^{82}Se(pol d,p),(d,p) 1978Mo12,1965Li08

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 125, 201 (2015)	31-Dec-2014

1978Mo12: E(d, pol d)=12.5 MeV. Measured $\sigma(\theta)$, vector-analyzing power using magnetic spectrograph and nuclear emulsions (FWHM=22 keV); DWBA analysis.

1965Li08: E(d)=15 MeV. Measured $\sigma(\theta)$ using a magnetic spectrograph and photographic plates (FWHM=40 keV) for θ=10° to 50°; DWBA analysis.

^{83}Se Levels

E(level)[†]	J$^{\pi}$[#]	L[‡]	(2J+1)C^{2}S[&]	Comments
0	9/2$^+$	4	1.80	dσ/dΩ_{max}=1.06 mb/sr (1965Li08).
229 *3*	1/2$^-$	1	0.11	dσ/dΩ_{max}=1.05 mb/sr (1965Li08).
360[a] *20*	(1/2$^+$)[@]	(0)	0.24	dσ/dΩ_{max}=3.56 mb/sr (1965Li08).
430[a] *20*	3/2$^+$,5/2$^+$[@]	2	0.11	dσ/dΩ_{max}=0.54 mb/sr (1965Li08).
540 *3*	1/2$^+$	0	0.56	
582 *3*	5/2$^+$	2	2.76	dσ/dΩ_{max}=17.7 mb/sr (1965Li08).
822 *3*	3/2$^+$	2	0.05	dσ/dΩ_{max}=0.62 mb/sr (1965Li08).
958 *3*	3/2$^+$	2	0.02	dσ/dΩ_{max}=0.70 mb/sr (1965Li08).
1104 *3*	3/2$^+$	2	0.60	dσ/dΩ_{max}=5.15 mb/sr (1965Li08).
1266 *3*				
1333 *3*	5/2$^+$	2	0.33	dσ/dΩ_{max}=2.38 mb/sr (1965Li08).
1466 *3*	3/2$^+$,5/2$^+$[@]	2[@]	0.12[@]	dσ/dΩ_{max}=0.68 mb/sr (1965Li08).
1587 *3*	3/2$^+$,5/2$^+$	2	0.04	
1668 *3*	5/2$^+$	2	0.38	dσ/dΩ_{max}=1.84 mb/sr (1965Li08).
1916? *20*				E(level): average of 1902 keV (1978Mo12) and 1930 keV (1965Li08).
2080 *3*				
2120 *3*	(5/2$^-$)[@]	(3)[@]	0.42[@]	dσ/dΩ_{max}=0.51 mb/sr (1965Li08).
2140 *3*				
2178 *3*				
2195 *3*	(3/2$^+$,5/2$^+$)[@]	(2)[@]	0.22[@]	dσ/dΩ_{max}=1.20 mb/sr (1965Li08).
2314 *3*	5/2$^+$	2	0.20	
2350?[a] *20*	3/2$^+$,5/2$^+$[@]	2	0.14	E(level): may be identical to the 2314-keV level. dσ/dΩ_{max}=0.79 mb/sr (1965Li08).
2409 *3*				
2483 *3*	5/2$^+$	2	0.47	
2536 *3*	3/2$^+$	2	1.98	
2580?[a] *20*	3/2$^+$,5/2$^+$[@]	2	2.68	E(level): may be identical to the 2536-keV level. dσ/dΩ_{max}=15.7 mb/sr (1965Li08).
2741 *3*	5/2$^+$	2	0.21	
2790?[a] *20*	3/2$^+$,5/2$^+$[@]	2	0.24	E(level): may be identical to the 2741-keV level. dσ/dΩ_{max}=1.46 mb/sr (1965Li08).
2803 *15*				
2860[b] *15*	3/2$^+$,5/2$^+$	2	0.17	dσ/dΩ_{max}=1.82 mb/sr (1965Li08).
2900 *15*				
2978 *15*	(1/2$^-$,3/2$^-$)[@]	(1)[@]	0.27[@]	L,(2J+1)C^{2}S: measured at E=3010 keV by 1965Li08. dσ/dΩ_{max}=3.16 mb/sr (1965Li08).
3023 *15*				
3106[b] *18*				
3211[b] *15*	5/2$^+$	2	0.21	dσ/dΩ_{max}=1.68 mb/sr (1965Li08).
3353[b] *13*	5/2$^+$	2	0.20	dσ/dΩ_{max}=1.04 mb/sr (1965Li08).
3462[b] *13*	5/2$^+$	2	0.35	dσ/dΩ_{max}=2.64 mb/sr (1965Li08).
3610 *15*				

Continued on next page (footnotes at end of table)

^{82}Se(pol d,p),(d,p) 1978Mo12,1965Li08 (continued)

^{83}Se Levels (continued)

E(level)[†]	Jπ[#]	L[‡]	(2J+1)C^{2}S[&]	Comments
3647[b] *12*				
3777 *12*	(1/2$^+$)[@]	(0)[@]	0.17[@]	E(level): weighted average of 3770 keV *15* (1978Mo12) and 3790 keV *20* (1965Li08). dσ/dΩ$_{max}$=1.79 mb/sr (1965Li08).
3800 *15*				
3841 *14*	(1/2$^+$)[@]	(0)[@]	0.28[@]	E(level): weighted average of 3830 keV *15* (1978Mo12) and 3860 keV *20* (1965Li08). dσ/dΩ$_{max}$=3.03 mb/sr (1965Li08).
4020? *20*				
4080[a] *20*	(3/2$^+$,5/2$^+$)[@]	(2)	0.054	dσ/dΩ$_{max}$=0.40 mb/sr (1965Li08).
4180[a] *20*	(3/2$^+$,5/2$^+$)[@]	2	0.066	dσ/dΩ$_{max}$=0.50 mb/sr (1965Li08).
4290? *20*				
4420? *20*				
4520? *20*				
4680? *20*				
4770? *20*				
4950? *20*				

[†] From 1978Mo12 using unpolarized deuterons, except where noted.
[‡] From DWBA of 1978Mo12, except where noted.
[#] From DWBA analysis of angular distribution and vector analyzing power (1978Mo12), except where noted.
[@] From 1965Li08.
[&] (2J+1)C^{2}S from DWBA (1978Mo12), except where noted.
[a] Level seen only by 1965Li08.
[b] Weighted average of 1965Li08 and 1978Mo12.