^{55}Mn(d,p) 1971Ga45,1969Co01

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huo Junde, Huo Su, Yang Dong	NDS 112, 1513 (2011)	29-Oct-2009

$J^{\pi}(^{55}Mn)=5/2^{-}$.
1969Co01: E=7.5 MeV, FWHM: 10-keV; measured σ(E(p),θ).
1971Ga45: E=10.1 MeV, FWHM: 20-keV; measured σ(E(p),θ).
See also 1957Gr19 (E=6.6 and 7 MeV) and 1964Bj01 (E=4 MeV).
All data are from 1969Co01, except as noted.

^{56}Mn Levels

E(level)†	L#	C^2S'@	E(level)†	L#	C^2S'@
0	1+3	0.10+0.25	2205	(1)‡	
26	1+3	0.14+0.22	2234	1+3	0.06+0.01
110	1	0.30	2255	1	0.28
213	1	1.3	2273	4	1.3
341	1	0.28	2300	1+3	0.03+0.16
454	1+3	0.028+0.07	2321	0+2	0.02+0.08
486	1	0.22	2338	3	0.15
541?‡	(0)‡	0.0010‡	2362	1	0.15
661?‡	(0)‡	0.0008‡	2394	1	0.30
717	1+3	0.13+0.15	2421	3[a]	0.43
754	3	0.35	2438	3	0.17
842	1+3	0.04+0.06	2519	(1)‡	
853‡	1‡	0.005‡	2546	1‡	0.026‡
884?‡			2580	1	0.10
974?‡			2628	0+2‡	0.002+0.01‡
1166	1	0.13	2653	(0)‡	
1192‡	1+3‡	0.004+0.09‡	2682	(1+3)‡	0.01+0.03‡
1238	1+3	0.008+0.19	2704	1+3	0.007+0.02
1293	1+3	0.004+0.07	2720	1+3	0.05+0.10
1349	1+3	0.05+0.02	2780	1+3	0.004+0.08
1364	(0+2)		2798	1	0.009
1384?‡	(0)‡		2824	1+3	0.09+0.45
1486			2855	1+3‡	0.03+0.13‡
1510	1	0.053	2873	0+2	0.006+0.03
1560	(3)&	0.14	2922	1+3	0.02+0.03
1614?	(1)		2942		
1674‡	(0)‡		2951	1+3	0.04+0.07
1727	1+3	0.07+0.33	3001	0+2	0.002+0.02
1742	1+3	0.14+0.06	3020	1	0.12
1834	1+3	0.03+0.06	3047	1+3	0.04+0.06
1865	(1)‡		3075	1+3‡	0.02+0.04‡
1878‡	0‡	0.0004‡	3102	0+2+4	
1911?‡	(1)‡		3130	1+3	0.009+0.01
1949	1+3	0.02+0.06	3164	2+4	0.04+0.15
1976	(0)+2+4	?+0.2+1.2	3220	2+4	0.02+0.19
2015	1+3	0.02+0.04	3241	1	0.097
2038	(1+3)‡		3263‡	4+0(+2)‡	0.43+0.002‡
2071	1+3	0.03+0.06	3293	0+2	0.011+0.06
2088	0+2	0.03+0.25	3315		
2116	2+4	0.12+1.5	3345	0‡	0.0007‡
2158	1+3	0.03+0.16	3372	1+3‡	0.02+0.02‡

Continued on next page (footnotes at end of table)

^{55}Mn(d,p) 1971Ga45,1969Co01 (continued)

^{56}Mn Levels (continued)

E(level)[†]	L[#]	C^2S'[@]	Comments
3388			
3416	1+3	0.02+0.18	
3449			
3455[‡]	(0)[‡]	0.0010[‡]	
3466			
3488	(1+3)[‡]		
3500			
3525	1[‡]	0.008	
3544	0+4[‡]	0.001+0.02[‡]	
3584	1+3	0.02+0.13	
3608	(0+4)[‡]		
3627	1(+3)[‡]	0.02[‡]	
3648[‡]	(1)[‡]		
3675			L: L=(2+4) (1969Co01), L=(1) (1971Ga45).
3696	1+3	0.01+0.02	
3721	(1+3)	0.005+0.02	
3750	0+4[‡]	0.004+0.05[‡]	
3766			
3794	1[‡]	0.022	
3812[‡]			
3823	4	0.67	
3838	0+4[‡]	0.002+0.0[‡] *2*	
3862	0+2+4[‡]		
3878			
3902	(0)[‡]		
3928	(1+3)	0.011+0.0 *28*	
3959			
3976	(1)[‡]		
3982	0+2+4[‡]		
3999			
4028	(1)[‡]		
4072	(1+3)	0.008+0.08	
4099			
4118			
4133			
4153	0+4[‡]	0.01+0.13	
4172	(1)[‡]		
4194			
4225	2+4	0.02+0.11	
4238	2+4(+0)[‡]	0.03+0.23[‡]	
4263	(0+4)[‡]		
4283	0+2+4		
4302	0+2+4		
4327			L: L=(0+2+4).
4350	0+2	0.02+0.07	
4374	(1)[‡]		
4403	0+2	0.03+0.13	
4418	(1+3)		
4432			
4457			
4470	0+2	0.02+0.09	

Continued on next page (footnotes at end of table)

^{55}Mn(d,p) 1971Ga45,1969Co01 (continued)

^{56}Mn Levels (continued)

E(level)[†]	L[#]	C^2S'[@]	Comments
4512	1+3[‡]	0.003+0.01[‡]	
4543	0+2(+4)	0.02+0.05	
4565			
4581	0+2[‡]	0.005+0.01[‡]	
4610			
4628	1+3	0.04+0.04	
4643			
4653	2+4	0.07+0.14	
4673			L: L=2+4 (1969Co01), L=1+3 (1971Ga45).
4697			
4712	1+3	0.01+0.05	
4738	1+3	0.02+0.04	
4753			
4767	1+3	0.01+0.05	
4798	1+3	0.04+0.13	
4809			
4819	1+3	0.02+0.03	
4834	2+4	0.004+0.01	
4840	0+2	0.004+0.01	
4863	0+2	0.01+0.04	
4886	0+2	0.008+0.03	
4898			
4918	1+3[‡]	0.03+0.10[‡]	
4927	1+3	0.03+0.13	
4950	2[‡]	0.021[‡]	
4968	1+3	0.04+0.05	
4978			
4989	0+2[‡]	0.01+0.06[‡]	
5013	0+2	0.01+0.03	
5044			L: L=2+4 (1969Co01), L=1 (1971Ga45).
5065			L: L=0+2 (1969Co01), L=1 (1971Ga45).
5072			
5085			
5113	2+4	0.02+0.11	
5130	2+4	0.02+0.16	
5161	(1)[‡]		
5172			
5188	0+2	0.005+0.01	
5208	1[‡]	0.031[‡]	
5223			
5261	2+4	0.05+0.19	
5275			
5297	2+4	0.03+0.19	
5312	2(+0+4)	0.04	L: L=2+4 (1969Co01), L=0+2 (1971Ga45).
5332	1+3	0.01+0.02	
5343	2+4	0.03+0.17	
5364	2+4	0.03+0.13	
5387			
5407	2+4	0.03+0.17	
5416			
5430			
5445	2[‡]	0.061[‡]	
5456			
5471	2+4	0.02+0.09	
5486	2(+0+4)	0.02	L: L=2+4 (1969Co01), L=0+2 (1971Ga45).

Continued on next page (footnotes at end of table)

^{55}Mn(d,p) 1971Ga45,1969Co01 (continued)

^{56}Mn Levels (continued)

E(level)†	L#	C^{2}S′@	E(level)†	L#	C^{2}S′@	E(level)†	L#	C^{2}S′@
5515			5733	(1)‡		5936‡		
5525			5751	(1)‡		5958	2‡	0.33
5551			5765			6266		
5562			5775	0+2‡	0.01+0.02‡	6309		
5595			5797	(1)‡		6367		
5605			5833	0+2‡	0.005+0.02‡	6411		
5642	(0)‡		5861			6464		
5656	(0)‡		5870‡	(1+3)‡		6478		
5683	1‡	0.022‡	5890‡	(1)‡		6512		
5715	1‡	0.021‡	5910‡	2‡	0.024‡	6532		

† Authors do not give uncertainties; however, a comparison with energies in Adopted Levels suggests that the (d,p) values are accurate to better than 5 keV. The evaluators assign ΔE=5 keV to these energies when used adopted as recommended values.
‡ From 1971Ga45.
# Based on σ(E(p),θ) fits with DWBA.
@ From DWBA.
& Other: (0)+2+4 (1971Ga45).
a Other: 0+2+4 (1971Ga45).