^{68}Zn(n,γ), (pol n,γ) E=thermal   1972Bo75

	Type	Author	History Citation	Literature Cutoff Date
	Full Evaluation	C. D. Nesaraja	NDS 115, 1 (2014)	31-Jul-2013

1972Bo75: Measured Eγ, Iγ, GeLi detectors.
1970Ba21: Measured Eγ, Iγ, GeLi detectors.
1972Ba75: Measured Eγ, Iγ, GeLi detectors.
1974DeYS: Polarized n; measured γ circular polarization.

^{69}Zn Levels

E(level)[†]	J^{π}[‡]	Comments
0	1/2⁻	J^{π}: consistent with γ circular polarization (1974DeYS).
436	9/2⁺	
531	5/2⁻	
835	3/2⁻	J^{π}: γ circular polarization consistent with 3/2⁻ not with 1/2⁻ (1974DeYS).
872?	5/2⁺	
1007	3/2⁻	J^{π}: consistent with γ circular polarization (1974DeYS).
1252	1/2,3/2	
1595	(1/2⁻,3/2⁻)	
1830	3/2⁻	
1983	1/2⁻,3/2⁻	
2055?	1/2,3/2,5/2⁺	
2344	1/2⁺,3/2,5/2⁺	J^{π}: γ circular polarization rules out 1/2⁻.
2377	1/2,3/2,5/2⁺	
2410	5/2⁺	
2510	1/2⁻,3/2⁻	
2562	3/2⁺,5/2⁺	
(6482)	1/2⁺	J^{π}: from s-wave neutron capture in ^{68}Zn g.s.

[†] From least-square fit to γ's.
[‡] From Adopted Levels.

γ(^{69}Zn)

Iγ normalization: from 1972Bo75.

E_{γ}[†]	I_{γ}[‡]	E_i(level)	J_i^{π}	E_f	J_f^{π}
436	8.2	436	9/2⁺	0	1/2⁻
436[#]		872?	5/2⁺	436	9/2⁺
532	6.5	531	5/2⁻	0	1/2⁻
760	1.7	1595	(1/2⁻,3/2⁻)	835	3/2⁻
835	15.2	835	3/2⁻	0	1/2⁻
1007	23.5	1007	3/2⁻	0	1/2⁻
1180[#]	4.0	2055?	1/2,3/2,5/2⁺	872?	5/2⁺
1218	1.3	2055?	1/2,3/2,5/2⁺	835	3/2⁻
1252	3.4	1252	1/2,3/2	0	1/2⁻
1452	0.8	1983	1/2⁻,3/2⁻	531	5/2⁻
1594	2.4	1595	(1/2⁻,3/2⁻)	0	1/2⁻
1812	2.0	2344	1/2⁺,3/2,5/2⁺	531	5/2⁻
1830	1.4	1830	3/2⁻	0	1/2⁻
^{x}2312[#]	2.4				

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γ(^{69}Zn) (continued)

E$_\gamma$[†]	I$_\gamma$[‡]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
2344	4.5	2344	1/2$^+$,3/2,5/2$^+$	0	1/2$^-$
2378	1.5	2377	1/2,3/2,5/2$^+$	0	1/2$^-$
^{x}3192[#]	0.5				
3920	0.8	(6482)	1/2$^+$	2562	3/2$^+$,5/2$^+$
3972	0.5	(6482)	1/2$^+$	2510	1/2$^-$,3/2$^-$
4072	1.2	(6482)	1/2$^+$	2410	5/2$^+$
4106	3.6	(6482)	1/2$^+$	2377	1/2,3/2,5/2$^+$
4138	9.3	(6482)	1/2$^+$	2344	1/2$^+$,3/2,5/2$^+$
4426	2.2	(6482)	1/2$^+$	2055?	1/2,3/2,5/2$^+$
4500	1.3	(6482)	1/2$^+$	1983	1/2$^-$,3/2$^-$
4652	2.2	(6482)	1/2$^+$	1830	3/2$^-$
4888	3.3	(6482)	1/2$^+$	1595	(1/2$^-$,3/2$^-$)
5230	1.9	(6482)	1/2$^+$	1252	1/2,3/2
5474	20.8	(6482)	1/2$^+$	1007	3/2$^-$
5647	3.8	(6482)	1/2$^+$	835	3/2$^-$
6482	4.9	(6482)	1/2$^+$	0	1/2$^-$

[†] From 1972Bo75, individual errors not given.

[‡] Intensity per 100 neutron captures.

[#] Placement of transition in the level scheme is uncertain.

[x] γ ray not placed in level scheme.

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Legend

__Level Scheme__

Intensities: I$_{(\gamma+ce)}$ per 100 neutron captures

$I_\gamma <\ 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)

Transition labels:
6482 4.9, 5647 3.8, 5474 20.8, 5230 1.9, 4888 3.3, 4652 2.2, 4500 1.3, 4426 2.2, 4138 9.3, 4106 3.6, 4072 1.2, 3972 0.5, 3920 0.8

2378 1.5, 2344 4.5, 1812 2.0, 1218 1.3, 1180 4.0, 1452 0.8, 1830 1.4, 1594 2.4, 760 1.7, 1252 3.4, 1007 23.5, 436, 835 15.2, 532 6.5, 436 8.2

Levels (spin/parity — energy):

$1/2^+$	6482
$3/2^+,5/2^+$	2562
$1/2^-,3/2^-$	2510
$5/2^+$	2410
$1/2,3/2,5/2^+$	2377
$1/2^+,3/2,5/2^+$	2344
$1/2,3/2,5/2^+$	2055
$1/2^-,3/2^-$	1983
$3/2^-$	1830
$(1/2^-,3/2^-)$	1595
$1/2,3/2$	1252
$3/2^-$	1007
$5/2^+$	872
$3/2^-$	835
$5/2^-$	531
$9/2^+$	436
$1/2^-$	0

$^{69}_{30}$Zn$_{39}$