

$^{134}\text{Ba}(\text{n},\gamma) \text{E}=2 \text{ keV:arc}$ **1993Ch21**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Alexander A. Rodionov And Yuri L. Khazov		NDS 109, 517 (2008)	22-Jan-2008

 ^{135}Ba Levels

E(level)	$J^\pi^\dagger$	E(level)	$J^\pi^\dagger$	E(level)	$J^\pi^\dagger$
0.0 ‡	3/2 ⁺	910.24 ‡ 3	1/2 ⁺	1878.7 ‡ 8	(1/2,3/2)
221.06 ‡ 9	1/2 ⁺	980.21 ‡ 17	3/2 ⁺ ,5/2 ⁺	1971.8 ‡ 8	(3/2,5/2)
268.2	11/2 ⁻	1213.61 13	(3/2)	1997.6 ‡ 13	(1/2) ⁻
480.51 ‡ 5	5/2 ⁺	1225.8 ‡ 3	(3/2)	2078.8 ‡ 7	(1/2 ⁻ ,3/2 ⁻)
587.89 ‡ 5	3/2 ⁺	1584.69 ‡ 11	(3/2) ⁻	2117.9 ‡ 16	(1/2,3/2)
713.6 4	(7/2 ⁻)	1669.8 5	(3/2) ⁻	2150.9 ‡ 8	(1/2,3/2)
854.92 ‡ 9	3/2 ⁺	1794.5 ‡ 9	(1/2,3/2)	(S(n)+2 $^\#$)	1/2,3/2 ⁻
874.44 6	7/2 ⁺	1830.2 ‡ 13	(1/2,3/2)		

† From 'Adopted Levels', except $J^\pi=1/2,3/2^-$ for s-, p-wave capture states.

‡ Fed by primary γ from 1/2,3/2⁻ resonances.

$^\#$ S(n)=6971.96 10 (2003Au03).

 $\gamma(^{135}\text{Ba})$

$E_\gamma^\dagger$	$I_\gamma^\ddagger@$	$E_i(\text{level})$	J_i^π	E_f	J_f^π
220.90 15	10.1 2	221.06	1/2 ⁺	0.0	3/2 ⁺
(268.2)		268.2	11/2 ⁻	0.0	3/2 ⁺
366.58 18	1.63 6	587.89	3/2 ⁺	221.06	1/2 ⁺
374.20 13	1.37 6	854.92	3/2 ⁺	480.51	5/2 ⁺
445.4 4	3.0 1	713.6	(7/2 ⁻)	268.2	11/2 ⁻
480.48 5	10.3 2	480.51	5/2 ⁺	0.0	3/2 ⁺
587.91 5	6.44 7	587.89	3/2 ⁺	0.0	3/2 ⁺
633.86 9	1.83 8	854.92	3/2 ⁺	221.06	1/2 ⁺
^x 720.74 10	0.7 3				
855.19 15	1.4 3	854.92	3/2 ⁺	0.0	3/2 ⁺
874.44 6	1.53 8	874.44	7/2 ⁺	0.0	3/2 ⁺
910.24 3	2.60 8	910.24	1/2 ⁺	0.0	3/2 ⁺
956.23 11	1.2 2	1669.8	(3/2) ⁻	713.6	(7/2 ⁻)
980.21 17	1.9 3	980.21	3/2 ⁺ ,5/2 ⁺	0.0	3/2 ⁺
1213.63 13	2.2 3	1213.61	(3/2)	0.0	3/2 ⁺
1225.8 3	1.8 3	1225.8	(3/2)	0.0	3/2 ⁺
1363.62 6	2.7 2	1584.69	(3/2) ⁻	221.06	1/2 ⁺
1582 1	0.4 $^\#$ 4	1584.69	(3/2) ⁻	0.0	3/2 ⁺
^x 1874.4 3	1.9 3				
4822.5 7	1.0 2	(S(n)+2)	1/2,3/2 ⁻	2150.9	(1/2,3/2)
4855.5 15	1.2 5	(S(n)+2)	1/2,3/2 ⁻	2117.9	(1/2,3/2)
4894.6 6	$\leq 0.7^\#$	(S(n)+2)	1/2,3/2 ⁻	2078.8	(1/2 ⁻ ,3/2 ⁻)
4975.8 12	0.74 11	(S(n)+2)	1/2,3/2 ⁻	1997.6	(1/2) ⁻
5001.6 7	0.27 16	(S(n)+2)	1/2,3/2 ⁻	1971.8	(3/2,5/2)
5094.7 7	0.23 20	(S(n)+2)	1/2,3/2 ⁻	1878.7	(1/2,3/2)
5143.2 12	0.10 10	(S(n)+2)	1/2,3/2 ⁻	1830.2	(1/2,3/2)
5178.9 8	0.39 17	(S(n)+2)	1/2,3/2 ⁻	1794.5	(1/2,3/2)
5388.8 5	1.94 13	(S(n)+2)	1/2,3/2 ⁻	1584.69	(3/2) ⁻
5747.1 9	0.29 9	(S(n)+2)	1/2,3/2 ⁻	1225.8	(3/2)

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$^{134}\text{Ba}(\text{n},\gamma) \text{ E}=2 \text{ keV:arc}$ **1993Ch21** (continued) $\gamma(^{135}\text{Ba})$ (continued)

$E_\gamma^\dagger$	$I_\gamma^{\ddagger@}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π
5762.2 12	$\leq 0.4^\#$	(S(n)+2)	$1/2, 3/2^-$	1213.61	(3/2)
5993.0 8	0.61 15	(S(n)+2)	$1/2, 3/2^-$	980.21	$3/2^+, 5/2^+$
6063.1 5	1.22 19	(S(n)+2)	$1/2, 3/2^-$	910.24	$1/2^+$
6119.7 17	1.13 14	(S(n)+2)	$1/2, 3/2^-$	854.92	$3/2^+$
6385.5 9	1.57 16	(S(n)+2)	$1/2, 3/2^-$	587.89	$3/2^+$
6491.8 8	0.46 6	(S(n)+2)	$1/2, 3/2^-$	480.51	$5/2^+$
6752.1 10	1.0 3	(S(n)+2)	$1/2, 3/2^-$	221.06	$1/2^+$
6973.5 6	0.51 8	(S(n)+2)	$1/2, 3/2^-$	0.0	$3/2^+$

† Weighted averages (**1993Ch21**) of the measurements at thermal, 102 eV, 2.0 and 24.3 keV, after correction of primary γ -ray energies from the filtered-beam experiments by 2.0 and 24.3 keV.

‡ Primary γ rays: $I_\gamma(\text{S(n)}/E_\gamma)^3$ per 100 n-captures. Secondary γ rays: I_γ per 100 n-captures.

$^\#$ Line contaminated.

$^@$ Intensity per 100 neutron captures.

x γ ray not placed in level scheme.

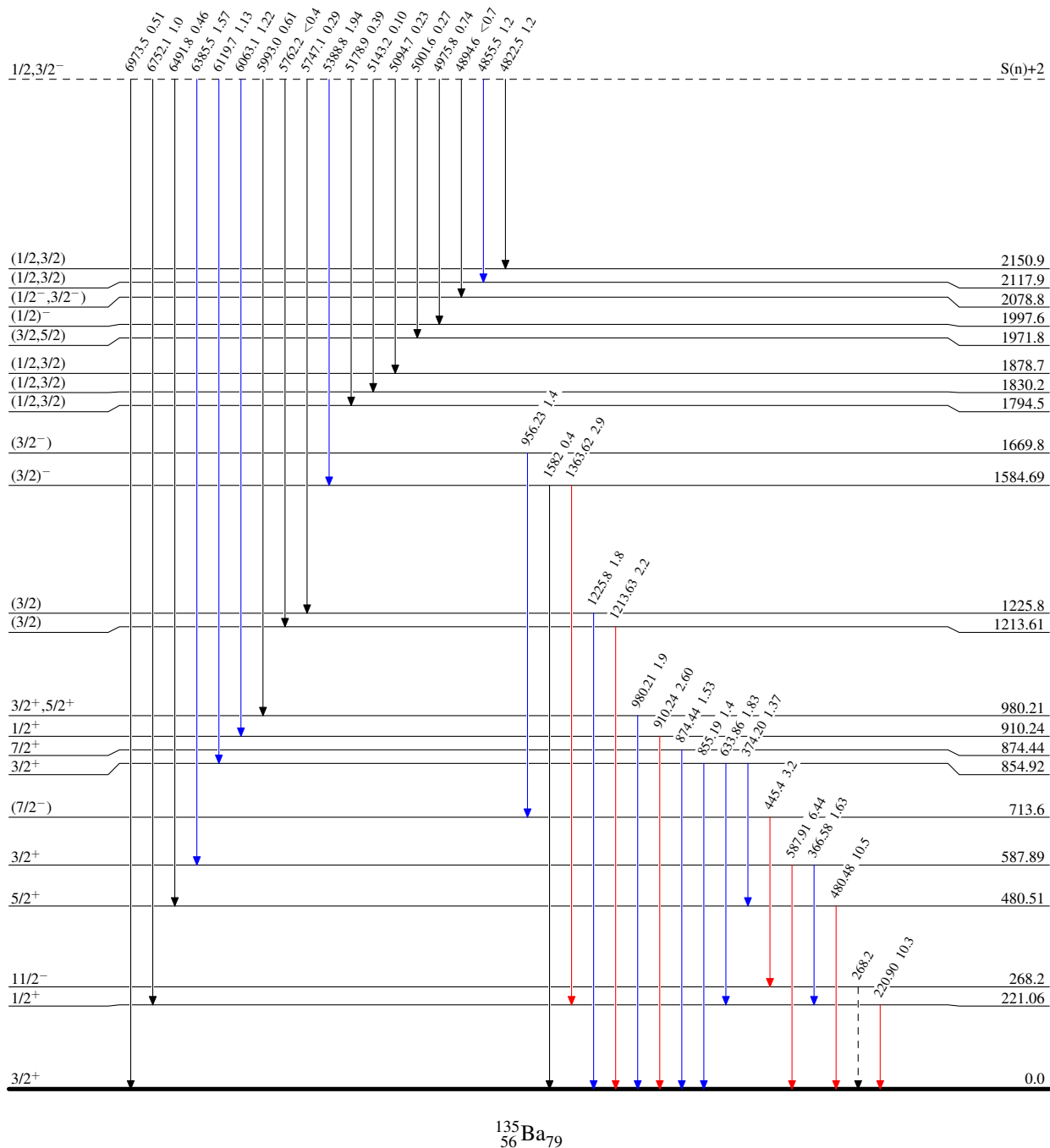
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Legend

Level Scheme

Intensities: Per 100 neutron captures

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\max}$
 $\cdots \longrightarrow$ γ Decay (Uncertain)

 $^{135}_{56}\text{Ba}_{79}$