^{74}Ge(α,2nγ) 1982Ma45,1984Zo01,1980We07

History

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

Includes ^{76}Ge(α,4nγ) from 1973Wy01, ^{71}Ga(^{7}Li,2nγ) from 1980We07, (^{16}O,Xγ) and (^{12}C,Xγ) from 1982An09.

1982Ma45 (also 1981Ma39): ^{74}Ge(α,2nγ),E=25-33 MeV, main data at E=27 MeV. Eγ, Iγ, $\gamma\gamma$-coin, $\gamma(\theta)$ for ten angles, γ(lin pol,θ), $\gamma\gamma$(t) and excitation functions. Interpretation based on IBA model.

1984Zo01: ^{74}Se(α,2nγ),E=25.5 MeV. Measured Eγ, $\gamma\gamma$-coin, $\gamma(\theta)$, excitation functions, $T_{1/2}$(level) by recoil-distance Doppler shift (RDDS) and DSA methods. See also 1981KiZW from the same group for $T_{1/2}$ measurements in ^{73}Ge(α,nγ) reaction at 15-22 MeV.

1980We07: ^{71}Ga(^{7}Li,2nγ),E=15-22 MeV, main data at E=18.5 MeV. Eγ, $\gamma\gamma$-coin, $\gamma(\theta)$ at three angles, $\gamma\gamma(\theta)$ (DCO ratios, 0° and 90°). Lifetime measurement from Doppler broadening. Interpretation of levels is based on interacting boson model.

Others:

1973Wy01 (also 1971WyZX,1970Li11): ^{74}Ge(α,2nγ),E=29.5 MeV and ^{76}Ge(α,4nγ),E=60 MeV. Measured Eγ, Iγ, $\gamma\gamma$-coin, $\gamma(\theta)$, ce. The γ-ray intensities and ce(K) values are given for nine prominent transitions.

1982An09: (^{16}O,Xγ) and (^{12}C,Xγ), deduced yrast cascade delay times.

^{76}Se Levels

E(level)[†]	J$^{\pi}$[‡]	$T_{1/2}$[#]	Comments
0.0[@]	0^+		
558.7[@] *4*	2^+		
1215.7[&] *4*	2^+	3.5 ps *14*	
1330.4[@] *5*	4^+	0.7 ps *+5−4*	
1688.2[&] *5*	3^+	3.2 ps *+12−6*	
2025.5[&] *5*	4^+	1.8 ps *4*	
2262.0[@] *5*	6^+	0.62 ps *7*	$T_{1/2}$: other: 0.7 ps *6* (1980We07).
2428.8[a] *5*	3^-	14 ps *7*	
2488.8[&] *5*	5^+	0.9 ps *+3−2*	
2824.3[a] *5*	5^-	6.2 ps *+21−14*	
2859.2[b] *6*	4^-	1.2 ps *5*	
2975.7[&] *6*	6^+	1.2 ps *+7−4*	$T_{1/2}$: other: 0.8 ps *3* (1980We07).
3045.3 *6*	(5^-)	<280 ps	$T_{1/2}$: other: 2.6 ps *7* (1981KiZW).
3225.3 *7*	$(6,8^+)$	1.1 ps *3*	$T_{1/2}$: from 1981KiZW.
3238.5 *7*			E(level): from 1984Zo01 only.
3261.8[b] *5*	6^-	12 ps *6*	$T_{1/2}$: other: 1.3 ps *4* (1981KiZW).
3269.3[@] *6*	8^+	0.35 ps *7*	$T_{1/2}$: other: 0.3 ps *2* (1980We07).
3311.5 *6*	(6^-)	0.14 ns *+14−7*	
3431.6[&] *6*	7^+	0.8 ps *+4−2*	
3441.1[a] *6*	7^-	3.6 ps *7*	
3695.8 *6*	(7^-)	28 ps *7*	
3785.2 *7*	(8^+)	0.9 ps *+5−3*	
3853.2 *7*	$(8)^+$	0.23 ps *+8−5*	$T_{1/2}$: other: 0.8 ps *2* (1981KiZW).
4005.1 *8*			
4008.1[b] *8*	(8^-)	2.2 ps *7*	
4213.5 *7*	(8^-)	1.7 ps *+15−8*	
4299.1[@] *7*	10^+	0.49 ps *+10−7*	$T_{1/2}$: other: 0.6 ps *3* (1980We07).
4324.1[a] *8*	$(9)^-$	1.4 ps *4*	
4404.7[&] *8*	(9^+)	0.9 ps *2*	
4687.0 *7*	$(10)^+$	0.49 ps *7*	
4728.0 *7*			E(level): from 1984Zo01 only. 1981KiZW report $T_{1/2}$(1287γ)=0.6 ps *1*.

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^{74}Ge(α,2nγ) 1982Ma45,1984Zo01,1980We07 (continued)

^{76}Se Levels (continued)

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$[#]
5067.6[b] 9	(10)$^-$	1.0 ps +4–2
5432.1[@] 9	12$^+$	0.2 ps 1

† From a least-squares fit to Eγ data.
‡ From Adopted Levels.
# From recoil-distance Doppler shift (RDDS) and/or DSA method (1984Zo01), unless otherwise stated.
@ Band(A): g.s., yrast band.
& Band(B): $K^\pi=2^+$, γ band.
a Band(C): $K^\pi=3^-$ band.
b Band(D): ΔJ=2 band.

$\gamma(^{76}Se)$

γ-ray intensities in ^{71}Ga(^{7}Li,2nγ),E=18.5 MeV (1980We07)

Eγ	Iγ	Eγ	Iγ	Eγ	Iγ
395.9 4	3.1 3	798 2	6.2 12	1129.4 5	11.5 6
438.1 5	3.8 5	800 2	4.4 15	1133 2	
472.9 4	3.8 4	809.5 4	14.2 7	1158.3 6	2.8 5
559.2 3	100 5	884.6 5	12.0 10	1212.3 6	7.7 4
584.1 6	3.0 10	931.4 4	27.1 14	1215.6 6	11.1 6
617.0 5	13 3	942.5 6	3.1 8	1287.2 8	0.8 3
657.1 4	24 4	950.1 6	4.1 8	1493.0 6	6.2 12
694.9 5	19 5	961.5 6	5.0 8	1527.8 6	1.9 7
739 2	0.2 2	1007.2 5	11.0 6	1712.5 8	3.0 11
771.6 4	62 3	1029.3 6	5.2 8		

E$_\gamma$[†]	I$_\gamma$[†]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[‡]	δ[‡]	Comments
179.2 5	0.9 1	3441.1	7$^-$	3261.8	6$^-$			
221.0 5	1.6 1	3045.3	(5$^-$)	2824.3	5$^-$			A$_2$=+0.30 3; A$_4$=−0.06 4; pol=+0.37 10 (1982Ma45) A$_2$=+0.33 3; A$_4$=−0.07 4 (1984Zo01) Mult.: δ(D+Q)=+0.6 3 (1984Zo01); $\gamma(\theta)$ consistent with ΔJ=0.
254.5 5	1.2 1	3695.8	(7$^-$)	3441.1	7$^-$			A$_2$=+0.41 4; A$_4$=−0.03 5; pol=+0.72 14 (1982Ma45) A$_2$=+0.51 9; A$_4$=+0.04 12 (1984Zo01) δ=+0.045 5 (1984Zo01).
266.1 5	2.6 2	3311.5	(6$^-$)	3045.3	(5$^-$)			A$_2$=−0.31 2; A$_4$=+0.14 3; pol=+0.15 6 (1982Ma45)
309.3[#] 5	0.17[#]	4005.1		3695.8	(7$^-$)			
335.5 5	0.62	2824.3	5$^-$	2488.8	5$^+$	D+Q	+0.35 15	A$_2$=+0.44 4; A$_4$=0.00 4 (1984Zo01) I$_\gamma$: from 1984Zo01. δ=+0.35 15 (1984Zo01).
384.2 5	0.5	3695.8	(7$^-$)	3311.5	(6$^-$)			A$_2$=−1.1 1; A$_4$=+0.12 16 (1984Zo01) I$_\gamma$: from 1984Zo01. $\delta\approx$−0.9.
388.0[#] 5	0.7[#]	4687.0	(10)$^+$	4299.1	10$^+$			
395.4 5	4.3 3	2824.3	5$^-$	2428.8	3$^-$	E2		A$_2$=+0.34 1; A$_4$=−0.08 2; pol=+0.44 7 (1982Ma45) A$_2$=+0.31 1; A$_4$=−0.15 2 (1984Zo01) A$_2$=+0.33 4; A$_4$=−0.08 4; DCO=1.0 2 (1980We07)
402.7 5	1.2 1	3261.8	6$^-$	2859.2	4$^-$	(E2)		A$_2$=+0.22 4; A$_4$=−0.17 5; pol=+0.19 17 (1982Ma45); A$_2$=+0.4 1 (1984Zo01)

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^{74}Ge(α,2nγ) 1982Ma45,1984Zo01,1980We07 (continued)

$\gamma(^{76}Se)$ (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ[‡]	Comments
414.2[#] *5*	1.0[#]	3238.5		2824.3	5^-			
430.3 *5*	0.8 *1*	2859.2	4^-	2428.8	3^-	M1+E2	−0.7 *+4−12*	A_2=−0.73 *5*; A_4=+0.04 *8*; pol=−0.15 *13* (1982Ma45) A_2=−0.40 *5*; A_4=0.00 *5* (1984Zo01) δ=−0.20 *10* (1984Zo01).
434.1[#] *5*	0.34[#]	3695.8	(7^-)	3261.8	6^-			
437.6 *5*	4.4 *3*	3261.8	6^-	2824.3	5^-	M1+E2	−0.25 *5*	A_2=−0.51 *1*; A_4=+0.02 *2*; pol=+0.03 *5* (1982Ma45) A_2=−0.62 *4*; A_4=+0.05 *5* (1984Zo01) A_2=−0.40 *4*; A_4=+0.04 *5* (1980We07) δ=−0.37 *13* (1984Zo01).
465.3[#] *5*	0.7[#]	3441.1	7^-	2975.7	6^+			
472.5 *5*	3.2 *2*	1688.2	3^+	1215.7	2^+	E2+M1		A_2=+0.38 *2*; A_4=+0.10 *3*; pol=+0.03 *9* (1982Ma45) A_2=+0.39 *2*; A_4=+0.03 *3* (1984Zo01) A_2=+0.16 *4*; A_4=+0.06 *4*; DCO=1.10 *17*; DCO=1.4 *5* (1980We07) Deduced δ=+2.1 *9* or +0.75 *+15−44* (1982Ma45). δ=+0.6 to 3.0 (1984Zo01).
487.1 *5*	2.2 *2*	3311.5	(6^-)	2824.3	5^-			A_2=+0.21 *2*; A_4=−0.04 *4*; pol=−0.49 *14* (1982Ma45) A_2=+0.13 *3*; A_4=+0.07 *4* (1984Zo01) Iγ(487γ)/Iγ(266γ)=100/55 (1984Zo01) disagrees with 100/118 from 1982Ma45. δ=+0.25 *5* (1984Zo01).
515.7[#] *5*	1.6[#]	3785.2	(8^+)	3269.3	8^+			
518.0[#] *5*	0.7[#]	4213.5	(8^-)	3695.8	(7^-)			
558.8 *5*	100	558.7	2^+	0.0	0^+	E2		A_2=+0.21 *1*; A_4=−0.04 *1*; pol=+0.33 *1* (1982Ma45) A_2=+0.26 *2*; A_4=−0.05 *2* (1984Zo01) A_2=+0.10 *2*; A_4=−0.03 *2* (1980We07)
562.3 *5*	<2.1	2824.3	5^-	2262.0	6^+			I_γ: from $\gamma\gamma$-coin (1984Zo01). 562γ is an unresolved doublet.
583.9 *5*	1.4 *1*	3853.2	$(8)^+$	3269.3	8^+	M1+E2	−0.45 *25*	A_2=+0.17 *4*; A_4=+0.01 *5*; pol=+0.55 *17* (1982Ma45) A_2=+0.45 *2*; A_4=−0.02 *3* (1984Zo01) A_2=+0.06 *12*; A_4=0.00 *12* (1980We07) δ=−0.26 *24* (1984Zo01).
616.8 *5*	11.1 *8*	3441.1	7^-	2824.3	5^-	E2		A_2=+0.28 *1*; A_4=−0.09 *1*; pol=+0.51 *5* (1982Ma45) A_2=+0.33 *3*; A_4=−0.14 *4* (1984Zo01) A_2=+0.26 *3*; A_4=−0.05 *3*; DCO=1.0 *3* (1980We07)
650.8[#] *5*	1.0[#]	3695.8	(7^-)	3045.3	(5^-)			
656.8 *5*	15.4 *11*	1215.7	2^+	558.7	2^+	E2+M1	+4.7 *+11−20*	A_2=+0.05 *1*; A_4=−0.02 *1*; pol=−0.12 *3* (1982Ma45) A_2=+0.08 *1*; A_4=−0.05 *1* (1984Zo01) A_2=−0.02 *8*; A_4=+0.02 *4* (1980We07); α(K)exp=0.70×10^{-3} *14* (1971WyZX) δ=+3.5 to +4.5 (1984Zo01). δ=−0.40 *8* (1980We07).
694.9 *5*	10.3 *7*	2025.5	4^+	1330.4	4^+	E2+M1	+1.7 *+6−1*	A_2=+0.15 *1*; A_4=−0.06 *2*; pol=−0.16 *8* (1982Ma45)

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^{74}Ge(α,2nγ) 1982Ma45,1984Zo01,1980We07 (continued)

$\gamma(^{76}Se)$ (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	Comments
							A_2=+0.48 *14*; A_4=−0.26 *19* (1984Zo01) A_2=+0.17 *3*; A_4=−0.04 *3* (1980We07) δ=+0.9 *1* (1984Zo01), −0.35 to +1.5 (1980We07).
713.8[#] *5*	0.41[#]	2975.7	6^+	2262.0	6^+		I_γ: from $\gamma\gamma$-coin.
740.6 *5*	0.24	2428.8	3^-	1688.2	3^+		E_γ,I_γ: from 1984Zo01.
746.3 *5*	4.2 *3*	4008.1	(8^-)	3261.8	6^-	E2	A_2=+0.30 *2*; A_4=−0.14 *2*; pol=+0.64 *12* (1982Ma45) A_2=+0.33 *1*; A_4=−0.14 *1* (1984Zo01)
771.5 *5*	65 *5*	1330.4	4^+	558.7	2^+	E2	A_2=+0.29 *1*; A_4=−0.07 *1*; pol=+0.43 *1* (1982Ma45) A_2=+0.28 *1*; A_4=−0.08 *1* (1984Zo01); α(K)exp=4.7×10^{-4} *10* (1971WyZX) A_2=+0.18 *2*; A_4=−0.02 *4*; DCO=0.79 *5* (1980We07)
799.0 *5*	10.7 *8*	2824.3	5^-	2025.5	4^+		A_2=−0.05 *5* (1984Zo01) I_γ: from $\gamma\gamma$-coin. δ=+0.04 *4* (1984Zo01).
800.6 *5*	6.0 *4*	2488.8	5^+	1688.2	3^+	E2	A_2=+0.37 *8*; A_4=−0.16 *10* (1984Zo01) I_γ: from $\gamma\gamma$-coin.
809.6 *5*	13.0 *9*	2025.5	4^+	1215.7	2^+	E2	A_2=+0.30 *1*; A_4=−0.09 *1*; pol=+0.42 *5* (1982Ma45) A_2=+0.35 *1*; A_4=−0.09 *1* (1984Zo01) A_2=+0.18 *4*; A_4=−0.10 *4* (1980We07)
833.8 *5*	2.3	4687.0	$(10)^+$	3853.2	$(8)^+$		I_γ: from 1984Zo01.
883.0 *5*	4.6 *3*	4324.1	$(9)^-$	3441.1	7^-	E2	A_2=+0.41 *2*; A_4=−0.17 *3*; pol=+0.48 *13* (1982Ma45) A_2=+0.27 *1*; A_4=−0.05 *2* (1984Zo01) A_2=+0.16 *4*; A_4=0.00 *4* (1980We07)
901.7 *5*	1.9 *1*	4213.5	(8^-)	3311.5	(6^-)	E2	A_2=+0.20 *3*; A_4=−0.22 *5*; pol=+0.43 *25* (1982Ma45) A_2=+0.34 *4*; A_4=−0.14 *5* (1984Zo01)
931.6 *5*	36 *3*	2262.0	6^+	1330.4	4^+	E2	A_2=+0.33 *1*; A_4=−0.11 *1*; pol=+0.54 *2* (1982Ma45) A_2=+0.33 *1*; A_4=−0.10 *1* (1984Zo01); α(K)exp=5.4×10^{-4} *11* (1971WyZX) A_2=+0.23 *2*; A_4=−0.05 *2*; DCO=1.07 *5* (1980We07)
942.8 *5*	5.0 *4*	3431.6	7^+	2488.8	5^+	E2	A_2=+0.20 *1*; A_4=−0.19 *2*; pol=+0.53 *11* (1982Ma45) A_2=+0.33 *4*; A_4=−0.11 *5* (1984Zo01) A_2=+0.15 *6*; A_4=−0.06 *6* (1980We07)
950.0 *5*	4.3 *3*	2975.7	6^+	2025.5	4^+	E2	A_2=+0.27 *2*; A_4=−0.11 *2*; pol=+0.37 *13* (1982Ma45) A_2=+0.34 *3*; A_4=−0.19 *4* (1984Zo01) A_2=+0.10 *5*; A_4=−0.06 *5* (1980We07)
963.3 *5*	2.4 *2*	3225.3	$(6,8^+)$	2262.0	6^+		A_2=+0.24 *3*; A_4=−0.03 *4*; pol=+0.44 *18* (1982Ma45) A_2=−0.17 *4*; A_4=+0.08 *4* (1980We07) A_2=+0.30 *8*; A_4=−0.16 *11* (1984Zo01) Note: signs of A_2 and A_4 in 1980We07 are opposite to those in 1982Ma45 and 1984Zo01. δ=−11 to +0.07 (1984Zo01). E_γ: 961.5 *6* (1980We07), 962.1 (1984Zo01).
973.1 *5*	2.1 *2*	4404.7	(9^+)	3431.6	7^+	(E2)	A_2=+0.39 *3*; A_4=−0.09 *4*; pol=+0.98 *23* (1982Ma45) A_2=+0.45 *10* (1984Zo01)
999.9 *5*	1.8 *1*	3261.8	6^-	2262.0	6^+		A_2=+0.57 *3*; A_4=+0.11 *4*; pol=−0.49 *28* (1982Ma45) A_2=+0.24 *7*; A_4=0.00 *8* (1984Zo01) δ=−0.23 *17* (1984Zo01).
1007.2 *5*	18.7 *13*	3269.3	8^+	2262.0	6^+	E2	A_2=+0.33 *1*; A_4=−0.14 *1*; pol=+0.57 *4* (1982Ma45) A_2=+0.37 *3*; A_4=−0.08 *4* (1984Zo01) A_2=+0.38 *3*; A_4=−0.16 *4* (1980We07); α(K)exp=3.0×10^{-4} *8* (1971WyZX)
1029.8 *5*	9.7 *7*	4299.1	10^+	3269.3	8^+	E2	A_2=+0.34 *1*; A_4=−0.16 *2*; pol=+0.66 *8* (1982Ma45) A_2=+0.36 *2*; A_4=−0.09 *3* (1984Zo01) A_2=+0.52 *6*; A_4=−0.16 *6* (1980We07)

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^{74}Ge(α,2nγ) 1982Ma45,1984Zo01,1980We07 (continued)

$\gamma(^{76}Se)$ (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	δ[‡]	Comments
1032.0[#@] *5*	0.34[#]	4728.0		3695.8	(7$^-$)			
1059.4 *5*	2.3 *2*	5067.6	(10)$^-$	4008.1	(8$^-$)	E2		A_2=+0.39 *3*; A_4=−0.10 *5*; pol=+0.20 *30* (1982Ma45) A_2=+0.34 *3*; A_4=−0.12 *4* (1984Zo01)
1129.5 *5*	10.3 *7*	1688.2	3$^+$	558.7	2$^+$	E2+M1		A_2=+0.47 *1*; A_4=+0.03 *1*; pol=−0.02 *8* (1982Ma45) A_2=+0.39 *2*; A_4=+0.11 *2* (1984Zo01) A_2=+0.39 *3*; A_4=−0.13 *3*; DCO=0.45 *8* (1980We07); α(K)exp=3.2×10^{-4} *10* (1971WyZX) δ=+0.6 to +3.0 (1984Zo01).
1133.0 *5*	2.4	5432.1	12$^+$	4299.1	10$^+$	(E2)		A_2=+0.26 *7*; A_4=−0.04 *11* (1984Zo01) E_γ,I_γ: from 1984Zo01.
1158.4 *5*	3.0 *2*	2488.8	5$^+$	1330.4	4$^+$	E2+M1	+2.9 *8*	A_2=+0.36 *2*; A_4=+0.08 *3*; pol=−0.22 *19* (1982Ma45) A_2=+0.31 *3*; A_4=+0.03 *5* (1984Zo01) A_2=+0.49 *12*; A_4=−0.27 *10*; DCO=1.0 *2* (1980We07) δ=+0.45 *10* (1984Zo01).
1169.6 *5*	1.2 *1*	3431.6	7$^+$	2262.0	6$^+$	M1(+E2)	+0.08 *15*	A_2=−0.11 *5*; A_4=−0.04 *8*; pol=−0.42 *36* (1982Ma45) A_2=+0.10 *3*; A_4=+0.06 *4* (1984Zo01) δ=+0.20 *5* (1984Zo01).
1179.1[#] *5*	1.0[#]	3441.1	7$^-$	2262.0	6$^+$			
1213.2 *5*	6.8 *5*	2428.8	3$^-$	1215.7	2$^+$			A_2=−0.39 *3*; A_4=+0.02 *4* (1984Zo01) A_2=−0.14 *4*; A_4=+0.03 *4*; DCO=2.0 *4* (1980We07) δ=−0.27 *13* (1984Zo01), −5.7 to +0.12 (1980We07).
1215.6 *5*	5.8 *4*	1215.7	2$^+$	0.0	0$^+$	E2		A_2=+0.29 *5*; A_4=−0.03 *7* (1984Zo01); α(K)exp=2.9×10^{-4} *10* (1971WyZX) A_2=+0.14 *6*; A_4=−0.02 *6* (1980We07)
1287.0 *5*	0.7	4728.0		3441.1	7$^-$			A_2=+0.05 *15*; A_4=−0.22 *17* (1980We07) E_γ,I_γ: from 1984Zo01. 1980We07 give Eγ=1287.2, Iγ=0.8 *3* and assign from a 2617 level.
1417.7 *5*	1.9 *1*	4687.0	(10)$^+$	3269.3	8$^+$	E2		A_2=+0.57 *4*; A_4=0.00 *6*; pol=+0.72 *45* (1982Ma45) A_2=+0.30 *3*; A_4=−0.09 *4* (1984Zo01)
1467.2[#] *5*	0.41[#]	2025.5	4$^+$	558.7	2$^+$			
1493.9 *5*	6.8 *5*	2824.3	5$^-$	1330.4	4$^+$	E1(+M2)	+0.03 *5*	A_2=−0.18 *1*; A_4=−0.01 *2*; pol=+0.40 *11* (1982Ma45) A_2=−0.29 *1*; A_4=0.00 *2* (1984Zo01) A_2=−0.11 *4*; A_4=−0.04 *4*; DCO=0.78 *21* (1980We07) δ=−0.07 *3* (1984Zo01), −9 to +0.11 (1980We07).
1523.5 *5*	1.8	3785.2	(8$^+$)	2262.0	6$^+$			A_2=+0.5 *1* (1984Zo01) E_γ,I_γ: from 1984Zo01. See also comment for 1529γ.
1528.8 *5*	1.2 *1*	2859.2	4$^-$	1330.4	4$^+$			A_2=+0.44 *4*; A_4=−0.13 *5* (1984Zo01) A_2=+0.24 *8*; A_4=−0.08 *8* (1980We07) This γ placed from a 3790 level by 1980We07 but placement from 2859 level supported by 1984Zo01 and 1982Ma45.

Continued on next page (footnotes at end of table)

^{74}Ge(α,2nγ) 1982Ma45,1984Zo01,1980We07 (continued)

$\gamma(^{76}Se)$ (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Comments
						Instead, a 1523.5γ is placed from a 3787 level by 1984Zo01. $\delta\approx+0.4$ (1984Zo01).
1591.1 *5*	2.4	3853.2	$(8)^+$	2262.0	6^+	$A_2=+0.30$ *5* (1984Zo01) I_γ: from 1984Zo01 for Eγ=1592.5.
1714.9 *5*	1.4 *1*	3045.3	(5^-)	1330.4	4^+	$A_2=-0.25$ *4*; $A_4=-0.05$ *7*; pol=−0.19 *39* (1982Ma45) $A_2=+0.22$ *12*; $A_4=-0.07$ *10* (1980We07)
1870.0 *5*	0.34	2428.8	3^-	558.7	2^+	$A_2=+0.06$ *3*; $A_4=+0.12$ *4*; pol=+0.29 *27* I_γ: from 1984Zo01. Iγ=2.6 *2* (1982Ma45) gives a branching ratio which disagrees with that in the Adopted Gammas.

† From 1982Ma45, unless otherwise stated. Uncertainties for Eγ assigned as 0.5 keV (evaluators). Intensities are mainly from 1982Ma45 at 55° relative to the beam direction. In some cases intensities are available from 1984Zo01 only, measured at 20°. The intensities from 1982Ma45 and 1984Zo01 are both from (α,2nγ) reaction at 27 and 25.5 MeV, respectively.

‡ From $\gamma(\theta$,pol) and $\gamma(\theta)$ data (1982Ma45,1984Zo01).

γ reported by 1984Zo01 only.

@ Placement of transition in the level scheme is uncertain.

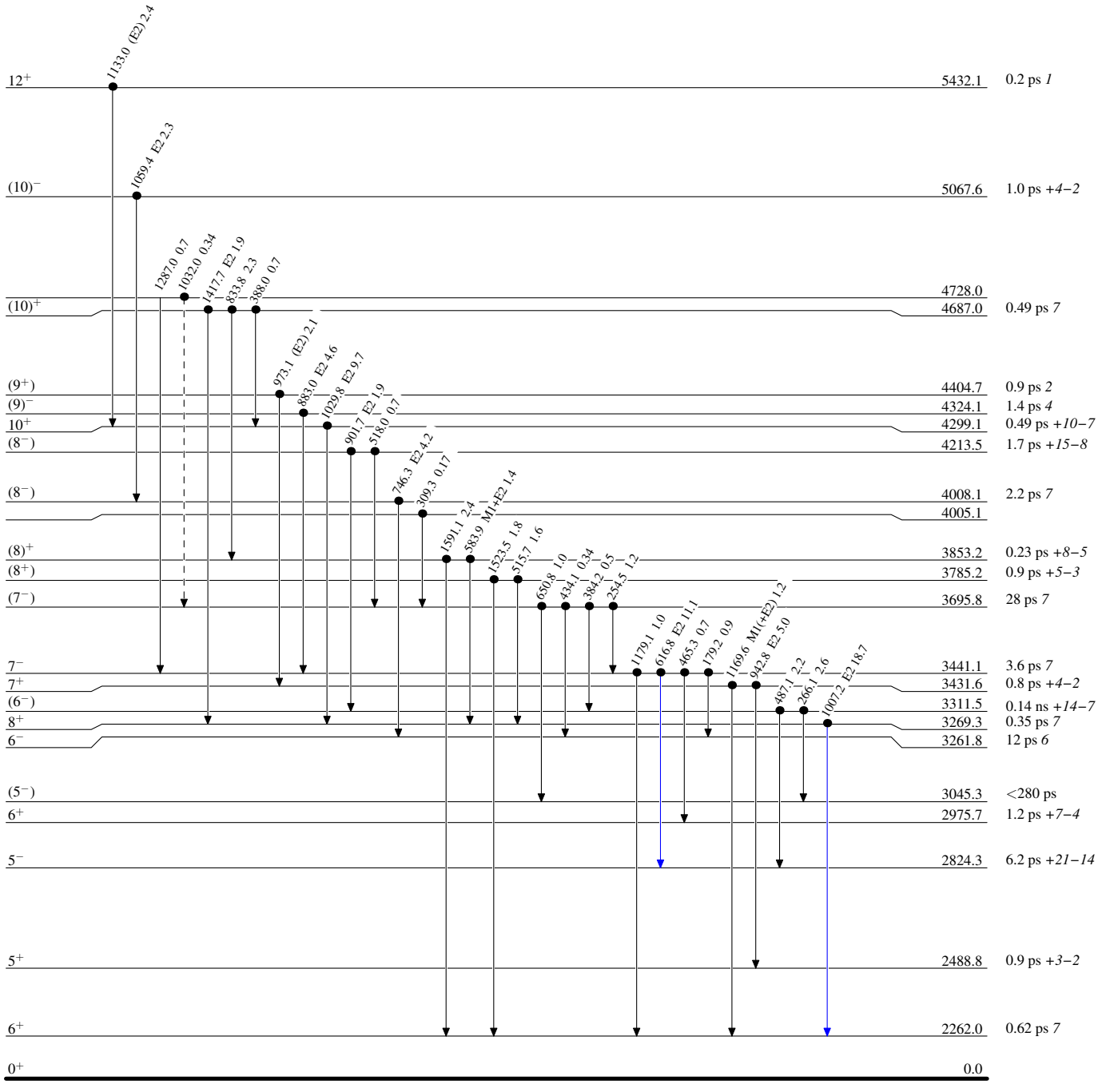
^{74}Ge(α,2nγ) 1982Ma45,1984Zo01,1980We07

Level Scheme

Intensities: Relative I_γ

Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)
- Coincidence

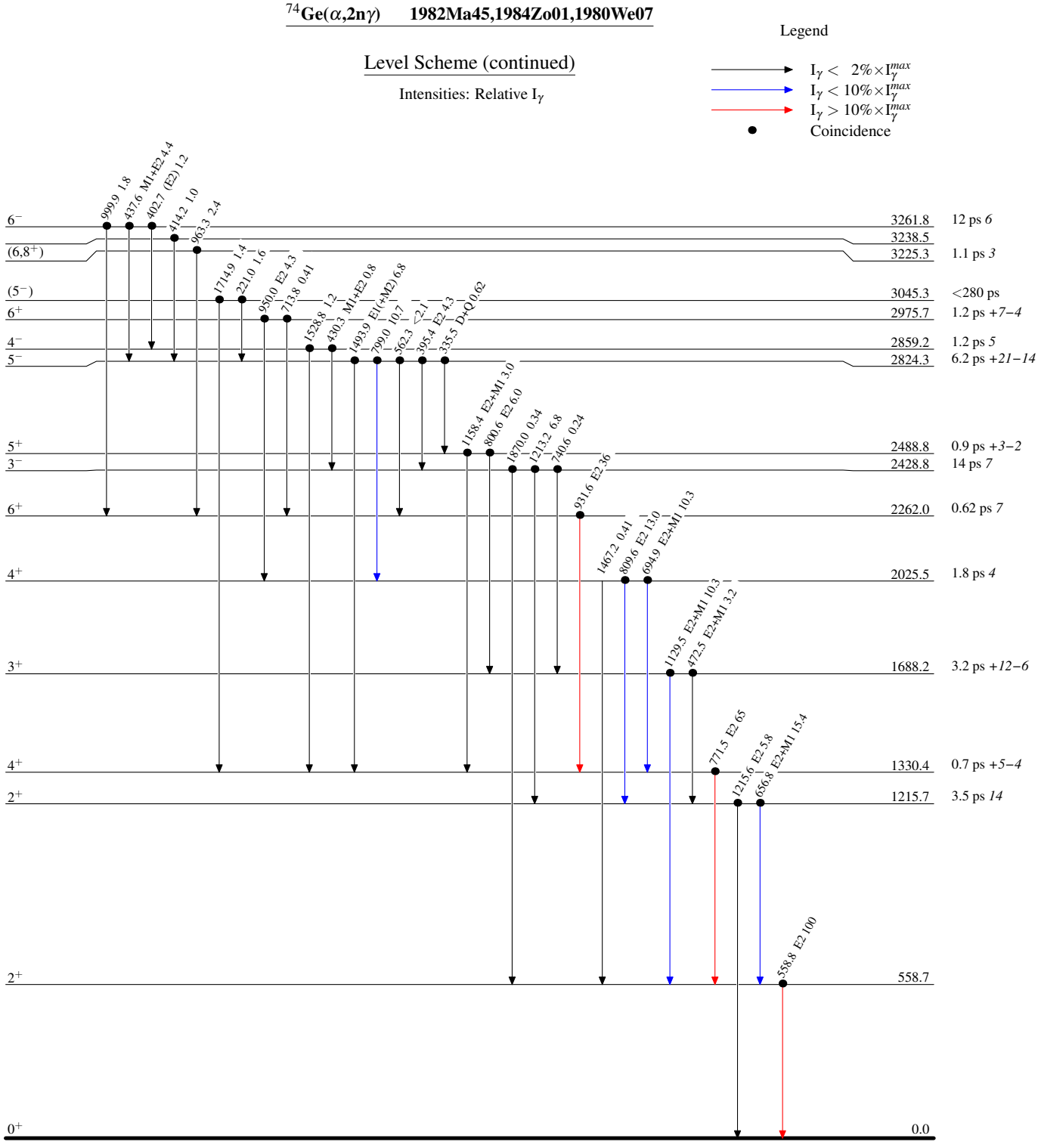


$^{76}_{34}Se_{42}$

^{74}Ge(α,2nγ) 1982Ma45,1984Zo01,1980We07

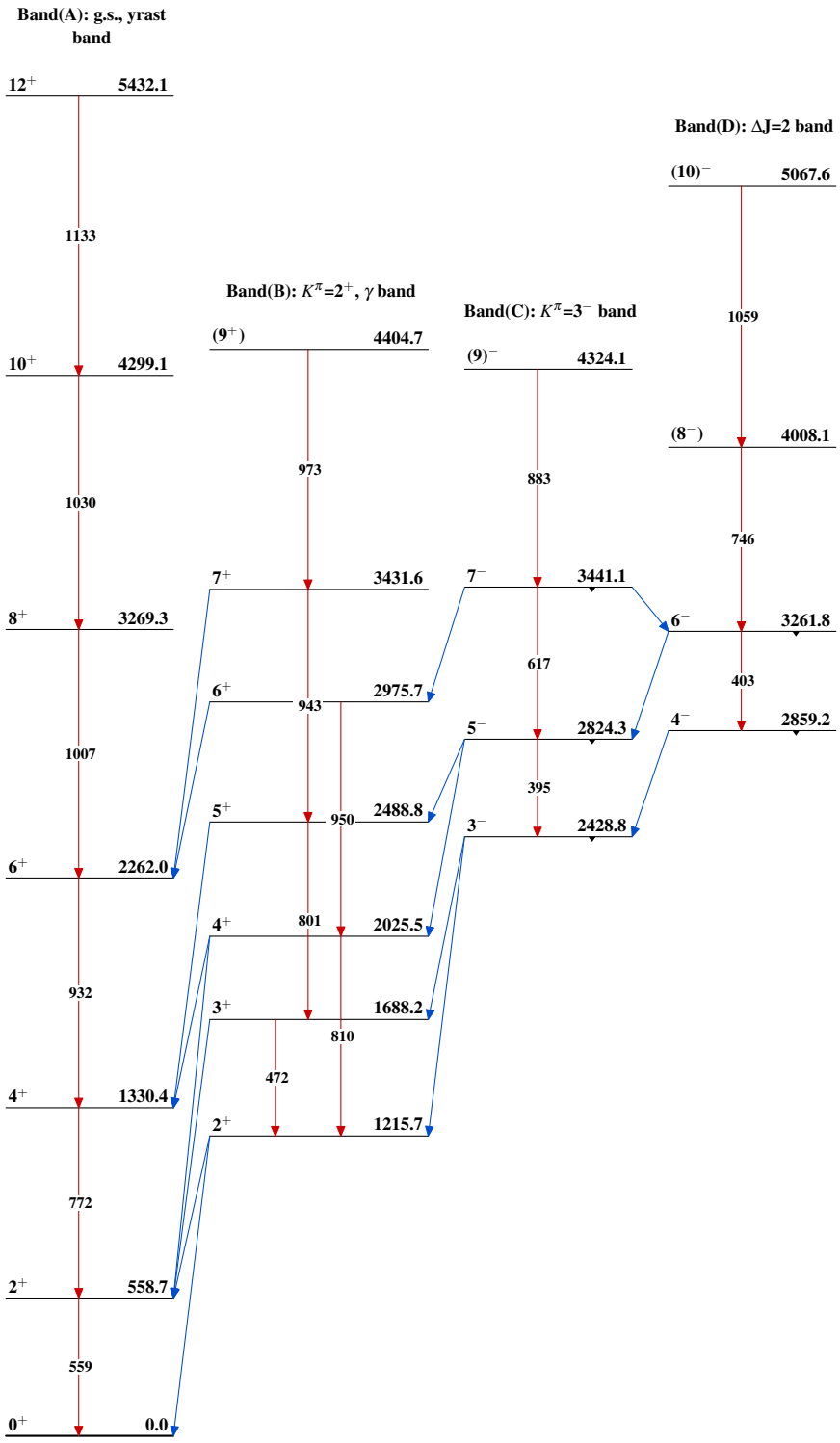
Level Scheme (continued)

Intensities: Relative I_γ



$^{76}_{34}Se_{42}$

^{74}Ge(α,2nγ) 1982Ma45,1984Zo01,1980We07



$^{76}_{34}Se_{42}$