^{54}Cr(p,p′),(p,p′γ)   **1980Fa07,1966Ma42**

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yang Dong, Huo Junde	NDS 121, 1 (2014)	20-Jun-2014

1966Ma42: E=11-12 MeV. Multigap and single channel spectrograph.

1980Fa07: E=29.7 and 35.2 MeV. Si surface barrier detectors, measured inelastic-scattering cross sections for the transition to the first 2$^+$ state.

1967Ab01: E(p)=1.5-2.5 MeV. Measured angular distributions of γ-ray, NaI.

1971An17: E(p)≈6 MeV. Measured angular distributions, magnetic (sector) spectrometer, semiconductor detector.

See 1980Be26 for statistical analysis of energy level widths.

See 1980PrZV for spin-flip probability.

Other: see 1978Ve02, 1978An28.

Ground state Q=7497 keV *15* (1966Ma42).

^{54}Cr Levels

E(level)†	J$^\pi$	Comments
0.0	0$^+$	
835 *7*	2	The quadrupole deformation parameter β_2=0.20 from 1980Fa07. Other: β_2=0.46 from $\sigma(\theta)$ 1971An17.
		J$^\pi$: from $\gamma(\theta)$, see 1967Ab01.
1821 *7*		E(level): unusually strong excitation of this level indicates that it is of a collective nature.
2615 *7*		
2828 *7*		
3074 *7*		
3160 *7*		
3222 *7*		
3393 *7*		
3435 *7*		
3514 *7*		
3657 *7*		
3720 *7*		
3785 *7*		
3797 *7*		
3863 *7*		
3929 *7*		
4014 *7*		
4045 *7*		
4086 *7*		
4129 *7*		
4195 *7*		
4219‡ *7*		
4241 *7*		
4259 *7*		
4377 *7*		
4454 *7*		
4572 *7*		
4585 *7*		
4619 *7*		
4632 *7*		
4843 *7*		
4864 *7*		
4873 *7*		
4921 *7*		
4934 *7*		
4997 *7*		
5017 *10*		
5026 *10*		

^{54}Cr(p,p′),(p,p′γ)   1980Fa07,1966Ma42 (continued)

^{54}Cr Levels (continued)

E(level)[†]	E(level)[†]	E(level)[†]	E(level)[†]
5060 *10*	5185 *10*	5225 *10*	5290 *10*
5113 *10*	5191 *10*	5270 *10*	5321 *10*
5156 *10*	5215 *10*	5275 *10*	5350 *10*

[†] From 1966Ma42.
[‡] This level which is strongly excited may be predominantly collective in nature.

$\gamma(^{54}$Cr)

E_γ	E_i(level)	J_i^π	E_f	J_f^π	Comments
835	835	2	0.0	0^+	E_γ: from 1967Ab01.

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Level Scheme

$^{54}_{24}$Cr$_{30}$