^{132}Ba(pol d,p) E=12 MeV 2009Su18,1970Vo04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yu. Khazov and A. Rodionov, F. G. Kondev	NDS 112, 855 (2011)	31-Oct-2010

2009Su18: ^{132}Ba(pol d,p), E=24.0 MeV; measured σ(E,θ) at 10 angles between 6°−40°. ^{133}Ba; deduced analyzing power, levels, L(n), J^{π}, S. MP Tandem accelerator, polarized deuteron beam, Q3D spectrograph, FWHM=6-7 keV, long focal-plane detector, DWBA analysis, interacting boson-fermion model and shell model calculations.

1970Vo04: ^{132}Ba(d,p), 12 MeV; measured σ(E,θ), θ=5°, 50°, deduced levels, L(n), J^{π}, S. Van de Graaff, broad-range magnetic spectrograph, FWHM=13-15 keV, DWBA analysis.

^{133}Ba Levels

E(level)[†]	J^{π}[@]	L	$(2J+1)S_{lj}$	Comments
0	$1/2^+$	0	0.47	dσ/dΩ=2.12 mb/sr *3*.
12.3 *5*	$3/2^+$	2	1.13	dσ/dΩ=1.86 mb/sr *3*.
288.3 *5*	$11/2^-$	5	2.30	dσ/dΩ=2.96 mb/sr *4*.
294[#] *5*				
302.8 *5*	$3/2^+$	2	0.19	dσ/dΩ=330 μb/sr *7*.
500[#] *5*	$1/2^+$	0	≈0.02	
576.6 *5*	$(7/2^+)$	(4)	0.12	dσ/dΩ=22 μb/sr *1*.
630.8 *5*	$5/2^+$	2	0.30	dσ/dΩ=515 μb/sr *9*.
674.3 *5*	$3/2^+$	2	0.03	dσ/dΩ=87 μb/sr *4*.
791.1 *5*	$7/2^-$	3	0.18	dσ/dΩ=283 μb/sr *6*.
858.5 *5*	$3/2^+$	2	0.24	dσ/dΩ=397 μb/sr *7*.
886.0 *5*	$5/2^+$	2	0.12	dσ/dΩ=195 μb/sr *5*.
969.4 *5*				dσ/dΩ=6.0 μb/sr *10*.
1066.8 *5*				dσ/dΩ=2.8 μb/sr *7*.
1111.2[‡] *5*	$5/2^-$,$7/2^-$	3	0.004, 0.003	dσ/dΩ=4.9 μb/sr *10*.
1211.1 *5*				dσ/dΩ=1.9 μb/sr *3*.
1247.7 *5*	$1/2^+$	0	0.10	dσ/dΩ=433 μb/sr *10*.
1271.3 *5*	$7/2^-$	3	1.63	dσ/dΩ=2.79 mb/sr *5*.
1283.6 *5*	$3/2^-$	1	0.52	dσ/dΩ=1.46 mb/sr *3*.
1329.5[‡] *5*	$7/2^-$	3	0.14	dσ/dΩ=233 μb/sr *12*.
1501.5 *5*				dσ/dΩ=9 μb/sr *3*.
1563.6 *5*	$5/2^+$	2	0.05	dσ/dΩ=96 μb/sr *6*.
1582.7 *5*	$1/2^-$	1	0.14	dσ/dΩ=589 μb/sr *12*.
1616.1 *5*				dσ/dΩ=33 μb/sr *3*.
1689.3 *5*				dσ/dΩ=3.9 μb/sr *5*.
1704.7 *5*				dσ/dΩ=1.7 μb/sr *25*.
1770.9[‡] *5*	$5/2^-$	3	0.27	dσ/dΩ=366 μb/sr *10*.
1833.7 *5*				dσ/dΩ=41 μb/sr *4*.
1872.4 *5*				dσ/dΩ=41 μb/sr *3*.
1938.3 *5*				dσ/dΩ=42 μb/sr *2*.
1968.2 *5*	$7/2^-$	3	0.05	dσ/dΩ=110 μb/sr *7*.
2017.0 *5*				dσ/dΩ=52 μb/sr *6*.
2025.1 *5*				dσ/dΩ=108 μb/sr *7*.
2075.8 *5*	$3/2^-$	1	0.02	dσ/dΩ=96 μb/sr *6*.
2101.3 *5*				dσ/dΩ=14 μb/sr *3*.
2113.4 *5*	$3/2^-$	1	0.02	dσ/dΩ=81 μb/sr *6*.
2142.2 *5*	$(7/2^-)$	(3)	0.03	dσ/dΩ=61 μb/sr *4*.
2171.2 *5*	$5/2^-$	3	0.08	dσ/dΩ=137 μb/sr *7*.
2223.0 *5*				dσ/dΩ=13 μb/sr *2*.
2245.3 *5*				dσ/dΩ=21 μb/sr *3*.
2266.9 *5*				dσ/dΩ=26 μb/sr *4*.
2288.1 *5*	$7/2^-$	3	0.01	dσ/dΩ=92 μb/sr *5*.
2325.3 *5*				dσ/dΩ=115 μb/sr *7*.

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^{132}Ba(pol d,p) E=12 MeV 2009Su18,1970Vo04 (continued)

^{133}Ba Levels (continued)

E(level)[†]	Comments
2338.8 *5*	dσ/dΩ=92 μb/sr *6*.
2409[#] *20*	

[†] From 2009Su18, except as noted. According to authors, evaluators assigned ΔE=0.5 keV for each level energy.
[‡] Possible a doublet.
[#] From 1970Vo04.
[@] From L-value and analyzing power (2009Su18).