

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Zoltan Elekes and Janos Timar		NDS 129, 191 (2015)	28-Feb-2015

$Q(\beta^-)=-9200$ 40; $S(n)=11630$ 40; $S(p)=4930$ 40; $Q(\alpha)=1130$ 30 [2012Wa38](#)

$S(2n)=20860$ 40, $S(2p)=7440$ 30 ([2012Wa38](#)).

α : [Additional information 1](#).

 ^{128}Ce Levels

Quasiparticle labels used in band configuration assignments, with main components:

a: $\nu_{7/2}[523]$, $\alpha=-1/2$.

b: $\nu_{7/2}[523]$, $\alpha=+1/2$.

e: $\nu_{5/2}[402]$, $\alpha=+1/2$.

f: $\nu_{5/2}[402]$, $\alpha=-1/2$.

A: $\pi_{3/2}[541]$, $\alpha=-1/2$.

B: $\pi_{3/2}[541]$, $\alpha=+1/2$.

C: $\pi_{1/2}[550]$, $\alpha=-1/2$.

D: $\pi_{1/2}[550]$, $\alpha=+1/2$.

E: $\pi_{1/2}[420]$, $\alpha=+1/2$.

F: $\pi_{1/2}[420]$, $\alpha=-1/2$.

G: $\pi_{3/2}[422]$, $\alpha=+1/2$.

H: $\pi_{3/2}[422]$, $\alpha=-1/2$.

Cross Reference (XREF) Flags

A ^{128}Pr ε decay
B (HI,xn γ)

E(level) [†]	J $\pi^{\ddagger}$	T _{1/2} [#]	XREF	Comments
0.0 ^c	0 ⁺	3.93 min 2	AB	$\% \varepsilon + \% \beta^+ = 100$ T _{1/2} : from 2012Au07 .
207.09 ^c 18	2 ⁺	0.30 ns 3	AB	J $^\pi$: stretched E2 γ to 0 ⁺ .
606.77 ^c 23	4 ⁺	8.0 ps +18-14	AB	J $^\pi$: stretched E2 γ to 4 ⁺ .
869.4 ^{&} 3	2 ⁺		AB	J $^\pi$: γ to 0 ⁺ , γ from 4 ⁺ .
1052.4 4	0 ⁺		A	J $^\pi$: E0 transition to 0 ⁺ , disagreement with strong $\beta+\varepsilon$ feeding from 4,5,6.
1138.5 [@] 3	3 ⁺		AB	J $^\pi$: M1+E2 γ to 2 ⁺ , no γ to 0 ⁺ .
1157.1 ^c 3	6 ⁺	1.49 ps 35	AB	J $^\pi$: stretched E2 γ to 4 ⁺ .
1306.0 4	2 ⁺		A	J $^\pi$: γ 's to 0 ⁺ , 4 ⁺ .
1312.1 ^{&} 3	4 ⁺		AB	J $^\pi$: $\Delta J=0$ M1+E2 γ to 4 ⁺ .
1663.4 [@] 4	5 ⁺		B	J $^\pi$: $\Delta J=1$ γ to 4 ⁺ , γ to (3) ⁺ , no γ to 2 ⁺ .
1700.7 4			AB	
1819.3 ^c 3	8 ⁺	0.46 ps 7	B	J $^\pi$: stretched E2 γ to 6 ⁺ .
1847.1 ^{&} 4	6 ⁺		B	J $^\pi$: γ to 4 ⁺ .
1888.8 ^f 4	5 ⁻		B	J $^\pi$: γ to 4 ⁺ , γ from 7 ⁻ .
1979.5 ⁱ 4	4 ⁽⁻⁾		AB	J $^\pi$: $\Delta J=0,1$ γ to 4 ⁺ , γ from 6 ⁽⁻⁾ .
2177.1 ^a 4	6 ⁺		B	J $^\pi$: $\Delta J=0,1$ γ to 6 ⁺ , γ to 4 ⁺ , no γ to 3 ⁺ .
2240.5 3	(5 ⁻)		B	J $^\pi$: M1+E2 γ from 6 ⁻ , no γ to 8 ⁺ .
2244.7 ^f 4	7 ⁻		B	J $^\pi$: E1 γ to 8 ⁺ , E1 γ to 6 ⁺ .
2286.0 ^k 5	5 ⁻		B	J $^\pi$: M1+E2 γ from 6 ⁻ , no γ to 8 ⁺ .
2298.3 [@] 6	7 ⁺		B	J $^\pi$: γ to (5) ⁺ , no γ to 4 ⁺ .

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Adopted Levels, Gammas (continued) ^{128}Ce Levels (continued)

E(level) [†]	J ^π [‡]	T _{1/2} [#]	XREF	Comments
2332.5 ⁱ 4	6 ⁽⁻⁾		B	J ^π : γ to 4 ⁻ , ΔJ=2 γ from 8 ⁽⁻⁾ .
2369.6 6			B	
2384.6 ^j 4	6 ⁻		B	J ^π : M1+E2 γ to 5 ⁻ , ΔJ=2 γ to 4 ⁻ .
2466.3 ^{&} 5	8 ⁺		B	J ^π : γ to 6 ⁺ , ΔJ=0 γ to 8 ⁺ .
2519.7 ^h 4	7 ⁻		B	J ^π : E1 γ to 6 ⁺ , γ to 8 ⁺ .
2530.5 ^c 4	10 ⁺	0.31 ps 7	B	J ^π : stretched E2 γ to 8 ⁺ .
2586.1 ^k 5	7 ⁻		B	J ^π : M1+E2 γ 6 ⁻ , γ to 6 ⁺ .
2659.0 ^a 4	8 ⁺		B	
2700.4 ⁱ 4	8 ⁻		B	J ^π : M1+E2 γ to 7 ⁻ , ΔJ=0 γ to 8 ⁺ .
2735.3 ^f 4	9 ⁻		B	J ^π : γ to 7 ⁻ .
2812.0 ^j 5	8 ⁻		B	J ^π : M1+E2 γ to 7 ⁻ , γ to 6 ⁻ .
2859.6 ^h 5	9 ⁻		B	J ^π : E1 γ to 8 ⁺ , γ to 7 ⁻ .
2869.9 6	10 ⁺		B	J ^π : stretched E2 γ to 8 ⁺ .
2974.6 6			B	
3001.3 [@] 8	9 ⁺		B	
3086.5 ^k 5	9 ⁻		B	J ^π : M1+E2 γ to 8 ⁻ , γ to 7 ⁻ .
3106.5 ^d 4	12 ⁺	1.7 ps 5	B	J ^π : stretched E2 γ to 10 ⁺ .
3130.0 ⁱ 6	10 ⁻		B	J ^π : stretched E2 γ to 8 ⁻ .
3131.6 7	(10 ⁺)		B	J ^π : γ to 10 ⁺ .
3143.6 ^{&} 6	10 ⁺		B	J ^π : γ to 8 ⁺ .
3269.1 ^a 5	10 ⁺		B	
3323.9 ^f 7	11 ⁻		B	J ^π : stretched E2 γ to 9 ⁻ .
3383.2 ^h 7	(11 ⁻)		B	
3397.7 ^j 6	10 ⁻		B	J ^π : γ's to 8 ⁻ , 9 ⁻ .
3478.0 ^b 5	12 ⁺		B	J ^π : stretched E2 to 10 ⁺ .
3585.0 8	(12 ⁺)		B	
3666.4 ^d 5	14 ⁺	1.5 ps 4	B	J ^π : stretched E2 γ to 12 ⁺ .
3722.9 ^k 6	11 ⁻		B	J ^π : γ's to 9 ⁻ , 10 ⁻ .
3727.1 ⁱ 8	12 ⁻		B	J ^π : Q γ to 10 ⁻ .
3809.5 ^{&} 7	(12 ⁺)		B	J ^π : γ to 10 ⁺ .
3965.8 ^f 8	(13 ⁻)		B	J ^π : stretched E2 γ to (11 ⁻).
3996.3 ^a 6	12 ⁺		B	
4086.2 ^j 7	12 ⁻		B	J ^π : γ's γ to 10 ⁻ , 11 ⁻ .
4102.4 ^h 9	(13 ⁻)		B	
4120.8 7			B	
4281.6 ^b 7	14 ⁺	0.90 ps 14	B	J ^π : γ to 12 ⁺ .
4356.8 ^d 7	16 ⁺		B	J ^π : stretched E2 γ to 14 ⁺ .
4404.6 ^k 7	13 ⁻		B	J ^π : γ's to 11 ⁻ , 13 ⁻ .
4476.5 ⁱ 9	14 ⁻		B	J ^π : stretched E2 to 12 ⁻ .
4544.0 ^{&} 9	(14 ⁺)		B	J ^π : γ to 12 ⁺ .
4595.0 ^a 6	14 ⁺		B	
4688.1 ^f 9	15 ⁻		B	J ^π : stretched E2 γ to 13 ⁻ .
4791.8 ^j 8	(14 ⁻)		B	J ^π : γ to 12 ⁻ .
4846.8 7			B	
4935.6 ^h 10	(15 ⁻)		B	
5069.1 7			B	
5072.7 ^k 9	(15 ⁻)		B	J ^π : γ to 13 ⁻ .
5126.8 ^b 8	16 ⁺		B	

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Adopted Levels, Gammas (continued) ^{128}Ce Levels (continued)

E(level) [†]	J π [‡]	T _{1/2} [#]	XREF	Comments
5184.5 ^d 8	18 ⁺	0.21 ps 3	B	
5192.4 ^a 9	16 ⁺		B	
5301.7 ⁱ 10	(16 ⁻)		B	J π : γ to 14 ⁻ .
5352.0 ^{&} 14	(16 ⁺)		B	
5479.0 ^f 10	17 ⁻		B	
5854.4 ^a 14	18 ⁺	0.12 ps 3	B	
6005.8 ^b 13	18 ⁺		B	
6142.7 ^d 10	20 ⁺		B	J π : γ to 18 ⁺ .
6198.8 ⁱ 12	(18 ⁻)		B	
6225.0 ^{&} 17	(18 ⁺)		B	
6316.9 ^e 11	19 ⁻		B	
6376.0 ^f 14	19 ⁻		B	
6501.0 ^g 14	(19 ⁻)		B	
6605.4 ^a 17	20 ⁺		B	
6929.8 ^b 17	20 ⁺		B	
7175.5 ^e 13	21 ⁻	<0.28 ps	B	
7219.4 ^d 11	22 ⁺		B	
7296.0 ^f 18	21 ⁻		B	
7380.0 ^g 18	(21 ⁻)		B	
7462.4 ^a 20	22 ⁺		B	
7911.8 ^b 20	22 ⁺		B	
8139.5 ^e 24	23 ⁻		B	
8361.0 ^g 20	(23 ⁻)		B	
8405.4 ^d 12	24 ⁺		B	
8432.4 ^a 22	24 ⁺		B	
8956.8 ^b 22	24 ⁺		B	
9219 ^e 3	(25 ⁻)		B	
9472.0 ^g 23	(25 ⁻)		B	
9514.5 ^a 24	26 ⁺		B	
9695.4 ^d 23	(26 ⁺)		B	
10076.9 ^b 24	26 ⁺		B	
10403 ^e 3	(27 ⁻)		B	
10698 ^a 3	(28 ⁺)		B	
11078 ^d 3	(28 ⁺)		B	
11271 ^b 3	28 ⁺		B	
11975 ^a 3	(30 ⁺)		B	
12541 ^b 3	(30 ⁺)		B	
12547 ^d 4	(30 ⁺)		B	
13333 ^a 3	(32 ⁺)		B	
13875 ^b 3	(32 ⁺)		B	
14762 ^a 4	(34 ⁺)		B	
16265 ^a 4	(36 ⁺)		B	
17839 ^a 4	(38 ⁺)		B	

[†] From a least-squares fit to the adopted E γ 's by the evaluator.[‡] From assignment to a band in addition to the argument given, except for levels populated by ^{128}Pr ε decay.

Adopted Levels, Gammas (continued) ^{128}Ce Levels (continued)# From (HI,xn γ), unless otherwise noted.@ Band(A): γ band, $\alpha=1$.& Band(B): γ band, $\alpha=0$.^a Band(C): possible β band with coupled AB configuration above spin 12.^b Band(D): possible triaxial ab band.^c Band(E): g.s. band.^d Band(F): AB band.^e Band(G): possible AFef band.^f Band(H): possible AF band.^g Band(I): possible AFBC band.^h Band(J): possible AH band.ⁱ Band(K): possible AG band.^j Band(L): possible ae band.^k Band(M): possible af band. $\gamma(^{128}\text{Ce})$

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ	E_f	J_f^π	Mult. @	$\delta^\&a$	α	Comments
207.09	2 ⁺	207.13 [#] 19	100	0.0	0 ⁺	E2		0.1634	B(E2)(W.u.)=111 12
606.77	4 ⁺	399.63 [#] 17	100	207.09	2 ⁺	E2		0.0203	B(E2)(W.u.)=1.8×10 ² 4
869.4	2 ⁺	662.3 [#] 3	100 18	207.09	2 ⁺				
		869.4 5	56 11	0.0	0 ⁺				
1052.4	0 ⁺	845.3 [‡] 3	100.0 18	207.09	2 ⁺				
		1052 1	0.06 2	0.0	0 ⁺	E0			
1138.5	3 ⁺	531.5 5	7.1 21	606.77	4 ⁺				
		931.6 [#] 3	100 8	207.09	2 ⁺	M1+E2	4.2 +24-15	0.00241 8	
1157.1	6 ⁺	550.39 [#] 17	100	606.77	4 ⁺	E2		0.00834	B(E2)(W.u.)=1.9×10 ² 5
1306.0	2 ⁺	699.4 [‡] 4	38 17	606.77	4 ⁺				
		1099.0 [‡] 4	100 14	207.09	2 ⁺				
		1305 [‡] 1		0.0	0 ⁺				
1312.1	4 ⁺	442.9 5	20 3	869.4	2 ⁺				
		705.3 [#] 2	100 7	606.77	4 ⁺	M1+E2		0.00664	
		1105.0 5	18 3	207.09	2 ⁺				
1663.4	5 ⁺	525.2 5	88 8	1138.5	3 ⁺				
		1056.4 5	100 9	606.77	4 ⁺	D+Q			
1700.7		1093.9 [#] 3	100	606.77	4 ⁺				
1819.3	8 ⁺	662.2 2	100	1157.1	6 ⁺	E2		0.00520	B(E2)(W.u.)=2.5×10 ² 4
1847.1	6 ⁺	534.9 5	100 5	1312.1	4 ⁺				
		690.1 5	25 3	1157.1	6 ⁺				
1888.8	5 ⁻	731.8 [#] 4	100 4	1157.1	6 ⁺	D			
		1282.0 5	9.4 14	606.77	4 ⁺				
1979.5	4 ⁽⁻⁾	1372.7 [#] 3	100	606.77	4 ⁺	D			
2177.1	6 ⁺	1020.2 5	100 9	1157.1	6 ⁺	D+Q			
		1570.0 5	52 7	606.77	4 ⁺				
2240.5	(5 ⁻)	351.8 5	57 12	1888.8	5 ⁻				
		393.6 5	29 4	1847.1	6 ⁺				
		576.9 5	19 6	1663.4	5 ⁺				
		928.4 5	50 9	1312.1	4 ⁺				
		1083.4 5	39 6	1157.1	6 ⁺				
		1633.7 5	100 7	606.77	4 ⁺				

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Adopted Levels, Gammas (continued)

$\gamma(^{128}\text{Ce})$ (continued)									
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ	E_f	J_f^π	Mult. @	$\delta\&a$	α	Comments
2244.7	7 ⁻	355.9 5	100 4	1888.8	5 ⁻				
		425.1 5	85 4	1819.3	8 ⁺	E1		0.00524	
		1087.5 5	12.8 13	1157.1	6 ⁺	E1		7.23×10 ⁻⁴	
2286.0	5 ⁻	1128.7 5	100	1157.1	6 ⁺				
2298.3	7 ⁺	634.9 5	100	1663.4	5 ⁺				
2332.5	6 ⁽⁻⁾	352.7 5	51 3	1979.5	4 ⁽⁻⁾				
		1175.3 5	100 5	1157.1	6 ⁺	D			
2369.6		1212.5 5	100	1157.1	6 ⁺				
2384.6	6 ⁻	98.5 5	26 5	2286.0	5 ⁻	M1+E2	-0.18 10	1.27 5	
		144.0 5	36 5	2240.5	5 ⁽⁻⁾	M1+E2	-0.45 20	0.447 21	
		405.1 5	100 9	1979.5	4 ⁽⁻⁾	(E2)		0.0195	
		495.8 5	97 14	1888.8	5 ⁻				
		537.5 5	36 8	1847.1	6 ⁺				
		721.5 5	15 7	1663.4	5 ⁺				
		1227.7 5	66 8	1157.1	6 ⁺	(E1)		6.22×10 ⁻⁴	
2466.3	8 ⁺	619.2 5	100 6	1847.1	6 ⁺				
		647.4 5	68 5	1819.3	8 ⁺	(M1+E2)		0.00818	
2519.7	7 ⁻	275.0 5	11 3	2244.7	7 ⁻				
		700.3 5	21 6	1819.3	8 ⁺				
		1362.5 5	100 6	1157.1	6 ⁺	E1		6.00×10 ⁻⁴	
2530.5	10 ⁺	711.1 2	100	1819.3	8 ⁺	E2		0.00437	B(E2)(W.u.)=2.6×10 ² 6
2586.1	7 ⁻	201.6 5	100 3	2384.6	6 ⁻	M1+E2	-0.05 10	0.167 3	
		300.1 5	3.6 12	2286.0	5 ⁻				
2659.0	8 ⁺	481.7 5	100 10	2177.1	6 ⁺				
		839		1819.3	8 ⁺				
		1502.2 5	100 9	1157.1	6 ⁺				
2700.4	8 ⁻	180.6 5	4.9 14	2519.7	7 ⁻				
		368.0 5	100 6	2332.5	6 ⁽⁻⁾	Q			
		455.7 5	48 5	2244.7	7 ⁻	M1+E2		0.0196	
		881.3 5	80 7	1819.3	8 ⁺	D			
2735.3	9 ⁻	205		2530.5	10 ⁺				
		490.6 2	100	2244.7	7 ⁻				
		917		1819.3	8 ⁺				
2812.0	8 ⁻	226.0 5	100 4	2586.1	7 ⁻	M1+E2	-0.12 10	0.1225 19	
		427.6 5	16.8 20	2384.6	6 ⁻				
		479.2 5	3.5 17	2332.5	6 ⁽⁻⁾				
2859.6	9 ⁻	339.8 5	96 8	2519.7	7 ⁻				
		1040.3 5	100 7	1819.3	8 ⁺	E1		7.85×10 ⁻⁴	
2869.9	10 ⁺	339.3 ^c 5	63 6	2530.5	10 ⁺				
		1050.6 5	100 8	1819.3	8 ⁺	E2		0.00182	
2974.6		1155.3 5	100	1819.3	8 ⁺				
3001.3	9 ⁺	703.0 5	100	2298.3	7 ⁺				
3086.5	9 ⁻	274.4 5	100 5	2812.0	8 ⁻	M1+E2	-0.09 6	0.0728	
		500.5 5	6 3	2586.1	7 ⁻				
3106.5	12 ⁺	576.0 2	100	2530.5	10 ⁺	E2		0.00740	B(E2)(W.u.)=1.4×10 ² 4
3130.0	10 ⁻	270.4 5	24.3 19	2859.6	9 ⁻				
		429.6 5	100 5	2700.4	8 ⁻	E2		0.01649	
3131.6	(10 ⁺)	601.1 5	100	2530.5	10 ⁺				
3143.6	10 ⁺	677.8 5	100	2466.3	8 ⁺				
3269.1	10 ⁺	610.0 5	100 7	2659.0	8 ⁺				
		802.8 5	36 5	2466.3	8 ⁺				
3323.9	11 ⁻	588.7 5	100	2735.3	9 ⁻	E2		0.00700	
3383.2	(11 ⁻)	523.6 5	100	2859.6	9 ⁻				
3397.7	10 ⁻	311.1 5	100 6	3086.5	9 ⁻				
		585.7 5	63 16	2812.0	8 ⁻				

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Adopted Levels, Gammas (continued)

$\gamma(^{128}\text{Ce})$ (continued)								
$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ	E_f	J_f^π	Mult. [@]	α	Comments
3478.0	12 ⁺	371.5 5	21 3	3106.5	12 ⁺	D		
		947.2 5	100 8	2530.5	10 ⁺	E2	0.00227	
3585.0	(12 ⁺)	453.4 5	100	3131.6	(10 ⁺)			
3666.4	14 ⁺	559.9 2	100	3106.5	12 ⁺	E2	0.00797	B(E2)(W.u.)=1.8×10 ² 5
3722.9	11 ⁻	325.2 5	81 8	3397.7	10 ⁻			
		636.4 5	100 12	3086.5	9 ⁻			
3727.1	12 ⁻	597.1 5	100	3130.0	10 ⁻	Q		
3809.5	(12 ⁺)	666.2 5	100	3143.6	10 ⁺			
3965.8	(13 ⁻)	641.9 5	100	3323.9	11 ⁻	E2	0.00562	
3996.3	12 ⁺	517		3478.0	12 ⁺			
		727.2 5	100	3269.1	10 ⁺	Q		
		853		3143.6	10 ⁺			
4086.2	12 ⁻	363.0 5	<67	3722.9	11 ⁻			
		688.6 5	100 20	3397.7	10 ⁻			
4102.4	(13 ⁻)	719.2 5	100	3383.2	(11 ⁻)			
4120.8		1014.3 5	100	3106.5	12 ⁺			
4281.6	14 ⁺	615		3666.4	14 ⁺			
		803.7 5	100	3478.0	12 ⁺			
4356.8	16 ⁺	690.2 5	100	3666.4	14 ⁺	E2	0.00470	
4404.6	13 ⁻	318.0 5	<60	4086.2	12 ⁻			
		682.0 5	100 16	3722.9	11 ⁻			
4476.5	14 ⁻	749.4 5	100	3727.1	12 ⁻	E2	0.00386	
4544.0	(14 ⁺)	734.5 5	100	3809.5	(12 ⁺)			
4595.0	14 ⁺	598.4 5	100	3996.3	12 ⁺	Q		
		787		3809.5	(12 ⁺)			
		929		3666.4	14 ⁺			
4688.1	15 ⁻	722.4 5	100	3965.8	(13 ⁻)	E2	0.00421	
4791.8	(14 ⁻)	705.6 5	100	4086.2	12 ⁻			
4846.8		1180.4 5	100	3666.4	14 ⁺			
4935.6	(15 ⁻)	833.2 5	100	4102.4	(13 ⁻)			
5069.1		1402.7 5	100	3666.4	14 ⁺			
5072.7	(15 ⁻)	668.1 5	100	4404.6	13 ⁻			
5126.8	16 ⁺	845.2 5	100	4281.6	14 ⁺			
5184.5	18 ⁺	827.6 5	100	4356.8	16 ⁺	(E2)	0.00307	B(E2)(W.u.)=1.8×10 ² 3
5192.4	16 ⁺	598		4595.0	14 ⁺			
		835		4356.8	16 ⁺			
5301.7	(16 ⁻)	825.2 5	100	4476.5	14 ⁻			
5352.0	(16 ⁺)	808	100	4544.0	(14 ⁺)			
5479.0	17 ⁻	790.9 5	100	4688.1	15 ⁻			
5854.4	18 ⁺	662		5192.4	16 ⁺			
6005.8	18 ⁺	879 ^b		5126.8	16 ⁺			
6142.7	20 ⁺	958.2 5	100	5184.5	18 ⁺			
6198.8	(18 ⁻)	897.1 5	100	5301.7	(16 ⁻)			
6225.0	(18 ⁺)	873	100	5352.0	(16 ⁺)			
6316.9	19 ⁻	839 2		5479.0	17 ⁻			
		1132		5184.5	18 ⁺			
6376.0	19 ⁻	897	100	5479.0	17 ⁻			
6501.0	(19 ⁻)	1022	100	5479.0	17 ⁻			
6605.4	20 ⁺	751	100	5854.4	18 ⁺			
6929.8	20 ⁺	924	100	6005.8	18 ⁺			
7175.5	21 ⁻	858 2		6316.9	19 ⁻			
		1033		6142.7	20 ⁺			
7219.4	22 ⁺	1076.7 5	100	6142.7	20 ⁺	[E2]		B(E2)(W.u.)>36
7296.0	21 ⁻	920	100	6376.0	19 ⁻			
7380.0	(21 ⁻)	879 ^b	100	6501.0	(19 ⁻)			

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Adopted Levels, Gammas (continued) $\gamma(^{128}\text{Ce})$ (continued)

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ	E_f	J_f^π	$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ	E_f	J_f^π
7462.4	22 ⁺	857	100	6605.4	20 ⁺	10403	(27 ⁻)	1184 ^b	100	9219	(25 ⁻)
7911.8	22 ⁺	982	100	6929.8	20 ⁺	10698	(28 ⁺)	1184 ^b	100	9514.5	26 ⁺
8139.5	23 ⁻	964 2	100	7175.5	21 ⁻	11078	(28 ⁺)	1383 2	100	9695.4	(26 ⁺)
8361.0	(23 ⁻)	981	100	7380.0	(21 ⁻)	11271	28 ⁺	1194	100	10076.9	26 ⁺
8405.4	24 ⁺	1186.0 5	100	7219.4	22 ⁺	11975	(30 ⁺)	1277	100	10698	(28 ⁺)
8432.4	24 ⁺	970	100	7462.4	22 ⁺	12541	(30 ⁺)	1270	100	11271	28 ⁺
8956.8	24 ⁺	1045	100	7911.8	22 ⁺	12547	(30 ⁺)	1469	100	11078	(28 ⁺)
9219	(25 ⁻)	1079	100	8139.5	23 ⁻	13333	(32 ⁺)	1358	100	11975	(30 ⁺)
9472.0	(25 ⁻)	1111	100	8361.0	(23 ⁻)	13875	(32 ⁺)	1334	100	12541	(30 ⁺)
9514.5	26 ⁺	1082	100	8432.4	24 ⁺	14762	(34 ⁺)	1429	100	13333	(32 ⁺)
9695.4	(26 ⁺)	1290 2	100	8405.4	24 ⁺	16265	(36 ⁺)	1503	100	14762	(34 ⁺)
10076.9	26 ⁺	1120	100	8956.8	24 ⁺	17839	(38 ⁺)	1573	100	16265	(36 ⁺)

[†] From (HI,xn γ), unless otherwise noted.

[‡] From ^{128}Pr ε decay.

weighted average from ^{128}Pr ε decay and (HI,xn γ).

@ From (HI,xn γ).

& From (HI,xn γ), unless otherwise noted.

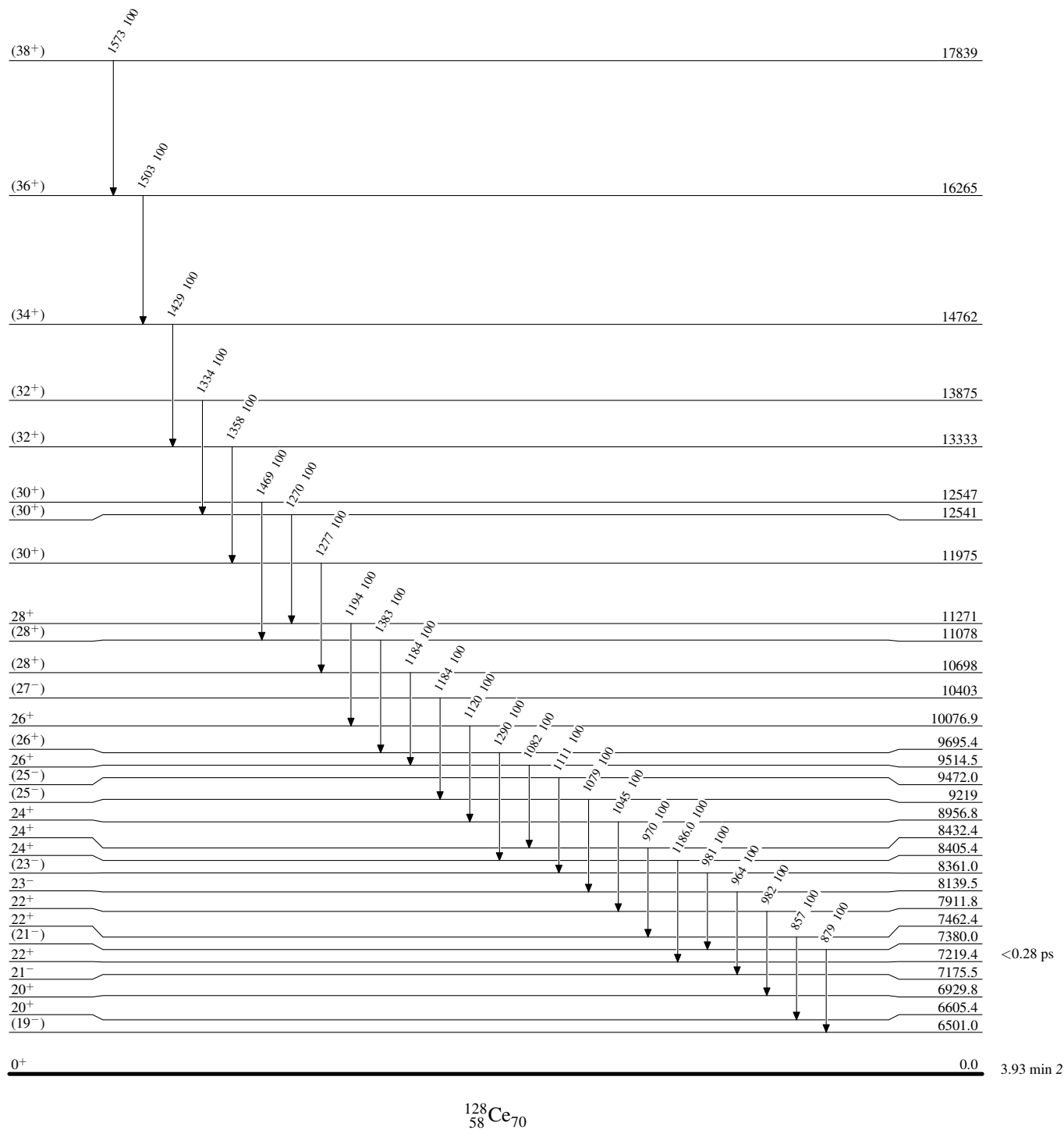
^a If No value given it was assumed $\delta=0.10$ for E2/M1, $\delta=1.00$ for E3/M2 and $\delta=0.10$ for the other multipolarities.

^b Multiply placed.

^c Placement of transition in the level scheme is uncertain.

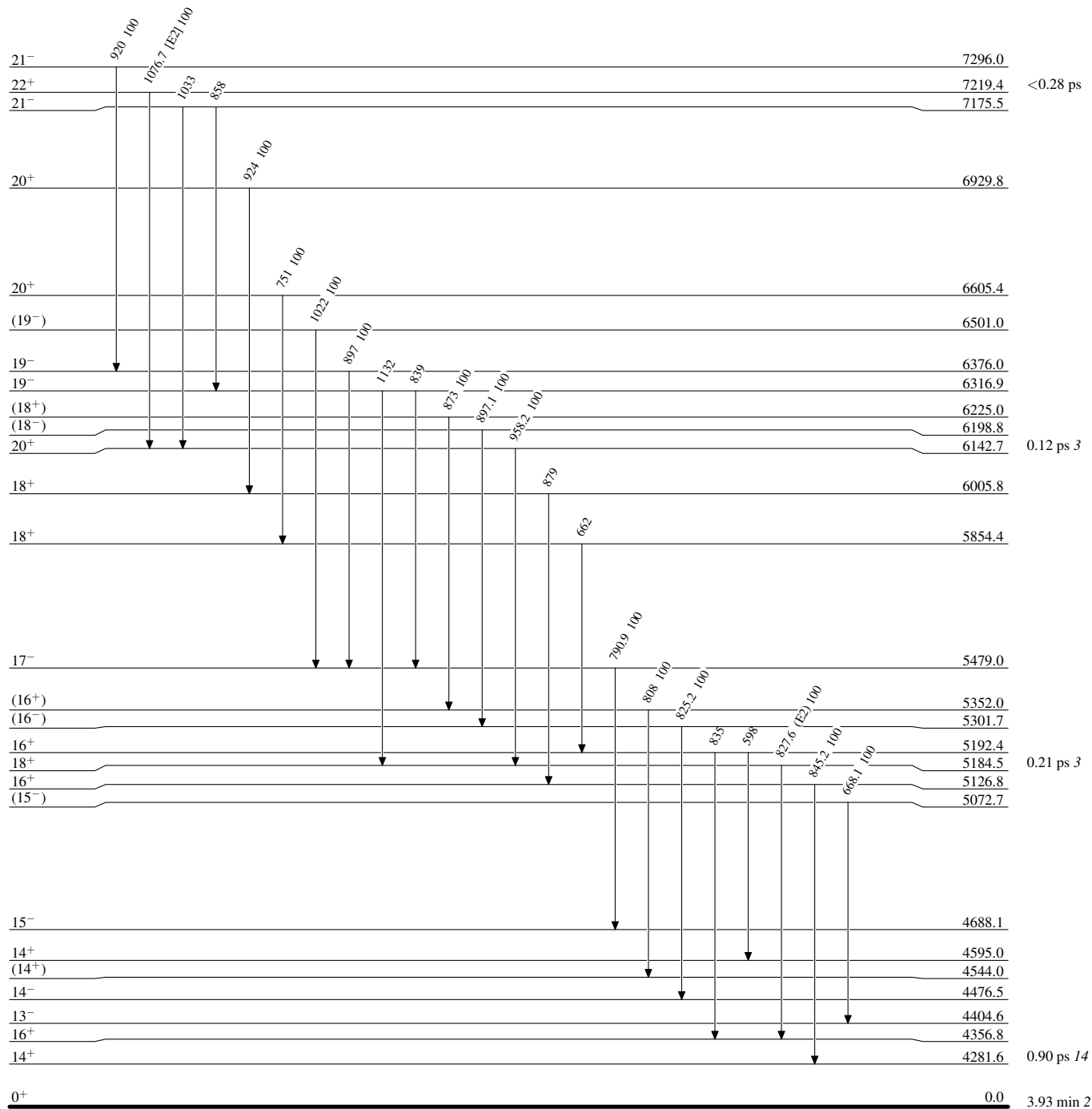
Adopted Levels, GammasLevel Scheme

Intensities: Relative photon branching from each level



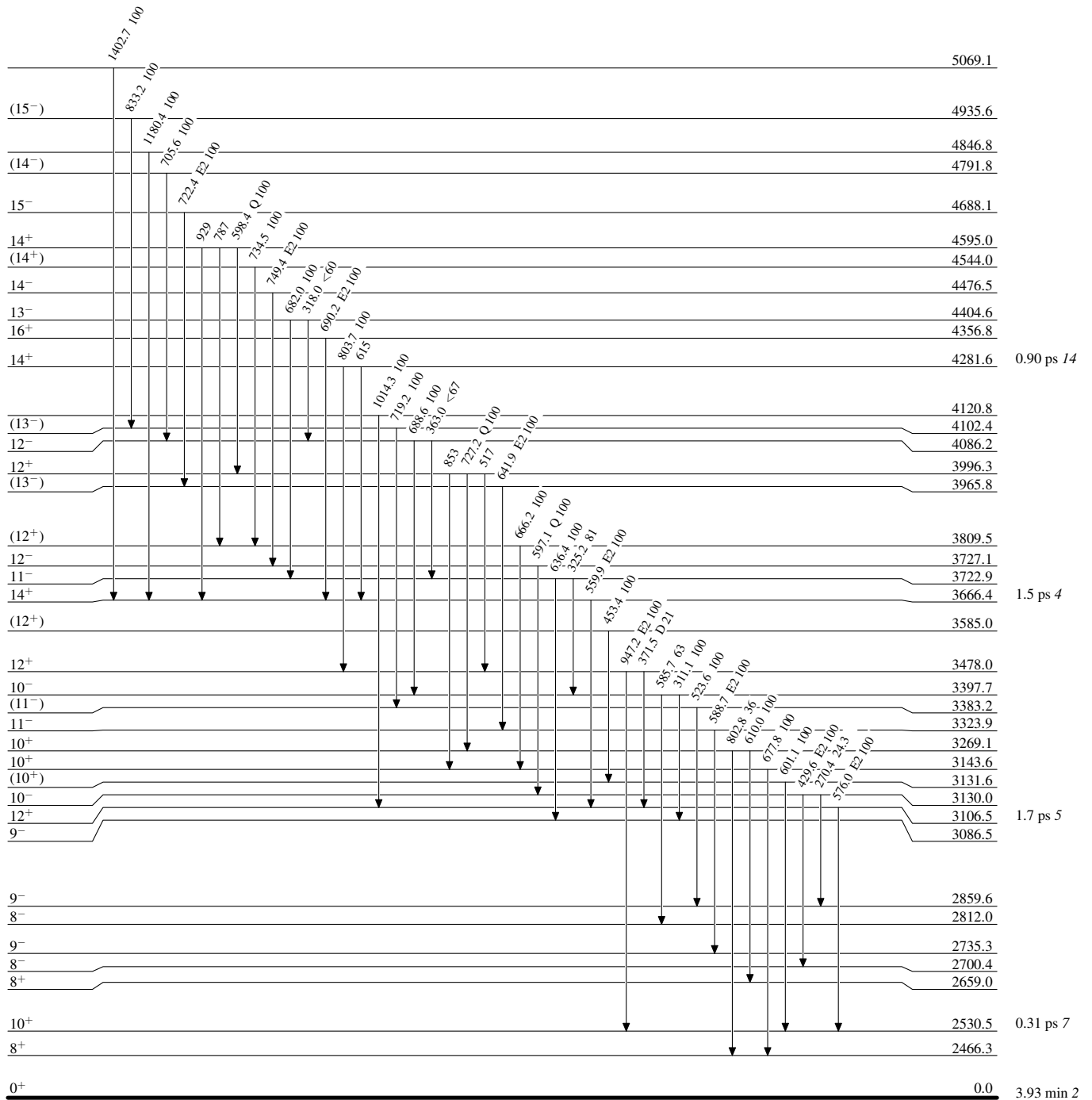
Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level



Adopted Levels, GammasLevel Scheme (continued)

Intensities: Relative photon branching from each level

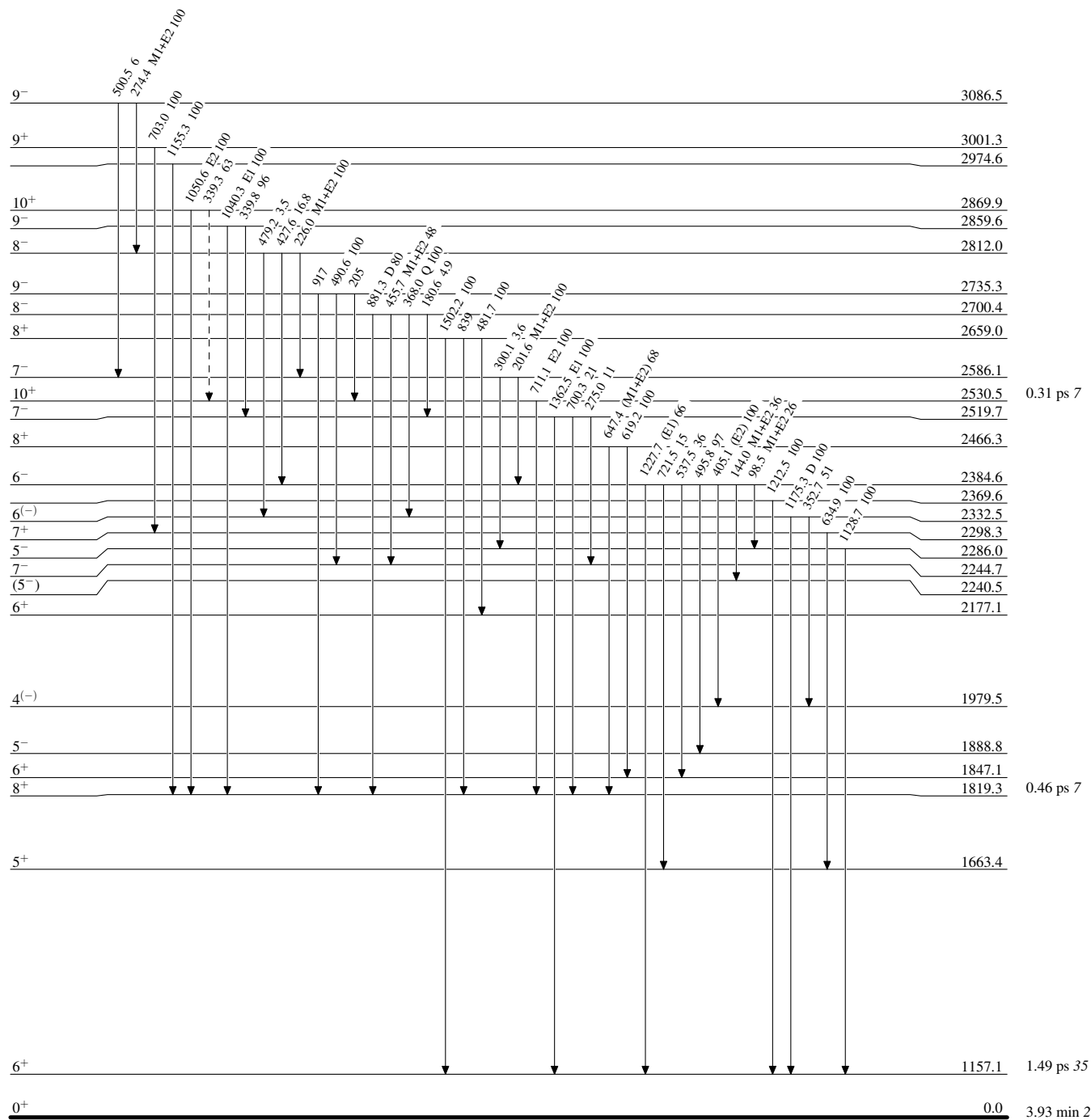


Adopted Levels, Gammas

Legend

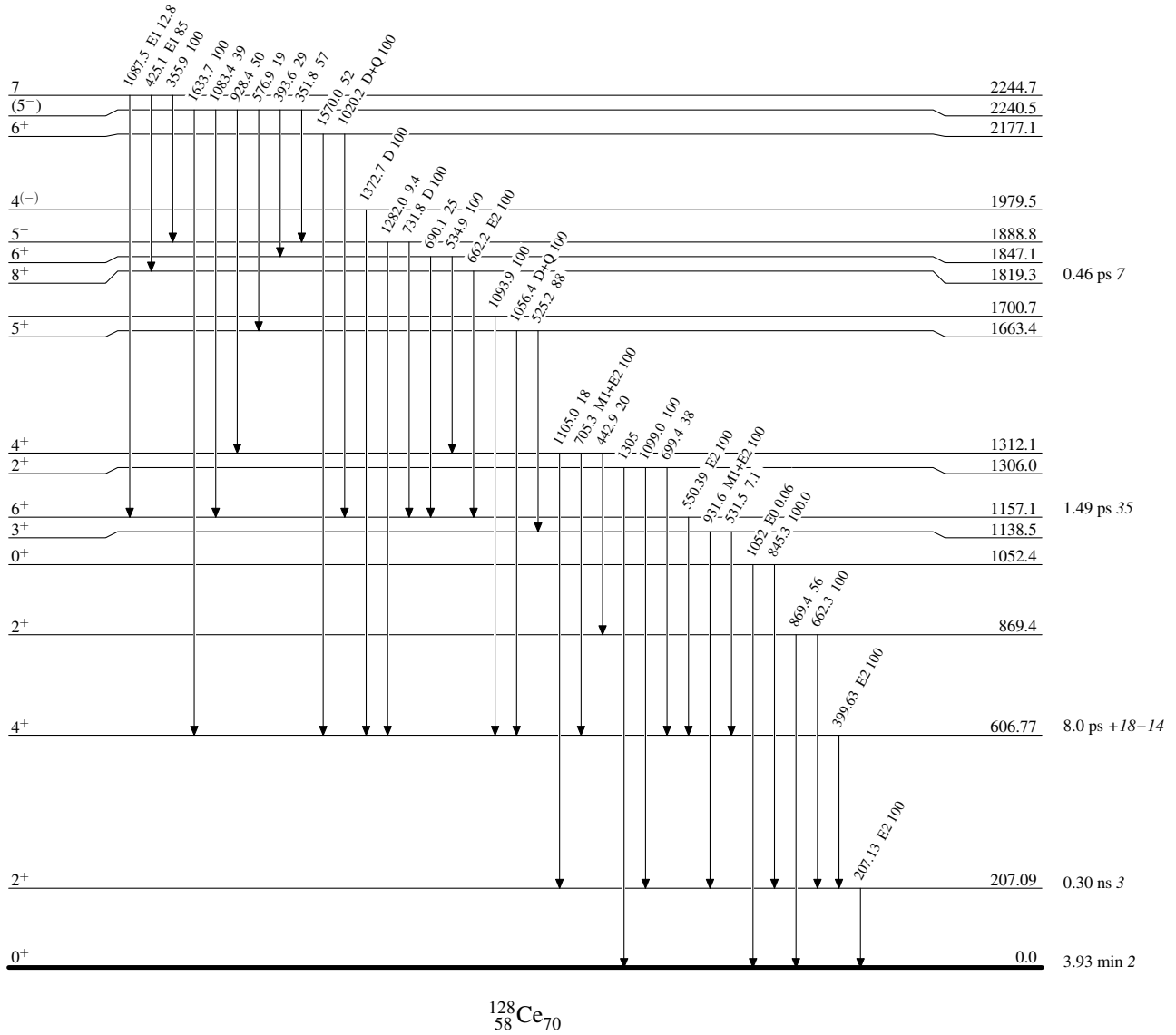
Level Scheme (continued)

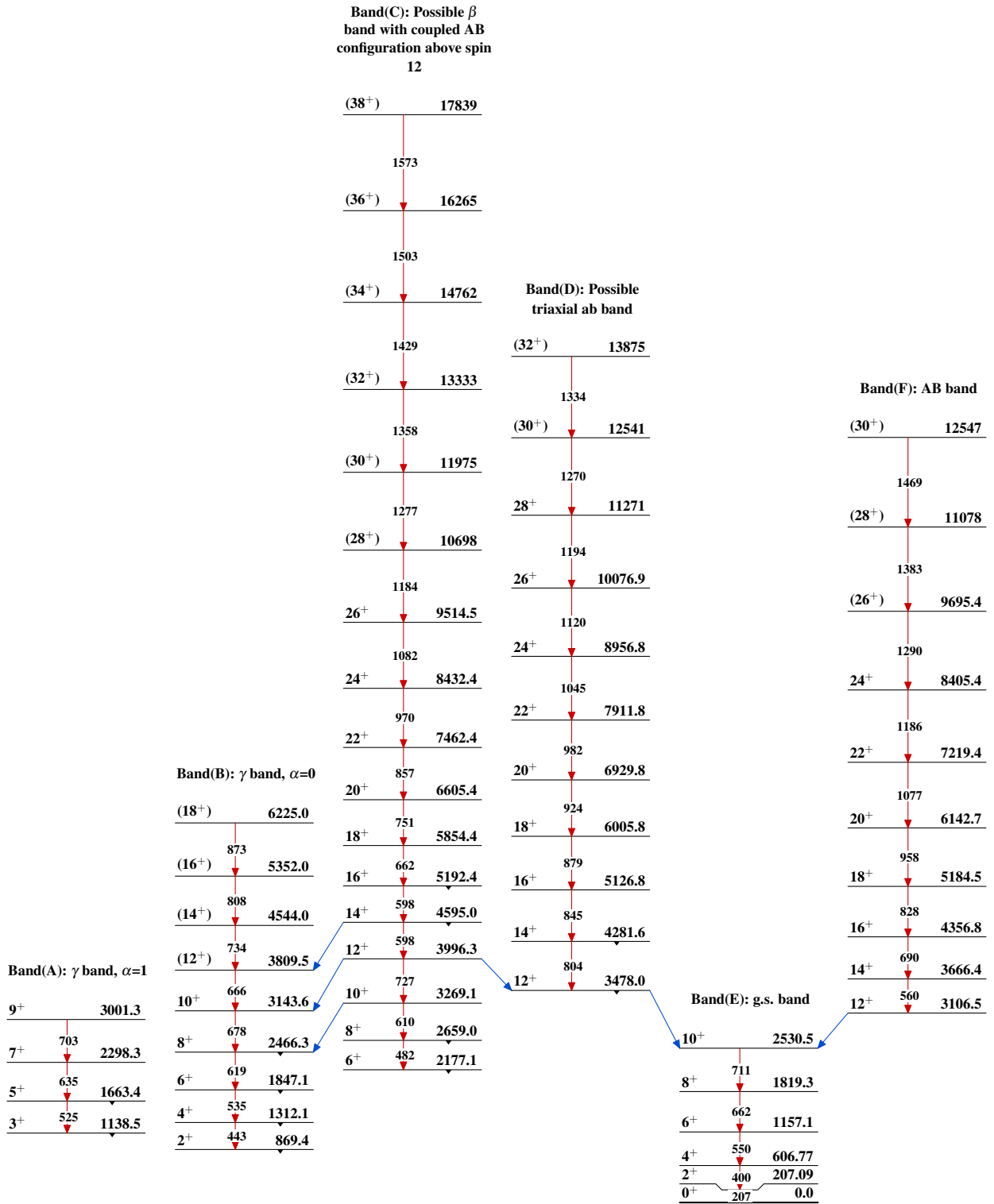
Intensities: Relative photon branching from each level

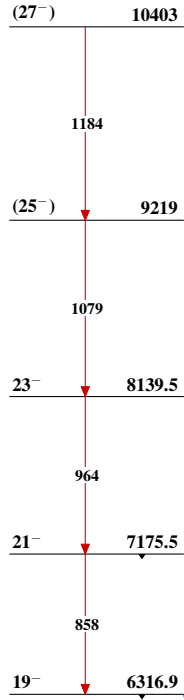
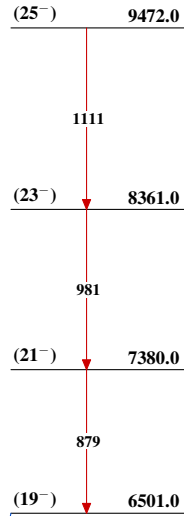
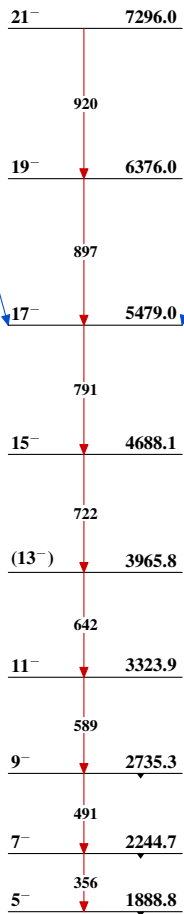
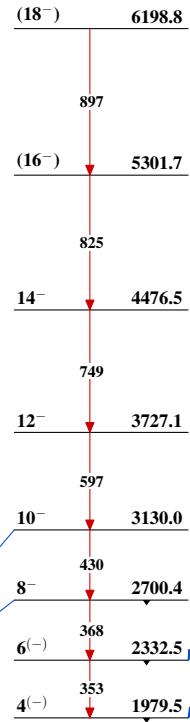
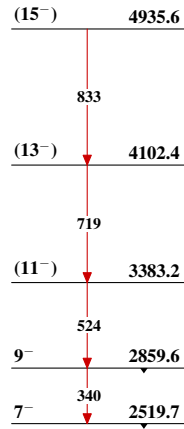
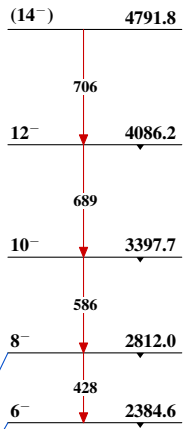
-----► γ Decay (Uncertain)

Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Adopted Levels, Gammas (continued)Band(G): Possible AFef
bandBand(I): Possible AFBC
bandBand(H): Possible AF
bandBand(K): Possible AG
bandBand(J): Possible AH
bandBand(L): Possible ae
band

Adopted Levels, Gammas (continued)

