^{123}Ba ε decay 2000Gi12

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 174, 1 (2021)	15-Apr-2021

Parent: ^{123}Ba: E=0.0; J$^{\pi}$=5/2$^{(+)}$; T$_{1/2}$=2.4 min *4*; Q(ε)=5389 *17*; %ε+%β$^+$ decay=100.0
^{123}Ba-J$^{\pi}$,T$_{1/2}$: From Adopted Levels of ^{123}Ba.
^{123}Ba-Q(ε): From 2021Wa16.
2000Gi12: ^{123}Ba source was produced via La(^{3}He,X) with E=280 MeV ^{3}He beam from the Synchrocyclotron facility at Orsay, on thick molten lanthanum metallic targets. Ions were separated by the ISOCELE2 separator and collected on aluminized mylar tape. γ rays were detected with a low-energy and high-resolution HPGe detector and a Ge detector; conversion electrons were detected with a Si detector (FWHM=2 keV). Measured Eγ, Iγ, E(x ray),I(x ray), γγ-coin, x-γ-coin, E(ce), I(ce), γ-ce-coin, (x ray)-ce-coin. Deduced levels, J, π, conversion coefficients, γ-ray multipolarities. Systematics of neighboring odd- mass Cs isotopes. Comparisons with theoretical calculations.
1975Ar31: ^{123}Ba source was produced via ^{114}Sn(^{12}C,3n) with E=65 MeV ^{12}C beam provided by the U-300 cyclotron at JINR, Dubna, on a self-supporting target of ^{114}Sn. γ rays were detected with a Ge(Li) detector (FWHM=0.7 keV at Eγ=100 keV). Measured Eγ, Iγ, γ(t). Deduced levels, parent T$_{1/2}$.
1978Bo32: ^{123}Ba source was produced via ^{96,98}Ru(^{32}S,X) with E=190 MeV ^{32}S beam from the U-300 cyclotron at JNIR, Dubna, on enriched (over 90%) Ru targets. γ rays were detected with a high- resolution Ge(Li) spectrometer and β particles were detected with a plastic β-counter. Measured Eγ, Iγ, βγ-coin.
Others:
1996Os04: measured Eγ, γγ-coin, γ-gated β spectra. Deduced end-point energies, Q(ε).
1962Pr09: measured decay curve. Deduced parent T$_{1/2}$.
1976Be11: measured βγ(t).
1975BaXJ: measured βγ(t).
The decay scheme is proposed by 2000Gi12, which is considered incomplete due to a large gap between the highest observed level and the Q-value. As stated by 2000Gi12, the absolute normalization of γ-ray intensities and thus estimation of the (β$^+$+ε) feeding cannot be done because the γ-intensity balance cannot be precisely estimated for the 30.6-keV level and the decay scheme is incomplete.

^{123}Cs Levels

E(level)†	J$^{\pi}$‡	T$_{1/2}$‡	Comments
0.0	1/2$^{(+)}$	5.86 min *10*	
30.59 *4*	(3/2$^+$)		
94.57 *3*	5/2$^{(+)}$	9 ns *3*	T$_{1/2}$: adopted value from β$^+$−94.6γ(t) in 1976Be11.
123.52 *4*	(3/2$^+$)		
146.80 *4*	5/2$^{(+)}$		
156.27 *5*	11/2$^{(-)}$	1.7 s *2*	
214.56 *5*	7/2$^{(-)}$		
231.63 *6*	(7/2$^+$)		
328.09 *8*	(9/2$^+$)	114 ns *5*	
467.57 *14*	(3/2$^+$,5/2$^+$,7/2$^+$)		J$^{\pi}$: 9/2$^+$ proposed by 2000Gi12 contradicts to 373.1γ M1(+E2) to 5/2$^{(+)}$ in 2000Gi12.
474.88 *10*	3/2$^{(-)}$		
494.05 *9*	(3/2$^+$,5/2$^+$)		
524.69 *17*	(1/2$^+$,3/2$^+$,5/2$^+$)		
557.51 *18*	(1/2$^+$,3/2$^+$,5/2$^+$)		
588.52 *18*	($^+$)		
620.90 *13*	(5/2$^+$)		
699.12 *18*	(5/2$^+$,7/2$^+$,9/2$^+$)		
728.0 *4*	(1/2 to 7/2)$^{(+)}$		
749.64 *17*	(1/2$^+$,3/2$^+$,5/2$^+$)		
784.37 *22*	(3/2$^-$,5/2$^-$,7/2$^-$)		
811.17 *13*	(3/2$^+$,5/2$^+$)		

Continued on next page (footnotes at end of table)

^{123}Ba ε decay 2000Gi12 (continued)

^{123}Cs Levels (continued)

E(level)†	J^{π}‡
817.15 *20*	$(3/2^+,5/2^+)$
866.46 *14*	$(3/2^+,5/2^+)$
869.7 *3*	$(5/2^+,7/2^+,9/2^+)$
905.43 *14*	$(3/2^+,5/2^+)$
1021.68 *16*	$(3/2^-)$
1048.75 *22*	$(3/2^+,5/2^+)$

† From a least-squares fit to γ-ray energies.
‡ From Adopted Levels.

γ(^{123}Cs)

Eγ[‡]	Iγ[‡]	Ei(level)	J^π_i	Ef	J^π_f	Mult.[&]	δ[a]	α[†]	Comments
23.2[#] 1	[#@]	146.80	5/2$^{(+)}$	123.52	(3/2$^+$)				
29.0[#] 1	[#@]	123.52	(3/2$^+$)	94.57	5/2$^{(+)}$				
30.6 5	66 13	30.59	(3/2$^+$)	0.0	1/2$^{(+)}$				Eγ: from 1978Bo32. Not seen in 2000Gi12. Iγ: from Iγ/I(K x-ray) ratios of 30.6γ and 63.97γ in 1978Bo32 and I(63.97γ)=16.6 1 in 2000Gi12. I(30.6γ)/I(K x-ray)=0.10 2 (1978Bo32).
52.20 5	1.5 1	146.80	5/2$^{(+)}$	94.57	5/2$^{(+)}$				
58.30 5	2.7 1	214.56	7/2$^{(-)}$	156.27	11/2$^{(-)}$	E2		13.19	α(K)=5.37 8; α(L)=6.17 9; α(M)=1.348 20 α(N)=0.271 4; α(O)=0.0308 5; α(P)=0.0001409 20 Eγ: 58.3 5 from 1978Bo32. Mult.: α(L)exp=4.5 9; K/L<1. Iγ(58.3γ)/I(K x-ray)=0.004 1 (1978Bo32).
61.70 5	[@]	156.27	11/2$^{(-)}$	94.57	5/2$^{(+)}$	E3		289	α(K)=22.9 4; α(L)=207 3; α(M)=47.8 7 α(N)=9.65 15; α(O)=1.066 16; α(P)=0.000570 8 Mult.: adopted assignment based on ce data in ^{123}Cs IT decay (1981Ma01).
63.97 3	16.6 1	94.57	5/2$^{(+)}$	30.59	(3/2$^+$)	M1			Eγ: others: 64.1 5 from 1978Bo32, 63.9 6 (1975Ar31). Iγ: Other: 14 4 (1975Ar31). Mult.: α(K)exp=3.5 4; K/L>9. Iγ(63.9γ)/I(K x-ray)=0.025 5 (1978Bo32).
67.75 5	1.1 1	214.56	7/2$^{(-)}$	146.80	5/2$^{(+)}$				
84.8 1	2.5 2	231.63	(7/2$^+$)	146.80	5/2$^{(+)}$				
92.92 3	47 1	123.52	(3/2$^+$)	30.59	(3/2$^+$)	M1+E2	0.35 5		Eγ: other: 92.7 6 (1975Ar31). Iγ: other: 51 5 (1975Ar31). Mult.: α(K)exp=0.85 4; K/L=4.6 4.
94.57 3	100	94.57	5/2$^{(+)}$	0.0	1/2$^{(+)}$	E2		2.28	α(K)=1.434 21; α(L)=0.666 10; α(M)=0.1442 21 α(N)=0.0292 5; α(O)=0.00342 5; α(P)=3.93×10^{-5} 6 Eγ: other: 94.5 6 (1975Ar31). Iγ: other: 100 (1975Ar31). Mult.: E2 from Adopted Gammas, based on ce data in ^{123}Cs IT decay; E2(+M1) proposed in 2000Gi12 based on α(K)exp=1.2 1 and K/L=3 1.
96.46 6	11.3 3	328.09	(9/2$^+$)	231.63	(7/2$^+$)	M1		0.998	α(K)=0.855 12; α(L)=0.1139 16; α(M)=0.0233 4 α(N)=0.00493 7; α(O)=0.000686 10; α(P)=3.36×10^{-5} 5 Mult.: α(K)exp=0.66 8; K/L>5.
108.1 1	0.7 1	231.63	(7/2$^+$)	123.52	(3/2$^+$)	E2		1.416	α(K)=0.950 14; α(L)=0.369 6; α(M)=0.0795 12 α(N)=0.01615 24; α(O)=0.00191 3; α(P)=2.67×10^{-5} 4 Mult.: α(K)exp=1.1 2.
116.2 1	43.5 5	146.80	5/2$^{(+)}$	30.59	(3/2$^+$)	M1+E2	0.77 +40−23		Eγ: other: 116.1 6 (1975Ar31). Iγ: other: 54 8 (1975Ar31). Mult.: α(K)exp=0.65 7; K/L=4.6 8.

γ(^{123}Cs) (continued)

E_γ[‡]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[&]	δ[a]	α[†]	Comments
120.0 *1*	20 *1*	214.56	$7/2^{(-)}$	94.57	$5/2^{(+)}$	E1		0.1320	α(K)=0.1133 *16*; α(L)=0.01500 *22*; α(M)=0.00305 *5* α(N)=0.000636 *9*; α(O)=8.51×10^{-5} *12*; α(P)=3.62×10^{-6} *6* E_γ: other: 120.0 *6* (1975Ar31). I_γ: other: 27 *4* (1975Ar31). Mult.: α(K)exp=0.11 *2*.
123.6 *1*	54.8 *5*	123.52	$(3/2^+)$	0.0	$1/2^{(+)}$	M1+E2	0.19 *+9−13*		E_γ: other: 123.5 *6* (1975Ar31). I_γ: other: 69 *6* (1975Ar31). Mult.: α(K)exp=0.41 *2*; K/L=6.8 *5*.
137.0 *1*	20.5 *5*	231.63	$(7/2^+)$	94.57	$5/2^{(+)}$	M1(+E2)	−0.04 *10*		E_γ: other: 137.0 *6* (1975Ar31). I_γ: other: 23 *7* (1975Ar31). Mult.: α(K)exp=0.35 *5*; K/L=8 *2*. δ: from Adopted Gammas. Other: δ<0.6 from ce data in 2000Gi12.
146.8 *1*	7.3 *2*	146.80	$5/2^{(+)}$	0.0	$1/2^{(+)}$	E2		0.483	α(K)=0.357 *5*; α(L)=0.0998 *15*; α(M)=0.0213 *3* α(N)=0.00436 *7*; α(O)=0.000530 *8*; α(P)=1.071×10^{-5} *16* Mult.: α(K)exp=0.32 *3*; K/L=3.6 *5*.
201.0 *1*	53 *3*	231.63	$(7/2^+)$	30.59	$(3/2^+)$	E2		0.1636	α(K)=0.1283 *18*; α(L)=0.0280 *4*; α(M)=0.00593 *9* α(N)=0.001219 *18*; α(O)=0.0001529 *22*; α(P)=4.08×10^{-6} *6* Mult.: α(K)exp=0.13 1; K/L=4.7 2.
231.7 *2*	1.8 *2*	699.12	$(5/2^+,7/2^+,9/2^+)$	467.57	$(3/2^+,5/2^+,7/2^+)$				
233.5 *2*	3.5 *5*	328.09	$(9/2^+)$	94.57	$5/2^{(+)}$				
236.0 *2*	3.2 *2*	467.57	$(3/2^+,5/2^+,7/2^+)$	231.63	$(7/2^+)$	M1,E2			Mult.: α(K)exp=0.067 *15*.
260.3 *1*	6.5 *5*	474.88	$3/2^{(-)}$	214.56	$7/2^{(-)}$	E2		0.0689	α(K)=0.0557 *8*; α(L)=0.01049 *15*; α(M)=0.00220 *3* α(N)=0.000455 *7*; α(O)=5.83×10^{-5} *9*; α(P)=1.85×10^{-6} *3* Mult.: α(K)exp=0.063 *10*; K/L=5 *1*.
262.0 *2*	2.5 *5*	494.05	$(3/2^+,5/2^+)$	231.63	$(7/2^+)$				
309.5 *3*	2.1 *2*	784.37	$(3/2^-,5/2^-,7/2^-)$	474.88	$3/2^{(-)}$				
336.2 *3*	1.7 *2*	811.17	$(3/2^+,5/2^+)$	474.88	$3/2^{(-)}$				
347.3 *2*	10.1 *8*	494.05	$(3/2^+,5/2^+)$	146.80	$5/2^{(+)}$	M1+E2	>0.2		Mult.: α(K)exp=0.036 *6*; K/L=6 *1*.
351.3 *3*	0.7 *1*	474.88	$3/2^{(-)}$	123.52	$(3/2^+)$				
370.6 *2*	35 *2*	494.05	$(3/2^+,5/2^+)$	123.52	$(3/2^+)$	M1		0.0257	α(K)=0.0222 *4*; α(L)=0.00285 *4*; α(M)=0.000583 *9* α(N)=0.0001233 *18*; α(O)=1.722×10^{-5} *25*; α(P)=8.61×10^{-7} *13* Mult.: α(K)exp=0.029 *5*; K/L>8.
373.1 *2*	18.5 *5*	467.57	$(3/2^+,5/2^+,7/2^+)$	94.57	$5/2^{(+)}$	M1(+E2)	<1.2		Mult.: α(K)exp=0.025 *4*.
380.3 *5*	1.3 *5*	474.88	$3/2^{(-)}$	94.57	$5/2^{(+)}$				

γ(^{123}Cs) (continued)

Eγ[‡]	Iγ[‡]	Ei(level)	J_i^π	Ef	J_f^π	Mult.[&]	δ[a]	α[†]	Comments
389.0 5	1.3 2	620.90	$(5/2^+)$	231.63	$(7/2^+)$	M1		0.0228	α(K)=0.0196 3; α(L)=0.00252 4; α(M)=0.000514 8 α(N)=0.0001088 16; α(O)=1.520×10^{-5} 22; α(P)=7.60×10^{-7} 11 Mult.: α(K)exp=0.030 10.
399.6 2	7.1 1	494.05	$(3/2^+,5/2^+)$	94.57	$5/2^{(+)}$	M1,E2			Mult.: α(K)exp=0.020 5; K/L=8 2.
401.3 2	2.0 2	524.69	$(1/2^+,3/2^+,5/2^+)$	123.52	$(3/2^+)$	M1			Mult.: α(K)exp=0.026 10; M1+E2 proposed in 2000Gi12.
410.8 2	13.6 2	557.51	$(1/2^+,3/2^+,5/2^+)$	146.80	$5/2^{(+)}$	M1,E2			Mult.: α(K)exp=0.016 2; K/L=8 2.
428.3 3	2.0 5	1048.75	$(3/2^+,5/2^+)$	620.90	$(5/2^+)$	M1,E2			Mult.: α(K)exp=0.021 10.
441.5 4	2.6 5	588.52	$(^+)$	146.80	$5/2^{(+)}$				
444.5 4	3.0 3	474.88	$3/2^{(-)}$	30.59	$(3/2^+)$	(E1)		0.00408	α(K)=0.00353 5; α(L)=0.000442 7; α(M)=8.98×10^{-5} 13 α(N)=1.89×10^{-5} 3; α(O)=2.62×10^{-6} 4; α(P)=1.260×10^{-7} 18 Mult.: α(K)exp<0.01.
463.7 2	6.3 3	494.05	$(3/2^+,5/2^+)$	30.59	$(3/2^+)$	M1,E2			Mult.: α(K)exp=0.011 3.
467.5 5	2.2 3	699.12	$(5/2^+,7/2^+,9/2^+)$	231.63	$(7/2^+)$				
474.8 5	1.6 2	620.90	$(5/2^+)$	146.80	$5/2^{(+)}$				
484.2 3	6 1	699.12	$(5/2^+,7/2^+,9/2^+)$	214.56	$7/2^{(-)}$	E1		0.00334	α(K)=0.00289 4; α(L)=0.000360 5; α(M)=7.32×10^{-5} 11 α(N)=1.542×10^{-5} 22; α(O)=2.13×10^{-6} 3; α(P)=1.033×10^{-7} 15 Mult.: α(K)exp=0.004 2.
494.0[b] 2	38.8[b] 5	494.05	$(3/2^+,5/2^+)$	0.0	$1/2^{(+)}$	M1,E2			Mult.: α(K)exp=0.0085 6; K/L=8 2 for a doublet.
494.0[b] 2	38.8[b] 5	588.52	$(^+)$	94.57	$5/2^{(+)}$	M1,E2			Mult.: α(K)exp=0.0085 6; K/L=8 2 for a doublet.
497.4 2	16 2	620.90	$(5/2^+)$	123.52	$(3/2^+)$	M1,E2		0.0109 14	Mult.: α(K)exp=0.008 2; K/L=6 2.
524.4 3	5.8 5	524.69	$(1/2^+,3/2^+,5/2^+)$	0.0	$1/2^{(+)}$	M1,E2			Mult.: α(K)exp=0.006 2.
526.5[b] 5	9.0[b] 5	557.51	$(1/2^+,3/2^+,5/2^+)$	30.59	$(3/2^+)$	M1,E2			Mult.: α(K)exp=0.007 2 for a doublet.
526.5[b] 5	9.0[b] 5	620.90	$(5/2^+)$	94.57	$5/2^{(+)}$	M1,E2			Mult.: α(K)exp=0.007 2 for a doublet.
541.6 3	6.0 5	869.7	$(5/2^+,7/2^+,9/2^+)$	328.09	$(9/2^+)$	M1,E2			Mult.: α(K)exp=0.008 2.
546.8 3	8.9 5	1021.68	$(3/2^-)$	474.88	$3/2^{(-)}$	M1,E2			Mult.: α(K)exp=0.009 3.
557.4 5	1.5 3	557.51	$(1/2^+,3/2^+,5/2^+)$	0.0	$1/2^{(+)}$				
569.8 3	6.0 5	784.37	$(3/2^-,5/2^-,7/2^-)$	214.56	$7/2^{(-)}$	M1,E2			Mult.: α(K)exp=0.006 2.
590.4 3	9.2 5	620.90	$(5/2^+)$	30.59	$(3/2^+)$	M1,E2			Mult.: α(K)exp=0.008 2; K/L=6 2.
602.8 5	4.2 5	749.64	$(1/2^+,3/2^+,5/2^+)$	146.80	$5/2^{(+)}$				
621.0 3	3.0 3	620.90	$(5/2^+)$	0.0	$1/2^{(+)}$	(E2)		0.00528	α(K)=0.00449 7; α(L)=0.000630 9; α(M)=0.0001294 19 α(N)=2.72×10^{-5} 4; α(O)=3.69×10^{-6} 6; α(P)=1.636×10^{-7} 23 Mult.: M1,E2 from α(K)exp=0.005 2 in 2000Gi12; (E2) is assumed from level scheme.
626.3 3	3.0 5	749.64	$(1/2^+,3/2^+,5/2^+)$	123.52	$(3/2^+)$				
633.5 5	2.5 5	728.0	$(1/2\ \text{to}\ 7/2)^{(+)}$	94.57	$5/2^{(+)}$				
635.1 4	10.0 5	866.46	$(3/2^+,5/2^+)$	231.63	$(7/2^+)$				
664.5 5	1.0 5	811.17	$(3/2^+,5/2^+)$	146.80	$5/2^{(+)}$				
670.6 3	7.3 5	817.15	$(3/2^+,5/2^+)$	146.80	$5/2^{(+)}$	M1+E2	<2.0		Mult.: α(K)exp=0.005 1.
673.8 5	≈0.5	905.43	$(3/2^+,5/2^+)$	231.63	$(7/2^+)$				
688.1 5	2.5 3	811.17	$(3/2^+,5/2^+)$	123.52	$(3/2^+)$				
697.3 5	≈0.5	728.0	$(1/2\ \text{to}\ 7/2)^{(+)}$	30.59	$(3/2^+)$				
716.6 3	16.1 5	811.17	$(3/2^+,5/2^+)$	94.57	$5/2^{(+)}$	M1+E2			Mult.: α(K)exp=0.0045 6; K/L≈7.

$^{123}_{55}$Cs$_{68}$-5

γ(^{123}Cs) (continued)

E_γ[‡]	I_γ[‡]	E_i(level)	J^π_i	E_f	J^π_f	Mult.[&]	Comments
718.8[b] 3	22.5[b] 5	749.64	(1/2$^+$,3/2$^+$,5/2$^+$)	30.59	(3/2$^+$)	M1(+E2)	Mult.: α(K)exp=0.0048 6; K/L≈8 for a doublet.
718.8[b] 3	22.5[b] 5	866.46	(3/2$^+$,5/2$^+$)	146.80	5/2$^{(+)}$	M1(+E2)	Mult.: α(K)exp=0.0048 6; K/L≈8 for a doublet.
723.1 5	≈0.5	869.7	(5/2$^+$,7/2$^+$,9/2$^+$)	146.80	5/2$^{(+)}$		
749.7 3	5.0 5	749.64	(1/2$^+$,3/2$^+$,5/2$^+$)	0.0	1/2$^{(+)}$		
757.8 3	2.1 2	905.43	(3/2$^+$,5/2$^+$)	146.80	5/2$^{(+)}$		
771.8 4	1.0 3	866.46	(3/2$^+$,5/2$^+$)	94.57	5/2$^{(+)}$		
780.8 3	6 1	811.17	(3/2$^+$,5/2$^+$)	30.59	(3/2$^+$)		
782.4 3	3.0 3	905.43	(3/2$^+$,5/2$^+$)	123.52	(3/2$^+$)		
786.8 5	0.9 2	817.15	(3/2$^+$,5/2$^+$)	30.59	(3/2$^+$)		
807.1 3	2.5 1	1021.68	(3/2$^-$)	214.56	7/2$^{(-)}$		
811.0[b] 2	7.5[b] 2	811.17	(3/2$^+$,5/2$^+$)	0.0	1/2$^{(+)}$		
811.0[b] 2	7.5[b] 2	905.43	(3/2$^+$,5/2$^+$)	94.57	5/2$^{(+)}$		
816.8[b] 3	2.0[b] 2	817.15	(3/2$^+$,5/2$^+$)	0.0	1/2$^{(+)}$		
816.8[b] 3	2.0[b] 2	1048.75	(3/2$^+$,5/2$^+$)	231.63	(7/2$^+$)		
836.2 2	2.0 2	866.46	(3/2$^+$,5/2$^+$)	30.59	(3/2$^+$)		
866.5 5	2.0 5	866.46	(3/2$^+$,5/2$^+$)	0.0	1/2$^{(+)}$		
874.8 5	1.3 5	905.43	(3/2$^+$,5/2$^+$)	30.59	(3/2$^+$)		
[x]894.8 3	3.0 5						
898.0 3	2.7 5	1021.68	(3/2$^-$)	123.52	(3/2$^+$)		
905.5 5	1.0 3	905.43	(3/2$^+$,5/2$^+$)	0.0	1/2$^{(+)}$		
[x]932.3 5	1.7 4						
[x]956.0 5	2.9 3						
991.3 4	3.4 3	1021.68	(3/2$^-$)	30.59	(3/2$^+$)		
1017.0 10	0.7 2	1048.75	(3/2$^+$,5/2$^+$)	30.59	(3/2$^+$)		
1021.9 6	1.8 3	1021.68	(3/2$^-$)	0.0	1/2$^{(+)}$		
1048.5 10	1.2 3	1048.75	(3/2$^+$,5/2$^+$)	0.0	1/2$^{(+)}$		

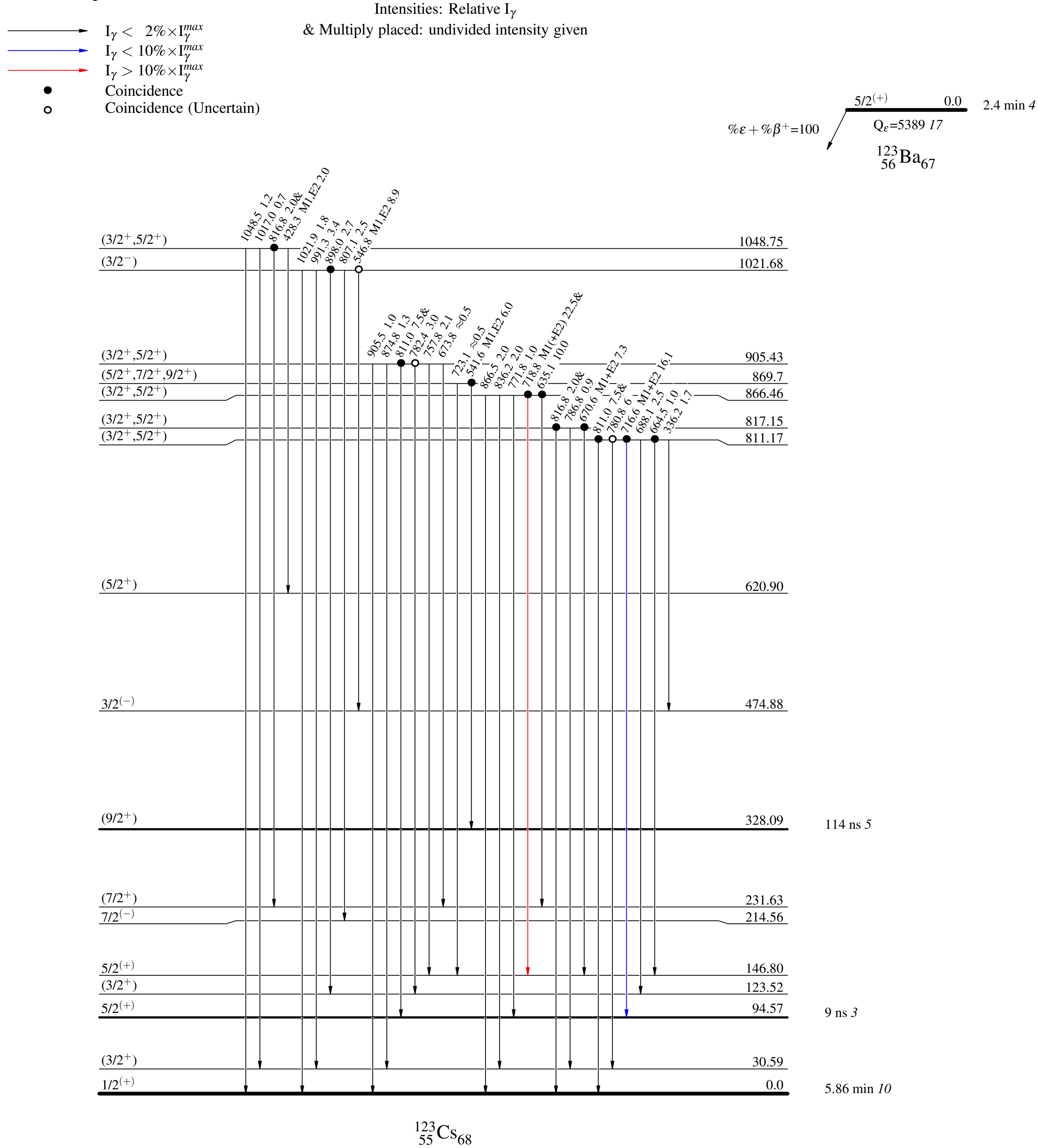
[†] Additional information 1.
[‡] From 2000Gi12, unless otherwise noted.
[#] Observed only in x-γ-coin and (x ray)-ce-coin; intensity is weak (2000Gi12).
[@] Weak.
[&] From ce data (given in comments) in 2000Gi12 , unless otherwise noted. The same assignments are adopted in Adopted Gammas. Some M1+E2 assignments are changed to M1,E2 (by the evaluator) when experimental conversion coefficients overlap with theoretical values of both M1 and E2.
[a] Deduced by the evaluator from ce data in ^{123}Ba ε decay (2000Gi12) using the BrIccMixing code, unless otherwise noted. The same values are adopted in Adopted Gammas.
[b] Multiply placed with undivided intensity.
[x] γ ray not placed in level scheme.

^{123}Ba ε decay 2000Gi12

Decay Scheme

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

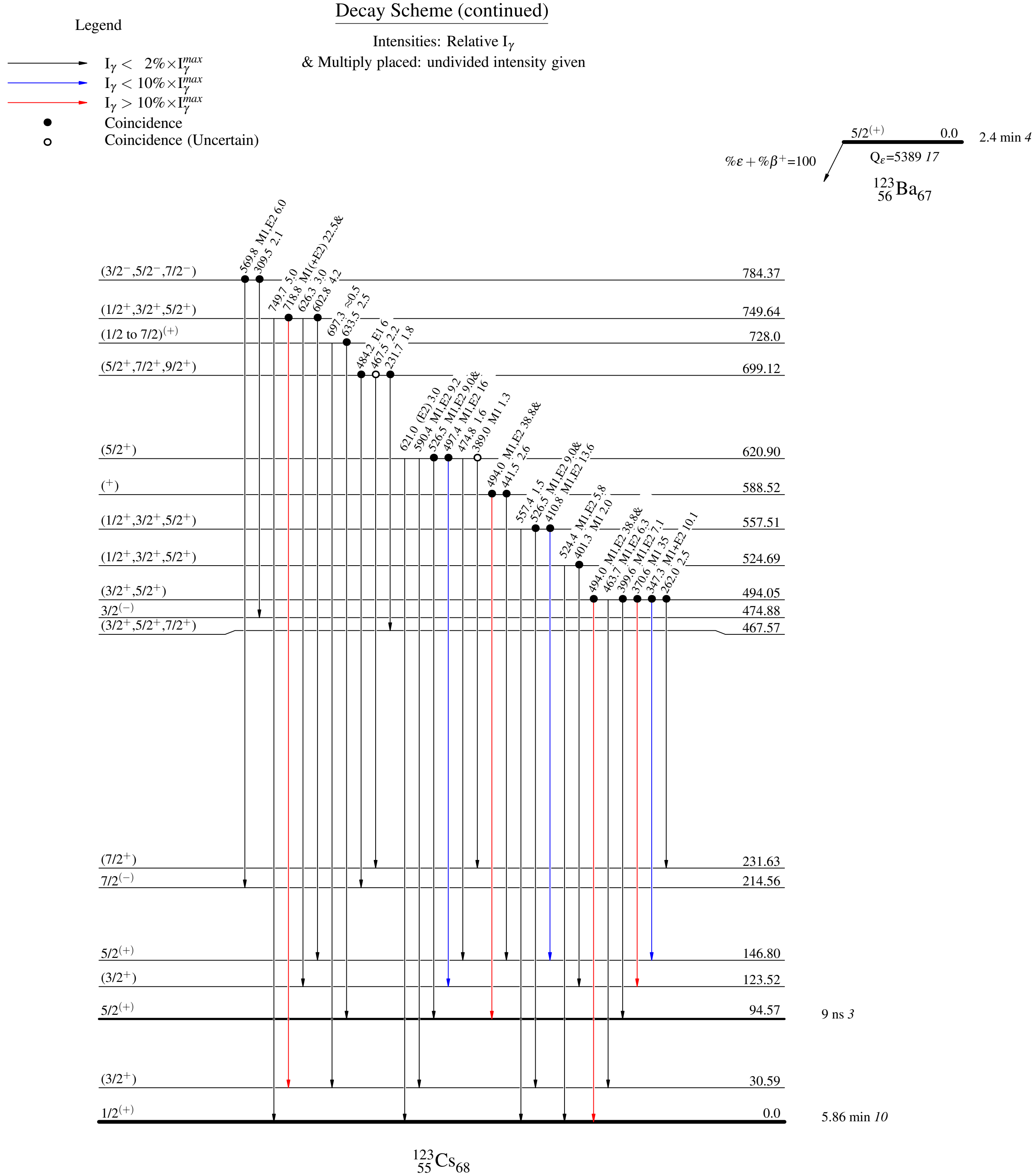
Legend



^{123}Ba ε decay 2000Gi12

Decay Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given



^{123}Ba ε decay 2000Gi12

Decay Scheme (continued)

Intensities: Relative I_γ

& Multiply placed: undivided intensity given

Legend

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