*	G	
3033.75[c] *18*	(6^+)		L P	Jπ: γ to 4^+; γs to 6^+ and 5^+; band member.
3041.37 *8*	2^+	0.0638 ps *42*	C GH	Jπ: L(t,p)=2.
3052.55 *10*	$2^+,3^+,4^+$	0.035 ps *5*	GH	Jπ: M1+E2 γ to 3^+.
3062.13 *9*	$(4^+,5^+)$[a]	0.122 ps *22*	G	
3066.86 *10*	$(2^+,3^+,4^+)$[a]	0.90 ps *+56−28*	G	
3070.41 *11*	4^+[a]	0.76 ps *+49−21*	GH	Jπ: M1+E2 γ to 4^+.
3088.4 *7*	1[&]	0.0017 eV *5*	E	
3092.10 *10*	$(3^+,5^+)$[a]	0.268 ps *+42−32*	GH	XREF: H(3090?).
3129.86 *8*	2^+	0.245 ps *+26−24*	GH L	Jπ: E2 γ to 0^+. $T_{1/2}$: other: 0.26 ps *+36−11* from B(E2)↓ of 3129.8γ in Coul. ex.
3141.39 *6*	1^+	119 fs *+14−10*	A C E G	Jπ: γγ(θ) in (γ,γ′); L(t,p)=L(p,p′)=2 with assumed S=1. $T_{1/2}$ from DSAM in (n,n′γ) (2015Cr06). Other: 0.06 ps *+7−4* (1990DoZU).
3147.54 *10*	$(2)^+$	118 fs *13*	GH	Jπ: L(p,p′)=2.
3162.65 *6*	$(4)^+$[a]	14.6 fs *21*	GH L	Jπ: E2+M1 γ to 4^+.
3181.95 *6*	$(2^+,3^+)$[a]	0.59 ps *+42−18*	G	
3182.19 *6*	(2^+)	0.25 ps *+35−11*	A G O	Jπ: L(p,p′)=2+5 for a 3195 group; L(p,t)=(2,3).
3191.05 *4*	2^+	0.128 ps *14*	C Gh	XREF: h(3195). Jπ: E2 γ to 0^+.
3195 *5*	$(4^-,5^-,6^-)$		h	Jπ: L(p,p′)=2+5 for a 3195 *5* level.
3200.01 *13*	$(3)^+$[a]	0.7 ps *+16−3*	G	Jπ: M1+E2 γ to 2^+.
3200.07 *20*	$(1,2^+)$		E	Jπ: γ to 0^+.
3224 *5*			H	
3231.8 *4*	4^+		A C H J	XREF: A(?)H(3240). Jπ: L(t,p)=L(α,α′)=4.
3236.02 *9*	$(5)^+$[a]	30.5 fs *+35−28*	G P	Jπ: M1+E2 γ to 4^+, γ to 6^+. Other: (6^+) in (^{76}Ge,^{76}Ge′).
3243.79 *7*	1^+	40.9 fs *+35−28*	G	Jπ: M1 γ to 0^+.
3268 *5*	(4^+)		H J	Jπ: L(α,α′)=(4). But L(p,p′)=(5) suggests $4^-,5^-,6^-$.
3312.29 *11*	3^-		A c h J	Jπ: L(α,α′)=3. Also L(p,p′)=0+3 for a doublet. L(t,p)=0,1 and 3,4 also indicates a doublet with $J^\pi=0^+$ or 1^- and 3^- or 4^+.
3317 *5*	(0^+)		c h	Jπ: L(p,p′)=0+3 for a doublet and L(t,p)=0,1 and

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Adopted Levels, Gammas (continued)

^{76}Ge Levels (continued)

E(level)[†]	Jπ[‡]	T$_{1/2}$ or Γ[#]	XREF	Comments
				3,4 for a doublet. L=3 component is associated with the 3312 level.
3322.80 *6*	(2$^+$)	0.16 ps *+14−6*	A G	Jπ: γs to 2$^+$ and 4$^+$. Excitation function analysis in (n,n′γ) suggests 2$^+$.
3349 *5*			H	
3391 *5*	(4$^+$,5$^-$)		C H J	Jπ: L(p,p′)=5 but L(t,p)=(4).
3409.19 *18*	(1,2,3)[@]		A H	XREF: H(3402).
3419.47 *31*	1$^+$		E G	Jπ: γ to 0$^+$; γγ(θ) in (pol γ,γ′).
3436.9 *4*			H P	
3453 *5*	(4)$^+$		H	Jπ: L(p,p′)=4.
3477.62 *17*	(2$^+$,3)[@]		A C	E(level),Jπ: L(t,p)=1 or 0 (and L>1); γ from 4$^+$. Probably a doublet with 1$^-$ or 0$^+$ for one of the components.
3484.0 *7*	3$^-$		GH J	Jπ: L(α,α′)=3.
3506 *5*			H	
3532.81[d] *30*	(7$^+$)		h P	Jπ: γ to 5$^+$; member of γ band.
3536.0 *4*			h P	
3543.27[b] *34*	8$^+$		L N P	Jπ: γ to 6$^+$; g.s. band member.
3545 *5*	2$^+$		C H J	Jπ: L(α,α′)=2. But L(t,p)=0,1 and 3,4 suggests 0$^+$ or 1$^-$ and 3$^-$ or 4$^+$ for a doublet.
3576.96 *26*		30 fs *+6−5*	G	
3585 *5*	(2)$^+$		H J	Jπ: L(α,α′)=(2) and L(p,p′)=2.
3596.79 *31*	2$^+$[&]		E	
3606 *5*			H	
3632.92 *10*	(2$^+$)		A P	Jπ: γ rays to 0$^+$ and (4$^+$).
3640 *5*	(4$^-$,5$^-$,6$^-$)		c H j	XREF: c(3648). Jπ: L(p,p′)=5. But L(t,p)=(2) for 3648 suggests 2$^+$.
3658 *5*			c H j	XREF: c(3648).
3680.70 *10*	1$^-$[&]		E	
3691 *5*			H	
3721 *5*	(5)$^-$		C H J	Jπ: L(α,α′)=(5) and L(p,p′)=5.
3727.83[e] *26*	(7$^-$)		P	Jπ: γ rays to 6$^+$ and (5)$^-$; possible band member.
3748 *5*	2$^+$		H J	Jπ: L(α,α′)=2.
3763.40 *18*	1$^+$[&]		E	
3783.57 *28*	(4$^+$,5,6,7$^-$)		H P	Jπ: γ rays to (5$^-$) and 6$^+$.
3805 *5*			C H	
3815 *5*			H	
3848 *5*			H	
3868 *5*			H	
3883 *5*			c H J	XREF: J(3871).
3886.97 *19*	(3$^-$)		A c H J	XREF: H(3904)J(3893). Jπ: L(α,α′)=L(p,p′)=3.
3951.88 *7*	1$^-$	28 fs *5*	A E G	Jπ: from (pol γ,γ′) data at HIGS-TUNL facility (priv. comm. of Feb 20, 2016 from W. Tornow); also γs to 0$^+$, 2$^+$ and 3$^-$. T$_{1/2}$ from DSAM in (n,n′γ) (2015Cr06).
3972 *5*	(4$^+$)		H J	XREF: J(3952). Jπ: L(α,α′)=(4).
3997 *5*	4$^+$		H J	XREF: J(3978). Jπ: L(α,α′)=L(p,p′)=4.
4024.11 *20*	1$^{(-)}$[&]	0.0055 eV *11*	E H	XREF: H(?).
4035.12 *20*	1[&]	0.0053 eV *20*	E	
4057? *5*			H	
4073 *5*			H J	XREF: J(4052).

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Adopted Levels, Gammas (continued)

^{76}Ge Levels (continued)

E(level)[†]	Jπ[‡]	T$_{1/2}$ or Γ[#]	XREF	Comments
4099 *5*	5$^-$		H J	XREF: J(4073).
4116.02 *20*	1[&]		E	
4122.28? *31*	(1,2$^+$)		A H	Jπ: γ to 0$^+$.
4129.8[c] *5*	8$^+$		L P	Jπ: γ to 6$^+$; member of γ band.
4130.6 *4*			P	
4153 *5*			H J	XREF: J(4126). Jπ: L(p,p′)=4 suggests 3$^+$,4$^+$,5$^+$ but L(α,α′)=(1) suggests 1$^-$.
4192.80? *12*	(2$^+$,3)		A H	Jπ: γ rays to 4$^+$ and 1.
4209 *5*	3$^-$		H J	XREF: J(4180). Jπ: L(α,α′)=L(p,p′)=3.
4239.36 *14*	(1,2,3)[@]		A H	
4249 *5*	4$^+$		H J	XREF: J(4220). Jπ: L(α,α′)=4.
4250.93 *30*	1[&]		E	
4272 *5*			H	
4311.1 *4*			P	
4326.43 *16*	(1,2,3)[@]		A H	
4331.3 *12*	1[&]	0.050 eV *10*	E	
4363.47 *19*	4$^+$		A H J	XREF: J(4332). Jπ: L(α,α′)=L(p,p′)=4.
4399 *5*	(3$^+$,4$^+$,5$^+$)		H J	XREF: J(4367). Jπ: L(p,p′)=4.
4426 *10*			H J	XREF: J(4402).
4444 *10*	(3$^+$,4$^+$,5$^+$)		H	Jπ: L(p,p′)=(4).
4476.67? *21*	(≤4)		A H	XREF: H(4468). Jπ: γ to 2$^+$ suggests 0$^+$,1,2,3,4$^+$.
4488 *10*	3$^-$		H J	XREF: J(4453). Jπ: L(α,α′)=3.
4536 *10*	(3$^+$,4$^+$,5$^+$)		H J	XREF: J(4500). Jπ: L(p,p′)=4. L(α,α′)=(3,4) suggests a doublet with 3$^-$ and 4$^+$.
4546.8[d] *5*	9$^+$		P	Jπ: γ to 7$^+$; member of γ band.
4570 *10*			H J	XREF: J(4530). Jπ: L(α,α′)=(3,5) suggests a doublet with 3$^-$ and 5$^-$.
4611 *10*	(3$^-$)		A H J	XREF: J(4570). Jπ: L(α,α′)=(3).
4613.0[b] *5*	10$^+$		P	Jπ: γ to 8$^+$; band member.
4623.7 *11*	1$^+$[&]		E	
4659 *10*	(5$^-$)		H J	XREF: J(4615). Jπ: L(α,α′)=(5).
4661.2 *4*	1[&]		E	
4678.26 *10*	1[&]		E	
4686.8[e] *4*	(9$^-$)		P	Jπ: γ rays to 8$^+$ and (7$^-$); possible band member.
4698 *10*			H	
4719.88 *18*	(2$^+$,3,4$^+$)		A	Jπ: γ rays to (2$^+$) and (4$^+$).
4720.5 *4*			P	
4722.36 *20*	(1)[&]		E	
4736 *10*			H	
4741.16 *20*			E	
4767 *10*			H	
4784.04? *26*	(1,2,3)[@]		A	
4789.06 *30*			E	

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Adopted Levels, Gammas (continued)

^{76}Ge Levels (continued)

E(level)[†]	Jπ[‡]	T$_{1/2}$ or Γ[#]	XREF	Comments
4812.47? *18*	(2$^+$,3)		A h	Jπ: γ rays to 4$^+$ and 1.
4814.92? *27*	(1,2,3)[@]		A h	
4837.2 *4*	(1)[&]		E	
4839 *10*	(3$^+$,4$^+$,5$^+$)		H	Jπ: L(p,p′)=(4).
4846.07 *30*	1[&]		E	
4874.67 *20*			E H	
4917.2 *6*	1[&]		E	
4936.07 *20*	1[&]		A E H	
5116.59 *20*	1[&]		E	
5122.47 *14*	(1,2,3)[@]		A	
5166.89 *20*	(1)[&]		E	
5185.99 *10*	(1)[&]		E	
5202.49 *20*	1[&]		E	
5222.19 *30*			E	
5267.00 *30*	1		E h	XREF: h(5276).
5273.8 *6*	(1)[&]		E H	
5285.10 *20*	1[&]		E h	XREF: h(5276).
5304.30 *30*	1[&]		E	
5365.80 *30*	1[&]		A E	XREF: A(5350).
5379.7 *4*	1[&]		E	
5390.8 *5*	(1)[&]		E	
5418.8 *4*	(1)[&]		E	
5434.51 *30*	1[&]		E	
5450.0?[b] *7*	(12$^+$)		P	Jπ: possible band member.
5522.58 *20*	(1,2,3)[@]		A	
5540.42 *20*	1[&]	0.103 eV *18*	E	
5567.62 *20*	(1)[&]		E	
5579.0 *5*	1[&]		E	
5626.7 *8*	1[&]	0.133 eV *20*	E	
5663.32 *14*	(2$^+$)		A	Jπ: γ rays to 0$^+$ and 4$^+$.
5665.43 *30*	1[&]		E	
5677.83 *30*	1[&]		E	
5699.03 *20*	1$^-$[&]	0.256 eV *22*	E	
5708.6 *6*	(1)[&]		E	
5748.53 *10*	1$^-$[&]	0.166 eV *24*	E	
5749.90? *32*	(1,2,3)[@]		A	
5785.24 *20*	1[&]		E	
5794.34 *20*	1[&]		E	
5821.0 *6*			E	
5825.5 *8*	1[&]		E	
5843.2[e] *6*	(11$^-$)		P	Jπ: γ to (9$^-$); possible band member.
5846.7 *7*			E	
5865.0 *6*			E	
5882.92? *24*	(1,2,3)[@]		A	
5909.05 *30*			E	
5955.9 *8*	1[&]	0.194 eV *23*	E	

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Adopted Levels, Gammas (continued)

^{76}Ge Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$ or Γ[#]	XREF
5983.25 *20*	1−[&]	0.150 eV *20*	E
6021.13? *28*	(1,2,3)[@]		A
6048.7 *4*	1[&]		E
6065.1? *4*	(1,2,3)[@]		A
6081.7 *4*	(1)[&]		E
6102.3 *9*			E
6113.86 *30*	1[&]		E
6130.57 *20*	1[&]		E
6145.87 *20*	1[&]		E
6162.7 *9*			E
6191.57 *20*	1[&]		E
6223.7 *7*			E
6228.5 *4*	1[&]		E
6235.1 *9*			E
6240.98 *30*	1[&]		E
6272.98 *30*	1[&]		E
6285.58 *20*	1[&]		E
6315.7 *4*	1[&]		E
6330.48 *20*	1[&]		E
6366.5 *11*			E
6393.5 *5*	1[&]		E
6408.4 *5*	1[&]		E
6436.4 *9*			E
6448.6 *11*			E
6472.50 *30*	1[&]		E
6498.20 *30*	1[&]		E
6513.6 *4*	1[&]		E
6572.3 *6*			E
6601.51 *20*	1[&]		E
6611.4 *6*			E
6629.31 *30*	1[&]		E
6642.2 *5*			E
6661.7 *9*			E
6670.91 *30*	1[&]		E
6741.9 *6*	(1)[&]		E
6765.1 *4*	1[&]		E
6787.03 *20*	1[&]		E
6816.83 *30*	1[&]		E
6835.83 *20*	1[&]		E
6846.53 *30*	1[&]		E
6880.6 *4*	1[&]		E
6884.5 *10*			E
6899.2 *5*	1[&]		E
6908.3 *18*			E
6938.9 *7*	1[&]		E
6960.24 *30*	1[&]		E

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Adopted Levels, Gammas (continued)

^{76}Ge Levels (continued)

E(level)†	Jπ‡	T1/2 or Γ#	XREF
6985.4 *5*	1&		E
6999.05 *30*	1−&	0.28 eV *4*	E
7011.4 *9*	1		E
7026.35 *30*	1(−)&	0.39 eV *4*	E
7048.3 *9*	1&		E
7081.6 *9*	1&		E
7091.8 *4*	1&		E
7102.8 *6*	1&		E
7121.66 *30*	1&		E
7130.46 *30*	1&		E
7147.7 *4*	1&		E
7172.0 *9*			E
7250.9 *7*	1−&		E
7290.1 *4*			E
7301.08 *30*	1−&		E
7407.09 *30*	1&		E
7416.0 *4*			E
7452.6 *5*			E
7479.0 *5*			E
7485.40 *30*	1&		E
7521.6 *5*	1&		E
7537.0 *4*	(1)&		E
7549.2 *7*	(1)&		E
7585.0 *4*	1&		E
7643.0 *4*	1&		E
7651.2 *4*	1&		E
7678.1 *4*	1&		E
7694.6 *11*	1&	0.30 eV *5*	E
7723.1 *4*	(1)&		E
7777.3 *7*	(1)&		E
7784.2 *9*			E
7797.0 *4*	1&		E
7804.1 *6*	1&		E
7814.7 *7*	1&		E
7817.63 *20*			E
7836.7 *6*			E
7849.7 *5*	(1)&		E
7861.6 *4*	1&		E
7883.7 *10*	1&		E
7894.0 *12*			E
7916.2 *24*	1−&	0.72 eV *17*	E
7950.35 *20*	1&		E
7976.1 *7*	(1)&		E
7996.3 *4*	(1)&		E
8018.0 *14*	(1)&		E
8027.0 *8*	(1)&		E
8049.8 *6*	(1)&		E
8063.9 *8*	1		E
8094.7 *8*			E
8103.3 *5*			E
8110.0 *8*			E
8135.0 *11*			E
8152.3 *5*	1(−)&	0.71 eV *7*	E
8160.7 *9*			E
8178.3 *4*	1&		E
8188.3 *5*	1&		E
8236.9 *4*	(1)&		E
8253.4 *9*			E
8260.1 *6*	(1)&		E
8284.99 *30*	(1)&		E
8294.8 *12*			E
8304.0 *5*	1&		E
8318.29 *30*	1&		E
8329.4 *7*	1&		E
8348.2 *9*			E
8357.9 *7*	(1)&		E
8397.8 *5*			E
8418.5 *15*			E
8425.70 *30*	1&	0.29 eV *5*	E
8446.6 *7*	(1)&		E
8462.4 *9*			E
8500.51 *30*	1&		E
8521.2 *6*			E
8535.6 *5*	1&		E
8546.6 *5*	1−&	0.76 eV *9*	E
8552.8 *8*	1&		E
8567.42 *30*	1&		E
8602.8 *5*			E
8626.2 *7*	1&		E
8649.6 *8*			E
8662.5 *4*	(1)&		E
8696.7 *7*			E
8741.2 *4*	(1)&		E
8753.2 *6*	1−&		E
8768.9 *9*	1&		E
8806.8 *5*			E
8844.3 *4*	1&		E
8889.1 *9*			E

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Adopted Levels, Gammas (continued)

^{76}Ge Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	$T_{1/2}$ or Γ[#]	XREF	E(level)[†]	J$^{\pi}$[‡]	XREF
9014.2 *14*	1^{-}[&]	0.71 eV *8*	E	9305.6 *4*		E
9020.1 *10*	(1)[&]		E	9316.4 *4*		E
9033.7 *9*			E	9338.4 *6*		E
9052.3 *12*	(1)[&]		E	9355.1 *8*	(1)[&]	E
9059.1 *11*			E	9366.5 *5*	1[&]	E
9163.9 *9*	1[&]		E	9378.5 *4*	(1)[&]	E
9176.1 *8*	1[&]		E	9400.0 *6*	1[&]	E
9188.0 *4*	1[&]		E	9410.5 *4*	1[&]	E
9255.2 *7*			E	9418.2 *5*	1[&]	E
9264.7 *6*			E	9557.2 *5*	1[&]	E

[†] For levels populated in γ-ray studies, E(level) values are from least-squares fit to Eγ data, assuming 0.5 keV uncertainty when stated. Normalized χ^2=1.1. In other cases values are averages from different reaction studies. In (p,p′) and (α,α′), values for similar levels differ systematically (higher by 12 keV to 45 keV in the 3700-4600 range). Values from (p,p′) are adopted here (since many more levels are reported in (p,p′) than in (α,α′)), although, it is difficult to know as to which dataset is more accurate.

[‡] Log *ft* values from ^{76}Ga decay have not been used in assigning J^{π} values since J^{π}(^{76}Ga g.s.)=(3^{-}) is only tentative. Moreover, several γ-ray placements remain uncertain. For levels above ≈3000, values are given in parentheses when available only from L(p,p′) and/or L(t,p) due to following reasons: 1. The agreement of $\sigma(\theta)$ fits to DWBA is not good over the whole angular range. 2. The correspondence between levels in different reactions is not unique due to large level density and large uncertainties in E(level) from particle reactions.

[#] From DSA in (n,n′γ) (1990DoZU,1984KoZN,2015Cr06) for levels above 2.1 MeV, unless otherwise stated. Below this energy, values are deduced by the evaluators from B(E2) values in Coul. ex. Level widths are from ^{76}Ge(γ,γ′),(pol γ,γ′).

[@] Possible β^{-} feeding from 2$^{(-)}$ (see ^{76}Ga β^{-} decay). Since the level scheme is not well established, the J^{π} assignment is considered as tentative.

[&] From $\gamma\gamma(\theta)$ in (γ,γ′), parity from (pol γ,γ′).

[a] Proposed in (n,n′γ) based on excitation functions and γ decay pattern.

[b] Band(A): The g.s. band.

[c] Band(B): γ band, even spin.

[d] Band(b): γ band, odd spin.

[e] Band(C): Band based on 5^{-}.

Adopted Levels, Gammas (continued)

γ(^{76}Ge)

Additional information 3.

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	δ[#]	α[†]	Comments
562.917	2^+	562.93 *3*	100	0.0	0^+	E2		1.64×10^{-3} *2*	B(E2)(W.u.)=28.81 *21* α(K)=0.001463 *20*; α(L)=0.0001529 *21*; α(M)=2.279×10^{-5} *32* α(N)=1.460×10^{-6} *20*
1108.416	2^+	545.51 *3*	100 *3*	562.917	2^+	E2+M1	+2.4 *2*	1.70×10^{-3} *3*	B(M1)(W.u.)=0.00119 *+24−18*; B(E2)(W.u.)=31.0 *+34−29* α(K)=0.001520 *25*; α(L)=0.0001588 *27*; α(M)=2.37×10^{-5} *4* α(N)=1.519×10^{-6} *25* δ: weighted average of +2.5 *2* from γ(θ) in (n,n′γ) and +2.1 *4* from γγ(θ) in (^{76}Ge,^{76}Ge′).
		1108.41 *8*	70 *4*	0.0	0^+	E2		0.000280 *4*	B(E2)(W.u.)=0.74 *+8−7* α(K)=0.0002491 *35*; α(L)=2.55×10^{-5} *4*; α(M)=3.80×10^{-6} *5* α(N)=2.487×10^{-7} *35*; α(IPF)=1.013×10^{-6} *14*
1409.982	4^+	847.11 *5*	100	562.917	2^+	E2		0.000531 *7*	B(E2)(W.u.)=36.5 *8* α(K)=0.000475 *7*; α(L)=4.89×10^{-5} *7*; α(M)=7.29×10^{-6} *10* α(N)=4.74×10^{-7} *7*
1539.383	3^+	430.95 *5*	69 *5*	1108.416	2^+	M1+E2	+1.86 *+17−11*	0.00336 *7*	α(K)=0.00300 *6*; α(L)=0.000316 *7*; α(M)=4.71×10^{-5} *10* α(N)=2.99×10^{-6} *6* B(M1)(W.u.)=7.2×10^{-4} *+19−15*; B(E2)(W.u.)=18.0 *+46−31* I_γ: from ^{238}U(^{76}Ge,^{76}Ge′γ) (2013To05). Value of 75 from (n,n′γ) is in agreement, but 200 *15* in β^- decay (1971Ca39) is in severe disagreement. Value from 2013To05 is preferred here as the branching ratio in this work is supported by γγ-coin data, whereas no coincidence data were obtained in 1971Ca39. Moreover, there are many contaminants present in γ-ray spectrum from ^{76}Ga decay obtained by 1971Ca39. δ: weighted average of +1.8 *4* from (^{76}Ge,^{76}Ge′γ) and +1.87 *+17−11* from (n,n′γ). The smaller values in those datasets are less likely.
		976.48 *5*	100 *3*	562.917	2^+	M1+E2	+2.61 *20*	0.000368 *5*	α(K)=0.000329 *5*; α(L)=3.37×10^{-5} *5*; α(M)=5.03×10^{-6} *7* α(N)=3.29×10^{-7} *5* B(M1)(W.u.)=5.1×10^{-5} *+16−10*; B(E2)(W.u.)=0.49 *+12−8* δ: weighted average of +2.5 *2* from (^{76}Ge,^{76}Ge′γ) and +2.72 *20* from (n,n′γ).
1911.12	0^+	1348.19 *6*	100	562.917	2^+	E2		0.0002213 *31*	B(E2)(W.u.)=3.75 *+18−16* α(K)=0.0001625 *23*; α(L)=1.654×10^{-5} *23*;

$^{76}_{32}Ge_{44}$-11

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	δ[#]	α[†]	Comments
									α(M)=2.469×10^{-6} *35* α(N)=1.621×10^{-7} *23*; α(IPF)=3.96×10^{-5} *6*
2021.68	4$^+$	482.33 *5*	14.2 *15*	1539.383	3$^+$	M1+E2		0.0021 *6*	α(K)=0.0018 *5*; α(L)=1.9×10^{-4} *5*; α(M)=2.9×10^{-5} *8* α(N)=1.9×10^{-6} *5* δ: +0.48 *+9−7* or +2.9 *1* from (n,n′γ) (2017Mu03). B(M1)(W.u.)=0.0096 *+34−22* if M1, B(E2)(W.u.)=55 *+20−13* if E2.
		611.72 *4*	67.9 *33*	1409.982	4$^+$	M1+E2	+0.50 *8*	0.000965 *25*	α(K)=0.000862 *22*; α(L)=8.88×10^{-5} *23*; α(M)=1.326×10^{-5} *35* α(N)=8.68×10^{-7} *22* B(M1)(W.u.)=0.018 *+6−4*; B(E2)(W.u.)=16 *+7−5* δ: from γγ(θ) in (^{76}Ge,^{76}Ge′).
		913.2 *4*	100 *4*	1108.416	2$^+$	E2		0.000440 *6*	B(E2)(W.u.)=16 *+6−3* α(K)=0.000394 *6*; α(L)=4.04×10^{-5} *6*; α(M)=6.03×10^{-6} *8* α(N)=3.93×10^{-7} *6* Eγ: from (^{76}Ge,^{76}Ge′γ). Other: 913.2 *5* in (n,n′γ). Eγ=911.40 *11* from β$^-$ decay is inconsistent.
2203.84	(1,2$^+$)	1097.4 *5*		1108.416	2$^+$				
		2203.79		0.0	0$^+$				
2284.22	(3)$^-$	1175.7 *5*	100	1108.416	2$^+$				
2453.74	6$^+$	1043.75 *5*	100	1409.982	4$^+$	E2		0.000320 *4*	B(E2)(W.u.)=51 *+26−15* α(K)=0.000286 *4*; α(L)=2.93×10^{-5} *4*; α(M)=4.37×10^{-6} *6* α(N)=2.86×10^{-7} *4*
2478.2	(1,2$^+$)	1915 *1*		562.917	2$^+$				
		2478.2 *5*		0.0	0$^+$				
2487.07	5$^+$	465.33 *10*	10.9 *10*	2021.68	4$^+$	M1+E2		0.0023 *7*	α(K)=0.0020 *6*; α(L)=2.1×10^{-4} *6*; α(M)=3.2×10^{-5} *9* α(N)=2.1×10^{-6} *6* δ: +0.65 *+93−18* or +1.4 *10* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.020 *+8−7* if M1, B(E2)(W.u.)=123 *+46−42* if E2.
		947.77 *17*	100.0 *33*	1539.383	3$^+$	E2		0.000402 *6*	α(K)=0.000359 *5*; α(L)=3.69×10^{-5} *5*; α(M)=5.51×10^{-6} *8* α(N)=3.59×10^{-7} *5* B(E2)(W.u.)=32 *+12−11*
		1077.2[d] *4*	5 *5*	1409.982	4$^+$	[M1,E2]		0.000282 *16*	α(K)=0.000252 *14*; α(L)=2.57×10^{-5} *15*; α(M)=3.84×10^{-6} *23* α(N)=2.52×10^{-7} *14* B(M1)(W.u.)<0.002 if M1, B(E2)(W.u.)<2.3 if E2.
2504.10	2$^+$	964.68 *5*	16.0 *14*	1539.383	3$^+$	E2+M1		0.000360 *26*	α(K)=0.000322 *23*; α(L)=3.29×10^{-5} *25*; α(M)=4.9×10^{-6} *4* α(N)=3.22×10^{-7} *23* δ: +2.8 *+11−8* or +0.57 *+18−12* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.0033 *+40−15* if M1, B(E2)(W.u.)=5 *+6−2* if E2.
		1094.22 *12*	20.2 *14*	1409.982	4$^+$	E2		0.000287 *4*	α(K)=0.000257 *4*; α(L)=2.62×10^{-5} *4*; α(M)=3.92×10^{-6} *5*

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Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	δ[#]	α[†]	Comments
									α(N)=2.56×10^{-7} *4* B(E2)(W.u.)=3.2 *+38−14*
2504.10	2$^+$	1395.66 *5*	100 *5*	1108.416	2$^+$	E2+M1		0.000210 *11*	α(K)=0.000147 *5*; α(L)=1.49×10^{-5} *5*; α(M)=2.23×10^{-6} *7* α(N)=1.47×10^{-7} *4*; α(IPF)=4.6×10^{-5} *6* δ: +1.9 *2* or +0.08 *4* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.007 *+8−3* if M1, B(E2)(W.u.)=5 *+6−2* if E2.
		2504.08 *6*	35.3 *17*	0.0	0$^+$	E2		0.000611 *9*	B(E2)(W.u.)=0.09 *+11−4* α(K)=5.04×10^{-5} *7*; α(L)=5.09×10^{-6} *7*; α(M)=7.59×10^{-7} *11* α(N)=5.02×10^{-8} *7*; α(IPF)=0.000555 *8*
2591.04	(1$^+$,2$^+$)	1051.7 *2*	95 *14*	1539.383	3$^+$				
		1482.5 *3*	100 *15*	1108.416	2$^+$				
		2591.0 *4*	55 *10*	0.0	0$^+$				
2654.51	(0$^+$,1$^+$)	1546.0 *4*	100 *20*	1108.416	2$^+$				
		2091.9 *4*	42 *10*	562.917	2$^+$				
2655.15	(1)	2655.1 *3*		0.0	0$^+$				
2669.12	3$^+$,4$^+$	647.44 *4*	25.6 *20*	2021.68	4$^+$	M1+E2		0.00094 *16*	α(K)=0.00084 *14*; α(L)=8.6×10^{-5} *15*; α(M)=1.29×10^{-5} *22* α(N)=8.4×10^{-7} *14* δ: −0.01 *10* or +1.1 *2* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.0059 *+28−24* if M1, B(E2)(W.u.)=19 *+9−8* if E2.
		1129.79 *10*	100 *6*	1539.383	3$^+$	M1(+E2)	+0.01 *2*	0.0002434 *34*	α(K)=0.0002166 *30*; α(L)=2.200×10^{-5} *31*; α(M)=3.29×10^{-6} *5* α(N)=2.171×10^{-7} *30*; α(IPF)=1.330×10^{-6} *19* B(M1)(W.u.)=0.0043 *+23−20*; B(E2)(W.u.)<0.0063
		1259.12 *5*	59.7 *22*	1409.982	4$^+$	M1+E2		0.000219 *10*	α(K)=0.000181 *7*; α(L)=1.84×10^{-5} *8*; α(M)=2.75×10^{-6} *11* α(N)=1.81×10^{-7} *7*; α(IPF)=1.66×10^{-5} *25* δ: −0.002 *63* or +1.09 *2* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.0019 *+9−8* if M1, B(E2)(W.u.)=1.6 *+8−6* if E2.
2692.347	3$^-$	1282.36[c] *4*	<14[c]	1409.982	4$^+$	E1		0.0002001 *28*	B(E1)(W.u.)<1.4×10^{-4} α(K)=8.68×10^{-5} *12*; α(L)=8.77×10^{-6} *12*; α(M)=1.308×10^{-6} *18* α(N)=8.60×10^{-8} *12*; α(IPF)=0.0001032 *14*
		1583.93 *3*	6.5 *7*	1108.416	2$^+$	E1		0.000388 *5*	B(E1)(W.u.)=3.16×10^{-5} *+48−43* α(K)=6.09×10^{-5} *9*; α(L)=6.14×10^{-6} *9*; α(M)=9.16×10^{-7} *13* α(N)=6.03×10^{-8} *8*; α(IPF)=0.000320 *4*
		2129.38 *6*	100 *3*	562.917	2$^+$	E1		0.000765 *11*	B(E1)(W.u.)=2.00×10^{-4} *+21−18* α(K)=3.86×10^{-5} *5*; α(L)=3.88×10^{-6} *5*; α(M)=5.80×10^{-7} *8* α(N)=3.82×10^{-8} *5*; α(IPF)=0.000722 *10*
		2691.6[d] *4*	6.9 *18*	0.0	0$^+$	[E3]		0.000501 *7*	α(K)=6.77×10^{-5} *9*; α(L)=6.86×10^{-6} *10*; α(M)=1.024×10^{-6}

$^{76}_{32}Ge_{44}$-13

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	δ[#]	α[†]	Comments
									14 α(N)=6.77×10^{-8} *9*; α(IPF)=0.000425 *6* Tentative B(E3)(W.u.)=700 *350*. I_γ: this value is questionable since reduced transition probability is 9.4 W.u. in (p,p′); and 11.7 W.u. in (α,α′), which suggest Iγ≈0.1. This γ ray was reported in ^{76}Ga β$^-$ decay only, where it may have been contributed mainly by a sum line. B(E3)(W.u.)=1.22×10^3 *32* exceeds RUL=100.
2697.20	(0)$^+$	1588.76 *4*	26.7 *13*	1108.416	2$^+$	E2		0.0002517 *35*	α(K)=0.0001163 *16*; α(L)=1.181×10^{-5} *17*; α(M)=1.762×10^{-6} *25* α(N)=1.160×10^{-7} *16*; α(IPF)=0.0001217 *17* B(E2)(W.u.)=0.88 *+32−29*
		2134.25 *5*	100 *4*	562.917	2$^+$	E2		0.000451 *6*	α(K)=6.67×10^{-5} *9*; α(L)=6.75×10^{-6} *9*; α(M)=1.007×10^{-6} *14* α(N)=6.65×10^{-8} *9*; α(IPF)=0.000376 *5* B(E2)(W.u.)=0.75 *+27−25*
2733.23	4$^+$	1193.92 *12*	63 *27*	1539.383	3$^+$	E2+M1		0.000233 *11*	α(K)=0.000202 *9*; α(L)=2.06×10^{-5} *10*; α(M)=3.08×10^{-6} *14* α(N)=2.02×10^{-7} *9*; α(IPF)=6.7×10^{-6} *11* δ: +4.3 *9* or +0.36 *+6−5* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.015 *+6−5* if M1, B(E2)(W.u.)=14 *+6−5* if E2.
		1624.78 *5*	100 *4*	1108.416	2$^+$	E2		0.000262 *4*	α(K)=0.0001113 *16*; α(L)=1.129×10^{-5} *16*; α(M)=1.686×10^{-6} *24* α(N)=1.110×10^{-7} *16*; α(IPF)=0.0001372 *19* B(E2)(W.u.)=4.9 *+20−11*
2747.75	(2)$^+$	1208.19 *17*	32 *5*	1539.383	3$^+$	M1+E2	+0.09 *5*	0.0002191 *31*	α(K)=0.0001896 *27*; α(L)=1.924×10^{-5} *27*; α(M)=2.87×10^{-6} *4* α(N)=1.899×10^{-7} *27*; α(IPF)=7.17×10^{-6} *11* B(M1)(W.u.)=0.0155 *+28−26*; B(E2)(W.u.)=0.12 *+16−9*
		1639.31 *5*	100.0 *24*	1108.416	2$^+$	M1(+E2)	−0.002 *29*	0.0002321 *32*	α(K)=0.0001053 *15*; α(L)=1.065×10^{-5} *15*; α(M)=1.590×10^{-6} *22* α(N)=1.052×10^{-7} *15*; α(IPF)=0.0001145 *16* B(M1)(W.u.)=0.0195 *+36−29*; B(E2)(W.u.)<0.011
		2185.02 *19*	8.5 *7*	562.917	2$^+$	M1+E2		0.000442 *31*	α(K)=6.32×10^{-5} *12*; α(L)=6.38×10^{-6} *12*; α(M)=9.53×10^{-7} *18* α(N)=6.30×10^{-8} *11*; α(IPF)=0.000371 *30* δ: +2.9 *+23−11* or −0.07 *+15−6* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=7.0×10^{-4} *+11−9* if M1, B(E2)(W.u.)=0.198 *+32−26* if E2.
2766.68	2$^+$	2203.71 *6*	100 *4*	562.917	2$^+$	E2+M1	−0.09 *2*	0.000419 *6*	α(K)=6.15×10^{-5} *9*; α(L)=6.21×10^{-6} *9*; α(M)=9.27×10^{-7} *13* α(N)=6.14×10^{-8} *9*; α(IPF)=0.000350 *5*

$^{76}_{32}Ge_{44}$-14

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	δ[#]	α[†]	Comments
									B(M1)(W.u.)=0.136 *+23−17*; B(E2)(W.u.)=0.31 *+17−13* E_γ,I_γ: from (n,n′γ). δ: from (n,n′γ).
2766.68	2+	2766.65 *8*	2.7 *8*	0.0	0+	E2		0.000724 *10*	α(K)=4.26×10^{-5} *6*; α(L)=4.30×10^{-6} *6*; α(M)=6.41×10^{-7} *9* α(N)=4.24×10^{-8} *6*; α(IPF)=0.000676 *9* B(E2)(W.u.)=0.33 *+12−10* E_γ,I_γ: from (n,n′γ).
2768.73	2+	1358.9 *6*	24 *8*	1409.982	4+				
		1660.30 *14*	100 *7*	1108.416	2+				
2841.61	2+	1732.97 *16*	100 *4*	1108.416	2+	E2+M1	+0.01 *+3−2*	0.000255 *4*	α(K)=9.49×10^{-5} *13*; α(L)=9.60×10^{-6} *13*; α(M)=1.433×10^{-6} *20* α(N)=9.48×10^{-8} *13*; α(IPF)=0.0001494 *21* B(M1)(W.u.)=0.100 *+20−16*; B(E2)(W.u.)<0.086
		2278.82 *14*	52 *9*	562.917	2+	E2+M1		0.000480 *33*	α(K)=5.87×10^{-5} *11*; α(L)=5.93×10^{-6} *11*; α(M)=8.84×10^{-7} *17* α(N)=5.85×10^{-8} *10*; α(IPF)=0.000415 *32* δ: +3.0 *+9−5* or −0.08 *6* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.0230 *+37−35* if M1, B(E2)(W.u.)=6.0 *+10−9* if E2.
2856.79	4+	1446.79 *9*	100	1409.982	4+	M1(+E2)	−0.08 *8*	0.0002012 *28*	α(K)=0.0001334 *19*; α(L)=1.351×10^{-5} *19*; α(M)=2.017×10^{-6} *28* α(N)=1.334×10^{-7} *19*; α(IPF)=5.22×10^{-5} *8* B(M1)(W.u.)=0.075 *7*; B(E2)(W.u.)<1.3
2897.55	0+	1789.23 *13*	38.1 *19*	1108.416	2+	E2		0.000314 *4*	α(K)=9.24×10^{-5} *13*; α(L)=9.36×10^{-6} *13*; α(M)=1.397×10^{-6} *20* α(N)=9.21×10^{-8} *13*; α(IPF)=0.0002105 *29* B(E2)(W.u.)=1.44 *+25−23*
		2334.51 *11*	100 *4*	562.917	2+	E2		0.000537 *8*	α(K)=5.69×10^{-5} *8*; α(L)=5.75×10^{-6} *8*; α(M)=8.58×10^{-7} *12* α(N)=5.67×10^{-8} *8*; α(IPF)=0.000474 *7* B(E2)(W.u.)=1.00 *16*
2919.74	1+	1811.22 *18*	14 *5*	1108.416	2+	M1+E2	−0.8 *+63−6*	0.000295 *26*	α(K)=8.86×10^{-5} *20*; α(L)=8.96×10^{-6} *22*; α(M)=1.338×10^{-6} *32* α(N)=8.84×10^{-8} *19*; α(IPF)=0.000196 *24* B(M1)(W.u.)=0.0015 *+21−14*; B(E2)(W.u.)<1.4
		2356.81 *13*	27.4 *12*	562.917	2+	M1+E2	+1.3 *+50−9*	0.000522 *34*	α(K)=5.55×10^{-5} *10*; α(L)=5.60×10^{-6} *10*; α(M)=8.36×10^{-7} *15* α(N)=5.53×10^{-8} *10*; α(IPF)=0.000460 *33* B(M1)(W.u.)=8×10^{-4} *+11−6*; B(E2)(W.u.)=0.32 *+15−26*
		2919.72 *13*	100 *4*	0.0	0+	M1		0.000705 *10*	α(K)=3.81×10^{-5} *5*; α(L)=3.83×10^{-6} *5*; α(M)=5.72×10^{-7} *8* α(N)=3.79×10^{-8} *5*; α(IPF)=0.000662 *9* B(M1)(W.u.)=0.00406 *+44−37*

$^{76}_{32}Ge_{44}$-15

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	δ[#]	α[†]	Comments
2958.06	5⁻	265.3 *5*	3.6 *6*	2692.347	3⁻	E2		0.01991 *31*	α(K)=0.01768 *27*; α(L)=0.001930 *30*; α(M)=0.000287 *4* α(N)=1.745×10^{-5} *27*
		1548.02 *18*	100 *4*	1409.982	4⁺	E1		0.000362 *5*	α(K)=6.32×10^{-5} *9*; α(L)=6.37×10^{-6} *9*; α(M)=9.51×10^{-7} *13* α(N)=6.26×10^{-8} *9*; α(IPF)=0.000291 *4*
2986.08	(2⁺,3⁺)	1576.02 *8*	23.2 *14*	1409.982	4⁺	[E2]		0.0002484 *35*	α(K)=0.0001182 *17*; α(L)=1.200×10^{-5} *17*; α(M)=1.791×10^{-6} *25* α(N)=1.179×10^{-7} *16*; α(IPF)=0.0001163 *16* B(E2)(W.u.)=5.7 *+6−5*
		1877.76 *12*	100 *4*	1108.416	2⁺	[M1,E2]		0.000323 *24*	α(K)=8.32×10^{-5} *17*; α(L)=8.41×10^{-6} *18*; α(M)=1.255×10^{-6} *26* α(N)=8.29×10^{-8} *16*; α(IPF)=0.000230 *22* B(M1)(W.u.)=0.0270 *+18−16* if M1, B(E2)(W.u.)=10.4 *7* if E2.
2988.09		319.0[a] *3*	100	2669.12	3⁺,4⁺				
		500.9[a] *4*	8 *3*	2487.07	5⁺				
		534.4[a] *4*	25 *10*	2453.74	6⁺				
2993.89	4⁺	972.30 *6*	86.3 *34*	2021.68	4⁺	M1+E2	−0.61 *+7−5*	0.000342 *5*	α(K)=0.000306 *5*; α(L)=3.12×10^{-5} *5*; α(M)=4.66×10^{-6} *7* α(N)=3.07×10^{-7} *5* B(M1)(W.u.)=0.0149 *+32−30*; B(E2)(W.u.)=7.9 *+18−22* δ: −5.2 *+75−36* or −0.08 *+13−59* (2017Mu03) in (n,n′γ).
		1454.37 *9*	15.8 *16*	1539.383	3⁺	M1+E2		0.000213 *12*	α(K)=0.000135 *4*; α(L)=1.37×10^{-5} *4*; α(M)=2.05×10^{-6} *6* α(N)=1.35×10^{-7} *4*; α(IPF)=6.2×10^{-5} *8* B(M1)(W.u.)=0.00111 *25* if M1, B(E2)(W.u.)=0.71 *16* if E2.
		2430.91 *5*	100 *5*	562.917	2⁺	E2		0.000579 *8*	α(K)=5.31×10^{-5} *7*; α(L)=5.36×10^{-6} *7*; α(M)=7.99×10^{-7} *11* α(N)=5.28×10^{-8} *7*; α(IPF)=0.000520 *7* B(E2)(W.u.)=0.35 *7*
3004.73	(0)⁺	2441.77 *7*	100	562.917	2⁺	E2		0.000584 *8*	α(K)=5.27×10^{-5} *7*; α(L)=5.32×10^{-6} *7*; α(M)=7.93×10^{-7} *11* α(N)=5.24×10^{-8} *7*; α(IPF)=0.000525 *7* B(E2)(W.u.)=1.59 *24*
3007.16	1⁺	1898.73 *6*	100 *4*	1108.416	2⁺	M1(+E2)	−0.8 *+18−7*	0.000325 *15*	α(K)=8.12×10^{-5} *13*; α(L)=8.21×10^{-6} *14*; α(M)=1.226×10^{-6} *21* α(N)=8.10×10^{-8} *13*; α(IPF)=0.000234 *14* B(M1)(W.u.)=0.07 *+11−4*; B(E2)(W.u.)<45

$^{76}_{32}Ge_{44}$-16

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	δ[#]	α[†]	Comments
3007.16	1$^+$	3007.02 *13*	57.7 *29*	0.0	0$^+$	M1		0.000739 *10*	α(K)=3.63×10^{-5} *5*; α(L)=3.65×10^{-6} *5*; α(M)=5.45×10^{-7} *8* α(N)=3.61×10^{-8} *5*; α(IPF)=0.000699 *10* B(M1)(W.u.)=0.016 *+10−4*
3014.2	1	3014.1 *4*	100	0.0	0$^+$				
3021.14	(2$^+$,3$^+$)	1481.73 *9*	78 *4*	1539.383	3$^+$	[M1,E2]		0.000216 *13*	α(K)=0.000131 *4*; α(L)=1.32×10^{-5} *4*; α(M)=1.98×10^{-6} *6* α(N)=1.304×10^{-7} *35*; α(IPF)=7.1×10^{-5} *9* B(M1)(W.u.)=0.0073 *9* if M1, B(E2)(W.u.)=4.5 *6* if E2.
		1611.36 *16*	33.5 *19*	1409.982	4$^+$	[E2]		0.000258 *4*	α(K)=0.0001131 *16*; α(L)=1.148×10^{-5} *16*; α(M)=1.713×10^{-6} *24* α(N)=1.128×10^{-7} *16*; α(IPF)=0.0001314 *18* B(E2)(W.u.)=1.27 *17*
		1912.59 *13*	100 *4*	1108.416	2$^+$	[M1,E2]		0.000335 *25*	α(K)=8.04×10^{-5} *16*; α(L)=8.13×10^{-6} *17*; α(M)=1.213×10^{-6} *25* α(N)=8.02×10^{-8} *15*; α(IPF)=0.000245 *23* B(M1)(W.u.)=0.0044 *6* if M1, B(E2)(W.u.)=1.60 *20* if E2.
3033.75	(6$^+$)	546.6[a] *4*	20 *20*	2487.07	5$^+$				
		580.1[a] *4*	60 *15*	2453.74	6$^+$	(M1+E2)	+1 *4*	0.00125 *23*	α(K)=0.00111 *21*; α(L)=0.000116 *22*; α(M)=1.72×10^{-5} *33* α(N)=1.12×10^{-6} *20*
		1012.2[a] *4*	100	2021.68	4$^+$				
		1623.8[a] *4*	40 *15*	1409.982	4$^+$				
3041.37	2$^+$	1130.24		1911.12	0$^+$				
		2478.8 *11*	100	562.917	2$^+$	[M1,E2]		0.00056 *4*	α(K)=5.07×10^{-5} *9*; α(L)=5.12×10^{-6} *9*; α(M)=7.64×10^{-7} *14* α(N)=5.05×10^{-8} *9*; α(IPF)=0.00051 *4* B(M1)(W.u.)=0.0227 *+16−14* if M1, B(E2)(W.u.)=4.95 *+35−31* if E2.
3052.55	2$^+$,3$^+$,4$^+$	1513.15 *9*	100	1539.383	3$^+$	M1+E2		0.000221 *14*	α(K)=0.0001253 *34*; α(L)=1.27×10^{-5} *4*; α(M)=1.90×10^{-6} *5* α(N)=1.251×10^{-7} *32*; α(IPF)=8.1×10^{-5} *10* δ: −0.05 *+6−5* or +1.64 *2* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.182 *+31−23* if M1, B(E2)(W.u.)=107 *+18−14* if E2.
3062.13	(4$^+$,5$^+$)	1652.13 *8*	100	1409.982	4$^+$	[M1,E2]		0.000252 *18*	α(K)=0.0001057 *25*; α(L)=1.071×10^{-5} *26*; α(M)=1.60×10^{-6} *4* α(N)=1.055×10^{-7} *24*; α(IPF)=0.000134 *15* B(M1)(W.u.)=0.040 *+9−6* if M1, B(E2)(W.u.)=19.7 *+44−31* if E2.
3066.86	(2$^+$,3$^+$,4$^+$)	1527.46 *9*	100	1539.383	3$^+$	[M1,E2]		0.000224 *14*	α(K)=0.0001230 *33*; α(L)=1.248×10^{-5} *35*; α(M)=1.86×10^{-6} *5* α(N)=1.228×10^{-7} *31*; α(IPF)=8.6×10^{-5} *10* B(M1)(W.u.)=0.0069 *+31−26* if M1, B(E2)(W.u.)=4.0 *+18−15* if E2.
3070.41	4$^+$	1660.41 *10*	100	1409.982	4$^+$	M1+E2		0.000254 *18*	α(K)=0.0001047 *24*; α(L)=1.061×10^{-5} *26*; α(M)=1.58×10^{-6} *4* α(N)=1.045×10^{-7} *23*; α(IPF)=0.000137 *15*

$^{76}_{32}Ge_{44}$-17

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[†]	Comments
								δ: −0.13 *8* or +1.5 *3* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.0063 *+25−23* if M1, B(E2)(W.u.)=3.1 *+12−11* if E2.
3088.4	1	3088.3 *7*	100	0.0	0^+			
3092.10	$(3^+,5^+)$	1682.10 *9*	100	1409.982	4^+	[M1,E2]	0.000260 *18*	α(K)=0.0001022 *23*; α(L)=1.035×10^{-5} *25*; α(M)=1.54×10^{-6} *4* α(N)=1.020×10^{-7} *22*; α(IPF)=0.000146 *16* B(M1)(W.u.)=0.0173 *24* if M1, B(E2)(W.u.)=8.2 *11* if E2.
3129.86	2^+	2022.4 *9*	100 *4*	1108.416	2^+	M1+E2	0.000377 *27*	α(K)=7.26×10^{-5} *14*; α(L)=7.34×10^{-6} *15*; α(M)=1.095×10^{-6} *22* α(N)=7.24×10^{-8} *13*; α(IPF)=0.000296 *26* δ: −0.31 *+5−6* or +10 *+11−3* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.0092 *+10−9* if M1, B(E2)(W.u.)=3.03 *+34−29* if E2.
		3129.78 *8*	17.8 *11*	0.0	0^+	E2	0.000874 *12*	α(K)=3.48×10^{-5} *5*; α(L)=3.51×10^{-6} *5*; α(M)=5.23×10^{-7} *7* α(N)=3.46×10^{-8} *5*; α(IPF)=0.000835 *12* B(E2)(W.u.)=0.061 *+8−7*
3141.39	1^+	1230.2[@d] *5*		1911.12	0^+			
		2578.48 *8*	58 *6*	562.917	2^+	M1+E2	0.00061 *4*	α(K)=4.74×10^{-5} *9*; α(L)=4.78×10^{-6} *9*; α(M)=7.14×10^{-7} *13* α(N)=4.72×10^{-8} *8*; α(IPF)=0.00055 *4* δ: +0.7 *+150−10* or +3 *+13−3* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.00396 *+44−51* if M1, B(E2)(W.u.)=0.80 *+9−10* if E2.
		3141.24 *8*	100.0 *18*	0.0	0^+	M1	0.000791 *11*	B(M1)(W.u.)=0.00378 *+39−43* α(K)=3.38×10^{-5} *5*; α(L)=3.40×10^{-6} *5*; α(M)=5.07×10^{-7} *7* α(N)=3.36×10^{-8} *5*; α(IPF)=0.000754 *11*
3147.54	$(2)^+$	1608.29 *13*	100.0 *21*	1539.383	3^+	[M1,E2]	0.000241 *16*	α(K)=0.0001113 *27*; α(L)=1.128×10^{-5} *29*; α(M)=1.68×10^{-6} *4* α(N)=1.111×10^{-7} *26*; α(IPF)=0.000117 *13* B(M1)(W.u.)=0.0284 *+35−29* if M1, B(E2)(W.u.)=14.8 *+18−15* if E2.
		2038.2 *7*	13.3 *16*	1108.416	2^+	[M1,E2]	0.000383 *28*	α(K)=7.16×10^{-5} *14*; α(L)=7.24×10^{-6} *14*; α(M)=1.080×10^{-6} *21* α(N)=7.14×10^{-8} *13*; α(IPF)=0.000303 *26* B(M1)(W.u.)=0.00186 *+31−27* if M1, B(E2)(W.u.)=0.60 *+10−9* if E2.
		2584.41 *15*	44.7 *19*	562.917	2^+	[M1,E2]	0.00061 *4*	α(K)=4.72×10^{-5} *9*; α(L)=4.76×10^{-6} *9*; α(M)=7.11×10^{-7} *13* α(N)=4.70×10^{-8} *8*; α(IPF)=0.00056 *4* B(M1)(W.u.)=0.00306 *+39−33* if M1, B(E2)(W.u.)=0.62 *+8−7* if E2.
3162.65	$(4)^+$	1752.65 *5*	100	1409.982	4^+	E2+M1	0.000281 *21*	α(K)=9.45×10^{-5} *21*; α(L)=9.57×10^{-6} *22*; α(M)=1.428×10^{-6} *32* α(N)=9.43×10^{-8} *20*; α(IPF)=0.000175 *19* δ: −0.09 *9* or +1.4 *3* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.280 *+47−35* if M1, B(E2)(W.u.)=123 *+21−15* if E2.
3181.95	$(2^+,3^+)$	489.73 *9*	33.5 *26*	2692.347	3^-	[E1]	0.000741 *10*	α(K)=0.000662 *9*; α(L)=6.76×10^{-5} *9*; α(M)=1.007×10^{-5} *14* α(N)=6.54×10^{-7} *9* B(E1)(W.u.)=0.0014 *+6−5*
		2618.93 *6*	100 *5*	562.917	2^+	[M1,E2]	0.00062 *4*	α(K)=4.62×10^{-5} *8*; α(L)=4.66×10^{-6} *9*; α(M)=6.95×10^{-7} *13* α(N)=4.60×10^{-8} *8*; α(IPF)=0.00057 *4* B(M1)(W.u.)=0.0016 *+7−6* if M1, B(E2)(W.u.)=0.31 *+13−12* if E2.

$^{76}_{32}Ge_{44}$-18

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	δ[#]	α[†]	Comments
3182.19	(2$^+$)	1642.80 *15*	22 *2*	1539.383	3$^+$	[M1,E2]		0.000250 *17*	α(K)=0.0001069 *25*; α(L)=1.083×10^{-5} *27*; α(M)=1.62×10^{-6} *4* α(N)=1.067×10^{-7} *24*; α(IPF)=0.000130 *15* B(M1)(W.u.)=0.0025 *+21−13* if M1, B(E2)(W.u.)=1.2 *+11−6* if E2.
		2073.75 *7*	100 *3*	1108.416	2$^+$	[M1,E2]		0.000397 *28*	α(K)=6.94×10^{-5} *13*; α(L)=7.01×10^{-6} *14*; α(M)=1.047×10^{-6} *20* α(N)=6.92×10^{-8} *13*; α(IPF)=0.000319 *27* B(M1)(W.u.)=0.0056 *+47−28* if M1, B(E2)(W.u.)=1.8 *+15−9* if E2.
		2619.20 *10*	53	562.917	2$^+$	[M1,E2]		0.00062 *4*	α(K)=4.62×10^{-5} *8*; α(L)=4.66×10^{-6} *9*; α(M)=6.95×10^{-7} *13* α(N)=4.60×10^{-8} *8*; α(IPF)=0.00057 *4* B(M1)(W.u.)=0.0015 *+12−8* if M1, B(E2)(W.u.)=0.29 *+24−15* if E2.
3191.05	2$^+$	2082.51 *9*	34.2 *25*	1108.416	2$^+$	M1+E2		0.000400 *29*	α(K)=6.89×10^{-5} *13*; α(L)=6.96×10^{-6} *14*; α(M)=1.039×10^{-6} *20* α(N)=6.87×10^{-8} *13*; α(IPF)=0.000324 *27* δ: −3 *+13−3* or −1 *+20−1* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.0044 *+6−5* if M1, B(E2)(W.u.)=1.36 *+19−16* if E2.
		2628.08 *12*	100 *4*	562.917	2$^+$	M1+E2		0.00063 *4*	α(K)=4.59×10^{-5} *8*; α(L)=4.63×10^{-6} *9*; α(M)=6.91×10^{-7} *13* α(N)=4.57×10^{-8} *8*; α(IPF)=0.00058 *4* δ: +0.36 *+21−10* or +1.03 *+25−81* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.0064 *+8−7* if M1, B(E2)(W.u.)=1.25 *+16−13* if E2.
		3190.99 *4*	13.8 *13*	0.0	0$^+$	E2		0.000898 *13*	α(K)=3.37×10^{-5} *5*; α(L)=3.40×10^{-6} *5*; α(M)=5.07×10^{-7} *7* α(N)=3.35×10^{-8} *5*; α(IPF)=0.000860 *12* B(E2)(W.u.)=0.065 *+10−9*
3200.01	(3)$^+$	2091.67 *14*	82 *4*	1108.416	2$^+$	M1+E2		0.000404 *29*	α(K)=6.83×10^{-5} *13*; α(L)=6.90×10^{-6} *13*; α(M)=1.030×10^{-6} *20* α(N)=6.81×10^{-8} *12*; α(IPF)=0.000328 *28* δ: +0.05 *+9−1* or −7 *+14−3* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.0016 *+13−8* if M1, B(E2)(W.u.)=0.48 *+38−24* if E2.
		2636.64 *27*	100 *4*	562.917	2$^+$	M1+E2		0.00063 *4*	α(K)=4.57×10^{-5} *8*; α(L)=4.60×10^{-6} *8*; α(M)=6.87×10^{-7} *13* α(N)=4.55×10^{-8} *8*; α(IPF)=0.00058 *4* δ: −8 *+13−3* or +0.08 *8* in (n,n′γ). B(M1)(W.u.)=9×10^{-4} *+8−5* if M1, B(E2)(W.u.)=0.18 *+15−9* if E2.
3200.07	(1,2$^+$)	3200.0 *2*		0.0	0$^+$				
3231.8	4$^+$	2668.8[&d] *4*	100	562.917	2$^+$				
3236.02	(5)$^+$	782.1[a] *4*		2453.74	6$^+$				I_γ: I(782.1γ)/I(1826γ)=100/40 in (^{76}Ge,^{76}Ge′).

$^{76}_{32}Ge_{44}$-19

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	δ[#]	α[†]	Comments
3236.02	(5)$^+$	1214.23 *11*	85 *4*	2021.68	4$^+$	M1+E2	+2.2 *+31−18*	0.000235 *15*	α(K)=0.000201 *11*; α(L)=2.05×10^{-5} *12*; α(M)=3.05×10^{-6} *18* α(N)=2.00×10^{-7} *11*; α(IPF)=1.03×10^{-5} *20* B(M1)(W.u.)<0.13; B(E2)(W.u.)=140 *+26−96*
		1826.15 *12*	100 *4*	1409.982	4$^+$	M1+E2		0.000305 *23*	α(K)=8.76×10^{-5} *18*; α(L)=8.86×10^{-6} *19*; α(M)=1.322×10^{-6} *29* α(N)=8.73×10^{-8} *17*; α(IPF)=0.000207 *21* δ: +0.48 *+13−20* or +1.9 *+10−17* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.064 *7* if M1, B(E2)(W.u.)=25.8 *28* if E2.
3243.79	1$^+$	2680.90 *10*	100 *5*	562.917	2$^+$	M1+E2		0.00065 *4*	α(K)=4.44×10^{-5} *8*; α(L)=4.48×10^{-6} *8*; α(M)=6.68×10^{-7} *12* α(N)=4.42×10^{-8} *8*; α(IPF)=0.00060 *4* δ: −4 *+60−2* or +0.04 *2* (2017Mu03) in (n,n′γ). B(M1)(W.u.)=0.0239 *+18−20* if M1, B(E2)(W.u.)=4.47 *+33−37* if E2.
		3243.66 *9*	16.8 *12*	0.0	0$^+$	M1		0.000830 *12*	α(K)=3.20×10^{-5} *4*; α(L)=3.22×10^{-6} *5*; α(M)=4.81×10^{-7} *7* α(N)=3.19×10^{-8} *4*; α(IPF)=0.000795 *11* B(M1)(W.u.)=0.00226 *24*
3312.29	3$^-$	1902.2 *2*	31 *3*	1409.982	4$^+$				
		2203.86 *16*	100 *8*	1108.416	2$^+$				
3322.80	(2$^+$)	1912.7 *1*	26 *2*	1409.982	4$^+$	[E2]		0.000359 *5*	α(K)=8.15×10^{-5} *11*; α(L)=8.25×10^{-6} *12*; α(M)=1.232×10^{-6} *17* α(N)=8.12×10^{-8} *11*; α(IPF)=0.000268 *4* B(E2)(W.u.)=1.1 *+7−5*
		2214.36 *8*	100 *3*	1108.416	2$^+$	[M1,E2]		0.000454 *32*	α(K)=6.18×10^{-5} *11*; α(L)=6.23×10^{-6} *12*; α(M)=9.31×10^{-7} *18* α(N)=6.15×10^{-8} *11*; α(IPF)=0.000385 *31* B(M1)(W.u.)=0.0072 *+45−31* if M1, B(E2)(W.u.)=2.0 *+12−9* if E2.
		2759.95 *14*	49 *3*	562.917	2$^+$	[M1,E2]		0.00068 *4*	α(K)=4.23×10^{-5} *8*; α(L)=4.26×10^{-6} *8*; α(M)=6.36×10^{-7} *12* α(N)=4.21×10^{-8} *7*; α(IPF)=0.00063 *4* B(M1)(W.u.)=0.0018 *+12−8* if M1, B(E2)(W.u.)=0.32 *+20−14* if E2.
3409.19	(1,2,3)	661.4[d] *2*	100	2747.75	(2)$^+$				
3419.47	1$^+$	2310.9		1108.416	2$^+$				
		2856.4		562.917	2$^+$				
		3419.7 *6*		0.0	0$^+$	M1		0.000896 *13*	α(K)=2.94×10^{-5} *4*; α(L)=2.96×10^{-6} *4*; α(M)=4.42×10^{-7} *6* α(N)=2.93×10^{-8} *4*; α(IPF)=0.000863 *12*

$^{76}_{32}Ge_{44}$-20

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[†]	Comments
3436.9		767.8 *4*	100	2669.12	$3^+,4^+$			
3477.62	$(2^+,3)$	335.9[d] *5*	100 *25*	3141.39	1^+			
		2369.8[d] *6*	5 *2*	1108.416	2^+			
		2914.6[d] *2*	14 *2*	562.917	2^+			
3484.0	3^-	2074 *1*		1409.982	4^+			
		2921 *1*		562.917	2^+			
3532.81	(7^+)	499.1[ad] *4*	20 *20*	3033.75	(6^+)			
		1045.7[a] *4*	100	2487.07	5^+			
3536.0		547.9 *4*	100	2988.09				
3543.27	8^+	1089.6 *4*	100	2453.74	6^+			
3576.96		2037.5[d]		1539.383	3^+			
		3014.0[a] *3*		562.917	2^+			
3596.79	2^+	3033.8		562.917	2^+			
		3596.7 *4*		0.0	0^+	E2	1.05×10^{-3} *2*	α(K)=2.79×10^{-5} *4*; α(L)=2.81×10^{-6} *4*; α(M)=4.19×10^{-7} *6* α(N)=2.77×10^{-8} *4*; α(IPF)=0.001018 *14*
3632.92	(2^+)	1612.7[b] *3*	49 *7*	2021.68	4^+			E_γ: poor fit; level-energy difference=1611.6.
		1721.9 *7*	16 *5*	1911.12	0^+			
		2524.0 *2*	86 *6*	1108.416	2^+			
		3069.90 *13*	100 *6*	562.917	2^+			
3680.70	1^-	3117.7		562.917	2^+			
		3680.6 *1*		0.0	0^+	E1	1.57×10^{-3} *2*	α(K)=1.830×10^{-5} *26*; α(L)=1.835×10^{-6} *26*; α(M)=2.74×10^{-7} *4* α(N)=1.809×10^{-8} *25*; α(IPF)=0.001545 *22*
3727.83	(7^-)	769.5[a] *4*	30 *20*	2958.06	5^-			
		1274.3[a] *4*	100	2453.74	6^+	(E1+M2)	0.0001977 *34*	α(K)=9.04×10^{-5} *29*; α(L)=9.14×10^{-6} *30*; α(M)=1.36×10^{-6} *5* α(N)=8.96×10^{-8} *30*; α(IPF)=9.68×10^{-5} *17* δ: +9 *7* or +0.2 *6*.
3763.40	1^+	2655.0		1108.416	2^+			
		3200.3		562.917	2^+			
		3763.3 *2*		0.0	0^+	M1	1.02×10^{-3} *1*	α(K)=2.531×10^{-5} *35*; α(L)=2.54×10^{-6} *4*; α(M)=3.80×10^{-7} *5* α(N)=2.517×10^{-8} *35*; α(IPF)=0.000991 *14*
3783.57	$(4^+,5,6,7^-)$	750.0[a] *4*	100	3033.75	(6^+)			
		825.3[a] *4*	25 *20*	2958.06	5^-			
3886.97	(3^-)	2347.40 *25*	55 *6*	1539.383	3^+			
		2476.60 *40*	27 *6*	1409.982	4^+			
		2779.1 *4*	100 *10*	1108.416	2^+			
		3325.2 *12*	14 *7*	562.917	2^+			
3951.88	1^-	1259.9 *5*	7 *2*	2692.347	3^-	[E2]	0.0002292 *32*	B(E2)(W.u.)=10.6 *+39−33* α(K)=0.0001877 *26*; α(L)=1.914×10^{-5} *27*; α(M)=2.86×10^{-6}

$^{76}_{32}Ge_{44}$-21

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[†]	Comments
								4 α(N)=1.873×10^{-7} *26*; α(IPF)=1.929×10^{-5} *29*
3951.88	1$^-$	2040.70 *25*	8 *2*	1911.12	0$^+$	[E1]	0.000707 *10*	B(E1)(W.u.)=5.8×10^{-5} *+20−16* α(K)=4.11×10^{-5} *6*; α(L)=4.14×10^{-6} *6*; α(M)=6.17×10^{-7} *9* α(N)=4.07×10^{-8} *6*; α(IPF)=0.000661 *9* I_γ: preliminary result in 2014Do08 suggests ≈11.
		2843.50 *9*	38 *2*	1108.416	2$^+$	[E1]	1.18×10^{-3} *2*	B(E1)(W.u.)=1.01×10^{-4} *+23−16* α(K)=2.57×10^{-5} *4*; α(L)=2.58×10^{-6} *4*; α(M)=3.85×10^{-7} *5* α(N)=2.54×10^{-8} *4*; α(IPF)=0.001150 *16*
		3388.75 *12*	67 *4*	562.917	2$^+$	[E1]	1.45×10^{-3} *2*	B(E1)(W.u.)=1.05×10^{-4} *+24−17* α(K)=2.035×10^{-5} *28*; α(L)=2.042×10^{-6} *29*; α(M)=3.05×10^{-7} *4* α(N)=2.013×10^{-8} *28*; α(IPF)=0.001424 *20*
		3951.70 *14*	100 *8*	0.0	0$^+$	[E1]	1.68×10^{-3} *2*	B(E1)(W.u.)=9.9×10^{-5} *+22−16* α(K)=1.672×10^{-5} *23*; α(L)=1.676×10^{-6} *23*; α(M)=2.500×10^{-7} *35* α(N)=1.653×10^{-8} *23*; α(IPF)=0.001661 *23*
4024.11	1$^{(-)}$	4024.0 *2*	100	0.0	0$^+$	(E1)	1.71×10^{-3} *2*	α(K)=1.634×10^{-5} *23*; α(L)=1.638×10^{-6} *23*; α(M)=2.443×10^{-7} *34* α(N)=1.616×10^{-8} *23*; α(IPF)=0.001688 *24*
4035.12	1	4035.0 *2*	100	0.0	0$^+$			
4116.02	1	4115.9 *2*		0.0	0$^+$			
4122.28?	(1,2$^+$)	3559.5[d] *4*	100 *8*	562.917	2$^+$			
		4121.8[d] *5*	43 *6*	0.0	0$^+$			
4129.8	8$^+$	1096.0[a] *4*	100	3033.75	(6$^+$)			
4130.6		894.6[a] *4*	100	3236.02	(5)$^+$			
4192.80?	(2$^+$,3)	1273.05[d] *10*	100 *6*	2919.74	1$^+$			
		2782.70[d] *40*	84 *7*	1409.982	4$^+$			
4239.36	(1,2,3)	927.05[d] *10*	100 *6*	3312.29	3$^-$			
		3130.7[d] *6*	23 *5*	1108.416	2$^+$			
4250.93	1	4250.8 *3*		0.0	0$^+$			
4311.1		775.1[a] *4*	70 *20*	3536.0				
		1323.0[a] *4*	100	2988.09				
4326.43	(1,2,3)	1014.2[d] *2*	31 *5*	3312.29	3$^-$			
		1634.0[d] *2*	100 *5*	2692.347	3$^-$			
4331.3	1	4331.2 *12*	100	0.0	0$^+$			
4363.47	4$^+$	885.83[d] *10*	100 *8*	3477.62	(2$^+$,3)			
		1443.9[d] *5*	20 *5*	2919.74	1$^+$	[M3]	0.000548 *8*	α(K)=0.000483 *7*; α(L)=5.01×10^{-5} *7*; α(M)=7.50×10^{-6} *11* α(N)=4.94×10^{-7} *7*; α(IPF)=6.52×10^{-6} *9*

$^{76}_{32}Ge_{44}$-22

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[†]	Comments
								E_γ: this γ from $J^\pi=4^+$ to J=1 requiring high multipolarity is questionable.
4476.67?	(≤4)	843.8[d] *2*	100 *10*	3632.92	(2^+)			
		3913.3[d] *5*	11 *3*	562.917	2^+			
4546.8	9^+	1014.0 *4*	100	3532.81	(7^+)			
4613.0	10^+	1069.7[a] *4*	100	3543.27	8^+			
4623.7	1^+	4623.5 *11*		0.0	0^+	M1	1.30×10^{-3} *2*	α(K)=1.849×10^{-5} *26*; α(L)=1.857×10^{-6} *26*; α(M)=2.77×10^{-7} *4* α(N)=1.837×10^{-8} *26*; α(IPF)=0.001275 *18*
4661.2	1	4661.0 *4*		0.0	0^+			
4678.26	1	4678.1 *1*		0.0	0^+			
4686.8	(9^-)	958.9[a] *4*	100	3727.83	(7^-)			
		1143.6[a] *4*	40 *30*	3543.27	8^+			
4719.88	$(2^+,3,4^+)$	1310.6[d] *3*	75 *13*	3409.19	(1,2,3)			
		1878.3 *2*	98 *11*	2841.61	2^+			
		2435.6 *3*	100 *13*	2284.22	$(3)^-$			
4720.5		936.9 *4*	100	3783.57	$(4^+,5,6,7^-)$			
		992.7[d] *4*	5 *5*	3727.83	(7^-)			
4722.36	(1)	4722.2 *2*		0.0	0^+			
4741.16		4741.0 *2*		0.0	0^+			
4784.04?	(1,2,3)	1461.2[d] *3*	74 *15*	3322.80	(2^+)			
		3675.60[d] *45*	100 *11*	1108.416	2^+			
4789.06		4788.9 *3*		0.0	0^+			
4812.47?	$(2^+,3)$	1892.7[d] *2*	100 *7*	2919.74	1^+			
		3402.4[d] *3*	33 *5*	1409.982	4^+			
4814.92?	(1,2,3)	1182.1[d] *3*	100 *15*	3632.92	(2^+)			
		1502.3[d] *5*	96 *13*	3312.29	3^-			
4837.2	(1)	4837.0 *4*		0.0	0^+			
4846.07	1	4845.9 *3*		0.0	0^+			
4874.67		4874.5 *2*		0.0	0^+			
4917.2	1	4917.0 *6*		0.0	0^+			
4936.07	1	4935.9 *2*		0.0	0^+			
5116.59	1	5116.4 *2*		0.0	0^+			
5122.47	(1,2,3)	1489.6 *4*	34 *10*	3632.92	(2^+)			
		1940.30 *14*	100 *7*	3182.19	(2^+)			
		1980.4 *5*	32 *6*	3141.39	1^+			
5166.89	(1)	5166.7 *2*		0.0	0^+			
5185.99	(1)	5185.8 *1*		0.0	0^+			
5202.49	1	5202.3 *2*		0.0	0^+			

$^{76}_{32}Ge_{44}$-23

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[†]	Comments
5222.19		5222.0 *3*		0.0	0^+			
5267.00	1	5266.8 *3*		0.0	0^+			
5273.8	(1)	5273.6 *6*		0.0	0^+			
5285.10	1	5284.9 *2*		0.0	0^+			
5304.30	1	5304.1 *3*		0.0	0^+			
5365.80	1	5365.6 *3*		0.0	0^+			
5379.7	1	5379.5 *4*		0.0	0^+			
5390.8	(1)	5390.6 *5*		0.0	0^+			
5418.8	(1)	5418.6 *4*		0.0	0^+			
5434.51	1	5434.3 *3*		0.0	0^+			
5450.0?	(12^+)	837.0[ad] *4*	100	4613.0	10^+			
5522.58	(1,2,3)	1282.9[cd] *4*	<81[c]	4239.36	(1,2,3)			
		2680.9 *3*	92 *10*	2841.61	2^+			
		2868.1 *2*	100 *14*	2654.51	$(0^+,1^+)$			
5540.42	1	5540.2 *2*	100	0.0	0^+			
5567.62	(1)	5567.4 *2*		0.0	0^+			
5579.0	1	5578.8 *5*		0.0	0^+			
5626.7	1	5626.5 *8*	100	0.0	0^+			
5663.32	(2^+)	2481.1 *4*	50 *10*	3182.19	(2^+)			
		2970.90 *15*	100 *12*	2692.347	3^-			
		3752.10 *50*	42 *9*	1911.12	0^+			
		4253.3 *5*	57 *9*	1409.982	4^+			
5665.43	1	5665.2 *3*		0.0	0^+			
5677.83	1	5677.6 *3*		0.0	0^+			
5699.03	1^-	5698.8 *2*	100	0.0	0^+	E1	2.23×10^{-3} *3*	α(K)=1.069×10^{-5} *15*; α(L)=1.070×10^{-6} *15*; α(M)=1.597×10^{-7} *22* α(N)=1.057×10^{-8} *15*; α(IPF)=0.002215 *31*
5708.6	(1)	5708.4 *6*		0.0	0^+			
5748.53	1^-	5748.3 *1*	100	0.0	0^+	E1	2.24×10^{-3} *3*	α(K)=1.058×10^{-5} *15*; α(L)=1.059×10^{-6} *15*; α(M)=1.580×10^{-7} *22* α(N)=1.046×10^{-8} *15*; α(IPF)=0.002227 *31*
5749.90?	(1,2,3)	2981.2[d] *4*	100 *20*	2768.73	2^+			
		3465.5[d] *4*	68 *13*	2284.22	$(3)^-$			
5785.24	1	5785.0 *2*		0.0	0^+			
5794.34	1	5794.1 *2*		0.0	0^+			
5821.0		5820.8 *6*		0.0	0^+			
5825.5	1	5825.3 *8*		0.0	0^+			
5843.2	(11^-)	1156.4[a] *4*	100	4686.8	(9^-)			
5846.7		5846.5 *7*		0.0	0^+			
5865.0		5864.8 *6*		0.0	0^+			
5882.92?	(1,2,3)	2700.5[d] *4*	94 *16*	3182.19	(2^+)			

$^{76}_{32}Ge_{44}$-24

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]	α[†]	Comments
5882.92?	(1,2,3)	3190.6[d] *3*	100 *13*	2692.347	3^-			
5909.05		5908.8 *3*		0.0	0^+			
5955.9	1	5955.6 *8*	100	0.0	0^+			
5983.25	1^-	5983.0 *2*	100	0.0	0^+	E1	2.30×10^{-3} *3*	α(K)=1.009×10^{-5} *14*; α(L)=1.010×10^{-6} *14*; α(M)=1.507×10^{-7} *21* α(N)=9.98×10^{-9} *14*; α(IPF)=0.002285 *32*
6021.13?	(1,2,3)	3328.7[d] *8*	100 *30*	2692.347	3^-			
		3366.5[d] *3*	73 *14*	2654.51	$(0^+,1^+)$			
		3736.90[d] *45*	80 *20*	2284.22	$(3)^-$			
6048.7	1	6048.4 *4*		0.0	0^+			
6065.1?	(1,2,3)	2882.9[d] *9*	47 *16*	3182.19	(2^+)			
		3145.3[d] *4*	100 *20*	2919.74	1^+			
6081.7	(1)	6081.4 *4*		0.0	0^+			
6102.3		6102.0 *9*		0.0	0^+			
6113.86	1	6113.6 *3*		0.0	0^+			
6130.57	1	6130.3 *2*		0.0	0^+			
6145.87	1	6145.6 *2*		0.0	0^+			
6162.7		6162.4 *9*		0.0	0^+			
6191.57	1	6191.3 *2*		0.0	0^+			
6223.7		6223.4 *7*		0.0	0^+			
6228.5	1	6228.2 *4*		0.0	0^+			
6235.1		6234.8 *9*		0.0	0^+			
6240.98	1	6240.7 *3*		0.0	0^+			
6272.98	1	6272.7 *3*		0.0	0^+			
6285.58	1	6285.3 *2*		0.0	0^+			
6315.7	1	6315.4 *4*		0.0	0^+			
6330.48	1	6330.2 *2*		0.0	0^+			
6366.5		6366.2 *11*		0.0	0^+			
6393.5	1	6393.2 *5*		0.0	0^+			
6408.4	1	6408.1 *5*		0.0	0^+			
6436.4		6436.1 *9*		0.0	0^+			
6448.6		6448.3 *11*		0.0	0^+			
6472.50	1	6472.2 *3*		0.0	0^+			
6498.20	1	6497.9 *3*		0.0	0^+			
6513.6	1	6513.3 *4*		0.0	0^+			
6572.3		6572.0 *6*		0.0	0^+			
6601.51	1	6601.2 *2*		0.0	0^+			
6611.4		6611.1 *6*		0.0	0^+			
6629.31	1	6629.0 *3*		0.0	0^+			
6642.2		6641.9 *5*		0.0	0^+			
6661.7		6661.4 *9*		0.0	0^+			

$^{76}_{32}Ge_{44}$-25

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]
6670.91	1	6670.6 *3*		0.0	0^+	
6741.9	(1)	6741.6 *6*		0.0	0^+	
6765.1	1	6764.8 *4*		0.0	0^+	
6787.03	1	6786.7 *2*		0.0	0^+	
6816.83	1	6816.5 *3*		0.0	0^+	
6835.83	1	6835.5 *2*		0.0	0^+	
6846.53	1	6846.2 *3*		0.0	0^+	
6880.6	1	6880.3 *4*		0.0	0^+	
6884.5		6884.2 *10*		0.0	0^+	
6899.2	1	6898.9 *5*		0.0	0^+	
6908.3		6908.0 *18*		0.0	0^+	
6938.9	1	6938.6 *7*		0.0	0^+	
6960.24	1	6959.9 *3*		0.0	0^+	
6985.4	1	6985.1 *5*		0.0	0^+	
6999.05	1^-	6998.7 *3*	100	0.0	0^+	E1
7011.4	1	7011.0 *9*		0.0	0^+	
7026.35	$1^{(-)}$	7026.0 *3*		0.0	0^+	(E1)
7048.3	1	7047.9 *9*		0.0	0^+	
7081.6	1	7081.2 *9*		0.0	0^+	
7091.8	1	7091.4 *4*		0.0	0^+	
7102.8	1	7102.4 *6*		0.0	0^+	
7121.66	1	7121.3 *3*		0.0	0^+	
7130.46	1	7130.1 *3*		0.0	0^+	
7147.7	1	7147.3 *4*		0.0	0^+	
7172.0		7171.6 *9*		0.0	0^+	
7250.9	1^-	7250.5 *7*		0.0	0^+	E1
7290.1		7289.7 *4*		0.0	0^+	
7301.08	1^-	7300.7 *3*		0.0	0^+	E1
7407.09	1	7406.7 *3*		0.0	0^+	
7416.0		7415.6 *4*		0.0	0^+	
7452.6		7452.2 *5*		0.0	0^+	
7479.0		7478.6 *5*		0.0	0^+	
7485.40	1	7485.0 *3*		0.0	0^+	
7521.6	1	7521.2 *5*		0.0	0^+	
7537.0	(1)	7536.6 *4*		0.0	0^+	
7549.2	(1)	7548.8 *7*		0.0	0^+	
7585.0	1	7584.6 *4*		0.0	0^+	
7643.0	1	7642.6 *4*		0.0	0^+	
7651.2	1	7650.8 *4*		0.0	0^+	
7678.1	1	7677.7 *4*		0.0	0^+	
7694.6	1	7694.2 *11*	100	0.0	0^+	
7723.1	(1)	7722.7 *4*		0.0	0^+	
7777.3	(1)	7776.9 *7*		0.0	0^+	
7784.2		7783.8 *9*		0.0	0^+	
7797.0	1	7796.6 *4*		0.0	0^+	
7804.1	1	7803.7 *6*		0.0	0^+	
7814.7	1	7814.3 *7*		0.0	0^+	
7817.63		7817.2 *2*		0.0	0^+	
7836.7		7836.3 *6*		0.0	0^+	
7849.7	(1)	7849.3 *5*		0.0	0^+	
7861.6	1	7861.2 *4*		0.0	0^+	
7883.7	1	7883.3 *10*		0.0	0^+	
7894.0		7893.6 *12*		0.0	0^+	
7916.2	1^-	7915.8 *24*	100	0.0	0^+	E1
7950.35	1	7949.9 *2*		0.0	0^+	
7976.1	(1)	7975.6 *7*		0.0	0^+	
7996.3	(1)	7995.8 *4*		0.0	0^+	
8018.0	(1)	8017.5 *14*		0.0	0^+	
8027.0	(1)	8026.5 *8*		0.0	0^+	
8049.8	(1)	8049.3 *6*		0.0	0^+	
8063.9	1	8063.4 *8*		0.0	0^+	
8094.7		8094.2 *8*		0.0	0^+	
8103.3		8102.8 *5*		0.0	0^+	
8110.0		8109.5 *8*		0.0	0^+	
8135.0		8134.5 *11*		0.0	0^+	
8152.3	$1^{(-)}$	8151.8 *5*	100	0.0	0^+	(E1)
8160.7		8160.2 *9*		0.0	0^+	
8178.3	1	8177.8 *4*		0.0	0^+	
8188.3	1	8187.8 *5*		0.0	0^+	
8236.9	(1)	8236.4 *4*		0.0	0^+	
8253.4		8252.9 *9*		0.0	0^+	
8260.1	(1)	8259.6 *6*		0.0	0^+	
8284.99	(1)	8284.5 *3*		0.0	0^+	
8294.8		8294.3 *12*		0.0	0^+	
8304.0	1	8303.5 *5*		0.0	0^+	
8318.29	1	8317.8 *3*		0.0	0^+	
8329.4	1	8328.9 *7*		0.0	0^+	
8348.2		8347.7 *9*		0.0	0^+	
8357.9	(1)	8357.4 *7*		0.0	0^+	
8397.8		8397.3 *5*		0.0	0^+	
8418.5		8418.0 *15*		0.0	0^+	
8425.70	1	8425.2 *3*	100	0.0	0^+	

$^{76}_{32}Ge_{44}$-26

Adopted Levels, Gammas (continued)

γ(^{76}Ge) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[#]
8446.6	(1)	8446.1 *7*		0.0	0^+	
8462.4		8461.9 *9*		0.0	0^+	
8500.51	1	8500.0 *3*		0.0	0^+	
8521.2		8520.7 *6*		0.0	0^+	
8535.6	1	8535.1 *5*		0.0	0^+	
8546.6	1^-	8546.1 *5*		0.0	0^+	E1
8552.8	1	8552.3 *8*		0.0	0^+	
8567.42	1	8566.9 *3*		0.0	0^+	
8602.8		8602.3 *5*		0.0	0^+	
8626.2	1	8625.7 *7*		0.0	0^+	
8649.6		8649.1 *8*		0.0	0^+	
8662.5	(1)	8662.0 *4*		0.0	0^+	
8696.7		8696.2 *7*		0.0	0^+	
8741.2	(1)	8740.7 *4*		0.0	0^+	
8753.2	1^-	8752.7 *6*		0.0	0^+	E1
8768.9	1	8768.4 *9*		0.0	0^+	
8806.8		8806.2 *5*		0.0	0^+	
8844.3	1	8843.7 *4*		0.0	0^+	
8889.1		8888.5 *9*		0.0	0^+	
9014.2	1^-	9013.6 *14*	100	0.0	0^+	E1
9020.1	(1)	9019.5 *10*		0.0	0^+	
9033.7		9033.1 *9*		0.0	0^+	
9052.3	(1)	9051.7 *12*		0.0	0^+	
9059.1		9058.5 *11*		0.0	0^+	
9163.9	1	9163.3 *9*		0.0	0^+	
9176.1	1	9175.5 *8*		0.0	0^+	
9188.0	1	9187.4 *4*		0.0	0^+	
9255.2		9254.6 *7*		0.0	0^+	
9264.7		9264.1 *6*		0.0	0^+	
9305.6		9305.0 *4*		0.0	0^+	
9316.4		9315.8 *4*		0.0	0^+	
9338.4		9337.8 *6*		0.0	0^+	
9355.1	(1)	9354.5 *8*		0.0	0^+	
9366.5	1	9365.9 *5*		0.0	0^+	
9378.5	(1)	9377.9 *4*		0.0	0^+	
9400.0	1	9399.4 *6*		0.0	0^+	
9410.5	1	9409.9 *4*		0.0	0^+	
9418.2	1	9417.6 *5*		0.0	0^+	
9557.2	1	9556.6 *5*		0.0	0^+	

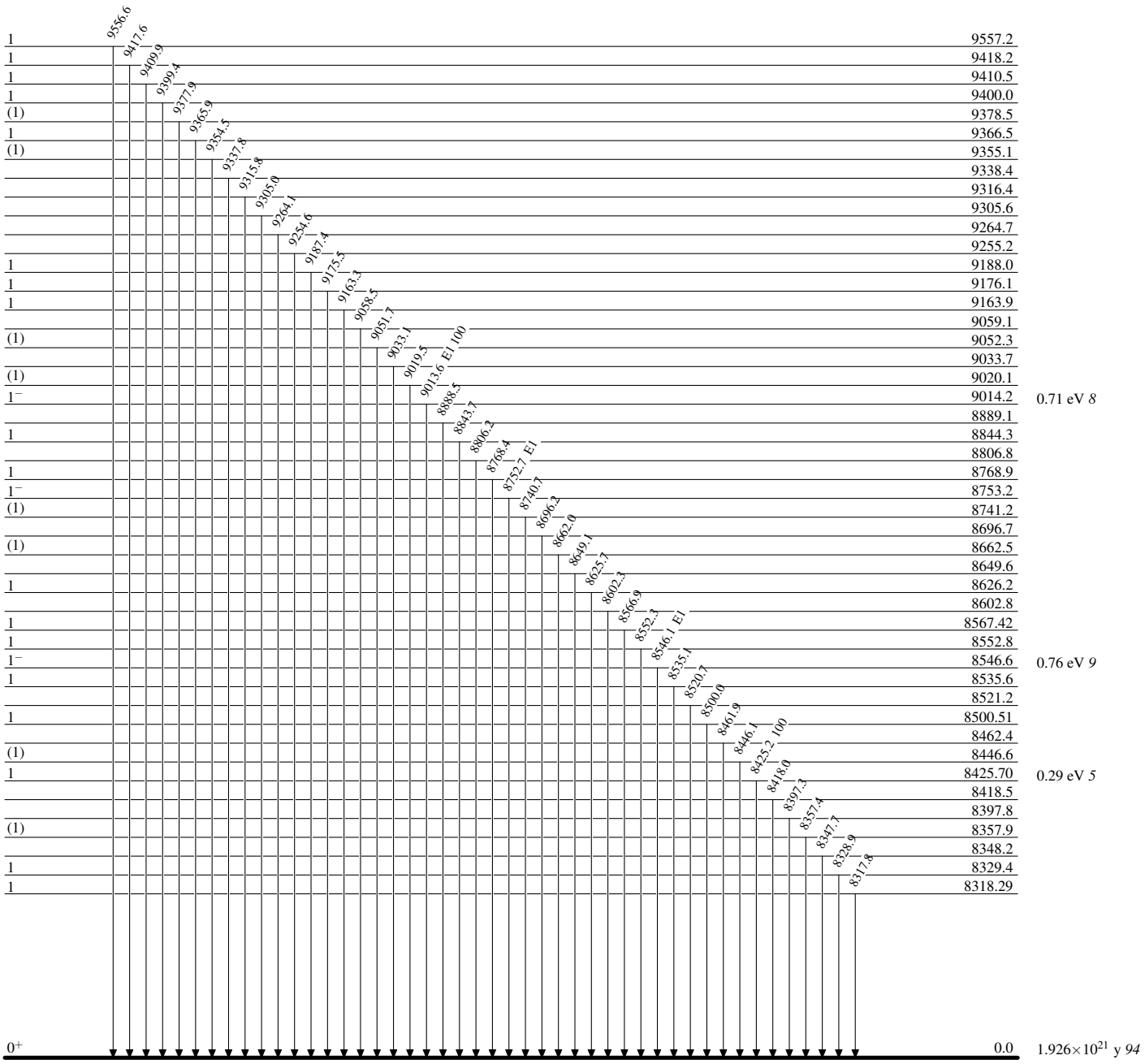
† Additional information 4.
‡ When a level is populated in more than one gamma-ray datasets, averages of all available data of comparable precision are taken. Exceptions are noted.
# From $\gamma(\theta)$ in (n,n′γ). RUL for E2 and M2 restricts to E2 and M1+E2 for mult=Q and D+Q, respectively. Exceptions are noted.
@ From (n,n′γ) only.
& Placement suggested by the evaluators.
a γ from ^{238}U(^{76}Ge,^{76}Ge′γ) only.
b Poor fit, level-energy difference=1611.6.
c Multiply placed with undivided intensity.
d Placement of transition in the level scheme is uncertain.

$^{76}_{32}Ge_{44}$-27

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

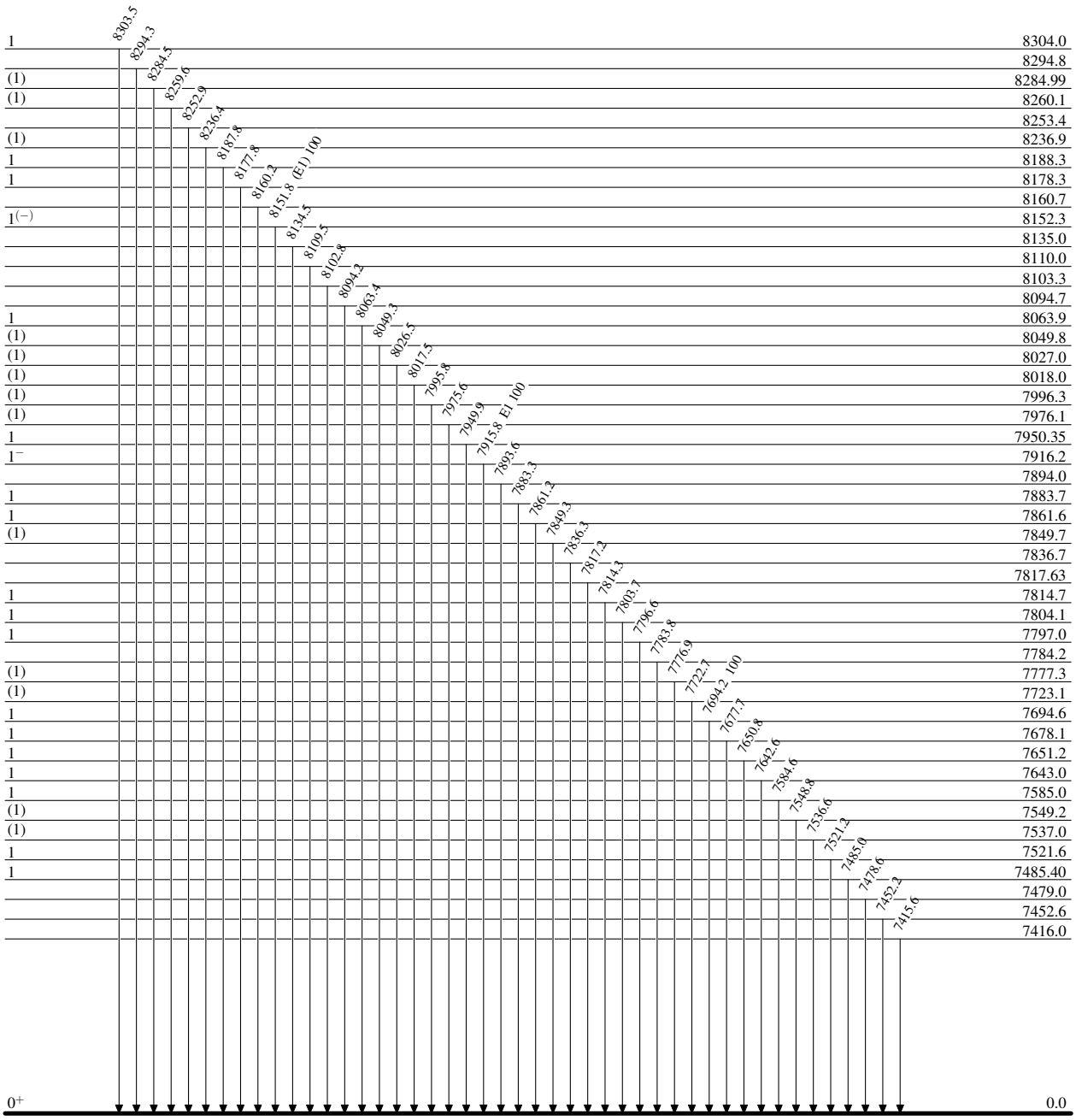


$^{76}_{32}Ge_{44}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

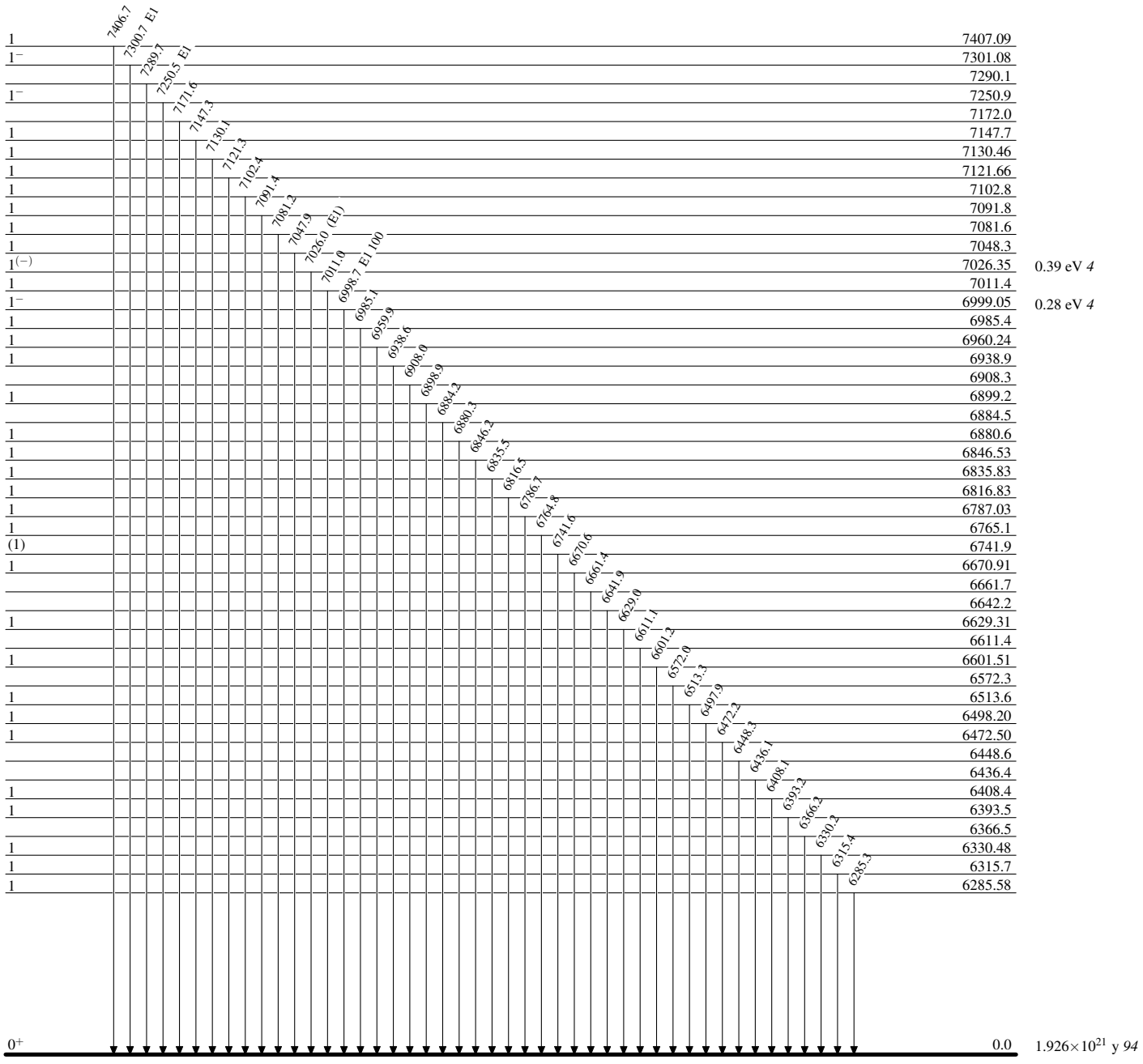


$^{76}_{32}Ge_{44}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



$^{76}_{32}Ge_{44}$

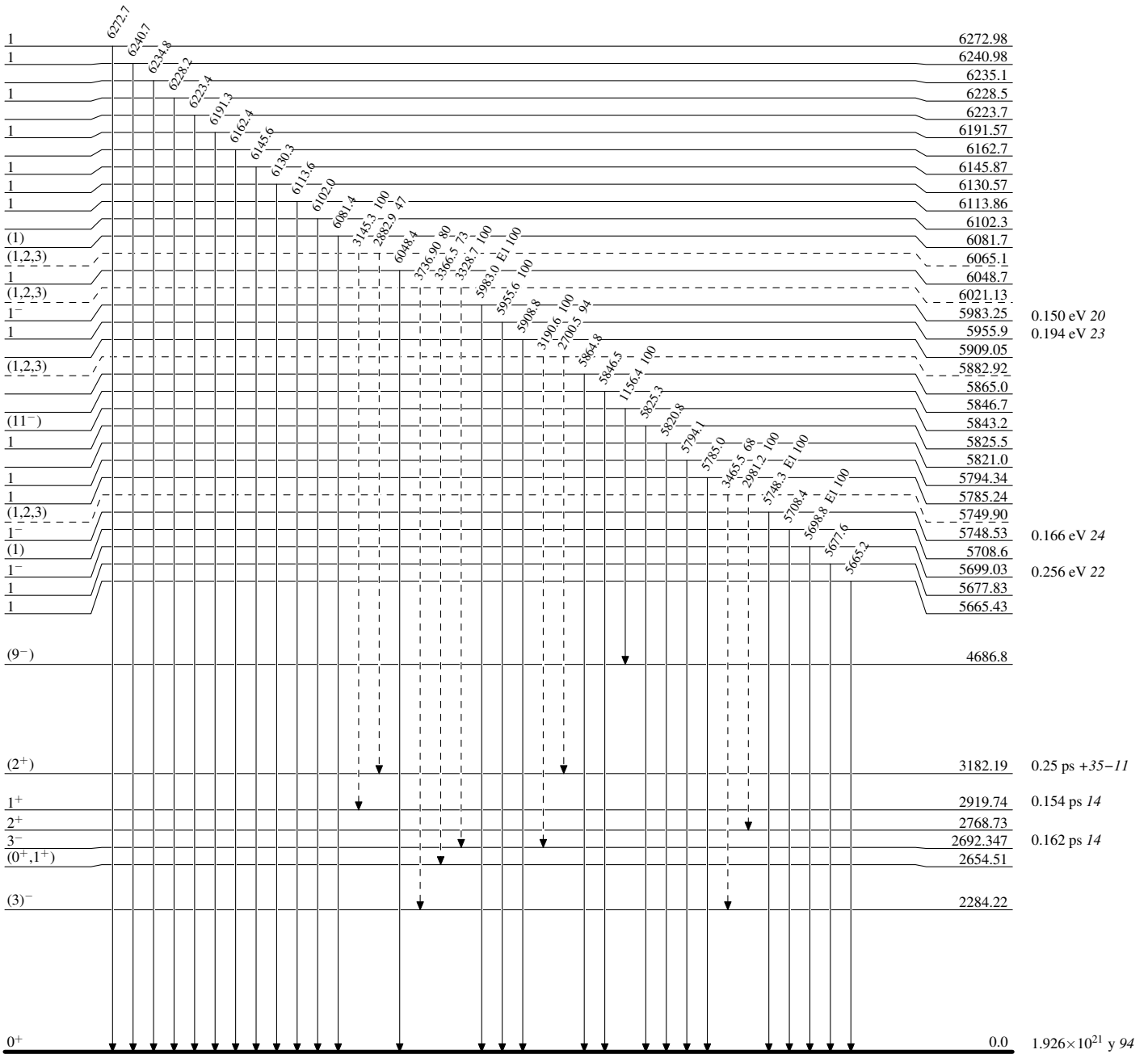
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{76}_{32}Ge_{44}$

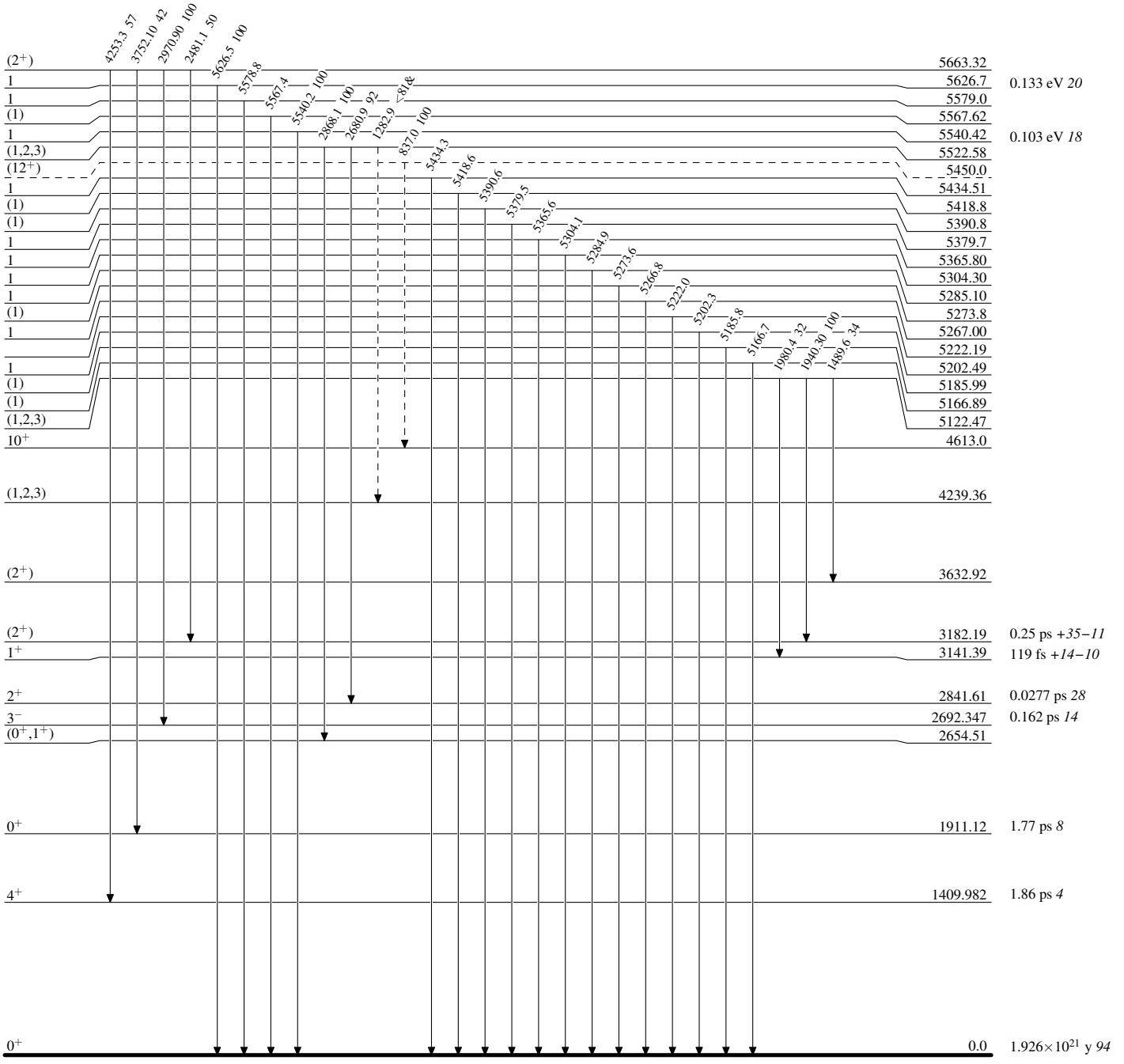
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

– – – – – – ► γ Decay (Uncertain)



$^{76}_{32}Ge_{44}$

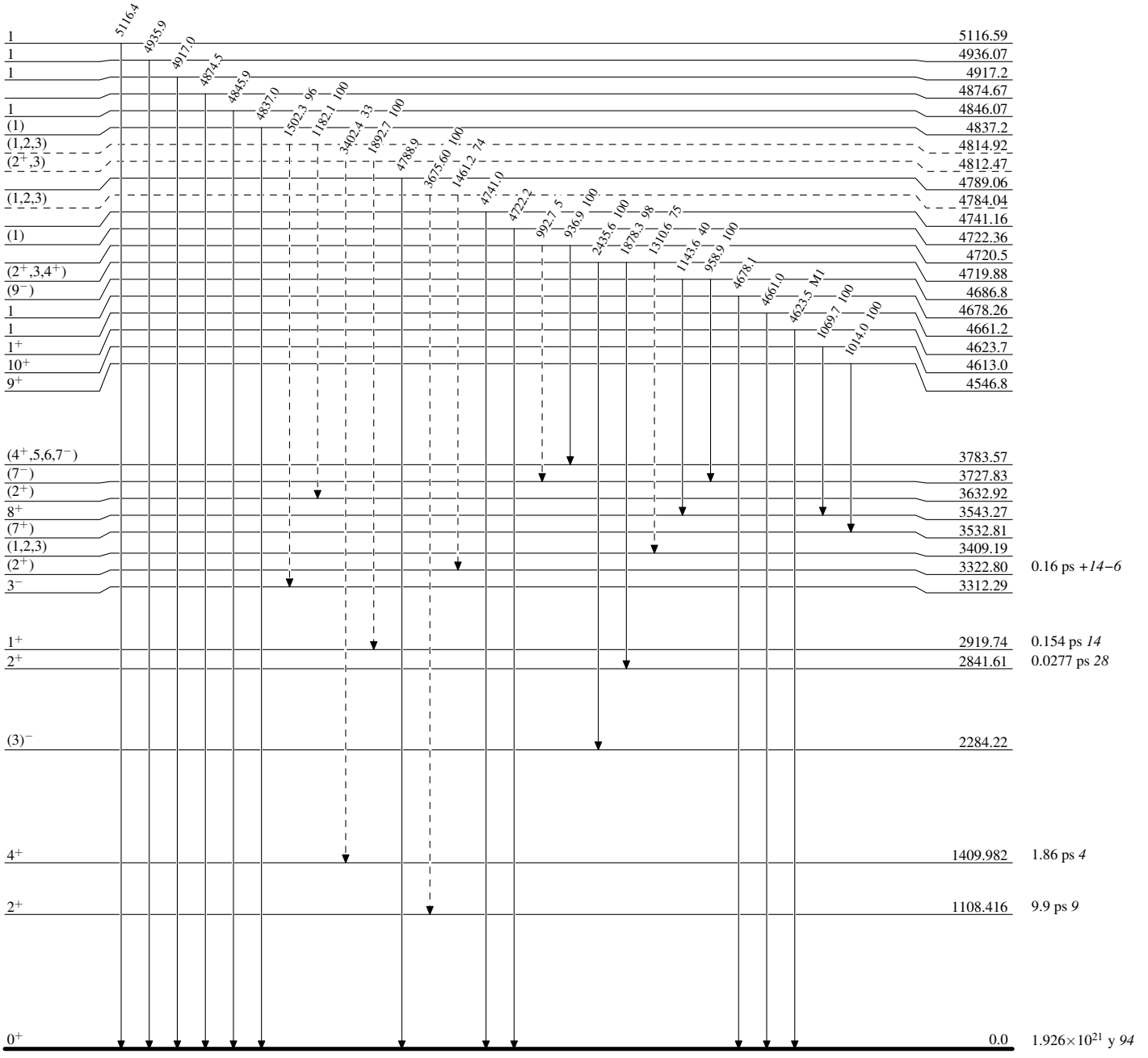
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

- - - - - - ► γ Decay (Uncertain)



$^{76}_{32}Ge_{44}$

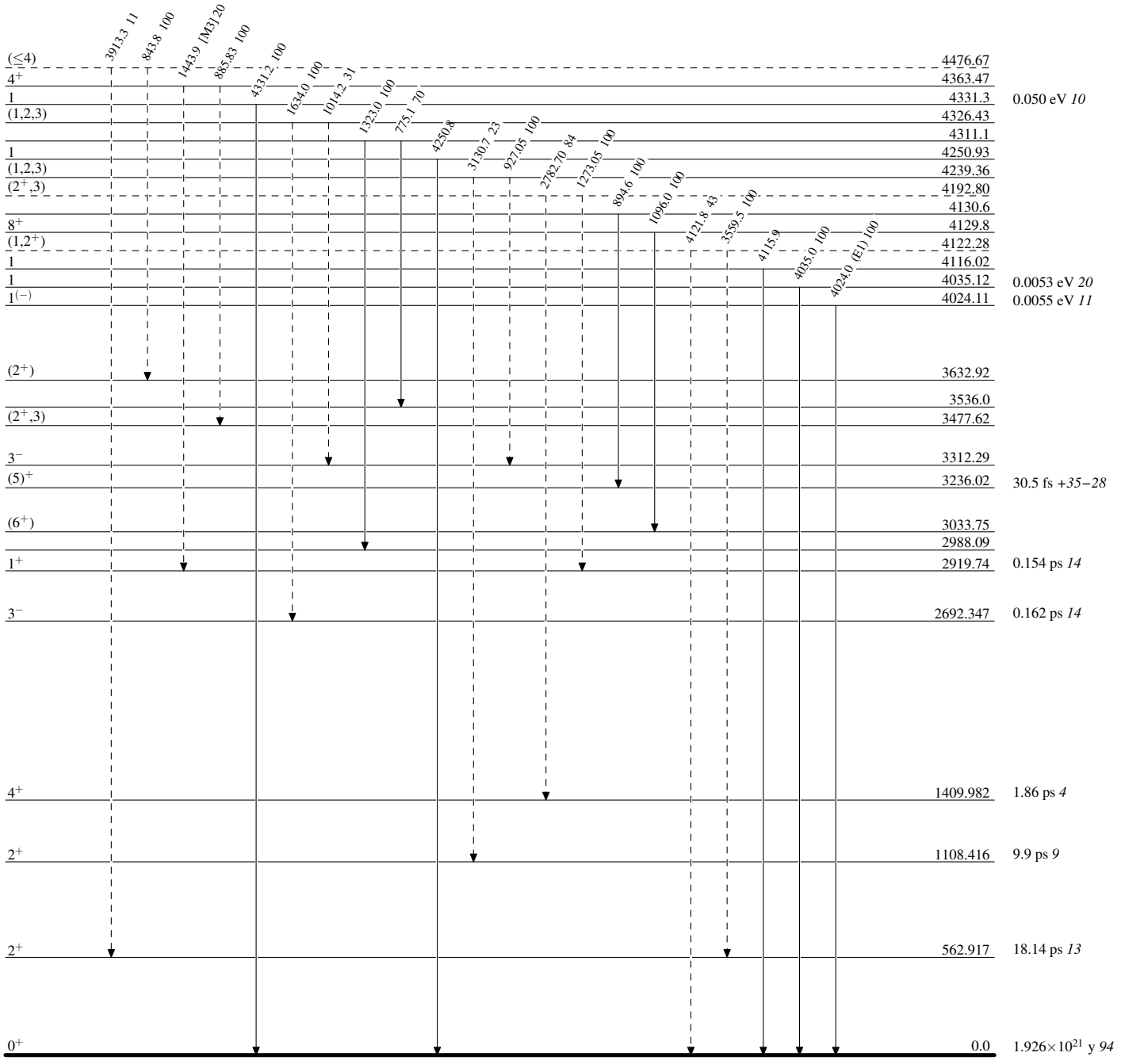
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

γ Decay (Uncertain)

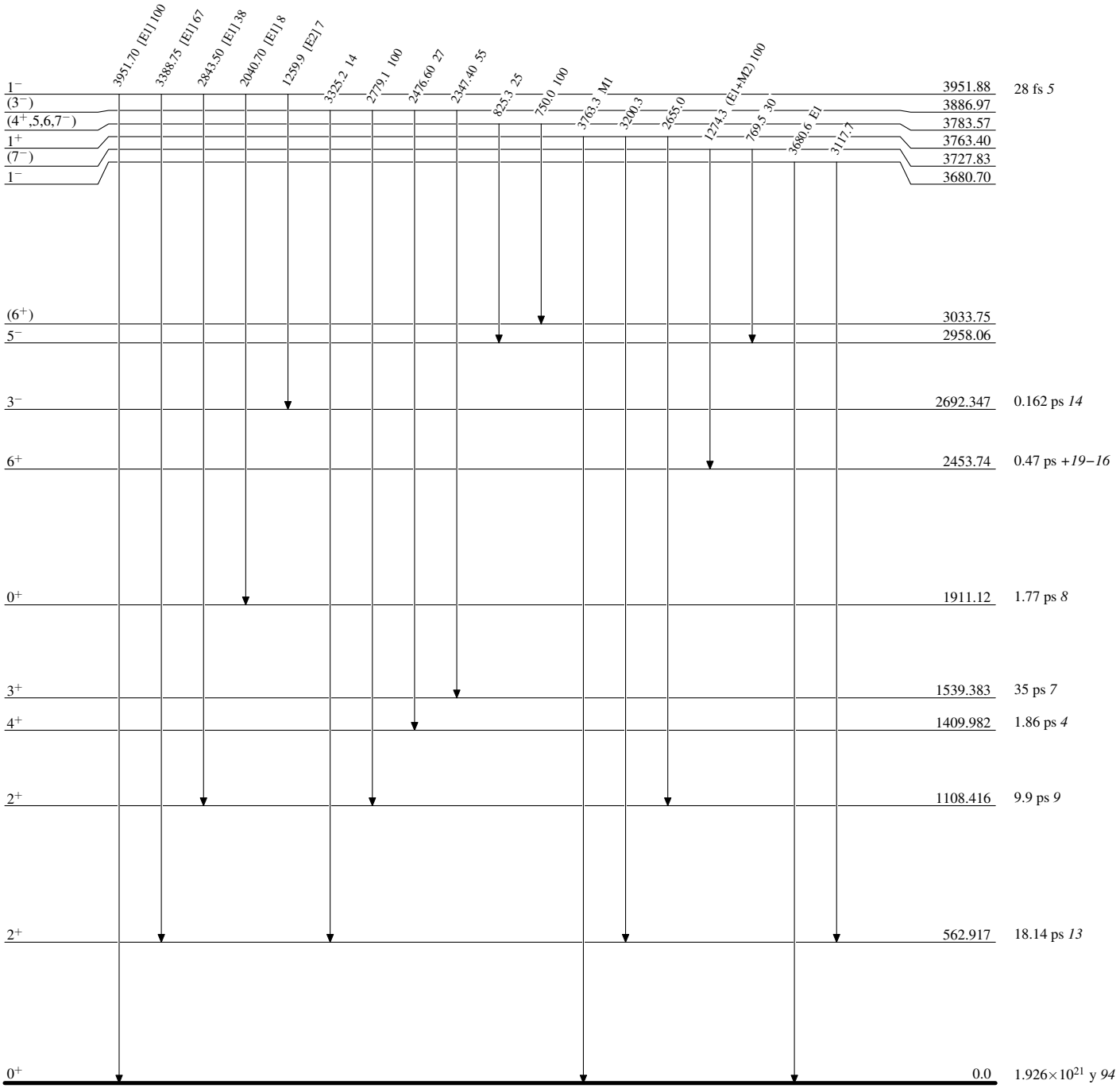


$^{76}_{32}Ge_{44}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

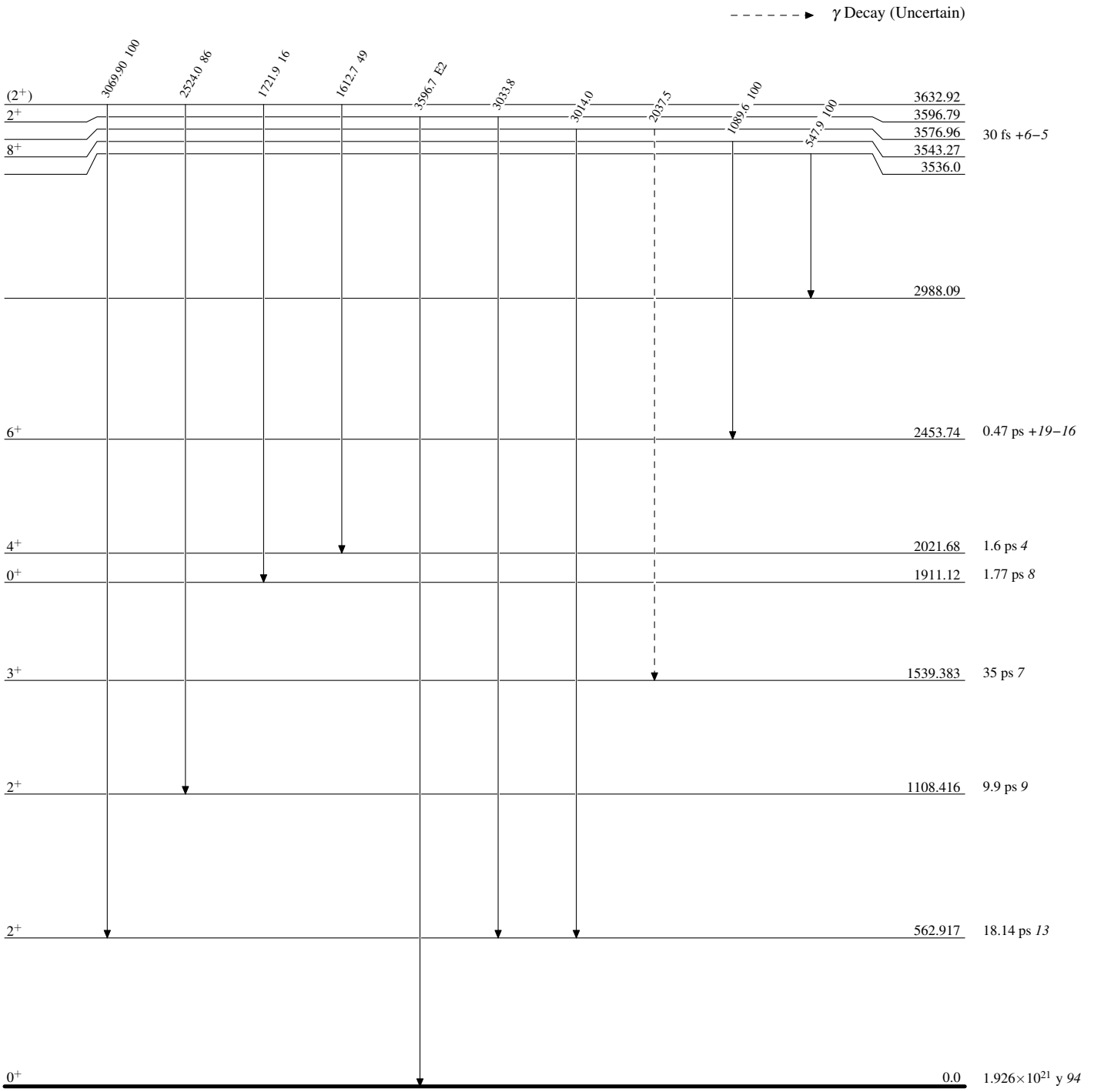


$^{76}_{32}Ge_{44}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



$^{76}_{32}Ge_{44}$

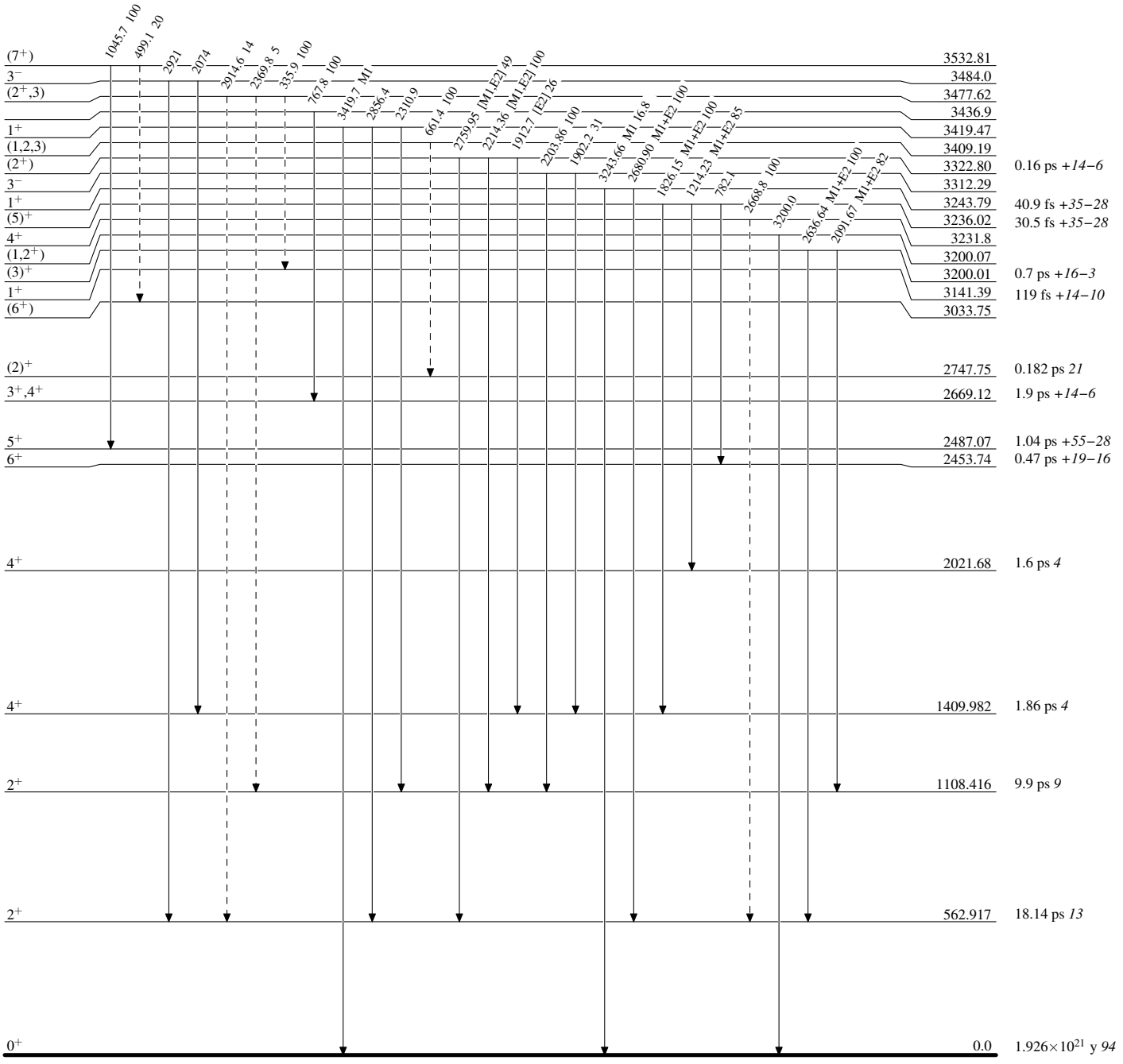
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

– – – – – – ► γ Decay (Uncertain)



$^{76}_{32}Ge_{44}$

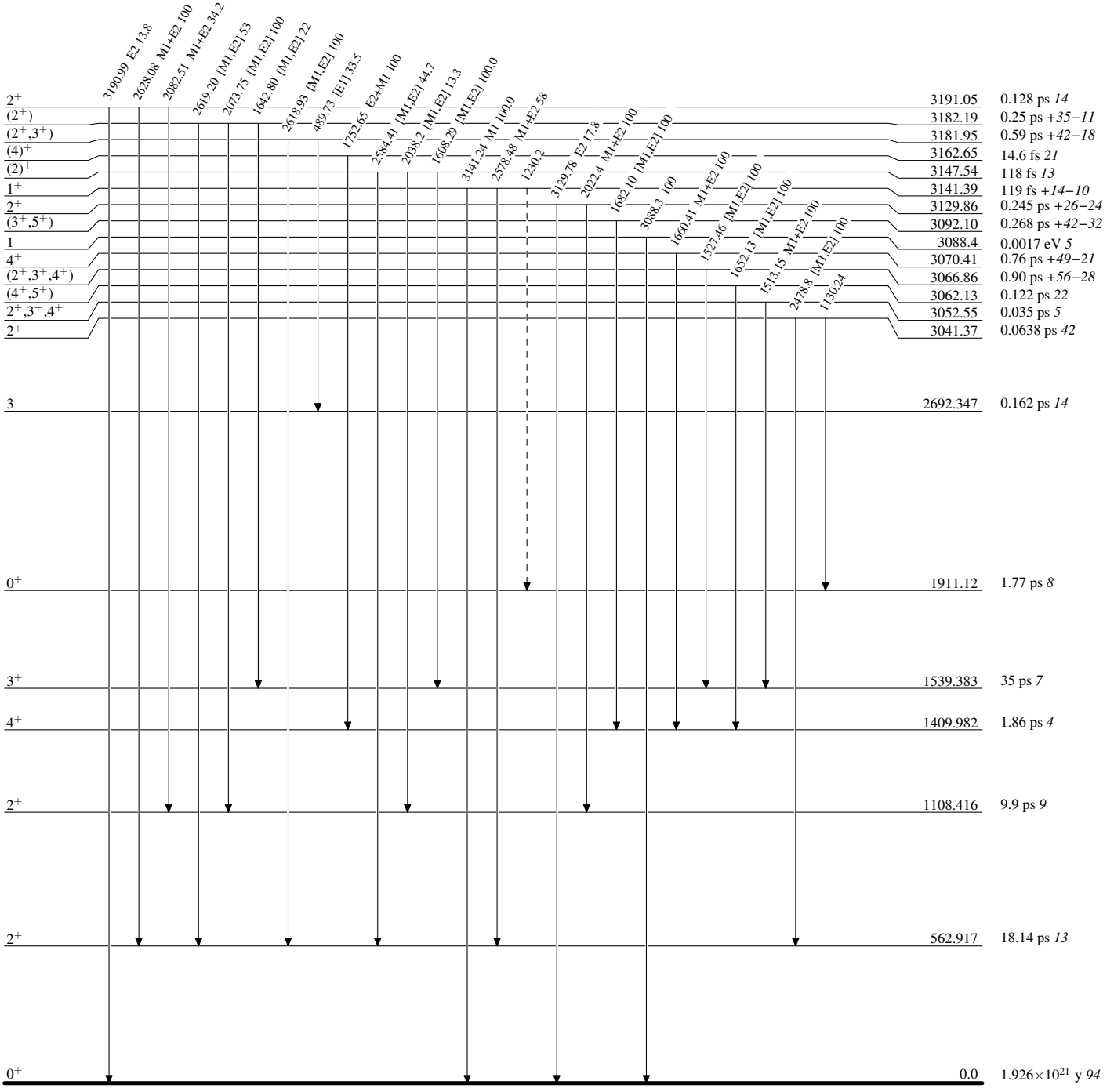
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

γ Decay (Uncertain)



$^{76}_{32}Ge_{44}$

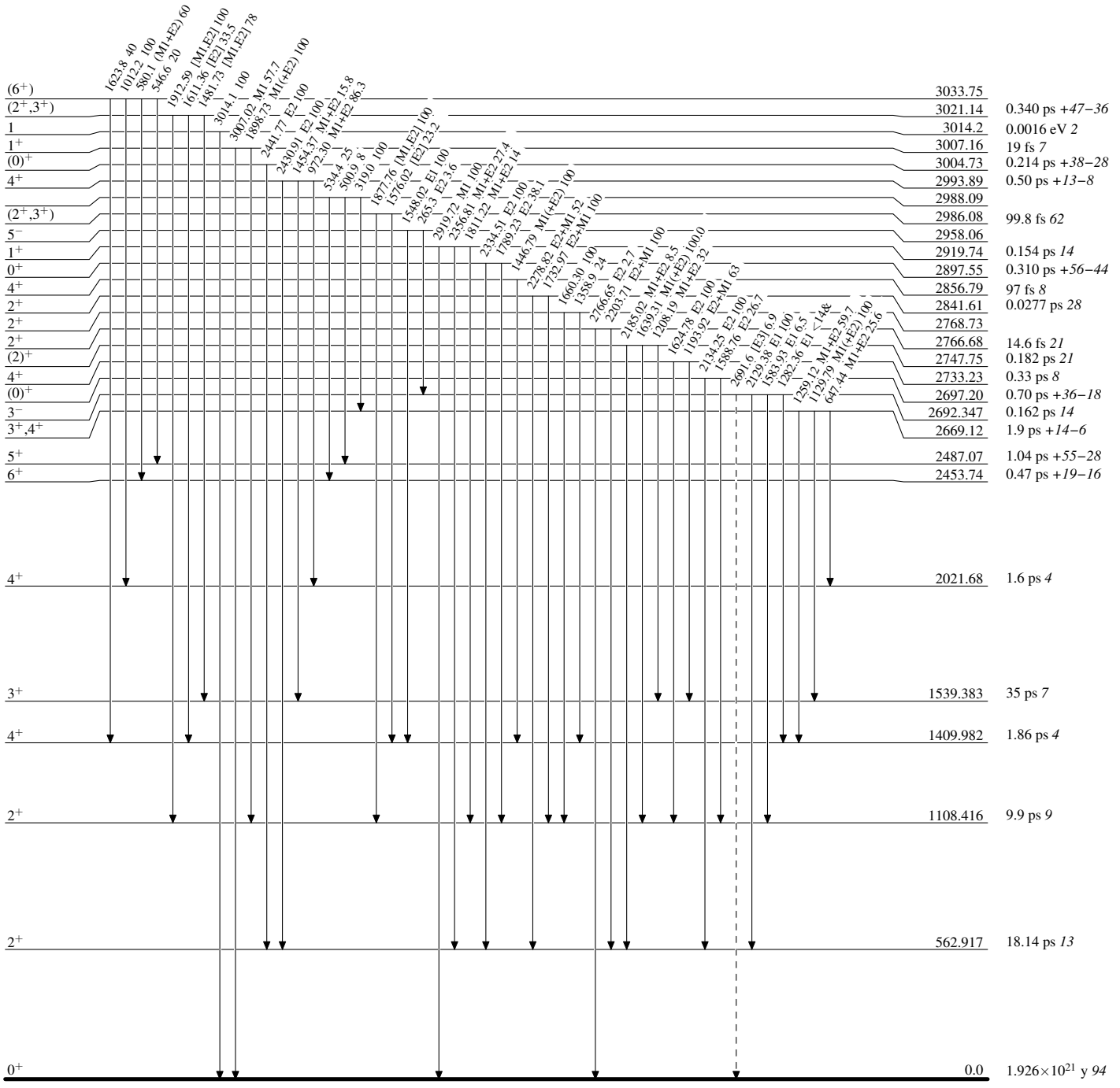
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

– – – – – – ► γ Decay (Uncertain)



$^{76}_{32}Ge_{44}$

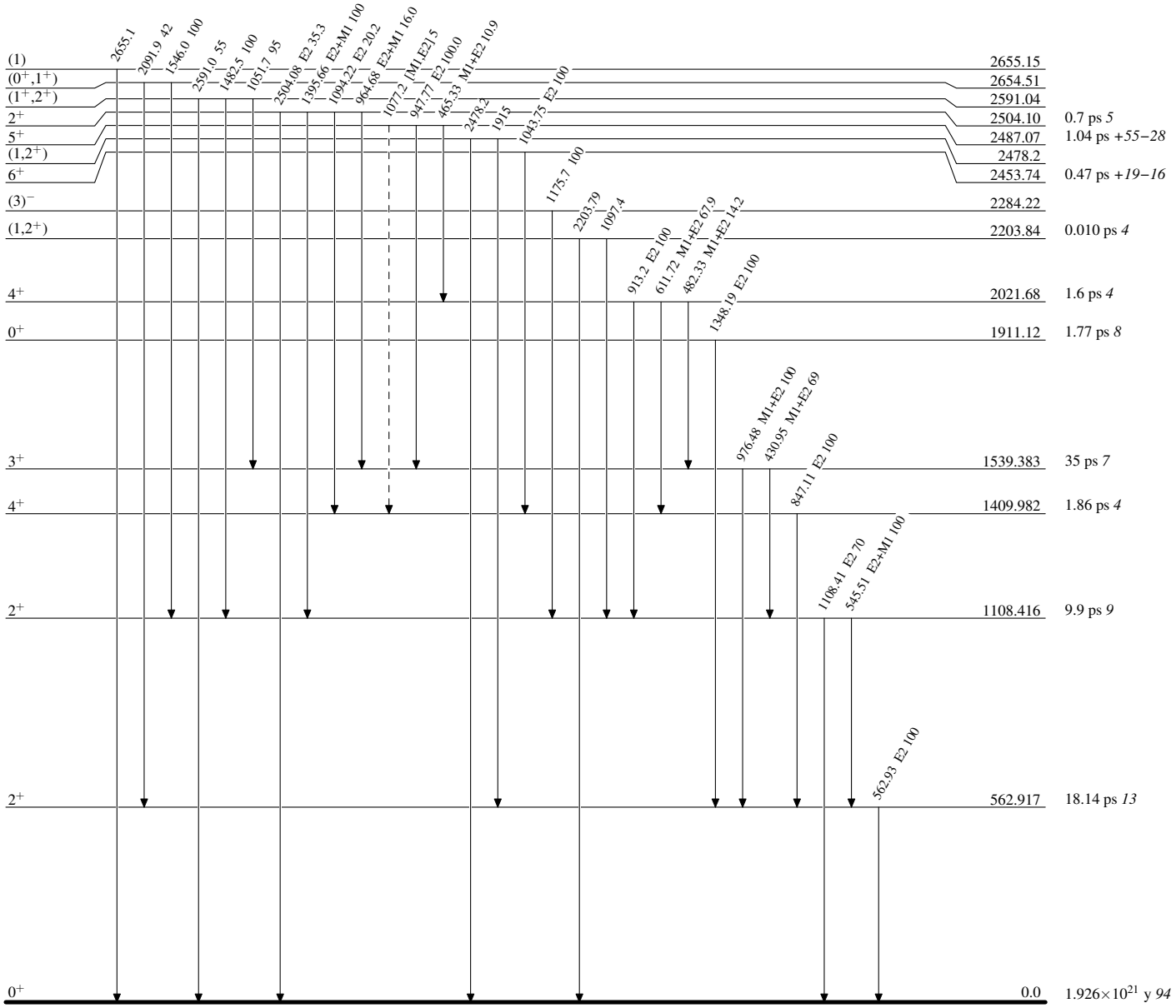
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

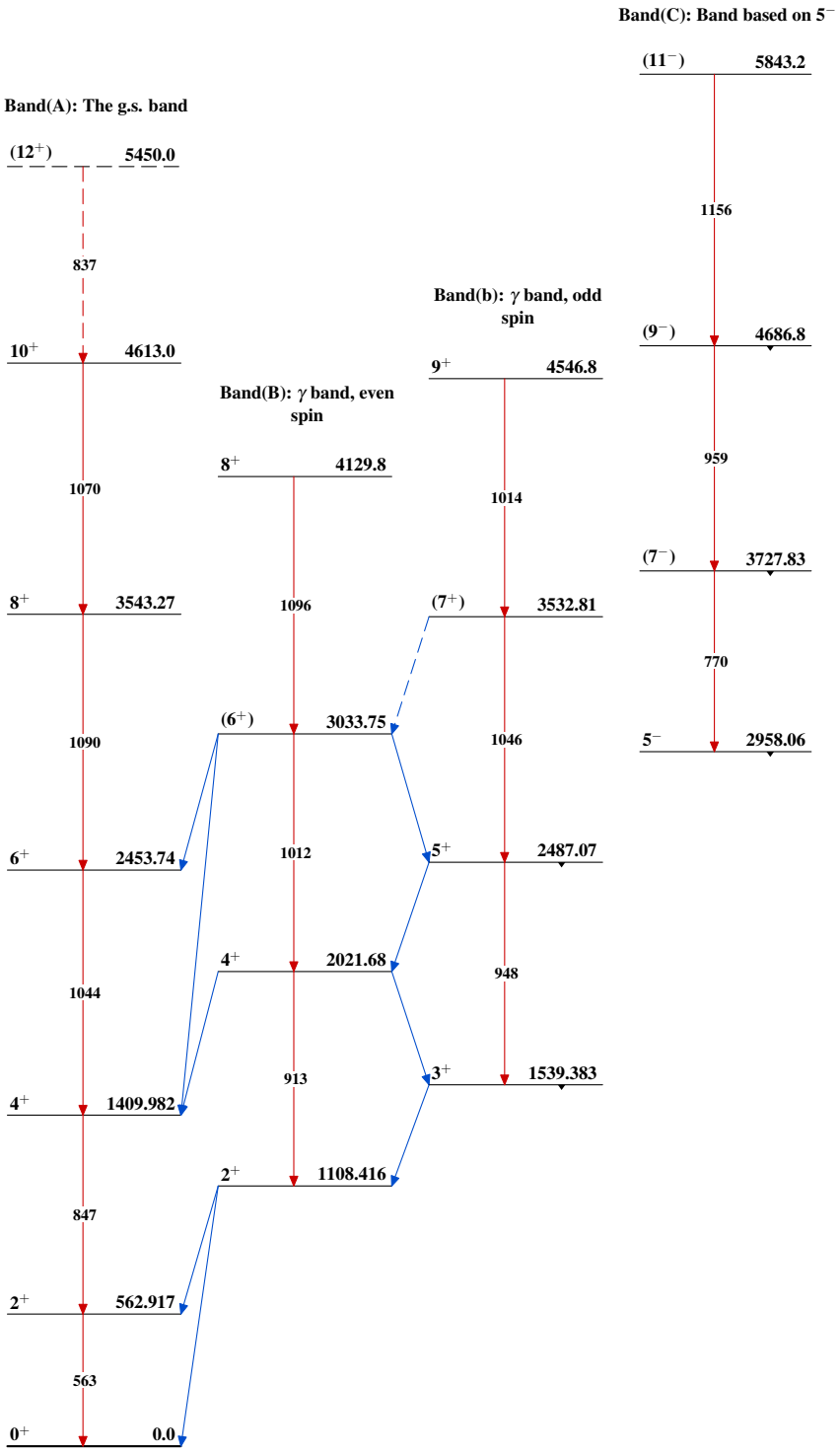
Legend

- - - - - - ► γ Decay (Uncertain)



$^{76}_{32}Ge_{44}$

Adopted Levels, Gammas



$^{76}_{32}Ge_{44}$