

(HI,xnγ) 1994Pa20,1995BI01

Type	Author	History	Citation	Literature Cutoff Date
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Additional information 1.

All data are from 1994Pa20,1995BI01.

1994Pa20,1994Pa32,1995Fo16: ²⁰⁸Pb(⁶⁴Ni,Xγ), E(⁶⁴Ni)=350 MeV; measured E_γ, I_γ, γγ coinc., T_{1/2}, shell-model calculations.

1995BI01: ⁶⁴Ni(¹⁸O,¹⁷Oγ), E(¹⁸O)=72 MeV; measured E_γ, I_γ, T_{1/2}.

⁶⁵Ni Levels

E(level) [†]	J ^π [‡]	T _{1/2}	Comments
0.0	5/2 ⁻		
63.4 5	1/2 ⁻		
310.39 19	3/2 ⁻		
692.8 4	3/2 ⁻		
1017.01 10	9/2 ⁺	26.6 ns 10	T _{1/2} : weighted average of 26.7 ns 10 (1995BI01) and 25 ns 5 (1994Pa20).
1143 @ 4			
1272 @ 4	1/2 ⁻		
1418.1 @ 24	1/2 ⁻		
1920.7 3	5/2 ⁺		
2185.74 21	(11/2 ⁺)#		
2519.34 22	(13/2 ⁺)#		
2906.36 25	(13/2 ⁺)#		
3522.8 3	(15/2 ⁺)#		
4011.1 5	(17/2 ⁺)#		

[†] From a least-squares fit to E_γ data.

[‡] From Adopted Levels; supporting arguments from this data set are indicated in comments.

From shell model calculations and level systematics.

@ From 1995BI01; not observed by 1994Pa20.

γ(⁶⁵Ni)

E _γ [†]	I _γ [#]	E _i (level)	J _i ^π	E _f	J _f ^π	Mult.	Comments
310.4 2	71 3	310.39	3/2 ⁻	0.0	5/2 ⁻		
382.4 4	2.2 4	692.8	3/2 ⁻	310.39	3/2 ⁻		
488.3 4	3.0 4	4011.1	(17/2 ⁺)	3522.8	(15/2 ⁺)		
^x 567 [‡] 3	5.0 @ 4						
616.5 3	4.6 5	3522.8	(15/2 ⁺)	2906.36	(13/2 ⁺)		
629.4 3	21 2	692.8	3/2 ⁻	63.4	1/2 ⁻		
692.7 5	2.7 3	692.8	3/2 ⁻	0.0	5/2 ⁻		
720.6 2	7.1 5	2906.36	(13/2 ⁺)	2185.74	(11/2 ⁺)		
726 [‡] 4	2.5 @ 2	1418.1	1/2 ⁻	692.8	3/2 ⁻		
962 [‡] 4	1.79 @ 16	1272	1/2 ⁻	310.39	3/2 ⁻		
1003.5 4	1.4 3	3522.8	(15/2 ⁺)	2519.34	(13/2 ⁺)		
1017.0 1	100	1017.01	9/2 ⁺	0.0	5/2 ⁻	(M2)	Mult.: from ΔJ ^π and RUL.
1107 [‡] 4	3.2 @ 3	1418.1	1/2 ⁻	310.39	3/2 ⁻		
1143 [‡] 4	7.9 @ 8	1143		0.0	5/2 ⁻		
1168.7 2	14.6 12	2185.74	(11/2 ⁺)	1017.01	9/2 ⁺		

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(HL,xn γ) 1994Pa20,1995BI01 (continued) $\gamma(^{65}\text{Ni})$ (continued)

E_γ^\dagger	$I_\gamma^\#$	$E_i(\text{level})$	J_i^π	E_f	J_f^π
^x 1194 [‡] 4	5.4 [@] 4				
^x 1225 [‡] 3	11.8 [@] 10				
^x 1265 [‡] 3	5.0 [@] 11				
^x 1319 [‡] 3	15.4 [@] 12				
^x 1344 [‡] 3	10.0 [@] 9				
^x 1388 [‡] 6	1.43 [@] 12				
1418 [‡] 4	1.79 [@] 16	1418.1	1/2 ⁻	0.0	5/2 ⁻
^x 1426 [‡] 6	1.79 [@] 16				
^x 1474 [‡] 6	0.71 [@] 18				
1491.6 6	1.1 3	4011.1	(17/2 ⁺)	2519.34	(13/2 ⁺)
1502.3 2	18.6 15	2519.34	(13/2 ⁺)	1017.01	9/2 ⁺
1610.3 2	18.4 15	1920.7	5/2 ⁺	310.39	3/2 ⁻
^x 1815 [‡] 5	2.5 [@] 2				
1889.5 5	1.9 5	2906.36	(13/2 ⁺)	1017.01	9/2 ⁺
^x 2475 [‡] 5	[@]				

[†] From 1994Pa20, unless indicated otherwise.

[‡] From 1995BI01; not observed by 1994Pa20.

[#] Relative intensity from 1994Pa20, unless indicated otherwise.

[@] From 1995BI01.

^x γ ray not placed in level scheme.

(HI,xn γ) 1994Pa20,1995B101

Level Scheme

Intensities: Relative I_γ

Legend

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

