^{134}Ba(n,γ) E=102 eV 1993Ch21

History

Type	Author	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^π †	E(level)	J^π †	E(level)	J^π †
0.0‡	$3/2^+$	910.25‡ *3*	$1/2^+$	1830.2‡ *13*	(1/2,3/2)
221.09‡ *9*	$1/2^+$	980.09 *16*	$3/2^+$,$5/2^+$	1879.1‡ *3*	(1/2,3/2)
268.2	$11/2^-$	1165.3?‡ *11*		1997.6‡ *13*	$(1/2)^-$
480.51 *5*	$5/2^+$	1213.61‡ *13*	(3/2)	2077.81‡ *21*	$(1/2^-,3/2^-)$
587.89‡ *5*	$3/2^+$	1225.9‡ *3*	(3/2)	2117.9 *16*	(1/2,3/2)
713.6 *4*	$(7/2^-)$	1584.71‡ *11*	$(3/2)^-$	2150.5? *8*	(1/2,3/2)
854.93‡ *9*	$3/2^+$	1669.8 *5*	$(3/2^-)$	2730.71 *21*	$1/2^-,3/2^-$
874.44 *6*	$7/2^+$	1794.5‡ *9*	(1/2,3/2)	(S(n)+0.102#)	$1/2^+$@

† From 'Adopted Levels', except $J^\pi=1/2^+$ for s-wave resonance.
‡ Fed by primary γ from $1/2^+$ resonance.
# S(n)=6971.96 *10* (2003Au03).
@ 102 eV is L=0 resonance (1996Ko27).

γ(^{135}Ba)

E_γ †	I_γ ‡#	E_i(level)	J_i^π	E_f	J_f^π
220.90 *15*	12.9 *7*	221.09	$1/2^+$	0.0	$3/2^+$
(268.2)		268.2	$11/2^-$	0.0	$3/2^+$
366.58 *18*	1.75 *10*	587.89	$3/2^+$	221.09	$1/2^+$
374.20 *13*	1.41 *10*	854.93	$3/2^+$	480.51	$5/2^+$
445.4 *4*	3.2 *2*	713.6	$(7/2^-)$	268.2	$11/2^-$
480.48 *5*	9.0 *2*	480.51	$5/2^+$	0.0	$3/2^+$
587.91 *5*	5.52 *14*	587.89	$3/2^+$	0.0	$3/2^+$
633.86 *9*	1.68 *6*	854.93	$3/2^+$	221.09	$1/2^+$
637.6@ *2*	0.45 *7*	1225.9	(3/2)	587.89	$3/2^+$
690.5 *6*	0.89 *13*	910.25	$1/2^+$	221.09	$1/2^+$
744.90@ *10*	0.24 *3*	1225.9	(3/2)	480.51	$5/2^+$
758.3 *4*	0.43 *9*	980.09	$3/2^+$,$5/2^+$	221.09	$1/2^+$
855.19 *15*	1.16 *13*	854.93	$3/2^+$	0.0	$3/2^+$
874.44 *6*	1.31 *11*	874.44	$7/2^+$	0.0	$3/2^+$
910.24 *3*	2.27 *13*	910.25	$1/2^+$	0.0	$3/2^+$
956.23 *11*	0.82 *9*	1669.8	$(3/2^-)$	713.6	$(7/2^-)$
980.21 *17*	1.9 *3*	980.09	$3/2^+$,$5/2^+$	0.0	$3/2^+$
1003.7@ *10*	0.14 *6*	1225.9	(3/2)	221.09	$1/2^+$
1213.63 *13*	1.51 *12*	1213.61	(3/2)	0.0	$3/2^+$
1225.8 *3*	1.23 *12*	1225.9	(3/2)	0.0	$3/2^+$
1291.3 *3*	0.39 *7*	1879.1	(1/2,3/2)	587.89	$3/2^+$
1363.62 *6*	1.7 *2*	1584.71	$(3/2)^-$	221.09	$1/2^+$
1856.6 *2*	0.49 *5*	2077.81	$(1/2^-,3/2^-)$	221.09	$1/2^+$
x1874.4 *3*	0.39 *8*				
2080.0 *8*	0.3 *1*	2077.81	$(1/2^-,3/2^-)$	0.0	$3/2^+$
2142.8 *2*	0.19 *7*	2730.71	$1/2^-,3/2^-$	587.89	$3/2^+$
2150.5@ *8*	0.30 *9*	2150.5?	(1/2,3/2)	0.0	$3/2^+$

Continued on next page (footnotes at end of table)

^{134}Ba(n,γ) E=102 eV 1993Ch21 (continued)

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

E_γ [†]	I_γ [‡#]	E_i(level)	J_i^π	E_f	J_f^π
4855.5 *15*	0.7 *2*	(S(n)+0.102)	$1/2^+$	2117.9	(1/2,3/2)
4894.6 *6*	3.6 *5*	(S(n)+0.102)	$1/2^+$	2077.81	$(1/2^-,3/2^-)$
4975.8 *12*	1.4 *3*	(S(n)+0.102)	$1/2^+$	1997.6	$(1/2)^-$
5094.7 *7*	1.7 *6*	(S(n)+0.102)	$1/2^+$	1879.1	(1/2,3/2)
5143.2 *12*	1.1 *3*	(S(n)+0.102)	$1/2^+$	1830.2	(1/2,3/2)
5178.9 *8*	1.0 *2*	(S(n)+0.102)	$1/2^+$	1794.5	(1/2,3/2)
5388.8 *5*	0.95 *12*	(S(n)+0.102)	$1/2^+$	1584.71	$(3/2)^-$
5747.1 *9*	0.28 *9*	(S(n)+0.102)	$1/2^+$	1225.9	(3/2)
5762.2 *12*	0.61 *10*	(S(n)+0.102)	$1/2^+$	1213.61	(3/2)
5808.1[@] *10*	0.46 *17*	(S(n)+0.102)	$1/2^+$	1165.3?	
6063.1 *5*	0.38 *14*	(S(n)+0.102)	$1/2^+$	910.25	$1/2^+$
6119.7 *17*	0.66 *10*	(S(n)+0.102)	$1/2^+$	854.93	$3/2^+$
6385.5 *9*	0.36 *6*	(S(n)+0.102)	$1/2^+$	587.89	$3/2^+$
6752.1 *10*	0.21 *6*	(S(n)+0.102)	$1/2^+$	221.09	$1/2^+$
6973.5 *6*	1.03 *6*	(S(n)+0.102)	$1/2^+$	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: $I\gamma(S(n)/E\gamma)^3$ per 100 n-captures. Secondary γ rays: $I\gamma$ per 100 n-captures.

[#] Intensity per 100 neutron captures.

[@] Placement of transition in the level scheme is uncertain.

[x] γ ray not placed in level scheme.

^{134}Ba(n,γ) E=102 eV 1993Ch21

Level Scheme

Intensities: Per 100 neutron captures

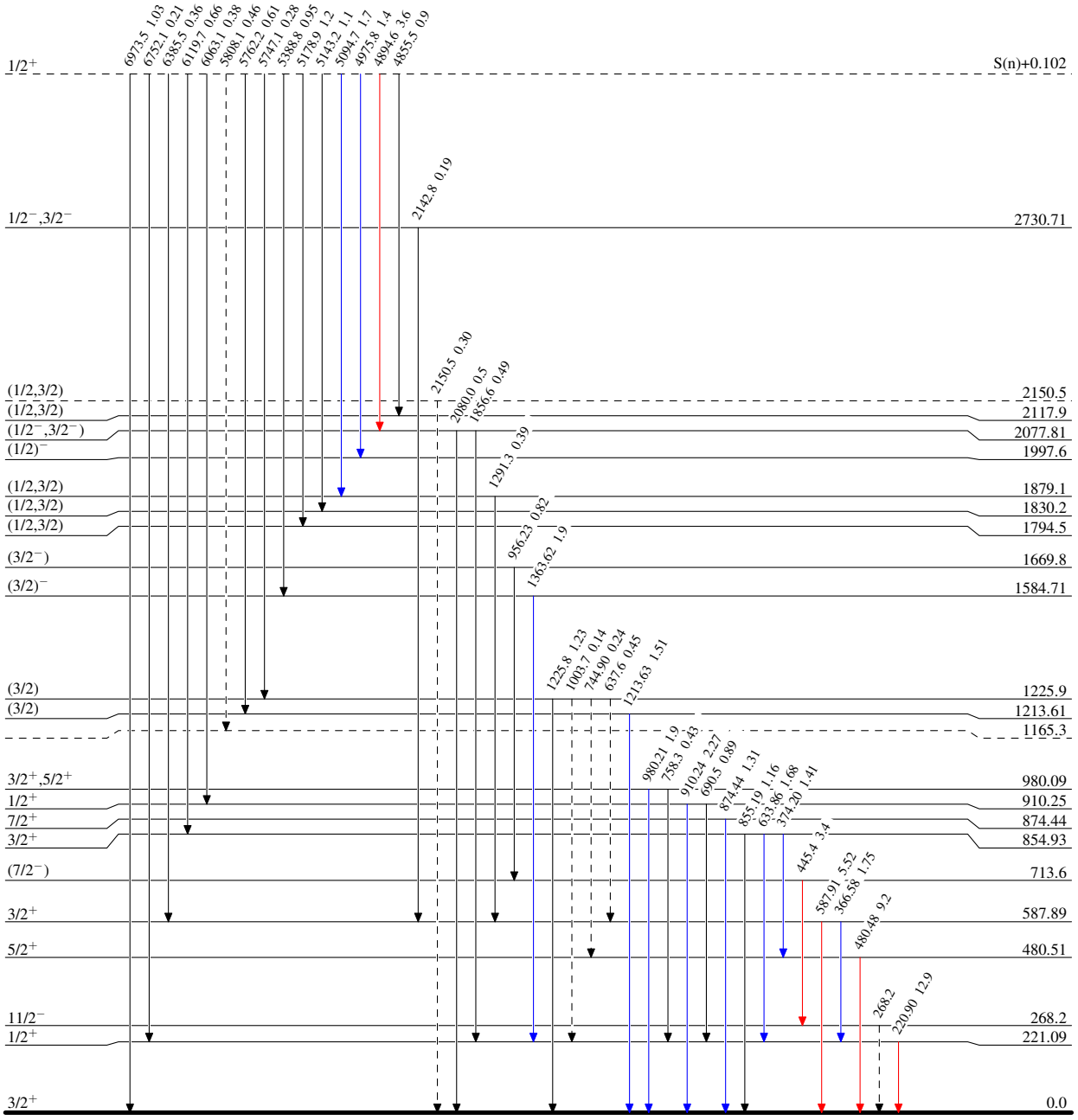
Legend

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

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

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

γ Decay (Uncertain)



$^{135}_{56}Ba_{79}$