

$^9\text{Be}(^{238}\text{U}, \text{X}\gamma)$  **2012Go19**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Shaofei Zhu and E. A. Mccutchan		NDS 175, 1 (2021)	1-May-2021

**2012Go19:**  $^{214}\text{Pb}$  ions were produced in fragmentation reaction with 1 GeV/nucleon  $^{238}\text{U}$  beam on  $^9\text{Be}$  target, and were separated and identified by fragment separator (FRS) at GSI. The  $\gamma$  rays were detected by RISING  $\gamma$ -spectrometer of 105 Ge crystals in correlation with the  $^{214}\text{Pb}$  ions. Measured  $E_\gamma$ , level half-life by  $\gamma(t)$ . Deduced levels, J,  $\pi$ .

 $^{214}\text{Pb}$  Levels

E(level) <sup>†</sup>	J $\pi$ <sup>‡</sup>	T <sub>1/2</sub>	Comments
0 <sup>#</sup>	0 <sup>+</sup>		
835 <sup>#</sup> 1	(2 <sup>+</sup> )		
1179 <sup>#</sup> 2	(4 <sup>+</sup> )		
1365 <sup>#</sup> 2	(6 <sup>+</sup> )		
1365+x? <sup>#</sup>	(8 <sup>+</sup> )	6.2 $\mu\text{s}$ 3	%IT=100 E(level): x<88 keV ( <b>2012Go19</b> ). T <sub>1/2</sub> : from $\gamma(t)$ decay curve ( <b>2012Go19</b> ).

<sup>†</sup> From  $E_\gamma$  values, assuming 1 keV uncertainty for each  $\gamma$  ray.

<sup>‡</sup> The transitions in the yrast cascade are attributed to E2 transitions with the assumption that the isomer is predominantly a fully aligned pair of neutrons with a  $(g_{9/2})^2$  configuration (**2012Go19**).

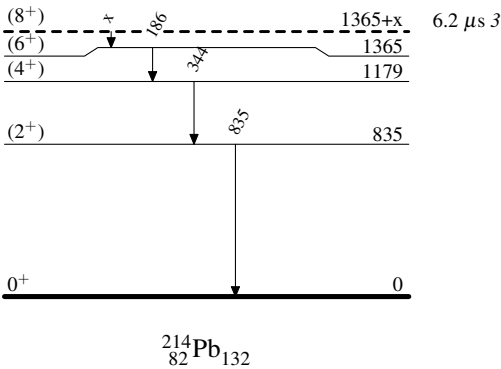
<sup>#</sup> Seq.(A): Yrast cascade.

 $\gamma(^{214}\text{Pb})$ 

$E_\gamma$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Comments
x	1365+x?	(8 <sup>+</sup> )	1365	(6 <sup>+</sup> )	$E_\gamma$ : transition to (6 <sup>+</sup> ) level was not seen in $\gamma$ -ray spectra, x is assumed to be smaller than 88 keV based on the observation that the intensity of $K_\alpha$ x rays was only compatible with that from the internal conversion of the 6 <sup>+</sup> to 4 <sup>+</sup> transition ( <b>2012Go19</b> ).
186	1365	(6 <sup>+</sup> )	1179	(4 <sup>+</sup> )	
344	1179	(4 <sup>+</sup> )	835	(2 <sup>+</sup> )	
835	835	(2 <sup>+</sup> )	0	0 <sup>+</sup>	

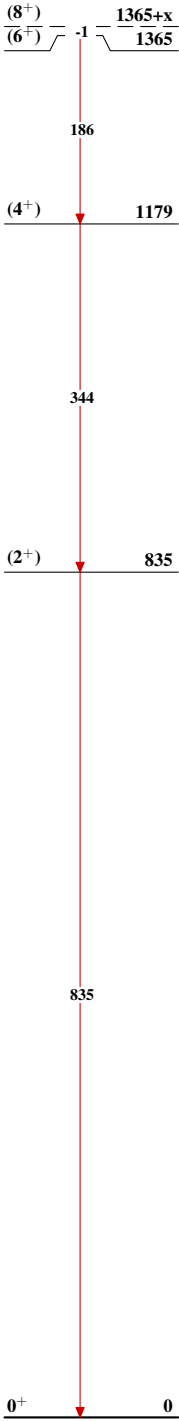
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Level Scheme



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Seq.(A): Yrast cascade



$^{214}_{82}\text{Pb}_{132}$