^{52}Cr(e,e′) 1985So05,1973Ph02,1964Be32

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yang Dong, Huo Junde	NDS 128, 185 (2015)	10-Jul-2015

1985So05: E=29.6-57.3 MeV, excitation energy spectra, $\sigma(\theta)$. enriched (99.9%) targets, the multichannel detector system of the energy-loss electron facility consisted 36 overlapping scintillators backed up by a large Cerenkov counter.
1988So07: E=170-260 MeV, excitation energy spectra, natural Cr and enriched (99.87%) separated ^{52}Cr targets, quadrupole-dipole -dipole (QDD) spectrometer.
1964Be32: E=150, 180 MeV, $\sigma(\theta)$. natural target, double focusing spectrometer (over-all energy resolution of 0.35%).
1973Ph02: E=209 MeV, $\sigma(\theta)$ for $2^+,3^-,4^+$ levels, double focusing magnetic spectrometer (intrinsic resolution of 0.11%).

^{52}Cr Levels

E(level)†	L@	Comments
0.0		Ground-state rms charge radius from elastic scattering: 3.674 fm *15* (1976Li19), 3.655 fm (1971Pe11).
1.43×10^3	2	B(E2)↑=0.067 *4* B(E2)↑: from weighted average of 0.0634 *39* (1976Li19), 0.080 *8* (1978Po04), 0.071 *9* (1971Pe11), 0.0761 *30* (1975DeXW), and 0.052 *4* (1964Be32). Other: 0.0632 (1983Li02).
2.37×10^3	4	B(E4)↑=0.00151 *5* (1975DeXW) B(E4)↑: Other: 0.00101 (1983Li02).
2.65×10^3	0	
2.77×10^3	4	B(E4)↑=0.000482 (1983Li02)
2.97×10^3	2	1964Be32 report L=4 and B(E4)=0.00050 *7*; however, the 2970 level has $J^\pi=2^+$.
3.11×10^3	6	B(E6)↑=0.143×10^{-4} (1983Li02)
3.16×10^3	2	B(E2)↑=0.00124 *23* (1976Li19) B(E2)↑: Others: 0.00155 *20* (1975DeXW), 0.0016 (1983Li02).
3.77×10^3	2	B(E2)↑=0.0101 *5* (1975DeXW) B(E2)↑: Other: 0.0112 (1983Li02).
4.04×10^3		
4.56×10^3	3	B(E3)↑=0.0065 *4* (1964Be32) B(E3)↑: Other: 0.0076 *11* (1975DeXW).
5.50×10^3‡	3	B(E3)↑=0.0013 *3* (1964Be32)
6.60×10^3‡	3	B(E3)↑=0.0022 *3* (1964Be32)
7.03×10^3 *1*	M1,(E1)	
7.10×10^3‡	3	B(E3)↑=0.0028 *3* (1964Be32)
7.14×10^3 *1*	M1	
7.17×10^3 *1*	M1	
7.26×10^3 *1*	M1,(M2)	
7.34×10^3 *1*	M1	
7.52×10^3 *1*	M1,(M2)	
7.56×10^3 *2*	M1,(M2)	
7.70×10^3 *1*	M1	
7.82×10^3 *1*	M1	
7.86×10^3 *1*	M1,(M2)	
7.90×10^3‡	3	B(E3)↑=0.0028 *3* (1964Be32)
8.08×10^3 *2*	M1,M2	
8.10×10^3# *2*	M8&	
8.39×10^3 *1*	M1	
8.45×10^3# *2*	M6&	
8.60×10^3 *1*	3	B(E3)↑=0.0022 *3* (1964Be32)
8.69×10^3 *2*	M1,M2,E2	
8.79×10^3 *1*	M2,(E2)	

Continued on next page (footnotes at end of table)

^{52}Cr(e,e′) 1985So05,1973Ph02,1964Be32 (continued)

^{52}Cr Levels (continued)

E(level)[†]	L[@]	E(level)[†]	L[@]	E(level)[†]	L[@]
8.86×10^3 *1*	M1,(M2)	10.27×10^3 *2*	D,(M2)	11.55×10^3[#] *2*	M8[&]
8.89×10^3 *2*	M1,M2	10.30×10^3 *2*	M2,M3,E3	11.57×10^3 *2*	(M1),Q
8.94×10^3[#] *2*	(M8,M6)[&]	10.33×10^3[#] *2*	M6[&]	11.61×10^3 *1*	M2,(E2)
9.00×10^3 *1*	M1	10.34×10^3 *2*	M1,E1	11.65×10^3 *1*	M1,(M2)
9.05×10^3 *1*	M1,(M2)	10.38×10^3 *2*	M1,E1	11.66×10^3[#] *2*	M8[&]
9.08×10^3[#] *2*	(M8)[&]	10.43×10^3 *1*	M1	11.69×10^3 *2*	(M1),Q
9.14×10^3 *1*	M1	10.46×10^3 *1*	M1	11.77×10^3[#] *2*	M8[&]
9.21×10^3 *1*	M1	10.50×10^3 *2*	M1,E1	11.78×10^3 *2*	(M1),M2
9.32×10^3 *1*	M1	10.51×10^3[#] *2*	(M8,M6)[&]	11.88×10^3[#] *2*	M8[&]
9.37×10^3 *2*	M1,M2	10.61×10^3 *1*	M1,Q	11.96×10^3[#] *2*	M8[&]
9.42×10^3 *1*	M1	10.71×10^3 *1*	M1,(E1)	12.03×10^3[#] *2*	(M8)[&]
9.44×10^3 *2*	M1,E2	10.76×10^3 *1*	M1	12.13×10^3[#] *2*	(M8,M6)[&]
9.45×10^3[#] *2*	M8[&]	10.79×10^3 *1*	M1	12.24×10^3[#] *2*	M6[&]
9.47×10^3 *2*	M1,E2	10.80×10^3[#] *2*	(M8,M6)[&]	12.73×10^3[#] *2*	M8[&]
9.58×10^3 *1*	M1,(E1)	10.82×10^3 *1*	M1,(M2)	13.22×10^3[#] *2*	M8[&]
9.61×10^3 *1*	M1	10.92×10^3 *2*	M1,M2	13.39×10^3[#] *2*	M6[&]
9.66×10^3[#] *2*	M8[&]	11.00×10^3[#] *2*	M8[&]	13.57×10^3[#] *2*	M6[&]
9.72×10^3 *1*	M1	11.07×10^3 *1*	M1,(E1)	13.71×10^3[#] *2*	M6[&]
9.83×10^3 *1*	M1	11.14×10^3 *1*	M1,(E1)	14.03×10^3[#] *2*	M6[&]
9.88×10^3 *1*	M1	11.16×10^3 *2*	(M1),Q	14.34×10^3[#] *2*	M6[&]
9.91×10^3[#] *2*	M8[&]	11.17×10^3[#] *2*	M8[&]	14.43×10^3[#] *2*	M8[&]
10.01×10^3 *1*	M1,(M2)	11.27×10^3[#] *2*	M8[&]	15.27×10^3[#] *2*	M6[&]
10.11×10^3[#] *2*	(M8)[&]	11.33×10^3 *2*	(M1),M2	15.47×10^3[#] *2*	M8[&]
10.13×10^3 *2*	M1,M2,E1	11.37×10^3[#] *2*	M8[&]	16.40×10^3[#] *2*	M6[&]
10.18×10^3 *1*	M2	11.40×10^3 *1*	M1	16.69×10^3[#] *2*	(M8)[&]
10.24×10^3 *2*	(M1),E1	11.51×10^3 *1*	M2		

[†] E<7 MeV from 1973Ph02. The authors take values from 1970Ra47. E>7 MeV from 1985So05, except as noted.
[‡] From 1964Be32.
[#] From 1988So07.
[@] The L values for the levels below 7100 are from the adopted J^{π}'s and multipolarity of inelastic trasition for above 7100 are from 1985So05, except as noted.
[&] Multipolarity of inelastic trasition from 1988So07.