^{130}Ba(pol d,t),(d,t) 1998Bu05,1974Gr22

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Janos Timar and Zoltan Elekes, Balraj Singh	NDS 121, 143 (2014)	31-May-2014

1998Bu05: E=25 MeV; polarized beam; magnetic spectrograph, FWHM=16-18 keV, θ=6°−35°; enriched target (14.4%). Measured $\sigma(\theta)$, vector analyzing powers.
1974Gr22: E=16 MeV; magnetic spectrograph, FWHM=16-18 keV, θ=20°−85°; enriched target (100%).
Data are from 1998Bu05, unless otherwise noted.

^{129}Ba Levels

Relative differential cross sections at 14.3°(c.m.) are listed under comments.

E(level)	J^{π}‡	L	G_{lj}#	Comments
0.0	$1/2^+$	0	1.0	dσ/dΩ=590.
7.8 *16*	$7/2^+$	4	1.38	dσ/dΩ=193.
110.4 *6*	$3/2^+$	2	0.64	dσ/dΩ=1027.
181.4 *3*	$9/2^-$	5	0.10	dσ/dΩ=3.
253.8 *5*	$3/2^+$	2	0.067	dσ/dΩ=98.
279.2† *9*	$1/2^+$	0	0.047	dσ/dΩ=90.
279.2† *9*	$(11/2)^-$	5	1.83	
318.4 *10*	$5/2^+$	2	0.40	dσ/dΩ=816.
458.7† *10*	$3/2^+$	2	0.22	dσ/dΩ=864.
458.7† *10*	$5/2^+$	2	0.27	
541.5 *27*	$5/2^+$	2	0.67	dσ/dΩ=1320.
631.3 *13*	$7/2^-$	3	0.31	L: L=2 was reported by 1974Gr22. dσ/dΩ=123.
659.5 *20*	$5/2^+$	2	0.056	dσ/dΩ=105.
788.0 *4*		(1+5)	0.003,0.089	dσ/dΩ=7.
799.6 *50*	$(3/2^+,5/2^+)$			Level observed by 1974Gr22.
805.8 *16*		(1+5)	0.006,0.14	dσ/dΩ=14.
849.8 *26*	$5/2^+$	2	0.024	dσ/dΩ=42.
892.1 *15*				dσ/dΩ=42.
906.7 *7*		1	0.044	dσ/dΩ=27.
928.6 *5*	$1/2^+$	0	0.24	dσ/dΩ=158.
1012.4 *9*				dσ/dΩ=30.
1035.4 *15*		5	0.19	dσ/dΩ<9.
1063.1 *2*	$3/2^+$	2	0.044	dσ/dΩ=64.
1097.8 *15*	$1/2^-$	1	0.004	dσ/dΩ=5.
1119.5 *4*	$1/2^+$	0	0.031	dσ/dΩ=17.
1204.1 *2*	$7/2^+$	4	0.096	dσ/dΩ=5.
1219.3 *18*	$(5/2)^+$	2	0.031	dσ/dΩ=58.
1282.5 *8*	$5/2^+$	2	0.13	dσ/dΩ=244.
1303.8 *8*	$(9/2)^+$	4	0.10	dσ/dΩ<20.
1324.7 *50*				
1338.9 *10*	$9/2^-$	5	0.18	dσ/dΩ<7.
1384.7 *53*				
1401.0 *20*	$5/2^+$	2	0.11	dσ/dΩ=200.
1436.9 *14*		2	0.07	dσ/dΩ=136.
1504.3 *5*	$(5/2)^+$	2	0.013	dσ/dΩ=19.
1530.2 *30*				dσ/dΩ=10.
1536.9 *46*		4	0.27	dσ/dΩ=28.
1566.0 *17*		(2)	0.006	dσ/dΩ=13.
1611.4 *40*		(3)	0.038	dσ/dΩ=17.
1633.2 *48*	$1/2^+$	0	0.038	dσ/dΩ=26.

Continued on next page (footnotes at end of table)

^{130}Ba(pol d,t),(d,t) 1998Bu05,1974Gr22 (continued)

^{129}Ba Levels (continued)

E(level)	J^{π}‡	L	G_{lj}#	Comments
1651.4 *24*		(5)	0.13	dσ/dΩ=15.
1692.3 *13*	11/2$^-$	5	0.24	dσ/dΩ=17.
1712.9 *23*	1/2$^+$	0	0.11	dσ/dΩ=78.
1768.2 *30*	1/2$^+$	0	0.22	dσ/dΩ=132.
1782.8 *30*				
1805.4 *38*		2	0.013	dσ/dΩ=26.
1837.3 *30*				
1863.4 *60*		2	0.009	dσ/dΩ=10.
1906.1 *57*		2	0.02	dσ/dΩ=28.
1951.8 *55*		(0)	0.02	dσ/dΩ=10.
1976.3 *45*				
1989.9 *30*	1/2$^+$	0	0.062	dσ/dΩ=46.
2008.1 *55*	3/2$^-$	1	0.027	dσ/dΩ=18.

† Doublet.
‡ From L-transfer and vector analyzing powers.
# Relative spectroscopic strength, normalized to the ground state.