^{52}Cr(^{3}He,n) 1975Bo14,1975Al05,1974Ev02

History

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

1975Bo14: E=13 MeV; measured σ(E(n),θ), DWBA analysis. Determined dσ/dΩ (max) at 0° for L=0, 20° for L=2 (c.m. angles).
197Al05 : E=15 MeV; measured σ(E(n),θ), DWBA analysis.
1972Ev02, 1974Ev02: E=18 MeV. Measured σ(E(n),θ), DWBA analysis. tof.
Isobaric analogs of ^{54}Mn have been inferred from observed level energies and Coulomb-energy difference (8810 keV *40*).
All data are from 1975Bo14, except as noted.

^{54}Fe Levels

E(level)	J$^{\pi}$	L	dσ/dΩ (max)	Comments
0	0$^+$	0	670 *20*	
1400 *20*	2$^+$	2	75 *10*	
2490 *30*				
2940 *20*	2$^+$	2	26 *5*	
3120 *30*	2$^+$	2	27 *5*	
3800 *30*	4$^+$	4	25 *5*	dσ/dΩ (max): $\sigma(\theta)$ max at 35° (C.M.).
4250 *20*	0$^+$	0	140 *15*	
4580 *20*	2$^+$	2	75 *15*	
5230 *20*	0$^+$	0	84 *18*	
5380 *20*	2$^+$	2	36 *7*	
6400 *10*	0$^+$	0	360 *30*	E(level): observed as doublet with other component L=(2) by 1974Ev02.
6910 *20*				
7200 *30*				
7560 *20*	0$^+$	0	76 *5*	
7940 *20*	3$^-$	3	60 *5*	dσ/dΩ (max): $\sigma(\theta)$ max at 25° (C.M.).
8410 *10*	0$^+$	0	360 *20*	
8640 *50*				
8860 *50*				
9040 *30*				
9610 *30*				
9980 *20*	2$^+$	2	80 *7*	
10250 *20*	0$^+$	0	170 *30*	E(level): isobaric analog of 1460 level of ^{54}Mn based partly on the assumption of J$^{\pi}$=0$^+$ for the parent analog state from 1975Bo14.
10700 *10*	0$^+$	0	480 *30*	E(level): isobaric analog of 2110 level of ^{54}Mn based partly on the assumption of J$^{\pi}$=0$^+$ for the parent analog state from 1975Bo14.
10830 *50*				
10950 *50*				
11120 *50*				
11460 *30*	2$^+$	2	100 *20*	
11620 *30*				
11740 *50*				
11850 *30*	2$^+$	2	90 *30*	
12040 *20*	0$^+$	0	110 *10*	
12100 *50*	2$^+$	2	26 *5*	
13520 *20*	0$^+$	0	78 *10*	
13730 *30*	4$^+$	4	100 *15*	dσ/dΩ (max): $\sigma(\theta)$ max at 35° (C.M.).
14050 *50*				
14540 *30*				
14590 *30*				
14700 *30*				
14730 *30*				
14850 *30*	2$^+$	2	74 *15*	
14870 *20*	0$^+$	0	280 *30*	E(level): isobaric analog of 6150 level of ^{54}Mn based partly on the assumption of J$^{\pi}$=0$^+$ for the parent analog state from 1975Bo14.