

$^{135}\text{Ba}(n,\gamma)$ E=24.4-463.4 eV res **1978ChZE,1974Ch14**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 152,331 (2018)	1-Apr-2018

Target $J^\pi=3/2^+$.

1974Ch14: E(n)=24.5-463.4 eV. Measured primary $E\gamma$, $I\gamma$ using coaxial Ge(Li) detectors. Neutron energies from tof. See also average resonance dataset.

Other: **1997VoZW**.

 ^{136}Ba Levels

E(level) [†]	J^π [‡]	E(level) [†]	J^π [‡]	E(level) [†]	J^π [‡]
0	0 ⁺	2975.7 5		3792.5 5	(1,2 ⁺)
817.5 5	2 ⁺	2994.0? 5		3848.5 5	0 ⁽⁺⁾ ,1,2,3 ⁺
1550.5 5	2 ⁺	3018.3 5	(1,2 ⁺)	3859.5 5	(1,2 ⁺)
1579.1 5	0 ⁺	3042.3 5	1 ⁽⁻⁾	3925.5 5	
2078.3 5	2 ⁺	3114.5 5	2 ⁺	3965.0? 5	(1,2 ⁺)
2127.3 5	2 ⁺	3178.9 5	0 ⁽⁺⁾ ,1,2,3 ⁽⁺⁾	3977.5 5	(1)
2222.5 5	(2,1) ⁺	3212.0? 5	0 ⁽⁺⁾ ,1,2,3 ⁺	3992.3 [#] 8	0 ⁽⁺⁾ ,1,2,3 ⁺
2349.5? 5		3347.1 5	0 ⁽⁺⁾ ,1,2,3 ⁺	4008.7 5	1,2 ⁺
2398.0 5	(1) ⁺	3366.5 5	1	S(n)+0.0244	1 ⁺ @
2531.1 5	3 ⁻	3378.0? 5		S(n)+0.0809	2 ⁽⁺⁾ &
2638.0? 5	(1 ⁺)	3432.0 5	1 ⁻	S(n)+0.0861	2 ⁽⁺⁾ &
2663.1 5	1,2 ⁺	3503.9 5	0 ⁽⁺⁾ ,1,2,3 ⁺	S(n)+0.1044 ^b	1 ⁽⁺⁾ ,2 ^a
2690.7 5	1	3542.5 5	0 ⁽⁺⁾ ,1,2,3,4 ⁽⁺⁾	S(n)+0.2241	2 ⁽⁺⁾ &
2771.5 5	2 ⁺	3559.0? 5	0 ⁽⁺⁾ ,1,2,3 ⁽⁺⁾	S(n)+0.2802	2 ⁽⁺⁾ &
2782.8 5	0 ⁺	3579.5 5	0 ⁺ ,1,2,3,4 ⁺	S(n)+0.3150	2 ⁽⁺⁾ &
2806.0? 5	(3 ⁺)	3650.0? 5	(0 ⁺),1,2,3,4 ⁽⁺⁾	S(n)+0.3764	1 ⁽⁺⁾ ac
2905.0? 5		3690.0 5	1 to 3	S(n)+0.4071	2 ⁽⁺⁾ &
2936.0? 5	(1,2 ⁺)	3698.5 5	(0 ⁺),1,2,3,4 ⁽⁺⁾	S(n)+0.4634	2 [@]
2946.0? 5	0 ⁽⁺⁾ ,1,2,3 ⁺	3765.2 5	1 ⁽⁻⁾ ,2,3 ⁺		

[†] Bound-state energies from **1978ChZE**, except where noted. These values are approximately 0.5-1.0 keV smaller than given in **1974Ch14**, with the difference increasing with increasing excitation energy. Approximate relative uncertainty shown; absolute $\Delta E=2-3$. S(n)=9107.74 4 (**2017Wa10**). **1974Ch14** give S(n)=9106.5.

[‡] From the Adopted Levels, except for the resonances. In general agreement with **1974Ch14**.

[#] From **1974Ch14**.

@ From evaluation of **1981MuZQ**.

& J from evaluation of **1981MuZQ**. π from assumption that strong primary γ 's to 2531, 3⁻, are E1. **1974Ch14** assign $J^\pi=2^+$ to these levels.

^a J from evaluation of **1981MuZQ**. π from assumption that strong primary γ 's to the 0⁺ levels are M1.

^b Doublet.

^c See footnote on primary γ to 2531, 3⁻, level.

 $\gamma(^{136}\text{Ba})$

See thermal capture for secondary gammas.

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$^{135}\text{Ba}(n,\gamma)$ E=24.4-463.4 eV res 1978ChZE,1974Ch14 (continued) $\gamma(^{136}\text{Ba})$ (continued)

E_γ †	I_γ ‡	E_i (level)	J_i^π	E_f	J_f^π
5098	0.59 10	S(n)+0.0809	2 ⁽⁺⁾	4008.7	1,2 ⁺
5098	0.40 9	S(n)+0.0861	2 ⁽⁺⁾	4008.7	1,2 ⁺
5098	0.43 23	S(n)+0.3764	1 ⁽⁺⁾	4008.7	1,2 ⁺
5098	0.24 14	S(n)+0.4071	2 ⁽⁺⁾	4008.7	1,2 ⁺
5115	0.60 12	S(n)+0.0244	1 ⁺	3992.3	0 ⁽⁺⁾ ,1,2,3 ⁺
5115	0.23 6	S(n)+0.0809	2 ⁽⁺⁾	3992.3	0 ⁽⁺⁾ ,1,2,3 ⁺
5115	0.15 10	S(n)+0.2241	2 ⁽⁺⁾	3992.3	0 ⁽⁺⁾ ,1,2,3 ⁺
5115	0.37 9	S(n)+0.3150	2 ⁽⁺⁾	3992.3	0 ⁽⁺⁾ ,1,2,3 ⁺
5130	0.19 5	S(n)+0.0809	2 ⁽⁺⁾	3977.5	(1)
5130	0.68 13	S(n)+0.2241	2 ⁽⁺⁾	3977.5	(1)
5130	0.34 18	S(n)+0.2802	2 ⁽⁺⁾	3977.5	(1)
5130	1.05 24	S(n)+0.3764	1 ⁽⁺⁾	3977.5	(1)
5182	0.41 6	S(n)+0.0809	2 ⁽⁺⁾	3925.5	
5182	0.12 4	S(n)+0.0861	2 ⁽⁺⁾	3925.5	
5248	0.20 2	S(n)+0.0861	2 ⁽⁺⁾	3859.5	(1,2 ⁺)
5248	0.34 15	S(n)+0.3764	1 ⁽⁺⁾	3859.5	(1,2 ⁺)
5248	0.24 9	S(n)+0.4634	2	3859.5	(1,2 ⁺)
5259	0.34 5	S(n)+0.0244	1 ⁺	3848.5	0 ⁽⁺⁾ ,1,2,3 ⁺
5259	0.3 6	S(n)+0.0861	2 ⁽⁺⁾	3848.5	0 ⁽⁺⁾ ,1,2,3 ⁺
5259	0.18 11	S(n)+0.2241	2 ⁽⁺⁾	3848.5	0 ⁽⁺⁾ ,1,2,3 ⁺
5259	0.16 9	S(n)+0.2802	2 ⁽⁺⁾	3848.5	0 ⁽⁺⁾ ,1,2,3 ⁺
5259	0.37 11	S(n)+0.3764	1 ⁽⁺⁾	3848.5	0 ⁽⁺⁾ ,1,2,3 ⁺
5315#	0.93 8	S(n)+0.0809	2 ⁽⁺⁾	3792.5	(1,2 ⁺)
5315#	0.19 8	S(n)+0.0861	2 ⁽⁺⁾	3792.5	(1,2 ⁺)
5315#	0.22 14	S(n)+0.3764	1 ⁽⁺⁾	3792.5	(1,2 ⁺)
5315#	0.40 17	S(n)+0.4071	2 ⁽⁺⁾	3792.5	(1,2 ⁺)
5342	0.13 4	S(n)+0.0244	1 ⁺	3765.2	1 ⁽⁻⁾ ,2,3 ⁺
5342	0.06 4	S(n)+0.0809	2 ⁽⁺⁾	3765.2	1 ⁽⁻⁾ ,2,3 ⁺
5342	0.29 6	S(n)+0.0861	2 ⁽⁺⁾	3765.2	1 ⁽⁻⁾ ,2,3 ⁺
5342	0.40 9	S(n)+0.1044	1 ⁽⁺⁾ ,2	3765.2	1 ⁽⁻⁾ ,2,3 ⁺
5409	0.07 4	S(n)+0.0809	2 ⁽⁺⁾	3698.5	(0 ⁺),1,2,3,4 ⁽⁺⁾
5409	0.26 24	S(n)+0.3150	2 ⁽⁺⁾	3698.5	(0 ⁺),1,2,3,4 ⁽⁺⁾
5409	0.30 21	S(n)+0.4071	2 ⁽⁺⁾	3698.5	(0 ⁺),1,2,3,4 ⁽⁺⁾
5409	0.30 10	S(n)+0.4634	2	3698.5	(0 ⁺),1,2,3,4 ⁽⁺⁾
5417	0.26 5	S(n)+0.0809	2 ⁽⁺⁾	3690.0	1 to 3
5417	0.34 10	S(n)+0.0861	2 ⁽⁺⁾	3690.0	1 to 3
5417	0.40 16	S(n)+0.2802	2 ⁽⁺⁾	3690.0	1 to 3
5417	0.10 6	S(n)+0.3764	1 ⁽⁺⁾	3690.0	1 to 3
5457	0.19 5	S(n)+0.0809	2 ⁽⁺⁾	3650.0?	(0 ⁺),1,2,3,4 ⁽⁺⁾
5457	0.15 6	S(n)+0.1044	1 ⁽⁺⁾ ,2	3650.0?	(0 ⁺),1,2,3,4 ⁽⁺⁾
5457	0.24 24	S(n)+0.2241	2 ⁽⁺⁾	3650.0?	(0 ⁺),1,2,3,4 ⁽⁺⁾
5457	0.73 14	S(n)+0.4071	2 ⁽⁺⁾	3650.0?	(0 ⁺),1,2,3,4 ⁽⁺⁾
5528	0.27 5	S(n)+0.0809	2 ⁽⁺⁾	3579.5	0 ⁺ ,1,2,3,4 ⁺
5528	0.08 5	S(n)+0.1044	1 ⁽⁺⁾ ,2	3579.5	0 ⁺ ,1,2,3,4 ⁺
5528	0.44 20	S(n)+0.2802	2 ⁽⁺⁾	3579.5	0 ⁺ ,1,2,3,4 ⁺
5528	0.97 24	S(n)+0.4634	2	3579.5	0 ⁺ ,1,2,3,4 ⁺
5548	0.5 11	S(n)+0.0809	2 ⁽⁺⁾	3559.0?	0 ⁽⁺⁾ ,1,2,3 ⁽⁺⁾
5548	0.96 11	S(n)+0.2802	2 ⁽⁺⁾	3559.0?	0 ⁽⁺⁾ ,1,2,3 ⁽⁺⁾
5548	0.10 11	S(n)+0.3764	1 ⁽⁺⁾	3559.0?	0 ⁽⁺⁾ ,1,2,3 ⁽⁺⁾
5565	0.27 10	S(n)+0.0809	2 ⁽⁺⁾	3542.5	0 ⁽⁺⁾ ,1,2,3,4 ⁽⁺⁾
5565	0.32 7	S(n)+0.1044	1 ⁽⁺⁾ ,2	3542.5	0 ⁽⁺⁾ ,1,2,3,4 ⁽⁺⁾

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$^{135}\text{Ba}(n,\gamma) E=24.4\text{-}463.4\text{ eV res}$ 1978ChZE,1974Ch14 (continued) $\gamma(^{136}\text{Ba})$ (continued)

E_γ †	I_γ ‡	$E_i(\text{level})$	J_i^π	E_f	J_f^π
5565	0.20 13	S(n)+0.2241	2 ⁽⁺⁾	3542.5	0 ⁽⁺⁾ ,1,2,3,4 ⁽⁺⁾
5565	0.34 18	S(n)+0.3150	2 ⁽⁺⁾	3542.5	0 ⁽⁺⁾ ,1,2,3,4 ⁽⁺⁾
5603	1.09 12	S(n)+0.0244	1 ⁺	3503.9	0 ⁽⁺⁾ ,1,2,3 ⁺
5603	0.49 6	S(n)+0.0809	2 ⁽⁺⁾	3503.9	0 ⁽⁺⁾ ,1,2,3 ⁺
5603	0.42 6	S(n)+0.0861	2 ⁽⁺⁾	3503.9	0 ⁽⁺⁾ ,1,2,3 ⁺
5603	0.18 6	S(n)+0.1044	1 ⁽⁺⁾ ,2	3503.9	0 ⁽⁺⁾ ,1,2,3 ⁺
5603	0.42 11	S(n)+0.2241	2 ⁽⁺⁾	3503.9	0 ⁽⁺⁾ ,1,2,3 ⁺
5603	0.75 19	S(n)+0.3150	2 ⁽⁺⁾	3503.9	0 ⁽⁺⁾ ,1,2,3 ⁺
5603	1.19 23	S(n)+0.3764	1 ⁽⁺⁾	3503.9	0 ⁽⁺⁾ ,1,2,3 ⁺
5603	1.82 24	S(n)+0.4634	2	3503.9	0 ⁽⁺⁾ ,1,2,3 ⁺
5675	0.41 7	S(n)+0.0244	1 ⁺	3432.0	1 ⁻
5675	0.54 10	S(n)+0.2802	2 ⁽⁺⁾	3432.0	1 ⁻
5675	0.34 10	S(n)+0.3150	2 ⁽⁺⁾	3432.0	1 ⁻
5675	0.32 10	S(n)+0.3764	1 ⁽⁺⁾	3432.0	1 ⁻
5675	0.46 11	S(n)+0.4071	2 ⁽⁺⁾	3432.0	1 ⁻
5741	0.19 4	S(n)+0.0809	2 ⁽⁺⁾	3366.5	1
5741	0.25 6	S(n)+0.0861	2 ⁽⁺⁾	3366.5	1
5741	0.46 10	S(n)+0.1044	1 ⁽⁺⁾ ,2	3366.5	1
5741	0.35 6	S(n)+0.2802	2 ⁽⁺⁾	3366.5	1
5741	0.48 15	S(n)+0.3764	1 ⁽⁺⁾	3366.5	1
5741	0.23 11	S(n)+0.4071	2 ⁽⁺⁾	3366.5	1
5760	0.09 3	S(n)+0.0244	1 ⁺	3347.1	0 ⁽⁺⁾ ,1,2,3 ⁺
5760	0.06 3	S(n)+0.0809	2 ⁽⁺⁾	3347.1	0 ⁽⁺⁾ ,1,2,3 ⁺
5760	0.12 4	S(n)+0.1044	1 ⁽⁺⁾ ,2	3347.1	0 ⁽⁺⁾ ,1,2,3 ⁺
5765	0.18 6	S(n)+0.1044	1 ⁽⁺⁾ ,2		
5895	0.10 4	S(n)+0.0244	1 ⁺	3212.0?	0 ⁽⁺⁾ ,1,2,3 ⁺
5895	0.08 3	S(n)+0.0809	2 ⁽⁺⁾	3212.0?	0 ⁽⁺⁾ ,1,2,3 ⁺
5895	0.16 8	S(n)+0.0861	2 ⁽⁺⁾	3212.0?	0 ⁽⁺⁾ ,1,2,3 ⁺
5895	0.25 6	S(n)+0.1044	1 ⁽⁺⁾ ,2	3212.0?	0 ⁽⁺⁾ ,1,2,3 ⁺
5895	0.29 16	S(n)+0.4071	2 ⁽⁺⁾	3212.0?	0 ⁽⁺⁾ ,1,2,3 ⁺
5928	0.16 4	S(n)+0.0809	2 ⁽⁺⁾	3178.9	0 ⁽⁺⁾ ,1,2,3 ⁽⁺⁾
5928	0.18 10	S(n)+0.0861	2 ⁽⁺⁾	3178.9	0 ⁽⁺⁾ ,1,2,3 ⁽⁺⁾
5928	0.21 15	S(n)+0.3764	1 ⁽⁺⁾	3178.9	0 ⁽⁺⁾ ,1,2,3 ⁽⁺⁾
5993	0.10 3	S(n)+0.0244	1 ⁺	3114.5	2 ⁺
5993	0.07 3	S(n)+0.0809	2 ⁽⁺⁾	3114.5	2 ⁺
5993	0.24 4	S(n)+0.0861	2 ⁽⁺⁾	3114.5	2 ⁺
5993	0.26 22	S(n)+0.1044	1 ⁽⁺⁾ ,2	3114.5	2 ⁺
5993	0.15 7	S(n)+0.2241	2 ⁽⁺⁾	3114.5	2 ⁺
5993	0.21 12	S(n)+0.4071	2 ⁽⁺⁾	3114.5	2 ⁺
6065	1.83 19	S(n)+0.0809	2 ⁽⁺⁾	3042.3	1 ⁽⁻⁾
6065	0.37 8	S(n)+0.0861	2 ⁽⁺⁾	3042.3	1 ⁽⁻⁾
6065	0.41 9	S(n)+0.1044	1 ⁽⁺⁾ ,2	3042.3	1 ⁽⁻⁾
6065	0.27 9	S(n)+0.2241	2 ⁽⁺⁾	3042.3	1 ⁽⁻⁾
6065	0.43 15	S(n)+0.2802	2 ⁽⁺⁾	3042.3	1 ⁽⁻⁾
6065	0.18 9	S(n)+0.3150	2 ⁽⁺⁾	3042.3	1 ⁽⁻⁾
6065	0.42 16	S(n)+0.4634	2	3042.3	1 ⁽⁻⁾
6089	0.19 5	S(n)+0.0809	2 ⁽⁺⁾	3018.3	(1,2 ⁺)
6089	0.07 4	S(n)+0.0861	2 ⁽⁺⁾	3018.3	(1,2 ⁺)
6089	0.10 3	S(n)+0.1044	1 ⁽⁺⁾ ,2	3018.3	(1,2 ⁺)
6132	0.26 4	S(n)+0.0244	1 ⁺	2975.7	
6132	0.07 2	S(n)+0.0809	2 ⁽⁺⁾	2975.7	

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¹³⁵Ba(n,γ) E=24.4-463.4 eV res **1978ChZE,1974Ch14 (continued)**

γ(¹³⁶Ba) (continued)

<u>E_γ[†]</u>	<u>I_γ[‡]</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.</u>
6132	0.21 20	S(n)+0.3150	2 ⁽⁺⁾	2975.7		
6132	0.23 19	S(n)+0.3764	1 ⁽⁺⁾	2975.7		
6161	0.09 2	S(n)+0.0244	1 ⁺	2946.0?	0 ⁽⁺⁾ ,1,2,3 ⁺	
6161	0.35 13	S(n)+0.3764	1 ⁽⁺⁾	2946.0?	0 ⁽⁺⁾ ,1,2,3 ⁺	
6171	0.05 1	S(n)+0.0861	2 ⁽⁺⁾	2936.0?	(1,2 ⁺)	
6171	0.26 7	S(n)+0.2241	2 ⁽⁺⁾	2936.0?	(1,2 ⁺)	
6171	0.09 3	S(n)+0.3150	2 ⁽⁺⁾	2936.0?	(1,2 ⁺)	
6202	0.18 8	S(n)+0.2241	2 ⁽⁺⁾	2905.0?		
6202	0.23 17	S(n)+0.3764	1 ⁽⁺⁾	2905.0?		
6301	0.20 4	S(n)+0.0861	2 ⁽⁺⁾	2806.0?	(3 ⁺)	
6301	0.12 7	S(n)+0.3764	1 ⁽⁺⁾	2806.0?	(3 ⁺)	
6301	0.5 30	S(n)+0.4071	2 ⁽⁺⁾	2806.0?	(3 ⁺)	
6324	0.61 8	S(n)+0.0244	1 ⁺	2782.8	0 ⁺	
6324	0.26 4	S(n)+0.0809	2 ⁽⁺⁾	2782.8	0 ⁺	
6324	0.12 5	S(n)+0.4071	2 ⁽⁺⁾	2782.8	0 ⁺	
6336	0.16 4	S(n)+0.0244	1 ⁺	2771.5	2 ⁺	
6336	0.23 4	S(n)+0.0809	2 ⁽⁺⁾	2771.5	2 ⁺	
6336	0.24 5	S(n)+0.0861	2 ⁽⁺⁾	2771.5	2 ⁺	
6336	0.18 5	S(n)+0.1044	1 ⁽⁺⁾ ,2	2771.5	2 ⁺	
6336	0.25 9	S(n)+0.2241	2 ⁽⁺⁾	2771.5	2 ⁺	
6336	0.39 18	S(n)+0.3150	2 ⁽⁺⁾	2771.5	2 ⁺	
6336	0.59 25	S(n)+0.3764	1 ⁽⁺⁾	2771.5	2 ⁺	
6336	0.09 5	S(n)+0.4071	2 ⁽⁺⁾	2771.5	2 ⁺	
6416	0.26 4	S(n)+0.0244	1 ⁺	2690.7	1	
6416	0.04 4	S(n)+0.0809	2 ⁽⁺⁾	2690.7	1	
6416	0.02 3	S(n)+0.0861	2 ⁽⁺⁾	2690.7	1	
6416	0.15 7	S(n)+0.2241	2 ⁽⁺⁾	2690.7	1	
6444	0.13 3	S(n)+0.0809	2 ⁽⁺⁾	2663.1	1,2 ⁺	
6444	0.06 1	S(n)+0.0861	2 ⁽⁺⁾	2663.1	1,2 ⁺	
6444	0.15 10	S(n)+0.4634	2	2663.1	1,2 ⁺	
6469	0.15 3	S(n)+0.0244	1 ⁺	2638.0?	(1 ⁺)	
6469	0.16 8	S(n)+0.2241	2 ⁽⁺⁾	2638.0?	(1 ⁺)	
6469	0.19 6	S(n)+0.3150	2 ⁽⁺⁾	2638.0?	(1 ⁺)	
6469	0.10 18	S(n)+0.4071	2 ⁽⁺⁾	2638.0?	(1 ⁺)	
6576	0.93 12	S(n)+0.0809	2 ⁽⁺⁾	2531.1	3 ⁻	[E1]
6576	0.20 4	S(n)+0.0861	2 ⁽⁺⁾	2531.1	3 ⁻	[E1]
6576	1.18 13	S(n)+0.2241	2 ⁽⁺⁾	2531.1	3 ⁻	[E1]
6576	0.95 22	S(n)+0.2802	2 ⁽⁺⁾	2531.1	3 ⁻	[E1]
6576	2.03 21	S(n)+0.3150	2 ⁽⁺⁾	2531.1	3 ⁻	[E1]
6576 @&	0.51 14	S(n)+0.3764	1 ⁽⁺⁾	2531.1	3 ⁻	
6576	0.47 12	S(n)+0.4071	2 ⁽⁺⁾	2531.1	3 ⁻	[E1]
6576	0.24 20	S(n)+0.4634	2	2531.1	3 ⁻	
6709	0.17 5	S(n)+0.0244	1 ⁺	2398.0	(1) ⁺	
6709	0.16 3	S(n)+0.0809	2 ⁽⁺⁾	2398.0	(1) ⁺	
6709	0.15 5	S(n)+0.0861	2 ⁽⁺⁾	2398.0	(1) ⁺	
6709	0.21 6	S(n)+0.1044	1 ⁽⁺⁾ ,2	2398.0	(1) ⁺	
6709	0.16 11	S(n)+0.3764	1 ⁽⁺⁾	2398.0	(1) ⁺	
6758	0.12 14	S(n)+0.0809	2 ⁽⁺⁾	2349.5?		
6758	0.28 15	S(n)+0.3764	1 ⁽⁺⁾	2349.5?		
6885	0.20 3	S(n)+0.0244	1 ⁺	2222.5	(2,1) ⁺	
6885	0.42 7	S(n)+0.1044	1 ⁽⁺⁾ ,2	2222.5	(2,1) ⁺	

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¹³⁵Ba(n,γ) E=24.4-463.4 eV res **1978ChZE,1974Ch14 (continued)**

γ(¹³⁶Ba) (continued)

<u>E_γ[†]</u>	<u>I_γ[‡]</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.</u>
6885	0.21 9	S(n)+0.2241	2 ⁽⁺⁾	2222.5	(2,1) ⁺	
6885	0.11 9	S(n)+0.2802	2 ⁽⁺⁾	2222.5	(2,1) ⁺	
6885	0.92 83	S(n)+0.3150	2 ⁽⁺⁾	2222.5	(2,1) ⁺	
6885	0.37 18	S(n)+0.3764	1 ⁽⁺⁾	2222.5	(2,1) ⁺	
6885	0.20 8	S(n)+0.4634	2	2222.5	(2,1) ⁺	
6980	0.20 4	S(n)+0.0244	1 ⁺	2127.3	2 ⁺	
6980	0.14 4	S(n)+0.0861	2 ⁽⁺⁾	2127.3	2 ⁺	
6980	0.72 16	S(n)+0.2241	2 ⁽⁺⁾	2127.3	2 ⁺	
6980	0.33 12	S(n)+0.2802	2 ⁽⁺⁾	2127.3	2 ⁺	
6980	0.28 12	S(n)+0.3150	2 ⁽⁺⁾	2127.3	2 ⁺	
6980	0.62 20	S(n)+0.3764	1 ⁽⁺⁾	2127.3	2 ⁺	
6980	0.46 16	S(n)+0.4071	2 ⁽⁺⁾	2127.3	2 ⁺	
6980	0.27 18	S(n)+0.4634	2	2127.3	2 ⁺	
7029	0.33 5	S(n)+0.0244	1 ⁺	2078.3	2 ⁺	
7029	0.10 4	S(n)+0.0861	2 ⁽⁺⁾	2078.3	2 ⁺	
7029	0.79 10	S(n)+0.1044	1 ⁽⁺⁾ ,2	2078.3	2 ⁺	
7029	0.18 7	S(n)+0.2241	2 ⁽⁺⁾	2078.3	2 ⁺	
7029	0.41 18	S(n)+0.3764	1 ⁽⁺⁾	2078.3	2 ⁺	
7528	0.23 5	S(n)+0.0244	1 ⁺	1579.1	0 ⁺	[M1]
7528	0.12 2	S(n)+0.0861	2 ⁽⁺⁾	1579.1	0 ⁺	
7528	0.60 15	S(n)+0.1044	1 ⁽⁺⁾ ,2	1579.1	0 ⁺	[M1]
7528	0.20 6	S(n)+0.2241	2 ⁽⁺⁾	1579.1	0 ⁺	
7528	0.73 22	S(n)+0.3764	1 ⁽⁺⁾	1579.1	0 ⁺	[M1]
7528	0.40 19	S(n)+0.4634	2	1579.1	0 ⁺	
7556	0.11 3	S(n)+0.0809	2 ⁽⁺⁾	1550.5	2 ⁺	
7556	0.23 4	S(n)+0.0861	2 ⁽⁺⁾	1550.5	2 ⁺	
7556	0.67 10	S(n)+0.1044	1 ⁽⁺⁾ ,2	1550.5	2 ⁺	
7557	0.10 2	S(n)+0.0244	1 ⁺	1550.5	2 ⁺	
7557	1.21 36	S(n)+0.3150	2 ⁽⁺⁾	1550.5	2 ⁺	
7557	0.20 16	S(n)+0.3764	1 ⁽⁺⁾	1550.5	2 ⁺	
7557	0.24 8	S(n)+0.4071	2 ⁽⁺⁾	1550.5	2 ⁺	
7557	0.14 11	S(n)+0.4634	2	1550.5	2 ⁺	
8290	1.67 17	S(n)+0.0244	1 ⁺	817.5	2 ⁺	
8290	0.58 8	S(n)+0.0809	2 ⁽⁺⁾	817.5	2 ⁺	
8290	0.16 4	S(n)+0.0861	2 ⁽⁺⁾	817.5	2 ⁺	
8290	2.81 29	S(n)+0.1044	1 ⁽⁺⁾ ,2	817.5	2 ⁺	
8290	0.72 13	S(n)+0.2241	2 ⁽⁺⁾	817.5	2 ⁺	
8290	0.49 11	S(n)+0.2802	2 ⁽⁺⁾	817.5	2 ⁺	
8290	1.78 27	S(n)+0.3150	2 ⁽⁺⁾	817.5	2 ⁺	
8290	1.21 29	S(n)+0.3764	1 ⁽⁺⁾	817.5	2 ⁺	
8290	0.45 11	S(n)+0.4071	2 ⁽⁺⁾	817.5	2 ⁺	
8290	0.59 13	S(n)+0.4634	2	817.5	2 ⁺	
9107	7.4 8	S(n)+0.0244	1 ⁺	0	0 ⁺	[M1]
9107	0.15 2	S(n)+0.0809	2 ⁽⁺⁾	0	0 ⁺	
9107	0.13 3	S(n)+0.0861	2 ⁽⁺⁾	0	0 ⁺	
9107	0.19 4	S(n)+0.1044	1 ⁽⁺⁾ ,2	0	0 ⁺	[M1]
9107	0.83 13	S(n)+0.2241	2 ⁽⁺⁾	0	0 ⁺	
9107	0.30 8	S(n)+0.2802	2 ⁽⁺⁾	0	0 ⁺	
9107	0.36 12	S(n)+0.3150	2 ⁽⁺⁾	0	0 ⁺	
9107	0.69 18	S(n)+0.3764	1 ⁽⁺⁾	0	0 ⁺	[M1]
9107	0.42 9	S(n)+0.4071	2 ⁽⁺⁾	0	0 ⁺	
9107	0.56 13	S(n)+0.4634	2	0	0 ⁺	

Continued on next page (footnotes at end of table)

$^{135}\text{Ba}(n,\gamma)$ E=24.4-463.4 eV res [1978ChZE,1974Ch14](#) (continued)

$\gamma(^{136}\text{Ba})$ (continued)

† Calculated by evaluator from S(n)+E(n) and bound-state excitation energies.

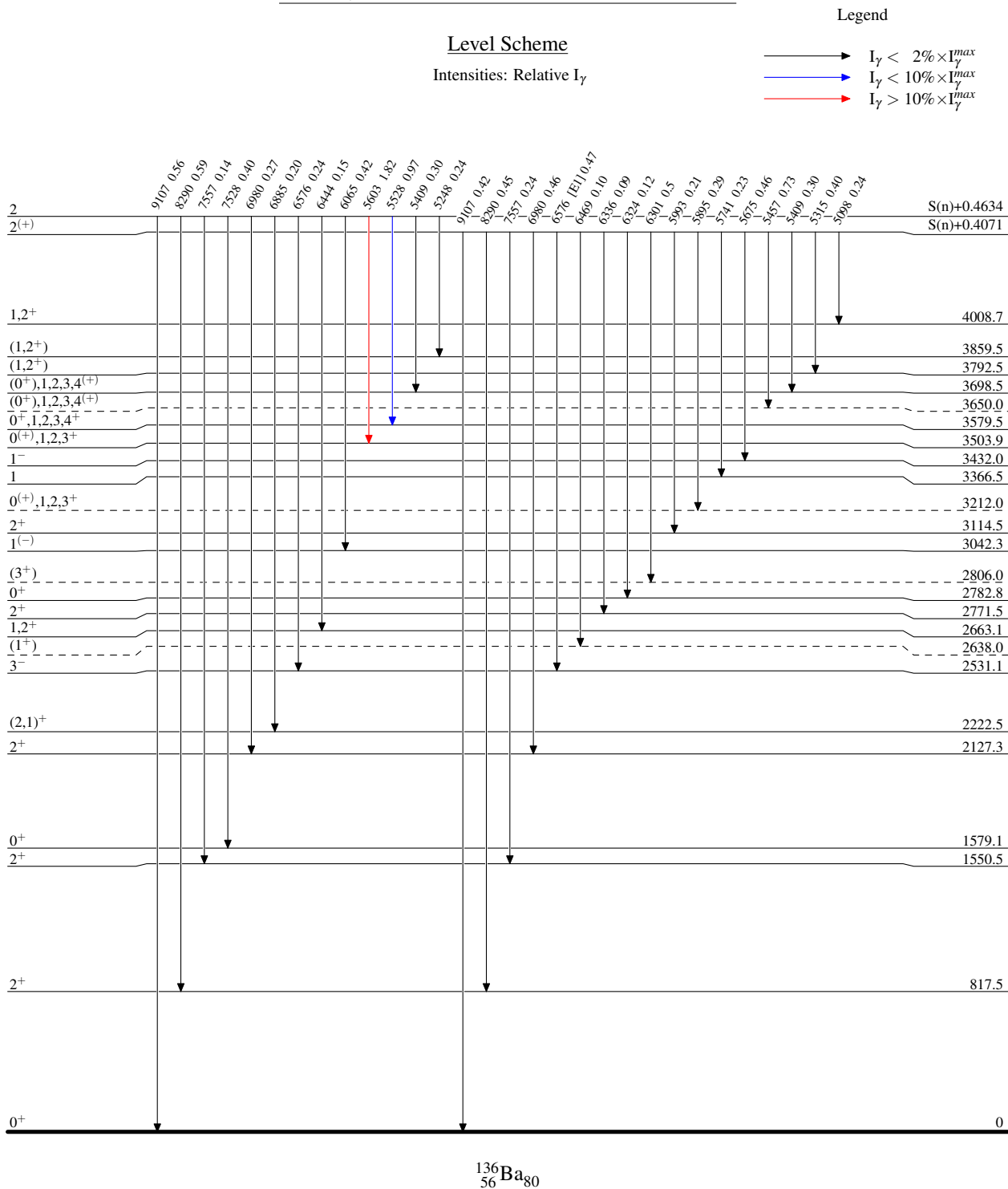
‡ Γ_γ (meV), from [1974Ch14](#).

Appears discrepant with result of [1969Ge07](#) in thermal capture.

@ Evaluator's Note: if $1^{(+)}$ for 376.4-eV resonance is correct then this primary γ cannot feed the 2531, 3^- , level.

& Placement of transition in the level scheme is uncertain.

¹³⁵Ba(n,γ) E=24.4-463.4 eV res 1978ChZE,1974Ch14



¹³⁶Ba₈₀

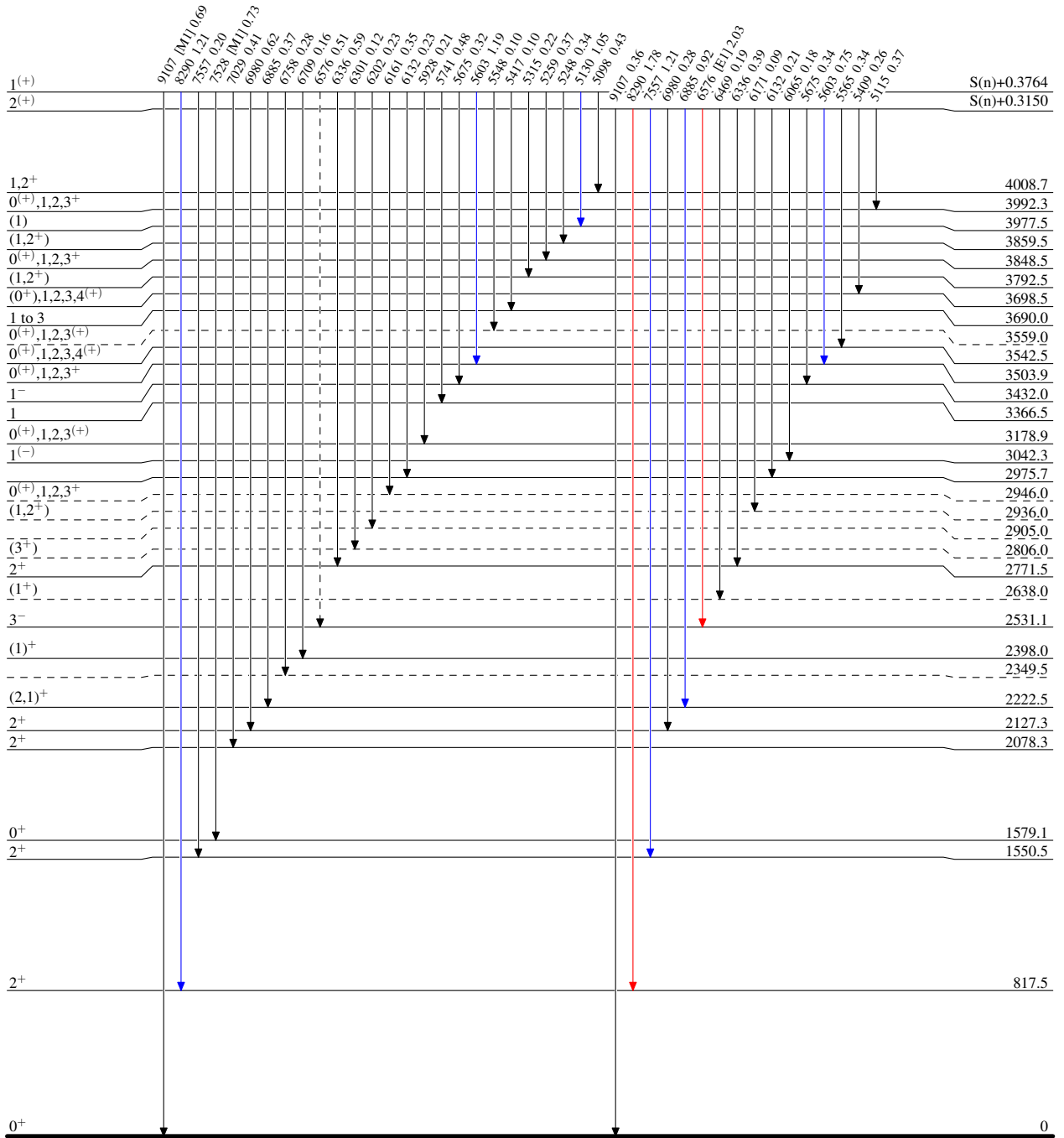
¹³⁵Ba(n,γ) E=24.4-463.4 eV res 1978ChZE,1974Ch14

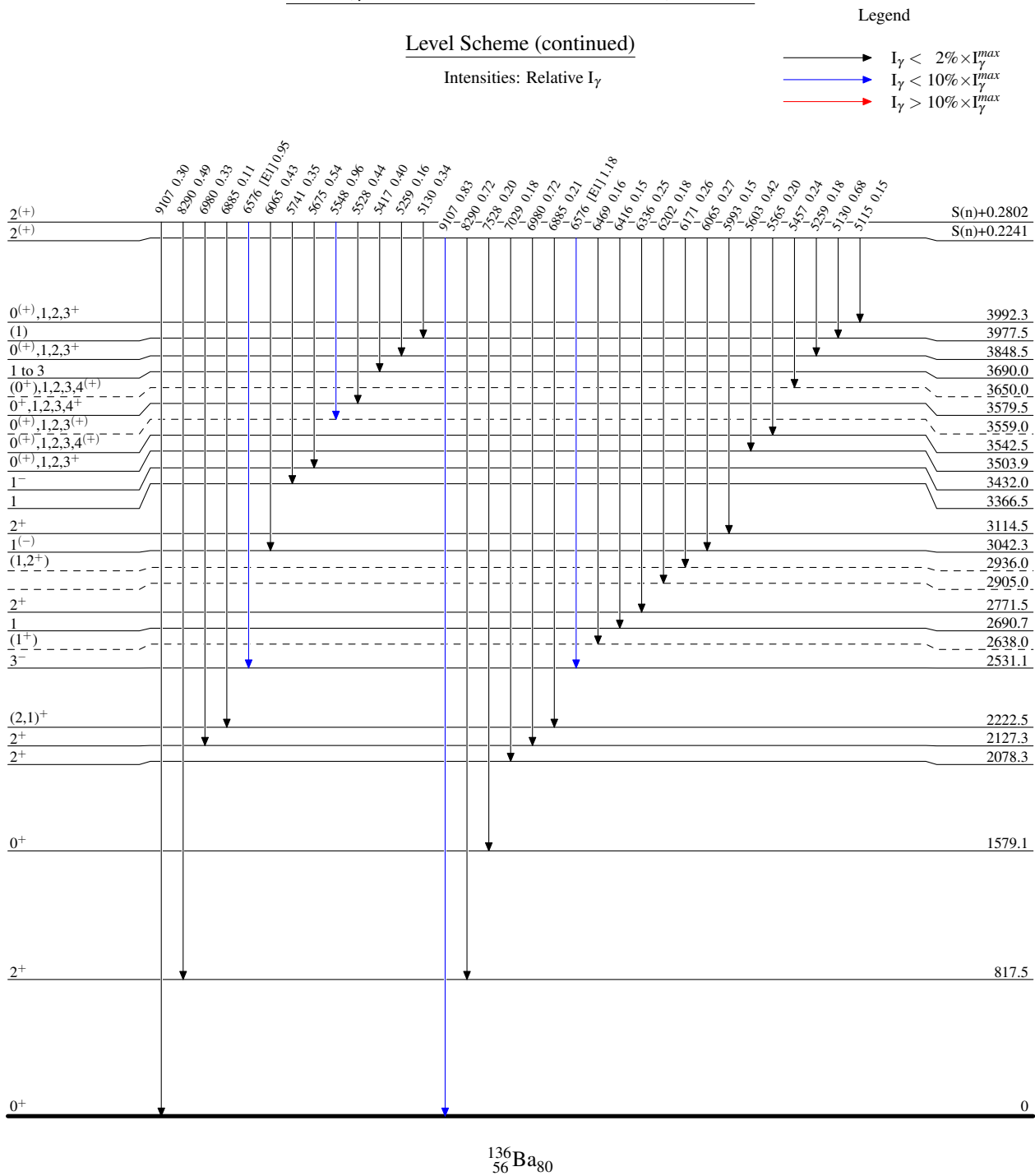
Legend

Level Scheme (continued)

Intensities: Relative I_γ

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}
- - - - - γ Decay (Uncertain)



$^{135}\text{Ba}(n,\gamma) E=24.4\text{-}463.4\text{ eV res } 1978\text{ChZE}, 1974\text{Ch14}$  $^{136}_{56}\text{Ba}_{80}$

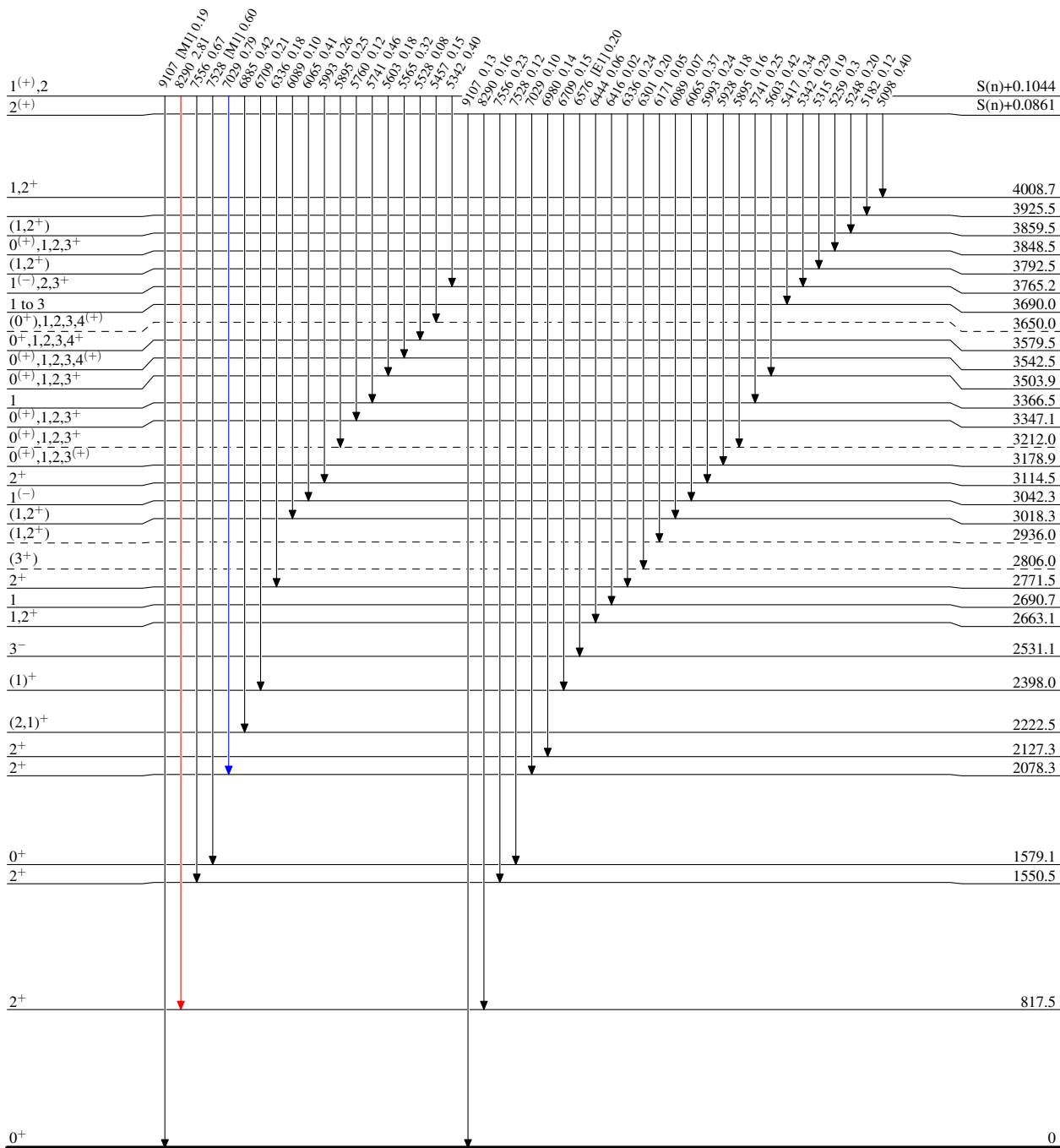
¹³⁵Ba(n,γ) E=24.4-463.4 eV res 1978ChZE,1974Ch14

Level Scheme (continued)

Intensities: Relative I_γ

Legend

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}



¹³⁶Ba₈₀

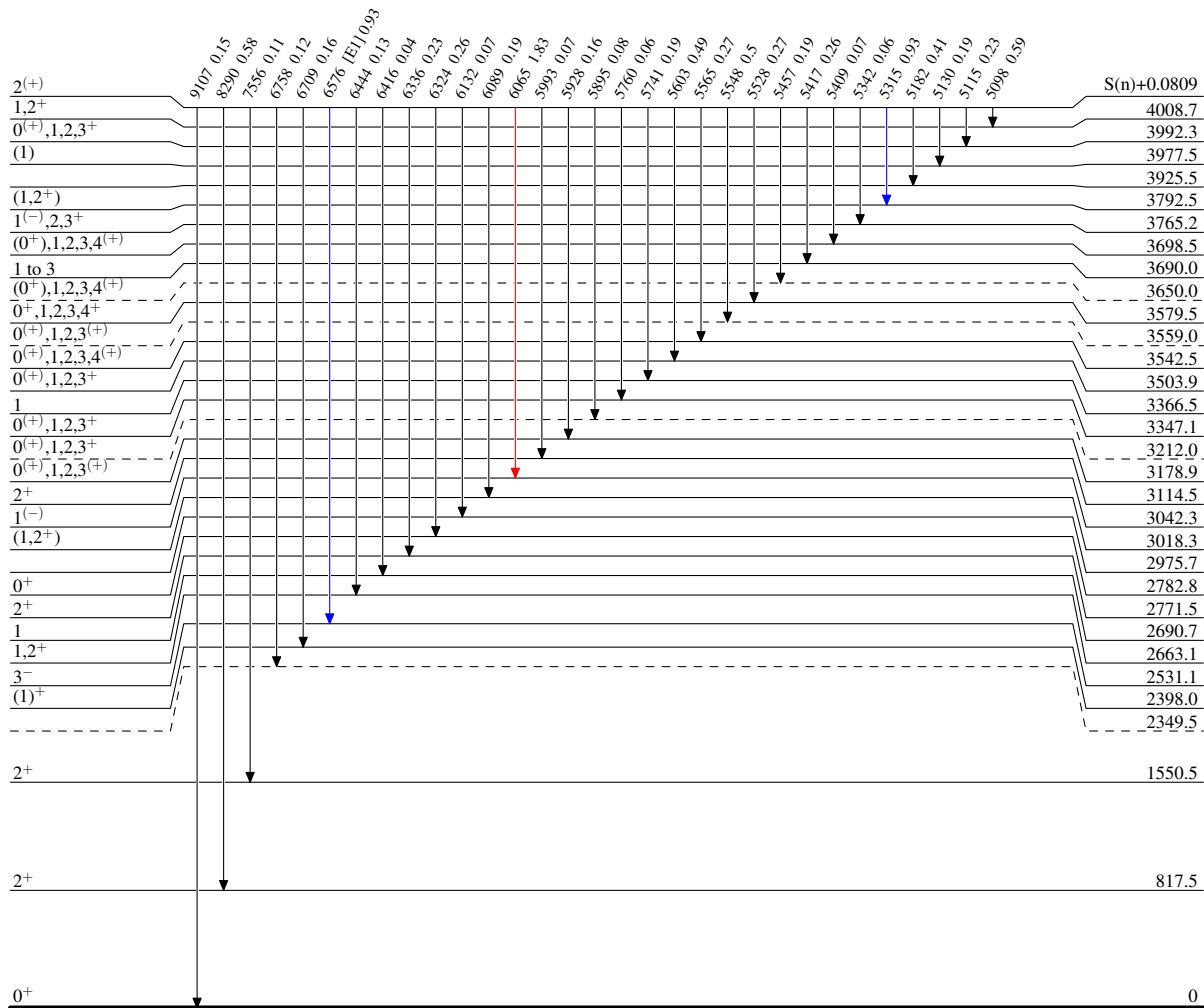
¹³⁵Ba(n,γ) E=24.4-463.4 eV res 1978ChZE,1974Ch14

Legend

Level Scheme (continued)

Intensities: Relative I_γ

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}



¹³⁶Ba₈₀

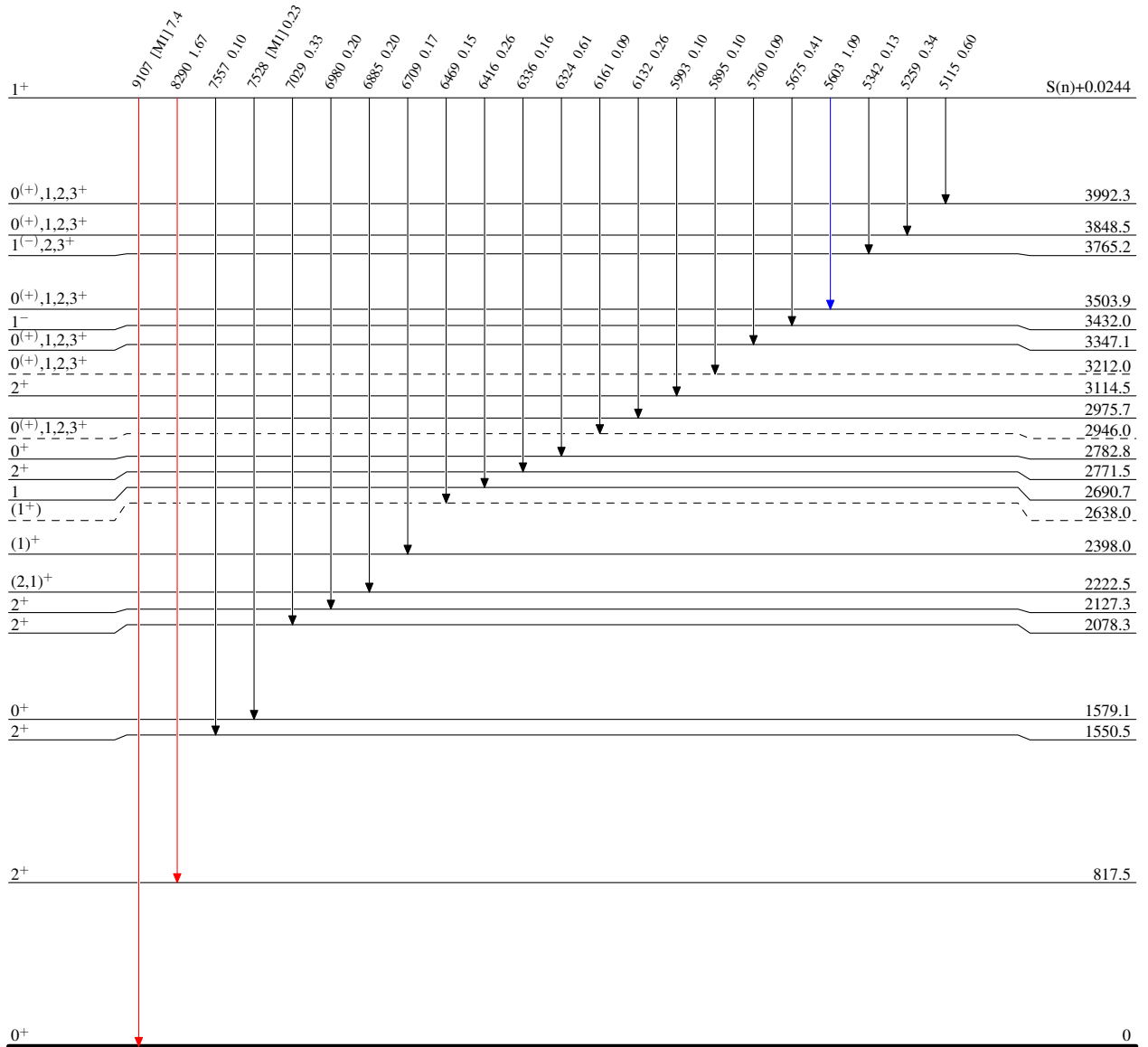
$^{135}\text{Ba}(n,\gamma) E=24.4-463.4 \text{ eV res } 1978\text{ChZE}, 1974\text{Ch14}$

Level Scheme (continued)

Intensities: Relative I_γ

Legend

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



$^{136}_{56}\text{Ba}_{80}$