

$^{92}\text{Mo}(^{54}\text{Fe},\text{p}4\text{n}\gamma):\gamma$ data **2001Se03**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 187,1 (2023)	12-Oct-2022

Reaction studied in both direct and inverse kinematics.

2001Se03: E(cm)=184-186 MeV. Measured E_γ , I_γ and $\gamma\gamma$ using Gammasphere array in coincidence with Fragment Mass Analyzer (FMA); 97 Compton-suppressed HPGe detectors and four LEPS's.

Recoil-decay tagging method was used to select γ -ray transitions belonging to ^{141}Ho .

 ^{141}Ho Levels

E(level) [†]	J ^π #	T _{1/2} [‡]	Comments
0.0 [@]	7/2 ⁻	4.1 ms 1	
66 ^a 12	1/2 ⁺	7.3 μs 3	
66+x ^a	(3/2 ⁺)		Additional information 1. E(level): x ≈20 keV from particle-rotor calculations (2001Se03).
77.8 ^{&} 4	(9/2 ⁻)		
169.1 [@] 4	(11/2 ⁻)		
277.7+x ^a ? 4	(7/2 ⁺)		
386.7 ^{&} 5	(13/2 ⁻)		
499.6 [@] 5	(15/2 ⁻)		
623.2+x ^a ? 6	(11/2 ⁺)		
978.1 [@] 7	(19/2 ⁻)		
1062.5+x ^a ? 7	(15/2 ⁺)		
1565.4+x ^a ? 8	(19/2 ⁺)		
1595.5 [@] 10	(23/2 ⁻)		
2333.1 [@] 13	(27/2 ⁻)		
3165.7 [@] 17	(31/2 ⁻)		
4084.6 [@] 21	(35/2 ⁻)		

[†] From least-squares fit to E_γ 's.

[‡] From adopted values.

High-spin data: from the γ energy and intensity pattern expected for band members, supported by cranked-Shell Model calculations and comparisons with neighboring nuclei.

@ Band(A): $\pi 7/2[523]$, $\alpha=-1/2$. Possible hexadecapole deformation and triaxial shape in the g.s.

& Band(a): $\pi 7/2[523]$, $\alpha=+1/2$.

^a Band(B): $\pi 1/2[411]$.

 $\gamma(^{141}\text{Ho})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
78.4 5	42 13	77.8	(9/2 ⁻)	0.0	7/2 ⁻
91.1 6	39 9	169.1	(11/2 ⁻)	77.8	(9/2 ⁻)
113.1 6	21 6	499.6	(15/2 ⁻)	386.7	(13/2 ⁻)
168.5 5	21 7	169.1	(11/2 ⁻)	0.0	7/2 ⁻
211.7 4	22 7	277.7+x?	(7/2 ⁺)	66+x	(3/2 ⁺)
217.2 4	41 9	386.7	(13/2 ⁻)	169.1	(11/2 ⁻)
^x 301					
309.5 4	39 9	386.7	(13/2 ⁻)	77.8	(9/2 ⁻)
330.4 3	92 12	499.6	(15/2 ⁻)	169.1	(11/2 ⁻)
345.5 4	18 6	623.2+x?	(11/2 ⁺)	277.7+x?	(7/2 ⁺)

Continued on next page (footnotes at end of table)

$^{92}\text{Mo}(^{54}\text{Fe,p4n}\gamma):\gamma$ data **2001Se03** (continued) $\gamma(^{141}\text{Ho})$ (continued)

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
439.3 4	26 7	1062.5+x?	(15/2 ⁺)	623.2+x?	(11/2 ⁺)
478.5 4	100 14	978.1	(19/2 ⁻)	499.6	(15/2 ⁻)
502.9 4	19 6	1565.4+x?	(19/2 ⁺)	1062.5+x?	(15/2 ⁺)
^x 611					
617.4 7	68 15	1595.5	(23/2 ⁻)	978.1	(19/2 ⁻)
^x 657					
737.6 9	37 12	2333.1	(27/2 ⁻)	1595.5	(23/2 ⁻)
832.6 11	22 10	3165.7	(31/2 ⁻)	2333.1	(27/2 ⁻)
918.9 12	17 9	4084.6	(35/2 ⁻)	3165.7	(31/2 ⁻)

^x γ ray not placed in level scheme.

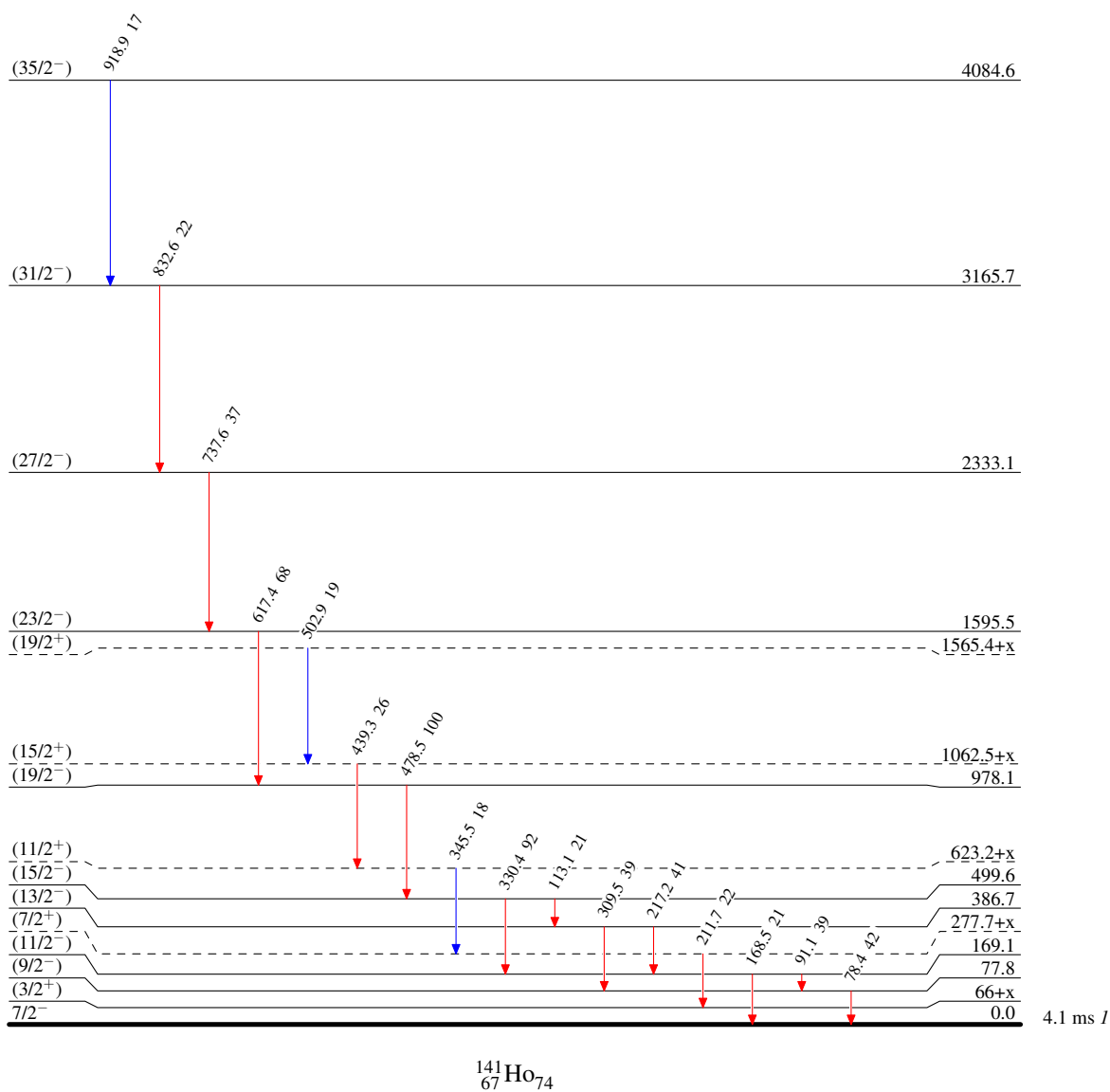
$^{92}\text{Mo}(^{54}\text{Fe}, \text{p}4\text{n}\gamma): \gamma$ data 2001Se03

Level Scheme

Intensities: Relative I_γ

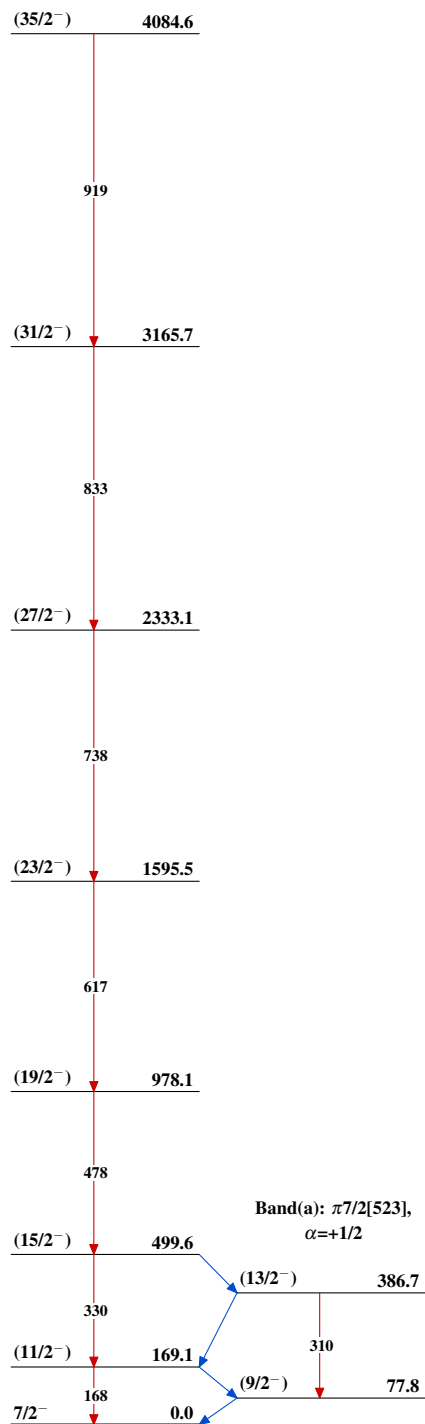
Legend

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

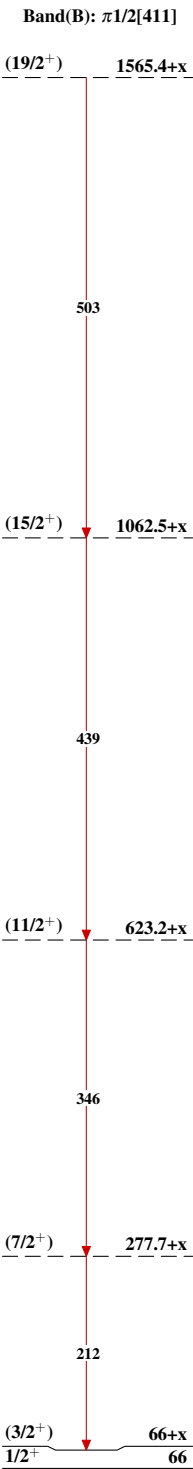


$^{92}\text{Mo}(^{54}\text{Fe,p4n}\gamma):\gamma$ data 2001Se03

Band(A): $\pi 7/2[523]$,
 $\alpha=-1/2$

 $^{141}_{67}\text{Ho}_{74}$

$^{92}\text{Mo}({}^{54}\text{Fe,p4n}\gamma):\gamma$ data 2001Se03 (continued)



$^{141}_{67}\text{Ho}_{74}$