

<sup>106</sup>Cd(<sup>3</sup>He,2n $\gamma$ ) 1984Au12

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 109, 1383 (2008)	1-Mar-2008

E(<sup>3</sup>He)=20 MeV.

Measured:  $\gamma$ , I $\gamma$ ,  $\gamma(\theta)$ ,  $\gamma\gamma$ , A<sub>2</sub>/A<sub>0</sub>.

<sup>107</sup>Sn Levels

E(level)	J $\pi$ <sup>†</sup>	E(level)	J $\pi$ <sup>†</sup>	E(level)	J $\pi$ <sup>†</sup>	E(level)
0	(5/2 <sup>+</sup> )	1350.0 <sup>‡</sup> 5	(11/2 <sup>+</sup> )	1798.8 7	(13/2 <sup>+</sup> )	2145.0 7
151.4 <sup>‡</sup> 3	(7/2 <sup>+</sup> )	1370.8 6	(9/2 <sup>+</sup> )	1943.1 6	(13/2 <sup>+</sup> )	2804.0? 8
1223.1 5	(9/2 <sup>+</sup> )	1668.1 6	(11/2 <sup>-</sup> )	2067.0 <sup>‡</sup> 6	(15/2 <sup>+</sup> )	

<sup>†</sup> From Adopted Levels.

<sup>‡</sup> Band(A): positive-parity band with L=2 character built on the g7/2 neutron orbit.

$\gamma(^{107}\text{Sn})$

E $\gamma$	I $\gamma$	E <sub>i</sub> (level)	J $\pi$ <sub>i</sub>	E <sub>f</sub>	J $\pi$ <sub>f</sub>	Mult. <sup>†</sup>	$\alpha$ <sup>‡</sup>	Comments
123.9 3		2067.0	(15/2 <sup>+</sup> )	1943.1	(13/2 <sup>+</sup> )			
151.4 3	105 9	151.4	(7/2 <sup>+</sup> )	0	(5/2 <sup>+</sup> )	(M1)	0.178	
428.0 4		1798.8	(13/2 <sup>+</sup> )	1370.8	(9/2 <sup>+</sup> )			
445.0 4		1668.1	(11/2 <sup>-</sup> )	1223.1	(9/2 <sup>+</sup> )			I $\gamma$ : weak.
659.0 4		2804.0?		2145.0				
717.0 5	62 7	2067.0	(15/2 <sup>+</sup> )	1350.0	(11/2 <sup>+</sup> )			
720.0 5	35 8	1943.1	(13/2 <sup>+</sup> )	1223.1	(9/2 <sup>+</sup> )			
795.0 5	16 5	2145.0		1350.0	(11/2 <sup>+</sup> )			
1198.6 5	100	1350.0	(11/2 <sup>+</sup> )	151.4	(7/2 <sup>+</sup> )	Q		
1219.4 5	37 5	1370.8	(9/2 <sup>+</sup> )	151.4	(7/2 <sup>+</sup> )			
1223.1 5	75 6	1223.1	(9/2 <sup>+</sup> )	0	(5/2 <sup>+</sup> )	Q		

<sup>†</sup> Based on  $\gamma(\theta)$ .  $\Delta\pi$ =no for 151 $\gamma$  based on level scheme.




<sup>‡</sup> Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on  $\gamma$ -ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

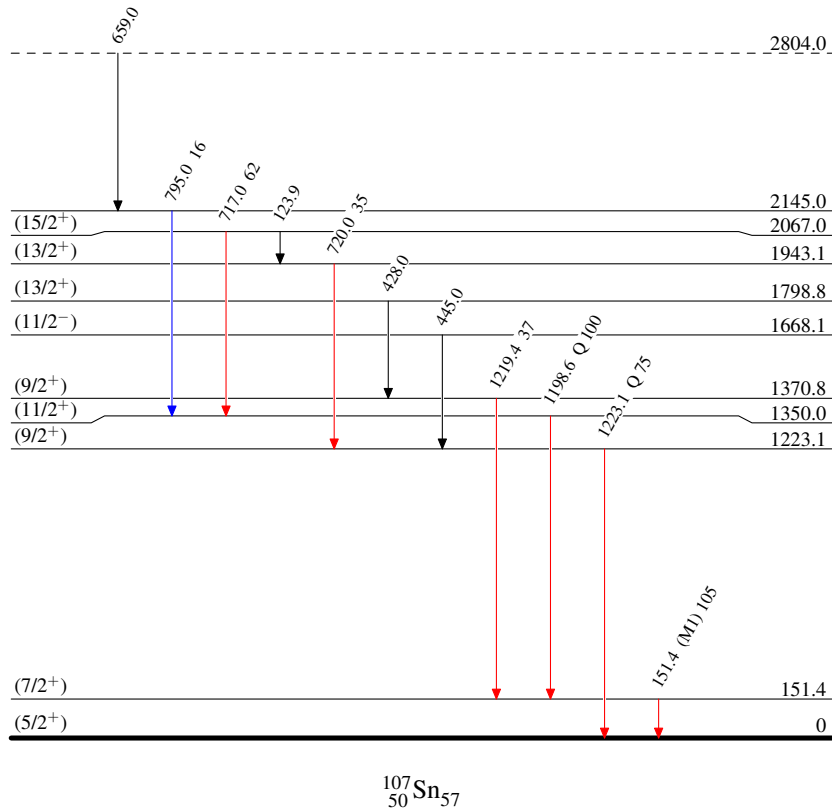
$^{106}\text{Cd}(^3\text{He},2n\gamma)$  1984Au12

## Level Scheme

Intensities: Relative  $I_\gamma$ 

## Legend

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



$^{106}\text{Cd}(^3\text{He},2n\gamma)$  1984Au12

**Band(A): Positive-parity  
band with L=2 character  
built on the g7/2  
neutron orbit**

(15/2<sup>+</sup>)      2067.0

717

(11/2<sup>+</sup>)      1350.0

1199

(7/2<sup>+</sup>)      151.4

$^{107}_{50}\text{Sn}_{57}$