^{53}Cr(d,p) 1966Ma42,1964Bj01

History

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

$J^{\pi}(^{53}Cr)=3/2^{-}$.
1966Ma42: E=10 MeV. Multigap spectrograph, ΔE=10 keV.
1964Bj01: E=3-4.3 MeV. Heavy particle spectrograph, ΔE=8 keV.
1964Bo08: E=6.6 MeV. Multi-spectrograph, $\sigma(\theta)$, DWBA analyses.
Other: see 1978Ve02.
See 1980KnZY for determination of J mixing from tensor-analyzing power.

^{54}Cr Levels

E(level)†	L@	S#	Comments
0.0	1	0.013	
832 *3*	1	0.0275	
1833 *6*	3		
2627 *6*	1	0.040	S: (2J+1)S=3.26 (1970Br27).
2835 *6*	1	0.0095	
3077 *6*	1	0.0325	S: (2J+1)S=2.35 (1970Br27).
3167 *8*			E(level): from 1964Bj01 only.
3389 *10*			E(level): from 1966Ma42 only.
3442 *6*	1	0.021	S: (2J+1)S=1.33 (1970Br27).
3662 *6*			
3726 *6*	1	0.0218	
3805 *6*			
3869 *6*			
3937 *7*	1	0.0220	
4020 *8*			
4092 *8*			
4134 *7*			L: E≈4140, L=3 (1964Le03).
4200 *6*			
4227 *9*			L: E≈4220, L=3 (1964Le03).
4250 *10*			
4379 *10*	1	0.0226	
4617 *10*			
4626 *10*	2	0.0188	L: E≈4670 keV, L=3 (1964Le03).
4845 *10*			
4870 *10*			
4940 *10*			
5112 *10*			
5186 *10*			
5230 *10*			
5275 *10*			
5298 *10*	1	0.017	
5387 *10*			
5459 *10*			
5498 *10*			
5560 *10*			
5590 *10*			
5670 *10*			
5698 *10*			
5740 *10*			
5800 *10*			
5829 *10*			
5863 *10*			
5893 *10*	(1)	0.0116	

Continued on next page (footnotes at end of table)

^{53}Cr(d,p) 1966Ma42,1964Bj01 (continued)

^{54}Cr Levels (continued)

E(level)[†]	E(level)[†]	E(level)[†]	E(level)[†]	L[@]	S[#]
5935 *10*	6350 *10*	6678 *10*	7000 *10*		
5981 *10*	6374 *10*	6719 *10*	7050 *10*		
6113 *10*	6391 *10*	6743 *10*	7084 *10*		
6120 *10*	6421 *10*	6780 *10*	7103 *10*		
6148 *10*	6510 *10*	6814 *10*	7127 *10*		
6193 *10*	6525 *10*	6831 *10*	7159 *10*		
6212 *10*	6556 *10*	6875 *10*	7174 *10*		
6255 *10*	6585 *10*	6899 *10*	7199 *10*		
6289 *10*	6633 *10*	6941 *10*	7370[‡]		
6314 *10*	6658 *10*	6960 *10*	7590[‡]	(0)	0.0272

[†] Weighted average of 1964Bj01 and 1966Ma42 below 4230 keV and from 1966Ma42 above 4230 keV, except as noted. According to 1966Do06, as pointed out in a footnote, the level energies as given by 1964Bj01 should be increased by 0.1% to correct for a more recent calibration standard. However, the 3469 and 3990 levels given by 1964Bj01 have been assigned by 1966Ma42 to ^{55}Cr, although 1979SmZQ show both these levels in their level scheme.

[‡] Observed by 1964Bo08.

[#] $(2J+1)(\theta)^2$ is given from 1964Bo08, 1964Le03. θ^2=single particle reduced width. For some levels, (2J+1)S from 1970Br27 is also given separately.

[@] From the comparison of the experiment with the DWBA angular distributions (1964Bo08,1964Le03).