Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Alexandru Negret, Balraj Singh	NDS 114, 841 (2013)	30-Jun-2013

Q(β^-)=1177.2 *9*; S(n)=6505.84 *5*; S(p)=11096.3 *30*; Q(α)=−6953.1 *27* 2012Wa38
S(2n)=16702.08 *7*, S(2p)=20841.5 *19* (2012Wa38).

Additional information 1.

Theoretical structure references: 2009Ho14, 2006La24, 1995Fe15, 1987Li05, 1986Os05, 1986Ro04, 1985Ve01, 1981Ar22, 1981Er08.

^{75}Ge produced and identified by 1939Sa02 in bombardment of Ge with neutrons followed by counting the activity and measuring half-life. Later studies of ^{75}Ge decay: 1941Se03, 1948Mc32, 1968Re04, 1970Az01, 1979Bh07.

^{75}Ge Levels

Cross Reference (XREF) Flags

A	^{75}Ga β^- decay (126 s)	E	^{74}Ge(n,n),(n,γ):resonances	I	^{76}Ge(p,d)
B	^{75}Ge IT decay (47.7 s)	F	^{74}Ge(d,p),(pol d,p)	J	^{76}Ge(d,t)
C	^{73}Ge(t,p)	G	^{74}Ge(d,pγ)	K	^{76}Ge(^{3}He,α)
D	^{74}Ge(n,γ) E=thermal	H	^{74}Ge(α,^{3}He)		

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0	1/2$^-$	82.78 min *4*	ABCDEFGHIJK	%β^-=100 μ=+0.510 *5* (1970Ol02,1989Ra17,2011StZZ) J$^\pi$: spin from 1970Ol02, 1969OlZY (atomic beam), parity from L(d,p)=1. μ: atomic beam (1970Ol02). T$_{1/2}$: from γ-spectroscopy followed over 10 half-lives (1968Re04), Others: 78 min *4* (2011Ra08), 1973ArZI, 1973McZP, 1970Az01 (also 1969Az02), 82.2 min *12* (1948Mc32), 89 min *2* (1941Se03), 81 min *3* (1939Sa02). Activities with half-life of 30 min (1935Am01) and 120 min (Sugden: Nature 135, 469 (1935)) do not seem to belong to ^{75}Ge. Additional information 2.
61.92? *10*			B	
139.69 *3*	7/2$^+$	47.7 s *5*	ABCDEFGHI K	%IT=99.970 *6*; %β^-=0.030 *6* (1976Bh04) J$^\pi$: L(p,d)=L(d,p)=4 and E3 γ to 1/2$^-$. T$_{1/2}$: from 1974Ch22. Others: 46.6 s *5* (1976Bh04), 48.9 s *2* (1969Im02), 45.8 s *31* (1974Bu14), 48 s *2* (1970Me20), 48 s (1963Ma44), 49 s *2* (1954Bu94), 48 s *2* (1952Sm51), 42 s *2* (A. Flammerfeld, Z. Naturforsch. 7a, 295 (1952)).
192.19 *6*	5/2$^+$	216 ns *5*	D G	T$_{1/2}$: γ(t) in (d,pγ) (1982Is07). J$^\pi$: M1+E2 γ to 7/2$^+$ and γ from 1/2$^+$.
199.89 *11*	9/2$^+$		C FGHIJK	XREF: C(202)I(197)J(196.6). J$^\pi$: L(t,p)=0 from 9/2$^+$. L(p,d)=4 for a doublet E=197, the second component is probably L=2.
253.15 *6*	3/2$^-$		A D FG IJ	J$^\pi$: L=1 in (d,p), (p,d) and (d,t) give 1/2$^-$, 3/2$^-$. Angular correlation measurements in (d,pγ) confirm 3/2$^-$.
316.81 *7*	5/2$^-$		A D FGHIJK	J$^\pi$: L=3 and vector analyzing power in (pol d,p).
457.07 *7*	5/2$^-$		A D FGHIJK	J$^\pi$: L=3 in (p,d), (d,p) and γ to 1/2$^-$.
574.70 *5*	3/2$^-$		A D G IJK	J$^\pi$: L=1 in (p,d), (d,t) and anisotropy of 574.8γ in p$\gamma(\theta)$ in (d,pγ). L(^{3}He,α)=(3), giving (5/2$^-$,7/2$^-$) is in disagreement if 576 group in this reaction is the same level as 574.69.
584.42 *8*	5/2$^+$		A CD FGHI	J$^\pi$: L=2 in (p,d) and (d,p). L(t,p)=2(+6) from 9/2$^+$ rules out J=3/2. γ to 1/2$^-$ disagrees with 5/2$^+$.
651 *2*	5/2$^-$,7/2$^-$		I	J$^\pi$: L(p,d)=3.
673.67 *8*	1/2$^+$		D FG IJ	J$^\pi$: L=0 in (d,p) and (p,d).
759.5 *11*	(7/2$^+$,9/2$^+$)		K	J$^\pi$: L(^{3}He,α)=4.
762.20 *9*	(3/2)		A D FG I	J$^\pi$: primary γ from 1/2$^+$ and gammas to 1/2$^-$, 5/2$^+$ and 5/2$^-$.

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Adopted Levels, Gammas (continued)

^{75}Ge Levels (continued)

E(level)[†]	Jπ	XREF	Comments
830?		I	
885.47 *7*	1/2⁻	A D FG IJ	Jπ: L=1 and vector analyzing power in (pol d,p).
901.9? *3*		D G	
946.4? *6*		G	
986.8 *14*	(5/2,7/2,9/2)⁺	C F HIJ	Jπ: L(t,p)=2+(6) from 9/2⁺ and L(d,p)=(2,4). E(level): weighted average of all the available values.
1062.2[&] *4*	(5/2 to 13/2)⁺	C G	Jπ: L(t,p)=2 from 9/2⁺.
1081.0?[a] *4*		G	
1127.8 *5*		G	
1136.93 *10*	3/2⁻	D FG IJK	XREF: J(1140)K(1146). Jπ: L=1 and vector analyzing power in (pol d,p).
1190 *5*	9/2⁺	C I	Jπ: L(t,p)=0+(2) from 9/2⁺.
1222.20? *21*		A	
1240.75 *16*	(5/2)⁻	A D FGHI K	XREF: F(1236)H(1236)I(1242)K(1242). Jπ: L=3 in (p,d), (d,p) and (α,^{3}He); possible β feeding from (3/2)⁻.
1257.0 *3*	(7/2⁺)	G IJ	Jπ: L(p,d)=(4) and γ to 5/2⁻.
1334.8?[&] *6*		G	
1394.41 *10*	5/2⁺	FGhI	XREF: F(1391). Jπ: L=2 and vector analyzing power in (pol d,p).
1405.5 *4*	9/2⁺	C Gh K	E(level): from (t,p). E=1405.7 for a tentative level in (d,pγ). Jπ: L(t,p)=0+2 from 9/2⁺.
1416.21 *11*	1/2⁻,3/2⁻	D GhIJ	XREF: J(1409). Jπ: L=1 in (p,d) and (d,t).
1428.21 *11*	(1/2,3/2)[@]	A D	E(level): from ^{75}Ga β⁻ decay.
1494.9?[a] *4*		G	
1501.56 *12*	1/2⁻,3/2⁻	A D IJ	XREF: J(1509). Jπ: L=1 in (p,d) and (d,t). E(level): from ^{75}Ga β⁻ decay.
1502.04 *12*	7/2⁺,9/2⁺	K	E(level): this group may correspond to the 1494.6 level. Jπ: L(^{3}He,α)=4.
1514.46 *6*	1/2⁺	D FGH	XREF: F(1517)H(1517). Jπ: L(pol d,p)=0.
1537.7 *3*	5/2⁺	C FG I	Jπ: L=2 in (d,p) and (p,d). L(t,p)=2+4 from 9/2⁺ rules out J=3/2.
1602.8 *19*	5/2⁻,7/2⁻	IJK	Jπ: L=3 in (d,t), (p,d) and (^{3}He,α). E(level): weighted average of E(d,t)=1600 *7* and E(p,d)=1603 *2*.
1682 *4*	9/2⁺	C h	Jπ: L(t,p)=0 from 9/2⁺.
1688.10 *10*	(1/2,3/2,5/2⁺)	D h	Jπ: primary γ from 1/2⁺.
1696 *9*		hIJ	E(level): from (d,t). E=1699 *5* for a doublet in (p,d). L(d,t)=(3,4) and L=3+4 for a doublet in (p,d).
1718.49 *7*	5/2⁺	C FG	XREF: C(1723)F(1714). Jπ: L=2 and vector analyzing power in (pol d,p).
1757.63 *12*	(1/2,3/2)[@]	D	
1796.3 *4*	1/2⁻,3/2⁻	A D IJ	XREF: I(1800)J(1791). Jπ: L=1 in (p,d) and (d,t). E(level): from ^{75}Ga β⁻ decay.
1869.43 *13*	3/2⁺	D FG I	Jπ: L=2 and vector analyzing power in (pol d,p).
1901 *8*	9/2⁺	C	Jπ: L(t,p)=0 from 9/2⁺.
2003.89 *11*	3/2⁺	CD FG	XREF: C(2012). Jπ: L=2 and vector analyzing power in (pol d,p).
2054 *11*		F I	E(level): weighted average of E(p,d)=2043 *10* and E(d,p)=2065 *10* (increased by 15 keV by evaluators).
2065.50 *10*	(1/2,3/2)[@]	D	
2091.03 *10*	(1/2,3/2)[@]	D	
2103.73 *20*		A F i	XREF: F(2108).

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Adopted Levels, Gammas (continued)

^{75}Ge Levels (continued)

E(level)[†]	Jπ	XREF	Comments
			E(level): E(p,d)=2105 *10*.
2110.1 *6*		G i	Jπ: γ to 7/2+.
2127 *5*	(5/2 to 13/2)+	C	Jπ: L(t,p)=2+6 from 9/2+.
2151 *10*		F	E(level): the energy reported by 1973Ka03 only is increased by 15 keV. (see (d,p) reaction).
2197.1 *6*	‡	FG I	
2214.8 *4*	(5/2+)‡	C FG	XREF: C(2208)F(2212). Jπ: L(t,p)=2 from 9/2+. γ to 7/2+. L(d,p)=2 or 2+4.
2281 *3*		I	
2311.63 *16*	(1/2,3/2)@	D	
2320 *6*	9/2+	C	Jπ: L(t,p)=0+2 from 9/2+.
2321 *2*	1/2−,3/2−	F I	E(level): weighted average of E(d,p)=2319.0 *25* and E(p,d)=2323 *3*. Jπ: L=1 in (d,p) and (p,d).
2359 *4*	1/2−,3/2−	I	Jπ: L(p,d)=1.
2382.88 *17*	5/2+	FG	Jπ: from L=2 and vector analyzing power in (pol d,p).
2384 *3*	9/2+	C I	E(level): weighted average of E(t,p)=2388 *5* and E(p,d)=2382 *4*. Jπ: L(t,p)=0+2+4 from 9/2+.
2478 *4*	7/2+,9/2+	C F	E(level): weighted average of E(t,p)=2484 *4* and E(d,p)=2475.6 *24*. Jπ: L(d,p)=4.
2493.9 *7*	(1/2,3/2)@	D	
2527.27 *25*	3/2+,5/2+	FG	Jπ: L(d,p)=2.
2534 *4*	5/2−,7/2−	I	Jπ: L(p,d)=3.
2544.4 *7*	(1/2,3/2)@	D	
2570.3 *7*	1/2−,3/2−	D I	XREF: I(2572). Jπ: L(p,d)=1.
2574.2 *17*	3/2+,5/2+	F	Jπ: L(d,p)=2.
2660.75 *20*	1/2−,3/2−	D FG i	E(p,d)=2681 *7* for a doublet. Jπ: L=1 in (d,p) and (p,d).
2664.43 *21*	(1/2,3/2,5/2)	A c i	Jπ: γ to 3/2−, possible β feeding from (3/2)−. L(t,p)=3 from 9/2+ and L(p,d)=1 for 2664.4 and/or 2665.0 level.
2665.1 *4*	(≤7/2)	A c G i	Jπ: γ to 3/2−. Also see comment for 2664.4 level.
2679.6 *7*	(1/2,3/2)@	D	
2740 *6*	(3/2 to 15/2)−	C	Jπ: L(t,p)=3 from 9/2+.
2744.2 *7*	(1/2,3/2)@	D	
2748.5 *23*	3/2+,5/2+	F	Jπ: L(d,p)=2.
2757.3 *7*	(1/2,3/2)@	D	
2759.2 *7*		G	
2781 *8*	9/2+	C	Jπ: L(t,p)=0+2(+4) from 9/2+.
2783.9 *7*	(1/2,3/2)@	D	
2835 *8*	(3/2 to 15/2)−	C i	E(level): from (t,p). E(p,d)=2829 *4*. Jπ: L(t,p)=3 from 9/2+.
2836 *3*	3/2+,5/2+	F i	E(level): from (d,p). Jπ: L(d,p)=2.
2840.0 *7*	(1/2,3/2)@	D	
2852.8 *4*	(3/2)−	G I	E(level): a doublet is proposed in (p,d). However, no doublet is seen in (d,pγ). Jπ: L(p,d)=1; γ to 7/2+. May be a doublet.
2866.0 *7*	(1/2,3/2)@	D	
2897.4 *7*	(1/2,3/2)@	D	
2928.3 *7*	(1/2,3/2)@	D	
2939 *7*	(3/2 to 15/2)−	C f	E(level): from (t,p). E(p,d)=2944 *10* (increased by 20 keV by evaluators). Jπ: L(t,p)=3 from 9/2+.
2952.5 *7*	(1/2,3/2)@	D f I	

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Adopted Levels, Gammas (continued)

^{75}Ge Levels (continued)

E(level)[†]	J^π	XREF	Comments
2964.4 *7*	(1/2,3/2)[@]	D	
2994.9 *7*	(1/2,3/2)[@]	D	
3004.2 *7*	(1/2,3/2)[@]	D	
3031.7 *6*	$3/2^+$,$5/2^+$	FG	XREF: F(3028). J^π: L(d,p)=2.
3042 *9*	$(9/2^+)$	C	J^π: L(t,p)=0+(2) or 1+(3) from $9/2^+$. The authors prefer L=0+(2).
3048.7 *9*	$3/2^+$,$5/2^+$	FG	XREF: F(3049.6). J^π: L(d,p)=2.
3067.4 *4*	$1/2^+$	FG I	XREF: F(3063)I(3067). J^π: L(d,p)=0, but γ to $5/2^-$ disfavors $1/2^+$.
3082.3 *4*	$1/2^+$	FG	XREF: F(3083). J^π: L(d,p)=0.
3092 *16*	$(3/2 \text{ to } 15/2)^-$	C	J^π: L(t,p)=3 from $9/2^+$.
3126 *3*	$3/2^+$,$5/2^+$	F	J^π: L(d,p)=2.
3136 *11*	$9/2^+$	C	J^π: L(t,p)=0+(2,3) from $9/2^+$.
3162.5 *5*	$1/2^-$,$3/2^-$	FG I	J^π: L(p,d)=1.
3170.4 *7*	$1/2^-$,$3/2^-$	D I	XREF: I(3182). J^π: L(p,d)=1 for a doublet.
3202.0 *7*	$1/2^-$,$3/2^-$	D I	XREF: I(3194). J^π: L(p,d)=1 for a doublet.
3214 *3*	$5/2^+$	C F	E(level): weighted average of E(t,p)=3213 *5* and E(d,p)=3215 *4*. J^π: L(d,p)=2 give $3/2^+$, $5/2^+$ but L(t,p)=2 from $9/2^+$ rules out $3/2^+$.
3226.5 *7*	(1/2,3/2)[@]	D	
3279.6 *5*	$7/2^-$	C G I	XREF: I(3272). J^π: L(t,p)=1+3 from $9/2^+$.
3290.0 *5*	$(3/2)^+$	FG	XREF: F(3281). J^π: γ to $1/2^-$ and L(d,p)=2.
3361 *4*	$3/2^+$,$5/2^+$	F	J^π: L(d,p)=2.
3370 *16*	$7/2^-$,$9/2^-$,$11/2^-$	C	J^π: L(t,p)=1 from $9/2^+$.
3393 *7*	$3/2^+$,$5/2^+$	F I	E(level): weighted average of E(d,p)=3399 *4* and E(p,d)=3385 *5*. J^π: L(d,p)=2.
3438 *5*	$3/2^+$,$5/2^+$	F I	J^π: L(d,p)=2.
3450 *4*	$7/2^-$,$9/2^-$,$11/2^-$	C I	E(level): weighted average of E(p,d)=3451 *5* and E(t,p)=3449 *7*. J^π: L(t,p)=1+3+5 from $9/2^+$.
3494 *7*		I	E(level): a doublet.
3532[b] *15*		F	
3560[b] *15*		F	
3626 *7*	$(^-)$	F I	E(level): from (p,d). E(d,p)=3617 *15* (increased by 30 keV by evaluators). J^π: L(p,d)=1+3 for a doublet.
3719 *6*	$(1/2^+)$	F I	E(level): from (p,d). E(d,p)=3713 *15* (increased by 30 keV by evaluators). J^π: L(d,p)=(0).
3759[b] *15*		F	
3812[b] *15*		F	
3839 *6*		I	
3862[b] *15*		F	
(6505.60 *5*)	$1/2^+$	D	E(level): S(n)=6505.84 *5* (2012Wa38). J^π: s-wave capture in ^{74}Ge g.s.
6508.13 *7*	$1/2^+$[#]	E	
6508.32 *7*	$1/2^+$[#]	E	
6509.42 *8*	$1/2^+$[#]	E	
6510.27 *8*	$1/2^+$[#]	E	
6517.23 *11*	$1/2^+$[#]	E	

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Adopted Levels, Gammas (continued)

^{75}Ge Levels (continued)

E(level)[†]	J$^{\pi}$	XREF
6524.63 *18*	1/2^{+}[#]	E
6527.03 *24*	1/2^{+}[#]	E
6529.7 *3*	1/2^{+}[#]	E
6547.9 *6*	1/2^{+}[#]	E
6565.7 *10*	1/2^{+}[#]	E

[†] As pointed out in the (d,p) data set, the energies of 1973Ka03, which are adopted for levels above 3449, are increased in value by 30 keV.

[‡] In (d,p), 1973Ka03 report L=0 for E=2205 *10*, and 1988BuZV report L=2 or L=2+4 for E=2204.4 *21*. There is also a 2208 *7* level in (t,p) with L=2, and a 2198 *15* level in (p,d). These could correspond to both or either of the (d,pγ) levels at 2197 and 2215.

[#] S-wave capture in ^{74}Ge g.s.

[@] Primary γ from 1/2^{+}; secondary γ to 1/2^{-}.

[&] The relative order of the 862 and 1135γ cascade connecting the 2197.5 and 200.3 levels is not known. This cascade defines a level at 1063.0 or at 1335.2 (see (d,pγ)). There is a level observed at 1062 in (t,p) and if it corresponds to the above level, it eliminates the alternate 1335 level. The 862.3γ is then assigned to 1063 level with 100% branching and the 1135γ entirely to the 2197 level.

[a] The relative order of 888.8 and 1302.7γ cascade connecting the 2383 and 192.5 levels is not known. This cascade defines a level at 1080.6 or 1494.6.

[b] Energy is increased by 30 keV by evaluators (see (d,p) reaction).

Adopted Levels, Gammas (continued)

γ(^{75}Ge)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	δ[‡]	α[@]	Comments
61.92?		61.92[b] *10*	100	0.0	1/2⁻				E_γ: from ^{75}Ge IT decay.
139.69	7/2⁺	77.86[b] *15*	0.008 *4*	61.92?					E_γ: from ^{75}Ge IT decay.
		139.68 *3*	100	0.0	1/2⁻	E3		1.530	α(K)=1.283 *18*; α(L)=0.215 *3*; α(M)=0.0318 *5*; α(N)=0.001387 *20* B(E3)(W.u.)=0.0290 *6* E_γ: from ^{75}Ge IT decay. Mult.: from ce data in ^{75}Ge IT decay.
192.19	5/2⁺	52.5 *1*	100	139.69	7/2⁺	M1+E2	0.9 *5*	3.9 *24*	α(K)=3.3 *20*; α(L)=0.6 *4*; α(M)=0.08 *6*; α(N)=0.0033 *20* B(M1)(W.u.)=8×10^{-5} *6*; B(E2)(W.u.)=30 *24*
199.89	9/2⁺	60.2 *1*	100	139.69	7/2⁺	(M1+E2)	−0.11 *+8−6*	0.38 *8*	α(K)=0.33 *7*; α(L)=0.039 *11*; α(M)=0.0058 *16*; α(N)=0.00035 *7*
253.15	3/2⁻	253.0 *1*	100	0.0	1/2⁻	(M1+E2)		0.015 *9*	α(K)=0.014 *8*; α(L)=0.0015 *9*; α(M)=0.00022 *13*; α(N)=1.4×10^{-5} *8* δ: −2.4<δ<−0.12 (1983Is07).
316.81	5/2⁻	124.4 *2*	12 *4*	192.19	5/2⁺	[E1]		0.0358	
		177.0 *1*	100 *3*	139.69	7/2⁺	(E1+M2)		0.06 *5*	α(K)=0.06 *5*; α(L)=0.006 *6*; α(M)=0.0010 *8*; α(N)=6.E−5 *5* δ: +0.03 *+11−9* or <−5.
		316.9 *1*	55 *4*	0.0	1/2⁻				
457.07	5/2⁻	203.9 *1*	99 *6*	253.15	3/2⁻	(M1+E2)		0.032 *20*	α(K)=0.028 *18*; α(L)=0.0031 *20*; α(M)=0.0005 *3*; α(N)=2.8×10^{-5} *17* δ: −0.1 *2* or>2.
		457.0 *1*	100 *10*	0.0	1/2⁻	(E2)		0.00312 *5*	α=0.00312 *5*; α(K)=0.00278 *4*; α(L)=0.000293 *5*; α(M)=4.37×10^{-5} *7*; α(N)=2.77×10^{-6} *4*
574.70	3/2⁻	257.4 *5*	1.0 *4*	316.81	5/2⁻				
		321.4 *1*	5 *1*	253.15	3/2⁻				
		574.8 *1*	100 *3*	0.0	1/2⁻	(M1+E2)		0.0013 *3*	α=0.0013 *3*; α(K)=0.00114 *24*; α(L)=0.00012 *3*; α(M)=1.8×10^{-5} *4*; α(N)=1.14×10^{-6} *23* δ: −2.4<δ<+0.12.
584.42	5/2⁺	392.2 *2*	8 *2*	192.19	5/2⁺				
		444.8 *1*	100 *4*	139.69	7/2⁺	(M1+E2)		0.0026 *8*	α=0.0026 *8*; α(K)=0.0023 *7*; α(L)=0.00024 *8*; α(M)=3.6×10^{-5} *12*; α(N)=2.3×10^{-6} *7*
		584.1[#b] *2*	94 *6*	0.0	1/2⁻				This γ (from 5/2⁺ to 1/2⁻), not seen in other studies, is unlikely.
673.67	1/2⁺	481.4 *1*	100 *8*	192.19	5/2⁺				
		673.8 *2*	33 *5*	0.0	1/2⁻				
762.20	(3/2)	444.6 *2*	100 *5*	316.81	5/2⁻				E_γ: poor fit, level-energy difference=445.4.
		570.1 *1*	26 *5*	192.19	5/2⁺				I_γ: from 2012Me04.
		762.4 *6*	23 *3*	0.0	1/2⁻				I_γ: from 2012Me04.
885.47	1/2⁻	124.3[#b] *2*	7.2 *27*	762.20	(3/2)				
		299.7 *15*	32	584.42	5/2⁺				E_γ: reported in (n,γ) only.
		310.7 *1*	60 *4*	574.70	3/2⁻				

Adopted Levels, Gammas (continued)

γ(^{75}Ge) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	α[@]	Comments
885.47	1/2$^-$	428.3[#] *2*	9.9 *27*	457.07	5/2$^-$			
		568.5 *3*	13 *2*	316.81	5/2$^-$			
		632.3 *2*	42 *4*	253.15	3/2$^-$			
		885.6 *1*	100	0.0	1/2$^-$			
901.9?		444.8[b] *3*	100	457.07	5/2$^-$			
946.4?		746.5[b] *5*	100	199.89	9/2$^+$			
1062.2	(5/2 to 13/2)$^+$	862.3[&] *3*	100	199.89	9/2$^+$			
1081.0?		888.8[&b] *4*	100	192.19	5/2$^+$			
1127.8		935.4 *5*	100	192.19	5/2$^+$			
1136.93	3/2$^-$	236.1[b] *1*	20 *2*	901.9?				
		562.0 *3*	13 *4*	574.70	3/2$^-$			
		679.8 *2*	31 *6*	457.07	5/2$^-$			
		820.1 *2*	100 *10*	316.81	5/2$^-$			
		884.4 *4*	13 *4*	253.15	3/2$^-$			
		1136.9 *3*	52 *9*	0.0	1/2$^-$	(M1+E2)	0.000253 *13*	α=0.000253 *13*; α(K)=0.000225 *12*; α(L)=2.29×10^{-5} *12*; α(M)=3.42×10^{-6} *18* α(N)=2.25×10^{-7} *11*; α(IPF)=1.9×10^{-6} *4* δ: +0.3 or<−5.
1222.20?		647.5[b] *2*	100	574.70	3/2$^-$			
		1222.5[&b] *2*		0.0	1/2$^-$			
1240.75	(5/2)$^-$	666.8 *4*	30 *14*	574.70	3/2$^-$			
		783.5 *2*	100	457.07	5/2$^-$			
		923.8 *7*	28 *11*	316.81	5/2$^-$			
		987.6 *3*	77 *11*	253.15	3/2$^-$			
		1239.5[#b] *2*	14 *5*	0.0	1/2$^-$			E_γ: not observed in (d,pγ) and poor fit in level scheme.
1257.0	(7/2$^+$)	799.9 *3*	100	457.07	5/2$^-$			
1334.8?		1134.9[b] *13*	100	199.89	9/2$^+$			
1394.41	5/2$^+$	632.0 *3*	8 *3*	762.20	(3/2)			
		810.0 *3*	15 *3*	584.42	5/2$^+$			
		1203.0 *5*	25 *6*	192.19	5/2$^+$			
		1254.7 *1*	100 *8*	139.69	7/2$^+$			
1405.5	9/2$^+$	1265.8[b] *4*	100	139.69	7/2$^+$			
1416.21	1/2$^-$,3/2$^-$	841.5 *3*	92 *30*	574.70	3/2$^-$			
		1416.3 *4*	100 *20*	0.0	1/2$^-$			
1428.21	(1/2,3/2)	1174.6[#] *2*	100 *13*	253.15	3/2$^-$			
		1427.0[#] *2*	60 *13*	0.0	1/2$^-$			E_γ: poor fit, level-energy difference=1428.2.
1494.9?		1302.7[&b] *4*	100	192.19	5/2$^+$			
1501.56	1/2$^-$,3/2$^-$	927.2[#] *2*	100 *8*	574.70	3/2$^-$			
		1043.3[#b] *2*	39 *3*	457.07	5/2$^-$			

Adopted Levels, Gammas (continued)

γ(^{75}Ge) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Mult.[‡]	α[@]	Comments
1501.56	1/2⁻,3/2⁻	1248.5[#] *2*	83 *5*	253.15	3/2⁻			
		1501.1[#] *2*	68 *8*	0.0	1/2⁻			
1514.46	1/2⁺	752.5 *2*	4 *1*	762.20	(3/2)			
		840.7 *1*	18 *1*	673.67	1/2⁺			
		939.7 *1*	14 *1*	574.70	3/2⁻			
		1514.5 *1*	100 *4*	0.0	1/2⁻			
1537.7	5/2⁺	1344.5 *8*	53 *14*	192.19	5/2⁺			
		1398.1 *3*	100 *18*	139.69	7/2⁺			
1688.10	(1/2,3/2,5/2⁺)	1495.98 *11*	100	192.19	5/2⁺			
1718.49	5/2⁺	955.8 *5*	5 *2*	762.20	(3/2)			
		1134.6 *2*	3 *1*	584.42	5/2⁺			
		1143.8 *1*	3 *1*	574.70	3/2⁻			
		1261.5 *3*	12 *2*	457.07	5/2⁻			
		1465.4 *2*	28 *3*	253.15	3/2⁻			
		1525.7 *3*	14 *2*	192.19	5/2⁺			
		1578.7 *1*	100 *5*	139.69	7/2⁺	(M1+E2)	0.000234 *16*	α=0.000234 *16*; α(K)=0.000115 *3*; α(L)=1.17×10^{-5} *3*; α(M)=1.75×10^{-6} *5* α(N)=1.15×10^{-7} *3*; α(IPF)=0.000105 *13* δ: 0.0 +2−*1* or<−4.
1757.63	(1/2,3/2)	1757.6		0.0	1/2⁻			
1796.3	1/2⁻,3/2⁻	1222.5[&#b] *2*		574.70	3/2⁻			
		1543.0[#] *2*	100 *8*	253.15	3/2⁻			
		1796.4[#] *2*	55 *9*	0.0	1/2⁻			
1869.43	3/2⁺	1196.2 *2*	22 *8*	673.67	1/2⁺			
		1284.6 *2*	100 *13*	584.42	5/2⁺			
		1412.3 *2*	86 *12*	457.07	5/2⁻			
		1869.4 *8*	10 *4*	0.0	1/2⁻			
2003.89	3/2⁺	867.5 *5*	13 *4*	1136.93	3/2⁻			
		1546.9 *3*	58 *7*	457.07	5/2⁻			
		1811.6 *2*	100 *11*	192.19	5/2⁺			
2065.50	(1/2,3/2)	1606.8 *4*	15 *3*	457.07	5/2⁻			E_γ: poor fit, level-energy difference=1608.4.
		1873.27 *15*	100 *15*	192.19	5/2⁺			
		2065.2		0.0	1/2⁻			
2091.03	(1/2,3/2)	2091.21 *15*	100	0.0	1/2⁻			
2103.73		2103.7[#] *2*	100	0.0	1/2⁻			
2110.1		1162.7[b] *6*	124 *50*	946.4?				
		1970.4 *6*	100 *33*	139.69	7/2⁺			
2197.1		862.3[&] *3*	100	1334.8?				
		1134.9 *5*	100	1062.2	(5/2 to 13/2)⁺			
2214.8	(5/2⁺)	1455.4[b] *7*	61 *23*	762.20	(3/2)			
		2075.1 *4*	100 *30*	139.69	7/2⁺			

$^{75}_{32}Ge_{43}$-8

Adopted Levels, Gammas (continued)

γ(^{75}Ge) (continued)

E_i(level)	J_i^π	E_γ [†]	I_γ	E_f	J_f^π	Mult.[‡]
2311.63	(1/2,3/2)	2119.42 *16*	100 *19*	192.19	$5/2^+$	
		2311.5		0.0	$1/2^-$	
2382.88	$5/2^+$	888.8[&b] *4*	18 *4*	1494.9?		
		1302.7[&b] *4*	18 *4*	1081.0?		
		1620.7 *2*	100 *8*	762.20	(3/2)	
		1799.1 *4*	14 *3*	584.42	$5/2^+$	
		1807.7 *3*	28 *6*	574.70	$3/2^-$	
2493.9	(1/2,3/2)	2493.3		0.0	$1/2^-$	
2527.27	$3/2^+$,$5/2^+$	1853.0 *3*	100 *15*	673.67	$1/2^+$	
		1943.0 *6*	20 *7*	584.42	$5/2^+$	
		2336.5 *5*	21 *7*	192.19	$5/2^+$	
2544.4	(1/2,3/2)	2543.7		0.0	$1/2^-$	
2570.3	$1/2^-$,$3/2^-$	2569.7		0.0	$1/2^-$	
2660.75	$1/2^-$,$3/2^-$	1776.1 *10*	15 *5*	885.47	$1/2^-$	
		1898.5 *2*	100 *11*	762.20	(3/2)	
		2086.0 *6*	13 *3*	574.70	$3/2^-$	
		2659.9		0.0	$1/2^-$	
2664.43	(1/2,3/2,5/2)	2089.7 *2*		574.70	$3/2^-$	
2665.1	(≤7/2)	2411.9 *4*		253.15	$3/2^-$	
2679.6	(1/2,3/2)	2679.0		0.0	$1/2^-$	
2744.2	(1/2,3/2)	2743.3		0.0	$1/2^-$	
2757.3	(1/2,3/2)	2756.6		0.0	$1/2^-$	
2759.2		2506.0 *7*	100	253.15	$3/2^-$	
2783.9	(1/2,3/2)	2783.1		0.0	$1/2^-$	
2840.0	(1/2,3/2)	2839.2		0.0	$1/2^-$	
2852.8	$(3/2)^-$	1458.8 *8*	55 *22*	1394.41	$5/2^+$	
		2267.9 *7*	81 *33*	584.42	$5/2^+$	
		2600.1 *7*	85 *33*	253.15	$3/2^-$	
		2660.7 *7*	56 *26*	192.19	$5/2^+$	
		2712.6 *7*	100 *33*	139.69	$7/2^+$	[M2]
2866.0	(1/2,3/2)	2865.2		0.0	$1/2^-$	
2897.4	(1/2,3/2)	2896.7		0.0	$1/2^-$	
2928.3	(1/2,3/2)	2927.7		0.0	$1/2^-$	
2952.5	(1/2,3/2)	2951.6		0.0	$1/2^-$	
2964.4	(1/2,3/2)	2963.7		0.0	$1/2^-$	
2994.9	(1/2,3/2)	2994.2		0.0	$1/2^-$	
3004.2	(1/2,3/2)	3003.0		0.0	$1/2^-$	
3031.7	$3/2^+$,$5/2^+$	2269.5 *6*	100	762.20	(3/2)	
3048.7	$3/2^+$,$5/2^+$	2856.5 *9*	100	192.19	$5/2^+$	
3067.4	$1/2^+$	2305.5 *4*	100 *21*	762.20	(3/2)	
		2607.3 *15*	15 *11*	457.07	$5/2^-$	
		2812.1 *14*	14 *9*	253.15	$3/2^-$	
3082.3	$1/2^+$	2507.3 *15*	100 *24*	574.70	$3/2^-$	

$^{75}_{32}Ge_{43}$-9

Adopted Levels, Gammas (continued)

γ(^{75}Ge) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ	E_f	J_f^π	Comments
3082.3	1/2$^+$	2890.2 *5*	52 *22*	192.19	5/2$^+$	
		3082.1 *6*	48 *22*	0.0	1/2$^-$	
3162.5	1/2$^-$,3/2$^-$	2034.4 *5*	100 *22*	1127.8		
		2402.9[a] *10*	54[a] *19*	762.20	(3/2)	
		2490.4 *30*	27 *5*	673.67	1/2$^+$	
		2909.5 *6*	92 *22*	253.15	3/2$^-$	
3170.4	1/2$^-$,3/2$^-$	3169.8		0.0	1/2$^-$	
3202.0	1/2$^-$,3/2$^-$	3201.3		0.0	1/2$^-$	
3226.5	(1/2,3/2)	3225.6		0.0	1/2$^-$	
3279.6	7/2$^-$	2517.9 *8*	39 *15*	762.20	(3/2)	
		2703.5 *10*	31 *15*	574.70	3/2$^-$	
		3026.6 *6*	100 *24*	253.15	3/2$^-$	
3290.0	(3/2)$^+$	2402.9[a] *10*	27[a] *17*	885.47	1/2$^-$	
		3290.3 *5*	100 *26*	0.0	1/2$^-$	
(6505.60)	1/2$^+$	3278.1		3226.5	(1/2,3/2)	
		3302.9		3202.0	1/2$^-$,3/2$^-$	
		3334.6		3170.4	1/2$^-$,3/2$^-$	
		3500.2		3004.2	(1/2,3/2)	
		3509.9		2994.9	(1/2,3/2)	
		3540.5		2964.4	(1/2,3/2)	
		3552.2		2952.5	(1/2,3/2)	
		3576.7		2928.3	(1/2,3/2)	
		3607.4		2897.4	(1/2,3/2)	
		3638.8		2866.0	(1/2,3/2)	
		3664.8		2840.0	(1/2,3/2)	
		3720.8		2783.9	(1/2,3/2)	
		3747.5		2757.3	(1/2,3/2)	
		3760.5		2744.2	(1/2,3/2)	
		3825.3		2679.6	(1/2,3/2)	
		3844.3		2660.75	1/2$^-$,3/2$^-$	
		3934.6		2570.3	1/2$^-$,3/2$^-$	
		3960.5		2544.4	(1/2,3/2)	
		4011.1		2493.9	(1/2,3/2)	
		4193.9 *5*	11 *5*	2311.63	(1/2,3/2)	
		4414.54 *11*	21.1 *11*	2091.03	(1/2,3/2)	
		4439.95 *11*	28.3 *15*	2065.50	(1/2,3/2)	
		4501.58 *12*	6.5 *4*	2003.89	3/2$^+$	
		4707.51 *10*	71 *4*	1796.3	1/2$^-$,3/2$^-$	E_γ: poor fit, level-energy difference=4709.1.
		4747.80 *11*	10.0 *5*	1757.63	(1/2,3/2)	
		4817.46 *14*	9.1 *9*	1688.10	(1/2,3/2,5/2$^+$)	
		4990.92 *11*	21.7 *11*	1514.46	1/2$^+$	
		5003.38 *11*	25.8 *14*	1501.56	1/2$^-$,3/2$^-$	
		5077.00 *11*	8.5 *5*	1428.21	(1/2,3/2)	
		5089.21 *11*	39.8 *21*	1416.21	1/2$^-$,3/2$^-$	

$^{75}_{32}Ge_{43}$-10

Adopted Levels, Gammas (continued)

γ(^{75}Ge) (continued)

E_i(level)	J_i^π	E_γ †	I_γ	E_f	J_f^π	E_i(level)	J_i^π	E_γ †	I_γ	E_f	J_f^π
(6505.60)	$1/2^+$	5368.38 *16*	21 *3*	1136.93	$3/2^-$	(6505.60)	$1/2^+$	5930.68 *11*	23.6 *14*	574.70	$3/2^-$
		5620.0 *3*	17.0 *18*	885.47	$1/2^-$			6252.24 *11*	100 *5*	253.15	$3/2^-$
		5743.2 *4*	9.3 *17*	762.20	(3/2)			6505.40 *11*	26.1 *14*	0.0	$1/2^-$
		5831.6 *3*	4.8 *3*	673.67	$1/2^+$						

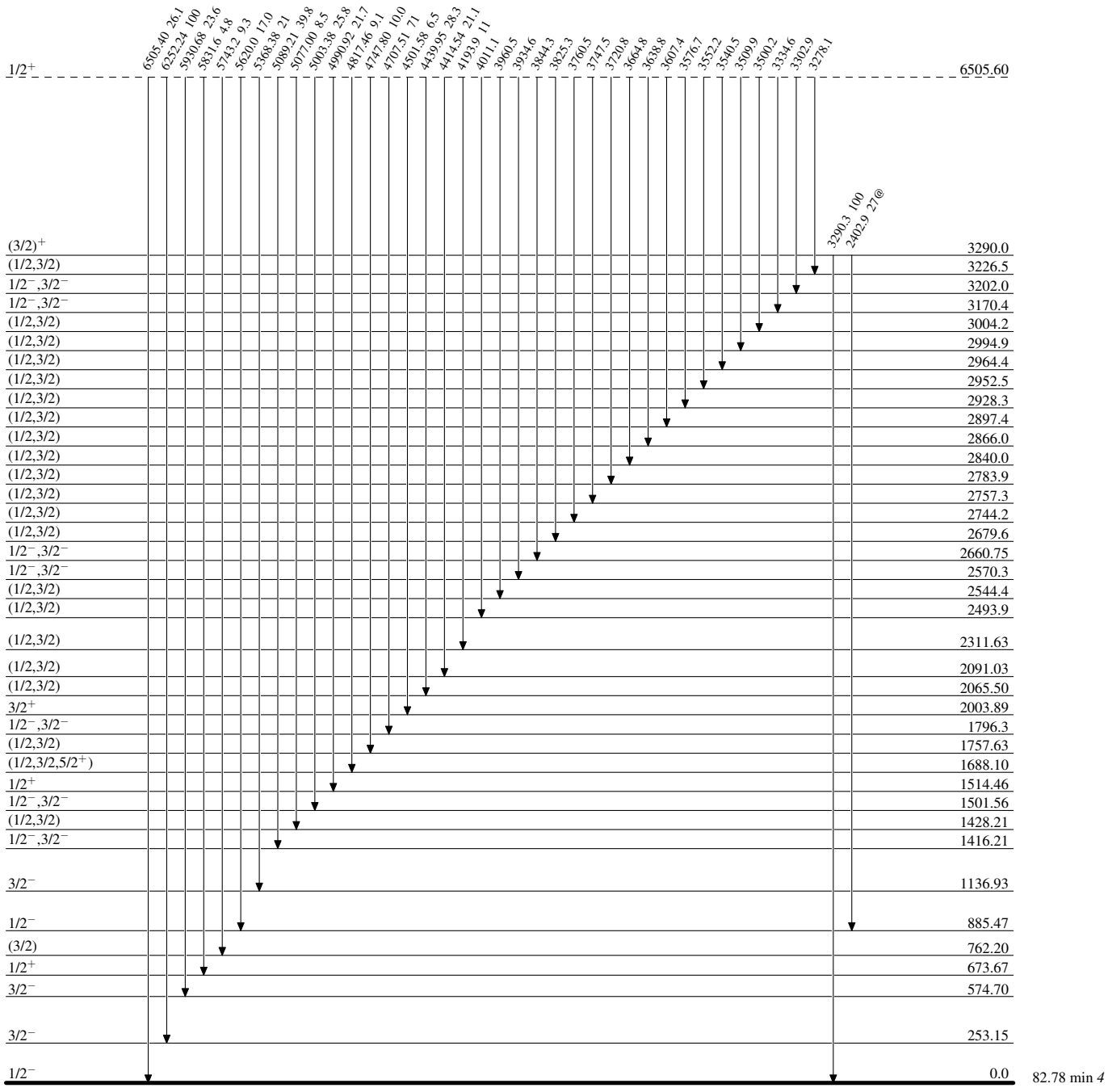
† From (d,pγ), unless otherwise stated.
‡ From angular correlation measurements in (d,pγ), except as noted.
# From ^{75}Ga β^- only.
@ Additional information 3.
& Multiply placed.
a Multiply placed with intensity suitably divided.
b Placement of transition in the level scheme is uncertain.

$^{75}_{32}Ge_{43}$-11

Adopted Levels, Gammas

Level Scheme

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

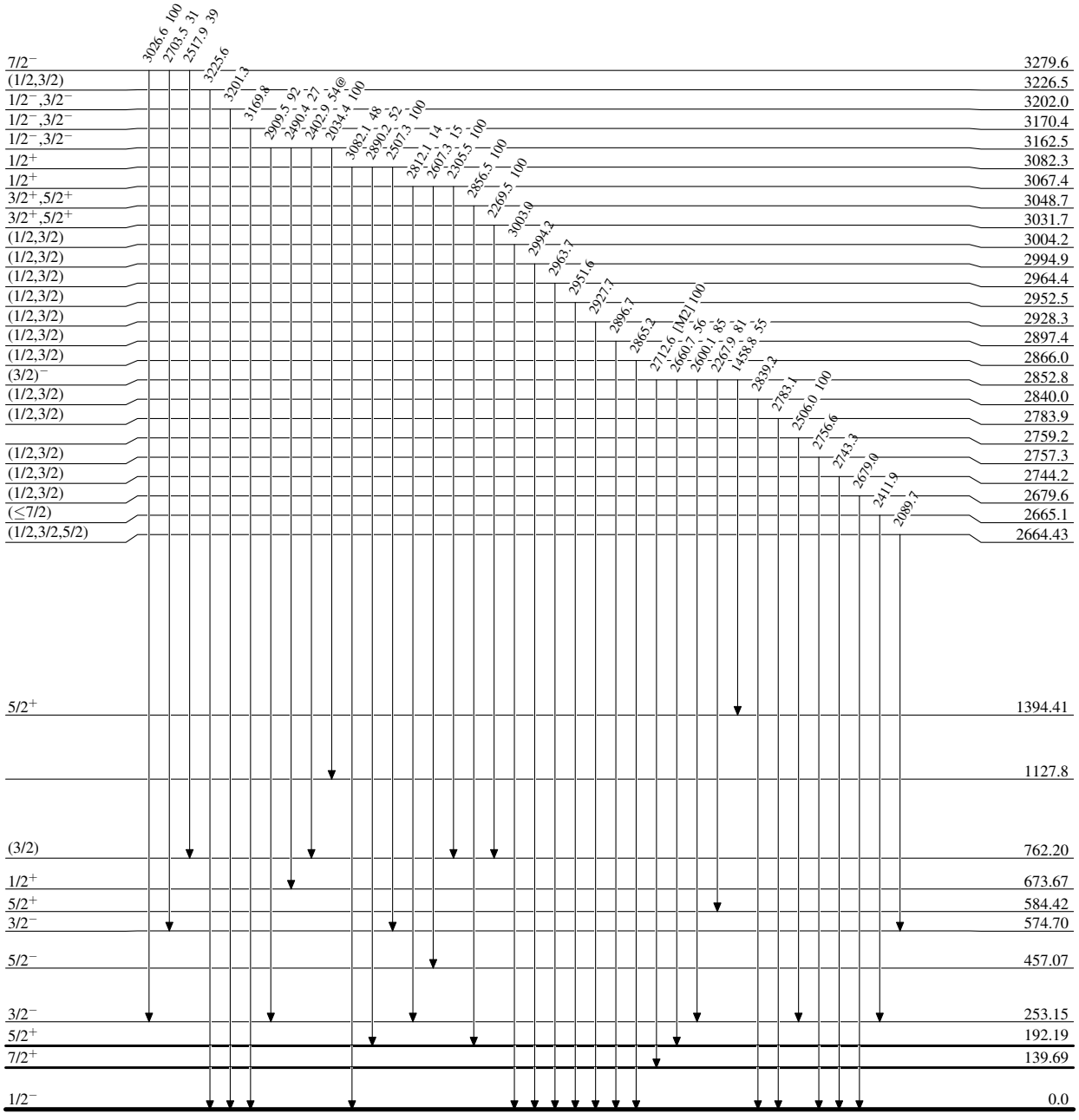


$^{75}_{32}Ge_{43}$

Adopted Levels, Gammas

Level Scheme (continued)

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



$^{75}_{32}Ge_{43}$

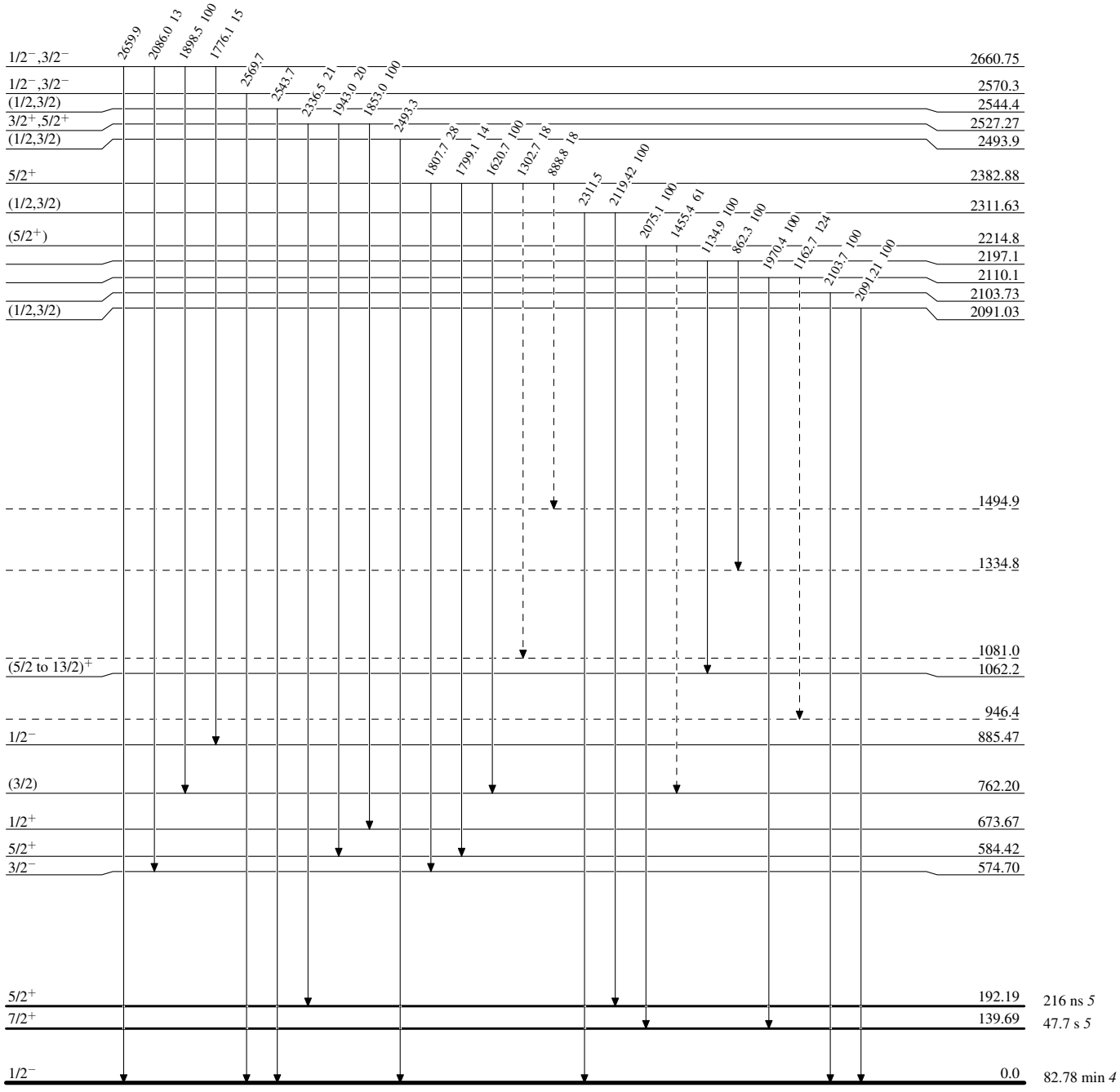
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

γ Decay (Uncertain)



$^{75}_{32}Ge_{43}$

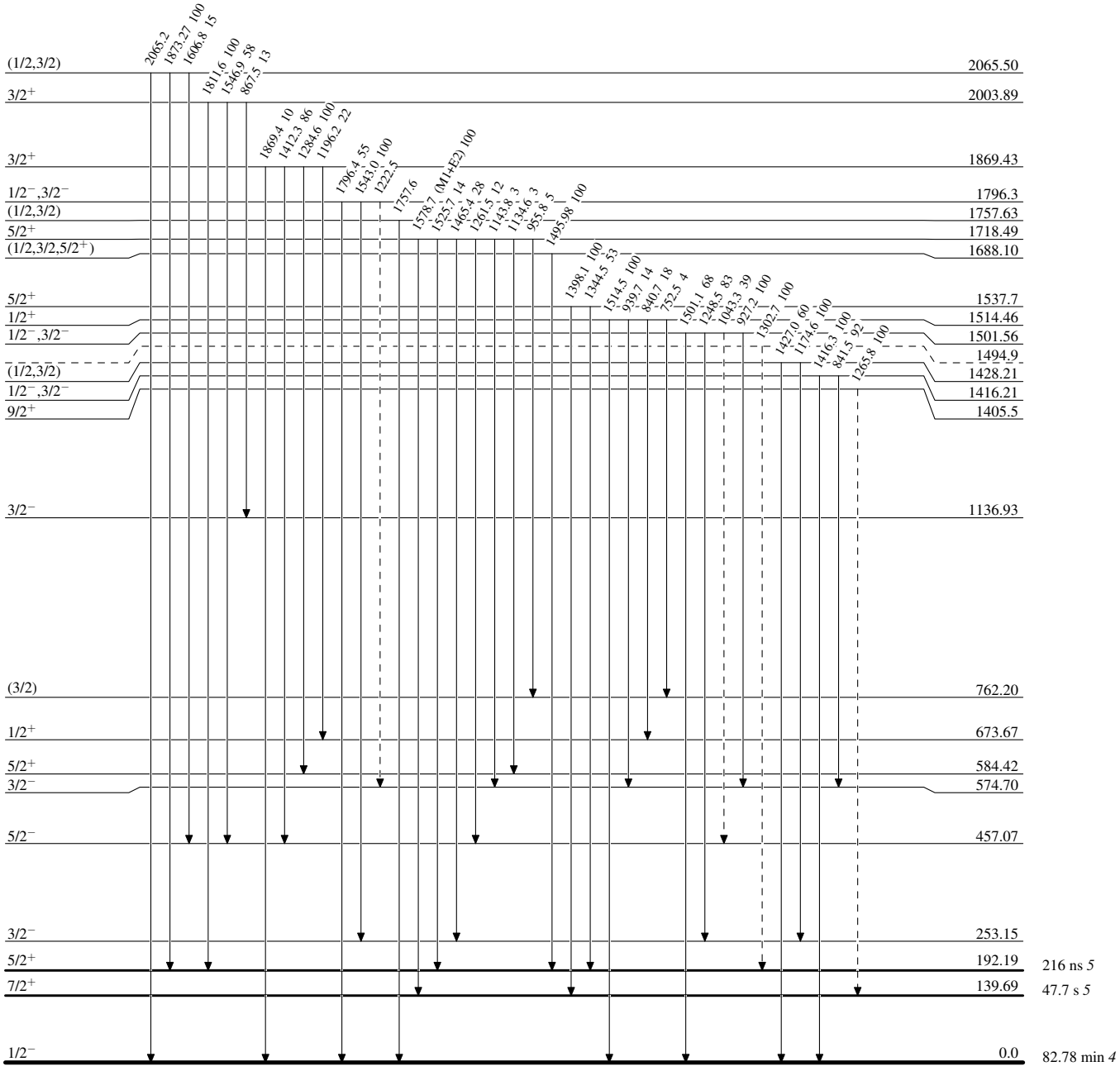
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

γ Decay (Uncertain)



$^{75}_{32}Ge_{43}$

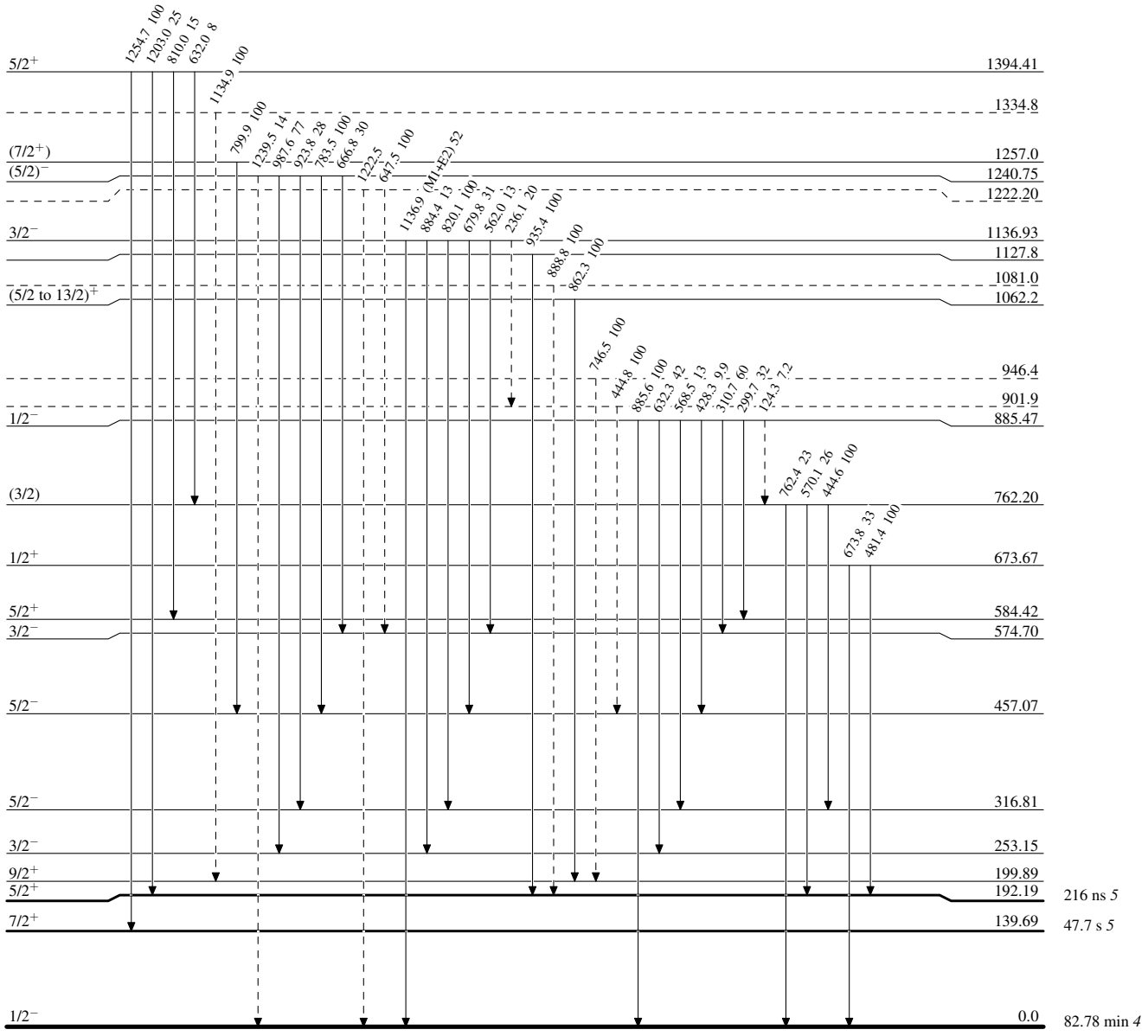
Adopted Levels, Gammas

Legend

Level Scheme (continued)

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

γ Decay (Uncertain)



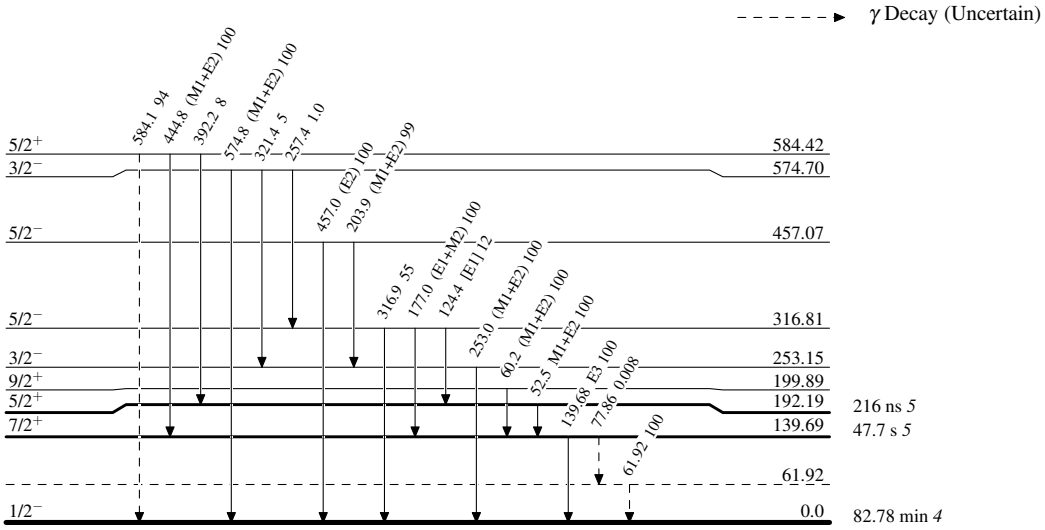
$^{75}_{32}Ge_{43}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

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



$^{75}_{32}Ge_{43}$