

**Au( $^{10}\text{B},\text{xn}\gamma$ ),Pb( $\alpha,\text{xn}\gamma$ ) 1976Be12**

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

Beams:  $^{10}\text{B}$ ,  $^{11}\text{B}$  and  $\alpha$  at various energies; Targets: nat Au and enriched  $^{206}\text{Pb}$  and  $^{208}\text{Pb}$ ; Detectors: several Ge(Li) and a cooled Si(Li); Measured:  $E\gamma$ ,  $I\gamma$ , ce,  $\gamma(\theta)$ ,  $\gamma\gamma(t)$ ; Deduced: level scheme.

$^{206}\text{Po}$  Levels

E(level) <sup>†</sup>	J <sup>π</sup> <sup>‡</sup>	T <sub>1/2</sub> <sup>‡</sup>	Comments
0	0 <sup>+</sup>	8.8 d	T <sub>1/2</sub> : From Adopted Levels.
700	2 <sup>+</sup>		
1177	4 <sup>+</sup>		
1572	6 <sup>+</sup>		
1585	8 <sup>+</sup>	212 ns	Configuration= $\pi(\text{h}_{9/2}^{+2})$ .
1647	8 <sup>-</sup> ,9 <sup>-</sup>	≈40 ns	
2262	9 <sup>-</sup>	>200 ns	Configuration= $\nu(\text{f}_{5/2}^{-1},\text{i}_{13/2}^{-1})$ .
2418	10 <sup>+</sup>		
2657	11 <sup>-</sup>		
3463	(13 <sup>-</sup> )		

<sup>†</sup> From  $E\gamma$ .

<sup>‡</sup> From 1976Be12.

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

$E_\gamma$ <sup>†</sup>	$I_\gamma$ <sup>†</sup>	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. <sup>‡</sup>	Comments
12.5	1	1585	8 <sup>+</sup>	1572	6 <sup>+</sup>	[E2]	$E_\gamma$ : From adopted gammas, based on $\gamma$ -rays energy difference in $^{198}\text{Pt}(^{13}\text{C},5n\gamma)$ in 1990Ba31.
62	40	1647	8 <sup>-</sup> ,9 <sup>-</sup>	1585	8 <sup>+</sup>	E1	
157		2418	10 <sup>+</sup>	2262	9 <sup>-</sup>		
238	16	2657	11 <sup>-</sup>	2418	10 <sup>+</sup>		
395	92	1572	6 <sup>+</sup>	1177	4 <sup>+</sup>		
395	30	2657	11 <sup>-</sup>	2262	9 <sup>-</sup>		
477	97	1177	4 <sup>+</sup>	700	2 <sup>+</sup>		
615		2262	9 <sup>-</sup>	1647	8 <sup>-</sup> ,9 <sup>-</sup>	M1	
700	100	700	2 <sup>+</sup>	0	0 <sup>+</sup>		
806		3463	(13 <sup>-</sup> )	2657	11 <sup>-</sup>		
833	29	2418	10 <sup>+</sup>	1585	8 <sup>+</sup>		

<sup>†</sup> From 1976Be12.  $\Delta I_\gamma=10\text{-}30\%$ .

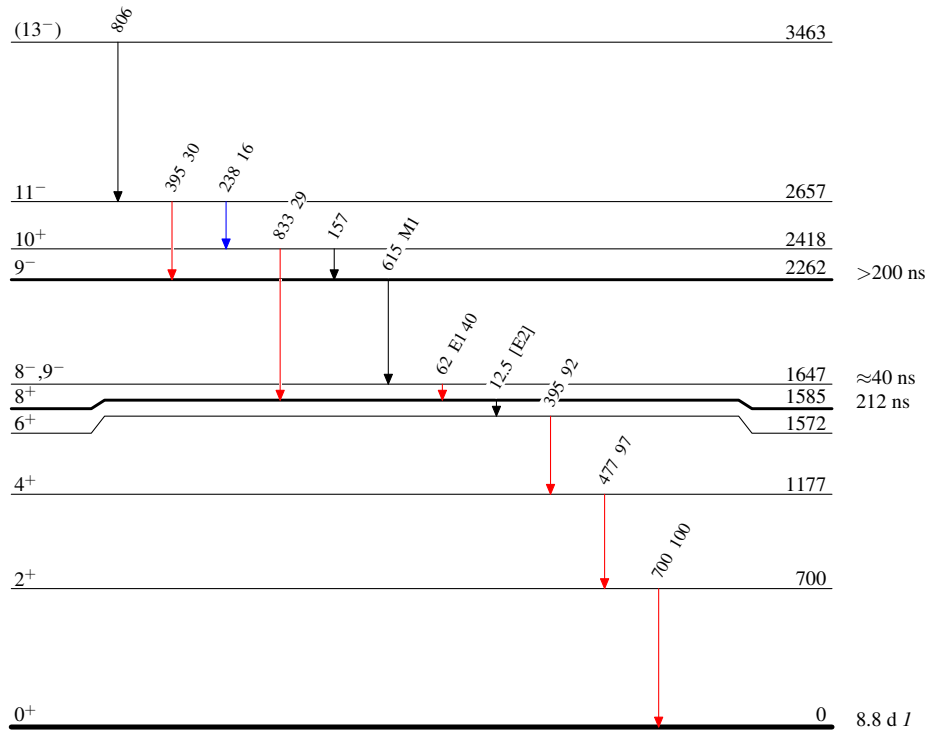
<sup>‡</sup> From measured ce in delayed spectrum in 1976Be12, but values were not given by the authors.

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Level Scheme  
 Intensities: Relative  $I_\gamma$

Legend

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

 $^{206}_{84}\text{Po}_{122}$