

$^{52}\text{Cr}(\text{n},\gamma)$ E=1.626 keV **1980Ko01**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Huo Junde	NDS 110,2689 (2009)	31-Mar-2007

E=1.626 keV, measured: γ from neutron resonance.

 ^{53}Cr Levels

E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]	E(level) [†]	J ^π [‡]
0.0	3/2 ⁻	1536.46 12	7/2 ⁻	2670.0 5	1/2 ⁻	3616.21 25	1/2 ⁻
563.88 15	1/2 ⁻	1973.68 12	5/2 ⁻	2709.3 4	3/2 ⁻	4186.6? 7	
1006.24 6	5/2 ⁻	2320.33 18	3/2 ⁻	3180.23 23	(3/2) ⁻	4293.7? 7	
1289.38 15	7/2 ⁻	2656.7 4	5/2 ⁻ , 7/2 ⁻	3262.33 23	(5/2) ⁺	7939.12 14	3/2 ⁻

[†] From a least-squares fit to the primary and secondary γ -ray data.

[‡] Adopted values.

 $\gamma(^{53}\text{Cr})$

E _{γ}	I _{γ} ^{†#}	E _i (level)	J ^π _i	E _f	J ^π _f	Mult.	Comments
529.89 13	5.6 6	1536.46	7/2 ⁻	1006.24	5/2 ⁻		
563.85 15	27.5 24	563.88	1/2 ⁻	0.0	3/2 ⁻		
1006.14 6	29.3 13	1006.24	5/2 ⁻	0.0	3/2 ⁻		
1289.36 15	15.7 20	1289.38	7/2 ⁻	0.0	3/2 ⁻		
1537.07 18	4.4 7	1536.46	7/2 ⁻	0.0	3/2 ⁻		
1650.4 4	2.7 10	2656.7	5/2 ⁻ , 7/2 ⁻	1006.24	5/2 ⁻		
1973.59 14	11.4 12	1973.68	5/2 ⁻	0.0	3/2 ⁻		
2320.2 2	7.1 11	2320.33	3/2 ⁻	0.0	3/2 ⁻	M1+E2	$\delta=+0.11$ 3 or +9 3 (1965Ba12).
2656.6 [‡] 9	0.3 1	2656.7	5/2 ⁻ , 7/2 ⁻	0.0	3/2 ⁻		
2670.8 [‡] 7	4.4 4	2670.0	1/2 ⁻	0.0	3/2 ⁻		
2710.3 [‡] 7	0.6 1	2709.3	3/2 ⁻	0.0	3/2 ⁻		
3616.6 [‡] 3	2.8 4	3616.21	1/2 ⁻	0.0	3/2 ⁻	M1+E2	$\delta=+0.19$ 3 or -35 20 (1965Ba12).
3646.4 7	3.1 6	7939.12	3/2 ⁻	4293.7?			
3753.5 6	6.4 11	7939.12	3/2 ⁻	4186.6?			
4324.8 4	3.1 8	7939.12	3/2 ⁻	3616.21	1/2 ⁻		
4677.7 2	14.2 6	7939.12	3/2 ⁻	3262.33	(5/2) ⁺		
4759.8 2	7.8 5	7939.12	3/2 ⁻	3180.23	(3/2) ⁻		
5231.0 4	6.5 8	7939.12	3/2 ⁻	2709.3	3/2 ⁻		
5270.6 6	3.5 7	7939.12	3/2 ⁻	2670.0	1/2 ⁻		
5619.3 4	3.9 4	7939.12	3/2 ⁻	2320.33	3/2 ⁻		
5966.1 2	10.4 5	7939.12	3/2 ⁻	1973.68	5/2 ⁻		
6933.3 2	9.3 5	7939.12	3/2 ⁻	1006.24	5/2 ⁻		
7375.6 4	8.0 5	7939.12	3/2 ⁻	563.88	1/2 ⁻		
7939.7 2	17.2 9	7939.12	3/2 ⁻	0.0	3/2 ⁻		

[†] The authors give the total primary γ -ray amounts to 93.3% based on **1969Ra10**, 10% systematic errors associated with each of the intensities.

[‡] Extracted from thermal neutron data.

For intensity per 100 neutron captures, multiply by 1.0718.

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Level Scheme

Intensities: Relative I_γ

Legend

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

