¹³⁴₅₈Ce₇₆-1

134 Ba(α ,4n γ), 135 Ba(α ,5n γ) **1984Mu08**

History								
Туре	Author	Citation	Literature Cutoff Date					
Full Evaluation	A. A. Sonzogni	NDS 103, 1 (2004)	31-Jul-2004					

1984Mu08: 134 Ba(α,4nγ) E=60 MeV, 135 Ba(α,5nγ) E=70 MeV, 136 Ba(α,6nγ) E=85 MeV. Measured γγ, γ-electron, γ(θ). 1982Ze04: 122 Sn(16 O,4nγ) E=75,80 MeV. Measured γγ, g-factors, T_{1/2}. Others: 1968Wa14, 1974De12, 1977Hu10, 1981Si02, 1980Go14, 1984Hi02.

¹³⁴Ce Levels

The level scheme is that of 1984Mu08. All transitions are assigned from $\gamma\gamma$ -coincidence spectra. The spin and parity assignments are based on transition multipolarities, $\gamma(\theta)$ and systematics.

All transitions, except those deexciting the 10^+ isomer, are prompt within the limit of ≈ 3 ns.

E(level)	J^{π}	$T_{1/2}^{\dagger}$	Comments
0.0‡	0^{+}	3.16 d 4	
409.09 [‡] 23	2^{+}	23 ps 2	$T_{1/2}$: 25 ps 6 (1974De12).
965.71 [#] 23	2^{+}		
1048.5 [‡] <i>3</i>	4+	3.3 ps 6	T _{1/2} : 4.5 ps 19 (1974De12).
1382.6 [#] 3	(3 ⁺)		
1643.4 [#] 3	4+		
1811.7 3	(4)		
1863.0 [‡] 4	6+	2.8 ps 9	$T_{1/2}$: <0.7 ps (1974De12).
2027.2 3	(5 ⁺)		
2050.2" 4	(5^+)		
2158.44	(5)		Possible Configuration $-((y, 11/2)^{-1}(y, y, y)^{-1})5^{-}(1094My09)$
2246.6? 5	(5)		$10551016 \text{ Configuration} = ((v \ 11/2) \ (v \ 51/2) \)5 \ (1764444006).$
2303.8 [#] 4	6+		
2359.1 4	(6 ⁻)		
2361.4 4	(6^{+})		
2473.9 ^{<i>a</i>} 4	(6^{-})		
2303.84	(7)		Possible Configuration = $((y, b, y)^{-1}(y, d, y)^{-1})7^{-}$ (1084 My08)
2768.1.5	(7)		$POSSIONE Configuration=((v n_{1/2}) (v u_{3/2})) (1984) (1984) (108).$
2811.1 [‡] 4	8+	<0.7 ps	
2820.9 5	(7)	ion Po	
2896.5 ^a 4	(8-)		
2969.4 4	(8)		
3017.6# 4	8 ⁺		
30/3.0 5	(9)		
$3143.4^{\circ} 4$ $3158.2^{\circ} 4$	(9) (9^{-})		
3138.2 + 3208.5 % /	() 10 ⁺	308 ns 5	$\Omega_{-\pm1}$ 32 12 (1983Da20 1986Da22); Configuration = (y h + y)^{-2}
5208.5 4	10	500 115 5	$T_{1/2}$: from 1983Da29. Other: 336 ns 14 (1980Go14). g: From 1983Da29 (DPAD). Other: -0.19 1 (1980Go14). Q: relative to Q(¹³⁸ Ce(10 ⁺), 3538)=0.77 (calc).
3381.3 ^b 6	(10)		
3634.2 ^{ab} 5	(10 ⁻)		
3655.5 <mark>b</mark> 10	(10)		
3719.3 [@] 4	10^{+}	5.8 ps 10	Configuration= $(\nu h_{11/2})^{-2}$

¹³⁴ Ba(α ,4n γ), ¹³⁵ Ba(α ,5n γ)	1984Mu08 (continued)
--	----------------------

					¹³⁴ Ce Levels (continued)			
E(level)	J^{π}	E(level)	\mathbf{J}^{π}	T _{1/2} †	E(level)	J^{π}	T _{1/2} †	
3817.6? [‡] 5	(10 ⁺)	4173.3 ^b 14	(11)		5492.5 7	(15)		
3851.7 <mark>b</mark> 10	(10)	4183.6 [@] 7	12^{+}	11.0 ps 13	5496.0? 9			
3945.2 ^b 5	(11)	4346.3 ^b 10			5725.9 [@] 9	16+	1.5 ps 5	
3973.3 ^{@b} 5	$(11)^{+}$	4540.2 8	(13)		5865.5? 12			
4006.6 ^{&} 5	12^{+}	4762.4 ^{&} 6	14^{+}		6598.1 [@] 10	(18 ⁺)		
4009.3 ^b 10	(11)	4908.2 [@] 8	14^{+}	1.2 ps 4				

[†] From RDM (1977Hu10,1982Ze04), except as noted.

[‡] g.s. band.

* g.s. band.
γ-vibrational band.
@ Positive-parity sideband.
& Band based on 10⁺ isomer.
^a Negative-parity level sequence.
^b Level not adopted.

E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_i (level)	\mathbf{J}_i^{π}	E_f J	\mathbf{J}_{f}^{π}	Mult. [‡]	α ^e	Comments
114.9 [#] 5	1.6 6	2473.9	(6 ⁻)	2359.1 (6	6-)			$\gamma(\theta)$: A ₂ =0.02 12, A ₄ =0.35 18.
121.1 [#] 5	1.3 7	3017.6	8+	2896.5 (8	8-)			$\gamma(\theta)$: A ₂ =0.02 14, A ₄ =-0.02 21.
141.2 [#] 5	5.3 26	2706.7	(7-)	2565.8 (7	7-)			$\gamma(\theta)$: A ₂ =0.05 6, A ₄ =0.01 9.
157.8 [#] 5	3.7 13	4009.3	(11)	3851.7 (1	10)			$\gamma(\theta)$: A ₂ =-0.38 6, A ₄ =-0.03 9.
164 [#]	3.2 11	4173.3	(11)	4009.3 (1	11)			$\gamma(\theta)$: A ₂ =-0.02 6, A ₄ =-0.01 9.
168.3 [#] 5	8.5 19	1811.7	(4)	1643.4 4	+			$\gamma(\theta)$: A ₂ =-0.24 5, A ₄ =0.11 8.
170.1 [#] 5	3.0 15	2473.9	(6 ⁻)	2303.8 6	+			$\gamma(\theta)$: A ₂ =-0.43 8, A ₄ =-0.08 12.
174.0 3	2.6 9	3143.4	(9)	2969.4 (8	8)			$\gamma(\theta)$: A ₂ =-0.23 8, A ₄ =0.00 12.
176.4 [#] 5	1.0 4	3073.0	(9)	2896.5 (8	8-)			$\gamma(\theta)$: A ₂ =-0.05 15, A ₄ =0.39 21.
184.8 [@] 5	31 15	2359.1	(6 ⁻)	2174.3 (5	5-)			$\gamma(\theta)$: A ₂ =0.20 3, A ₄ =-0.03 5.
189.6 <i>3</i>	5.0 8	2896.5	(8^{-})	2706.7 (7	7-)	M1+E2		$\gamma(\theta)$: A ₂ =-0.59 3, A ₄ =-0.03 5.
190.8 <i>3</i>	3.4 9	3208.5	10^{+}	3017.6 8	+	E2	0.2167	α (K)=0.1628; α (L)=0.0424; α (M)=0.00918 $\gamma(\theta)$: A ₂ =-0.04 6, A ₄ =-0.06 9.
196.4 <mark>&</mark> 5	7.4 23	3851.7	(10)	3655.5 (1	10)			$\gamma(\theta)$: A ₂ =-0.01 3, A ₄ =0.04 5.
206.6 ^a 5	5.0 10	3017.6	8+	2811.1 8	+			$\gamma(\theta)$: A ₂ =-0.49 6, A ₄ =-0.01 9.
206.7 ^a 5	5.0 10	2565.8	(7^{-})	2359.1 (6	6-)			$\gamma(\theta)$: A ₂ =-0.49 6, A ₄ =-0.01 9.
215.3 <i>3</i>	6.3 10	2027.2	(5^{+})	1811.7 (4	4)	(D)		$\gamma(\theta)$: A ₂ =0.33 6, A ₄ =-0.09 10; A ₂ <0.0 (1982Ze04).
233.0 <i>3</i>	0.66 15	2706.7	(7^{-})	2473.9 (6	6-)	M1+E2		$\gamma(\theta)$: A ₂ =-0.78 25, A ₄ =0.34 40.
238.1 5	4.2 13	3381.3	(10)	3143.4 (9	9)			$\gamma(\theta)$: A ₂ =-0.02 6, A ₄ =0.06 9.
245	0.57 22	2811.1	8+	2565.8 (7	7-)	D		$\gamma(\theta)$: A ₂ =-0.62 40, A ₄ =-0.52 50.
246.9 <i>3</i>	0.74 23	3143.4	(9)	2896.5 (8	8-)			$\gamma(\theta)$: A ₂ =-0.18 20, A ₄ =-0.03 30.
253.7 3	1.6 4	2303.8	6+	2050.2 (5	5+)	D		$\gamma(\theta)$: A ₂ =-0.12 15, A ₄ =0.01 23.
260.9 [°] 5	4.6 23	1643.4	4+	1382.6 (3	3+)			$\gamma(\theta)$: A ₂ =-0.58 8, A ₄ =-0.01 12.
261.5° 5	4.6 23	3158.2	(9-)	2896.5 (8	8-)	M1+E2		$\gamma(\theta)$: A ₂ =-0.58 8, A ₄ =-0.01 12.
261.9 [°] 5	4.6 23	3073.0	(9)	2811.1 8	+			$\gamma(\theta)$: A ₂ =-0.58 8, A ₄ =-0.01 12.
262.2° 5	4.6 23	2565.8	(7 ⁻)	2303.8 6	т			$\gamma(\theta)$: A ₂ =-0.58 8, A ₄ =-0.01 12.
275 [#]	8.4 25	3655.5	(10)	3381.3 (1	10)			$\gamma(\theta)$: A ₂ =-0.03 5, A ₄ =-0.01 8.
299.7 <i>3</i>	9.0 11	2473.9	(6 ⁻)	2174.3 (5	5-)	M1+E2		$\gamma(\theta)$: A ₂ =-0.45 6, A ₄ =-0.08 9.

 $\gamma(^{134}\text{Ce})$

Continued on next page (footnotes at end of table)

				¹³⁴ Ba(α,4nγ), ¹³⁵ Ba(α,5nγ) 1984 M			1984Mu	8 (continued)	
γ ⁽¹³⁴ Ce) (continued)									
E_{γ}^{\dagger}	I_{γ}^{\dagger}	E _i (level)	\mathbf{J}_i^{π}	E_{f}	\mathbf{J}_{f}^{π}	Mult. [‡]	δ	α e	Comments
308.9 <i>3</i>	3.0 9	2359.1	(6 ⁻)	2050.2	(5 ⁺)	D			$\gamma(\theta)$: A ₂ =-0.09 8, A ₄ =0.01 12.
310.8 [#] 5	0.99 40	3017.6	8^+	2706.7	(7^{-})				$\gamma(\theta)$: A ₂ =0.07 25, A ₄ =0.12 40.
213.35	0.79 20	2475.9	(0)	2138.4	(3)				$\gamma(\theta)$: A ₂ =0.32 50, A ₄ =0.35 50.
330.8° 5	<2.7	2896.5	(8)	2565.8	(/) (5+)				$\gamma(\theta): A_2=0.336, A_4=-0.129.$
332.0° 5	≈6	2359.1	(6)	2027.2	(5')				$\gamma(\theta)$: A ₂ =0.33 6, A ₄ =-0.12 9.
332.4° 5	<2.7	3143.4 2261.4	(9)	2811.1	8' (5 ⁺)				$\gamma(\theta)$: A ₂ =0.33 6, A ₄ =-0.12 9.
337 1 3	1.2.3 2.4.7	4346.3	(0)	4009 3	(3)				$\gamma(\theta): A_2=0.19 \ 18, A_4=0.17 \ 27.$ $\gamma(\theta): A_2=-0.07 \ 12 \ A_4=0.03 \ 18$
346.7 ^f 5	$\approx 0.8^{f}$	2158.4	(5)	1811.7	(4)				$\gamma(\theta): A_2 = 0.53 \ I3, A_4 = 0.11 \ I8;$ $A_2 = 0.43 \ I1 \ (19872e04)$
346.7 ^{<i>f</i>} 5	$\approx 1.5^{f}$	3158.2	(9 ⁻)	2811.1	8+				$\gamma(\theta)$: A ₂ =0.53 13, A ₄ =0.11 18; A ₂ =-0.43 12 (1982Ze04)
317 3 <mark>0</mark> 5	~1.5	2706.7	(7^{-})	2350 1	(6^{-})				$\gamma(\theta): \Lambda_2 = -0.43, 12, \Lambda_3 = 0.0$
375 3# 5	~1.5	2100.7	(7)	2559.1	(0)				$\gamma(\theta): A_2 = -0.485 A_4 = -0.358$
384.0.3	5.6 10	2027.2	(5)	1643.4	(7) 4 ⁺				$\gamma(\theta): A_2=0.485, A_4=-0.558.$ $\gamma(\theta): A_2=-0.178, A_4=0.0112.$
391.5 3	6.1 11	2565.8	(7-)	2174.3	(5 ⁻)	E2		0.02163	$\alpha(K)=0.01776; \alpha(L)=0.00305; \alpha(M)=0.00065$
397.4 <i>3</i>	14.0 18	3208.5	10+	2811.1	8+	E2		0.02070	$\gamma(\theta)$: A ₂ =0.26 8, A ₄ =-0.01 12. $\alpha(K)$ =0.01701; $\alpha(L)$ =0.00290; $\alpha(M)$ =0.00062
403 ^{<i>a</i>}	5.0 10	2706.7	(7-)	2303.8	6+				Mult.: from ce data (1984Mu08). $\gamma(\theta)$: A ₂ =0.02 3, A ₄ =-0.06 5. $\gamma(\theta)$: A ₂ =-0.33 8, A ₄ =-0.05 12.
403.7 ^{<i>a</i>} 5	5.0 10	2969.4	(8)	2565.8	(7 ⁻)				$\gamma(\theta): A_2 = -0.33 \ 8, \ A_4 = -0.05 \ 12.$
409.1 3	100 7	409.09	2+	0.0	0^{+}	E2		0.01901	$\alpha(K)=0.01566; \ \alpha(L)=0.00264; \ \alpha(M)=0.00056$
116 8 3	378	1382.6	(3^{+})	065 71	2+				$\gamma(\theta): A_2=0.24 2, A_4=-0.04 3.$
410.05	~2.2	1362.0	(3^{-})	1316.3	2				y(0). R ₂ - 0.04 11, R ₄ -0.05 15.
422.6.3	≈ 2.2 8 1 10	2896.5	(8^{-})	4340.3 2473 9	(6^{-})	E2		0.01730	$\alpha(K) = 0.01428; \alpha(L) = 0.00238;$
122.0 5	0.1 10	2070.5	(0)	2113.9	(0)	112		0.01750	$\alpha(M)=0.00120, \alpha(D)=0.00250, \alpha(M)=0.00050$ $\gamma(\theta): A_2=0.394, A_4=-0.056.$
429.2 <i>3</i>	2.4 6	1811.7	(4)	1382.6	(3 ⁺)				$\gamma(\theta)$: A ₂ =-0.28 11, A ₄ =0.07 15.
446.9 <i>3</i>	6.4 12	2473.9	(6 ⁻)	2027.2	(5^{+})				$\gamma(\theta)$: A ₂ =0.13 6, A ₄ =-0.02 9.
449.7 3	1.5 5	2811.1	8^+	2361.4	(6^+)	F 2		0.01421	$\gamma(\theta): A_2 = -0.83 \ 20, \ A_4 = 0.47 \ 30.$
451.6 3	8.79	3158.2	(9)	2706.7	(/)	E2		0.01431	$\alpha(\mathbf{K})=0.01187; \ \alpha(\mathbf{L})=0.00193; \ \alpha(\mathbf{M})=0.00041 \ \gamma(\theta): \ A_2=0.42.6 \ A_4=-0.12.9$
464.3 ^a 5	17.1 <i>17</i>	2768.1	(7)	2303.8	6+				$\gamma(\theta): A_2 = 0.30 \ 6, \ A_4 = -0.11 \ 9.$
464.3 ^{<i>a</i>} 5	17.1 17	4183.6	12+	3719.3	10+	E2		0.01324	$\alpha(K)=0.01100; \ \alpha(L)=0.00177; \ \alpha(M)=0.00037$
51712	210	2820.0	(7)	2202.9	<i>(</i> +				$\gamma(\theta): A_2 = 0.30 \ 6, \ A_4 = -0.11 \ 9.$
532.3 3	10.4 <i>10</i>	2820.9 2706.7	(7) (7^{-})	2303.8 2174.3	(5^{-})	E2		0.00919	$\gamma(\theta)$: A ₂ =-0.15 10, A ₄ =0.08 15. $\alpha(K)=0.00763; \alpha(L)=0.00117$ $\gamma(\theta)$: A ₂ =0.36 6, A ₄ =-0.09 9
537.3 <i>3</i>	5.9 14	2896.5	(8-)	2359.1	(6 ⁻)	(E2)		0.00897	$\alpha(K)=0.00745; \ \alpha(L)=0.00114$ $\gamma(\theta): \ A_2=0.10 \ 6. \ A_4=0.04 \ 9.$
556.6 <i>3</i>	7.3 15	965.71	2+	409.09	2+	M1+E2	9 +16-4	0.00822 11	$\alpha(K)=0.00684 \ 10; \ \alpha(L)=0.00104$ $\gamma(\theta): A_2=0.02 \ 7, \ A_4=-0.12 \ 12.$
561.0 ^d 5 595.0 ^a 5	≈1.1 2.8 6	3719.3 1643.4	$ 10^+ 4^+ $	3158.2 1048.5	(9 ⁻) 4 ⁺				$\gamma(\theta)$: A ₂ =0.18 <i>12</i> , A ₄ =0.0. $\gamma(\theta)$: A ₂ =0.20 <i>7</i> , A ₄ =0.0
595.0 ^a 5	2.8 6	4540.2	(13)	3945.2	(11)				(1982Ze04). $\gamma(\theta)$: A ₂ =0.20 7, A ₄ =0.0 (1982Ze04).

Continued on next page (footnotes at end of table)

¹³⁴Ba(α,4nγ),¹³⁵Ba(α,5nγ) **1984Mu08** (continued)

$\gamma(^{134}\text{Ce})$ (continued) E_{γ}^{\dagger} $\alpha^{\pmb{e}}$ I_{γ}^{\dagger} Mult.[‡] E_i (level) \mathbf{J}_i^{π} Comments \mathbf{E}_{f} J_f^{π} 2969.4 2359.1 610.4 5 4.0 16 (8) (6^{-}) $\gamma(\theta)$: A₂=0.01 10, A₄=0.04 15. 639.5 3 82 6 1048.5 4^{+} 409.09 2^{+} E2 0.00572 $\alpha(K)=0.00479; \alpha(L)=0.00070$ $\gamma(\theta)$: A₂=0.26 3, A₄=-0.06 9. $\gamma(\theta)$: A₂=-0.40 15, A₄=0.33 21. 644.5 3 1.8 7 2027.2 (5^{+}) 1382.6 (3^{+}) 660.4 3 9.8 25 2303.8 6^{+} 1643.4 4^{+} E2 0.00528 $\alpha(K)=0.00443; \alpha(L)=0.00064$ $\gamma(\theta)$: A₂=0.34 5, A₄=-0.06 7. (3⁺) 667.6 3 7.3 18 2050.2 (5^{+}) 1382.6 0.00515 $\alpha(K)=0.00432; \alpha(L)=0.00062$ (E2) $\gamma(\theta)$: A₂=0.38 6, A₄=-0.09 8. 4^{+} 677.7 3 11.8 27 1643.4 965.71 2+ E2 0.00496 $\alpha(K)=0.00416; \alpha(L)=0.00060$ $\gamma(\theta)$: A₂=0.29 5, A₄=0.07 7. 10^{+} 3017.6 8+ 0.00456 $\alpha(K)=0.00383; \alpha(L)=0.00055$ 701.7 3 0.42 26 3719.3 E2 $\gamma(\theta)$: A₂=0.80 40, A₄=-0.27 60. 8^{+} 713.8 3 4.7 12 3017.6 2303.8 6^{+} E2 0.00437 $\alpha(K)=0.00368; \alpha(L)=0.00052$ $\gamma(\theta)$: A₂=0.31 10, A₄=-0.06 15. 4908.2 14^{+} 0.00422 $\alpha(K)=0.00355; \alpha(L)=0.00050$ 724.6 5 16.0 16 4183.6 12^{+} E2 $\gamma(\theta)$: A₂=0.10 5, A₄=-0.17 7. 730.0 3 3.6 11 5492.5 (15)4762.4 14^{+} $\gamma(\theta)$: A₂=-0.33 10, A₄=-0.10 15. 737.7 3 5.6 10 3634.2 (10^{-}) 2896.5 (8^{-}) (E2) 0.00404 $\alpha(K)=0.00340; \alpha(L)=0.00048$ $\gamma(\theta)$: A₂=0.45 9, A₄=-0.11 12. 755.8 3 6.7 17 4762.4 14^{+} 4006.6 12^{+} E2 0.00382 $\alpha(K)=0.00322; \alpha(L)=0.00045$ $\gamma(\theta)$: A₂=0.44 7, A₄=-0.12 9. 4^+ 763.1 3 1.2 3 1811.7 (4) 1048.5 $\gamma(\theta)$: A₂=0.40 5, A₄=-0.22 7. 10^{+} 764.8 3 4.1 15 3973.3 $(11)^+$ 3208.5 M1+E2 $\gamma(\theta)$: A₂=-0.66 7, A₄=-0.09 11. $\gamma(\theta)$: A₂=-0.03 10, A₄=0.17 15. 787.1[#] 5 2.9.3 3945.2 (11)3158.2 (9^{-}) 798.0 3 12.7 30 12^{+} 3208.5 10^{+} 0.00336 $\alpha(K)=0.00284; \alpha(L)=0.00039$ 4006.6 E2 $\gamma(\theta)$: A₂=0.49 5, A₄=-0.16 7. 814.4 3 43 4 1863.0 6^{+} 1048.5 4+ E2 0.00321 $\alpha(K)=0.00271; \alpha(L)=0.00038$ $\gamma(\theta)$: A₂=0.23 4, A₄=-0.07 6. 817.7 3 5.2 5 5725.9 4908.2 0.00318 $\alpha(K)=0.00269; \alpha(L)=0.00037$ 16^{+} 14^{+} E2 $\gamma(\theta)$: A₂=0.24 8, A₄=-0.02 12. 965.71 2+ 846.0 5 10.5 21 1811.7 (4)Q $\gamma(\theta)$: A₂=0.33 10, A₄=0.13 15. 872.2^{*a*} 5 5.8 12 3945.2 3073.0 (9) $\gamma(\theta)$: A₂=0.26 10, A₄=0.17 15. (11)872.2^{*a*} 5 5.8 12 6598.1 (18^{+}) 5725.9 0.00275 $\alpha(K)=0.00232; \alpha(L)=0.00032$ 16^{+} (E2) $\gamma(\theta)$: A₂=0.26 10, A₄=0.17 15. 908.3 3 14.3 13 3719.3 10^{+} 2811.1 8+ E2 0.00251 $\alpha(K)=0.00213; \alpha(L)=0.00029$ $\gamma(\theta)$: A₂=0.22 6, A₄=-0.05 9. 948.0 3 30 3 8^{+} 1863.0 6^{+} E2 0.00229 $\alpha(K)=0.00194; \alpha(L)=0.00026$ 2811.1 $\gamma(\theta)$: A₂=0.23 4, A₄=-0.07 6. 955.8^d 5 5496.0? 4540.2 (13) 2^{+} $\alpha(K)=0.00186; \alpha(L)=0.00025$ 965.7 3 0.00220 8.8 22 965.71 0.0 0^{+} E2 $\gamma(\theta)$: A₂=0.31 6, A₄=0.08 9. 973.4 3 7.9 11 1382.6 (3^{+}) 409.09 2+ $\gamma(\theta)$: A₂=0.22 9, A₄=-0.06 12. 979.0 3 2.2 7 2027.2 (5^{+}) 1048.5 4^{+} $\gamma(\theta)$: A₂=0.52 15, A₄=-0.19 22. 1006.5 3 2.99 3817.6? (10^{+}) 2811.1 8^{+} (E2) 0.00201 $\alpha(K)=0.00171; \alpha(L)=0.00023$ $\gamma(\theta)$: A₂=0.38 15, A₄=-0.05 22. 1103^d 14^{+} 5865.5? 4762.4 1125.6 3 25.0 25 2174.3 1048.5 4^{+} (E1) 0.00068 $\alpha(K) = 0.00059$ (5^{-}) $\gamma(\theta)$: A₂=-0.16 4, A₄=-0.05 6. 1048.5 4+ 3.5 11 $\gamma(\theta)$: A₂=-0.15 15, A₄=0.07 20. 1198.1 3 2246.6? 1234.3 3 1.6 5 1643.4 4^{+} 409.09 2+ $\gamma(\theta)$: A₂=0.70 22, A₄=-0.13 33.

[†] From ${}^{135}Ba(\alpha, 5n\gamma)$ (1984Mu08).

[‡] From $\alpha(\exp)$, $\gamma(\theta)$ and RUL.

¹³⁴Ba(α ,4n γ),¹³⁵Ba(α ,5n γ) 1984Mu08 (continued)

$\gamma(^{134}\text{Ce})$ (continued)

 $^{\#}$ Line contaminated. $^{@}$ Line unresolved from the 184.0 γ in $^{19}F.$ & Line unresolved from the 197.0 γ in $^{19}F.$

^{*a*} Unresolved doublet.

^b Unresolved triplet.

^c Unresolved quadruplet.

^d Observed only by 1982Ze04.

^e 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.

^f Multiply placed with intensity suitably divided.



¹³⁴₅₈Ce₇₆

6

134 Ba(α ,4n γ), 135 Ba(α ,5n γ) 1984Mu08



 134 Ba(α ,4n γ), 135 Ba(α ,5n γ) 1984Mu08

