(HI,xnγ) 1984To10

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 93, 33 (2001)	11-May-2001

See also ^{100}Mo(^{34}S,4nγ):SD (1998Se10,1997Wi02,1997Pa42) for SD band measurements.

1984To10: ^{116}Sn(^{18}O,4nγ), ^{117}Sn(^{16}O,3nγ), ^{118}Sn(^{16}O,4nγ) E=73-85 MeV. Measured Eγ, Iγ, γγ, γ(θ), γγ(θ), γγ(t), lifetimes by Doppler-shift attenuation method, recoils.

1984Tw01 (also 1982No02,1983No07,1983No09): ^{100}Mo(^{34}S,4nγ) E=150 MeV. Measured Eγ, γγ. Deduced higher members of g.s. and negative parity bands and other features of the yrast band.

2000PaZZ: ^{100}Mo(^{34}S,4nγ) E=155 MeV. Measured Eγ, Iγ, γγ (triples and quadruples), γγ(θ)(DCO), γ(lin pol) using EUROGAM 2 array. Preliminary report; full details are not yet available.

Additional information 1.

Earlier γ-ray data:

1974De12: ^{118}Sn(^{16}O,4nγ) E=68-76 MeV. Measured Eγ, γ(θ), γγ, lifetimes by recoil-distance Doppler shift method. Eight γ rays reported in the g.s. band.

1970Sm05, 1973Wy01 (also 1971WyZW): ^{130}Ba(α,4nγ) E=62-64 MeV. Measured Eγ, Iγ, ce. Four γ rays reported in the g.s. band.

1968Wa14: ^{118}Sn(^{16}O,4nγ) E=80 MeV, ^{114}Cd(^{20}Ne,4nγ) E=85 MeV. Measured Eγ, Iγ, γ(θ). Four γ rays reported in g.s. band.

Lifetime measurements:

1999Kl11: ^{110}Pd(^{28}Si,a4ng) E=125 MeV. Measured lifetimes of 2^+ and and 4^+ members of the g.s. band by recoil-distance Doppler-shift method.

1999Io02: ^{116}Sn(^{16}O,2nγ), ^{117}Sn(^{16}O,3nγ) and ^{118}Sn(^{16}O,4nγ) E=70 MeV. Measured quadrupole moment and lifetime of 7^- isomer at 2454 by TDPAD method.

1992De28: ^{98}Mo(^{36}S,4nγ) E=150 MeV. Measured lifetimes by recoil- distance Doppler shift method.

1990Ti08: ^{98}Mo(^{36}S,4nγ) E=143-150 MeV. Measured lifetimes by line-shape analysis.

1983No09: ^{100}Mo(^{34}S,4nγ) E=150 MeV. Measured lifetimes by DSA.

1977Hu10: ^{118}Sn(^{16}O,4nγ) E=76 MeV. Measured lifetimes by recoil-distance Doppler shift method.

1975Wa14 (also 1974WaZS): ^{110}Pd(^{24}Mg,4nγ) E=103 MeV, ^{115}In(^{19}F,4nγ) E=86 MeV. Measured lifetimes by recoil-distance Doppler shift method.

1975Bu08: ^{118}Sn(^{16}O,4nγ) E=82 MeV. Measured lifetime by recoil-distance Doppler shift method.

Others:

1996Sa03: ^{100}Mo(^{34}S,4nγ) E=140 MeV. Measured γγ and γ ce coin to estimate E0 components in ΔJ=0, Δπ=no transitions.

1988Ja05: ^{58}Ni(^{78}Se,X) E=300 MeV. Measured γ(recoil) coin, deduced evidence for ^{130}Ce.

Energy-energy correlation measurements: 1987Le01, 1985Lo06, 1985Je03, 1984Tw01, 1984Hi02, 1981Bi02.

The level scheme is mainly from 1984To10.

^{130}Ce Levels

Quasiparticle nomenclature:
A: $\pi h_{11/2}3/2[541]$, $\alpha=-1/2$.
B: $\pi h_{11/2}3/2[541]$, $\alpha=+1/2$.
C: $\pi h_{11/2}1/2[550]$, $\alpha=-1/2$.
D: $\pi h_{11/2}1/2[550]$, $\alpha=+1/2$.
E: $\pi d_{3/2}1/2[420]$, $\alpha=+1/2$.
F: $\pi d_{3/2}1/2[420]$, $\alpha=-1/2$.
a: $\nu h_{11/2}7/2[523]$, $\alpha=-1/2$.
b: $\nu h_{11/2}7/2[523]$, $\alpha=+1/2$.
e: $\nu g_{7/2}7/2[404]$, $\alpha=+1/2$.
f: $\nu g_{7/2}7/2[404]$, $\alpha=-1/2$.

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(HI,xnγ) 1984To10 (continued)

^{130}Ce Levels (continued)

E(level)	Jπ†	T1/2	Comments
0.0‡	0+		
253.98‡ *19*	2+	143 ps *6*	T1/2: weighted average of 125 ps *10* (1984To10), 145 ps *10* (1977Hu10), 146 ps *6* (1975Bu08), 156 ps *13* (1974De12).
710.4‡ *3*	4+	4.3 ps *+5−3*	T1/2: from RDDS (1992De28). Others (RDDS): 5.1 ps *6* (1984To10), 5.0 ps *4* (1977Hu10), 5.4 ps *16* (1974De12).
834.6# *3*	2+		
1322.6# *4*	4+		
1323.9‡ *3*	6+	0.87 ps *7*	T1/2: from RDDS (1992De28). Others: 1.80 ps *14* (1984To10), 1.9 ps *6* (1977Hu10), 1.7 ps *8* (1974De12).
1897.4# *4*	6+		
1954.6& *4*	5−		
2052.8‡ *4*	8+	0.24 ps *7*	T1/2: from RDDS (1992De28). Others (RDDS):<0.6 ps (1984To10),≤0.7 ps (1977Hu10,1974De12,1975Wa14).
2313.0& *4*	7−	23 ps *3*	T1/2: from RDDS (1984To10).
2333.1 *5*			
2380.8@ *4*	6−		
2453.4a *4*	7−	100 ns *8*	Q=1.77 *21* (1999Io02) T1/2: from γ(t). Average of 92 ns *3* (1999Io02) and 109 ns *3* (1984To10). Q: TDPAD method.
2560.4# *5*	8+		
2642.2b *5*	8−		
2644.3@ *4*	8−		
2760.7& *4*	9−	2.8 ps *14*	T1/2: from RDDS (1984To10).
2808.9‡ *4*	10+	0.42 ps *10*	T1/2: from RDDS (1992De28). Others (RDDS): 0.62 ps *14* (1984To10), 0.8 ps *4* (1977Hu10),≈1.0 ps (1975Wa14).
2958.2a *5*	9−		
3071.4@ *4*	10−	5.2 ps *10*	T1/2: from RDDS (1984To10). Additional information 2.
3296.3# *7*	10+		
3311.8‡ *5*	12+	2.84 ps *17*	T1/2: from RDDS (1992De28). Others (RDDS): 1.3 ps *3* (1984To10), 5.0 ps *9* (1977Hu10), 4.1 ps *10* (1974WaZS).
3316.6b *6*	10−		
3319.6& *5*	11−	<1.4 ps	T1/2: from RDDS (1984To10).
3681.1@ *5*	12−	<1.0 ps	T1/2: from RDDS (1984To10). Additional information 3.
3699.5a *6*	11−		
3860.5‡ *5*	14+	1.24 ps *7*	T1/2: from RDDS (1992De28). Others (RDDS): 0.83 ps *21* (1984To10), 1.0 ps *+7−10* (1977Hu10),<2 ps (1975Wa14).
3985.1# *8*	12+		
4026.5& *5*	13−		
4119.7b *6*	12−		
4448.6@ *7*	14−		
4535.4a *6*	13−		
4553.2‡ *5*	16+	0.28 ps *7*	T1/2: from RDDS (1992De28). Others: 0.35 ps *8* (DSAM,1990Ti08), 0.7-1.0 ps (RDM and DSAM,1984To10).
4755.2# *9*	14+		
4862.2& *6*	15−		
4972.8b *7*	14−		

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(HI,xnγ) 1984To10 (continued)

^{130}Ce Levels (continued)

E(level)	J^{π}†	$T_{1/2}$	Comments
5304.6[a] 7	15⁻		
5343.3[@] 8	16⁻		
5384.3[‡] 6	18⁺	0.21 ps 5	$T_{1/2}$: from DSAM (1990Ti08). Other: 0.70 ps 14 (DSAM,1984To10).
5585.1[b] 7	16⁻		
5608[#] 1	16⁺		
5757.7[&] 7	17⁻		
5880.5[a] 7	17⁻		
5884.3 8	(17⁻)		
6211.1[b] 8	18⁻		
6319.8[@] 9	18⁻		
6341.8[‡] 6	20⁺	173 fs 35	$T_{1/2}$: from DSAM (1990Ti08). Other: 0.24 ps 6 (DSAM,1984To10).
6396 1	20⁺		
6533[#] 2	18⁺		
6575.4[a] 8	19⁻		
6642.1[&] 8	19⁻		
6977.3[b] 8	20⁻		
7388[@] 1	20⁻		
7409.0[‡] 7	22⁺	75 fs 14	$T_{1/2}$: from DSAM (1990Ti08). Other: 0.21 ps 4 (DSAM,1984To10).
7411.1[a] 10	21⁻		
7513[#] 2	20⁺		
7583[&] 1	21⁻		
7883.4[b] 9	22⁻		
8378.7[a] 11	23⁻		
8511[@] 2	22⁻		
8554[#] 2	22⁺		
8570.5[‡] 9	24⁺	52 fs 10	$T_{1/2}$: DSAM (1990Ti08).
8605[&] 2	23⁻		
8606 1	24⁺		
8910.6[b] 11	24⁻		
9463.6[a] 13	25⁻		
9664[#] 3	24⁺		
9702.9 10	(26⁺)		
9703[&] 2	25⁻		
9748 2	26⁺		
9816[‡] 2	26⁺	31 fs 9	$T_{1/2}$: DSAM (1990Ti08).
10049[b] 2	26⁻		
10649[a] 2	27⁻		
10849[#] 3	26⁺		
10876[&] 2	27⁻		
10997 2	28⁺		
11132[‡] 2	28⁺		
11138 2	28⁺		
11282[b] 2	28⁻		
11922[a] 3	29⁻		
12097[&] 3	29⁻		
12486[‡] 3	30⁺		
12606[b] 3	30⁻		

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(HI,xnγ) 1984To10 (continued)

^{130}Ce Levels (continued)

E(level)	Jπ†
13817‡ *3*	32^+
15178‡ *3*	34^+

† From γ(θ), γγ(θ) and associated band structures.
‡ Band(A): g.s. (yrast) band, AB after 10^+. second backbend at about 24^+.
# Band(B): γ band, γAB after 10^+.
@ Band(C): AE band.
& Band(D): AF band.
a Band(E): $K^\pi=(7^-)$ af band, afAB after 15^-.
b Band(F): $K^\pi=(7^-)$ ae band, aeAB after 14^-.

γ(^{130}Ce)

Eγ†	Iγ†	Ei(level)	J_i^π	Ef	J_f^π	Mult.@	δ	αb	I(γ+ce)	Comments
(72.8&)	&	2453.4	7^-	2380.8	6^-				≈1.9	$I_{(\gamma+ce)}$: branching=10% (1984To10) based on subsequent γ's in γγ spectrum.
116.4 *5*	0.5 *1*	2760.7	9^-	2644.3	8^-					
(120.5&)	&	2453.4	7^-	2333.1					≈4.3	$I_{(\gamma+ce)}$: branching=23% (1984To10) based on subsequent γ's in γγ spectrum.
189.3 *3*	9.5 *20*	2642.2	8^-	2453.4	7^-	(M1+E2)	−1.3 *4*	0.21 *5*		α(K)= 0.1687; α(L)= 0.036; α(M)= 0.0077; α(N+..)=0.00205 A_2=−0.88 *3*, A_4=+0.14 *3* (1984To10).
248.2 *5*	0.5 *1*	3319.6	11^-	3071.4	10^-					
253.9 *2*	100 *10*	253.98	2^+	0.0	0^+	E2		0.0837		α(K)exp=0.068 *12* α(K)= 0.0659; α(L)=0.01399; α(M)=0.00300; α(N+..)=0.00079 A_2=+0.40 *1*, A_4=−0.18 *2* (1974De12). Additional information 4.
260.4 *4*	3.0 *6*	2313.0	7^-	2052.8	8^+	D(+Q)	+0.05 *5*			A_2=−0.02 *3*, A_4=−0.02 *3* (1984To10).
263.4 *4*	3.2 *6*	2644.3	8^-	2380.8	6^-					
280.5 *4*	1.5 *3*	5585.1	16^-	5304.6	15^-					
295.5 *4*	1.5 *3*	5880.5	17^-	5585.1	16^-					
310.7 *4*	1.4 *3*	3071.4	10^-	2760.7	9^-					
316.3 *4*	1.9 *4*	2958.2	9^-	2642.2	8^-					
330.6 *5*	1.0 *2*	6211.1	18^-	5880.5	17^-					
331.2 *4*	2.2 *4*	2644.3	8^-	2313.0	7^-					
332.0 *4*	1.5 *3*	5304.6	15^-	4972.8	14^-					
345.4 *5*	0.5 *1*	4026.5	13^-	3681.1	12^-					
358.4 *2*	15.3 *15*	2313.0	7^-	1954.6	5^-	E2[a]				
358.4 *5*	0.9 *2*	3316.6	10^-	2958.2	9^-					
361.5 *4*	1.1 *2*	3681.1	12^-	3319.6	11^-					
364.4 *5*	0.9 *2*	6575.4	19^-	6211.1	18^-					

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(HI,xnγ) 1984To10 (continued)

γ(^{130}Ce) (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Mult. [@]	δ	Comments
383.0 *5*	0.8 *2*	3699.5	11^-	3316.6	10^-			
401.0 *5*	0.6 *1*	2453.4	7^-	2052.8	8^+			
402.0 *5*	0.7 *2*	6977.3	20^-	6575.4	19^-			
415.5 *4*	1.8 *4*	2313.0	7^-	1897.4	6^+			E_γ: 419 (2000PaZZ).
415.5 *5*	0.7 *2*	4535.4	13^-	4119.7	12^-			
420.3 *5*	0.3 *1*	4119.7	12^-	3699.5	11^-			
426.2 *5*	0.6 *1*	2380.8	6^-	1954.6	5^-			
427.1 *3*	6.8 *14*	3071.4	10^-	2644.3	8^-	E2[a]		
434[#]		7411.1	21^-	6977.3	20^-			
437.1 *5*	0.5 *1*	4972.8	14^-	4535.4	13^-			
447.6 *2*	13.7 *14*	2760.7	9^-	2313.0	7^-	E2[a]		
456.4 *2*	99 *10*	710.4	4^+	253.98	2^+	E2		α(K)exp=0.013 *3* A_2=+0.32 *1*, A_4=−0.14 *1* (1974De12). Additional information 5.
473[#]		7883.4	22^-	7411.1	21^-			
483.3 *5*	0.5 *1*	2380.8	6^-	1897.4	6^+			
487.7 *4*	2.5 *5*	1322.6	4^+	834.6	2^+			
495[#]		8378.7	23^-	7883.4	22^-			E_γ: 497 (1984Tw01).
499.0 *4*	1.8 *4*	2453.4	7^-	1954.6	5^-			
502.9 *2*	38 *4*	3311.8	12^+	2808.9	10^+	E2		A_2=+0.38 *2*, A_4=−0.04 *2* (1984To10). Additional information 8.
505[#]		2560.4	8^+	2052.8	8^+			
532[#]		8910.6	24^-	8378.7	23^-			
548.6 *2*	31 *3*	3860.5	14^+	3311.8	12^+	E2		A_2=+0.37 *10*, A_4=−0.10 *14* (1974De12).
553[‡]		9463.6	25^-	8910.6	24^-			γ not shown by 2000PaZZ.
556.1 *3*	5.0 *10*	2453.4	7^-	1897.4	6^+			
558.9 *3*	9.1 *20*	3319.6	11^-	2760.7	9^-	E2[a]		
573.6 *4*	4.2 *8*	1897.4	6^+	1323.9	6^+			
574.8 *4*	3.5 *7*	1897.4	6^+	1322.6	4^+			
576.0 *5*	0.2 *1*	5880.5	17^-	5304.6	15^-			
580.1 *4*	1.3 *3*	834.6	2^+	253.98	2^+			
587[#]		2642.2	8^-	2052.8	8^+			
591.6 *5*	0.9 *2*	2644.3	8^-	2052.8	8^+			
609.7 *4*	4.2 *8*	3681.1	12^-	3071.4	10^-	E2[a]		
612[#]		1322.6	4^+	710.4	4^+			
612.5 *4*	1.3 *3*	5585.1	16^-	4972.8	14^-			
613.6 *2*	86 *9*	1323.9	6^+	710.4	4^+	E2		α(K)exp=0.0058 *15* A_2=+0.26 *2*, A_4=−0.14 *3* (1974De12). Additional information 6.
626.1 *5*	0.4 *1*	6211.1	18^-	5585.1	16^-			
630.7 *2*	15.2 *15*	1954.6	5^-	1323.9	6^+	D(+Q)	+0.04 *4*	A_2=−0.19 *12*, A_4=−0.01 *7*.
631.9 *5*	0.3 *1*	1954.6	5^-	1322.6	4^+			E_γ: 635 (2000PaZZ).
663.4 *4*	3.6 *8*	2560.4	8^+	1897.4	6^+			
674.7 *4*	3.2 *6*	3316.6	10^-	2642.2	8^-			
688.8 *4*	1.2 *2*	3985.1	12^+	3296.3	10^+			
692.7 *2*	23.5 *24*	4553.2	16^+	3860.5	14^+	E2		A_2=+0.32 *4*, A_4=−0.20 *6* (1974De12).
695.0 *5*	0.4 *1*	6575.4	19^-	5880.5	17^-			
706.9 *3*	6.5 *13*	4026.5	13^-	3319.6	11^-			
708.0 *4*	4.0 *8*	2760.7	9^-	2052.8	8^+			
728.7 *2*	64 *6*	2052.8	8^+	1323.9	6^+	E2		α(K)exp=0.0027 *6* A_2=+0.37 *2*, A_4=0.00 *1* (1984To10). A_2=+0.30 *3*, A_4=−0.11 *4* (1974De12). Additional information 7.
735.9 *4*	3.1 *6*	3296.3	10^+	2560.4	8^+			

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(HI,xnγ) 1984To10 (continued)

γ(^{130}Ce) (continued)

E_γ †	I_γ †	E_i(level)	J_i^π	E_f	J_f^π	Mult. @	Comments
741.3 *4*	2.2 *4*	3699.5	11^-	2958.2	9^-		
756.0 *2*	45 *5*	2808.9	10^+	2052.8	8^+	E2	A_2=+0.41 *2*, A_4=−0.05 *2* (1984To10). A_2=+0.38 *2*, A_4=−0.19 *3* (1974De12).
766.4 *5*	0.4 *1*	6977.3	20^-	6211.1	18^-		
767.5 *4*	3.1 *6*	4448.6	14^-	3681.1	12^-	E2[a]	
769.1 *4*	1.4 *3*	5304.6	15^-	4535.4	13^-		
770.1 *5*	0.8 *2*	4755.2	14^+	3985.1	12^+		
803.3 *4*	2.7 *6*	4119.7	12^-	3316.6	10^-		
831.0 *2*	16.5 *17*	5384.3	18^+	4553.2	16^+		
835.0 *4*	1.2 *3*	834.6	2^+	0.0	0^+		
835.7 *3*	6.1 *12*	4862.2	15^-	4026.5	13^-	E2[a]	
835.8 *4*	2.2 *4*	4535.4	13^-	3699.5	11^-		
836‡		7411.1	21^-	6575.4	19^-		E_γ: unresolved doublet.
853#		5608	16^+	4755.2	14^+		
853.6 *4*	2.1 *4*	4972.8	14^-	4119.7	12^-		
884.4 *4*	2.3 *5*	6642.1	19^-	5757.7	17^-		
894.7 *4*	2.8 *6*	5343.3	16^-	4448.6	14^-		
895.5 *4*	3.5 *7*	5757.7	17^-	4862.2	15^-	E2[a]	
903#		2958.2	9^-	2052.8	8^+		
907#		7883.4	22^-	6977.3	20^-		E_γ: 902 (1984Tw01).
925#		6533	18^+	5608	16^+		
941#		7583	21^-	6642.1	19^-		
957.4 *3*	6.1 *12*	6341.8	20^+	5384.3	18^+		
968#		8378.7	23^-	7411.1	21^-		E_γ: 966 (1984Tw01).
976.5 *4*	1.2 *3*	6319.8	18^-	5343.3	16^-		
980#		7513	20^+	6533	18^+		
989.0 *5*	0.9 *2*	2313.0	7^-	1323.9	6^+		
1009.2 *4*	4.6 *10*	2333.1		1323.9	6^+		
1012#		6396	20^+	5384.3	18^+		
1022#		8605	23^-	7583	21^-		
1022.1 *5*	1.0 *2*	5884.3	(17^-)	4862.2	15^-		
1027#		8910.6	24^-	7883.4	22^-		
1041#		8554	22^+	7513	20^+		
1056.9 *4*	4.0 *8*	2380.8	6^-	1323.9	6^+	D+Q	δ(Q/D)=−0.2 to +0.6 from A_2=+0.49 *9*, A_4=+0.12 *10* (1984To10).
1067.0 *4*	3.2 *6*	7409.0	22^+	6341.8	20^+		
1068#		7388	20^-	6319.8	18^-		
1068.8 *5*	0.8 *2*	1322.6	4^+	253.98	2^+		
1085#		9463.6	25^-	8378.7	23^-		E_γ: 1083 (1984Tw01).
1098#		9703	25^-	8605	23^-		
1110#		9664	24^+	8554	22^+		
1123#		8511	22^-	7388	20^-		
1129.7 *3*	5.0 *10*	2453.4	7^-	1323.9	6^+		
1132.5 *5*	0.9 *2*	9702.9	(26^+)	8570.5	24^+		
1138#		10049	26^-	8910.6	24^-		E_γ: 1136 (1984Tw01).
1142#		9748	26^+	8606	24^+		
1161.4 *5*	1.0 *2*	8570.5	24^+	7409.0	22^+		
1173#		10876	27^-	9703	25^-		
1185#		10649	27^-	9463.6	25^-		
1185#		10849	26^+	9664	24^+		

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(HI,xnγ) 1984To10 (continued)

$\gamma(^{130}Ce)$ (continued)

E_γ [†]	I_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Comments
1187[#]		1897.4	6^+	710.4	4^+	
1197[#]		8606	24^+	7409.0	22^+	
1221[#]		12097	29^-	10876	27^-	
1233[#]		11282	28^-	10049	26^-	E_γ: 1227 (1984Tw01).
1244.3 *5*	0.3 *1*	1954.6	5^-	710.4	4^+	
1246		9816	26^+	8570.5	24^+	E_γ: from 1990Ti08. Eγ=1242 in 1983No07 and 1984Tw01.
1249[#]		10997	28^+	9748	26^+	
1273[#]		11922	29^-	10649	27^-	
1316[#]		11132	28^+	9816	26^+	
1324[#]		12606	30^-	11282	28^-	E_γ: 1322 (1984Tw01).
1331[#]		13817	32^+	12486	30^+	
1354[#]		12486	30^+	11132	28^+	
1361[#]		15178	34^+	13817	32^+	
1390[#]		11138	28^+	9748	26^+	

[†] From 1984To10, except as noted. $\Delta(E\gamma)$=0.2 keV for Iγ>10, 0.3 keV for Iγ=5-10, 0.4 keV for Iγ=1-5 and 0.5 keV for Iγ<1; $\Delta(I\gamma)$=10% for Iγ>10 and 20-30% for Iγ<10, based on a general statement by 1984To10.

[‡] From spectrum shown by 1983No07 (also 1984Tw01), intensity is not available.

[#] From 2000PaZZ.

[@] From $\gamma(\theta)$, $\gamma\gamma(\theta)$ of 1984To10 and α(K)exp′s of 1973Wy01 (also 1970Sm05).

[&] Weak γ from coincidence relations, Eγ from level-energy difference.

[a] From $\gamma\gamma(\theta)$ (1984To10).

[b] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

(HI,xnγ) 1984To10

Level Scheme

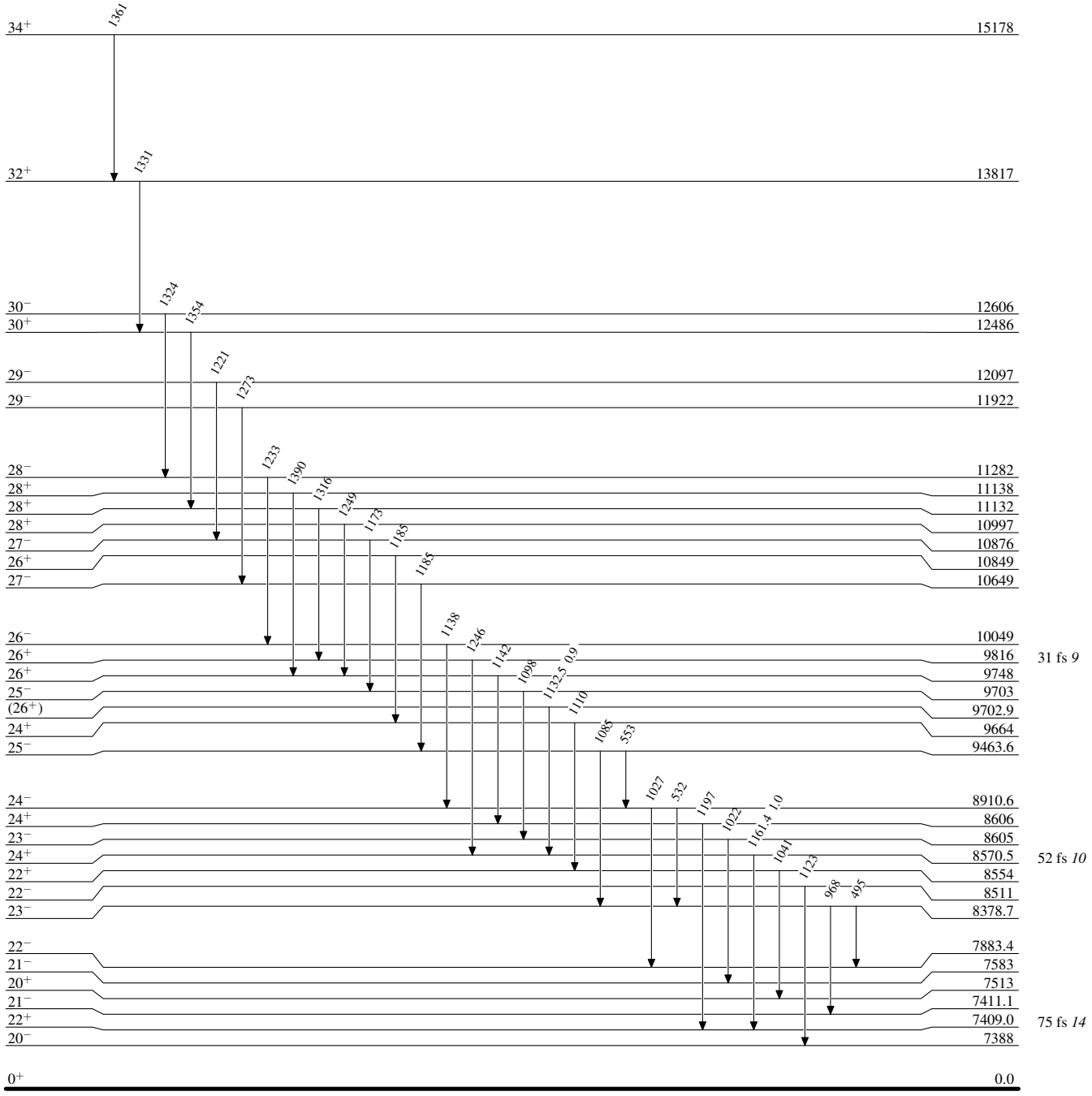
Intensities: Relative I_γ

Legend

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

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

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



$^{130}_{58}Ce_{72}$

(HI,xnγ) 1984To10

Level Scheme (continued)

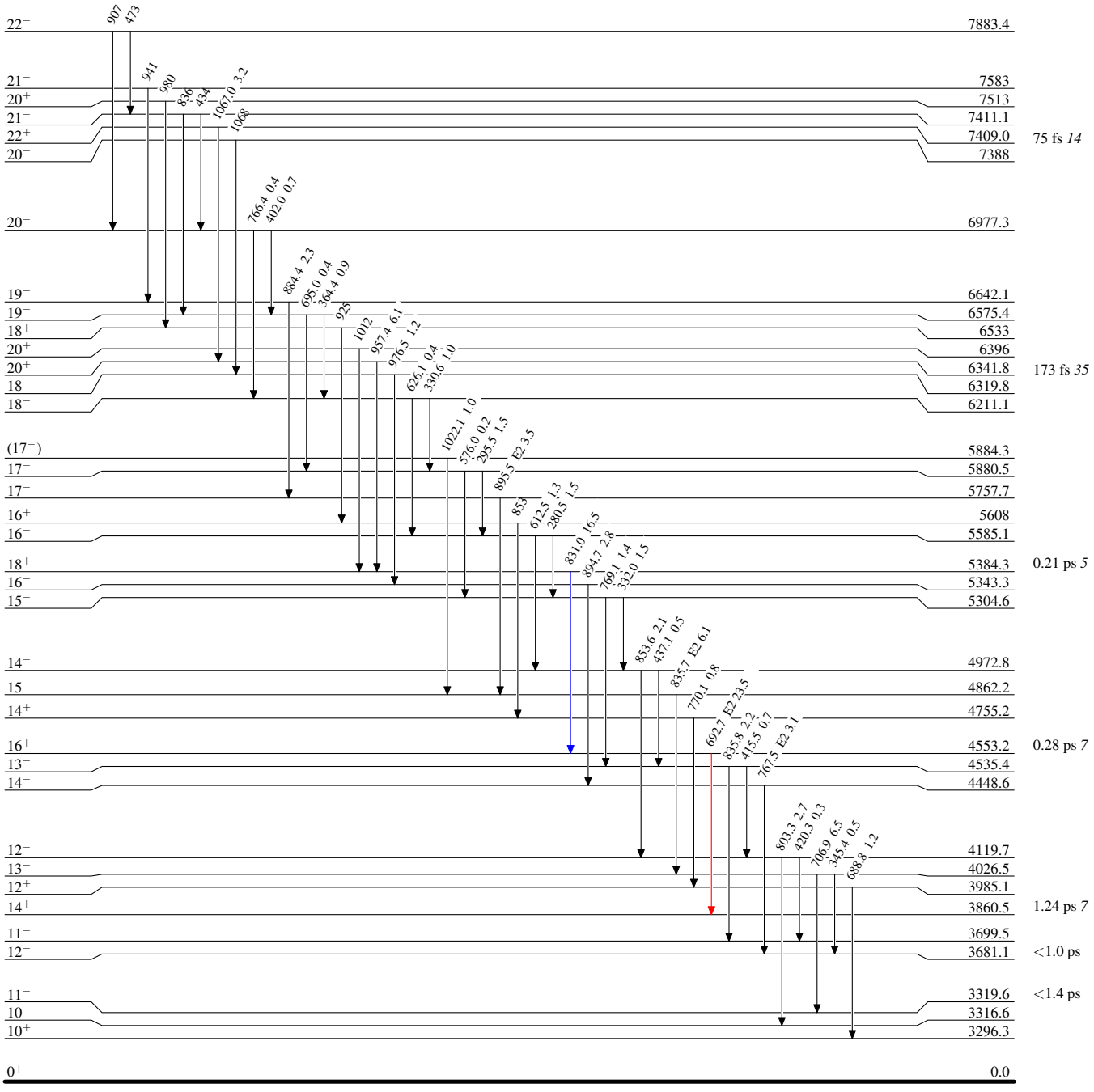
Intensities: Relative I_γ

Legend

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

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

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



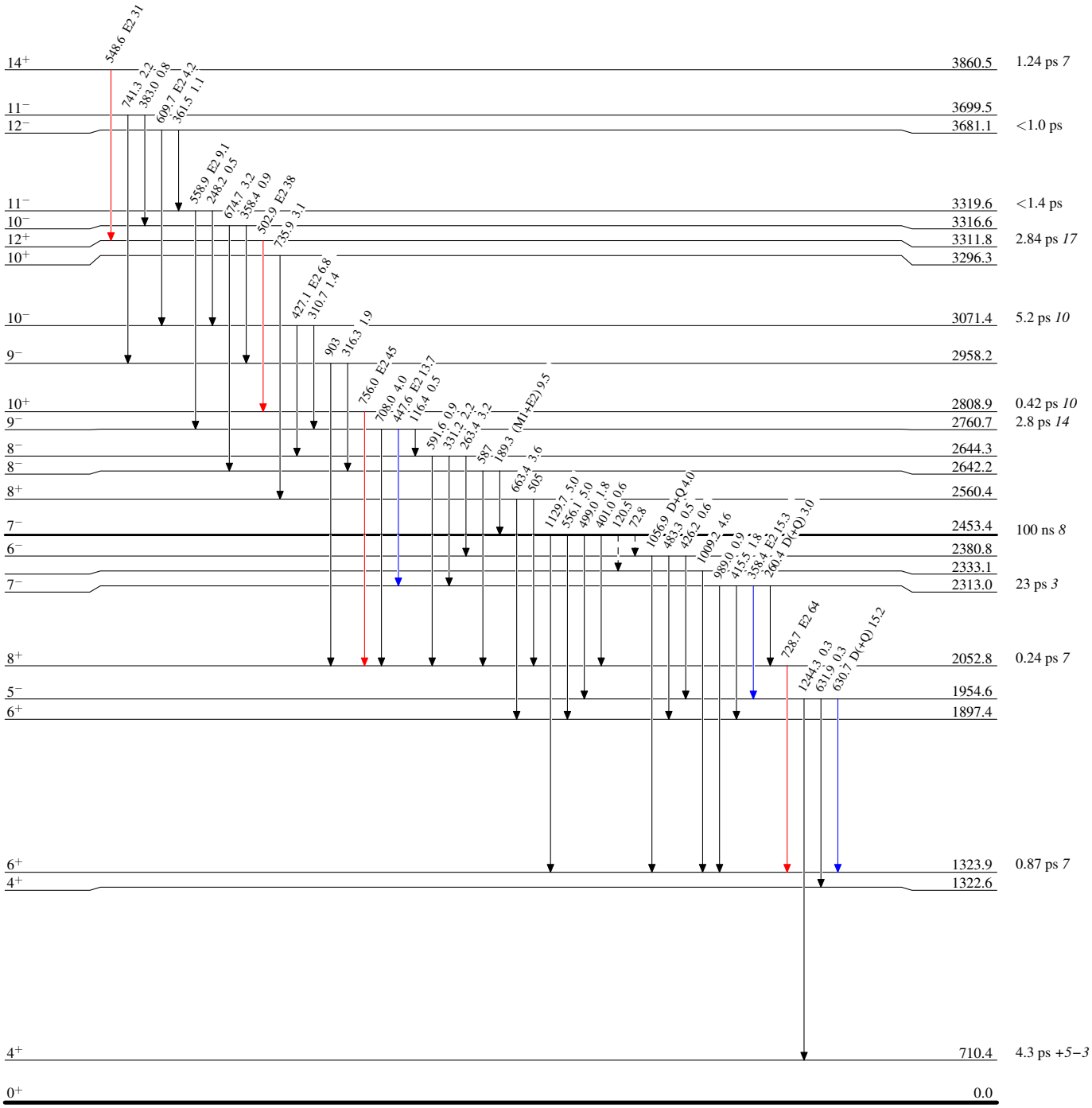
$^{130}_{58}Ce_{72}$

(HI,xnγ) 1984To10

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)



$^{130}_{58}Ce_{72}$

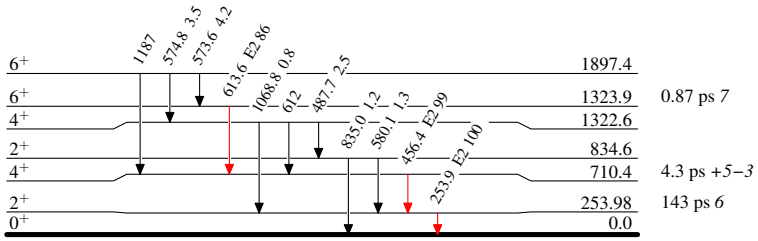
(HI,xnγ) 1984To10

Level Scheme (continued)

Intensities: Relative I_γ

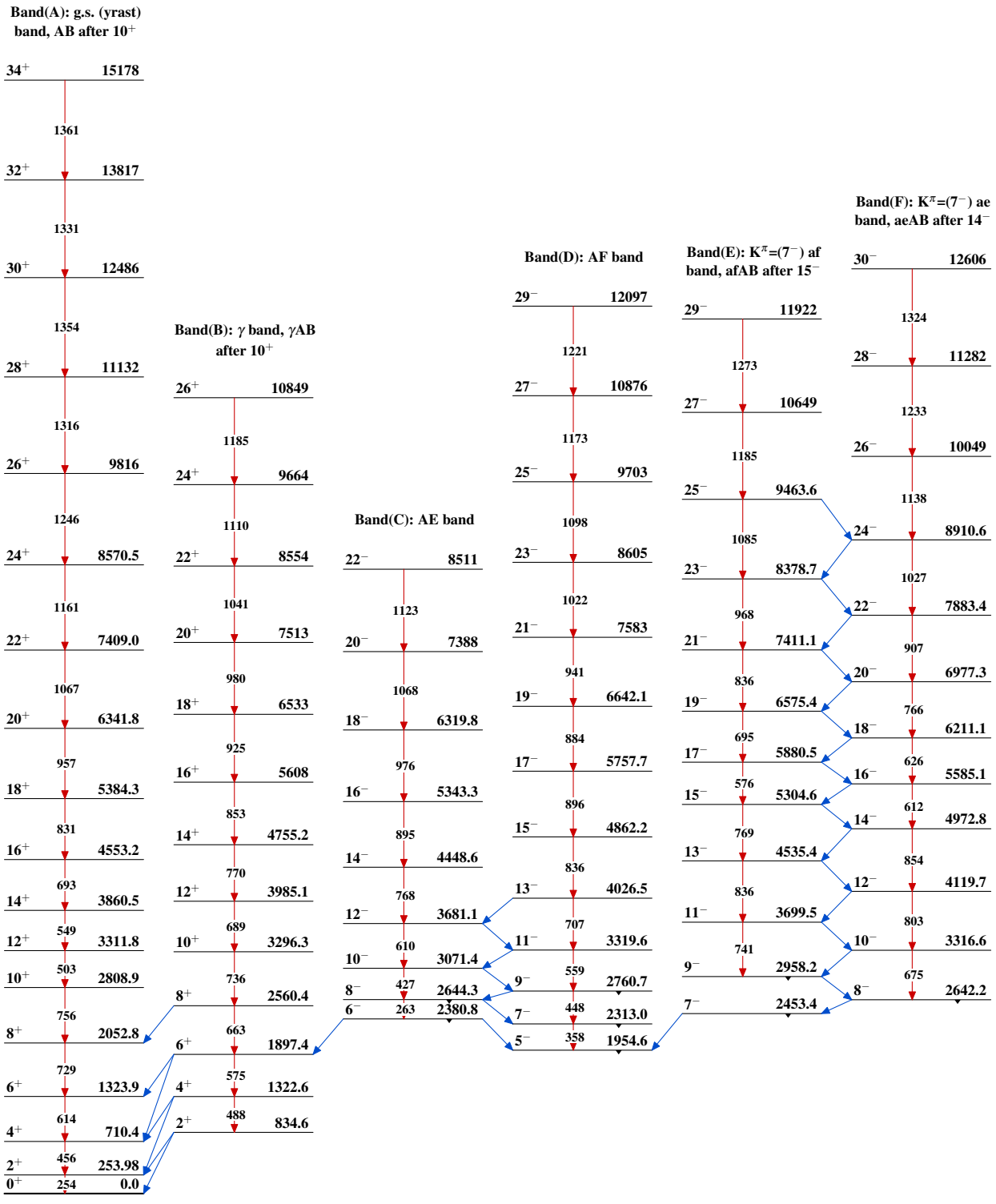
Legend

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



$^{130}_{58}Ce_{72}$

(HI,xnγ) 1984To10



$^{130}_{58}Ce_{72}$