

$^{209}\text{Bi}(\mu^{-}, 3n\gamma)$ 2007Me09

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 201,346 (2025)	21-Jan-2025

2007Me09: Experiment performed at TRIUMF facility. The bismuth target was a powder and had a mass of 221 g. Detectors: two HPGe. Measured: $E\gamma$. Other: 1971Ba10.

 ^{206}Pb Levels

E(level) [†]	$J^{\pi\ddagger}$	E(level) [†]	$J^{\pi\ddagger}$	E(level) [†]	$J^{\pi\ddagger}$	E(level) [†]	$J^{\pi\ddagger}$
0.0	0 ⁺	1684.01 13	4 ⁺	2148.95 14	2 ⁺	2647.65 10	3 ⁻
803.06 10	2 ⁺	1704.5 5	1 ⁺	2196.97 13	(3) ⁺	2658.32 19	9 ⁻
1340.46 12	3 ⁺	1784.05 14	2 ⁺	2200.22 16	7 ⁻	2782.25 16	5 ⁻
1466.81 14	2 ⁺	1997.64 16	4 ⁺	2384.23 16	6 ⁻		

[†] From a least-squares fit to $E\gamma$.

[‡] From Adopted Levels.

 $\gamma(^{206}\text{Pb})$




E_{γ} [†]	I_{γ} [†]	$E_i(\text{level})$	J_i^{π}	E_f	J_f^{π}	Comments
183.98 10		2384.23	6 ⁻	2200.22	7 ⁻	
343.52 10	1.3 5	1684.01	4 ⁺	1340.46	3 ⁺	
398.00 10	0.7 3	2782.25	5 ⁻	2384.23	6 ⁻	
458.1 1	0.40 15	2658.32	9 ⁻	2200.22	7 ⁻	
516.18 10	2.8 19	2200.22	7 ⁻	1684.01	4 ⁺	
537.47 10	4.3 7	1340.46	3 ⁺	803.06	2 ⁺	I_{γ} : Other: 3.0 8 in 1971Ba10.
657.18 10	1.0 4	1997.64	4 ⁺	1340.46	3 ⁺	
663.75 10	0.8 3	1466.81	2 ⁺	803.06	2 ⁺	
803.06 10	9.3 10	803.06	2 ⁺	0.0	0 ⁺	I_{γ} : Other: 7.7 13 in 1971Ba10.
856.6 1	<0.4	2196.97	(3) ⁺	1340.46	3 ⁺	
880.98 10	3.6 8	1684.01	4 ⁺	803.06	2 ⁺	
980.99 10	<0.5	1784.05	2 ⁺	803.06	2 ⁺	
1098.26 10	<0.2	2782.25	5 ⁻	1684.01	4 ⁺	I_{γ} : Obstructed by a nickel-line background.
1345.88 10	0.5 3	2148.95	2 ⁺	803.06	2 ⁺	
1393.8 1	0.25 16	2196.97	(3) ⁺	803.06	2 ⁺	
1466.8 5	0.5 5	1466.81	2 ⁺	0.0	0 ⁺	
1704.5 5	0.4 2	1704.5	1 ⁺	0.0	0 ⁺	
1844.58 1	0.9 3	2647.65	3 ⁻	803.06	2 ⁺	

[†] From 2007Me09. I_{γ} corresponds to γ 's per 100 μ^{-} captures.

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Level Scheme
 Intensities: Relative I_{γ}

Legend

-  $I_{\gamma} < 2\% \times I_{\gamma}^{\text{max}}$
 $I_{\gamma} < 10\% \times I_{\gamma}^{\text{max}}$
 $I_{\gamma} > 10\% \times I_{\gamma}^{\text{max}}$

