(HI,xnγ) 1994Mu02,1993Wo04,1995Da30

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. K. Tuli, E. Browne	NDS 157, 260 (2019)	1-Mar-2019

1994Mu02: ^{58}Ni(^{28}Si,3pnγ) E=100, 102, 128 MeV. Measured Eγ, Iγ, γ(θ), particle-γ, γγ coin, DCO ratios.

1993Wo04: ^{58}Ni(^{28}Si,3pnγ) E=95 to 135 MeV. Measured Eγ, branching ratio particle-γ coin, DCO ratios, lifetimes by direct timing and DSAM. Includes also data from the reaction ^{56}Fe(^{29}Si,p2nγ), E= 95 MeV, measured γγ coin.

1995Pa23: ^{58}Ni(^{27}Al,2pn), E= 92 MeV. Also used ^{58}Ni(^{28}Si,3pn), E= 115 MeV in preliminary investigation. Measured γ, γγ, γ(θ), γ(t), DCO, $T_{1/2}$ using pulsed-beam for 1.0×10^{-9} s to 1.0×10^{-7} s, by RDM for 1.0×10^{-12} s to 1.0×10^{-9} s, and line-shape analysis for 1.0×10^{-14} s to 1.0×10^{-12} s, 5 Compton-suppressed HPGe and 8 scin.

1995Da30,1996Da20: ^{58}Ni(^{30}Si,αpnγ) E= 134 MeV. Measured Eγ, Iγ, γγ with Eurogam array (54 Ge detectors with BGO shields). Deduced SD band.

1996Jo05: ^{58}Ni(^{27}Al,2pn), E= 90 MeV. Measured γ(t), LEPS, HPGe, $T_{1/2}$ recoil-distance. Studied alternating pattern of B(M1) in yrast band (also in 1998Ka56).

1995Ga06: ^{58}Ni(^{27}Al,2pn), E= 90 MeV. Measured γ, γγ, γ(θ), γ(t). Their level scheme is in agreement with the one given here, configuration of π=+ levels up to 9^+ in terms of (π, g9/2)⊗(ν,g9/2) is discussed.

2003Le08: ^{58}Ni(^{28}Si,3pnγ) E= 130 MeV. Measured Eγ, Iγ, γγ with Gammasphere array (100 HPGe detectors with BGO shields) and Microball array (95-element CsI(Tl) detectors). Deduced SD band. Also reported in 2003ReZZ.

^{82}Y Levels

E(level)[†]	J^π[‡]	$T_{1/2}$[#]	Comments
0	1^+		
142.34 *7*	2^+		
250.19 *9*	2^+		
313.69 *8*	3^+		
336.99 *10*	3^+		
401.10 *10*	4^+	11[&] ns *3*	$T_{1/2}$: others: 11 ns *2* (1995Pa23), 20 ns *10* (1994Mu02).
402.63[e] *14*	4^-	268[&] ns *25*	$T_{1/2}$: others: 220 ns *50* (1994Mu02), 180 ns *90* (1995Ga06).
405.76[f] *24*	4^-	35.3[&] ns *21*	
473.83[f] *17*	(5^-)		
507.50[c] *13*	6^+	147[&] ns *7*	$T_{1/2}$: others: 157 ns *14* (1995Pa23), 137 ns *20* (1994Mu02), 140 ns *20* (1995Ga06).
511.82[d] *15*	(5^-)	1.42[@] ns *14*	
586.59[f] *16*	(6^-)		
594.71? *14*	(6^+)		
677.92[e] *15*	6^-	0.43[@] ns *3*	
718.84[b] *15*	7^+	23[@] ps *10*	
751.47[c] *15*	8^+	0.83[@] ns *4*	$T_{1/2}$: other: 3.67 ns *14* (1995Pa23). 1996Jo05 doubt this value of 1995Pa23.
818.20[g] *19*	(6^-)		
956.91[d] *16*	(7^-)	8[@] ps *4*	$T_{1/2}$: other: 0.43 ns *8* (1995Pa23).
1146.92[b] *16*	9^+	1.04[a] ps *7*	
1163.35[f] *20*	(7^-)		
1272.21[e] *16*	8^-	8[@] ps *4*	
1284.10? *18*	(8^+)		
1506.7[g] *4*	(8^-)		
1557.18? *25*	(9^+)		E(level): from 1993Wo04. Level not confirmed by 1994Mu02, 1995Pa23. Not adopted.
1589.71[c] *17*	10^+	0.97[a] ps *7*	
1687.72[d] *18*	(9^-)	1.5[a] ps *5*	
1960.03[b] *17*	11^+	0.42 ps *10*	$T_{1/2}$: other: 0.49 ps *4* (1995Pa23).
1963.7[f] *4*	(9^-)		
2061.50[e] *18*	10^-	0.65[a] ps *15*	

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(HI,xnγ) 1994Mu02,1993Wo04,1995Da30 (continued)

^{82}Y Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$#	Comments
2379.0[g] 6	(10⁻)		
2602.13[d] 20	(11⁻)	0.31 ps 5	$T_{1/2}$: other: 0.69 ps 14 (1995Pa23).
2651.19[c] 19	12⁺	0.28 ps 4	$T_{1/2}$: other: 0.49 ps 12 (1995Pa23).
2914.7[af] 11	(11⁻)		
2970.8[b] 3	13⁺	0.24 ps 3	$T_{1/2}$: other: 0.31 ps 8 (1995Pa23).
3026.0[e] 4	12⁻	0.49[a] ps 12	
3386.0[ag] 12	(12⁻)		
3674.94[d] 23	(13⁻)	0.166 ps 21	$T_{1/2}$: other: 0.35 ps 8 (1995Pa23).
3904.03[c] 22	14⁺	0.24[a] ps 6	
3934.7[af] 15	(13⁻)		
4142.6[b] 3	15⁺	0.132 ps 14	$T_{1/2}$: other: 0.14 ps 5 (1995Pa23).
4150.0[e] 4	14⁻	0.24[a] ps 6	
4413.0[ag] 16	(14⁻)		
4886.0[d] 4	(15⁻)	<0.26 ps	$T_{1/2}$: other: 0.21 ps 7 (1995Pa23).
5043.7?[af] 18	(15⁻)		
5250.0[c] 3	16⁺		
5414.4[e] 4	16⁻		
5456.2[b] 4	17⁺	0.083 ps 14	$T_{1/2}$: other: 0.09 ps 4 (1995Pa23).
6222.7[d] 5	(17⁻)		
6672.1[c] 5	18⁺		
6777.3[e] 5	(18⁻)		
6914.4[b] 5	19⁺	<0.21 ps	
7591.2?[d] 10	(19⁻)		
8187.6[e] 6	(20⁻)		
8194.2[c] 6	20⁺		
8515.7[b] 6	21⁺		
8602.2 12	(19⁺,20⁺)		E(level),Jπ: from 1995Pa23.
9679.9[e] 10	(22⁻)		
9861.0[c] 7	22⁺		
10267.1[b] 7	(23⁺)		
11712.8[c] 11	(24⁺)		
12080.1[b] 12	(25⁺)		
13785.5[c] 12	(26⁺)		
14032.3[b] 13	(27⁺)		
x[h]	J		Jπ: ≈(16) suggested by 2003Le08. Other: ≈(20) (1995Da30).
1454.0+x[h] 10	J+2		
3059.0+x[h] 15	J+4		
4833.0+x[h] 18	J+6		
6769.1+x[h] 20	J+8		
8869.1+x[h] 23	J+10		
11133.1+x[h] 25	J+12		
13560+x[h] 3	J+14		
16142+x[h] 3	J+16		
18897+x?[h] 4	J+18		

† From least-squares fit to Eγ.

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(HI,xnγ) 1994Mu02,1993Wo04,1995Da30 (continued)

^{82}Y Levels (continued)

‡ As given by the authors.
# From 1993Wo04 DSAM, unless indicated otherwise.
@ From 1996Jo05 recoil-distance.
& By direct timing (1993Wo04).
a From 1995Pa23.
b Band(A): (π,α)=(+,1). Configuration=((π $g_{9/2}$)(ν $g_{9/2}$)).
c Band(B): (π,α)=(+,0). Configuration=((π $g_{9/2}$)(ν $g_{9/2}$)).
d Band(C): (π,α)=(-,1). Main component has configuration= ((π $g_{9/2}$)(ν $f_{5/2}$)).
e Band(D): (π,α)=(-,0). Main component has configuration= ((π $g_{9/2}$)(ν $f_{5/2}$)).
f Band(E): π=−. From 1993Wo04, 1995Pa23, not In 1994Mu02.
g Band(F): π=−. From 1993Wo04, 1995Pa23, not In 1994Mu02.
h Band(G): SD band, (π,α)=(-,0) (1995Da30,2003Le08). Percent population of SD band=0.93 (2003Le08), 1.5 *5* (1995Da30). Q(intrinsic)=4.3 *+18−8* (2003Le08). $\beta_2 \approx 0.55$ (1995Da30). Configuration=$(\pi 5^1(1/2[431])^2)(\nu 5^2(5/2[422])^{-1})$ (1995Da30). Configuration=$\nu 5^1 \pi 5^0$ or $\nu 5^1 \pi 5^1$ (2003Le08).

(HI,xnγ) 1994Mu02,1993Wo04,1995Da30 (continued)

γ(^{82}Y)

Measured DCO ratios (1994Mu02) are given. They are also used in the J^π assignments for the Adopted Levels.

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[c]	α[h]	Comments
32.6[b] *3*	18[b] *5*	751.47	8^+	718.84	7^+			
63.7 *3*	58 *23*	313.69	3^+	250.19	2^+			
64.3 *3*	43 *23*	401.10	4^+	336.99	3^+			
65.7 *2*	53 *5*	402.63	4^-	336.99	3^+			
67.5[‡] *3*		473.83	(5^-)	405.76	4^-			
68.2[‡] *3*		405.76	4^-	336.99	3^+			
74.2[#] *2*	29.9[@] *12*	586.59	(6^-)	511.82	(5^-)			
87.5 *1*	138 *5*	401.10	4^+	313.69	3^+			
88.9 *2*	40 *3*	402.63	4^-	313.69	3^+			
91.1[‡] *1*		677.92	6^-	586.59	(6^-)			
106.4 *1*	120 *5*	507.50	6^+	401.10	4^+	E2[g]	0.849	α(K)=0.710 *11*; α(L)=0.1162 *17*; α(M)=0.0200 *3* α(N)=0.00249 *4*; α(O)=0.0001063 *16*
107.9 *2*	20 *3*	250.19	2^+	142.34	2^+			
109.2 *1*	50 *3*	511.82	(5^-)	402.63	4^-	(D)		R(DCO)=0.77 *16*
112.4[#] *2*	12.8[@] *9*	586.59	(6^-)	473.83	(5^-)			
140.0[#] *2*	16.9[@] *7*	818.20	(6^-)	677.92	6^-			
142.3 *1*	250	142.34	2^+	0	1^+	D[d]		
166.5 *2*	33.5[@] *10*	677.92	6^-	511.82	(5^-)	D		Mult.: from γ(θ) (1995Pa23).
170.7[#] *2*	27.1[@] *10*	677.92	6^-	507.50	6^+			
171.4 *1*	125 *5*	313.69	3^+	142.34	2^+	D[d]		
193.7[‡i] *1*		594.71?	(6^+)	401.10	4^+			
194.6 *1*	128 *5*	336.99	3^+	142.34	2^+	D[d]		
204.1[‡] *1*		677.92	6^-	473.83	(5^-)			
206[@] *1*	4.7[@] *9*	5456.2	17^+	5250.0	16^+			
211.3 *1*	67.6 *6*	718.84	7^+	507.50	6^+	D[d]		R(DCO)=0.50 *6*
237[@] *1*	4.1[@] *9*	4142.6	15^+	3904.03	14^+			
238.1[#] *2*	7.1[@] *7*	956.91	(7^-)	718.84	7^+			
243.9 *1*	100	751.47	8^+	507.50	6^+	Q		R(DCO)=0.95 *7*
250.2 *1*	68 *5*	250.19	2^+	0	1^+	D[d]		
258.7[‡] *1*	≈9[a]	401.10	4^+	142.34	2^+			
273.1[‡i] *2*		1557.18?	(9^+)	1284.10?	(8^+)			
276.1[b] *5*	15.2[@] *7*	677.92	6^-	401.10	4^+	(Q)		R(DCO)=0.88 *20*
278.2[b] *6*	14.5[@] *9*	956.91	(7^-)	677.92	6^-	(D)		R(DCO)=0.68 *22*
306.6[#] *2*	10.9[@] *7*	818.20	(6^-)	511.82	(5^-)			

From ENSDF

$^{82}_{39}Y_{43}$-4

(HI,xnγ) 1994Mu02,1993Wo04,1995Da30 (continued)

γ(^{82}Y) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[c]	α[h]	Comments
313.7 *1*	108 *8*	313.69	3^+	0	1^+	Q[e]		
315.3 *2*	7.7[@] *7*	1272.21	8^-	956.91	(7^-)			
320.3[b] *4*	16[b] *3*	2970.8	13^+	2651.19	12^+	M1[f]	0.00848	R(DCO)=0.65 *11* α(K)=0.00748 *11*; α(L)=0.000835 *12*; α(M)=0.0001428 *21* α(N)=1.92×10^{-5} *3*; α(O)=1.334×10^{-6} *20*
337.1 *2*	63 *8*	336.99	3^+	0	1^+	Q[e]		
344.5[#] *3*	21.4[@] *9*	818.20	(6^-)	473.83	(5^-)			
345[@] *1*	3.4[@@] *6*	1163.35	(7^-)	818.20	(6^-)			
370.2 *1*	51.0 *6*	1960.03	11^+	1589.71	10^+	D		R(DCO)=0.56 *6*
370.3[#] *2*	16.7[@] *9*	956.91	(7^-)	586.59	(6^-)			
374[@] *1*	3.2[@] *6*	2061.50	10^-	1687.72	(9^-)			
395.5 *1*	63.8 *7*	1146.92	9^+	751.47	8^+	D		R(DCO)=0.43 *4*
415[@] *1*	3.8[@] *6*	1687.72	(9^-)	1272.21	8^-			
423[@]	[@]	3026.0	12^-	2602.13	(11^-)			
428.0[#] *2*	2.1[@] *3*	1146.92	9^+	718.84	7^+			
442.6[b] *2*	11[b] *2*	1589.71	10^+	1146.92	9^+	D		R(DCO)=0.38 *10*
445.1[b] *3*	52.8[@] *16*	956.91	(7^-)	511.82	(5^-)	Q		R(DCO)=1.06 *16*
449.6 *3*	15.0[@] *9*	956.91	(7^-)	507.50	6^+			
521[@] *1*	1.5[@] *4*	1272.21	8^-	751.47	8^+			
532.3[‡] *2*		1284.10?	(8^+)	751.47	8^+			
541[@] *1*	≤0.64[@]	2602.13	(11^-)	2061.50	10^-			
553[@] *1*	2.1[@] *6*	1272.21	8^-	718.84	7^+			
565.2[‡] *2*		1284.10?	(8^+)	718.84	7^+			
576.8[#] *2*	10.5[@] *5*	1163.35	(7^-)	586.59	(6^-)			
594.3 *1*	28.8[@] *3*	1272.21	8^-	677.92	6^-	Q		R(DCO)=1.01 *13* I_γ: 37.9 (1994Mu02).
651.5[#] *2*	10.7[@] *5*	1163.35	(7^-)	511.82	(5^-)			
688.5[#] *3*	9.6[@] *9*	1506.7	(8^-)	818.20	(6^-)			
690.8[‡] *4*		1284.10?	(8^+)	594.71?	(6^+)			
691.1[#] *9*	5.5[@] *11*	2651.19	12^+	1960.03	11^+	D		
730.8 *1*	50[@] *3*	1687.72	(9^-)	956.91	(7^-)	Q		R(DCO)=0.96 *14* I_γ: 30.6 *7* (1994Mu02).
776.7[‡] *3*		1284.10?	(8^+)	507.50	6^+			
789.3 *1*	24.4[@] *10*	2061.50	10^-	1272.21	8^-	Q		R(DCO)=1.02 *13* I_γ: 40.6 *7* (1994Mu02).
800.3[#] *3*	25.6[@] *10*	1963.7	(9^-)	1163.35	(7^-)			
813.2 *1*	52.5 *8*	1960.03	11^+	1146.92	9^+	(E2)[f]	1.03×10^{-3}	R(DCO)=0.88 *15*

From ENSDF

$^{82}_{39}Y_{43}$-5

(HI,xnγ) 1994Mu02,1993Wo04,1995Da30 (continued)

γ(^{82}Y) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[c]	α[h]	Comments
								α(K)=0.000906 *13*; α(L)=0.0001008 *15*; α(M)=1.720×10^{-5} *24* α(N)=2.30×10^{-6} *4*; α(O)=1.573×10^{-7} *22*
838.2[i] *5*		1557.18?	(9$^+$)	718.84	7$^+$			
838.2 *1*	98.7 *11*	1589.71	10$^+$	751.47	8$^+$	Q		R(DCO)=1.08 *14*
872.3[#] *4*	7.3[@] *7*	2379.0	(10$^-$)	1506.7	(8$^-$)			
914.4 *1*	35.2[@] *24*	2602.13	(11$^-$)	1687.72	(9$^-$)	E2[f]	7.70×10^{-4}	R(DCO)=1.13 *18* α(K)=0.000680 *10*; α(L)=7.52×10^{-5} *11*; α(M)=1.283×10^{-5} *18* α(N)=1.721×10^{-6} *24*; α(O)=1.183×10^{-7} *17* I_γ: 42.3 *8* (1994Mu02).
914.5[‡i] *3*		2061.50	10$^-$	1146.92	9$^+$			
934[@] *1*	2.1[@] *6*	3904.03	14$^+$	2970.8	13$^+$			
936.2[#] *3*	6.4[@] *6*	1687.72	(9$^-$)	751.47	8$^+$			
951[@] *1*	24[@] *2*	2914.7	(11$^-$)	1963.7	(9$^-$)			
964.6[b] *3*	28[b] *3*	3026.0	12$^-$	2061.50	10$^-$	Q		R(DCO)=0.91 *18*
1007[@] *1*	3.8[@] *19*	3386.0	(12$^-$)	2379.0	(10$^-$)			
1010.5[b] *3*	30[b] *4*	2970.8	13$^+$	1960.03	11$^+$	E2[f]	6.09×10^{-4}	R(DCO)=0.97 *12* α(K)=0.000538 *8*; α(L)=5.92×10^{-5} *9*; α(M)=1.010×10^{-5} *15* α(N)=1.356×10^{-6} *19*; α(O)=9.37×10^{-8} *14*
1020 *1*	13.9 *15*	3934.7	(13$^-$)	2914.7	(11$^-$)			
1027[@] *1*	<1.5[@]	4413.0	(14$^-$)	3386.0	(12$^-$)			
1061.5 *1*	41.5 *9*	2651.19	12$^+$	1589.71	10$^+$	E2[f]	5.44×10^{-4}	R(DCO)=1.11 *18* α(K)=0.000481 *7*; α(L)=5.28×10^{-5} *8*; α(M)=9.01×10^{-6} *13* α(N)=1.210×10^{-6} *17*; α(O)=8.38×10^{-8} *12*
1072.8 *1*	25.5 *7*	3674.94	(13$^-$)	2602.13	(11$^-$)	(E2)[f]	5.31×10^{-4}	R(DCO)=0.82 *17* α(K)=0.000470 *7*; α(L)=5.15×10^{-5} *8*; α(M)=8.79×10^{-6} *13* α(N)=1.181×10^{-6} *17*; α(O)=8.19×10^{-8} *12*
1107[@] *1*	1.1[@] *4*	5250.0	16$^+$	4142.6	15$^+$			
1109[@i] *1*	[@]	5043.7?	(15$^-$)	3934.7	(13$^-$)			
1124.0 *1*	20.5 *7*	4150.0	14$^-$	3026.0	12$^-$	Q		R(DCO)=1.11 *24*
1171.8 *1*	47[@] *4*	4142.6	15$^+$	2970.8	13$^+$	E2[f]	4.42×10^{-4}	R(DCO)=1.07 *15* α(K)=0.000387 *6*; α(L)=4.23×10^{-5} *6*; α(M)=7.21×10^{-6} *10* α(N)=9.69×10^{-7} *14*; α(O)=6.74×10^{-8} *10*; α(IPF)=4.61×10^{-6} *7* I_γ: 58.9 *10* (1994Mu02).
1211.0 *3*	24[b] *3*	4886.0	(15$^-$)	3674.94	(13$^-$)	(E2)[f]	4.17×10^{-4}	R(DCO)=1.17 *52* α(K)=0.000360 *5*; α(L)=3.93×10^{-5} *6*; α(M)=6.71×10^{-6} *10* α(N)=9.02×10^{-7} *13*; α(O)=6.28×10^{-8} *9*; α(IPF)=9.60×10^{-6} *15*
1252.8 *1*	17.9[@] *7*	3904.03	14$^+$	2651.19	12$^+$	Q		R(DCO)=1.08 *26* I_γ: 31.0 *9* (1994Mu02).

From ENSDF

$^{82}_{39}Y_{43}$-6

(HI,xnγ) 1994Mu02,1993Wo04,1995Da30 (continued)

γ(^{82}Y) (continued)

E_γ[†]	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[c]	α[h]	Comments
1264.4 *2*	17[b] *3*	5414.4	16⁻	4150.0	14⁻	Q		R(DCO)=1.01 *36*
1313.6[b] *3*	23.9[@] *22*	5456.2	17⁺	4142.6	15⁺	E2[f]	3.73×10^{-4}	R(DCO)=1.10 *22* α(K)=0.000303 *5*; α(L)=3.30×10^{-5} *5*; α(M)=5.63×10^{-6} *8* α(N)=7.57×10^{-7} *11*; α(O)=5.29×10^{-8} *8*; α(IPF)=3.02×10^{-5} *5* I_γ: 43.1 *10* (1994Mu02).
1336.7 *3*	12.1 *25*	6222.7	(17⁻)	4886.0	(15⁻)	(Q)		R(DCO)=1.25 *80*
1346.0 *2*	13.7[@] *15*	5250.0	16⁺	3904.03	14⁺	Q		R(DCO)=1.04 *29* I_γ: 15.0 *7* (1994Mu02).
1362.8 *2*	9[b] *2*	6777.3	(18⁻)	5414.4	16⁻			
1368.5[&bi] *8*	12[b] *4*	7591.2?	(19⁻)	6222.7	(17⁻)			
1410.3 *4*	5[b] *2*	8187.6	(20⁻)	6777.3	(18⁻)			
1422.1 *4*	14.0 *8*	6672.1	18⁺	5250.0	16⁺	(Q)		R(DCO)=0.91 *32*
1454 *1*	0.40 *7*	1454.0+x	J+2	x	J			
1458.2 *3*	32[b] *2*	6914.4	19⁺	5456.2	17⁺	(E2)[f]	3.46×10^{-4}	R(DCO)=1.01 *33* α(K)=0.000245 *4*; α(L)=2.65×10^{-5} *4*; α(M)=4.53×10^{-6} *7* α(N)=6.10×10^{-7} *9*; α(O)=4.27×10^{-8} *6*; α(IPF)=6.94×10^{-5} *10*
1492.3[b] *8*	3.9 *9*	9679.9	(22⁻)	8187.6	(20⁻)			
1522.0 *3*	9.1 *7*	8194.2	20⁺	6672.1	18⁺	(Q)		R(DCO)=0.92 *34*
1601.3 *2*	16.5 *9*	8515.7	21⁺	6914.4	19⁺	(Q)		R(DCO)=0.75 *25*
1605 *1*	0.65 *8*	3059.0+x	J+4	1454.0+x	J+2			
1666.8 *4*	7.0 *7*	9861.0	22⁺	8194.2	20⁺	(Q)		R(DCO)=1.15 *44*
1751.4 *4*	12.2 *8*	10267.1	(23⁺)	8515.7	21⁺			
1774 *1*	1.0 *1*	4833.0+x	J+6	3059.0+x	J+4			
1813[@i] *1*	[@]	12080.1	(25⁺)	10267.1	(23⁺)			
1851.8 *8*	5.7 *8*	11712.8	(24⁺)	9861.0	22⁺			
1930[@] *1*	[@]	8602.2	(19⁺,20⁺)	6672.1	18⁺			Mult.: not E1 from $T_{1/2}$.
1936 *1*	1.0 *1*	6769.1+x	J+8	4833.0+x	J+6			
1952.1[i] *4*	5.8 *6*	14032.3	(27⁺)	12080.1	(25⁺)			E_γ: revised placement suggested by 1995Pa23.
2072.7[i] *4*	3.6[b] *13*	13785.5	(26⁺)	11712.8	(24⁺)			
2100 *1*	1.0 *1*	8869.1+x	J+10	6769.1+x	J+8			
[x]2196.8 *8*	100.0							
2264 *1*	1.0 *1*	11133.1+x	J+12	8869.1+x	J+10			
2427 *1*	0.65 *8*	13560+x	J+14	11133.1+x	J+12			E_γ: 2421 (1995Da30).
2582 *1*	0.35 *5*	16142+x	J+16	13560+x	J+14			
2755[i] *2*	0.13 *5*	18897+x?	J+18	16142+x	J+16			E_γ: from 1995Da30 only; not reported by 2003Le08.

[†] SD band transition energies are from 2003Le08 unless otherwise stated. SD band intensities are from 1995Da30. Others are from 1994Mu02, unless noted otherwise. Iγ(244 keV)=100.

From ENSDF

$^{82}_{39}Y_{43}$-7

(HI,xnγ) 1994Mu02,1993Wo04,1995Da30 (continued)

$\gamma(^{82}Y)$ (continued)

‡ From 1993Wo04, not reported in 1994Mu02 or 1995Pa23.
# From 1993Wo04, also observed in 1995Pa23.
@ From 1995Pa23. Assumed ΔE=1.
& From 1994Mu02, not reported in 1993Wo04 or 1995Pa23.
a Iγ estimated by evaluators from branching ratios given in 1993Wo04. See the adopted gammas data set for branching ratios not given here.
b From spectra gated by coincident γ rays (1994Mu02).
c From DCO ratios, except as noted otherwise.
d ΔJ=1 from γ(θ) (1994Mu02).
e ΔJ=2 (or ΔJ=0) from γ(θ) (1994Mu02).
f From DCO ratios and RUL.
g From γ(θ) and RUL.
h Additional information 1.
i Placement of transition in the level scheme is uncertain.
x γ ray not placed in level scheme.

From ENSDF

$^{82}_{39}Y_{43}$-8

(HI,xnγ) 1994Mu02,1993Wo04,1995Da30

Level Scheme

Intensities: Relative I_γ

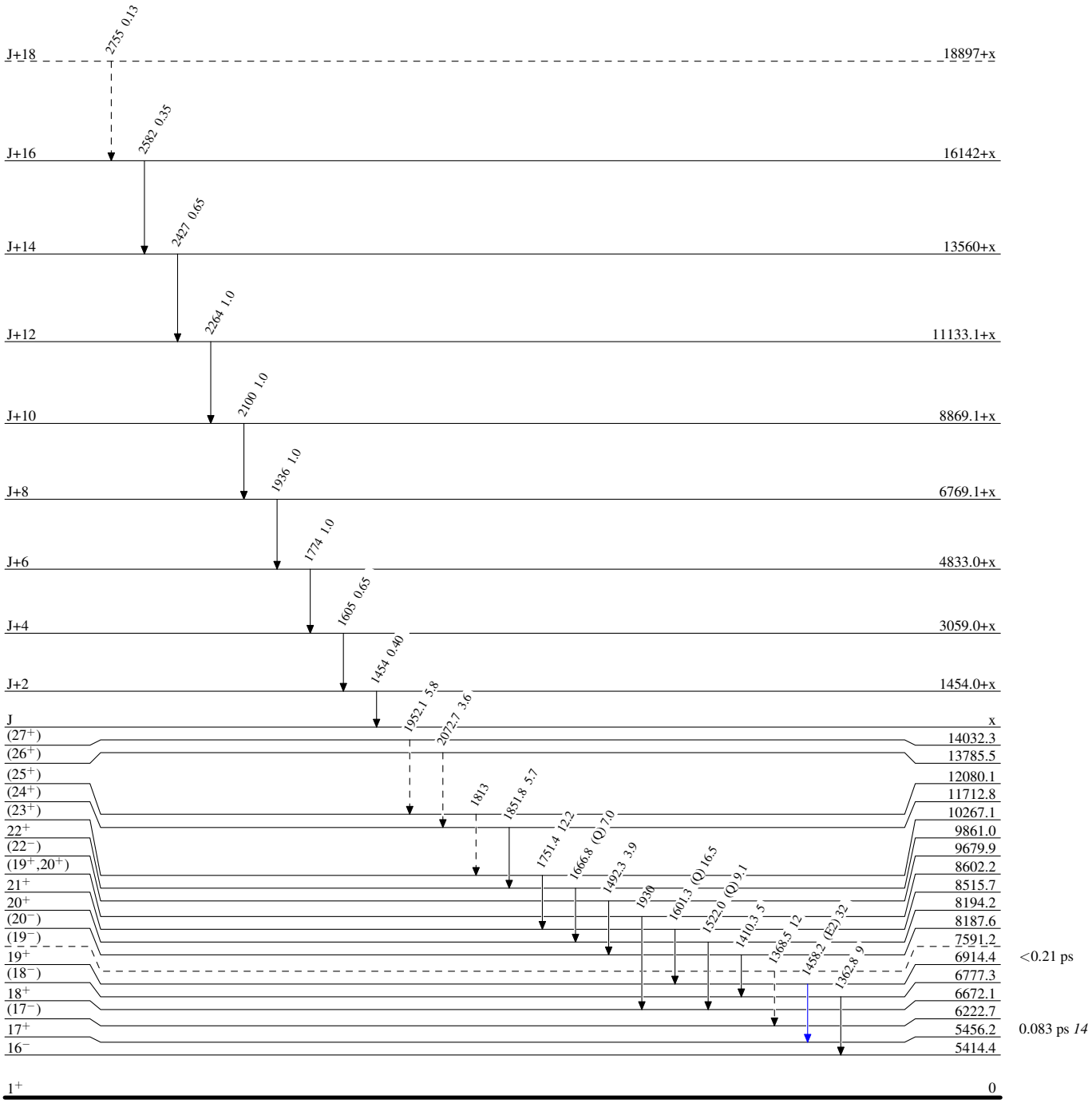
Legend

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

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

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

γ Decay (Uncertain)



$^{82}_{39}Y_{43}$

(HI,xnγ) 1994Mu02,1993Wo04,1995Da30

Level Scheme (continued)

Intensities: Relative I_γ

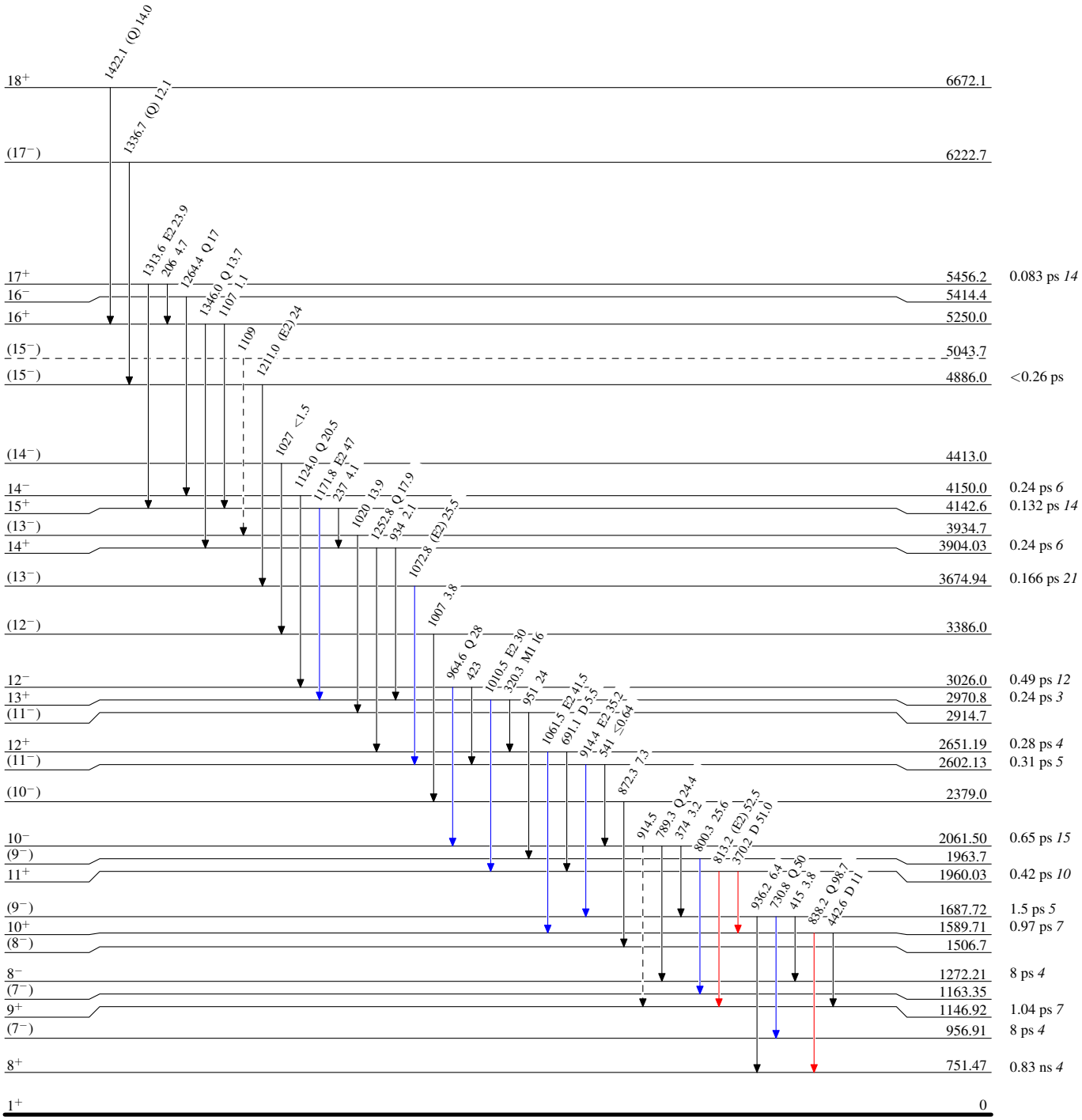
Legend

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

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

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

γ Decay (Uncertain)



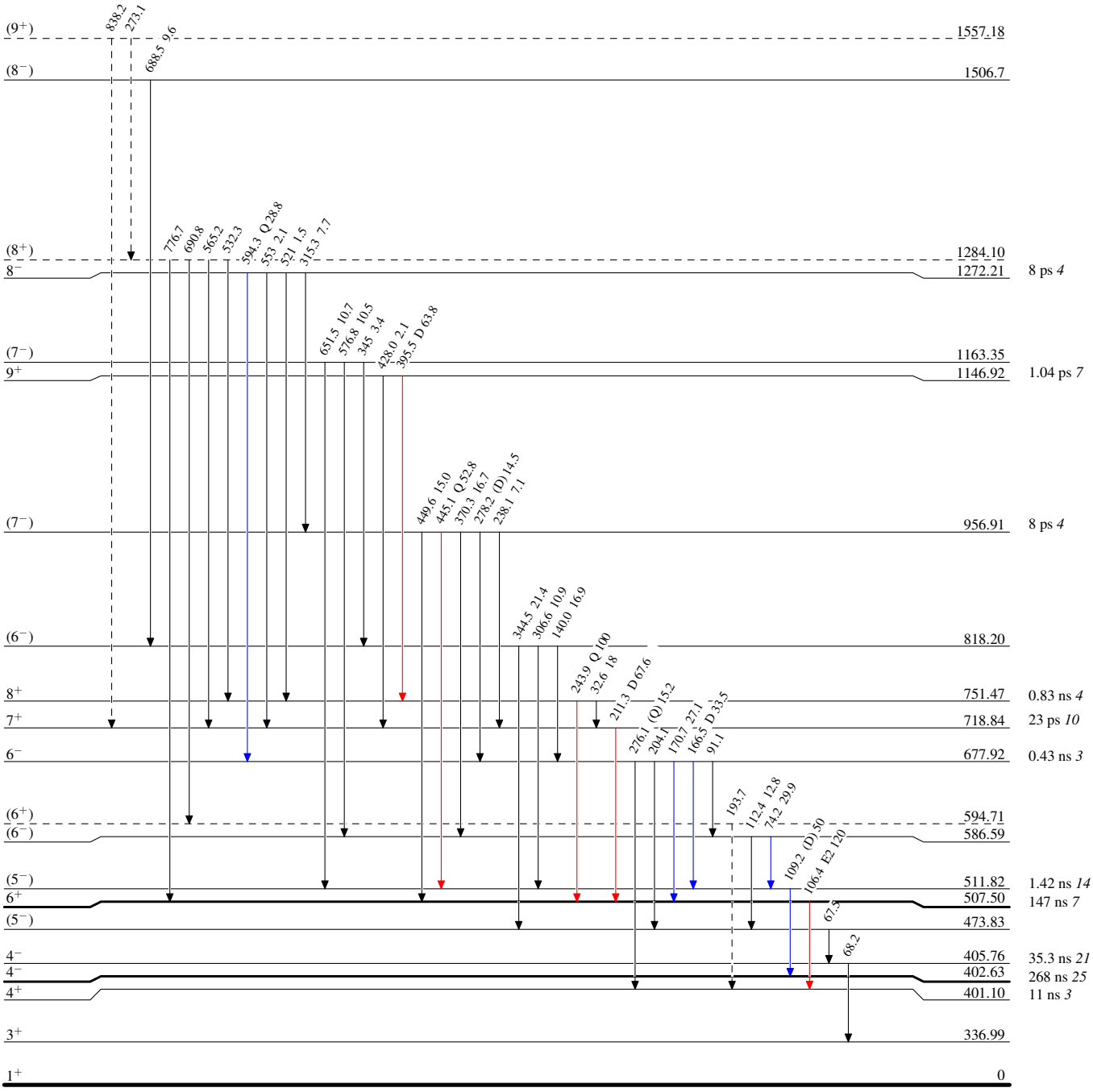
$^{82}_{39}Y_{43}$

(HI,xnγ) 1994Mu02,1993Wo04,1995Da30

Level Scheme (continued)

Intensities: Relative I_γ

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



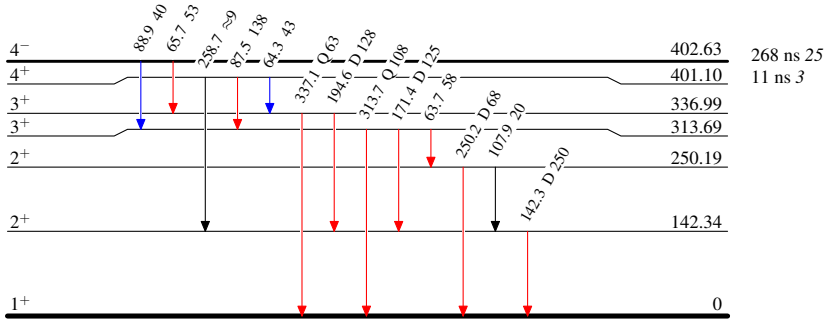
$^{82}_{39}Y_{43}$

(HI,xnγ) 1994Mu02,1993Wo04,1995Da30

Level Scheme (continued)

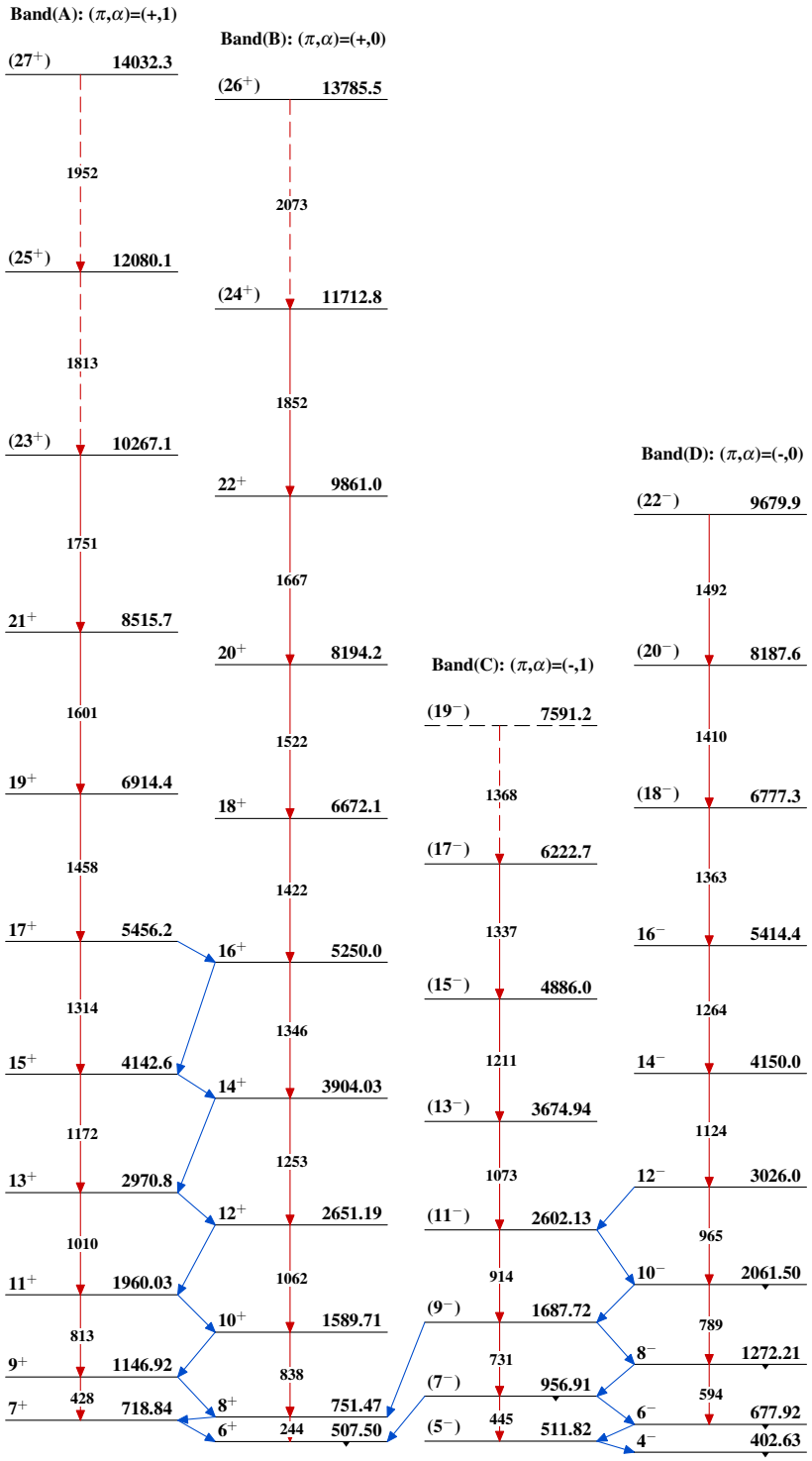
Intensities: Relative I_γ

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



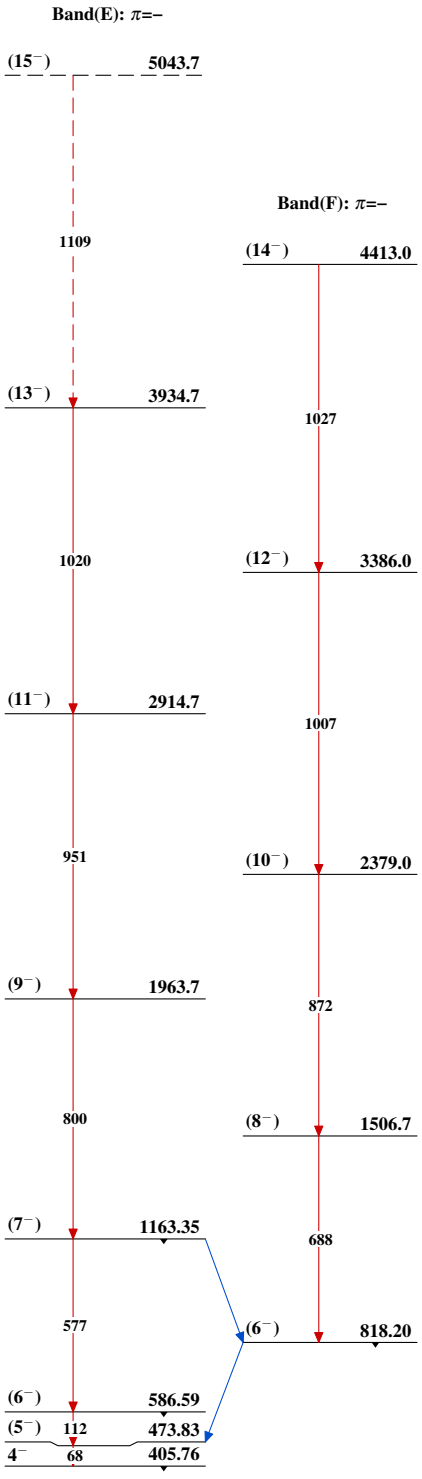
$^{82}_{39}Y_{43}$

(HI,xnγ) 1994Mu02,1993Wo04,1995Da30



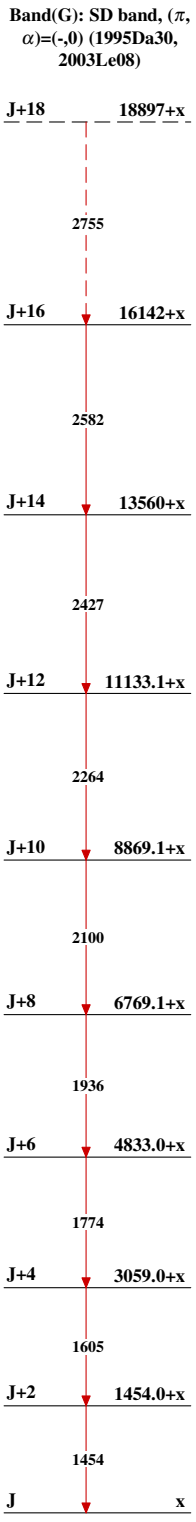
$^{82}_{39}Y_{43}$

(HI,xnγ) 1994Mu02,1993Wo04,1995Da30 (continued)



$^{82}_{39}Y_{43}$

(HI,xnγ) 1994Mu02,1993Wo04,1995Da30 (continued)



$^{82}_{39}Y_{43}$