

$^{55}\text{Mn}(\text{p},\text{p}'\gamma)$ 1970EI05,1974HaWG,1974VaYS

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Huo Junde	NDS 109, 787 (2008)	30-Apr-2007

1970EI05: E=1.8-2.5 MeV; NaI; measured $\gamma(\theta)$;

1974VaYS, 1974VaYR, 1974HaWG: E=6 MeV; measured $\gamma(E,\theta)$, DSA; Hauser-Feshbach analysis.

For negative search for γ decay of possible $1/2^-$ level near 1300 keV, see 1975NeZU.

Many resonances are observed, see 1988St14 and 1988St03.

See also 1967Ab01.

 ^{55}Mn Levels

E(level) [†]	J^π [†]	$T_{1/2}$ [‡]	L	Comments
0.0	$5/2^-$			
126	$7/2^-$			$\mu=4.47$ (1974VaYR) μ : Value from $\gamma(\theta,H)$ measurement.
984	$9/2^-$	0.28 ps 12		
1292	$11/2^-$	1.1 ps 8		
1530	$3/2^-$	0.12 ps 4		
1885	$7/2^-$	<6 fs		
2199	$7/2^-$	19 fs 10		
2215	$5/2^-, 7/2^-$	<7 fs		
2254	$3/2^-$	67 fs 28		
2269	$1/2$	28 fs 14		
2311	$13/2$	0.11 ps +18-6		
2366	$5/2^-$	<7 fs		
2401	$5/2, 7/2$	114 fs +80-42		
2429	$1/2^+$	0.36 ps +104-1	8	
2565	$3/2^-$			
2727	$7/2$			
2753	$9/2^-$			
2823	$9/2$			
2825	$9/2$			
2925				J^π : $3/2^-, 5/2^{(-)}, 7/2^{(-)}, 9/2$.
3004	$5/2, 7/2$			

[†] From 1974VaYS.

[‡] From 1974HaWG, DSA.

 $\gamma(^{55}\text{Mn})$

E_γ [†]	I_γ [‡]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. #	$\delta^\#$
126	100	126	$7/2^-$	0.0	$5/2^-$		
308	27	1292	$11/2^-$	984	$9/2^-$		
739	14	2269	$1/2$	1530	$3/2^-$		
857	96	984	$9/2^-$	126	$7/2^-$	M1+E2	0.26 +8-4
868	60	2753	$9/2^-$	1885	$7/2^-$		
899	100	2429	$1/2^+$	1530	$3/2^-$		
938	20	2823	$9/2$	1885	$7/2^-$		
984	4	984	$9/2^-$	0.0	$5/2^-$		
1019	100	2311	$13/2$	1292	$11/2^-$		
1165	73	1292	$11/2^-$	126	$7/2^-$		
1215	47	2199	$7/2^-$	984	$9/2^-$		
1417	29	2401	$5/2, 7/2$	984	$9/2^-$		

Continued on next page (footnotes at end of table)

$^{55}\text{Mn}(\text{p},\text{p}'\gamma)$ 1970E105,1974HaWG,1974VaYS (continued) $\gamma(^{55}\text{Mn})$ (continued)

E_γ †	I_γ ‡	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. #	Comments
1435	23	2727	7/2	1292	11/2 ⁻		
1530	100	1530	3/2 ⁻	0.0	5/2 ⁻	M1+E2	$\delta: \delta=+0.36$ or $+8.1$ (1970E105).
1531	80	2823	9/2	1292	11/2 ⁻		
1743	27	2727	7/2	984	9/2 ⁻		
1758	32	1885	7/2 ⁻	126	7/2 ⁻		
1885	68	1885	7/2 ⁻	0.0	5/2 ⁻		
2199	53	2199	7/2 ⁻	0.0	5/2 ⁻		
2215	100	2215	5/2 ⁻ ,7/2 ⁻	0.0	5/2 ⁻		
2239	80	2366	5/2 ⁻	126	7/2 ⁻		
2254	100	2254	3/2 ⁻	0.0	5/2 ⁻		
2269	86	2269	1/2	0.0	5/2 ⁻		
2274	71	2401	5/2,7/2	126	7/2 ⁻		
2366	20	2366	5/2 ⁻	0.0	5/2 ⁻		
2565	100	2565	3/2 ⁻	0.0	5/2 ⁻		
2626	40	2753	9/2 ⁻	126	7/2 ⁻		
2699	100	2825	9/2	126	7/2 ⁻		
2727	50	2727	7/2	0.0	5/2 ⁻		
2799	100	2925		126	7/2 ⁻		
3004	100	3004	5/2,7/2	0.0	5/2 ⁻		

† Calculated values based on level energies of 1974VaYS.

‡ Percent photon branching for each level, from 1974VaYS.

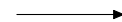

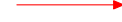
From 1970E105; phase conventions of 1970Kr03.

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Legend

Level Scheme

Intensities: Relative I_γ

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

