^{10}B(^{16}O,2nγ) 2008Lo04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia, Anagha Chakraborty	NDS 186, 2 (2022)	31-Mar-2022

Adapted from XUNDL dataset compiled by S. Geraedts and B. Singh (McMaster); May 20, 2008.

E=60 MeV beam provided by ATLAS accelerator at Argonne. Fragment Mass Analyzer and an ionization chamber used to resolve A=24 nuclei by ΔE-E technique. Measured Eγ, Iγ, γγ, γ(fragment) coin using GAMMASPHERE array of 100 Compton-suppressed HPGe detectors. Comparisons with shell-model calculations.

^{24}Al Levels

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
0.0	4^+	1088.3 *2*	1^+	1538.6 *2*	5^+	2345.1 *14*	3^+
425.81 *10*	1^+	1107.9 *2*	2^+	1548.2 *4*	2^+	3875.4 *11*	(6^+)
500.1 *1*	2^+	1261.1 *2*	3^+	1617.0 *5*	3^+		

† From least-squares fit to Eγ′s.

‡ From 2008Lo04, based on γ decay, comparison with analogue states in ^{24}Al.

γ(^{24}Al)

E_γ†	I_γ†	E_i(level)	J_i^π	E_f	J_f^π	Comments
74.3 *1*	45 *1*	500.1	2^+	425.81	1^+	A_2=−0.23 *10*; A_4=+0.30 *15*
425.81 *10*		425.81	1^+	0.0	4^+	E_γ: From Adopted Gammas.
459.8 *3*	6.3 *11*	1548.2	2^+	1088.3	1^+	
500.0 *5*	2.0 *4*	500.1	2^+	0.0	4^+	
662.5 *2*	15 *1*	1088.3	1^+	425.81	1^+	
682.1 *2*	24 *1*	1107.9	2^+	425.81	1^+	A_2=−0.14 *20*; A_4=+0.17 *25*
760.9 *2*	19 *2*	1261.1	3^+	500.1	2^+	
1048.5 *9*	4.0 *8*	1548.2	2^+	500.1	2^+	
1116.9 *5*	38 *3*	1617.0	3^+	500.1	2^+	A_2=−0.63 *21*; A_4=+0.09 *26*
1261.4 *5*	23 *3*	1261.1	3^+	0.0	4^+	
1538.5 *2*	100 *3*	1538.6	5^+	0.0	4^+	A_2=−0.37 *16*; A_4=+0.16 *14*
1617.0 *12*	13 *4*	1617.0	3^+	0.0	4^+	
1844.9 *14*	1.5 *8*	2345.1	3^+	500.1	2^+	
2336.7 *10*	13 *2*	3875.4	(6^+)	1538.6	5^+	

† From 2008Lo04, except where otherwise noted.

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Level Scheme

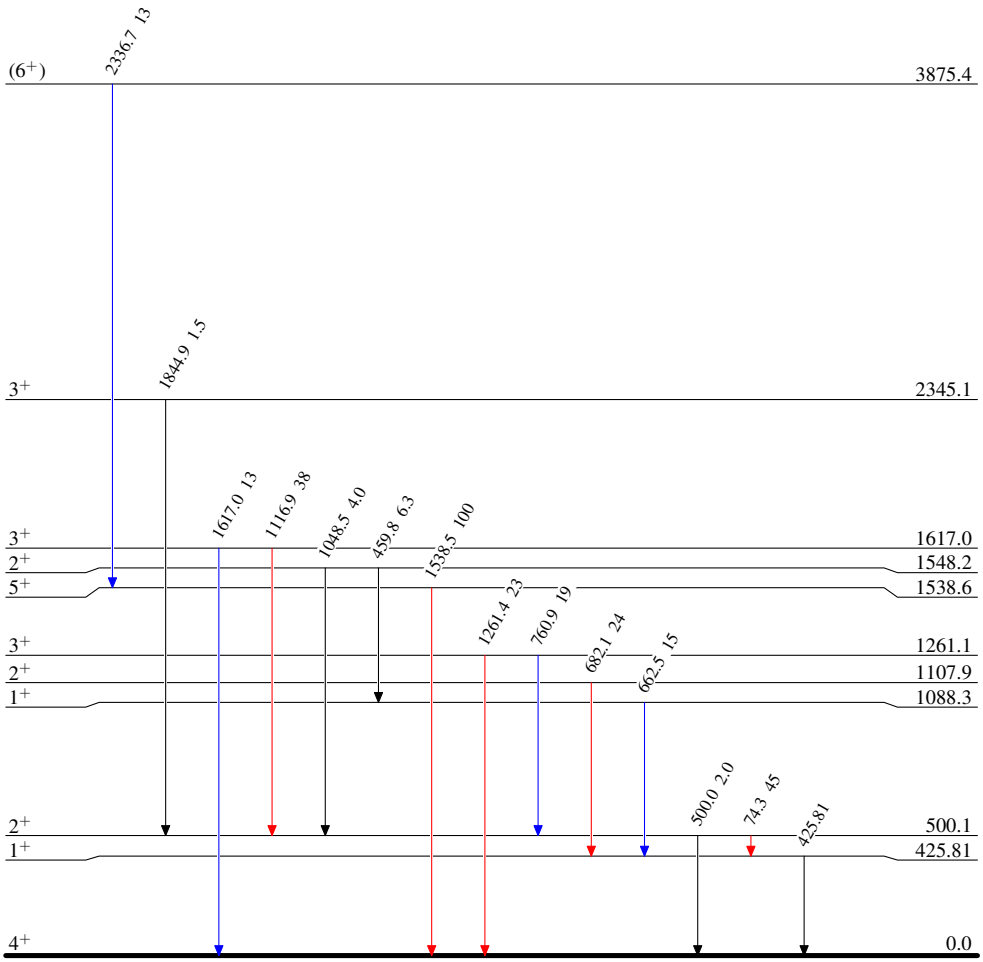
Intensities: Relative I_γ

Legend

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

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

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



$^{24}_{13}Al_{11}$