^{52}Cr(^{3}He,d), (^{3}He,dγ) 1979Pa01,1976Gu04,1976Ga20

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

1979Pa01: E=18 MeV, FWHM=12-15 keV, σ(E,θ).
1976Ta02: E=10.99 MeV, γ, γ-d coin, DWBA analysis.
1976Ga20: E=25 MeV, FWHM=15-17 keV, σ(E,θ).
1976Ga15: E=24 MeV, σ(E,θ).
1976Gu04: E=24 MeV, FWHM=70 keV, σ(E,θ).
1969Cu02: E=9.5 MeV, σ(E,θ).
1967Ob04: E=11 MeV, σ(E,θ).

^{53}Mn Levels

E(level)[#]	L	C^2S'	Comments
0.0	3	3.0	
377.9[@] *10*	(3)	0.09	
1289.8[@] *11*	1	0.19	
2406.7[@] *13*	1	1.45	
2671.8[@] *11*	1	0.30	
2707.6[@] *14*	0	0.06	
2875 *2*	1	0.06	
3007 *3*	2	0.04	
3097 *3*	1	0.04	
3127 *3*	3	0.17	
3478.9[@] *12*	1	0.25	
3532[@] *4*			
3597.9[@] *13*			
3666 *3*	3	1.76	
3709 *3*	(3)	0.10	
3729.5[@] *14*			
3896 *3*	1	0.08	
4064 *3*	(1,3)	0.04,0.52	C^2S': L=(1), C^2S'=0.04; L=(3), C^2S'=0.52.
4268 *3*	(3)	0.08	
4298 *3*	3	0.13	
4348 *3*	(1)	0.03	L: L=(0) (1967Ob04), L=1 (1969Cu02).
4429 *3*	1	0.19	
4552 *3*	(3)	0.08	
4574 *3*	1	0.07	
4635 *3*	(3)	0.06	
4718.0[@] *13*	1	0.24	
4783 *3*	(1)	0.04	
4931 *3*	3	0.42	
4958 *3*	1	0.14	
5081 *3*	&	&	
5096 *3*	&	&	
5320 *3*	(1)	0.04	L: L=0 (1969Cu02), L=1 (1976Gu04).
5476 *3*	*a*	*a*	
5493 *3*	*a*	*a*	
5582 *6*			
5705 *15*			E(level): from 1967Ob04.
5801 *6*			
5894 *3*	(0,1)	0.07,0.39	C^2S': L=(0), C^2S'=0.07; L=(1), C^2S'=0.39.
5954 *3*			

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^{52}Cr(^{3}He,d), (^{3}He,dγ) 1979Pa01,1976Gu04,1976Ga20 (continued)

^{53}Mn Levels (continued)

E(level)[#]	Jπ[†‡]	L	C^{2}S′	Comments
6005 *6*				
6150 *15*				
6240 *15*				
6320 *15*				
6410 *15*				
6490 *15*				
6540 *15*		(4)		
6730 *15*				
6870 *15*				
6977 *5*	3/2$^-$	1	0.60	E(level): authors′ value of 6997 in table 1 is a misprint; see text and table vi.
7028 *8*		4	0.3	
7094 *8*		3	0.12	L: from 1976Ga20. Others: L=(4), C^{2}S′=0.2 (1976Gu04).
7150 *8*		2	0.06	
7277 *5*		3	0.36	L: from 1976Ga20. Others: L=4, C^{2}S′=0.6 (1976Gu04).
7385 *8*		3	0.18	
7420 *5*		1	0.10	
7473 *8*				
7507 *8*		3	0.18	
7548 *5*	1/2$^-$	1	0.26	
7628 *8*		(1)		
7667 *8*				
7710 *8*		3	0.18	
7758 *8*		(3)	(0.18)	
7810 *8*		(1)		
7935 *8*		3	0.24	L: from 1976Ga20. Others: L=4, C^{2}S′=0.3 (1976Gu04).
8000 *8*		3	0.12	
8027 *8*		3	0.12	
8050 *5*	5/2$^-$	3	0.78	
8129 *8*				
8188 *8*		1	0.05	
8421 *8*		1	0.08	
8516 *8*		3	0.18	
8562 *8*				
8608 *8*				
8660 *8*				
8722 *8*				
8883 *8*	(5/2$^+$)	(2)	(0.06)	
8982 *8*		(2)	(0.06)	
9022 *8*				
9106 *8*	5/2$^+$	2	0.06	
9194 *8*		4	0.06	
9248 *8*	5/2$^+$	2	0.12	
9282 *5*	3/2$^-$	1	0.28	
9425 *5*		1	0.12	
9585 *8*		(1)		
9656 *5*	5/2$^-$,7/2$^-$	3	0.42	
9837 *8*	(9/2)$^+$	4	0.3	
9938 *8*		3	0.12	
10050 *8*				
10108 *8*		(2)	0.06	
10190 *8*		(2)	0.06	
10320 *8*		(2)	0.06	
10475 *8*		(2)		
10575 *5*	3/2$^-$	1	0.22	
10604 *8*		4	0.1	
10662 *5*	9/2$^+$	4	1.2	

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^{52}Cr(^{3}He,d), (^{3}He,dγ) 1979Pa01,1976Gu04,1976Ga20 (continued)

^{53}Mn Levels (continued)

E(level)[#]	J$^{\pi}$[†‡]	L	C^{2}S′
11033 *8*	5/2$^+$,3/2$^+$	(2)	0.06
11082 *8*	5/2$^+$,3/2$^+$	(2)	0.06
11600 *8*			
11654 *8*	5/2$^-$,7/2$^-$	3	0.18
12130 *8*			

† Adopted values.
‡ From combination of L in (^{3}He,d) and d,p(θ) in (^{3}He,dp) (1976Ga20).
# E≤6005 from 1979Pa01, E=6005-6900 from 1976Gu04, E>6900 from 1976Ga20, except as noted.
@ From (^{3}He,dγ) (1976Ta02).
& L=(1), C^{2}S′=0.12 for 5081+5096.
a L=(1), C^{2}S′=0.04 for 5476+5494.

γ(^{53}Mn)

All data are from 1976Ta02. Eγ from level energy differences.

E$_\gamma$	E$_i$(level)	E$_f$
377.9	377.9	0.0
911.9	1289.8	377.9
1116.9	2406.7	1289.8
1289.9	1289.8	0.0
2028.8	2406.7	377.9
2406.7	2406.7	0.0

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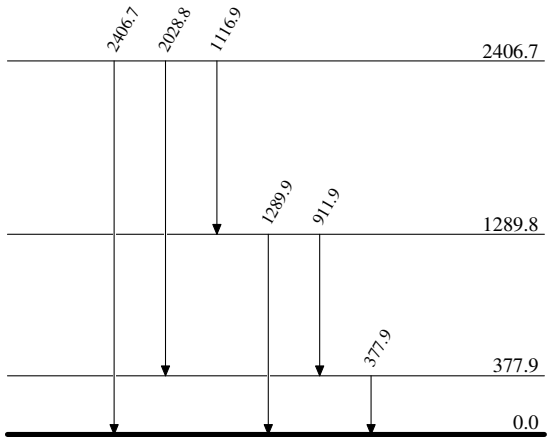
Level Scheme



$^{53}_{25}Mn_{28}$