

$^{130}\text{Ba}(\text{p,t})$ 2009Pa25

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Zoltan Elekes and Janos Timar		NDS 129, 191 (2015)	28-Feb-2015

Proton beam at E=25 MeV provided by the MP Tandem accelerator at the Maier-Leibnitz Laboratory of the Ludwig Maximilians University and the Technical University of Munich. The Munich Q3D magnetic spectrograph was used to analyze tritons detected by a multidetector system consisting of three proportional counters and a plastic scintillator; 37.61% enriched target, particle identification. Measured triton spectra, cross sections, Q value of the $^{130}\text{Ba}(\text{p,t})$ reaction. FWHM=5-10 keV. Comparison with IBA model predictions.

 ^{128}Ba Levels

E(level)	J π #	L	ε^\dagger	Comments
0	0 ⁺	0	100	
284.2 1	2 ⁺	2	100	
762.7 4	4 ⁺	4		
884.6 2	2 ⁺	2	25.5 28	
942.3 1	0 ⁺	0	2.8 1	
1320.1 10	(2) ⁺	2	1.6 5	
1373.3 5	4 ⁺	4		
1710.9 1	0 ⁺	0	3.3 2	
1833.1 5	4 ⁺	3		J π : contradicts with L=3.
1907.2 6	4 ⁺	4		
1953.9 \ddagger 5				
2054.6 7	2 ⁺	2	6.2 13	
2197.7 3	3 ⁻ ,4 ⁺	4		
2217.4 7	0 ⁺	0	0.5 1	
2250.6 9	4 ⁺	4		
2346.0 10	2 ⁺	2	2.3 8	
2444.5 2	0 ⁺	0	3.3 2	
2486.2 \ddagger 10				
2511.2 \ddagger 7				
2551.5 7	4 ⁺	4		
2589.7 7	2 ⁺	2	7.4 2	
2629.7 5	0 ⁺	0	0.7 1	
2659 1	(3 ⁻)	(3)		
2710 1	(2 ⁺)	(2)	7.8 5	
2749 1				
2770 1	0 ⁺	0	2.4 2	
2804 1				
2840 1	0 ⁺	0	2.4 3	
2870 1				
2923 1	0 ⁺	0	2.5 3	
2950 1				
3039 1				
3086 1	(3 ⁻)	(3)		
3127 1				
3204 1				
3246 1				
3341 3	(4 ⁺)	(4)		
3474 3	(3 ⁻)	(3)		
3536 3				
3611 3	(3 ⁻)	(3)		

$\dagger \varepsilon = (\text{d}\sigma/\text{d}\Omega)_{\text{exp}} / (\text{d}\sigma/\text{d}\Omega)_{\text{DWBA}}$, normalized to 100 for the g.s.

Continued on next page (footnotes at end of table)

 $^{130}\text{Ba}(\text{p,t})$ [2009Pa25](#) (continued) ^{128}Ba Levels (continued)

‡ Angular distribution shown by [2009Pa25](#) but no L value could be assigned.

From Adopted Levels.