^{55}Mn(pol d,t), (d,t) 1981Ca07,1976Ta03

History

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

Additional information 1.
$J^{\pi}(^{55}Mn)=5/2^{-}$.

1981Ca07: polarization≈0.75. Magnetic spectrograph, focal plane detector, measured σ(ET,θ) (25°−65° in 5° steps), vector-analyzing power. Distinguished a favored L(n) value using the vector-analyzing power, fitted mixed J(n) transitions.

1976Ta03: photographic plates, measured σ(ET,θ) (10°−70°, in 5° steps).

^{54}Mn Levels

E(level)[†]	Jπ	L[&]	S[ab]	Comments
0.0	3+	1	0.43 *4*	
54.5 *4*		1	0.32 *1*	
155.7 *6*		1	0.13 *3*	
366.9 *9*		3	0.08 *2*	
406.6 *9*		1	0.13 *2*	
836 *2*		3	0.12 *1*	
1008 *3*		1	0.019 *7*	
1071 *3*		3	1.2 *3*	
1133 *5*		3	0.028 *5*	
1372 *4*		3	0.015[c]	
1388 *3*		3	0.35 *6*	
1452 *4*		1	0.004 *2*	
1507 *4*		3	0.34 *5*	
1542 *4*		1	0.013 *3*	
1632 *5*		3,(1)	0.03[c]	
1648 *10*				E(level): this state probably not populated by direct process.
1679 *4*		3	0.004 *2*	
1785 *10*		1		
1853 *10*		3		
1922 *10*		3		
2050 *10*	2+,4+[‡]	3	0.004	
2113 *10*	1 to 6+[#]	3		
2234 *10*	2+,4+[‡]	1	0.004[c]	
2267 *10*		1,(3)		
2291 *10*				
2320 *10*				
2354 *10*				
2498 *10*				
2566 *10*				
2620 *10*				
2695 *10*				
2815 *10*		3		
2868 *10*				
2910 *10*				
2980 *10*				
3023 *10*		3		
3067 *10*		3		
3080 *10*				
3207 *10*		3		
3240 *10*				
3305 *10*				
3313 *10*				
3422 *10*		3		
3552 *10*		3	0.01	

Continued on next page (footnotes at end of table)

^{55}Mn(pol d,t), (d,t) 1981Ca07,1976Ta03 (continued)

^{54}Mn Levels (continued)

E(level)†	Jπ	L&	E(level)†	E(level)†
3720 *10*	0 to 5+@	3,(1)	4332 *10*	4670 *10*
4100 *10*			4415 *10*	4710 *10*
4160 *10*			4465 *10*	4760 *10*
4210 *10*			4542 *10*	4830 *10*

† E<1700 from 1976Ta03, E>1700 from 1981Ca07.
‡ From (pol d,t) tensor-analyzing powers measurement.
# Analyzing power is best fit by at least some f7/2 strength.
@ Fed by f5/2 transfer.
& Derived from characteristic shape of angular distributions, see 1981Ca07.
a S=C^2S.
b From 1976Ta03, except as noted.
c From 1981Ca07.