

$^{165}\text{Ho}(\text{p},\text{n}\gamma)$ **1963Ha39**

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen		NDS 194,460 (2024)	31-Oct-2022

1963Ha39: E(p)=8, 10, 12 MeV. Measured ce using a six-gap orange-type magnetic spectrometer at the 12-MeV HVEC tandem Van de Graaff accelerator.

1976Go23: (pol p,n): E(p)=22.8 MeV. Measured analyzing powers $A_y(\theta)$, $\sigma(E(n),\theta)$ for IAS in ^{165}Er at 15.49 MeV excitation energy at the Saclay variable energy cyclotron. DWBA analysis.

1975Ca18 (also **1972CaYN**, **1971Be46**): E(p)=22.8 MeV. Measured $\sigma(E(n),\theta)$ from 10° to 152° at the University of Colorado variable-frequency cyclotron. FWHM=50-200 keV. Deduced IAS.

1968Ba29: E(p)=30, 50 MeV. Measured neutron spectra and $\sigma(E(n),\theta)$ by time-of-flight method using NEI02 plastic scintillator and XPI040 photomultipliers at Rutherford Laboratory Proton Linear Accelerator (PLA). Deduced IAS.

[Additional information 1](#).

 ^{165}Er Levels

E(level)	J^π [†]	Comments
0 [‡]	5/2 ⁻	
77 [‡]	7/2 ⁻	
178 [‡]	9/2 ⁻	
243	1/2 ⁻	J^π : 1/2 ⁻ , ν 1/2[521] in 1963Ha39 ; 3/2 ⁻ in the Adopted Levels.
297 [‡]	11/2 ⁻	
298	3/2 ⁻	E(level), J^π : 3/2 ⁻ in 1963Ha39 , close doublet in the Adopted Levels with $J^\pi=5/2^-$ and 1/2 ⁻ .
440? [‡]	13/2 ⁻	
606? [‡]	15/2 ⁻	
15.49×10 ³		IAS in ^{165}Er .

[†] From **1963Ha39**.

[‡] Band(A): $K^\pi=5/2^-$ band.

 $\gamma(^{165}\text{Er})$

E_γ	$E_i(\text{level})$	J^π_i	E_f	J^π_f	Comments
178	178	9/2 ⁻	0	5/2 ⁻	
220	297	11/2 ⁻	77	7/2 ⁻	E_γ : this transition could also be from 298 level.
243	243	1/2 ⁻	0	5/2 ⁻	
262 [†]	440?	13/2 ⁻	178	9/2 ⁻	
298	298	3/2 ⁻	0	5/2 ⁻	
309 [†]	606?	15/2 ⁻	297	11/2 ⁻	

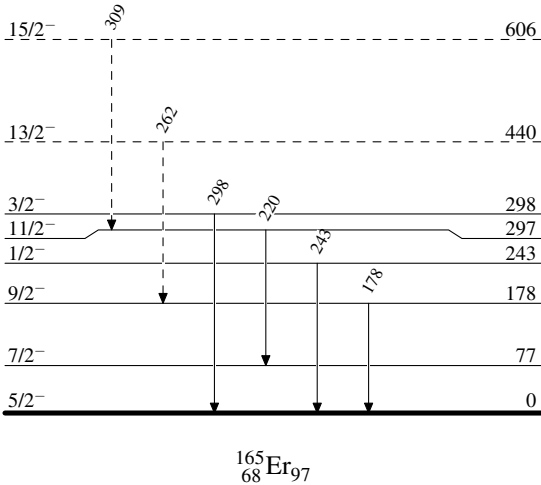
[†] Placement of transition in the level scheme is uncertain.

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Legend

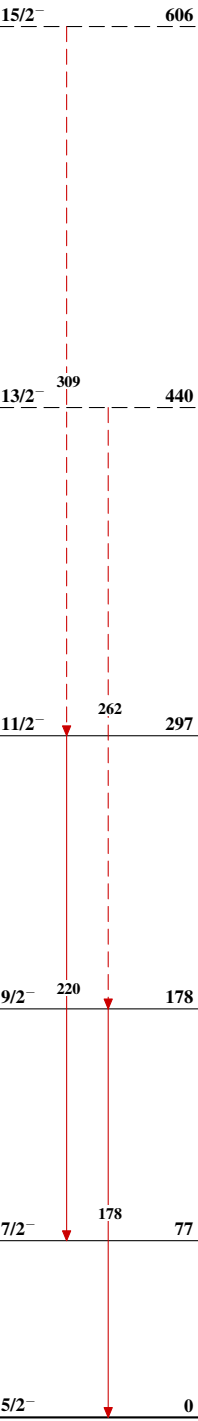
Level Scheme

-----► γ Decay (Uncertain)



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Band(A): $K^\pi=5/2^-$ band



$^{165}_{68}\text{Er}_{97}$