^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Huang Xiaolong, and Wang Xianghan	NDS 204,1 (2025)	30-Jun-2023

2012Ge04 (also 2009Ge14 and thesis by J. Gellanki, Lund University (2011)): data given in these works are from four experiments mentioned below: Data set 1: ^{40}Ca(^{28}Si,α2pγ): ^{28}Si beam at E=122 MeV at the Lawrence Berkeley National Laboratory. Target=0.5 mg/cm^2 ^{40}Ca. Gamma rays were detected using the Gammasphere array with 103 HPGe detectors, and particles were detected by the Microball 4π charged-particle detector array. Data set 2: ^{28}Si(^{36}Ar,2pγ): ^{36}Ar beam at E≈140 MeV at Argonne National Laboratory. Three different experiments using the Gammasphere array were carried out. Measured Eγ, Iγ, $\gamma\gamma$-coin, (particle)γ-coin, $\gamma\gamma(\theta)$(DCO). Deduced 262 levels from 460 γ rays, J^π, bands, multipolarities, mixing ratios of a few transitions, and configurations. Comparison with cranked Nilsson-Strutinsky calculations.

1998Sv01, 1997Sv02, 1998SvZY: ^{40}Ca(^{28}Si,α2pγ),E=115, 125 MeV. Measured Eγ, Iγ, $\gamma\gamma$-coin, (particle)$\gamma\gamma$-coin, level $T_{1/2}$ by Doppler shift attenuation method. Two experiments were conducted, first at Chalk River using the TASCC accelerator facility, and the second at LBNL, Berkeley cyclotron facility. First experiment used 8π array of 20 Compton-suppressed Ge detectors and a 70-element BGO ball, with Miniball array of 44-element CsI(Tl) charged-particle detectors. The second experiment used Gammasphere array of 83 Compton-suppressed Ge detectors and Microball array of 95-element CsI(Tl) charged-particle detectors. Deduced extensive high-spin level scheme with six bands up to J^π=24, and one SD band. See also 1997Sv04 and 1998-Svensson, p407, ENAM98 conference proceedings (1998). These results are in general agreement with much more extensive band structures in 2012Ge04.

1997Fu08: ^{40}Ca(^{28}Si,α2pγ),E=120 MeV. Measured Eγ, Iγ, $\gamma\gamma$-coin, $\gamma\gamma(\theta)$(DCO) at the tandem accelerator of Japan Atomic Energy Agency using an array of ten Compton-suppressed Ge detectors and Si-ball for charged-particles. Only a level scheme is provided in the paper with γ-cascades: 2484-1585-1161-1791-1341-1177-1197-1521-1232-954; 1603-938-1804; 1557-1073-913-2830, and some other levels, with a total of 38 γ rays and 26 excited levels of spins from 2 to 16 assigned for 12 levels. While the results are in general agreement with those from 1997Fu08 and 2012Ge04, placements of six γ rays from six levels (3784 to 8331 keV) in the level scheme were not confirmed in later studies.

Additional information 1.

1979Mu04 (also 1980MuZV thesis): ^{40}Ca(^{28}Si,α2pγ),E=93.5, 102 MeV. Measured Eγ, Iγ, $\gamma\gamma$-coin, $\gamma(\theta)$ and $\gamma\gamma(\theta)$(DCO) using two Ge(Li) detectors at the University of Pennsylvania FN tandem Van de Graaff accelerator. (1161)−1341-1177-1197-1521-1232-954 and 1177-557-1604-557-1232 γ-cascades proposed in this study, with nine excited states reported: 953.9, 2$^+$; 2186.1, 4$^+$; 2743.1, (3$^-$,4$^+$); 3707.8, (6$^+$); 4347.1; 4905.0, (7); 6081.9, (9); 7423.4, (11); (8594.2), (12). Except for the tentative placement of the 1161γ, ordering of the two cascades is in agreement with those in 1998Sv01 2012Ge04.

All data here are from 2012Ge04 unless otherwise specified.

^{62}Zn Levels

Levels at 7630 keV decaying by 1548γ, and 10317 keV, 13$^+$ decaying by 851 and 1268 γ rays, and a γ ray of 3006 keV from 10636, 12$^{(+)}$ in 1998Sv01 were not confirmed by 2012Ge04, thus omitted here.

Placements of six γ rays from six levels: 3784 (2830γ), 4697 (913γ), 5770 (1073γ), 7327 (1557γ), 7701 (279γ), and 8331 (909γ) were not confirmed in more detailed studies by 1998Sv01 and 2012Ge04, thus omitted here.

General specify configurations are listed in terms of valence holes or particles: [$p_1(\pm)p_2$,$n_1(\pm)n_2$], where p_1, n_1=number of proton or neutron holes in $1f_{7/2}$ orbital; p_2, n_2=number of neutron or proton particles in $1g_{9/2}$ orbital, relative to a closed ^{56}Ni core. The (±) notation refers to α=+1/2 and α=−1/2 signature.

Nothe that: configurations for bands are from Fig. 21 in 2012Ge04 in with the following nomenclature based on cranked Nilsson-Strutinsky formalism, and relative to ^{56}Ni (N=Z=28) core:

$\pi[(1f_{7/2})^{-p1}(fp)^{p3}(1g_{9/2})^{p2}]$ abbreviated as π[p1,p2(±)], where p3=2+p1−p2, + for α=+1/2, − for α=−1/2 for odd number of *fp* protons p3.

$\nu[(1f_{7/2})^{-n1}(fp)^{n3}(1g_{9/2})^{n2}]$ abbreviated as ν[n1,n2(±)], where n3=4+n1+n2, + for α=+1/2, − for α=−1/2 for odd number of *fp* neutrons n3.

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

^{62}Zn Levels (continued)

E(level)†	Jπ#	Comments
0.0@	0^+	
954.0@ 3	2^+	
1804.8& 3	2^+	
2186.2@ 4	4^+	
2384.6a 3	3^+	
2743.8& 4	4^+	
3209.9c 5	3^-	Jπ: 4^+ in the Adopted Levels.
3586.9a 4	5^+	
3707.7@ 4	6^+	
4043.3c 4	5^-	
4231.0 7	5^+	
4348.3& 4	6^+	
4535.5 4	5^-	
4905.0c 4	7^-	
5124.1e 4	7^-	
5131.6b 5	6^-	
5144.1a 5	7^+	
5481.5 7	8^+	
5693.5 9	7^-	
5878.9 8		
5910.8@ 5	8^+	
6081.8c 5	9^-	
6113.7b 5	8^-	
6304.7 6	7^+	
6343.0d 7	8^-	
6445.0& 10	(8^+)	
6631.2e 5	9^-	
6964.9a 7	9^+	
7024.4 8	(9^-)	
7422.5c 5	11^-	
7423.0b 5	10^-	
7445.0f 6	9^-	
7499.3 8	10^+	
7739.2d 6	10^-	
7975.8h 6	9^+	
7985.1 7	10^+	
8437.2g 6	10^+	
8480.2 6	10	
8490.0e 8	(11^-)	
9024.6b 6	12^-	
9048.0h 5	11^+	
9083.7f 6	11^-	
9213.9c 6	13^-	
9464.9g 5	12^+	
9682.0d 11	12^-	
9823.1j 8	12^+	
9866.0 9	11^+	
9960.0h 6	13^+	

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

^{62}Zn Levels (continued)

E(level)†	Jπ#	E(level)†	Jπ#	E(level)†	Jπ#	E(level)†	Jπ#
10242.0[m] 7	11+	15704.7[k] 7	19−	18506.1[w] 27	(19)	22568.0[t] 28	23+
10374.8[g] 6	14+	15716.3 16	17+	18516.7[t] 25	19+	22741.7 41	
10457.0[e] 13	(13−)	15727.6 19		18592.9 37		22782.7[3] 18	23(−)
10630.8[l] 6	12+	15750.4[r] 8	17−	18677.3[p] 12	20+	22794.5 23	23+
10725.5[b] 8	14−	15796.3‡[v] 42	(16+)	18725.0‡[z] 28	(19+)	22822.9 34	
11178.0[m] 6	13+	15830.4[y] 28	17	18759.2[x] 19	(20+)	22866.3[z] 23	23+
11546.1[j] 7	14+	15869.9[1] 20	(17−)	19093.3[s] 16	21−	23024.6 46	
11651.3[o] 7	13−	16101.9[u] 16	17−	19177.2 25		23028.9[6] 25	23−
11751.3[l] 6	14+	16234.6 33	17	19305.4[r] 11	21−	23071.8[q] 16	24−
11786.8[h] 10	15+	16323.5[x] 17	(18+)	19400.2[2] 15	20−	23079.6 27	
11961.2[g] 7	16+	16365.4[m] 9	19+	19477.4[4] 28	20+	23179.4[n] 16	24−
12046.3[d] 15	(14−)	16369.9 31	(17)	19486.3 19	21−	23184.7 39	
12276.8[i] 8	15+	16372.9[o] 7	19−	19498.4[m] 25	(21+)	23274.1 52	(22)
12329.3[n] 6	14−	16414.2 27		19599.7‡ 21	(20−)	23341.8[p] 22	24+
12531.8[m] 6	15+	16444.1[w] 28	(17)	19676.8[n] 10	22−	23376.9[5] 48	(22)
12812.5[k] 7	15−	16469.8 16	18+	19677.6[y] 36		23408.3 44	
12831.7[e] 19	(15−)	16500.7[q] 9	18−	19702.9[v] 41	(20+)	23467.2[w] 40	(23)
12992.8[o] 6	15−	16574.3‡[3] 21	(17−)	19757.4[1] 18	21−	23625.4[x] 33	
13156.4[j] 8	16+	16678.1‡ 32		19774.1 39		23761.8 45	
13231.2[l] 6	16+	16715.3 11	18+	19777.9[u] 17	21−	24054.0[2] 18	24−
13496.8‡[s] 21	15−	16817.5 11	18+	20027.0 24		24308.2 38	(24)−
13726.2[n] 6	16−	16874.4 24		20086.4 17	21+	24468.6[4] 33	24+
13782.5[i] 8	17+	16901.3[s] 11	19−	20432.5[t] 26	21+	24607.5[r] 22	25−
13964.7 13	(16+)	17035.4 33		20442.1[q] 12	22−	24692.4[v] 47	(24+)
14119.2[m] 7	17+	17318.4‡ 22	(18−)	20473.7[3] 17	21(−)	24725.9[s] 28	25−
14322.1‡ 37		17338.7[r] 9	19−	20620.7‡ 25	(21+)	24913.0[1] 24	25−
14344.1 13	(16−)	17350.4[4] 28	18+	20658.7[z] 24	21+	25145.5[t] 29	25+
14430.1[x] 18	(16+)	17365.4 18	18−	20782.3 42		25162.4[u] 25	25−
14445.0[k] 6	17−	17400.3 28		20851.6[w] 33	(21)	25338.7[z] 23	25+
14489.6[r] 11	15−	17407.8[2] 16	18−	20857.2[p] 17	22+	25347.4[3] 21	25(−)
14541.1[o] 7	17−	17454.3[y] 31		21037.1[o] 11	23−	25402.3[5] 50	(24)
14568.1 22	15	17478.1[n] 8	20−	21098.4‡ 55		25438.5 40	
14610.8 29		17488.9 16	19+	21190.1 43		25479.2[6] 24	(25−)
14644.7 14	16+	17508.8‡ 21	(18−)	21197.4 32	21	25660.7 28	25−
14831.4 13	16+	17578.9[1] 17	19−	21316.5 30	21	25880.6 38	
14984.8‡ 15		17582.6[l] 12	20+	21401.7 30	(22−)	25990.0 41	
15020.9 19	17	17646.5[v] 39	(18+)	21403.5[x] 27	(22+)	26174.1[p] 30	26+
15040.4 12	16+	17666.2 26		21468.3 28		26228.4 42	
15042.8[l] 7	18+	17696.9 17	19+	21602.7 47	(21−)	26323.1[q] 24	26−
15076.9[s] 11	17−	17749.1 32		21614.6[2] 17	22−	26461.9[w] 43	(25)
15081.4[q] 9	16−	17764.3[u] 17	19−	21682.9[r] 14	23−	26743.9[2] 22	26−
15281.4 14	17+	17843.9 43		21687.2[s] 22	23−	27317.2[4] 37	26+
15294.3 16	18+	18020.6 35		21825.1‡[5] 50		27717.8[5] 52	(26)
15407.8 18	17+	18240.1 14	20−	21852.1[4] 30	22+	27763.9[v] 55	(26+)
15414.2[n] 7	18−	18286.8[q] 10	20−	22030.0[v] 44	(22+)	28162.9[3] 24	27(−)
15482.5‡[4] 30	16+	18416.3[3] 16	19(−)	22127.4[1] 18	23−	28205.9[z] 28	27+
15682.3 25		18502.3[o] 9	21−	22243.8[u] 19	23−	28230.2[r] 40	27−

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

^{62}Zn Levels (continued)

E(level)†	Jπ#	E(level)†	Jπ#	E(level)†	Jπ#	E(level)†	Jπ#
28245.1[6] *25*	(27$^-$)	30370.1[5] *55*	(28)	33360.8[p] *50*	(30$^+$)	36897.0[5] *68*	(32)
28369.5[1] *35*	(27$^-$)	30434.9[4] *43*	28$^+$	33458.5[5] *60*	(30)	38366.5[3] *51*	(33$^-$)
28555.5[s] *42*	(27$^-$)	30508.3[q] *44*	(28$^-$)	33791.0 *52*	(30$^+$)	40455.3[2] *61*	(34$^-$)
28745.6[u] *42*	(27$^-$)	31213.3[3] *28*	(29$^-$)	33798.2[4] *50*	(30$^+$)	40730.7 *63*	(34$^-$)
29474.0[p] *39*	28$^+$	31398.1[6] *34*	(29$^-$)	34601.0[3] *38*	(31$^-$)	42519.2[3] *64*	(35$^-$)
29682.8[2] *28*	28$^-$	31542.9[z] *40*	(29$^+$)	35339.1[z] *55*	(31$^+$)		
29818.4[w] *54*	(27)	32916.9[2] *38*	(30$^-$)	36496.8[2] *49*	(32$^-$)		

† From least-squares fit to Eγ data for 460 γ rays placed amongst 262 levels. Reduced χ^2=0.32, with only one γ ray poorly fitted.
‡ No deexciting γ ray(s) from this level.
# As given by 2012Ge04, based on multipolarity and ΔJ assignments from $\gamma\gamma(\theta)$(DCO) data, and band assignments.
@ Band(A): g.s., normal deformed, ND-1 band. Configuration=[00,00].
& Band(B): Normal-deformed, ND-2 band,α=0.
a Band(b): Normal-deformed, ND-2 band,α=1.
b Band(C): Normal-deformed, ND-3 band,α=0. Configuration=[00,01].
c Band(c): Normal-deformed, ND-3 band,α=1. Configuration=[00,01].
d Band(D): Normal-deformed, ND-4 band,α=0.
e Band(d): Normal-deformed, ND-4 band,α=1.
f Band(E): Normal-deformed, ND-5 band,α=1.
g Band(F): Normal-deformed, ND-6 band,α=0. Configuration=[01,01$^{(+)}$].
h Band(f): Normal-deformed, ND-6 band,α=1. Configuration=[01,01$^{(+)}$].
i Band(G): Normal-deformed, ND-7 band,α=1. Configuration=[01$^{(+)}$,01$^{(-)}$].
j Band(h): Normal-deformed, ND-8 band. Configuration=[00,02].
k Band(i): Normal-deformed, ND-9 band. Configuration=[01$^{(+)}$,02].
l Band(J): Terminating, TB-1 band,α=0. Configuration=[11,01$^{(+)}$].
m Band(j): Terminating, TB-1 band,α=1. Configuration=[11,01$^{(+)}$].
n Band(K): Terminating, TB-2 band,α=0. Configuration=[11,02].
o Band(k): Terminating, TB-2 band,α=1. Configuration=[11,02].
p Band(H): Well-deformed, WD-1 band. Configuration=[22,02].
q Band(L): Well-deformed, WD-2 band,α=0. Configuration=[11,12$^{(+)}$].
r Band(l): Well-deformed, WD-2 band,α=1. Configuration=[11,12$^{(+)}$].
s Band(I): Well-deformed, WD-3 band. Configuration=[22,01$^{(+)}$].
t Band(M): Well-deformed, WD-4 band. Configuration=[12$^{(+)}$,02].
u Band(N): Well-deformed, WD-6 band. Configuration=[11,12$^{(+)}$].
v Band(O): Well-deformed, WD-8 band. Configuration=[11,13].
w Band(P): Well-deformed, WD-9 band.
x Band(Q): Well-deformed, WD-10 band. Configuration=[21$^{(+)}$,01$^{(+)}$].
y Band(R): Well-deformed, WD-11 band.
z Band(S): Well-deformed, WD-5 band. Configuration=[22,12$^{(+)}$].
1 Band(T): Well-deformed, WD-7 band. Configuration=[21$^{(+)}$,02].
2 Band(U): SD-1 band,α=0. Configurations=[22,23]. Band intensity $\approx$1%; Q(transition)=2.7 *+7−5* (1997Sv02), corresponding to β_2=0.45 *+10−7*. Other configuration=$\nu f_{7/2}^{-2}\nu g_{9/2}^{+2}$ with possible contribution from configuration=$\nu f_{7/2}^{-2}\nu g_{9/2}^{+3}$ (1997Sv02).
3 Band(V): SD-2 band,α=1. Configurations=[22,23].
4 Band(W): SD-3 band Configurations=[22,24].
5 Band(X): SD-4 band.
6 Band(Y): SD-5 band. Configuration=[22,13].

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

$\gamma(^{62}Zn)$

The $\gamma\gamma(\theta)$(DCO) data from 2012Ge04 are available for 30°−83°, 30°−53°, and 53°−83° geometries. Stated values in this dataset are mainly for 30°−83° geometry. For 30 γ rays, data are available for all the three geometries, where these are listed in the following order: the first DCO for 30°−83°, second for 30°−53°, and the third for 53°−83°. Expected DCO values are: 1.0, ≈0.6, and 0.9 corresponding to ΔJ=2, quadrupole (likely E2); ΔJ=1, dipole or dipole+quadrupole (likely M1+E2); and ΔJ=0, dipole, respectively, when gated on known ΔJ=2, quadrupole transitions.

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ[‡]	Comments
171.0 *3*	0.17 *3*	6081.8	9$^-$	5910.8	8$^+$			E1 in 2012Ge04.
219.3 *2*	0.42 *3*	5124.1	7$^-$	4905.0	7$^-$	D		DCO=0.87 *11* Mult.: ΔJ=0 (2012Ge04).
359.5 *2*	1.71 *5*	2743.8	4$^+$	2384.6	3$^+$	D+Q	−0.13 *+7−10*	DCO=0.39 *4*; DCO=0.74 *7*; DCO=0.70 *5* Eγ=358 (1998Sv01), 359 (1997Fu08). E2+M1 in 2012Ge04.
369.7 *2*	2.48 *7*	4905.0	7$^-$	4535.5	5$^-$	Q		DCO=0.92 *7* Eγ=370 (1997Fu08). E2 in 2012Ge04.
388.8 *4*	0.98 *4*	10630.8	12$^+$	10242.0	11$^+$	D(+Q)	+0.06 *+8−9*	DCO=0.59 *8*; DCO=0.93 *15*; DCO=0.70 *9* Eγ=388.3 *3*, Iγ=1.2 *1* (1998SvZY). M1(+E2) in 2012Ge04.
414.8 *4*	0.27 *2*	10374.8	14$^+$	9960.0	13$^+$	D+Q		DCO=0.44 *9* M1+E2 in 2012Ge04.
416.9 *2*	1.51 *5*	9464.9	12$^+$	9048.0	11$^+$	D+Q		DCO=0.44 *9* Eγ=417 (1998Sv01). M1+E2 in 2012Ge04.
492.4 *2*	0.39 *5*	4535.5	5$^-$	4043.3	5$^-$			ΔJ=0 (2012Ge04).
495.1 *5*	0.14 *2*	9960.0	13$^+$	9464.9	12$^+$			M1+E2 in 2012Ge04.
547.2 *2*	5.05 *13*	11178.0	13$^+$	10630.8	12$^+$	D+Q	+0.16 *4*	DCO=0.71 *4*; DCO=0.92 *5*; DCO=0.79 *4* Eγ=546.9 *3*, Iγ=5.0 *3* (1998SvZY). M1+E2 in 2012Ge04.
549.6 *8*	0.08 *1*	6631.2	9$^-$	6081.8	9$^-$			ΔJ=0 (2012Ge04).
556.9 *5*	24.8 *13*	4905.0	7$^-$	4348.3	6$^+$	D		DCO=0.59 *3* Eγ=557.0 *4* (1979Mu04). E1 in 2012Ge04.
557.3 *3*	17.3 *13*	2743.8	4$^+$	2186.2	4$^+$	D		DCO=0.80 *5* A_2=+0.021 *21*; A_4=−0.035 *25* (1979Mu04) Eγ=557.0 *4* (1979Mu04). Mult.: ΔJ=0 (2012Ge04).
566.6 *6*	0.27 *3*	9048.0	11$^+$	8480.2	10	D		DCO=0.68 *8* Mult.: ΔJ=1, dipole from DCO (2012Ge04).
573.3 *2*	4.48 *13*	11751.3	14$^+$	11178.0	13$^+$	D+Q	+0.12 *+4−5*	DCO=0.63 *5*; DCO=0.90 *7*; DCO=0.80 *4* Eγ=573.1 *3*, Iγ=5.0 *3* (1998SvZY). M1+E2 in 2012Ge04.
580.1 *2*	2.05 *6*	2384.6	3$^+$	1804.8	2$^+$	D+Q		DCO=0.36 *7*; DCO=0.57 *8*; DCO=0.68 *5* Eγ=580 (1998Sv01, 1997Fu08). Mult.,δ: E2+M1 in 2012Ge04 with δ ≈−0.15 or ≈−2.1.
603.2 *7*	0.16 *3*	9083.7	11$^-$	8480.2	10			Mult.: ΔJ=1 (2012Ge04).
610.9 *6*	0.26 *3*	9048.0	11$^+$	8437.2	10$^+$	D+Q		DCO=0.42 *12* Eγ=611 (1998Sv01). M1+E2 in 2012Ge04.
640.6 *2*	3.60 *11*	4348.3	6$^+$	3707.7	6$^+$	D		DCO=0.95 *8* Eγ=640 (1998Sv01, 1997Fu08). Mult.: ΔJ=0 (2012Ge04).
643.9 *8*	0.07 *1*	4231.0	5$^+$	3586.9	5$^+$			ΔJ=0 (2012Ge04).
663.7 *3*	5.27 *16*	12992.8	15$^-$	12329.3	14$^-$	D+Q	+0.12 *4*	DCO=0.61 *4*; DCO=0.88 *5*; DCO=0.81 *5*

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

γ(^{62}Zn) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ ‡	Comments
								Eγ=663.6 *3*, Iγ=4.3 *3* (1998SvZY). M1+E2 in 2012Ge04.
668.9 *6*	0.17 *2*	15750.4	17$^-$	15081.4	16$^-$			M1+E2 in 2012Ge04.
678.0 *3*	1.43 *5*	12329.3	14$^-$	11651.3	13$^-$	D+Q	+0.15 *5*	DCO=0.72 *6*; DCO=0.84 *7*; DCO=0.90 *8* Eγ=677.7 *4*, Iγ=2.0 *2* (1998SvZY). M1+E2 in 2012Ge04.
699.4 *3*	5.01 *15*	13231.2	16$^+$	12531.8	15$^+$	D+Q	+0.11 *+4−5*	DCO=0.69 *4*; DCO=0.84 *5*; DCO=0.73 *5* Eγ=699.6 *3*, Iγ=4.2 *3* (1998SvZY). M1+E2 in 2012Ge04.
718.8 *3*	1.12 *5*	14445.0	17$^-$	13726.2	16$^-$	D+Q	+0.10 *+6−7*	DCO=0.55 *6*; DCO=0.92 *9*; DCO=0.96 *9* Eγ=717 (1998Sv01). M1+E2 in 2012Ge04.
720.5 *10*	0.11 *1*	6631.2	9$^-$	5910.8	8$^+$			E1 in 2012Ge04.
733.5 *3*	6.62 *15*	13726.2	16$^-$	12992.8	15$^-$	D+Q	+0.07 *+3−4*	DCO=0.60 *4*; DCO=0.82 *5*; DCO=0.74 *5* Eγ=733.6 *3*, Iγ=5.0 *4* (1998SvZY). M1+E2 in 2012Ge04.
750.6 *6*	0.11 *1*	16500.7	18$^-$	15750.4	17$^-$			M1+E2 in 2012Ge04.
761.4 *2*	2.61 *8*	4348.3	6$^+$	3586.9	5$^+$	D(+Q)	−0.07 *+8−10*	DCO=0.53 *6*; DCO=0.66 *9*; DCO=0.73 *7* Eγ=761 (1998Sv01), 757 (1997Fu08). M1(+E2) in 2012Ge04.
775.8 *7*	0.09 *1*	5124.1	7$^-$	4348.3	6$^+$			E1 in 2012Ge04.
780.4 *3*	5.37 *16*	12531.8	15$^+$	11751.3	14$^+$	D+Q	+0.15 *+5−6*	DCO=0.64 *5*; DCO=1.09 *10*; DCO=0.82 *6* Eγ=780.6 *3*, Iγ=4.1 *3* (1998SvZY). M1+E2 in 2012Ge04.
791.7 *8*	0.11 *1*	7423.0	10$^-$	6631.2	9$^-$	D+Q		DCO=0.44 *10* M1+E2 in 2012Ge04.
795.8 *3*	1.13 *8*	5144.1	7$^+$	4348.3	6$^+$	D+Q		DCO=0.39 *9*; DCO=0.65 *12*; DCO=0.58 *10* Eγ=796 (1998Sv01). Mult.,δ: M1+E2 in 2012Ge04 with δ=−0.23 *+13−32* or −2.6 *+10−19*.
814.9 *4*	4.69 *15*	14541.1	17$^-$	13726.2	16$^-$	D+Q	+0.14 *4*	DCO=0.64 *4*; DCO=0.92 *5*; DCO=0.77 *4* Eγ=815.0 *3*, Iγ=3.7 *3* (1998SvZY). M1+E2 in 2012Ge04.
827.7 *4*	0.57 *7*	4535.5	5$^-$	3707.7	6$^+$	D		DCO=0.39 *11* E1 in 2012Ge04.
833.3 *3*	0.56 *4*	4043.3	5$^-$	3209.9	3$^-$			DCO=1.03 *19* Eγ=833 (1998Sv01). E2 in 2012Ge04. Mult.: ΔJ=2, Q from DCO in 2012Ge04, but [E1] implied in the Adopted Levels, Gammas dataset from 833.3γ to 3210, 4$^+$ level, rather than 3$^-$ in this dataset.
838.2 *5*	0.19 *2*	17338.7	19$^-$	16500.7	18$^-$	D+Q		DCO=0.83 *14* M1+E2 in 2012Ge04.
843.2 *3*	3.74 *19*	3586.9	5$^+$	2743.8	4$^+$	D+Q		DCO=0.28 *2*; DCO=0.58 *5*; DCO=0.54 *4* Eγ=843 (1998Sv01), 847 (1997Fu08). Mult.,δ: E2+M1 in 2012Ge04 with δ ≈−0.39 or ≈−1.9.
850.9 *3*	9.80 *29*	1804.8	2$^+$	954.0	2$^+$	D+Q		DCO=0.93 *6* Eγ=851 (1998Sv01), 850 (1997Fu08). ΔJ=0 (2012Ge04).
861.4 *3*	2.59 *8*	4905.0	7$^-$	4043.3	5$^-$	Q		DCO=1.01 *11* Eγ=861 (1998Sv01). E2 in 2012Ge04.
873.2 *4*	3.12 *10*	15414.2	18$^-$	14541.1	17$^-$	D+Q	+0.16 *4*	DCO=0.72 *4*; DCO=0.88 *5*; DCO=0.77 *5*

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

$\gamma(^{62}Zn)$ (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ[‡]	Comments
								Eγ=873.7 *3*, Iγ=3.5 *3* (1998SvZY). M1+E2 in 2012Ge04.
888.0 *4*	2.96 *9*	14119.2	17^+	13231.2	16^+	D+Q	+0.18 *+5−6*	DCO=0.68 *7*; DCO=0.92 *8*; DCO=0.85 *5* Eγ=888.7 *3*, Iγ=3.4 *2* (1998SvZY). M1+E2 in 2012Ge04.
909.6 *6*	4.63 *19*	10374.8	14^+	9464.9	12^+	Q		DCO=1.01 *8* Eγ=910 (1998Sv01). E2 in 2012Ge04.
911.2 *8*	3.81 *18*	9960.0	13^+	9048.0	11^+	Q		DCO=1.08 *6* E2 in 2012Ge04.
913.6 *5*	0.57 *5*	13726.2	16^-	12812.5	15^-	D+Q	+0.16 *6*	DCO=0.67 *8*; DCO=0.94 *10*; DCO=0.96 *12* M1+E2 in 2012Ge04.
923.6 *5*	2.33 *8*	15042.8	18^+	14119.2	17^+	D+Q	+0.18 *5*	DCO=0.67 *6*; DCO=1.01 *8*; DCO=0.81 *6* Eγ=924.1 *4*, Iγ=2.4 *2* (1998SvZY). M1+E2 in 2012Ge04.
935.7 *8*	1.19 *6*	9960.0	13^+	9024.6	12^-	D		DCO=0.72 *5* E1 in 2012Ge04.
936.1 *7*	1.07 *5*	11178.0	13^+	10242.0	11^+	Q		DCO=0.86 *7* Eγ=935.5 *5*, Iγ=1.2 *1* (1998SvZY). E2 in 2012Ge04.
938.4 *4*	9.97 *43*	2743.8	4^+	1804.8	2^+	Q		DCO=0.98 *5* Eγ=938 (1998Sv01, 1997Fu08). E2 in 2012Ge04.
948.1 *10*	0.07 *2*	18286.8	20^-	17338.7	19^-			M1+E2 in 2012Ge04.
953.9 *3*	100.0 *30*	954.0	2^+	0.0	0^+	Q		DCO=0.93 *4* A_2=+0.293 *16*; A_4=−0.104 *20* (1979Mu04) Eγ=953.9 *4* (1979Mu04). E2 in 2012Ge04 and 1979Mu04.
959.0 *5*	3.59 *16*	16372.9	19^-	15414.2	18^-	D+Q	+0.19 *+7−8*	DCO=0.77 *7*; DCO=0.86 *8*; DCO=0.84 *8* Eγ=959.0 *8*, Iγ=3.0 *8* (1998SvZY). M1+E2 in 2012Ge04.
961.0 *9*	0.51 *6*	7985.1	10^+	7024.4	(9^-)	D		DCO=0.42 *9* (E1) in 2012Ge04.
969.3 *6*	1.89 *6*	15414.2	18^-	14445.0	17^-	D+Q		DCO=0.69 *6*; DCO=1.08 *9*; DCO=0.68 *7* Mult.,δ: M1+E2 in 2012Ge04 with δ=+0.19 *10* or +6.8 *+53−13*.
974.8 *10*	0.15 *3*	9464.9	12^+	8490.0	(11^-)			E1 in 2012Ge04.
981.8 *4*	0.86 *7*	6113.7	8^-	5131.6	6^-	Q		DCO=1.30 *32* Eγ=983 (1998Sv01). E2 in 2012Ge04.
990.2 *6*	0.21 *4*	6113.7	8^-	5124.1	7^-	D+Q		DCO=0.62 *9* M1+E2 in 2012Ge04.
1011.0 *9*	0.08 *1*	7975.8	9^+	6964.9	9^+			ΔJ=0 (2012Ge04).
1018.9 *11*	0.09 *1*	19305.4	21^-	18286.8	20^-			M1+E2 in 2012Ge04.
1021.2 *11*	0.08 *3*	11651.3	13^-	10630.8	12^+			E1 in 2012Ge04.
1023.4 *5*	0.42 *5*	3209.9	3^-	2186.2	4^+	D		DCO=0.50 *18* Eγ=1024 (1998Sv01). E1 in 2012Ge04.
1024.6 *6*	1.01 *5*	18502.3	21^-	17478.1	20^-	D+Q	+0.18 *9*	DCO=0.85 *6*; DCO=0.82 *6*; DCO=0.67 *5* Eγ=1024.3 *4*, Iγ=2.0 *2* (1998SvZY). M1+E2 in 2012Ge04.
1027.6 *4*	2.16 *11*	9464.9	12^+	8437.2	10^+	Q		DCO=0.90 *10* Eγ=1028 (1998Sv01). E2 in 2012Ge04.
1056.1 *6*	0.25 *3*	8480.2	10	7422.5	11^-	D		DCO=0.57 *15* Eγ: poor fit. Level-energy diffeence=1057.6 *5*. Mult.: ΔJ=1 (2012Ge04).

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

$\gamma(^{62}Zn)$ (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ[‡]	Comments
1072.2 *7*	2.90 *11*	9048.0	11^+	7975.8	9^+	Q		DCO=1.08 *6* Eγ=1072 (1998Sv01). E2 in 2012Ge04.
1080.4 *4*	5.43 *22*	5124.1	7^-	4043.3	5^-	Q		DCO=1.14 *8* Eγ=1080 (1997Fu08). E2 in 2012Ge04.
1085.8 *11*	0.16 *3*	6964.9	9^+	5878.9				
1088.0 *4*	1.33 *8*	5131.6	6^-	4043.3	5^-	D+Q	−1.6 *15*	DCO=0.32 *5*; DCO=0.71 *8*; DCO=0.38 *6* Eγ=1087 (1998Sv01). Mult.,δ: M1+E2 in 2012Ge04 with δ=−3.1 to −0.1.
1105.1 *6*	3.45 *13*	17478.1	20^-	16372.9	19^-	D+Q		DCO=0.69 *13* Eγ=1105.9 *4*, Iγ=2.4 *2* (1998SvZY). M1+E2 in 2012Ge04.
1108.2 *4*	1.08 *4*	7739.2	10^-	6631.2	9^-	D+Q		DCO=0.55 *6* M1+E2 in 2012Ge04.
1112.6 *12*	0.09 *1*	17478.1	20^-	16365.4	19^+			E1 in 2012Ge04.
1120.0 *11*	2.94 *8*	11751.3	14^+	10630.8	12^+	Q		DCO=1.29 *12* Eγ=1119.8 *4*, Iγ=3.2 *2* (1998SvZY). E2 in 2012Ge04.
1136.8 *11*	0.07 *2*	20442.1	22^-	19305.4	21^-			M1+E2 in 2012Ge04.
1151.6 *7*	0.31 *2*	12329.3	14^-	11178.0	13^+	D		DCO=0.42 *7* E1 in 2012Ge04.
1160.8 *11*	0.09 *4*	6304.7	7^+	5144.1	7^+			ΔJ=0 (2012Ge04).
1160.9 *5*	27.10 *90*	10374.8	14^+	9213.9	13^-	D		DCO=0.54 *3* A_2=−0.26 *4*; A_4=+0.09 *5* (1979Mu04) Eγ=1160.8 *4* (1979Mu04), placed tentatively above 7423, (11) level. E1 in 2012Ge04.
1174.8 *6*	0.99 *6*	19676.8	22^-	18502.3	21^-			Eγ=1174.6 *12*, Iγ=1.6 *8* (1998SvZY). M1+E2 in 2012Ge04.
1176.7 *4*	77.1 *23*	6081.8	9^-	4905.0	7^-	Q		DCO=1.03 *5* A_2=+0.318 *21*; A_4=−0.173 *26*; DCO=0.46 *16* (1979Mu04) Eγ=1176.9 *4* (1979Mu04). E2 in 2012Ge04. In 1979Mu04, DCO is for 9→7→6 spin sequence.
1192.7 *13*	0.11 *1*	9682.0	12^-	8490.0	(11^-)			M1+E2 in 2012Ge04.
1193.9 *9*	0.53 *8*	13726.2	16^-	12531.8	15^+	D		DCO=0.62 *6* E1 in 2012Ge04.
1196.0 *13*	0.09 *3*	16901.3	19^-	15704.7	19^-			ΔJ=0 (2012Ge04).
1196.8 *6*	53.1 *16*	4905.0	7^-	3707.7	6^+	D		DCO=0.57 *2* A_2=−0.303 *24*; A_4=+0.006 *26*; DCO=2.1 *4* (1979Mu04) Eγ=1197.2 *4* (1979Mu04). E1 in 2012Ge04. In 1979Mu04, DCO is for 7→6→4 spin sequence.
1202.2 *5*	3.55 *18*	3586.9	5^+	2384.6	3^+	Q		DCO=1.04 *6* Eγ=1201 (1998Sv01), 1204 (1997Fu08). E2 in 2012Ge04.
1208.8 *5*	6.26 *28*	6113.7	8^-	4905.0	7^-	D+Q		DCO=0.96 *5*; DCO=1.19 *6*; DCO=0.86 *5* Eγ=1209 (1998Sv01), 1208 (1997Fu08). Mult.,δ: M1+E2 in 2012Ge04 with δ=+0.35 *5* or +2.8 *+5−4*.
1214.2 *10*	0.12 *1*	14445.0	17^-	13231.2	16^+			E1 in 2012Ge04.
1217.3 *11*	0.65 *5*	17582.6	20^+	16365.4	19^+	D+Q		DCO=0.76 *12* Eγ=1217.5 *7*, Iγ=0.6 *1* (1998SvZY). M1+E2 in 2012Ge04.

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

γ(^{62}Zn) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ[‡]	Comments
1219.0 *7*	0.85 *4*	6343.0	8^-	5124.1	7^-	D+Q		DCO=0.31 *3*; DCO=0.67 *5*; DCO=0.57 *4* Mult.,δ: M1+E2 in 2012Ge04 with δ=−0.22 *+8−12* or −2.3 *6*.
1231.9 *3*	87.80 *26*	2186.2	4^+	954.0	2^+	Q		DCO=1.12 *5* A_2=+0.322 *18*; A_4=−0.093 *22*; DCO=1.03 *9* (1979Mu04) Eγ=1232.2 *4* (1979Mu04). E2 in 2012Ge04 and 1979Mu04.
1240.5 *13*	0.06 *2*	21682.9	23^-	20442.1	22^-			M1+E2 in 2012Ge04.
1241.4 *7*	1.05 *6*	12992.8	15^-	11751.3	14^+	D		DCO=0.54 *6* E1 in 2012Ge04.
1259.6 *4*	3.44 *15*	15704.7	19^-	14445.0	17^-	Q		DCO=1.04 *11* Eγ=1260 (1998Sv01). E2 in 2012Ge04.
1260.7 *8*	0.78 *6*	15750.4	17^-	14489.6	15^-	Q		DCO=1.09 *10* E2 in 2012Ge04.
1266.9 *5*	0.80 *5*	12812.5	15^-	11546.1	14^+	D		DCO=0.64 *9* E1 in 2012Ge04.
1288.8 *8*	0.22 *5*	14445.0	17^-	13156.4	16^+			E1 in 2012Ge04.
1295.0 *8*	0.67 *5*	15414.2	18^-	14119.2	17^+			E1 in 2012Ge04.
1299.4 *5*	1.87 *9*	4043.3	5^-	2743.8	4^+	D		DCO=0.63 *6* Eγ=1300 (1998Sv01), 1299 (1997Fu08). E1 in 2012Ge04.
1306.0 *11*	0.15 *1*	15750.4	17^-	14445.0	17^-			ΔJ=0 (2012Ge04).
1309.3 *5*	5.84 *37*	7423.0	10^-	6113.7	8^-	Q		DCO=0.97 *5* Eγ=1310 (1998Sv01). E2 in 2012Ge04.
1309.6 *9*	0.91 *5*	14541.1	17^-	13231.2	16^+	D		DCO=0.59 *5* E1 in 2012Ge04.
1310.0 *8*	0.50 *4*	9048.0	11^+	7739.2	10^-			E1 in 2012Ge04.
1311.8 *9*	0.33 *4*	11178.0	13^+	9866.0	11^+			E2 in 2012Ge04.
1322.8 *9*	1.81 *12*	16365.4	19^+	15042.8	18^+	D(+Q)	+0.04 *6*	DCO=0.47 *6*; DCO=0.85 *8*; DCO=0.76 *8* Eγ=1323.3 *6*, Iγ=1.5 *2* (1998SvZY). M1(+E2) in 2012Ge04.
1329.6 *9*	0.37 *3*	16372.9	19^-	15042.8	18^+			E1 in 2012Ge04.
1331.1 *9*	0.14 *3*	7445.0	9^-	6113.7	8^-			M1+E2 in 2012Ge04.
1331.2 *9*	0.41 *5*	7024.4	(9^-)	5693.5	7^-	(Q)		DCO=0.97 *7* (E2) in 2012Ge04.
1340.4 *4*	65.8 *21*	7422.5	11^-	6081.8	9^-	Q		DCO=1.05 *5* A_2=+0.134 *25*; A_4=−0.036 *30* (1979Mu04) Eγ=1341.5 *6* (1979Mu04). E2 in 2012Ge04.
1341.4 *7*	2.03 *36*	7423.0	10^-	6081.8	9^-	(D+Q)		DCO=0.94 *7* M1+E2 in 2012Ge04.
1341.4 *8*	1.63 *51*	12992.8	15^-	11651.3	13^-	Q		DCO=1.01 *8* Eγ=1342.0 *10*, Iγ=4.1 *10* (1998SvZY). E2 in 2012Ge04.
1353.3 *8*	4.27 *14*	12531.8	15^+	11178.0	13^+	Q		DCO=1.01 *5* Eγ=1353.8 *5*, Iγ=2.8 *2* (1998SvZY). E2 in 2012Ge04.
1353.6 *12*	0.09 *3*	7985.1	10^+	6631.2	9^-			E1 in 2012Ge04.
1360.2 *5*	0.72 *4*	21037.1	23^-	19676.8	22^-	D+Q		DCO=0.53 *7* Eγ=1362.3 *7*, Iγ=1.5 *2* (1998SvZY). M1+E2 in 2012Ge04.
1363.3 *5*	0.29 *2*	7445.0	9^-	6081.8	9^-	D		DCO=1.13 *12* Mult.: ΔJ=0 (2012Ge04).

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

γ(^{62}Zn) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ[‡]	Comments
1383.5 *14*	0.13 *1*	15727.6		14344.1	(16$^-$)			
1384.2 *10*	0.21 *3*	14541.1	17$^-$	13156.4	16$^+$			E1 in 2012Ge04.
1388.4 *14*	0.12 *2*	23071.8	24$^-$	21682.9	23$^-$			M1+E2 in 2012Ge04.
1396.4 *10*	0.55 *3*	7739.2	10$^-$	6343.0	8$^-$	Q		DCO=0.88 *9* E2 in 2012Ge04.
1396.4 *7*	6.34 *21*	13726.2	16$^-$	12329.3	14$^-$	Q		DCO=0.97 *7* Eγ=1397.6 *4*, Iγ=3.8 *3* (1998SvZY). E2 in 2012Ge04.
1400.7 *11*	0.08 *2*	3586.9	5$^+$	2186.2	4$^+$			M1+E2 in 2012Ge04.
1416.8 *6*	1.48 *10*	5124.1	7$^-$	3707.7	6$^+$	D		DCO=0.53 *7* E1 in 2012Ge04.
1419.6 *10*	0.98 *9*	16500.7	18$^-$	15081.4	16$^-$	Q		DCO=1.01 *15* E2 in 2012Ge04.
1430.6 *6*	2.77 *14*	2384.6	3$^+$	954.0	2$^+$	D+Q	+0.30 *+6−7*	DCO=0.84 *9*; DCO=1.05 *9*; DCO=0.95 *8* Eγ=1431 (1998Sv01), 1430 (1997Fu08). E2+M1 in 2012Ge04.
1446.8 *10*	0.14 *2*	12992.8	15$^-$	11546.1	14$^+$			E1 in 2012Ge04.
1452.1 *12*	0.10 *1*	14445.0	17$^-$	12992.8	15$^-$			E2 in 2012Ge04.
1479.6 *7*	6.87 *22*	13231.2	16$^+$	11751.3	14$^+$	Q		DCO=1.04 *12* Eγ=1481.2 *4*, Iγ=4.8 *3* (1998SvZY). E2 in 2012Ge04.
1479.8 *9*	0.83 *6*	9464.9	12$^+$	7985.1	10$^+$	Q		DCO=0.96 *16* E2 in 2012Ge04.
1483.3 *13*	0.08 *2*	6964.9	9$^+$	5481.5	8$^+$			M1+E2 in 2012Ge04.
1487.1 *15*	0.05 *1*	4231.0	5$^+$	2743.8	4$^+$			M1+E2 in 2012Ge04.
1505.6 *8*	0.63 *3*	13782.5	17$^+$	12276.8	15$^+$	Q		DCO=1.14 *17* E2 in 2012Ge04.
1507.2 *6*	4.11 *21*	6631.2	9$^-$	5124.1	7$^-$	Q		DCO=1.05 *6* E2 in 2012Ge04.
1511.6 *7*	0.57 *6*	10725.5	14$^-$	9213.9	13$^-$	D+Q	+0.11 *+5−6*	DCO=0.59 *5*; DCO=0.91 *8*; DCO=0.86 *6* M1+E2 in 2012Ge04.
1515.3 *15*	0.08 *2*	8480.2	10	6964.9	9$^+$			Mult.: ΔJ=1 (2012Ge04).
1521.6 *4*	62.4 *19*	3707.7	6$^+$	2186.2	4$^+$	Q		DCO=1.14 *5* A_2=+0.288 *20*; A_4=−0.130 *25*; DCO=1.03 *18* (1979Mu04) Eγ=1521.7 *4* (1979Mu04). E2 in 2012Ge04.
1531.2 *13*	0.08 *1*	7975.8	9$^+$	6445.0	(8$^+$)			(M1+E2) in 2012Ge04.
1543.1 *13*	0.18 *4*	7024.4	(9$^-$)	5481.5	8$^+$	D		DCO=0.40 *10* (E1) in 2012Ge04.
1547.2 *6*	2.43 *8*	10630.8	12$^+$	9083.7	11$^-$	D		DCO=0.59 *5* E1 in 2012Ge04.
1548.3 *7*	5.81 *22*	14541.1	17$^-$	12992.8	15$^-$	Q		DCO=1.18 *15* Eγ=1549.3 *5*, Iγ=3.4 *3* (1998SvZY). E2 in 2012Ge04.
1548.6 *12*	0.11 *2*	9048.0	11$^+$	7499.3	10$^+$	D+Q		DCO=0.58 *18* M1+E2 in 2012Ge04.
1551.8 *13*	0.17 *2*	23376.9	(22)	21825.1				
1557.2 *6*	3.24 *15*	5144.1	7$^+$	3586.9	5$^+$	Q		DCO=1.12 *10* Eγ=1557 (1998Sv01). E2 in 2012Ge04.
1562.8 *9*	0.06 *2*	5910.8	8$^+$	4348.3	6$^+$			E2 in 2012Ge04.
1580.1 *18*	0.11 *2*	15076.9	17$^-$	13496.8	15$^-$			(E2) in 2012Ge04.
1582.6 *12*	0.13 *2*	10630.8	12$^+$	9048.0	11$^+$			M1+E2 in 2012Ge04.
1586.4 *5*	21.70 *70*	11961.2	16$^+$	10374.8	14$^+$	Q		DCO=1.05 *5*

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

$\gamma(^{62}Zn)$ (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
							Eγ=1587 (1998Sv01), 1585 (1997Fu08). E2 in 2012Ge04.
1587.5 *9*	1.09 *8*	17338.7	19$^-$	15750.4	17$^-$	Q	DCO=1.00 *5* E2 in 2012Ge04.
1587.7 *10*	1.95 *6*	14119.2	17$^+$	12531.8	15$^+$	Q	DCO=1.28 *11* Eγ=1589.0 *6*, Iγ=2.7 *2* (1998SvZY). E2 in 2012Ge04.
1589.2 *13*	0.32 *3*	12046.3	(14$^-$)	10457.0	(13$^-$)		(M1+E2) in 2012Ge04.
1601.7 *7*	4.83 *37*	9024.6	12$^-$	7423.0	10$^-$	Q	DCO=1.02 *6* E2 in 2012Ge04.
1602.7 *8*	2.11 *24*	9024.6	12$^-$	7422.5	11$^-$	D+Q	DCO=0.82 *5* M1+E2 in 2012Ge04.
1604.1 *13*	0.16 *5*	12329.3	14$^-$	10725.5	14$^-$		ΔJ=0 (2012Ge04).
1604.4 *4*	26.50 *90*	4348.3	6$^+$	2743.8	4$^+$	Q	DCO=1.19 *5* A_2=+0.19 *5*; A_4=−0.10 *6* (1979Mu04) Eγ=1604.0 *5* (1979Mu04). E2 in 2012Ge04.
1610.3 *10*	0.75 *4*	13156.4	16$^+$	11546.1	14$^+$	Q	DCO=1.40 *15* E2 in 2012Ge04.
1623.9 *13*	0.16 *2*	17454.3		15830.4	17		
1625.0 *9*	1.49 *6*	9048.0	11$^+$	7423.0	10$^-$	D	DCO=0.59 *4* E1 in 2012Ge04.
1632.6 *12*	0.33 *5*	7975.8	9$^+$	6343.0	8$^-$	D	DCO=0.66 *38* E1 in 2012Ge04.
1632.8 *7*	2.08 *11*	14445.0	17$^-$	12812.5	15$^-$	Q	DCO=0.91 *9* Eγ=1632 (1998Sv01). E2 in 2012Ge04.
1638.7 *8*	0.67 *5*	9083.7	11$^-$	7445.0	9$^-$	Q	DCO=0.93 *7* E2 in 2012Ge04.
1650.9 *12*	0.21 *2*	5693.5	7$^-$	4043.3	5$^-$	Q	DCO=0.94 *29* E2 in 2012Ge04.
1661.7 *10*	0.35 *4*	9083.7	11$^-$	7422.5	11$^-$		ΔJ=0 (2012Ge04).
1662.4 *10*	0.60 *4*	17764.3	19$^-$	16101.9	17$^-$	Q	DCO=1.15 *10* E2 in 2012Ge04.
1670.4 *7*	0.45 *2*	7975.8	9$^+$	6304.7	7$^+$	Q	DCO=1.32 *22* E2 in 2012Ge04.
1675.3 *11*	0.20 *2*	16715.3	18$^+$	15040.4	16$^+$		E2 in 2012Ge04.
1688.4 *7*	7.06 *25*	15414.2	18$^-$	13726.2	16$^-$	Q	DCO=0.96 *4* Eγ=1689.2 *5*, Iγ=4.5 *3* (1998SvZY). E2 in 2012Ge04.
1701.0 *9*	2.92 *13*	10725.5	14$^-$	9024.6	12$^-$	Q	DCO=1.09 *6* E2 in 2012Ge04.
1709.1 *17*	0.09 *2*	17578.9	19$^-$	15869.9	(17$^-$)		(E2) in 2012Ge04.
1712.2 *13*	0.19 *4*	11178.0	13$^+$	9464.9	12$^+$		M1+E2 in 2012Ge04.
1723.7 *7*	1.12 *5*	11546.1	14$^+$	9823.1	12$^+$	Q	DCO=1.09 *6* E2 in 2012Ge04.
1761.3 *15*	0.13 *2*	10242.0	11$^+$	8480.2	10		Mult.: ΔJ=1 (2012Ge04).
1773.8 *7*	4.91 *34*	5481.5	8$^+$	3707.7	6$^+$	Q	DCO=1.10 *8* Eγ=1775 (1998Sv01), 1773 (1997Fu08). E2 in 2012Ge04.
1774.1 *12*	0.12 *2*	23376.9	(22)	21602.7	(21$^-$)	D	DCO=0.59 *8* Mult.: ΔJ=1 (2012Ge04).
1776.9 *8*	0.65 *4*	16817.5	18$^+$	15040.4	16$^+$	Q	DCO=1.04 *14* E2 in 2012Ge04.
1785.7 *14*	0.13 *1*	15750.4	17$^-$	13964.7	(16$^+$)		(E1) in 2012Ge04.
1786.3 *9*	1.61 *9*	18286.8	20$^-$	16500.7	18$^-$	Q	DCO=1.10 *8* E2 in 2012Ge04.

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

γ(^{62}Zn) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
1791.3 *6*	37.6 *13*	9213.9	13^-	7422.5	11^-	Q	DCO=1.08 *5* Eγ=1792 (1998Sv01), 1791 (1997Fu08). E2 in 2012Ge04.
1804.7 *15*	0.14 *3*	10242.0	11^+	8437.2	10^+		M1+E2 in 2012Ge04.
1805.0 *5*	8.51 *44*	1804.8	2^+	0.0	0^+	Q	DCO=1.12 *9* Eγ=1805 (1998Sv01), 1804 (1997Fu08). E2 in 2012Ge04.
1806.0 *17*	0.09 *2*	8437.2	10^+	6631.2	9^-		E1 in 2012Ge04.
1811.3 *8*	2.61 *9*	15042.8	18^+	13231.2	16^+	Q	DCO=1.26 *10* Eγ=1813.0 *4*, Iγ=3.2 *2* (1998SvZY). E2 in 2012Ge04.
1821.0 *10*	0.74 *5*	6964.9	9^+	5144.1	7^+	Q	DCO=1.15 *8* E2 in 2012Ge04.
1821.3 *5*	2.83 *16*	13782.5	17^+	11961.2	16^+	D+Q	DCO=0.35 *3*; DCO=0.43 *4*; DCO=0.45 *4* Mult.,δ: M1+E2 in 2012Ge04 with δ=−0.26 *+7−9* or −1.7 *+7−10*.
1824.7 *11*	0.95 *4*	16901.3	19^-	15076.9	17^-	Q	DCO=0.92 *8* E2 in 2012Ge04.
1826.7 *9*	3.48 *14*	11786.8	15^+	9960.0	13^+	Q	DCO=1.07 *4* E2 in 2012Ge04.
1828.0 *17*	0.12 *2*	18506.1	(19)	16678.1			
1831.4 *8*	5.06 *16*	16372.9	19^-	14541.1	17^-	Q	DCO=1.15 *10* Eγ=1833.1 *5*, Iγ=3.7 *3* (1998SvZY). E2 in 2012Ge04.
1832.7 *9*	0.38 *3*	16817.5	18^+	14984.8			
1842.0 *13*	0.06 *1*	18416.3	$19^{(-)}$	16574.3	(17^-)		(E2) in 2012Ge04.
1845.8 *17*	0.08 *3*	4231.0	5^+	2384.6	3^+		E2 in 2012Ge04.
1850.2 *16*	0.11 *2*	17646.5	(18^+)	15796.3	(16^+)		(E2) in 2012Ge04.
1857.4 *7*	5.98 *27*	4043.3	5^-	2186.2	4^+	D	DCO=0.66 *4* Eγ=1857 (1998Sv01), 1856 (1997Fu08). E1 in 2012Ge04.
1859.0 *11*	1.21 *5*	8490.0	(11^-)	6631.2	9^-	(Q)	DCO=0.74 *5* (E2) in 2012Ge04.
1859.7 *10*	1.05 *5*	18677.3	20^+	16817.5	18^+	Q	DCO=0.90 *7* E2 in 2012Ge04.
1862.2 *13*	0.24 *3*	7975.8	9^+	6113.7	8^-	D	DCO=0.66 *7* E1 in 2012Ge04.
1867.9 *11*	0.31 *3*	17350.4	18^+	15482.5	16^+	Q	DCO=0.90 *20* E2 in 2012Ge04.
1883.7 *10*	0.28 *3*	16715.3	18^+	14831.4	16^+	Q	DCO=1.27 *10* E2 in 2012Ge04.
1891.3 *15*	0.12 *1*	19400.2	20^-	17508.8	(18^-)		(E2) in 2012Ge04.
1893.4 *11*	0.18 *2*	16323.5	(18^+)	14430.1	(16^+)		(E2) in 2012Ge04.
1894.2 *8*	0.46 *3*	7975.8	9^+	6081.8	9^-	D	DCO=1.01 *13* Mult.: ΔJ=0 (2012Ge04).
1901.8 *7*	2.45 *15*	12276.8	15^+	10374.8	14^+	D+Q	DCO=0.35 *3*; DCO=0.55 *6*; DCO=0.43 *4* Mult.,δ: M1+E2 in 2012Ge04 with δ=−0.26 *+7−9* or −2.5 *+6−7*.
1902.7 *17*	0.16 *5*	7985.1	10^+	6081.8	9^-		E1 in 2012Ge04.
1915.8 *11*	0.52 *4*	20432.5	21^+	18516.7	19^+	Q	DCO=0.99 *19* E2 in 2012Ge04.
1927.6 *10*	2.22 *8*	16372.9	19^-	14445.0	17^-	Q	DCO=1.14 *10* Eγ=1931 (1998Sv01). E2 in 2012Ge04.
1933.7 *13*	0.17 *4*	20658.7	21^+	18725.0	(19^+)		(E2) in 2012Ge04.
1942.0 *14*	0.18 *2*	9682.0	12^-	7739.2	10^-	Q	DCO=0.97 *17* E2 in 2012Ge04.

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

γ(^{62}Zn) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
1954.9 *17*	0.08 *1*	6304.7	7^+	4348.3	6^+		M1+E2 in 2012Ge04.
1962.3 *11*	0.97 *4*	18677.3	20^+	16715.3	18^+	Q	DCO=1.09 *10* E2 in 2012Ge04.
1965.5 *18*	0.09 *2*	9464.9	12^+	7499.3	10^+		E2 in 2012Ge04.
1966.4 *10*	1.73 *7*	19305.4	21^-	17338.7	19^-	Q	DCO=1.10 *10* E2 in 2012Ge04.
1966.9 *15*	1.07 *7*	10457.0	(13^-)	8490.0	(11^-)	Q	DCO=1.12 *11* E2 in 2012Ge04.
1980.6 *11*	0.16 *2*	17696.9	19^+	15716.3	17^+		E2 in 2012Ge04.
1985.1 *16*	0.17 *4*	5693.5	7^-	3707.7	6^+	D	DCO=0.41 *17* E1 in 2012Ge04.
1992.5 *14*	0.18 *1*	19400.2	20^-	17407.8	18^-		Eγ=1992.7 *12*, Iγ=0.14 *7* (1998SvZY). E2 in 2012Ge04.
2013.5 *13*	0.72 *5*	19777.9	21^-	17764.3	19^-	Q	DCO=1.12 *11* E2 in 2012Ge04.
2014.9 *13*	0.13 *2*	21614.6	22^-	19599.7	(20^-)		(E2) in 2012Ge04.
2017.8 *9*	1.59 *8*	7499.3	10^+	5481.5	8^+	Q	DCO=1.03 *8* Eγ=2018 (1998Sv01). E2 in 2012Ge04.
2025.4 *13*	0.41 *3*	25402.3	(24)	23376.9	(22)	Q	DCO=1.19 *19* E2 in 2012Ge04.
2034.7 *14*	0.15 *2*	19400.2	20^-	17365.4	18^-		E2 in 2012Ge04.
2042.5 *11*	4.32 *18*	9464.9	12^+	7422.5	11^-	D	DCO=0.51 *5* Eγ=2043 (1998Sv01). E1 in 2012Ge04.
2044.8 *18*	0.08 *1*	4231.0	5^+	2186.2	4^+		M1+E2 in 2012Ge04.
2047.7 *20*	0.08 *2*	16369.9	(17)	14322.1			
2050.6 *17*	0.08 *1*	15281.4	17^+	13231.2	16^+	D+Q	DCO=0.66 *12* M1+E2 in 2012Ge04.
2056.4 *14*	0.53 *6*	19702.9	(20^+)	17646.5	(18^+)	Q	DCO=1.16 *16* E2 in 2012Ge04.
2057.8 *12*	0.31 *5*	20473.7	$21^{(-)}$	18416.3	$19^{(-)}$	Q	DCO=1.02 *21* E2 in 2012Ge04.
2061.8 *19*	0.11 *2*	18506.1	(19)	16444.1	(17)		(E2) in 2012Ge04.
2063.8 *10*	5.03 *17*	17478.1	20^-	15414.2	18^-	Q	DCO=1.00 *8* Eγ=2065.4 *6*, Iγ=5.0 *4* (1998SvZY). E2 in 2012Ge04.
2065.0 *18*	0.17 *3*	7975.8	9^+	5910.8	8^+	D+Q	DCO=0.83 *14* M1+E2 in 2012Ge04.
2070.7 *12*	0.51 *3*	16715.3	18^+	14644.7	16^+	Q	DCO=1.11 *13* E2 in 2012Ge04.
2073.0 *12*	0.13 *1*	6304.7	7^+	4231.0	5^+		E2 in 2012Ge04.
2080.8 *11*	0.13 *2*	17488.9	19^+	15407.8	17^+		E2 in 2012Ge04.
2081.7 *17*	0.09 *1*	19400.2	20^-	17318.4	(18^-)		(E2) in 2012Ge04.
2083.0 *18*	0.13 *1*	9048.0	11^+	6964.9	9^+		E2 in 2012Ge04.
2093.2 *16*	0.04 *1*	18416.3	$19^{(-)}$	16323.5	(18^+)		Mult.: ΔJ=(1) (2012Ge04).
2097.1 *12*	0.45 *3*	6445.0	(8^+)	4348.3	6^+	(Q)	DCO=0.81 *34* (E2) in 2012Ge04.
2126.8 *12*	0.75 *5*	19477.4	20^+	17350.4	18^+	Q	DCO=0.92 *9* E2 in 2012Ge04.
2128.2 *13*	0.38 *4*	25402.3	(24)	23274.1	(22)	Q	DCO=1.23 *12* E2 in 2012Ge04.
2129.1 *11*	4.37 *14*	18502.3	21^-	16372.9	19^-	Q	DCO=1.04 *10* Eγ=2130.3 *8*, Iγ=3.5 *4* (1998SvZY). E2 in 2012Ge04.

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

γ(^{62}Zn) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
2135.5 *14*	0.34 *3*	22568.0	23^+	20432.5	21^+	Q	DCO=1.06 *10* E2 in 2012Ge04.
2135.9 *15*	0.06 *2*	22794.5	23^+	20658.7	21^+		
2136.2 *16*	0.18 *2*	18506.1	(19)	16369.9	(17)		(E2) in 2012Ge04.
2138.0 *15*	0.13 *2*	15294.3	18^+	13156.4	16^+		E2 in 2012Ge04.
2142.2 *16*	0.27 *2*	23179.4	24^-	21037.1	23^-		Eγ=2143.8 *12*, Iγ=0.4 *1* (1998SvZY). M1+E2 in 2012Ge04.
2154.0 *14*	0.55 *4*	11178.0	13^+	9024.6	12^-	D	DCO=0.43 *7* E1 in 2012Ge04.
2155.4 *13*	1.72 *7*	20442.1	22^-	18286.8	20^-	Q	DCO=1.00 *10* E2 in 2012Ge04.
2156.9 *17*	0.36 *5*	12531.8	15^+	10374.8	14^+		M1+E2 in 2012Ge04.
2157.7 *20*	0.42 *5*	14119.2	17^+	11961.2	16^+	D+Q	DCO=0.74 *9* M1+E2 in 2012Ge04.
2171.0 *9*	0.35 *4*	5878.9		3707.7	6^+		
2173.8 *11*	0.22 *2*	22794.5	23^+	20620.7	(21^+)		(E2) in 2012Ge04.
2175.6 *18*	0.17 *3*	23274.1	(22)	21098.4			
2178.6 *13*	0.45 *4*	19757.4	21^-	17578.9	19^-	Q	DCO=1.14 *10* E2 in 2012Ge04.
2179.8 *12*	1.95 *7*	20857.2	22^+	18677.3	20^+	Q	DCO=1.04 *10* E2 in 2012Ge04.
2187.0 *19*	0.09 *2*	11651.3	13^-	9464.9	12^+		E1 in 2012Ge04.
2192.0 *12*	1.01 *5*	19093.3	21^-	16901.3	19^-	Q	DCO=0.97 *10* E2 in 2012Ge04.
2197.0 *13*	1.71 *8*	19676.8	22^-	17478.1	20^-	Q	DCO=1.03 *11* Eγ=2199.5 *7*, Iγ=4.0 *3* (1998SvZY). E2 in 2012Ge04.
2201.6 *17*	0.31 *2*	20442.1	22^-	18240.1	20^-	Q	DCO=0.98 *8* E2 in 2012Ge04.
2203.2 *11*	0.28 *3*	5910.8	8^+	3707.7	6^+		E2 in 2012Ge04.
2207.0 *18*	0.09 *2*	18677.3	20^+	16469.8	18^+		E2 in 2012Ge04.
2207.3 *15*	0.42 *5*	22866.3	23^+	20658.7	21^+	Q	DCO=0.99 *18* E2 in 2012Ge04.
2207.9 *14*	0.24 *4*	17488.9	19^+	15281.4	17^+	Q	DCO=0.93 *14* E2 in 2012Ge04.
2214.4 *9*	1.06 *8*	21614.6	22^-	19400.2	20^-	Q	DCO=0.99 *13* Eγ=2215.3 *8*, Iγ=0.93 *13* (1998SvZY). E2 in 2012Ge04.
2221.8 *18*	0.11 *2*	23625.4		21403.5	(22^+)		
2223.3 *19*	0.12 *3*	19677.6		17454.3			
2242.3 *19*	0.03 *1*	23024.6		20782.3			
2245.3 *15*	0.96 *6*	16365.4	19^+	14119.2	17^+	Q	DCO=1.15 *22* Eγ=2246.7 *8*, Iγ=1.6 *2* (1998SvZY). E2 in 2012Ge04.
2256.1 *16*	0.12 *2*	3209.9	3^-	954.0	2^+		E1 in 2012Ge04.
2264.7 *17*	0.08 *2*	15076.9	17^-	12812.5	15^-		E2 in 2012Ge04.
2269.2 *14*	0.16 *2*	15081.4	16^-	12812.5	15^-		M1+E2 in 2012Ge04.
2270.5 *17*	0.11 *1*	16715.3	18^+	14445.0	17^-		E2 in 2012Ge04.
2286.6 *18*	0.16 *3*	11751.3	14^+	9464.9	12^+		E2 in 2012Ge04.
2290.1 *20*	0.07 *1*	18759.2	(20^+)	16469.8	18^+		(E2) in 2012Ge04.
2309.2 *14*	0.45 *4*	22782.7	$23^{(-)}$	20473.7	$21^{(-)}$	Q	DCO=0.98 *20* E2 in 2012Ge04.
2315.4 *14*	0.97 *5*	27717.8	(26)	25402.3	(24)	Q	DCO=1.13 *13* E2 in 2012Ge04.
2327.0 *15*	0.43 *4*	22030.0	(22^+)	19702.9	(20^+)	Q	DCO=1.18 *10* E2 in 2012Ge04.

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

γ(^{62}Zn) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
2333.1 *13*	0.62 *4*	11546.1	14^+	9213.9	13^-	D	DCO=0.53 *9* E1 in 2012Ge04.
2345.4 *19*	0.31 *2*	20851.6	(21)	18506.1	(19)		(E2) in 2012Ge04.
2349.5 *13*	0.33 *2*	22127.4	23^-	19777.9	21^-	Q	DCO=1.13 *13* E2 in 2012Ge04.
2349.8 *9*	1.90 *14*	4535.5	5^-	2186.2	4^+	D	DCO=0.64 *5* Eγ=2349 (1997Fu08). E1 in 2012Ge04.
2354.9 *12*	3.28 *19*	8437.2	10^+	6081.8	9^-	D	DCO=0.67 *5* Eγ=2356 (1998Sv01). E1 in 2012Ge04.
2355.4 *20*	0.06 *2*	12812.5	15^-	10457.0	(13^-)		E2 in 2012Ge04.
2364.5 *19*	0.09 *1*	12046.3	(14^-)	9682.0	12^-		(E2) in 2012Ge04.
2369.4 *17*	0.23 *4*	12329.3	14^-	9960.0	13^+		E1 in 2012Ge04.
2370.0 *11*	0.40 *3*	22127.4	23^-	19757.4	21^-	Q	DCO=1.13 *7* E2 in 2012Ge04.
2372.7 *19*	0.12 *1*	16817.5	18^+	14445.0	17^-		E1 in 2012Ge04.
2374.6 *14*	0.25 *2*	12831.7	(15^-)	10457.0	(13^-)		(E2) in 2012Ge04.
2374.7 *12*	0.77 *6*	21852.1	22^+	19477.4	20^+	Q	DCO=1.04 *10* E2 in 2012Ge04.
2377.3 *13*	1.17 *5*	21682.9	23^-	19305.4	21^-	Q	DCO=0.94 *9* E2 in 2012Ge04.
2389.4 *14*	0.26 *2*	20086.4	21^+	17696.9	19^+	Q	DCO=0.98 *12* E2 in 2012Ge04.
2398.3 *17*	0.14 *2*	8480.2	10	6081.8	9^-		Mult.: ΔJ=1 (2012Ge04).
2401.7 *9*	2.90 *9*	9823.1	12^+	7422.5	11^-	D	DCO=0.63 *6* E1 in 2012Ge04.
2435.3 *15*	0.15 *2*	18759.2	(20^+)	16323.5	(18^+)		(E2) in 2012Ge04.
2436.1 *16*	0.31 *5*	11651.3	13^-	9213.9	13^-		ΔJ=0 (2012Ge04).
2436.9 *9*	4.82 *22*	12812.5	15^-	10374.8	14^+	D	DCO=0.68 *4* Eγ=2440 (1998Sv01). E1 in 2012Ge04.
2439.3 *10*	1.31 *7*	24054.0	24^-	21614.6	22^-	Q	DCO=0.92 *6* Eγ=2439.5 *9*, Iγ=1.02 *15* (1998SvZY). E2 in 2012Ge04.
2442.9 *13*	0.45 *1*	9866.0	11^+	7422.5	11^-	D	DCO=0.46 *10* E1 in 2012Ge04.
2450.1 *13*	0.18 *2*	25479.2	(25^-)	23028.9	23^-		(E2) in 2012Ge04.
2456.2 *20*	0.15 *4*	16901.3	19^-	14445.0	17^-		E2 in 2012Ge04.
2465.7 *14*	0.43 *3*	22243.8	23^-	19777.9	21^-	Q	DCO=1.08 *17* E2 in 2012Ge04.
2472.4 *13*	0.28 *3*	25338.7	25^+	22866.3	23^+	Q	DCO=1.08 *18* E2 in 2012Ge04.
2483.4 *12*	4.92 *30*	14445.0	17^-	11961.2	16^+	D	DCO=0.52 *3* Eγ=2485 (1998Sv01), 2484 (1997Fu08). E1 in 2012Ge04.
2484.6 *14*	1.85 *6*	23341.8	24^+	20857.2	22^+	Q	DCO=0.95 *10* E2 in 2012Ge04.
2486.8 *21*	0.03 *1*	22243.8	23^-	19757.4	21^-		E2 in 2012Ge04.
2518.6 *17*	0.21 *3*	15750.4	17^-	13231.2	16^+		E1 in 2012Ge04.
2535.0 *13*	1.63 *6*	21037.1	23^-	18502.3	21^-	Q	DCO=0.98 *14* Eγ=2537.4 *9*, Iγ=2.7 *3* (1998SvZY). E2 in 2012Ge04.
2535.1 *16*	0.41 *3*	18240.1	20^-	15704.7	19^-	D+Q	DCO=0.43 *6* M1+E2 in 2012Ge04.
2537.4 *14*	1.21 *8*	11751.3	14^+	9213.9	13^-	D	DCO=0.59 *11* E1 in 2012Ge04.

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

γ(^{62}Zn) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
2539.7 *14*	1.65 *13*	17582.6	20^+	15042.8	18^+	Q	DCO=1.10 *11* Eγ=2541.4 *9*, Iγ=1.8 *2* (1998SvZY). E2 in 2012Ge04.
2544.2 *12*	0.45 *3*	25338.7	25^+	22794.5	23^+	Q	DCO=0.94 *19* E2 in 2012Ge04.
2564.8 *14*	0.50 *5*	25347.4	$25^{(-)}$	22782.7	$23^{(-)}$	Q	DCO=1.06 *7* E2 in 2012Ge04.
2577.4 *16*	0.16 *2*	25145.5	25^+	22568.0	23^+	Q	DCO=1.04 *19* E2 in 2012Ge04.
2580.7 *14*	1.86 *7*	14541.1	17^-	11961.2	16^+	D	DCO=0.69 *6* Eγ=2585 (1998Sv01). E1 in 2012Ge04.
2581.8 *15*	0.42 *3*	18286.8	20^-	15704.7	19^-	D+Q	DCO=0.75 *10* M1+E2 in 2012Ge04.
2593.8 *14*	0.75 *4*	21687.2	23^-	19093.3	21^-	Q	DCO=1.17 *8* E2 in 2012Ge04.
2597.4 *13*	0.34 *3*	20086.4	21^+	17488.9	19^+	Q	DCO=0.95 *19* E2 in 2012Ge04.
2597.6 *17*	0.13 *1*	6304.7	7^+	3707.7	6^+		M1+E2 in 2012Ge04.
2615.6 *22*	0.27 *2*	23467.2	(23)	20851.6	(21)		(E2) in 2012Ge04.
2616.4 *14*	0.52 *4*	24468.6	24^+	21852.1	22^+	Q	DCO=1.00 *9* E2 in 2012Ge04.
2626.3 *16*	0.31 *2*	11651.3	13^-	9024.6	12^-		M1+E2 in 2012Ge04.
2630.2 *15*	1.62 *8*	23071.8	24^-	20442.1	22^-	Q	DCO=1.04 *10* E2 in 2012Ge04.
2640.7 *22*	0.07 *2*	22127.4	23^-	19486.3	21^-		E2 in 2012Ge04.
2644.2 *20*	0.14 *1*	21403.5	(22^+)	18759.2	(20^+)		(E2) in 2012Ge04.
2645.6 *21*	0.12 *3*	10630.8	12^+	7985.1	10^+		E2 in 2012Ge04.
2652.3 *19*	0.58 *4*	30370.1	(28)	27717.8	(26)	Q	DCO=0.90 *13* E2 in 2012Ge04.
2662.3 *18*	0.30 *2*	24692.4	(24^+)	22030.0	(22^+)	Q	DCO=1.04 *26* E2 in 2012Ge04.
2683.7 *19*	0.05 *2*	28162.9	$27^{(-)}$	25479.2	(25^-)		(E2) in 2012Ge04.
2689.9 *12*	0.81 *6*	26743.9	26^-	24054.0	24^-	Q	DCO=0.99 *10* Eγ=2689.7 *10*, Iγ=0.86 *13* (1998SvZY). E2 in 2012Ge04.
2707.8 *22*	0.30 *2*	22794.5	23^+	20086.4	21^+	Q	DCO=0.96 *15* E2 in 2012Ge04.
2709.0 *21*	0.07 *2*	21468.3		18759.2	(20^+)		
2716.3 *16*	0.23 *1*	6304.7	7^+	3586.9	5^+	Q	DCO=0.94 *16* E2 in 2012Ge04.
2742.2 *18*	0.34 *4*	10242.0	11^+	7499.3	10^+	D+Q	DCO=1.10 *16* Eγ=2747 (1998Sv01). M1+E2 in 2012Ge04.
2757.4 *23*	0.06 *2*	22243.8	23^-	19486.3	21^-		E2 in 2012Ge04.
2765.6 *17*	0.07 *2*	28245.1	(27^-)	25479.2	(25^-)		(E2) in 2012Ge04.
2780.1 *24*	0.19 *2*	22866.3	23^+	20086.4	21^+	Q	DCO=1.29 *40* E2 in 2012Ge04.
2785.5 *16*	0.58 *4*	24913.0	25^-	22127.4	23^-	Q	DCO=0.93 *14* E2 in 2012Ge04.
2803.9 *17*	0.17 *1*	15081.4	16^-	12276.8	15^+		E1 in 2012Ge04.
2815.7 *18*	0.26 *3*	28162.9	$27^{(-)}$	25347.4	$25^{(-)}$	(Q)	DCO=0.85 *22* E2 in 2012Ge04.
2819.9 *19*	0.27 *3*	10242.0	11^+	7422.5	11^-	D	DCO=0.97 *13* Mult.: ΔJ=0 (2012Ge04).
2831.9 *14*	1.04 *9*	7975.8	9^+	5144.1	7^+	Q	DCO=1.16 *10*

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

$\gamma(^{62}Zn)$ (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
							Eγ=2833 (1998Sv01). E2 in 2012Ge04.
2832.2 *20*	0.85 *4*	26174.1	26^+	23341.8	24^+	Q	DCO=0.94 *9* E2 in 2012Ge04.
2848.5 *17*	0.23 *3*	27317.2	26^+	24468.6	24^+	Q	DCO=1.27 *14* E2 in 2012Ge04.
2856.2 *21*	0.39 *4*	13231.2	16^+	10374.8	14^+		E2 in 2012Ge04.
2858.3 *20*	0.22 *3*	14644.7	16^+	11786.8	15^+		M1+E2 in 2012Ge04.
2867.1 *24*	0.29 *3*	28205.9	27^+	25338.7	25^+	Q	DCO=0.98 *14* E2 in 2012Ge04.
2870.8 *22*	0.07 *2*	16101.9	17^-	13231.2	16^+		E1 in 2012Ge04.
2897.7 *21*	0.07 *1*	28245.1	(27^-)	25347.4	$25^{(-)}$		(E2) in 2012Ge04.
2918.5 *17*	0.32 *2*	25162.4	25^-	22243.8	23^-	Q	DCO=0.86 *13* E2 in 2012Ge04.
2924.6 *17*	0.95 *5*	24607.5	25^-	21682.9	23^-	Q	DCO=1.21 *11* E2 in 2012Ge04.
2938.8 *18*	0.28 *2*	29682.8	28^-	26743.9	26^-	Q	DCO=0.85 *13* Eγ=2939.1 *12*, Iγ=0.43 *11* (1998SvZY). E2 in 2012Ge04.
2962.9 *28*	0.06 *1*	17407.8	18^-	14445.0	17^-	D+Q	DCO=0.74 *22* M1+E2 in 2012Ge04.
2967.8 *22*	0.03 *2*	31213.3	(29^-)	28245.1	(27^-)		(E2) in 2012Ge04.
2972.8 *25*	0.08 *2*	18677.3	20^+	15704.7	19^-		E1 in 2012Ge04.
2994.0 *30*	0.06 *1*	20473.7	$21^{(-)}$	17478.1	20^-	D	DCO=0.61 *20* Mult.: ΔJ=1 (2012Ge04).
2994.6 *17*	0.14 *1*	26461.9	(25)	23467.2	(23)		(E2) in 2012Ge04.
3002.1 *12*	0.54 *3*	9083.7	11^-	6081.8	9^-		E2 in 2012Ge04.
3002.9 *26*	0.05 *1*	18416.3	$19^{(-)}$	15414.2	18^-		(M1+E2) in 2012Ge04.
3027.4 *24*	0.08 *2*	19400.2	20^-	16372.9	19^-		M1+E2 in 2012Ge04.
3038.6 *18*	0.39 *3*	24725.9	25^-	21687.2	23^-	Q	DCO=1.03 *16* E2 in 2012Ge04.
3043.5 *21*	0.24 *4*	14831.4	16^+	11786.8	15^+		M1+E2 in 2012Ge04.
3050.6 *23*	0.10 *2*	31213.3	(29^-)	28162.9	$27^{(-)}$		(E2) in 2012Ge04.
3059.6 *18*	0.37 *2*	15020.9	17	11961.2	16^+	D	DCO=0.75 *10* Mult.: ΔJ=1 (2012Ge04).
3060.4 *25*	0.06 *2*	28205.9	27^+	25145.5	25^+		E2 in 2012Ge04.
3071.5 *28*	0.07 *1*	27763.9	(26^+)	24692.4	(24^+)		(E2) in 2012Ge04.
3088.3 *24*	0.21 *3*	33458.5	(30)	30370.1	(28)		(E2) in 2012Ge04.
3091.8 *23*	0.11 *2*	16874.4		13782.5	17^+		
3105.5 *29*	0.09 *1*	22782.7	$23^{(-)}$	19676.8	22^-		Mult.: ΔJ=1 (2012Ge04).
3115.2 *18*	2.40 *19*	12329.3	14^-	9213.9	13^-	(D+Q)	DCO=0.93 *10* Eγ=3118 (1998Sv01). M1+E2 in 2012Ge04.
3116.2 *18*	0.33 *2*	15076.9	17^-	11961.2	16^+	D	DCO=0.67 *7* Mult.: ΔJ=1 (2012Ge04).
3117.7 *21*	0.10 *1*	30434.9	28^+	27317.2	26^+	(Q)	DCO=0.86 *24* E2 in 2012Ge04.
3132.1 *19*	0.29 *3*	10630.8	12^+	7499.3	10^+	Q	DCO=1.11 *23* E2 in 2012Ge04.
3132.9 *23*	0.26 *2*	19498.4	(21^+)	16365.4	19^+		Eγ=3134.7 *12*, Iγ=0.6 *1* (1998SvZY). (E2) in 2012Ge04.
3134.4 *26*	0.18 *4*	17578.9	19^-	14445.0	17^-	Q	DCO=1.08 *31* E2 in 2012Ge04.
3152.9 *23*	0.08 *2*	31398.1	(29^-)	28245.1	(27^-)		(E2) in 2012Ge04.
3208.4 *18*	0.63 *3*	10630.8	12^+	7422.5	11^-	D	DCO=0.54 *8*

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

γ(^{62}Zn) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
							Eγ=3213 (1998Sv01).
							E1 in 2012Ge04.
3234.0 *25*	0.07 *2*	32916.9	(30$^-$)	29682.8	28$^-$		Eγ=3235.6 *14*, Iγ=0.10 *5* (1998SvZY).
							(E2) in 2012Ge04.
3251.3 *18*	0.77 *4*	26323.1	26$^-$	23071.8	24$^-$	Q	DCO=0.90 *9*
							E2 in 2012Ge04.
3299.8 *26*	0.35 *3*	29474.0	28$^+$	26174.1	26$^+$	Q	DCO=1.17 *17*
							E2 in 2012Ge04.
3304.9 *14*	0.11 *2*	12329.3	14$^-$	9024.6	12$^-$		E2 in 2012Ge04.
3336.9 *29*	0.09 *2*	31542.9	(29$^+$)	28205.9	27$^+$		(E2) in 2012Ge04.
3356.4 *32*	0.04 *1*	29818.4	(27)	26461.9	(25)		(E2) in 2012Ge04.
3363.2 *25*	0.03 *1*	33798.2	(30$^+$)	30434.9	28$^+$		(E2) in 2012Ge04.
3387.6 *26*	0.03 *1*	34601.0	(31$^-$)	31213.3	(29$^-$)		(E2) in 2012Ge04.
3402.7 *25*	0.21 *2*	23079.6		19676.8	22$^-$		
3438.4 *32*	0.06 *2*	36897.0	(32)	33458.5	(30)		(E2) in 2012Ge04.
3438.8 *28*	0.06 *1*	15716.3	17$^+$	12276.8	15$^+$		E2 in 2012Ge04.
3456.4 *25*	0.23 *3*	28369.5	(27$^-$)	24913.0	25$^-$	(Q)	DCO=1.27 *46*
							(E2) in 2012Ge04.
3472.4 *24*	0.12 *1*	19177.2		15704.7	19$^-$		
3494.8 *25*	0.07 *1*	15040.4	16$^+$	11546.1	14$^+$		E2 in 2012Ge04.
3495.4 *29*	0.07 *1*	15281.4	17$^+$	11786.8	15$^+$	Q	DCO=1.22 *26*
							E2 in 2012Ge04.
3502.7 *21*	0.65 *5*	23179.4	24$^-$	19676.8	22$^-$	Q	DCO=1.33 *19*
							Eγ=3505.7 *14*, Iγ=1.0 *2* (1998SvZY).
							E2 in 2012Ge04.
3579.8 *31*	0.05 *1*	36496.8	(32$^-$)	32916.9	(30$^-$)		(E2) in 2012Ge04.
3583.1 *33*	0.05 *2*	28745.6	(27$^-$)	25162.4	25$^-$		(E2) in 2012Ge04.
3589.7 *17*	0.41 *3*	13964.7	(16$^+$)	10374.8	14$^+$	(Q)	DCO=1.46 *37*
							(E2) in 2012Ge04.
3597.1 *22*	0.11 *1*	12812.5	15$^-$	9213.9	13$^-$		E2 in 2012Ge04.
3617.7 *27*	0.08 *2*	17400.3		13782.5	17$^+$		
3618.4 *10*	0.17 *2*	14344.1	(16$^-$)	10725.5	14$^-$	(Q)	DCO=0.95 *19*
							(E2) in 2012Ge04.
3618.7 *30*	0.04 *1*	15407.8	17$^+$	11786.8	15$^+$		E2 in 2012Ge04.
3622.6 *33*	0.18 *2*	28230.2	27$^-$	24607.5	25$^-$	Q	DCO=1.00 *10*
							E2 in 2012Ge04.
3638.7 *33*	0.05 *1*	17365.4	18$^-$	13726.2	16$^-$		E2 in 2012Ge04.
3654.2 *30*	0.15 *2*	20027.0		16372.9	19$^-$		
3682.0 *34*	0.03 *1*	17407.8	18$^-$	13726.2	16$^-$		E2 in 2012Ge04.
3719.2 *31*	0.21 *1*	21197.4	21	17478.1	20$^-$	D	DCO=0.61 *19*
							Mult.: ΔJ=1 (2012Ge04).
3721.0 *24*	0.09 *1*	15682.3		11961.2	16$^+$		
3754.6 *29*	0.05 *1*	15716.3	17$^+$	11961.2	16$^+$		M1+E2 in 2012Ge04.
3765.4 *34*	0.02 *1*	38366.5	(33$^-$)	34601.0	(31$^-$)		(E2) in 2012Ge04.
3779.3 *29*	0.18 *4*	12992.8	15$^-$	9213.9	13$^-$	Q	DCO=0.85 *18*
							E2 in 2012Ge04.
3780.8 *25*	0.29 *3*	19486.3	21$^-$	15704.7	19$^-$	Q	DCO=1.19 *27*
							E2 in 2012Ge04.
3788.7 *22*	0.23 *1*	15750.4	17$^-$	11961.2	16$^+$	D	DCO=0.49 *9*
							E1 in 2012Ge04.
3796.0 *38*	0.02 *1*	35339.1	(31$^+$)	31542.9	(29$^+$)		(E2) in 2012Ge04.
3829.5 *31*	0.07 *2*	28555.5	(27$^-$)	24725.9	25$^-$		(E2) in 2012Ge04.
3838.3 *29*	0.24 *2*	21316.5	21	17478.1	20$^-$	D	DCO=0.73 *10*
							Mult.: ΔJ=1 (2012Ge04).
3842.4 *21*	0.22 *3*	14568.1	15	10725.5	14$^-$	D	DCO=0.66 *9*
							Mult.: ΔJ=1 (2012Ge04).

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^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

γ(^{62}Zn) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
3869.0 *27*	0.30 *2*	15830.4	17	11961.2	16^+	D	DCO=0.68 *15* Mult.: ΔJ=1 (2012Ge04).
3883.5 *25*	0.19 *2*	17666.2		13782.5	17^+		
3886.7 *31*	0.11 *2*	33360.8	(30^+)	29474.0	28^+		(E2) in 2012Ge04.
3908.9 *31*	0.04 *1*	15869.9	(17^-)	11961.2	16^+		(E1) in 2012Ge04.
3923.5 *29*	0.35 *2*	21401.7	(22^-)	17478.1	20^-	(Q)	DCO=0.96 *10* (E2) in 2012Ge04.
3930.4 *31*	0.08 *1*	15716.3	17^+	11786.8	15^+		E2 in 2012Ge04.
3958.3 *37*	0.03 *1*	40455.3	(34^-)	36496.8	(32^-)		(E2) in 2012Ge04.
3966.4 *31*	0.09 *1*	17749.1		13782.5	17^+		
3984.9 *31*	0.11 *1*	19400.2	20^-	15414.2	18^-	(Q)	DCO=1.12 *39* Eγ=3986, Iγ≈0.08 (1998SvZY). E2 in 2012Ge04.
4055.0 *27*	0.48 *4*	14430.1	(16^+)	10374.8	14^+	(Q)	DCO=1.46 *37* (E2) in 2012Ge04.
4061.4 *33*	0.04 *2*	18506.1	(19)	14445.0	17^-		(E2) in 2012Ge04.
4114.2 *30*	0.12 *1*	14489.6	15^-	10374.8	14^+	D	DCO=0.69 *15* E1 in 2012Ge04.
4140.0 *29*	0.17 *2*	16101.9	17^-	11961.2	16^+	D	DCO=0.51 *10* E1 in 2012Ge04.
4152.6 *39*	0.01 *1*	42519.2	(35^-)	38366.5	(33^-)		(E2) in 2012Ge04.
4183.5 *31*	0.07 *1*	19477.4	20^+	15294.3	18^+		E2 in 2012Ge04.
4185.0 *37*	0.05 *1*	30508.3	(28^-)	26323.1	26^-		(E2) in 2012Ge04.
4228.0 *28*	0.59 *6*	11651.3	13^-	7422.5	11^-	Q	DCO=1.30 *21* Eγ=4232 (1998Sv01). E2 in 2012Ge04.
4233.7 *40*	0.02 *1*	40730.7	(34^-)	36496.8	(32^-)		(E2) in 2012Ge04.
4235.8 *28*	0.25 *5*	14610.8		10374.8	14^+		
4237.9 *34*	0.12 *1*	18020.6		13782.5	17^+		
4239.3 *40*	0.10 *2*	22741.7		18502.3	21^-		
4273.2 *32*	0.17 *1*	16234.6	17	11961.2	16^+	D	DCO=0.58 *10* Mult.: ΔJ=1 (2012Ge04).
4316.8 *34*	0.09 *2*	33791.0	(30^+)	29474.0	28^+		(E2) in 2012Ge04.
4320.4 *33*	0.15 *2*	22822.9		18502.3	21^-		
4321.8 *37*	0.05 *2*	20027.0		15704.7	19^-		
4355.4 *26*	0.38 *2*	15081.4	16^-	10725.5	14^-	Q	DCO=1.06 *9* E2 in 2012Ge04.
4377.1 *34*	0.07 *1*	24054.0	24^-	19676.8	22^-		E2 in 2012Ge04.
4401.3 *38*	0.05 *1*	25438.5		21037.1	23^-		
4452.8 *26*	0.13 *2*	16414.2		11961.2	16^+		
4482.1 *38*	0.05 *2*	16444.1	(17)	11961.2	16^+		Mult.: ΔJ=1 (2012Ge04).
4508.6 *28*	0.29 *2*	16469.8	18^+	11961.2	16^+	Q	DCO=0.86 *18* E2 in 2012Ge04.
4525.3 *35*	0.24 *2*	23028.9	23^-	18502.3	21^-	Q	DCO=1.11 *10* E2 in 2012Ge04.
4623.4 *26*	0.20 *3*	25660.7	25^-	21037.1	23^-	Q	DCO=1.16 *15* E2 in 2012Ge04.
4631.2 *37*	0.18 *2*	24308.2	$(24)^-$	19676.8	22^-	Q	DCO=1.26 *14* E2 in 2012Ge04.
4682.2 *38*	0.08 *2*	23184.7		18502.3	21^-		
4731.1 *38*	0.08 *2*	19774.1		15042.8	18^+		
4734.0 *28*	0.13 *2*	18516.7	19^+	13782.5	17^+	Q	DCO=1.20 *25* E2 in 2012Ge04.
4752.4 *38*	0.13 *2*	16715.3	18^+	11961.2	16^+	Q	DCO=1.36 *18* E2 in 2012Ge04.
4810.2 *36*	0.09 *1*	18592.9		13782.5	17^+		

Continued on next page (footnotes at end of table)

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

γ(^{62}Zn) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
4843.3 *36*	0.11 *1*	25880.6		21037.1	23^-		
4856.4 *32*	0.13 *2*	16817.5	18^+	11961.2	16^+		E2 in 2012Ge04.
4905.8 *43*	0.06 *1*	23408.3		18502.3	21^-		
4952.7 *39*	0.08 *1*	25990.0		21037.1	23^-		
5074.0 *32*	0.11 *2*	17035.4		11961.2	16^+		
5077.3 *41*	0.05 *1*	20782.3		15704.7	19^-		
5191.1 *41*	0.08 *1*	26228.4		21037.1	23^-		
5259.3 *44*	0.04 *1*	23761.8		18502.3	21^-		
5275.0 *35*	0.09 *1*	14489.6	15^-	9213.9	13^-		E2 in 2012Ge04.
5387.9 *41*	0.17 *2*	17350.4	18^+	11961.2	16^+	Q	DCO=0.96 *18* E2 in 2012Ge04.
5485.1 *42*	0.04 *1*	21190.1		15704.7	19^-		
5685.0 *38*	0.06 *1*	17646.5	(18^+)	11961.2	16^+		(E2) in 2012Ge04.
5882.4 *42*	0.03 *1*	17843.9		11961.2	16^+		
5897.7 *46*	0.03 *1*	21602.7	(21^-)	15704.7	19^-		(E2) in 2012Ge04.

[†] From 2012Ge04. Values available from other studies are listed under comments.
[‡] From 2012Ge04. Authors use Rose-Brink convention. The sign here has been reversed to be consistent with Krane-Steffen convention used in ENSDF database.

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01

Level Scheme

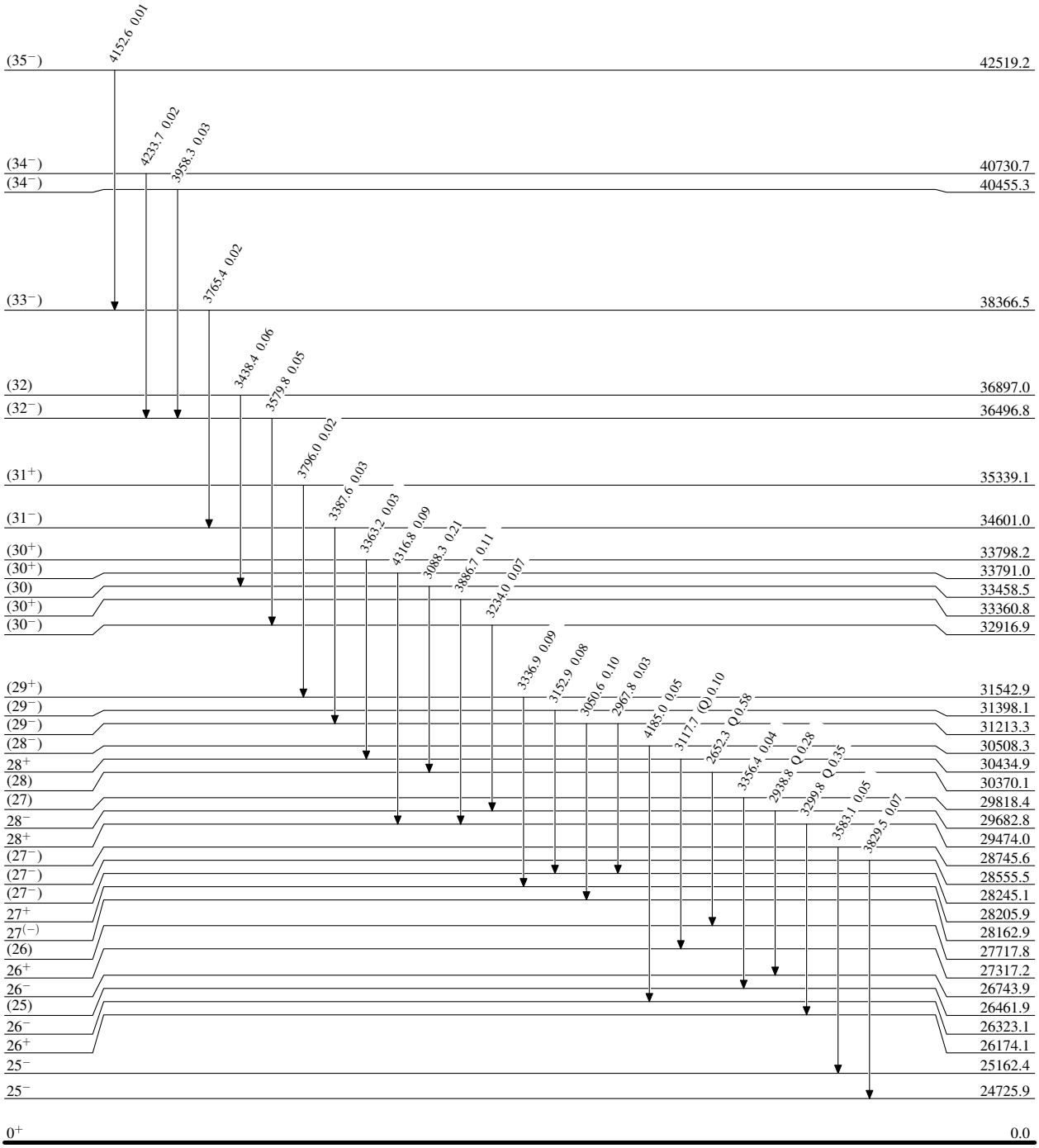
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) **2012Ge04,1998Sv01**

Level Scheme (continued)

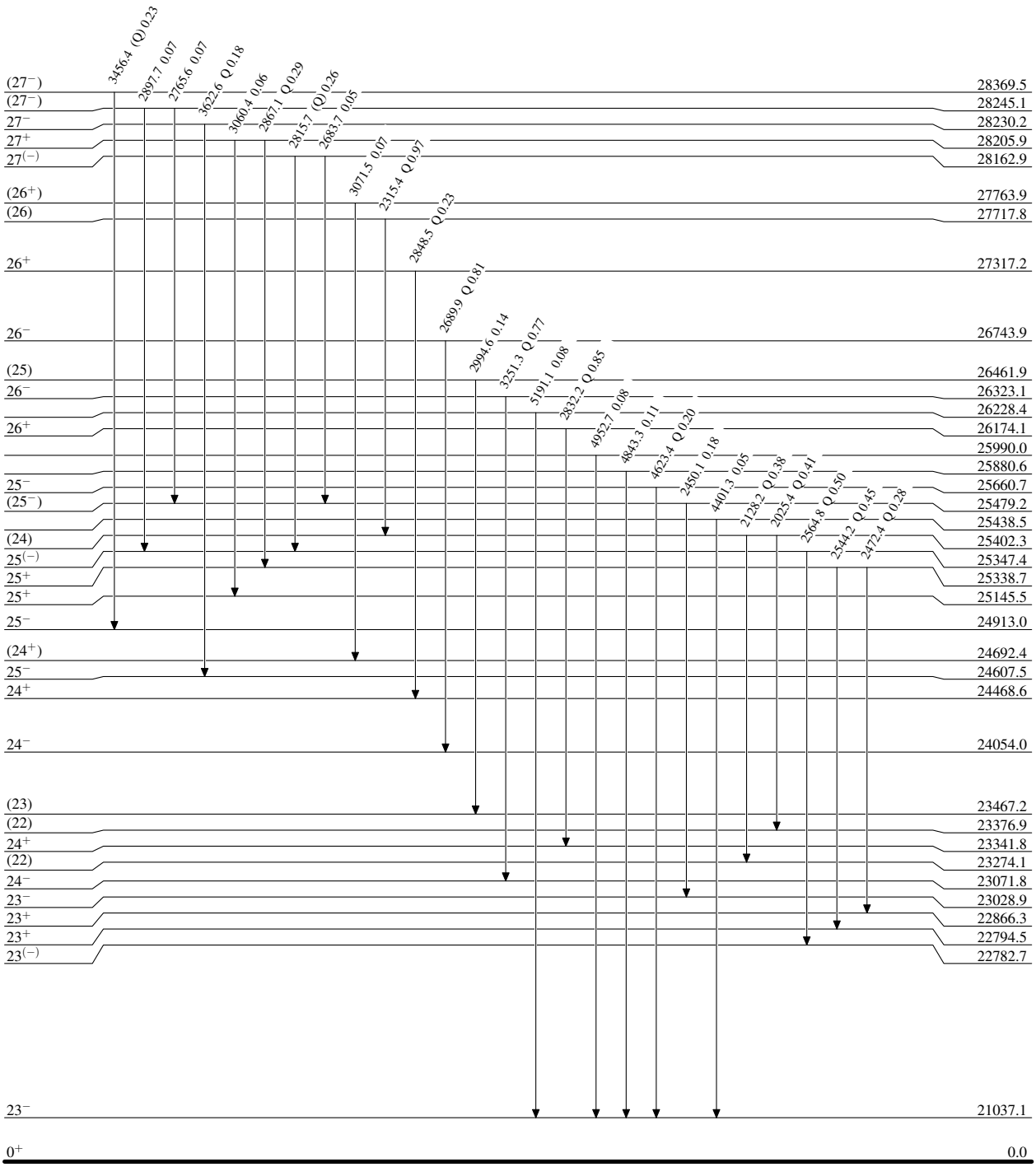
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01

Level Scheme (continued)

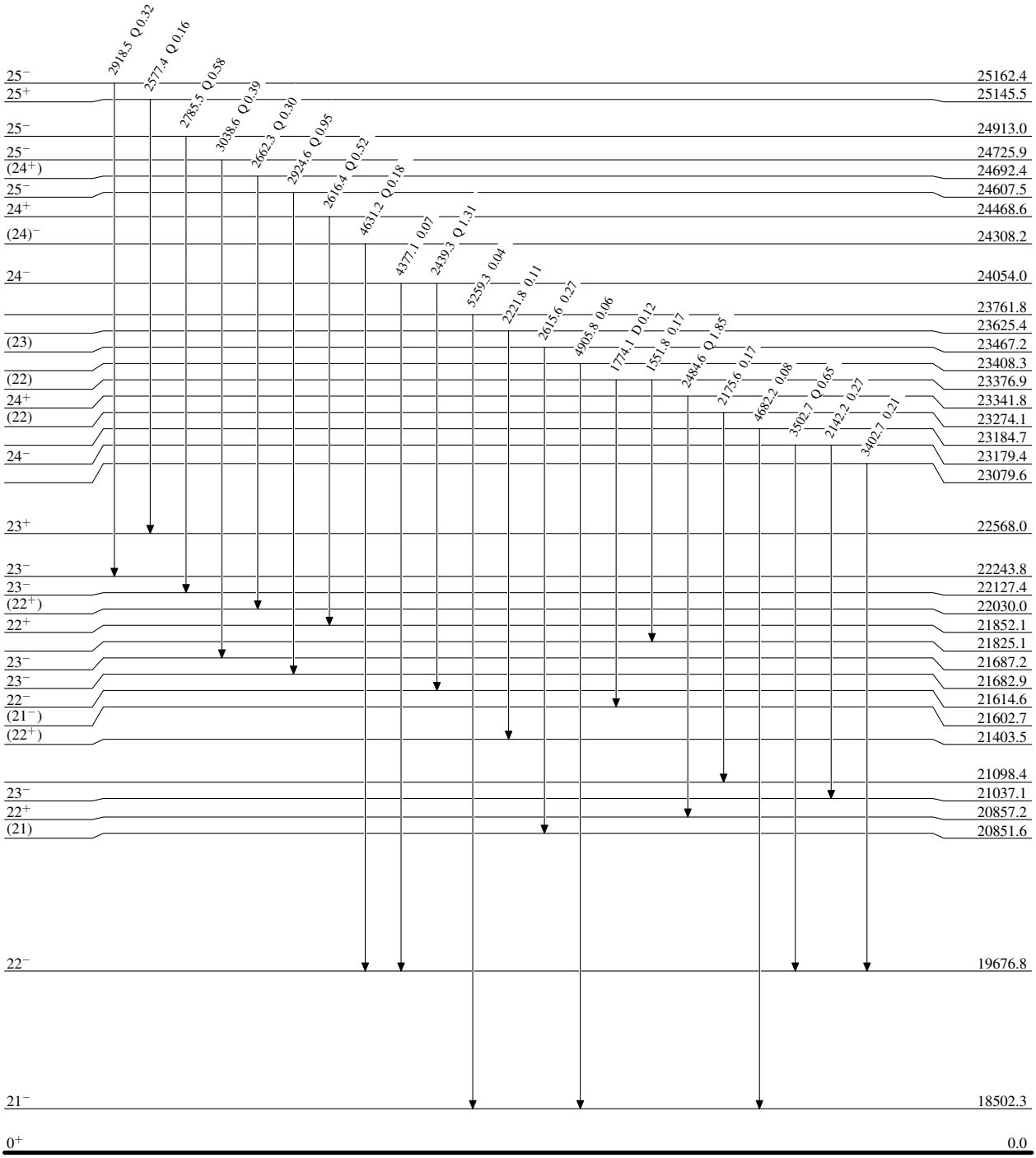
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01

Level Scheme (continued)

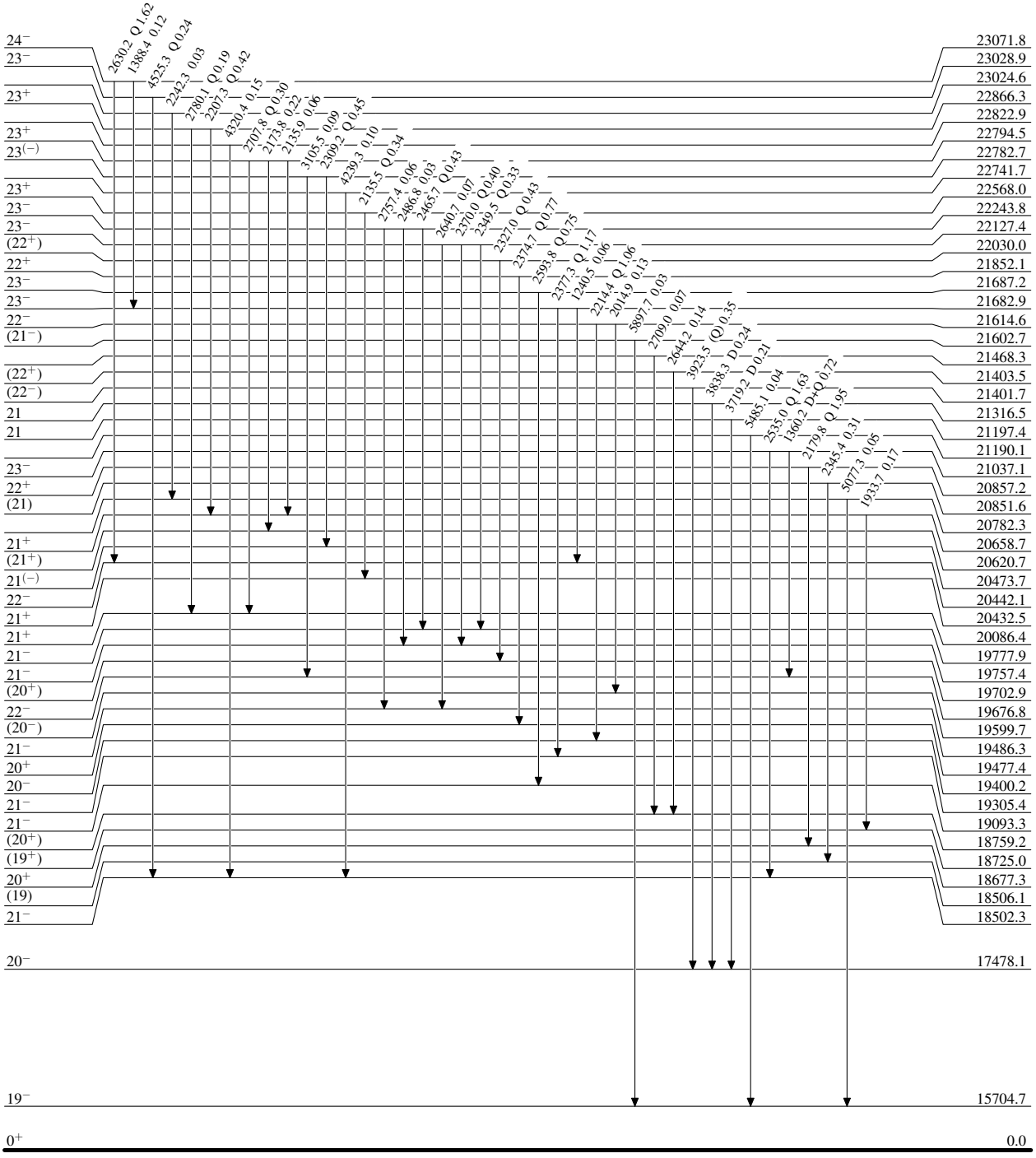
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01

Level Scheme (continued)

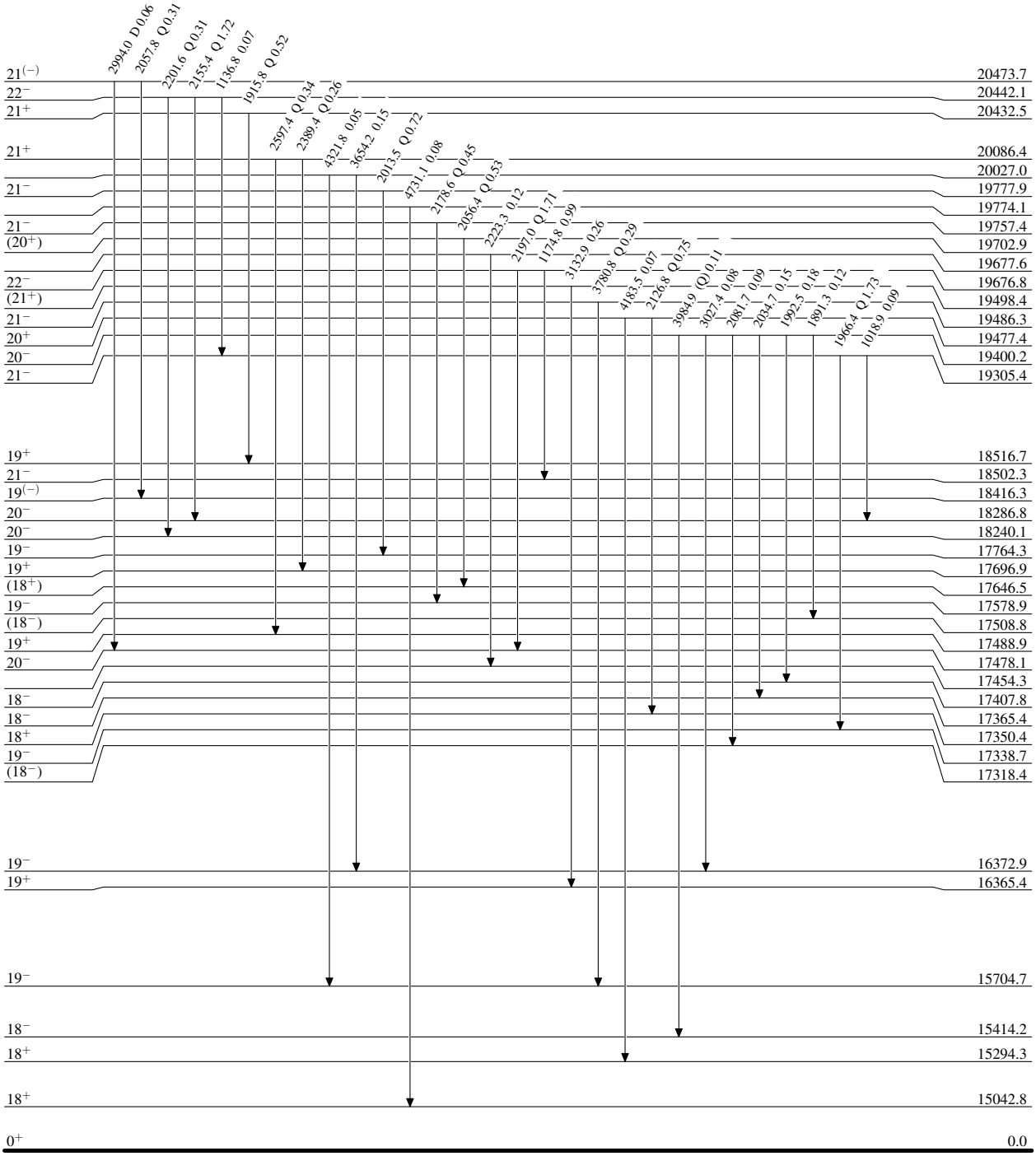
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{62}_{30}Zn_{32}$

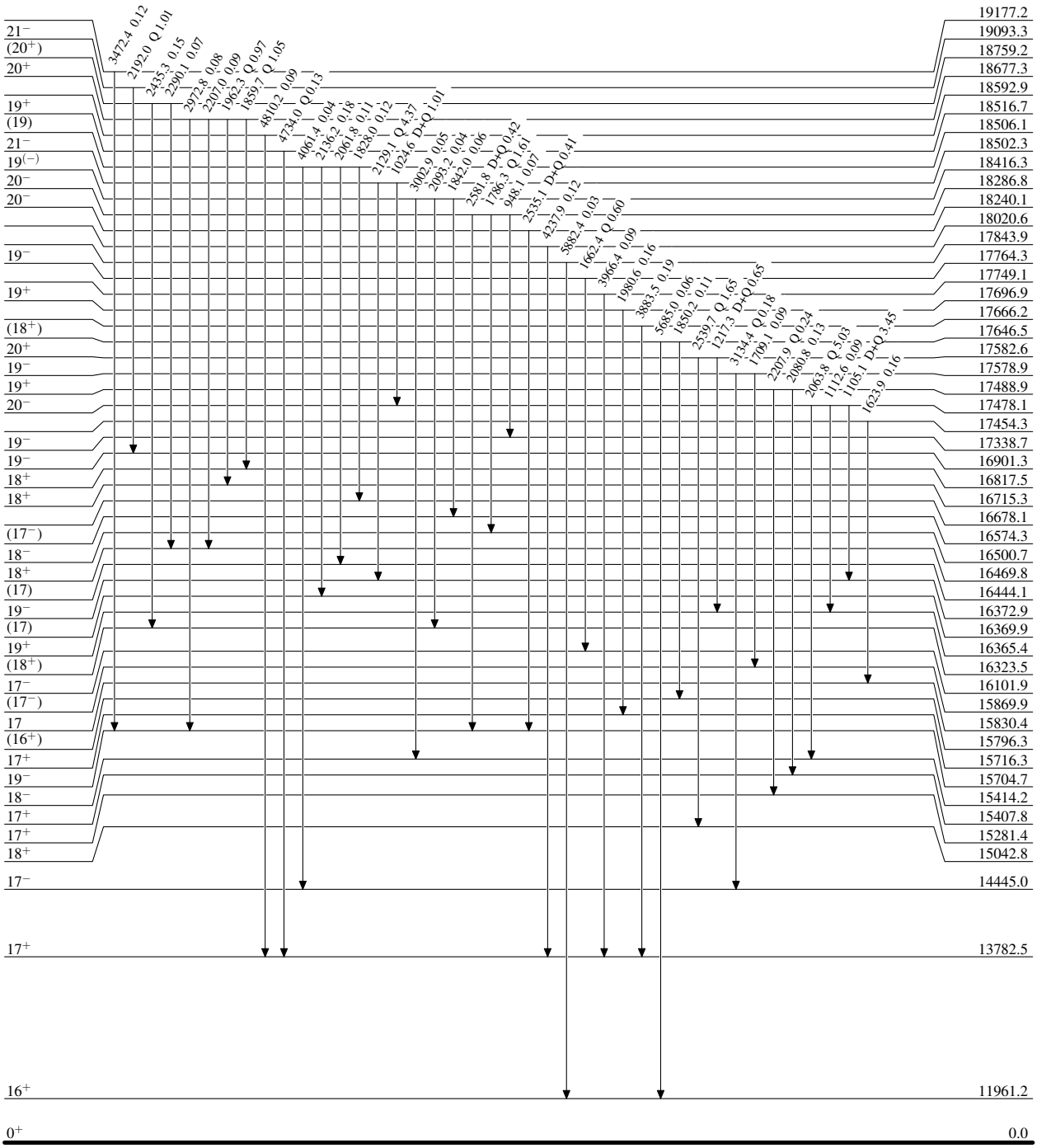
^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) **2012Ge04,1998Sv01**

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$

Level Scheme (continued)

Intensities: Relative I_γ



$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01

Level Scheme (continued)

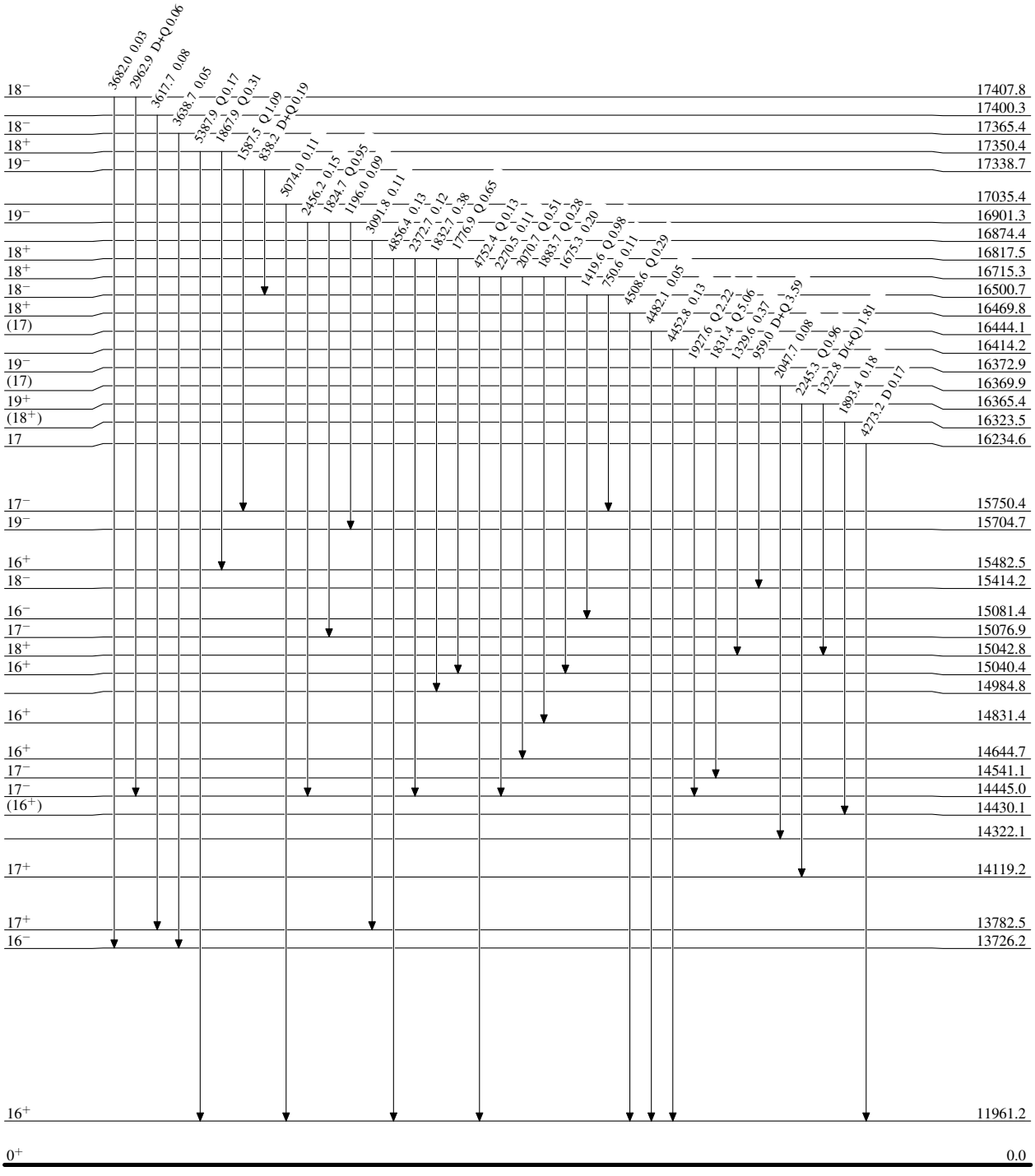
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01

Level Scheme (continued)

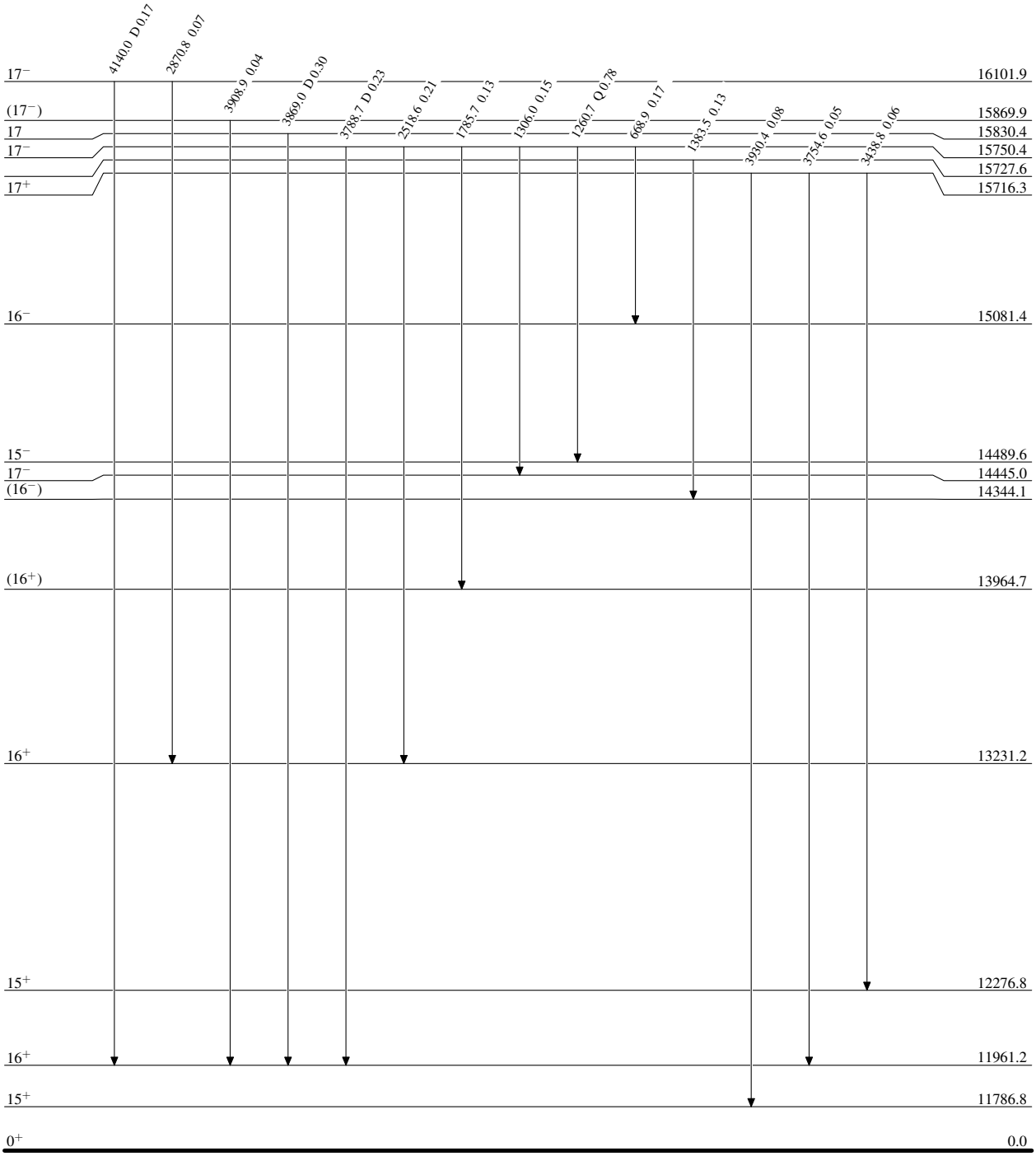
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



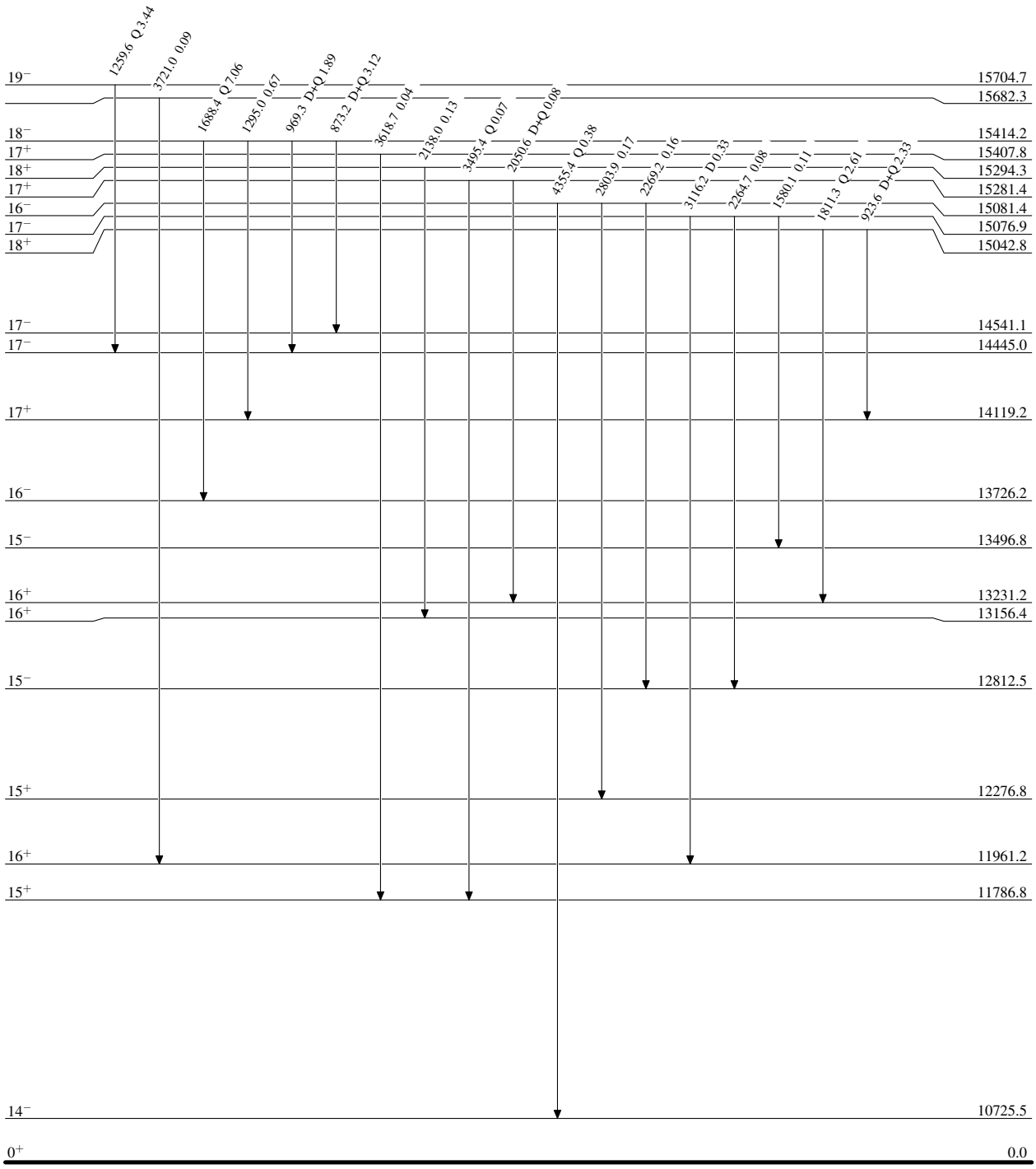
$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01

Level Scheme (continued)

Intensities: Relative I_γ

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) **2012Ge04,1998Sv01**

Level Scheme (continued)

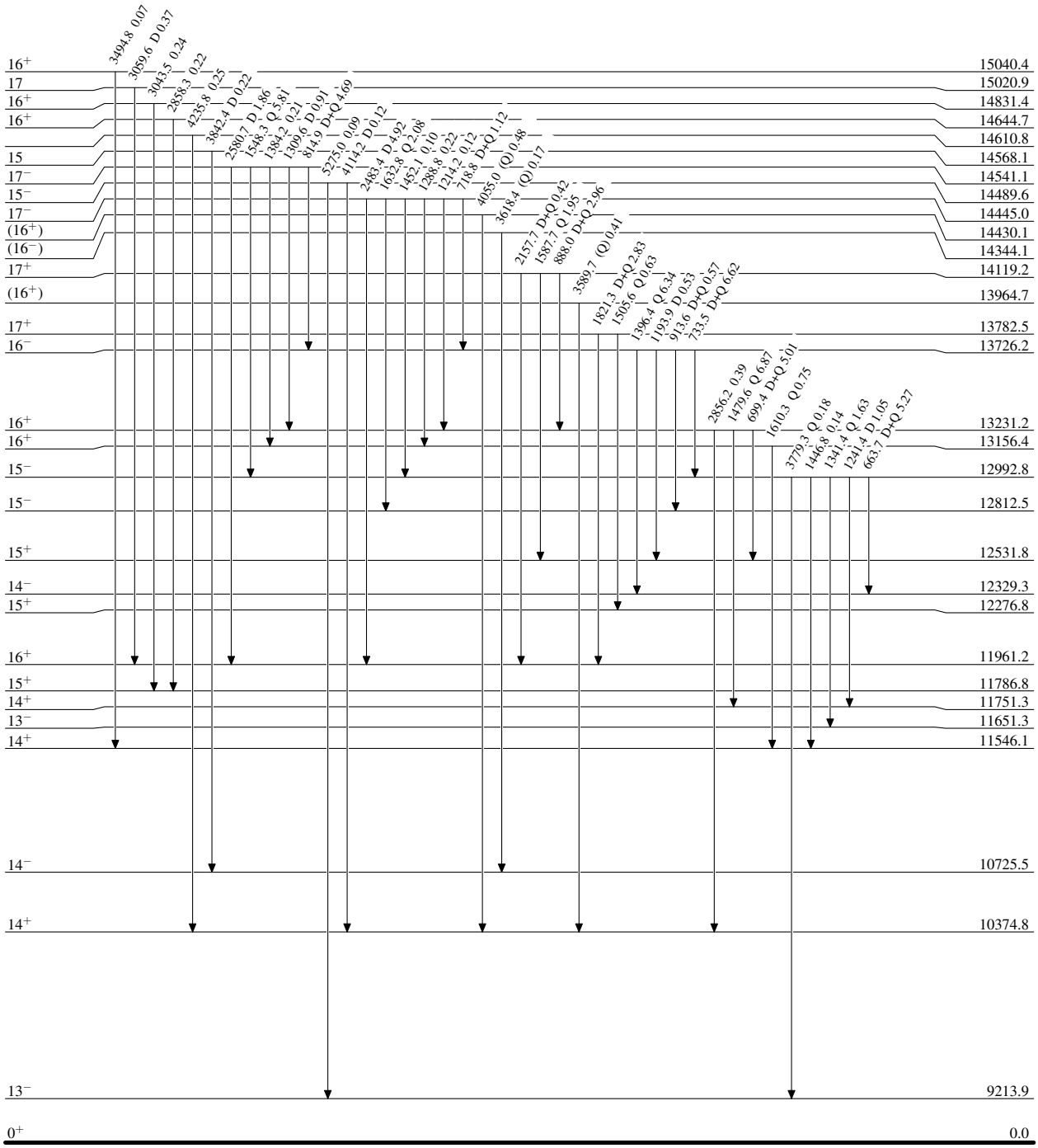
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

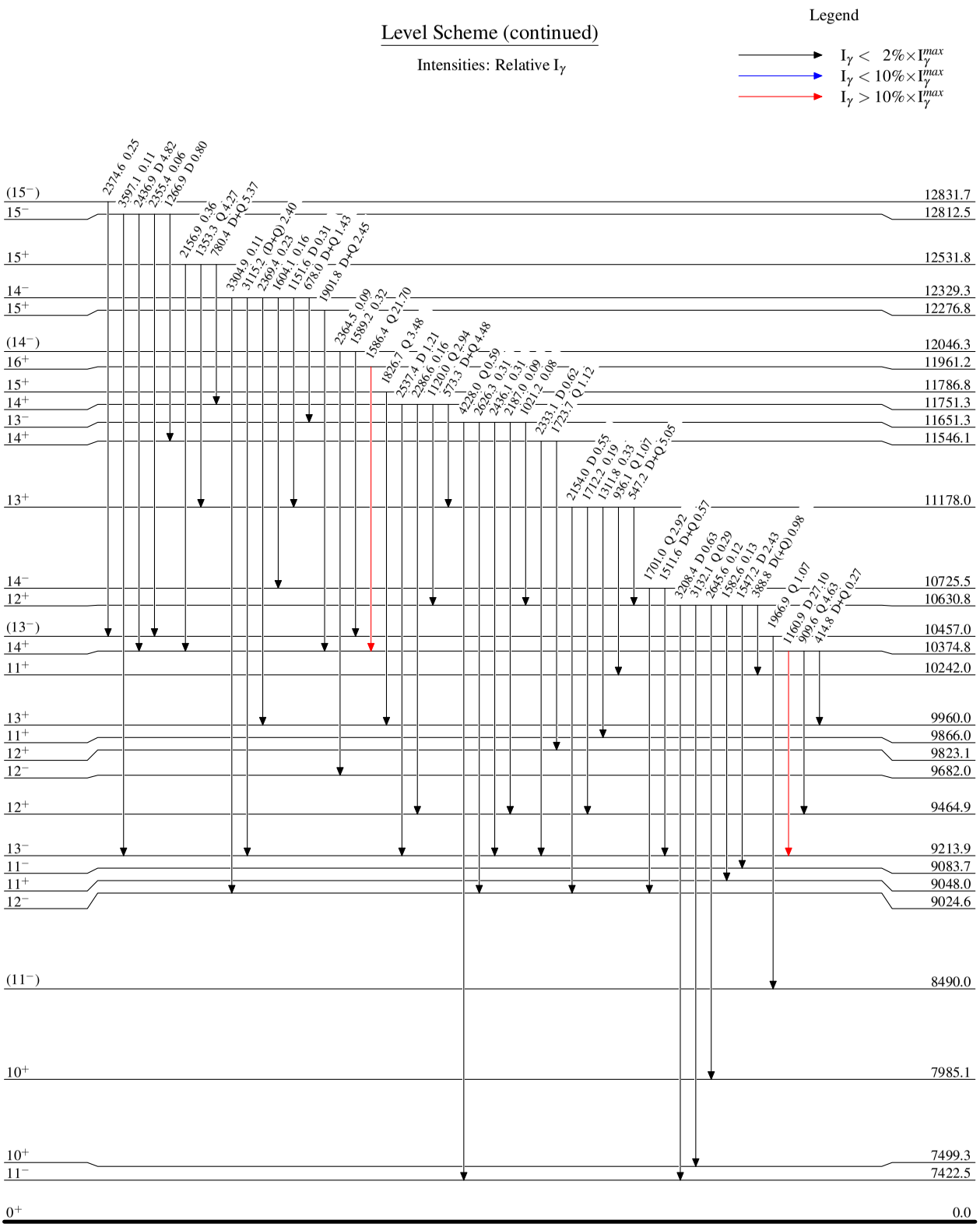


$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01

Level Scheme (continued)

Intensities: Relative I_γ



$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01

Level Scheme (continued)

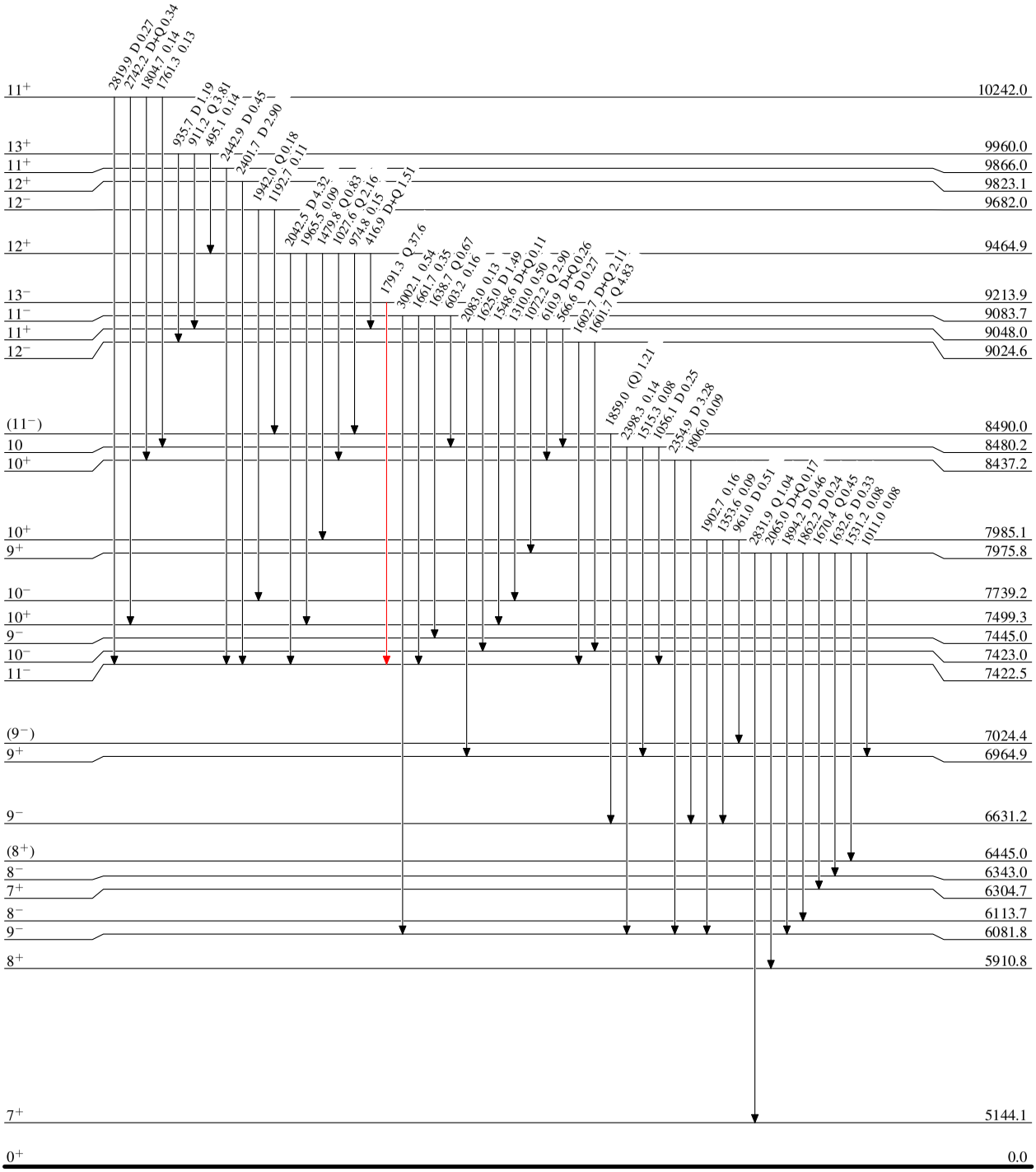
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$

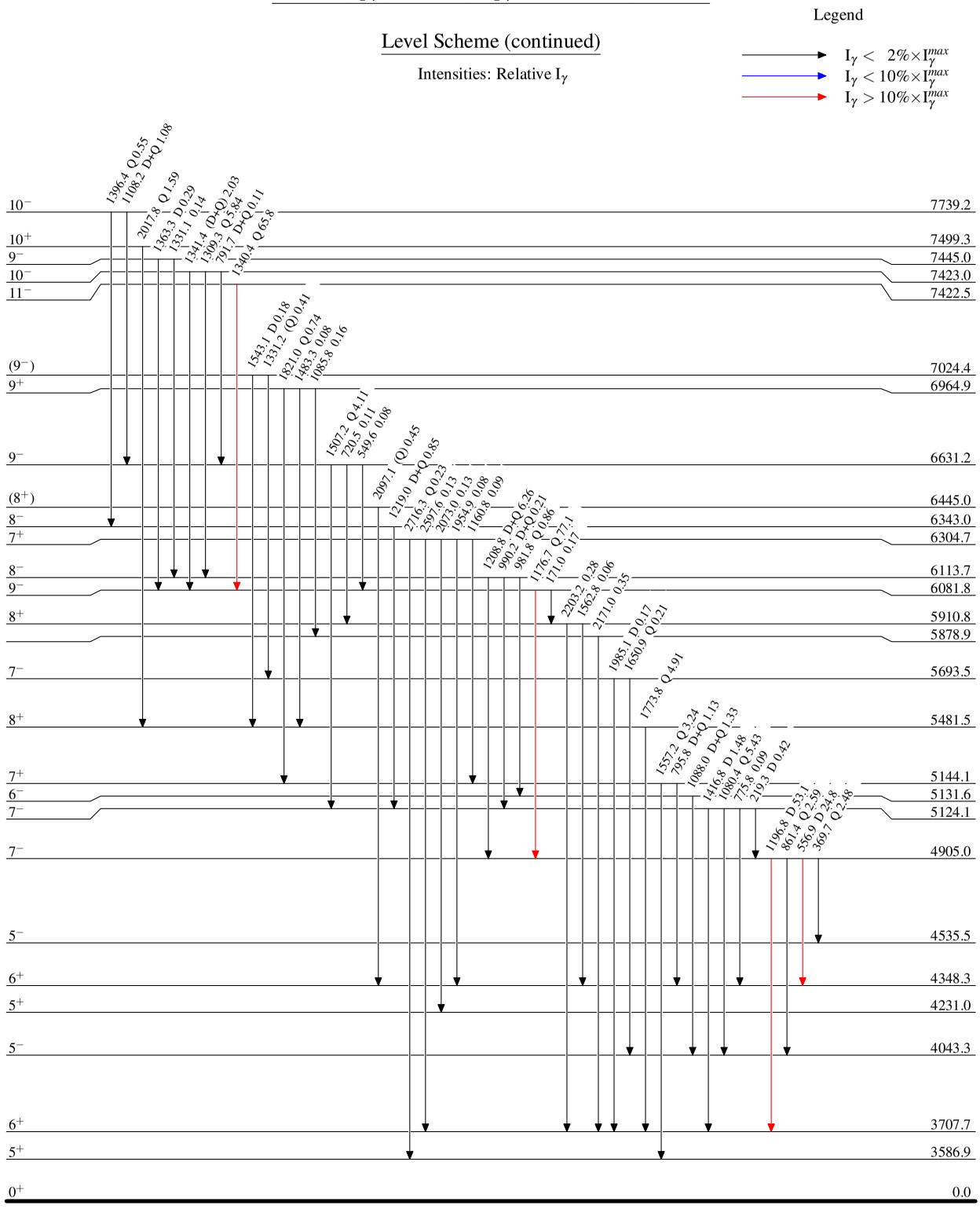


$^{62}_{30}Zn_{32}$

$^{28}Si(^{36}Ar,2p\gamma),^{40}Ca(^{28}Si,\alpha 2p\gamma)$ 2012Ge04,1998Sv01

Level Scheme (continued)

Intensities: Relative I_γ

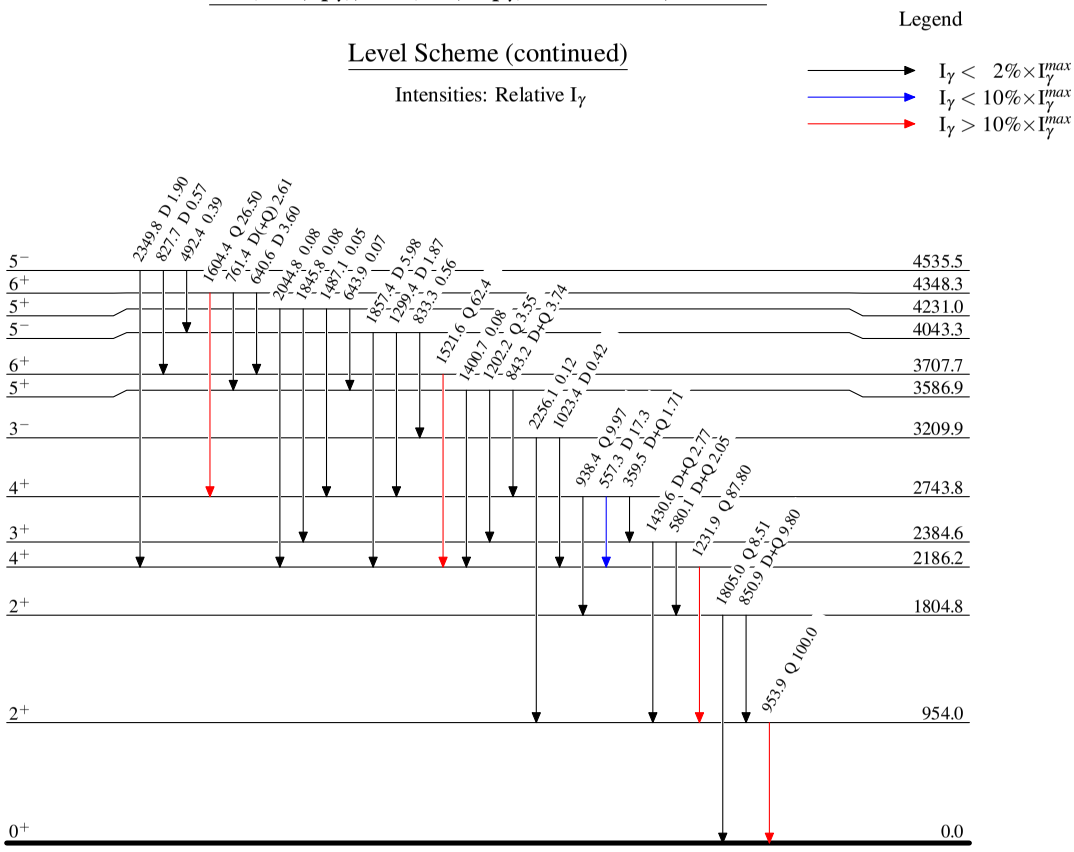


$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01

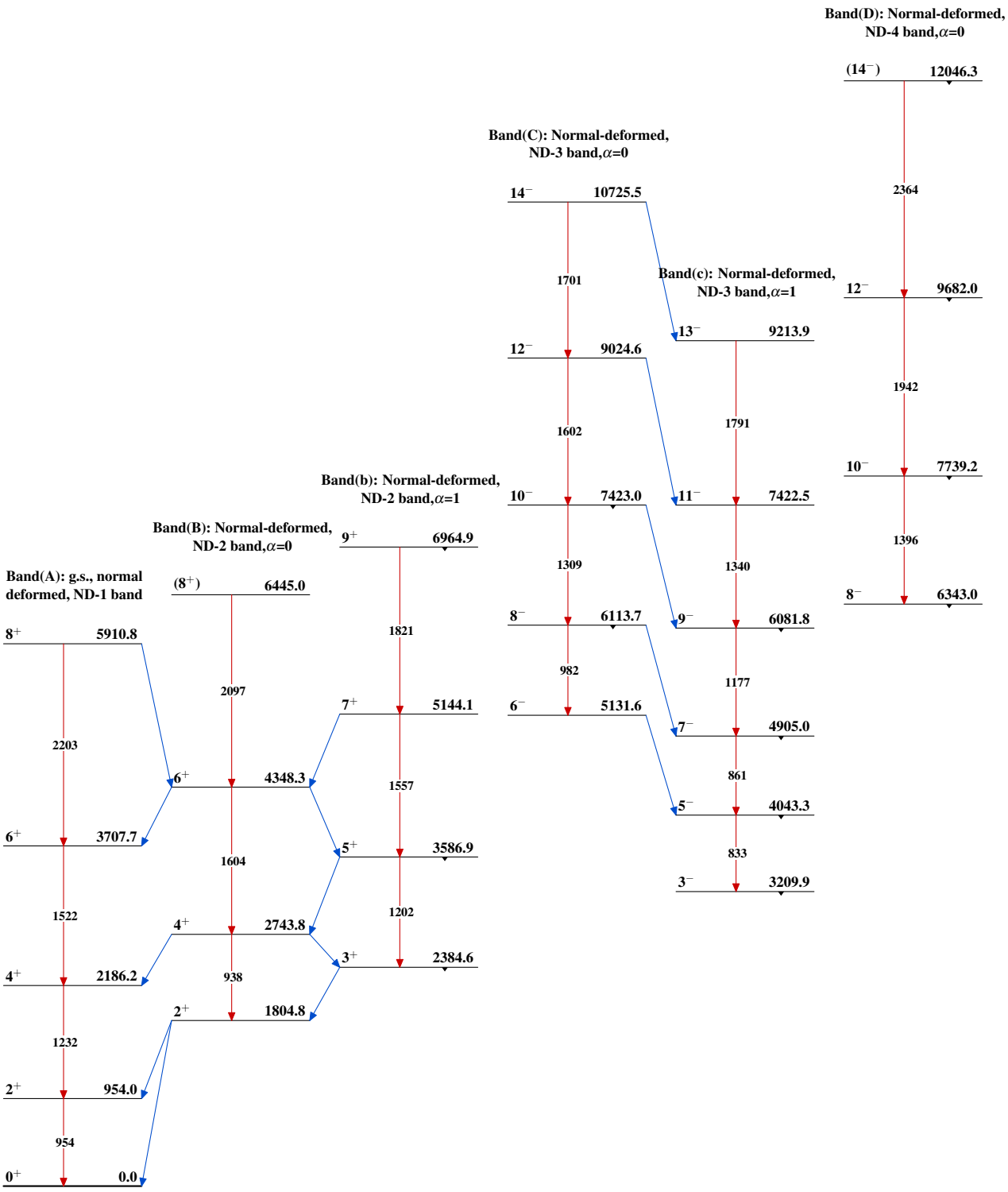
Level Scheme (continued)

Intensities: Relative I_γ



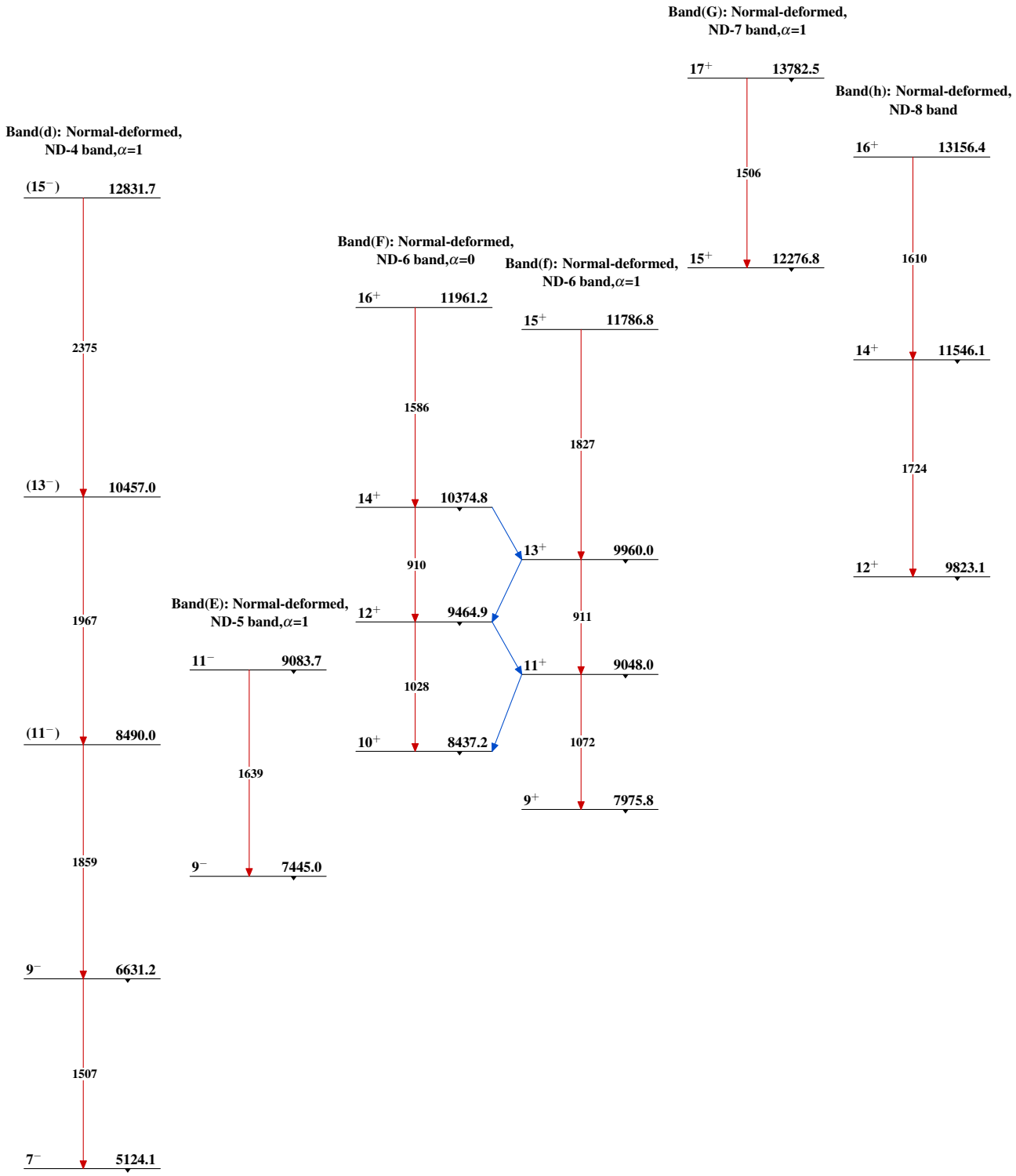
$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01



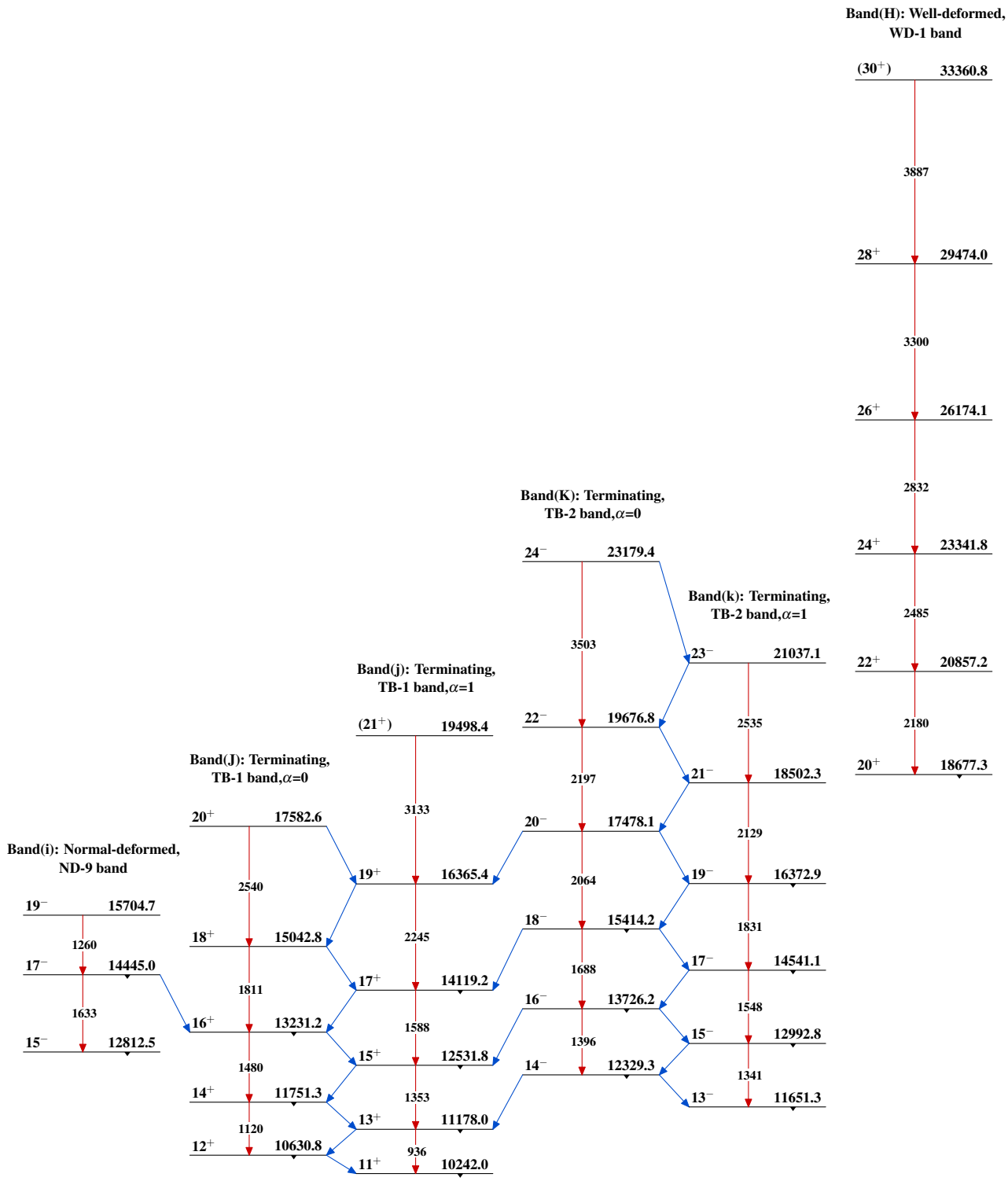
$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)



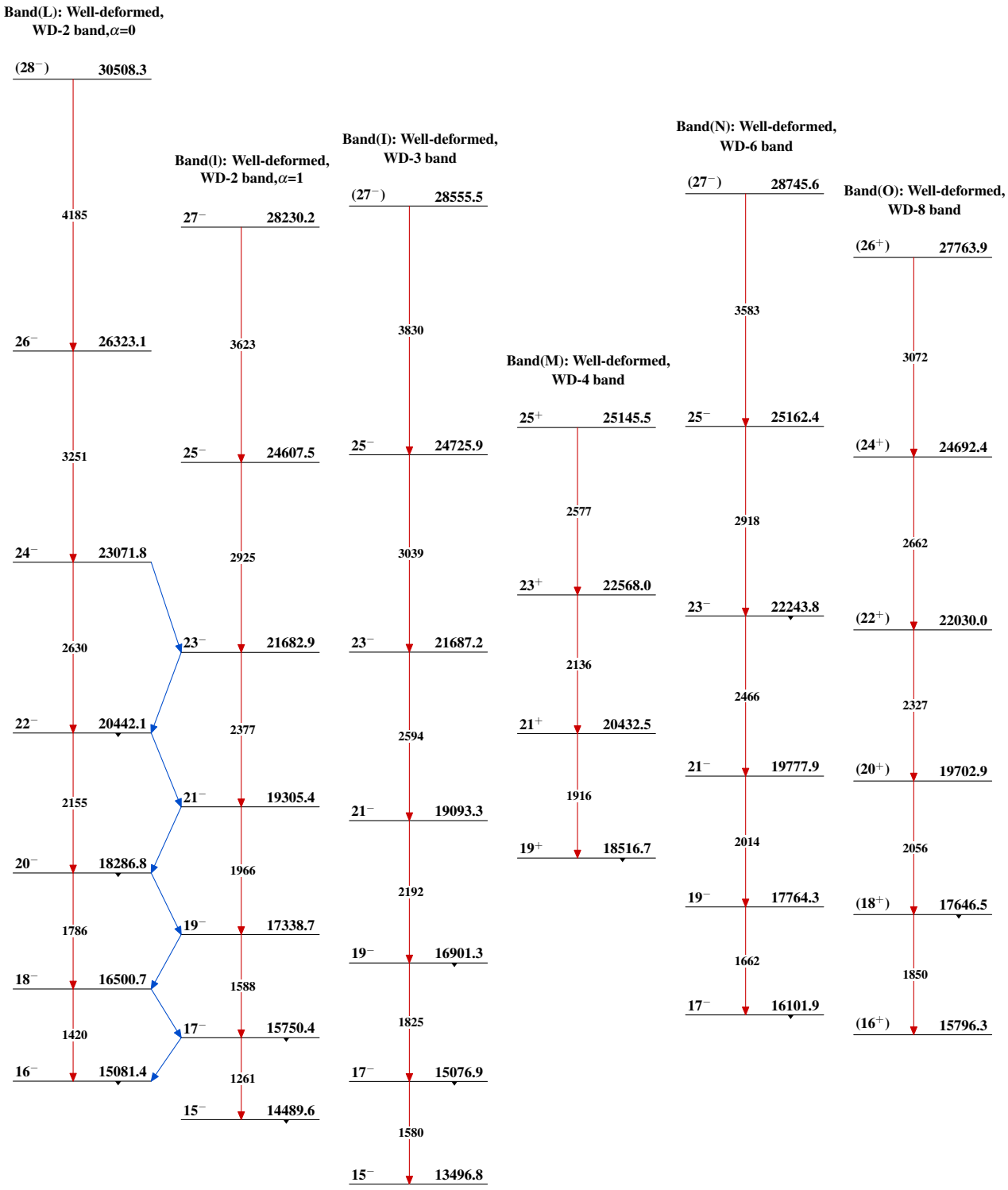
$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

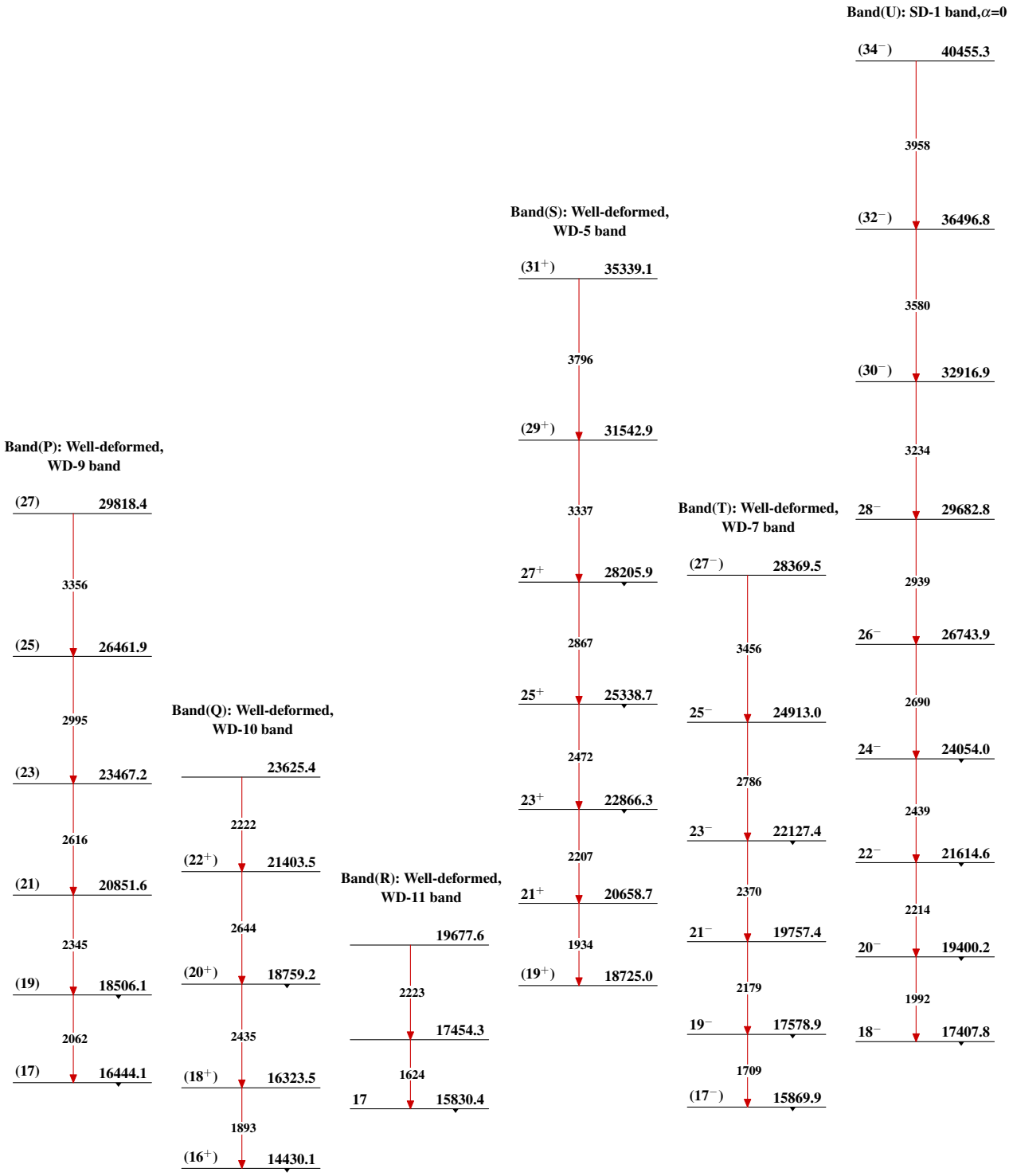


$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)

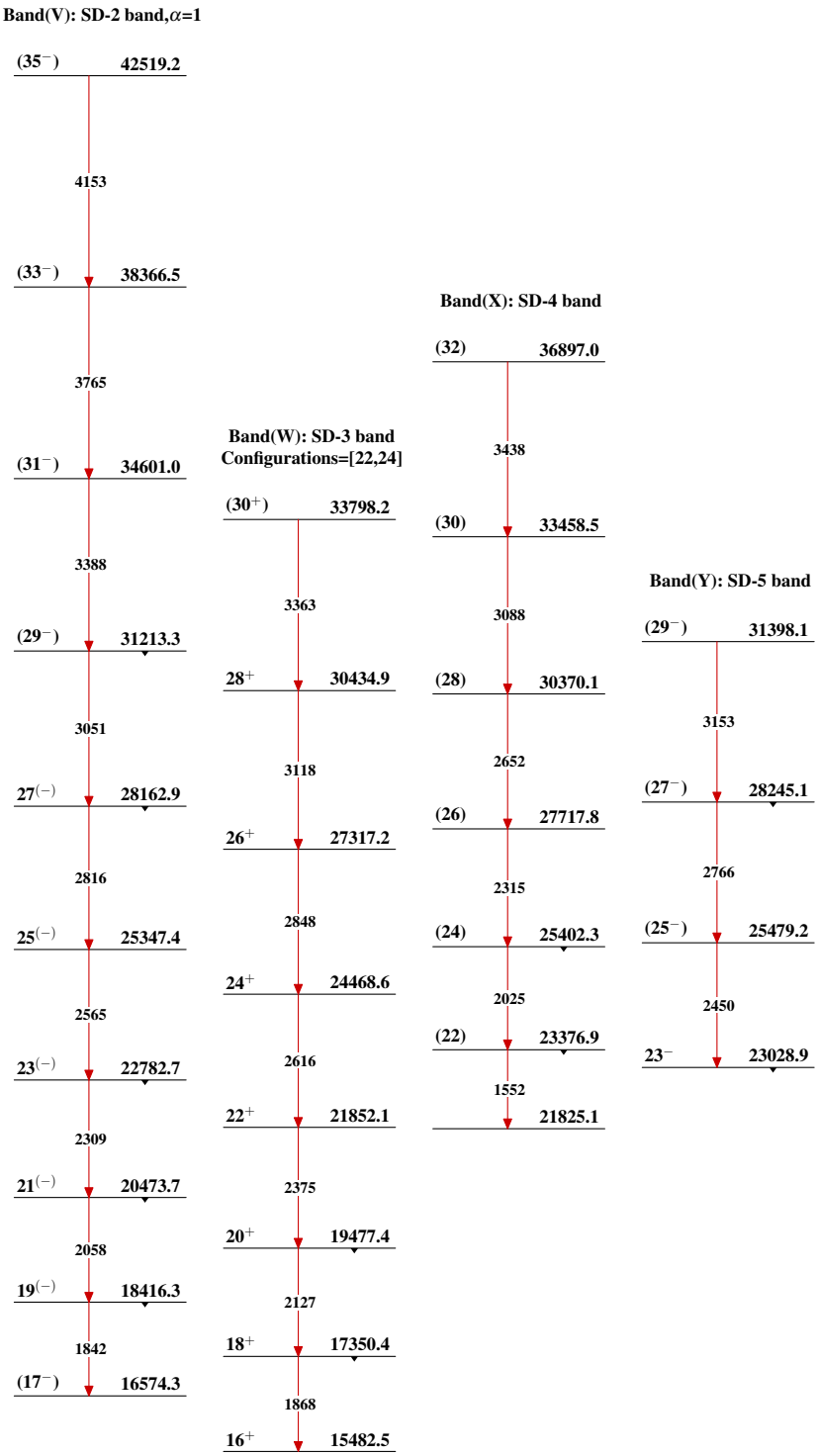


^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)



$^{62}_{30}Zn_{32}$

^{28}Si(^{36}Ar,2pγ),^{40}Ca(^{28}Si,α2pγ) 2012Ge04,1998Sv01 (continued)



$^{62}_{30}Zn_{32}$