

$^{82}\text{Se}(n,\gamma)$ E=thermal 1979BrZE

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 125, 201 (2015)	31-Dec-2014

Thermal neutrons on target enriched to 87.8% ^{82}Se . Measured E_γ , I_γ using pair spectrometer.

Level scheme should be considered extremely tentative. Due to the very low capture cross section of ^{82}Se , the most intense lines observed in the spectrum were from activation of the beryllium capsule and capture on $^{76,77}\text{Se}$ impurities. Except in cases where supporting evidence for transitions is provided by other datasets, the results in this dataset are not included in the Adopted Levels.

 ^{83}Se Levels

E(level) [†]	J^π	Comments
0.0		
228.9		
448.3		
546.0		
571.0		
577.1		
1473.0		
2121.8		
2347.1		
2413.1		
2627.4		
2975.0		
5816.0 4	(1/2 ⁺)	J^π : s-wave capture on ^{82}Se (g.s. $J^\pi=0^+$).

[†] From 1979BrZe.

 $\gamma(^{83}\text{Se})$

E_γ	I_γ [†]	$E_i(\text{level})$	J_i^π	E_f	Comments
2841.0 2	12.3 30	5816.0	(1/2 ⁺)	2975.0	
3188.6 2	11.6 22	5816.0	(1/2 ⁺)	2627.4	
3402.7 5	5.0 15	5816.0	(1/2 ⁺)	2413.1	E_γ : anomalous peak shape.
3468.9 3	7.6 16	5816.0	(1/2 ⁺)	2347.1	
3694.1 3	4.2 12	5816.0	(1/2 ⁺)	2121.8	
^x 4317.4 3	3.6 7				
4343.0 3	4.2 8	5816.0	(1/2 ⁺)	1473.0	
^x 4735.6 3	5.7 7				
^x 4764.2 3	2.7 6				
^x 4791.6 3	2.0 5				
^x 5019.8 3	2.1 5				
5238.9 3	2.0 5	5816.0	(1/2 ⁺)	577.1	
5245.0 3	2.8 5	5816.0	(1/2 ⁺)	571.0	
5270.0 4	2.3 8	5816.0	(1/2 ⁺)	546.0	
^x 5313.7 3	2.1 5				
5367.7 5	2.7 11	5816.0	(1/2 ⁺)	448.3	
5587.07 23	25.4 18	5816.0	(1/2 ⁺)	228.9	

[†] Intensity per 100 neutron captures.

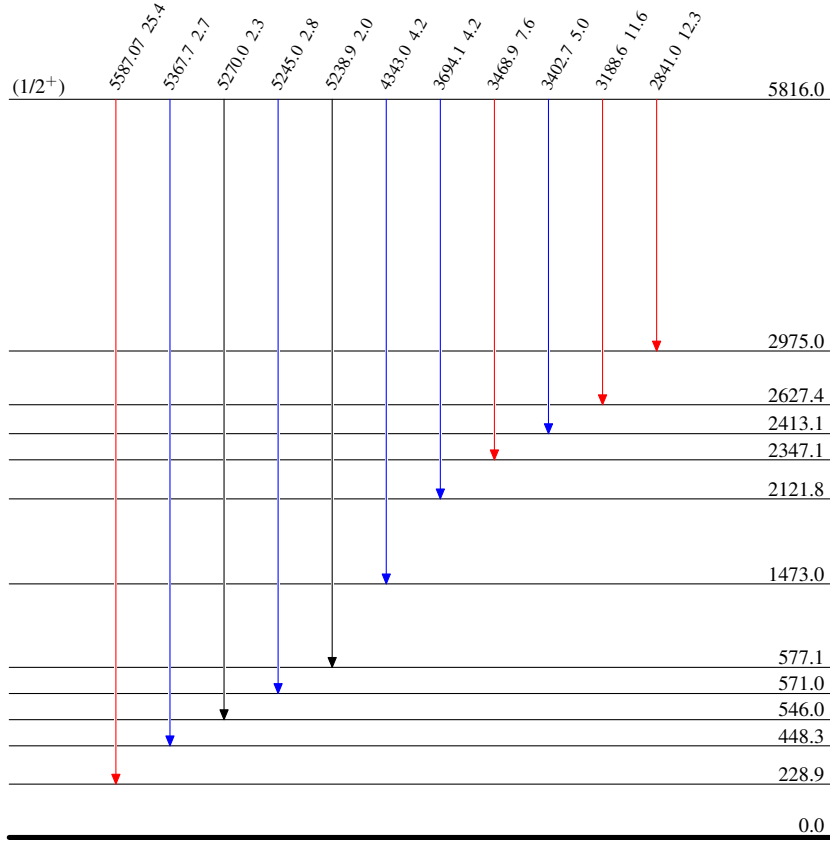
^x γ ray not placed in level scheme.

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Legend

Level Scheme
Intensities: Type not specified

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



$^{83}_{34}\text{Se}_{49}$