

¹⁴⁵Nd(p,n γ) 1976Sh05,1977Na07

Type	Author	History	Citation	Literature Cutoff Date
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J π (¹⁴⁵Nd)=7/2⁻.

Measured: γ , $\gamma\gamma$, $\gamma(\theta)$, $\gamma(t)$ (1976Sh05), γ , ce (1977Na07).

¹⁴⁵Pm Levels

E(level)	J π [†]	T _{1/2}	Comments
0.0	5/2 ⁺		
61.3 2	7/2 ⁺		
492.5 2	3/2 ⁺		
660.7 4	(3/2) ⁺		
670.0 2	7/2 ⁺		
714.5	9/2 ⁺		
750.6 2	9/2 ⁺		
794.9 3	11/2 ⁻	18.3 ns 19	T _{1/2} : from 1976Sh05.
836.8 4	11/2 ⁺		
884.6 4	7/2 ⁺ ,5/2 ⁺		
958.7 4	(3/2) ⁺		
1102.4 7	9/2 ⁻		
1207.0 7	(11/2) ⁺		
1284.9 7	(7/2,11/2) ⁻		
1347.5 7	13/2 ⁺		
1397.2 8	13/2 ⁺		
1494.4 9	13/2 ⁺		
1648.9 9	(15/2)		

[†] Adopted values.

γ (¹⁴⁵Pm)

E _{γ}	I _{γ} [†]	E _i (level)	J π _{<i>i</i>}	E _{<i>f</i>}	J π _{<i>f</i>}
61.3 2		61.3	7/2 ⁺	0.0	5/2 ⁺
^x 149.7 2	2.3 7				
190.2 4	4.8 14	1397.2	13/2 ⁺	1207.0	(11/2) ⁺
^x 208.3 2	13.2 17				
251.7 4	5.1 17	1648.9	(15/2)	1397.2	13/2 ⁺
^x 272.1 3	10.5 21				
^x 333.2 3	7.1 31				
432.4 3	12.6 33	1102.4	9/2 ⁻	670.0	7/2 ⁺
456.4 3	28.7 41	1207.0	(11/2) ⁺	750.6	9/2 ⁺
492.5 2	62.5 42	492.5	3/2 ⁺	0.0	5/2 ⁺
570.4 3	14.5 35	1284.9	(7/2,11/2) ⁻	714.5	9/2 ⁺
599.4 3	33.7 52	660.7	(3/2) ⁺	61.3	7/2 ⁺
633.0 4	9.5 38	1347.5	13/2 ⁺	714.5	9/2 ⁺
653.2 2	100.0 37	714.5	9/2 ⁺	61.3	7/2 ⁺
657.6 3	46.4 36	1494.4	13/2 ⁺	836.8	11/2 ⁺
670.0 2	68.6 37	670.0	7/2 ⁺	0.0	5/2 ⁺
^x 687.3 [‡] 3	4.4 [‡] 4				
^x 728.3 [‡] 3	13.8 [‡] 11				
733.6 2	36.2 38	794.9	11/2 ⁻	61.3	7/2 ⁺
750.6 2	111.0 43	750.6	9/2 ⁺	0.0	5/2 ⁺

Continued on next page (footnotes at end of table)

$^{145}\text{Nd}(\text{p},\text{n}\gamma)$ **1976Sh05,1977Na07** (continued) $\gamma(^{145}\text{Pm})$ (continued)

E_γ	I_γ^\dagger	$E_i(\text{level})$	J_i^π	E_f	J_f^π
775.5 3	72.6 43	836.8	11/2 ⁺	61.3	7/2 ⁺
823.5 4	17.9 41	884.6	7/2 ⁺ ,5/2 ⁺	61.3	7/2 ⁺
^x 835.1 \ddagger 3	11.4 \ddagger 9				
^x 883.8 4	<20				
884.6 4	<20.0	884.6	7/2 ⁺ ,5/2 ⁺	0.0	5/2 ⁺
958.7 4	23.6 49	958.7	(3/2) ⁺	0.0	5/2 ⁺
^x 1165.1 \ddagger 3	33.1 \ddagger 50				
^x 1441.6 \ddagger 3	8.4 \ddagger 21				

[†] At E(p)=6.6 MeV.

[‡] Observed only in **1977Na07** at E=8 MeV.

^x γ ray not placed in level scheme.

$^{145}\text{Nd}(p,n\gamma)$ 1976Sh05,1977Na07

Level Scheme

Intensities: Relative I_γ

Legend

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

