

⁶⁴Zn(n,γ) E=10-100 keV 1971Bi15

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 202,59 (2025)	25-Feb-2025

1971Bi15,1971BiZU: E(n)=10-80 keV. γ rays were detected with a Ge(Li) detector. Measured E_γ, I_γ. Deduced levels.

1970AIZP: E(n)=10-100 keV. γ rays were detected with a Ge(Li) detector. Measured E_γ, I_γ. Deduced levels.

1967Mu07: measured E_γ.

For measured cross sections, deduced resonance parameters and widths see 1969Ju01, 1981Ga04.

⁶⁵Zn Levels

E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]
0	5/2 ⁻	1047	5/2 ⁻	1905	1/2 ⁺	2520	
55	1/2 ⁻	1253?	7/2 ⁻	1942	(1/2,3/2)	2577?	(1/2,3/2,5/2 ⁺)
114	3/2 ⁻	1266?	9/2 ⁻	2144?		2720?	(1/2,3/2,5/2 ⁺)
207	3/2 ⁻	1359		2212?	(1/2,3/2,5/2 ⁺)	(7979)	1/2 ⁺
764	5/2 ⁻	1468	3/2 ⁻	2308?			
867	1/2 ⁻	1590	7/2 ⁻	2420	1/2 ⁻		
904	3/2 ⁻	1603		2491?	1/2 ⁺		

[†] From E_γ data.

[‡] From Adopted Levels.

γ(⁶⁵Zn)

E _γ [†]	I _γ [†]	E _i (level)	J _i ^π	E _f	J _f ^π	Comments
5259 [‡]	0.3	(7979)	1/2 ⁺	2720?	(1/2,3/2,5/2 ⁺)	
5402 [‡]	≤0.6	(7979)	1/2 ⁺	2577?	(1/2,3/2,5/2 ⁺)	
5459	0.3	(7979)	1/2 ⁺	2520		E _γ : confirmed by observation of a 5456γ (1970AIZP).
5488 [‡]	1.0	(7979)	1/2 ⁺	2491?	1/2 ⁺	
5559	0.7	(7979)	1/2 ⁺	2420	1/2 ⁻	E _γ : confirmed by observation of a 5560γ in thermal n capture.
5671 [‡]	0.5	(7979)	1/2 ⁺	2308?		
5767 [‡]	1.3	(7979)	1/2 ⁺	2212?	(1/2,3/2,5/2 ⁺)	
5835 [‡]	0.3	(7979)	1/2 ⁺	2144?		
6037	≤0.9	(7979)	1/2 ⁺	1942	(1/2,3/2)	
6074 [‡]	≤1.0	(7979)	1/2 ⁺	1905	1/2 ⁺	E _γ : 6077 (1970AIZP).
6376	≤0.4	(7979)	1/2 ⁺	1603		
6389	≤0.4	(7979)	1/2 ⁺	1590	7/2 ⁻	
6511	0.9	(7979)	1/2 ⁺	1468	3/2 ⁻	
6620	1.3	(7979)	1/2 ⁺	1359		
6713 [‡]	0.1	(7979)	1/2 ⁺	1266?	9/2 ⁻	
6726 [‡]	0.1	(7979)	1/2 ⁺	1253?	7/2 ⁻	
6932	0.6	(7979)	1/2 ⁺	1047	5/2 ⁻	
7075	1.4	(7979)	1/2 ⁺	904	3/2 ⁻	
7112	1.67	(7979)	1/2 ⁺	867	1/2 ⁻	
7215	0.88	(7979)	1/2 ⁺	764	5/2 ⁻	
7772	≤3.5	(7979)	1/2 ⁺	207	3/2 ⁻	
7865	≤3.0	(7979)	1/2 ⁺	114	3/2 ⁻	
7924	5.9	(7979)	1/2 ⁺	55	1/2 ⁻	
7979	2.1	(7979)	1/2 ⁺	0	5/2 ⁻	

[†] From 1971Bi15.

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

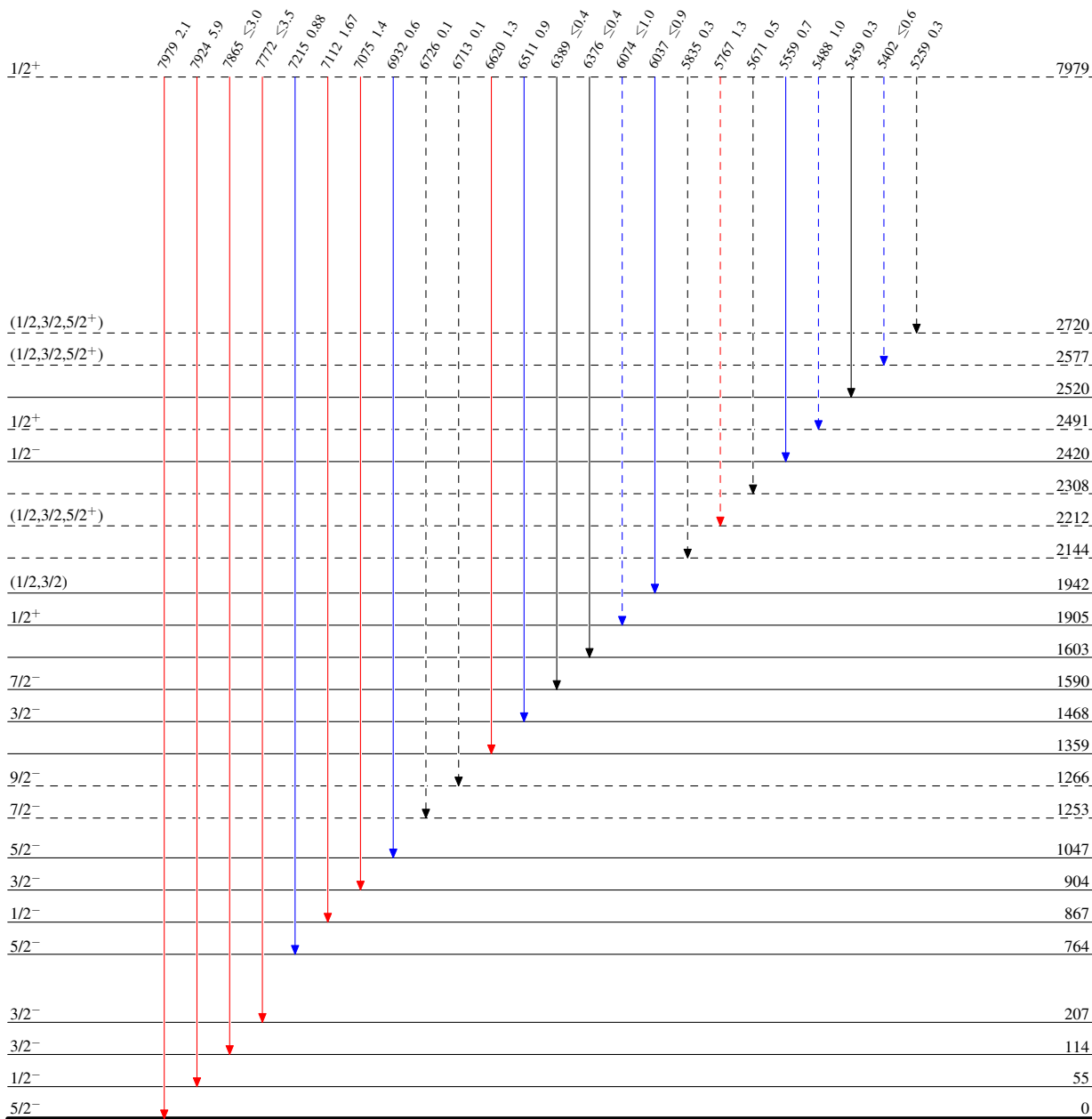
$^{64}\text{Zn}(n,\gamma) \text{E}=10\text{-}100 \text{ keV}$ 1971Bi15

Legend

Level Scheme

Intensities: Relative I_γ

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

 $^{65}_{30}\text{Zn}_{35}$