^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) 1994Pa22,2007Pa07

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. Lalkovski, F. G. Kondev	NDS 124, 157 (2015)	1-Aug-2014

1994Pa22: Facility: Daresbury Nuclear Structure Facility; Beam: E(^{58}Ni)= 240 MeV; Target: 440 μg/cm^2 self-supporting ^{58}Ni; Detectors: EUROGAM array, comprising 45 Compton-suppressed HPGe detectors, Daresbury recoil separator; Measured: γ-γ-γ, Eγ, Iγ; Facility: TASCC Facility at Chalk River; Beam: E(^{58}Ni)=250 MeV; Targets: stack of two 450–μg/cm^2 thick self-supporting ^{60}Ni foils. One 1 mg/cm^2 ^{58}Ni with 10 mg/cm^2 Au backing; Detectors: 8π spectrometer, comprising 20 HPGe detectors, and 71-element inner-ball calorimeter; Measured: γ-γ, γ-$\gamma(\theta)$, Eγ, Iγ; Deduced: level scheme. Also, from the same collaboration: 1993PaZX.

2007Pa07: Facility: 88-inch cyclotron at LBNL; Beam: E(^{58}Ni)=240 and 250 MeV; Targets: one thin target and one 1 mg/cm^2 on 15 mg/cm^2 ^{208}Pb backing; Detectors: GAMMASPHERE, Microball charged-particle detector, and array of 15 neutron detectors; Measured: γ-γ-γ- charged particle coinc., Eγ, Iγ; Deduced: level scheme, band structure, Doppler corrections, $T_{1/2}$; Also, from the same collaboration: 2006Ev01.

Other: 1998StZZ.

^{112}Te Levels

E(level)[†]	J$^\pi$[‡]	Comments
0.0[@]	0$^+$	
689.00[@] *20*	2$^+$	
1476.1[@] *3*	4$^+$	
2261.7 *4*	(5)	J$^\pi$: From Adopted Levels.
2297.6[@] *4*	6$^+$	
2619.7 *4*	6$^+$	
2839.0 *4*		
3362.3[@] *4*	8$^+$	
3454.3[&] *4*	8$^-$	
3512.1 *4*		
3629.8[&] *4*	9$^-$	
3785.6 *4*		
3959.1 *4*	9$^-$	
4109.5[&] *4*	10$^-$	
4225.9[@] *4*	10$^+$	
4239.4 *5*		
4329.1[&] *5*	11$^-$	
4425.3 *5*		
4460.3[a] *4*	10$^+$	
4827.1[@] *5*	12$^+$	
4864.9[&] *5*	12$^-$	
5040.9 *5*		
5124.0[&] *5*	13$^-$	
5212.1[a] *5*	12$^+$	
5432.7[&] *5*	14$^-$	
5540.1[@] *5*	14$^+$	
5753.1 *6*		
5874.4[&] *5*	15$^-$	
5970.8[a] *5*	14$^+$	
6294.5[@] *5*	16$^+$	
6439.1[&] *5*	16$^-$	
6709.4 *9*	(17$^+$)	

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^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) 1994Pa22,2007Pa07 (continued)

^{112}Te Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	T$_{1/2}$[#]
6772.4[a] *6*	16$^+$	
6904.7? *6*	17$^-$	
6951.1[&] *5*	17$^-$	
7029.0? *5*	17$^-$	
7251.9[@] *6*	18$^+$	
7565.1[&] *11*	18$^-$	
7634.4[a] *6*	18$^+$	0.21 ps *+7−4*
7857.9? *6*		
7911.8[b] *6*	19$^-$	
8117.1[&] *12*	19$^-$	
8168.2[@] *6*	20$^+$	
8211.6 *6*	20$^+$	
8491.0 *6*	21	
8563.1[a] *7*	20$^+$	0.14 ps *+4−3*
8904.4[b] *6*	21$^-$	
9087.2[c] *9*	20$^+$	
9191.2[@] *6*	22$^+$	
9492.9[c] *9*	21$^+$	
9561.3[a] *7*	22$^+$	101 fs *+31−21*
9710.8[b] *6*	23$^-$	
9754.2[d] *10*	23$^-$	
9958.1[c] *9*	22$^+$	
10054.2? *6*		
10393.2[@] *10*	24$^+$	
10434.3[c] *9*	23$^+$	
10618.2[b] *7*	25$^-$	
10633.1[a] *8*	24$^+$	70 fs *+21−15*
10930.4[c] *9*	24$^+$	
11023.2[d] *11*	25$^-$	
11438.4[c] *9*	25$^+$	
11657.2[@] *12*	26$^+$	
11779.5[a] *8*	26$^+$	50 fs *+15−10*
11968.7[c] *9*	26$^+$	
11990.2[b] *11*	27$^-$	
12276.2[d] *12*	27$^-$	
12517.6[c] *9*	27$^+$	
12997.2[a] *9*	28$^+$	37 fs *+11−8*
13080.6[c] *9*	28$^+$	
13455.2[b] *12*	29$^-$	
13666.7[c] *9*	29$^+$	
13878.2 *15*		
13969.2 *15*		
14264.7[c] *9*	30$^+$	
14288.5[a] *10*	30$^+$	27 fs *+8−6*
14908.8[c] *9*	31$^+$	
14996.2[b] *16*	31$^-$	
15333.2 *18*		
15408.2 *18*	31$^-$	
15563.8[c] *9*	32$^+$	

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^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) 1994Pa22,2007Pa07 (continued)

^{112}Te Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$#	Comments
15652.3[a] *10*	32^+	21 fs *+6–4*	
16273.9[c] *9*	33^+		
16998.1[c] *9*	34^+		
17153.1[a] *10*	34^+		
17786.2[c] *10*	35^+		
18586.9[c] *10*	36^+		
18777.9[a] *11*	36^+		
19515.6[c] *10*	37^+		
20441.9[c] *14*	38^+		
20498.9[a] *11*	38^+		
21523.6[c] *14*	39^+		
22305.6[a] *12*	40^+		
22556.0[c] *17*	40^+		
24248.1[a] *12*	42^+		
26353.2[a] *16*	44^+		
28646.2[a] *19*	46^+		
x[g]	(21^+)		Additional information 1.
966.0+x[g] *10*	(23^+)		
1985.0+x[g] *15*	(25^+)		
3099.0+x[g] *18*	(27^+)		
4317.9+x[g] *18*	(29^+)		
5649.0+x[g] *18*	(31^+)		
7119.4+x[g] *18*	(33^+)		
8732.1+x[g] *19*	(35^+)		
10509.7+x[g] *19*	(37^+)		
12430.5+x[g] *19*	(39^+)		
14501.5+x[g] *19*	(41^+)		
y[f]	(21^-)		Additional information 2.
860.0+y[f] *10*	(23^-)		
1451.2+y *15*			
1793.5+y[f] *11*	(25^-)		
2802.2+y[f] *11*	(27^-)		
3926.2+y[f] *12*	(29^-)		
5096.0+y *16*			
5138.3+y[f] *12*	(31^-)		
6449.0+y[f] *12*	(33^-)		
7843.0+y[f] *13*	(35^-)		
9361.6+y[f] *13*	(37^-)		
11037.7+y[f] *14*	(39^-)		
12913.5+y[f] *14*	(41^-)		
15019.0+y[f] *14*	(43^-)		
17346.0+y[f] *17*	(45^-)		
z[e]	(18^-)		Additional information 3.
867.0+z[e] *10*	(20^-)		
1807.0+z[e] *15*	(22^-)		
2828.0+z[e] *18*	(24^-)		
3930.0+z[e] *20*	(26^-)		
5136.3+z[e] *21*	(28^-)		
6427.5+z[e] *21*	(30^-)		

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^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) 1994Pa22,2007Pa07 (continued)

^{112}Te Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
7785.8+z[e] *21*	(32$^-$)	10688.5+z[e] *21*	(36$^-$)	14138.4+z[e] *22*	(40$^-$)
9187.7+z[e] *21*	(34$^-$)	12328.7+z[e] *22*	(38$^-$)	16133.2+z[e] *22*	(42$^-$)
				18318.2+z[e] *24*	(44$^-$)

† From a least-squares fit to Eγ.
‡ From 1994Pa22 and 2007Pa07, based on deduced transition multipolarities and the apparent band structures.
# From DSAM (centoid shift) in 2007Pa07.
@ Band(A): g.s. band.
& Band(B): π=− band based on the 8$^-$ state.
a Band(C): ΔJ=2, π=+ intruder band based on the 10$^+$ state.
b Band(D): ΔJ=2, π=− band based on the 18$^-$ state.
c Band(E): ΔJ=1, π=+ band based on the 20$^+$ state.
d Band(F): ΔJ=2, π=− band based on the 23$^-$ state.
e Band(G): ΔJ=2, π=− band based on the (18$^-$) state.
f Band(g): ΔJ=2, π=− band based on the (21$^-$) state.
g Band(H): ΔJ=2, π=+ band based on the (21$^+$) state.

γ(^{112}Te)

E$_\gamma$†	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.‡	Comments
91.9 *2*	10.1 *5*	3454.3	8$^-$	3362.3	8$^+$		
173.7 *2*	0.7 *1*	3959.1	9$^-$	3785.6			
175.7 *2*	4.2 *1*	3629.8	9$^-$	3454.3	8$^-$	(M1)	Mult.: DCO=0.85 *7* from (^{58}Ni,4pγ) in 1994Pa22.
219.5 *2*	1.2 *6*	2839.0		2619.7	6$^+$		Mult.: DCO 1.31 *21* from (^{58}Ni,4pγ) in 1994Pa22.
266.6 *2*	2.1 *1*	4225.9	10$^+$	3959.1	9$^-$	(E1)	Mult.: DCO=0.61 *2* from (^{58}Ni,4pγ) in 1994Pa22 for the 266-keV doublet.
267.5 *2*	12.0 *6*	3629.8	9$^-$	3362.3	8$^+$	(E1)	Mult.: DCO=0.61 *2* from (^{58}Ni,4pγ) in 1994Pa22 for the 266-keV doublet.
279.4 *2*	1.00 *5*	8491.0	21	8211.6	20$^+$	D	Mult.: DCO= 0.62 *7* from (^{58}Ni,4pγ) in 1994Pa22.
308.6 *2*	0.9 *1*	5432.7	14$^-$	5124.0	13$^-$		
357.2 *2*	0.7 *1*	2619.7	6$^+$	2261.7	(5)		
406# *1*		9492.9	21$^+$	9087.2	20$^+$		
415# *1*		6709.4	(17$^+$)	6294.5	16$^+$		
423.4 *2*	2.1 *1*	3785.6		3362.3	8$^+$		
440.2 *2*	1.3 *1*	4225.9	10$^+$	3785.6			
441.6 *2*	1.7 *1*	5874.4	15$^-$	5432.7	14$^-$		
465.1# *3*		9958.1	22$^+$	9492.9	21$^+$		
465.6@ *2*	5.1 *3*	6904.7?	17$^-$	6439.1	16$^-$	M1	Eγ: observed only in 1994Pa22; not confirmed in 2007Pa07. Mult.: DCO =0.52 *3* from (^{58}Ni,4pγ) in 1994Pa22.
476.4# *3*		10434.3	23$^+$	9958.1	22$^+$		
479.8 *2*	1.1 *1*	4109.5	10$^-$	3629.8	9$^-$		
495.9# *3*		10930.4	24$^+$	10434.3	23$^+$		
507.9# *3*		11438.4	25$^+$	10930.4	24$^+$		
519.6 *2*	2.5 *1*	9710.8	23$^-$	9191.2	22$^+$		
530.4# *3*		11968.7	26$^+$	11438.4	25$^+$		
548.8# *3*		12517.6	27$^+$	11968.7	26$^+$		
563.1# *3*		13080.6	28$^+$	12517.6	27$^+$		

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^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) 1994Pa22,2007Pa07 (continued)

γ(^{112}Te) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	Comments
563.3[#] *2*	3.2 *2*	9754.2	23^-	9191.2	22^+	(E1)	Mult.: DCO=0.63 *6* from (^{58}Ni,4pγ) in 1994Pa22.
567.8 *2*	13.5 *7*	5432.7	14^-	4864.9	12^-	E2	Mult.: 1.11 *5* from (^{58}Ni,4pγ) in 1994Pa22.
586.0[#] *3*		13666.7	29^+	13080.6	28^+		
596.5 *2*	2.0 *4*	3959.1	9^-	3362.3	8^+		
597.8[#] *3*		14264.7	30^+	13666.7	29^+		
601.2 *2*	48 *2*	4827.1	12^+	4225.9	10^+	E2	Mult.: DCO=1.02 *3* from (^{58}Ni,4pγ) in 1994Pa22.
615.5 *2*	0.9	3454.3	8^-	2839.0			
615.6 *2*	0.6 *1*	5040.9		4425.3			
619[#] *1*		12276.2	27^-	11657.2	26^+		
619[#] *1*		14908.8	31^+	14288.5	30^+		
630[#] *1*		11023.2	25^-	10393.2	24^+		
639.7 *2*	1.0	4425.3		3785.6			
644.3[#] *3*		14908.8	31^+	14264.7	30^+		
655.1 *2*	14.3 *7*	4109.5	10^-	3454.3	8^-	E2	Mult.: DCO= 1.05 *5* from (^{58}Ni,4pγ) in 1994Pa22.
655.2[#] *3*		15563.8	32^+	14908.8	31^+		
659.8 *2*	8.3 *17*	7911.8	19^-	7251.9	18^+	(E1)	Mult.: DCO=0.58 *4* from (^{58}Ni,4pγ) in 1994Pa22.
673.1 *2*	1.0 *1*	3512.1		2839.0			
689.0 *2*	100 *5*	689.00	2^+	0.0	0^+	E2	Mult.: DCO=1.00 *2* from (^{58}Ni,4pγ) in 1994Pa22.
699.3 *2*	13.2 *7*	4329.1	11^-	3629.8	9^-	E2	Mult.: DCO=1.11 *6* from (^{58}Ni,4pγ) in 1994Pa22.
710.1[#] *3*		16273.9	33^+	15563.8	32^+		
712.2 *2*	1.1 *1*	5753.1		5040.9			
713.0 *2*	45 *2*	5540.1	14^+	4827.1	12^+	E2	Mult.: DCO=1.05 *4* from (^{58}Ni,4pγ) in 1994Pa22.
724.2[#] *3*		16998.1	34^+	16273.9	33^+		
727.3 *2*	0.4 *1*	4239.4		3512.1			
736.2 *2*	2.4 *1*	8904.4	21^-	8168.2	20^+	(E1)	Mult.: DCO=0.69 *9* from (^{58}Ni,4pγ) in 1994Pa22.
750.5 *2*	7.8 *4*	5874.4	15^-	5124.0	13^-	E2	Mult.: DCO=1.02 *6* from (^{58}Ni,4pγ) in 1994Pa22.
751.8 *2*	7.2 *4*	5212.1	12^+	4460.3	10^+	E2	
754.4 *2*	41 *2*	6294.5	16^+	5540.1	14^+	E2	Mult.: DCO=0.99 *3* from (^{58}Ni,4pγ) in 1994Pa22.
755.4 *2*	15.4 *8*	4864.9	12^-	4109.5	10^-	E2	Mult.: DCO=1.03 *6* from (^{58}Ni,4pγ) in 1994Pa22.
758.7 *2*	5.7 *3*	5970.8	14^+	5212.1	12^+	E2	Mult.: DCO=0.95 *14* from (^{58}Ni,4pγ) in 1994Pa22.
784.8 *2*	4.5 *2*	2261.7	(5)	1476.1	4^+		
787.1 *2*	98 *5*	1476.1	4^+	689.00	2^+	E2	Mult.: DCO=1.01 *2* from (^{58}Ni,4pγ) in 1994Pa22.
788[#] *1*		17786.2	35^+	16998.1	34^+		
794.9 *2*	10.6 *5*	5124.0	13^-	4329.1	11^-	E2	Mult.: DCO=1.02 *7* from (^{58}Ni,4pγ) in 1994Pa22.
801[#] *1*		18586.9	36^+	17786.2	35^+		
801.6 *2*	3.6 *2*	6772.4	16^+	5970.8	14^+	E2	Mult.: DCO 1.06 *14* from (^{58}Ni,4pγ) in 1994Pa22.
806.3 *2*	6.2 *3*	9710.8	23^-	8904.4	21^-	E2	Mult.: DCO=0.88 *8* from (^{58}Ni,4pγ) in 1994Pa22.
821.3 *2*	91 *5*	2297.6	6^+	1476.1	4^+	E2	Mult.: DCO=0.98 *2* from (^{58}Ni,4pγ) in 1994Pa22.
860[#] *1*		860.0+y	(23^-)	y	(21^-)		
862.0 *2*	3.0 *2*	7634.4	18^+	6772.4	16^+	E2	Mult.: DCO=0.98 *16* from (^{58}Ni,4pγ) in 1994Pa22.
862.7[@] *2*	1.0 *1*	10054.2?		9191.2	22^+		E_γ: transition observed only in 1994Pa22 and not confirmed in 2007Pa07.
863.8 *2*	47 *2*	4225.9	10^+	3362.3	8^+	E2	Mult.: 0.95 *4* from (^{58}Ni,4pγ) in 1994Pa22.
867[#] *1*		867.0+z	(20^-)	z	(18^-)		
870.8[#] *3*		9958.1	22^+	9087.2	20^+		
907.4 *2*	3.2 *2*	10618.2	25^-	9710.8	23^-		
916.4 *2*	11.9 *6*	8168.2	20^+	7251.9	18^+	E2	Mult.: DCO=0.96 *5* from (^{58}Ni,4pγ) in 1994Pa22.
925[#] *1*		7634.4	18^+	6709.4	(17^+)		
928[#] *1*		19515.6	37^+	18586.9	36^+		
928.7[#] *3*		8563.1	20^+	7634.4	18^+		
933.5[#] *3*		1793.5+y	(25^-)	860.0+y	(23^-)		

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^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) 1994Pa22,2007Pa07 (continued)

γ(^{112}Te) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	Comments
940[#] *1*		1807.0+z	(22$^-$)	867.0+z	(20$^-$)		
941.5[#] *3*		10434.3	23$^+$	9492.9	21$^+$		
953.2[@] *2*	2.1 *1*	7857.9?		6904.7?	17$^-$		E_γ: observed only in 1994Pa22; not confirmed in 2007Pa07.
957.4 *2*	31.4 *16*	7251.9	18$^+$	6294.5	16$^+$	E2	Mult.: DCO=0.92 *7* from (^{58}Ni,4pγ) in 1994Pa22.
959.8 *2*	8.5 *4*	8211.6	20$^+$	7251.9	18$^+$	E2	Mult.: DCO=1.18 *21* from (^{58}Ni,4pγ) in 1994Pa22.
966[#] *1*		966.0+x	(23$^+$)	x	(21$^+$)		
972.1[#] *3*		10930.4	24$^+$	9958.1	22$^+$		
979.7 *2*	2.4 *1*	9191.2	22$^+$	8211.6	20$^+$	E2	Mult.: DCO=0.97 *12* from (^{58}Ni,4pγ) in 1994Pa22.
986[#] *1*		5212.1	12$^+$	4225.9	10$^+$		
992.5 *2*	4.7 *2*	8904.4	21$^-$	7911.8	19$^-$	E2	Mult.: DCO=1.12 *8* from (^{58}Ni,4pγ) in 1994Pa22.
998.2[#] *3*		9561.3	22$^+$	8563.1	20$^+$		
1004.4[#] *3*		11438.4	25$^+$	10434.3	23$^+$		
1006.4 *2*	7.8 *4*	6439.1	16$^-$	5432.7	14$^-$	E2	Mult.: DCO=1.11 *11* from (^{58}Ni,4pγ) in 1994Pa22.
1008.7[#] *3*		2802.2+y	(27$^-$)	1793.5+y	(25$^-$)		
1019[#] *1*		1985.0+x	(25$^+$)	966.0+x	(23$^+$)		
1021[#] *1*		2828.0+z	(24$^-$)	1807.0+z	(22$^-$)		
1023.0 *2*	4.4 *2*	9191.2	22$^+$	8168.2	20$^+$	E2	Mult.: DCO=0.97 *14* from (^{58}Ni,4pγ) in 1994Pa22.
1038.1[#] *3*		11968.7	26$^+$	10930.4	24$^+$		
1064.5 *2*	78 *4*	3362.3	8$^+$	2297.6	6$^+$	E2	Mult.: DCO=0.96 *4* from (^{58}Ni,4pγ) in 1994Pa22.
1071.8[#] *3*		10633.1	24$^+$	9561.3	22$^+$		
1076.7 *2*	2.4 *1*	6951.1	17$^-$	5874.4	15$^-$	E2	Mult.: DCO=0.97 *14* from (^{58}Ni,4pγ) in 1994Pa22.
1079.2[#] *3*		12517.6	27$^+$	11438.4	25$^+$		
1098.0 *2*	4.4 *2*	4460.3	10$^+$	3362.3	8$^+$	E2	Mult.: DCO=0.99 *13* from (^{58}Ni,4pγ) in 1994Pa22.
1102[#] *1*		3930.0+z	(26$^-$)	2828.0+z	(24$^-$)		
1112.0[#] *3*		13080.6	28$^+$	11968.7	26$^+$		
1114[#] *1*		3099.0+x	(27$^+$)	1985.0+x	(25$^+$)		
1124.0[#] *3*		3926.2+y	(29$^-$)	2802.2+y	(27$^-$)		
1126[#] *1*		7565.1	18$^-$	6439.1	16$^-$		
1144.5 *2*	1.9 *1*	2619.7	6$^+$	1476.1	4$^+$	E2	Mult.: DCO=1.05 *20* from (^{58}Ni,4pγ) in 1994Pa22.
1146.4[#] *3*		11779.5	26$^+$	10633.1	24$^+$		
1149.1[#] *3*		13666.7	29$^+$	12517.6	27$^+$		
1154.6[@] *2*	1.3 *7*	7029.0?	17$^-$	5874.4	15$^-$	(E2)	E_γ: observed only in 1994Pa22; not confirmed in 2007Pa07. Mult.: DCO=1.07 *21* from (^{58}Ni,4pγ) in 1994Pa22.
1166[#] *1*		8117.1	19$^-$	6951.1	17$^-$		
1179[#] *1*		13455.2	29$^-$	12276.2	27$^-$		
1184.3[#] *3*		14264.7	30$^+$	13080.6	28$^+$		
1202[#] *1*		10393.2	24$^+$	9191.2	22$^+$		
1206.3[#] *3*		5136.3+z	(28$^-$)	3930.0+z	(26$^-$)		
1207[#] *1*		14288.5	30$^+$	13080.6	28$^+$		
1212.1[#] *3*		5138.3+y	(31$^-$)	3926.2+y	(29$^-$)		
1217.7[#] *1*		12997.2	28$^+$	11779.5	26$^+$		
1218.9[#] *3*		4317.9+x	(29$^+$)	3099.0+x	(27$^+$)		
1242.1[#] *3*		14908.8	31$^+$	13666.7	29$^+$		
1253[#] *1*		12276.2	27$^-$	11023.2	25$^-$		
1264[#] *1*		11657.2	26$^+$	10393.2	24$^+$		

Continued on next page (footnotes at end of table)

^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) 1994Pa22,2007Pa07 (continued)

γ(^{112}Te) (continued)

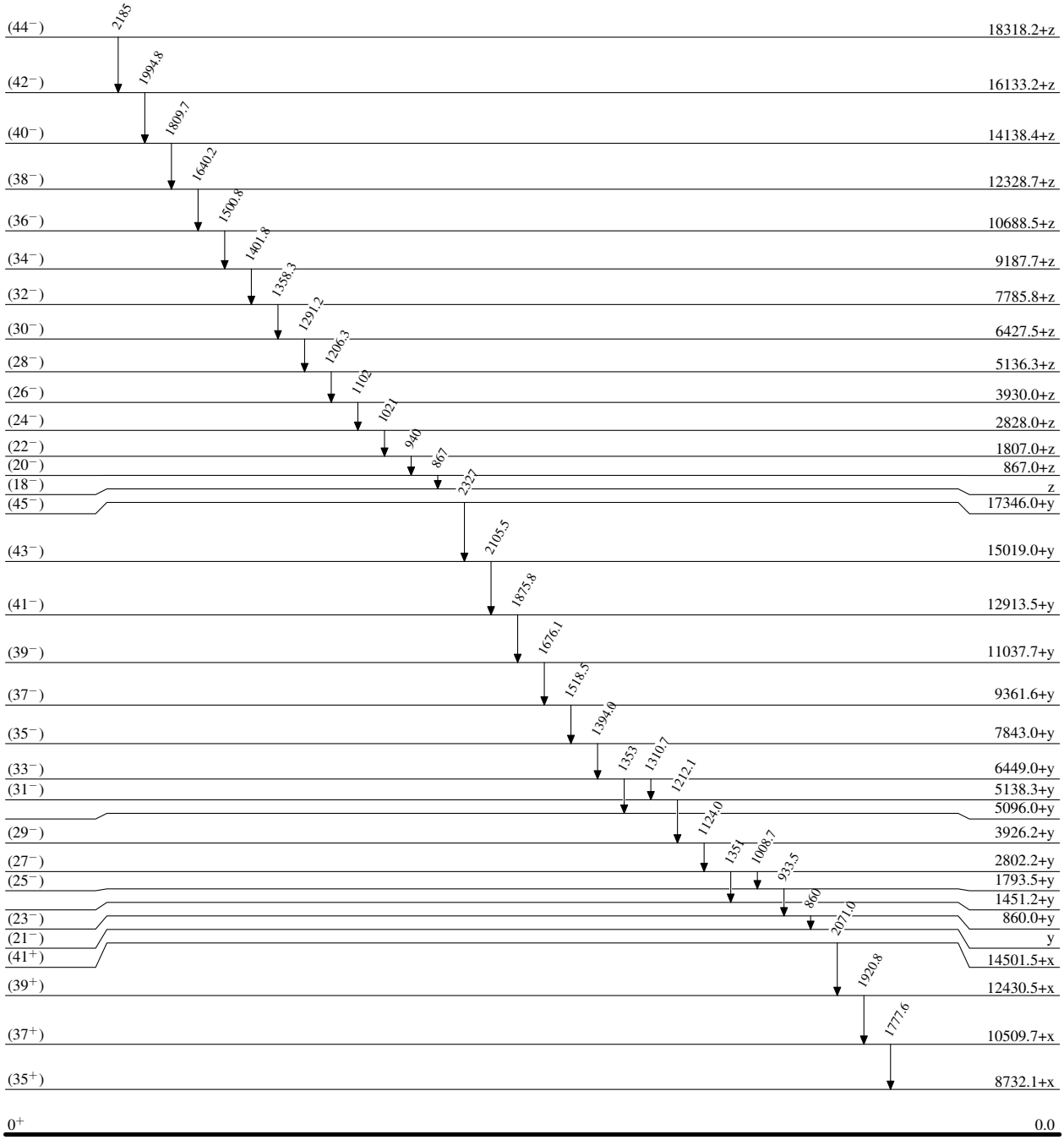
E_γ †	E_i(level)	J_i^π	E_f	J_f^π	E_γ †	E_i(level)	J_i^π	E_f	J_f^π
1268# *1*	14264.7	30^+	12997.2	28^+	1588.7# *3*	18586.9	36^+	16998.1	34^+
1269# *1*	11023.2	25^-	9754.2	23^-	1612.6# *3*	8732.1+x	(35^+)	7119.4+x	(33^+)
1291.2# *3*	6427.5+z	(30^-)	5136.3+z	(28^-)	1624.8# *3*	18777.9	36^+	17153.1	34^+
1291.2# *3*	14288.5	30^+	12997.2	28^+	1640.2# *3*	12328.7+z	(38^-)	10688.5+z	(36^-)
1298.9# *3*	15563.8	32^+	14264.7	30^+	1676.1# *3*	11037.7+y	(39^-)	9361.6+y	(37^-)
1310.7# *3*	6449.0+y	(33^-)	5138.3+y	(31^-)	1721.0# *3*	20498.9	38^+	18777.9	36^+
1325# *1*	9492.9	21^+	8168.2	20^+	1729.4# *3*	19515.6	37^+	17786.2	35^+
1331.1# *3*	5649.0+x	(31^+)	4317.9+x	(29^+)	1777.6# *3*	10509.7+x	(37^+)	8732.1+x	(35^+)
1351# *1*	2802.2+y	(27^-)	1451.2+y		1806.7# *3*	22305.6	40^+	20498.9	38^+
1353# *1*	6449.0+y	(33^-)	5096.0+y		1809.7# *3*	14138.4+z	(40^-)	12328.7+z	(38^-)
1358.3# *3*	7785.8+z	(32^-)	6427.5+z	(30^-)	1835# *1*	9087.2	20^+	7251.9	18^+
1363.8# *3*	15652.3	32^+	14288.5	30^+	1855# *1*	20441.9	38^+	18586.9	36^+
1365.2# *3*	16273.9	33^+	14908.8	31^+	1875.8# *3*	12913.5+y	(41^-)	11037.7+y	(39^-)
1372# *1*	11990.2	27^-	10618.2	25^-	1888# *1*	13878.2		11990.2	27^-
1394.0# *3*	7843.0+y	(35^-)	6449.0+y	(33^-)	1920.8# *3*	12430.5+x	(39^+)	10509.7+x	(37^+)
1401.8# *3*	9187.7+z	(34^-)	7785.8+z	(32^-)	1942.5# *3*	24248.1	42^+	22305.6	40^+
1434.2# *3*	16998.1	34^+	15563.8	32^+	1979# *1*	13969.2		11990.2	27^-
1439# *1*	15408.2	31^-	13969.2		1994.8# *3*	16133.2+z	(42^-)	14138.4+z	(40^-)
1455# *1*	15333.2		13878.2		2008# *1*	21523.6	39^+	19515.6	37^+
1465# *1*	13455.2	29^-	11990.2	27^-	2071.0# *3*	14501.5+x	(41^+)	12430.5+x	(39^+)
1470.4# *3*	7119.4+x	(33^+)	5649.0+x	(31^+)	2105# *1*	26353.2	44^+	24248.1	42^+
1500.8# *3*	10688.5+z	(36^-)	9187.7+z	(34^-)	2105.5# *3*	15019.0+y	(43^-)	12913.5+y	(41^-)
1500.8# *3*	17153.1	34^+	15652.3	32^+	2114# *1*	22556.0	40^+	20441.9	38^+
1512.4# *3*	17786.2	35^+	16273.9	33^+	2185# *1*	18318.2+z	(44^-)	16133.2+z	(42^-)
1518.5# *3*	9361.6+y	(37^-)	7843.0+y	(35^-)	2293# *1*	28646.2	46^+	26353.2	44^+
1541# *1*	14996.2	31^-	13455.2	29^-	2327# *1*	17346.0+y	(45^-)	15019.0+y	(43^-)

† From 1994Pa22, unless otherwise noted.
‡ From DCO ratios in 1994Pa22 and the apparent band structures in 1994Pa22 and 2007Pa07.
# From 2007Pa07.
@ Placement of transition in the level scheme is uncertain.

^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) 1994Pa22,2007Pa07

Level Scheme

Intensities: Type not specified

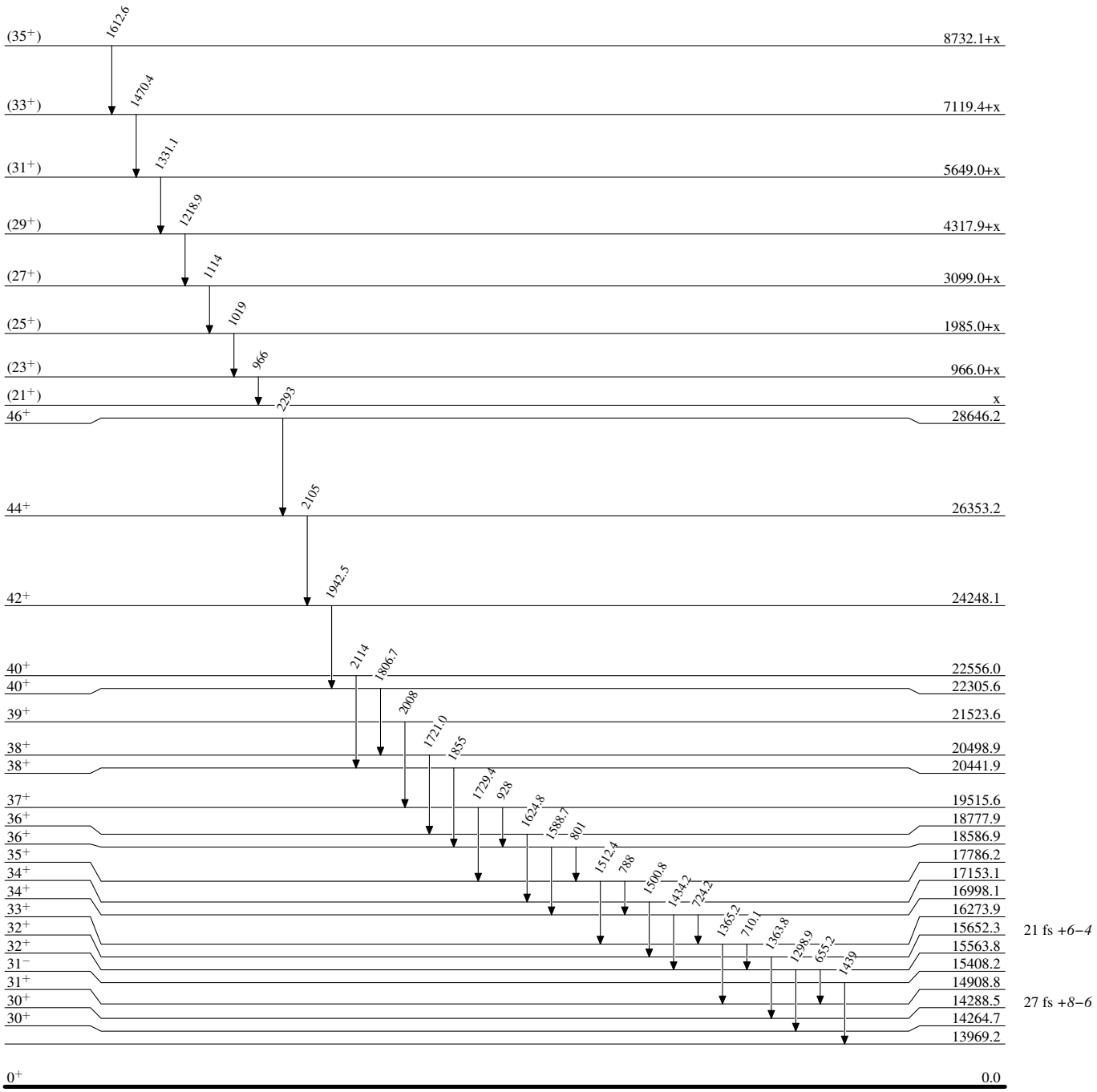


$^{112}_{52}Te_{60}$

^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) **1994Pa22,2007Pa07**

Level Scheme (continued)

Intensities: Type not specified



$^{112}_{52}Te_{60}$

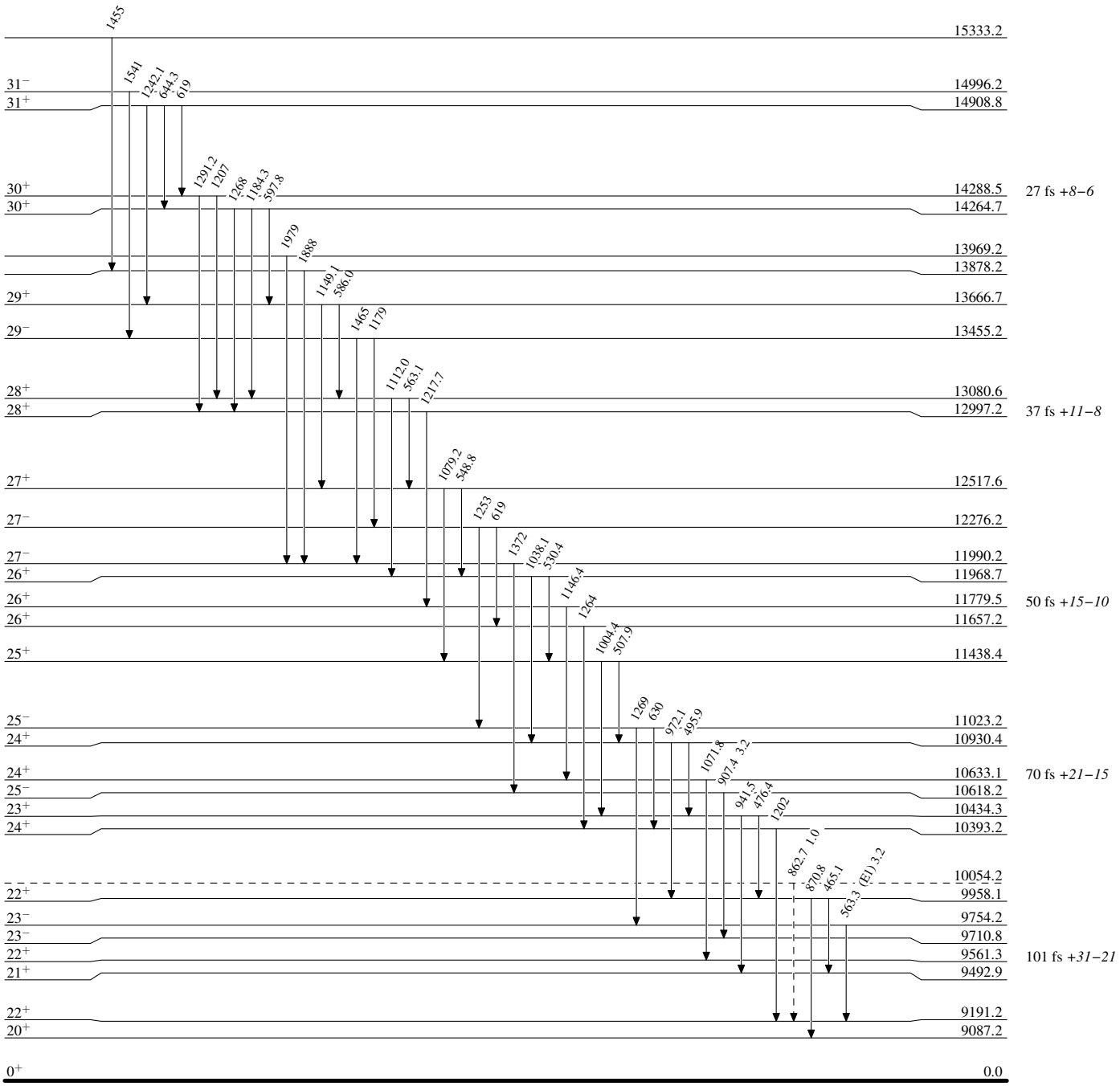
^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) 1994Pa22,2007Pa07

Level Scheme (continued)

Intensities: Type not specified

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)



$^{112}_{52}Te_{60}$

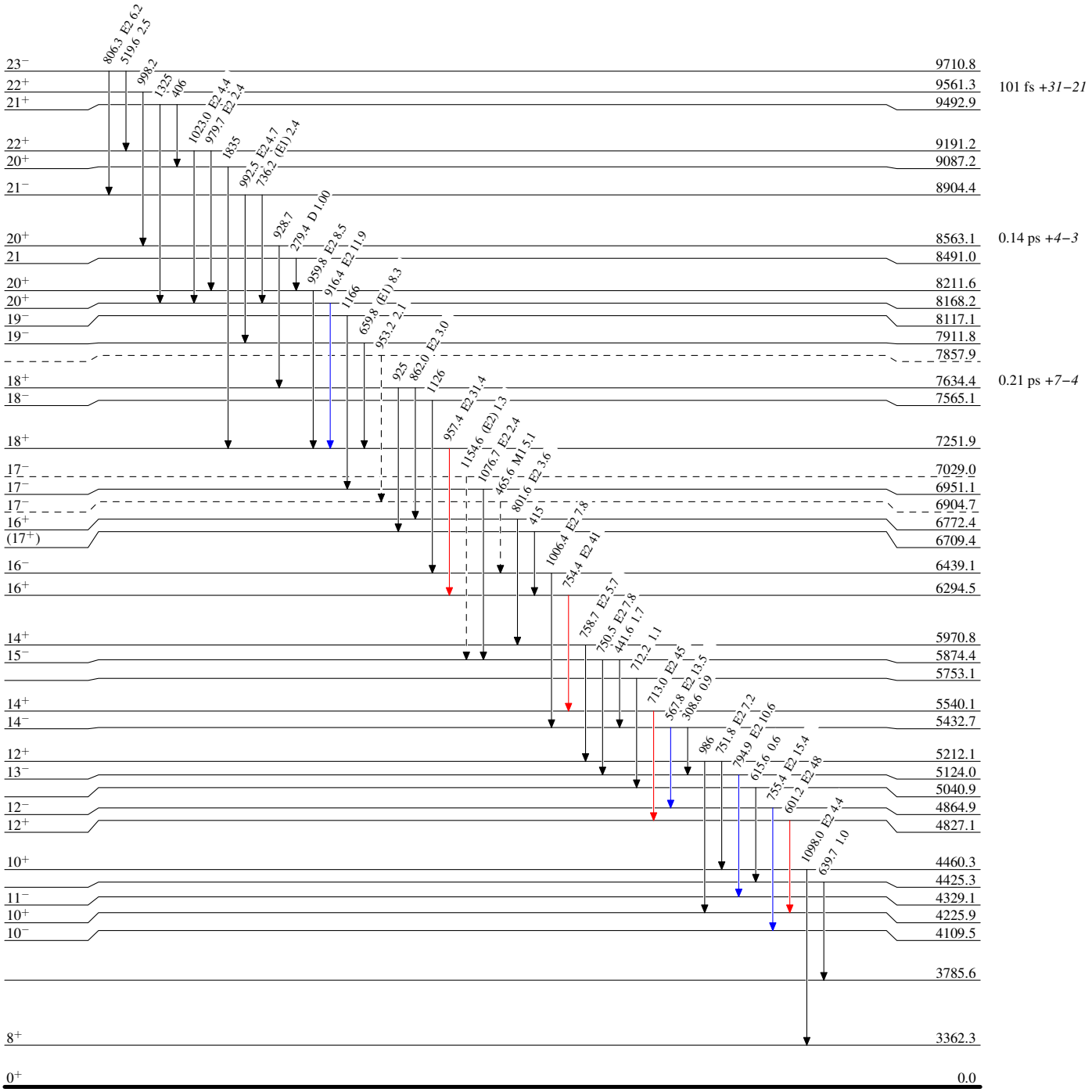
^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) **1994Pa22,2007Pa07**

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)

Level Scheme (continued)

Intensities: Type not specified

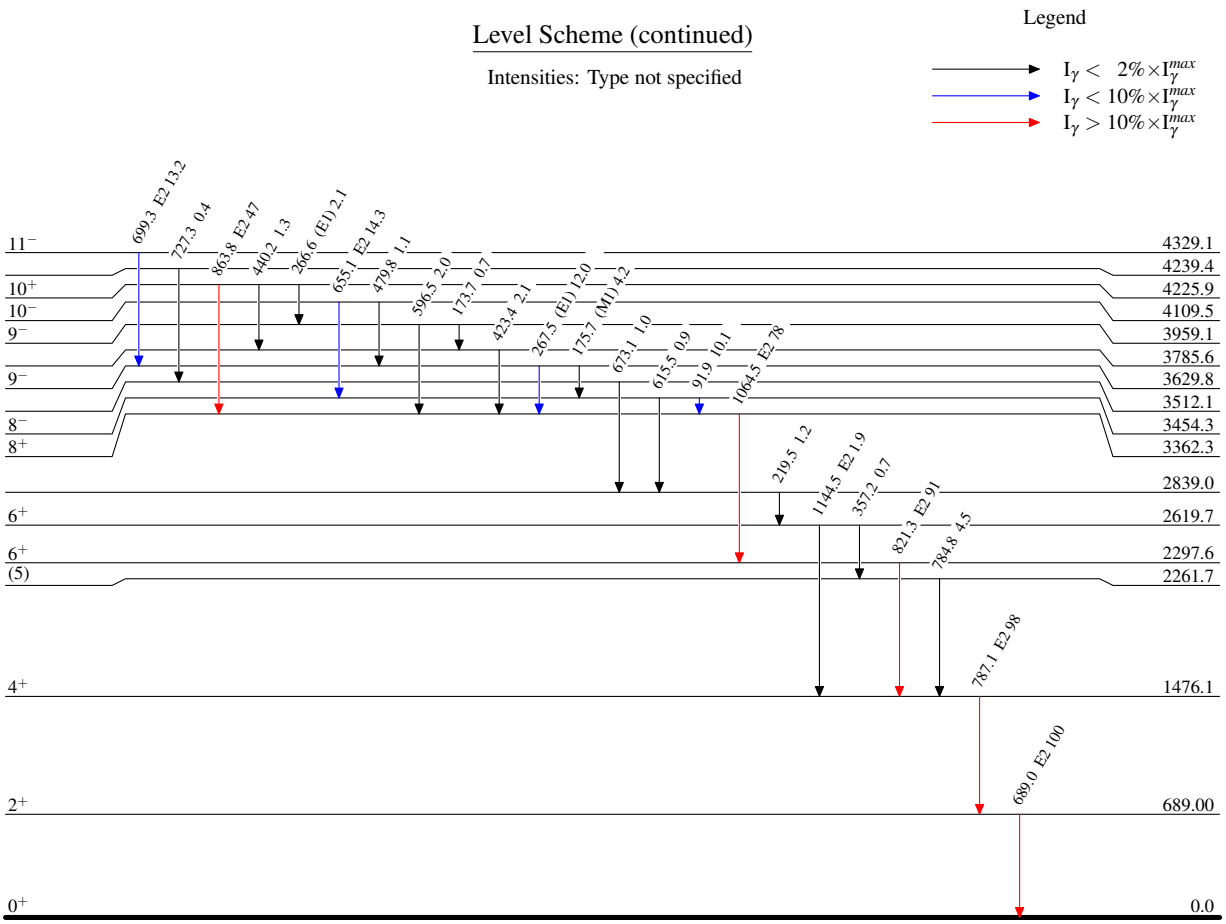


$^{112}_{52}Te_{60}$

^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) 1994Pa22,2007Pa07

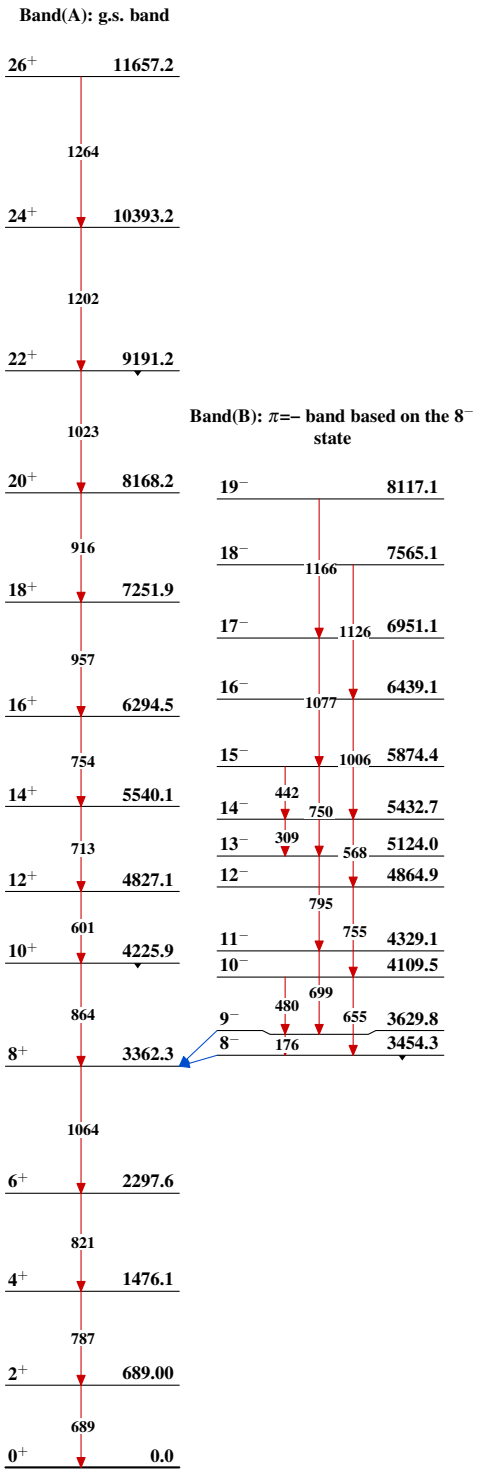
Level Scheme (continued)

Intensities: Type not specified



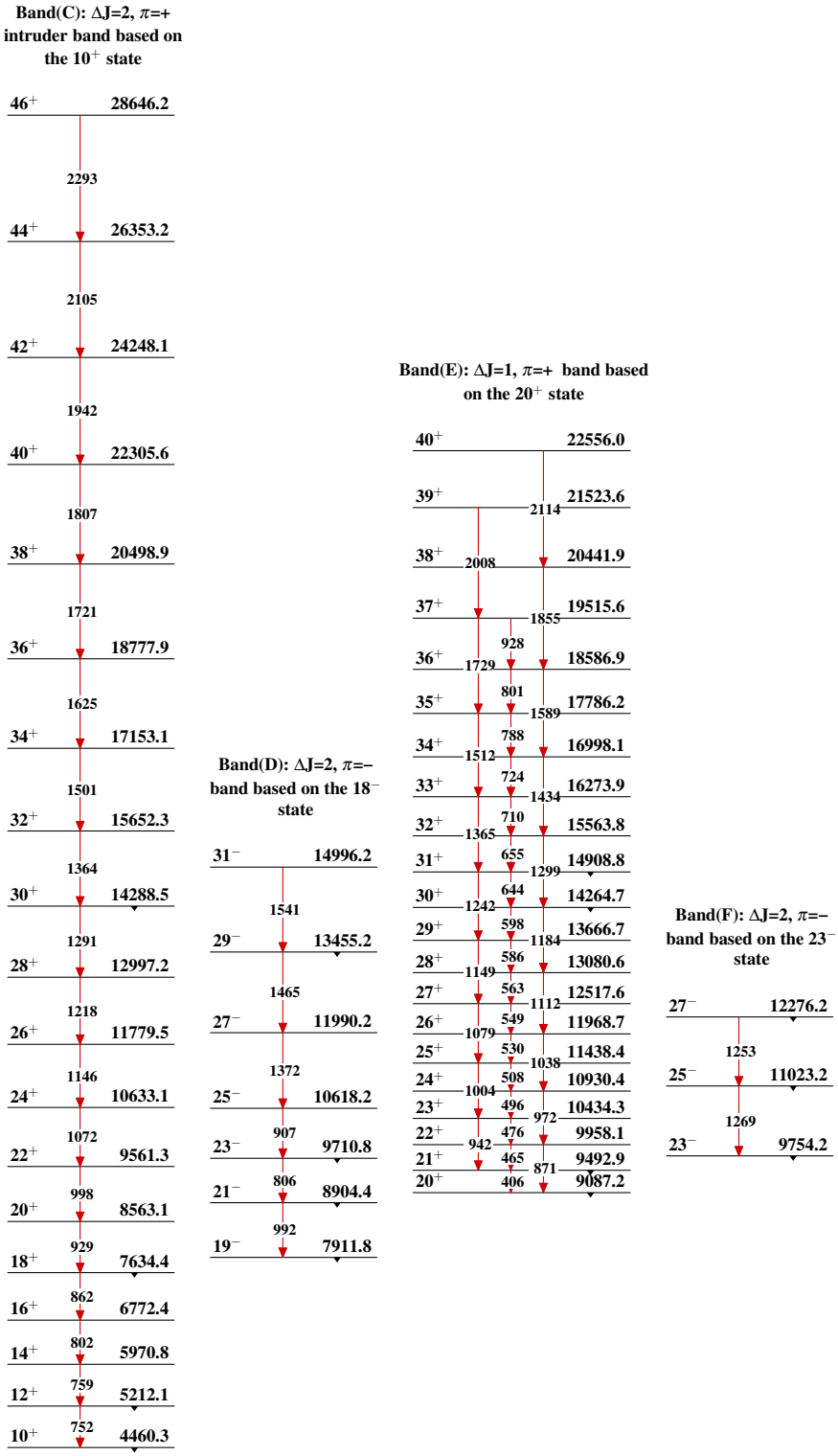
$^{112}_{52}Te_{60}$

^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) 1994Pa22,2007Pa07



$^{112}_{52}Te_{60}$

^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) 1994Pa22,2007Pa07 (continued)



^{58}Ni(^{58}Ni,4pγ),(^{60}Ni,α2pγ) 1994Pa22,2007Pa07 (continued)

Band(G): ΔJ=2, π=− band based on the (18⁻) state

(44⁻)		18318.2+z
	2185	
(42⁻)		16133.2+z
	1995	
(40⁻)		14138.4+z
	1810	
(38⁻)		12328.7+z
	1640	
(36⁻)		10688.5+z
	1501	
(34⁻)		9187.7+z
	1402	
(32⁻)		7785.8+z
	1358	
(30⁻)		6427.5+z
	1291	
(28⁻)		5136.3+z
	1206	
(26⁻)		3930.0+z
	1102	
(24⁻)		2828.0+z
	1021	
(22⁻)		1807.0+z
	940	
(20⁻)		867.0+z
	867	
(18⁻)		z

Band(g): ΔJ=2, π=− band based on the (21⁻) state

(45⁻)		17346.0+y
	2327	
(43⁻)		15019.0+y
	2106	
(41⁻)		12913.5+y
	1876	
(39⁻)		11037.7+y
	1676	
(37⁻)		9361.6+y
	1518	
(35⁻)		7843.0+y
	1394	
(33⁻)		6449.0+y
	1311	
(31⁻)		5138.3+y
	1212	
(29⁻)		3926.2+y
	1124	
(27⁻)		2802.2+y
	1009	
(25⁻)		1793.5+y
	934	
(23⁻)		860.0+y
	860	
(21⁻)		y

Band(H): ΔJ=2, π=+ band based on the (21⁺) state

(41⁺)		14501.5+x
	2071	
(39⁺)		12430.5+x
	1921	
(37⁺)		10509.7+x
	1778	
(35⁺)		8732.1+x
	1613	
(33⁺)		7119.4+x
	1470	
(31⁺)		5649.0+x
	1331	
(29⁺)		4317.9+x
	1219	
(27⁺)		3099.0+x
	1114	
(25⁺)		1985.0+x
	1019	
(23⁺)		966.0+x
	966	
(21⁺)		x

$^{112}_{52}Te_{60}$