^{62}Ni(d,^{3}He) 1984Ma60

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Kazimierz Zuber, Balraj Singh	NDS 125, 1 (2015)	25-Jan-2015

1984Ma60: E=78 MeV. Measured σ(E(^{3}He)), $\sigma(\theta)$ θ(lab)=7.5°−32.8° with magnet spectrometer of QQDDQ system, ΔE-E detectors, FWHM=25 keV. Enriched to 96.64% Ni target. DWBA analysis, shell-model, particle-vibration-model calculations. Summed C^2S: 5.6 for $1f^{-1}_{7/2}$ with centroid at 470 keV, 0.7 for $2p^{-1}_{3/2}$ with centroid at 1200 keV, 1.5 for $2s^{-1}_{1/2}$ with centroid at 2240 keV, 3.6 for $1d^{-1}_{3/2}$ with centroid at 3560 keV.

^{61}Co Levels

E(level)	J^π	L[†]	C^2S[#]	Comments
0	$7/2^-$[‡]	3	4.47	
1028 *5*	$3/2^-$[‡]	1	0.59	
1619 *5*		3	0.44	C^2S: for L+1/2.
1888 *5*		3	0.21,0.12	
1953 *5*		1	0.06,0.05	
2238 *5*		0	1.50	
2313 *5*		1	0.08,0.06	
2354 *5*		3	0.25,0.15	
2448 *5*		3	0.11,0.06	
2499 *5*		(2,3)[@]	0.05,0.03	S=0.04 for $7/2^-$ and 0.08 for $5/2^-$.
2574 *5*		2	1.35,0.90	
2893 *5*		3	0.19,0.11	
3026 *5*		2	0.20,0.14	
3218 *5*		2	0.37,0.25	
3421 *5*		(5)	0.09,0.20	
3491 *5*		3	0.29,0.16	
3599 *5*		(0,3)[&]	0.09	S=0.14 for $7/2^-$ and 0.24 for $5/2^-$.
3800 *5*		3	0.15,0.09	
3889 *5*		2	0.24,0.16	
4002 *5*		(0,3)[&]	0.08	S=0.12 for $7/2^-$ and 0.22 for $5/2^-$.
4159 *5*				
4267 *5*		(0,3)[&]	0.08	S=0.13 for $7/2^-$ and 0.23 for $5/2^-$.
4382 *5*		2	0.33,0.22	
4455 *5*		2	0.37,0.25	
4656 *5*		2	0.41,0.27	
4753 *5*		2	0.23,0.15	
4990 *5*		2	0.12,0.08	
5061 *5*		(2,3)[@]	0.11,0.07	S=0.10 for $7/2^-$ and 0.18 for $5/2^-$.
5150 *5*		(2,3)[&]	0.09,0.06	S=0.07 for $7/2^-$ and 0.13 for $5/2^-$.

[†] From DWBA analysis of $\sigma(\theta)$.
[‡] From Adopted Levels.
[#] From $(d\sigma/d\Omega)exp=[NC^2S/(2J+1)](d\sigma/d\Omega)_{dw}$, N=2.363. When two values are listed, first corresponds to L-1/2 and the second to L+1/2.
[@] $\sigma(\theta)$ is fitted somewhat better with L=2 transfer.
[&] $\sigma(\theta)$ is fitted somewhat better with L=3 transfer.