^{207}Pb(α,d) 1971Le09

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. Chen [#] and F. G. Kondev	NDS 126, 373 (2015)	30-Sep-2013

1971Le09: E=42 MeV α beam was produced from the oak Ridge isochronous cyclotron. Targets of 92.4% enriched ^{207}Pb evaporated onto 5-10 μg/cm^2 carbon-coated glass slides were used. Deuterons were momentum analyzed with a broad-range spectrograph and detected with 50−μ-thick photographic emulsions, FWHM≈25 keV. Measured $\sigma(E_d,\theta)$. Deduced levels.

^{209}Bi Levels

E(level)	dσ/dΩ(θ_{lab}=40°) (μb/sr)[#]	Comments
0.0	12.3	configuration=$\pi(1h_{9/2})^{+1}$.
895 *4*	21.1	configuration=$\pi(2f_{7/2})^{+1}$.
1606 *5*	31.4	configuration=$\pi(1i_{13/2})^{+1}$.
2603 *5*	≈6.1	configuration=$\pi(1h_{9/2})^{+1}\otimes 3^-$.
2819 *6*	18	
2910 *20*	≈4.8	
2979 *5*	26	
3040 *20*	≈6.5	configuration=$\pi(1h_{9/2})^{+1}\otimes 5^-$.
3143 *10*	56	
3197 *10*	19	
≈3400[†]		
3476 *10*	79	configuration=$\pi(1h_{9/2})^{+1}\otimes 4^-$ for 3476+3496. dσ/dΩ(θ_{lab}=40°) (μb/sr): for 3476+3496.
3496 *10*		
3569 *10*	58	
3670 *20*		
3700?		
3802 *10*	≈312[@]	
3822 *10*	≈312[@]	
≈3950[†]		
4133[‡] *6*	≈130	
4178[‡] *10*	≈145	
4276 *10*		
4320?		
4397 *10*		
4470 *20*		
4516 *10*		
4601 *5*		
4650 *5*		
4745 *10*		
≈4910[†]		
≈5540[†]		

[†] Unresolved group of levels.
[‡] Based on the large σ, the authors suggest high spin.
[#] Uncertainty=15%.
[@] Summed cross section for the unresolved 3802-keV and 3822-keV levels. The authors suggest high spin, based on large σ.