^{80}Se(p,p′),(pol p,p′) 1986Og01,1986MoZR,1984De01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 105, 223 (2005)	22-Jun-2005

Includes (p,p) and (pol p,p).

Other main references: 1993Mo05, 1983Ma59, 1979Ma28, 1974MuZB.

1986Og01 (also 1983Og02): (p,p′) E=64.8 MeV. Measured $\sigma(\theta)$ (8°−60°), FWHM=20 keV. $\sigma(\theta)$ were compared with DWBA and coupled-channel calculations.

1993Mo05: (pol p,p′) E=22.3 MeV. Measured $\sigma(\theta)$ and analyzing powers for first two 2^+ states, first 3^- and 4^- states. Deduced model parameters and deformation lengths. Coupled-channel calculations.

1986MoZR: (pol p,p′) E=22.3 MeV. Measured $\sigma(\theta)$ and Ay(θ) for first 0^+, 2^+, 4^+ and 3^- states and second 2^+ state.

1984De01: (pol p,p′) E=16 MeV. Measured $\sigma(\theta)$ and Ay(θ) for first 0^+, 2^+, 4^+ and 3^- states.

1983Ma59: (pol p,p′) E=65 MeV. Measured $\sigma(\theta)$ and Ay(θ).

1979Ma28 (also 1979Ma41): (p,p′) E=51.9 MeV. $\sigma(\theta)$ measurements reported for first 2^+ and 3^- levels and analyzed by DWBA and coupled-channel calculations.

1974MuZB: (p,p′) E=9 MeV, FWHM=25-30 keV. $\sigma(\theta)$ data.

Others:

1986Ro10: (p,p) E=3.5-6.0 MeV, deduced model parameters from $\sigma(\theta)$.

1983Ra02: (p,p′) E=1.7, 2.4 MeV. Measured yields.

1970He10 (also 1967DeZX): (p,p′) E=6.4 MeV. Measured $\sigma(\theta)$ and polarization.

1963Da19: (p,p′) E=12 MeV.

1960Ca16: (p,p′) E=7.5 MeV.

^{80}Se Levels

E(level)[†]	J^{π}[#]	L[‡]	β_LR (1986Og01)	Comments
0	0^+			
666 *2*	2^+	2	1.03	β_2=0.193 (deduced by 1988Ba35 from β_2R=1.03 (1986Og01)), 0.21 (1993Mo05) from β_2R=1.041 or 1.062, 0.21 *1* or 0.22 *1* (1986MoZR), 0.228 *15* or 0.230 *15* (1984De01), 0.196 *30* or 0.194 *30* (1983Ma59), 0.210 *5* (1979Ma28), 0.234 (1970He10). Two values correspond to vibrational and rotational model calculations, respectively.
1449 *2*	2^+	2	0.25	β_2=0.047 (deduced by 1988Ba35 from β_2R=0.25 (1986Og01)), 0.087 *20* or 0.065 *5* (1986MoZR).
1478?[&] *3*				
1701 *2*	4^+	4	−0.18	β_4=−0.033 (deduced by 1988Ba35 from β_4R=−0.18 (1986Og01)), β_4R=−0.121 (1993Mo05), −0.025 *10* or −0.051 *9* (1986MoZR), 0.013 (1984De01), −0.026 *8* or −0.034 *10* (1983Ma59). Two values correspond to rotational and vibrational model calculations, respectively.
1871 *2*		2	0.05	
1960 *2*		2	0.05	
2121[@] *3*				
2312[@] *3*				
2342[@] *5*				
2497 *2*		4	0.25	
2512?[&] *3*				
2718 *2*	3^-	3	0.66	β_3=0.163 (deduced by 2002Ki06 from β_3R=0.842 (1993Mo05)), β_3=0.124 (deduced by 1988Ba35 from β_3R=0.66 (1986Og01)), 0.17 *1* (1986MoZR), 0.144 (deduced by 1988Ba35 from β_3R=0.742 (1984De01)) 0.167 (1979Ma28).
2787?[&] *5*				
2819 *2*		(2)		
2946 *2*		(2)		
2998?[&] *5*				
3033 *4*		4	0.22	

Continued on next page (footnotes at end of table)

^{80}Se(p,p′),(pol p,p′) 1986Og01,1986MoZR,1984De01 (continued)

^{80}Se Levels (continued)

E(level)[†]	L[‡]	β_LR (1986Og01)	E(level)[†]	L[‡]	β_LR (1986Og01)	E(level)[†]	L[‡]	β_LR (1986Og01)
3126[@] *3*			3640[@] *5*			4173 *4*	(2)	
3179[@] *3*			3675[@] *5*			4225 *4*		
3201?[&] *5*			3753 *4*	3	0.16	4295 *4*		
3226 *4*	4	0.11	3774?[&] *5*			4322 *4*		
3284 *4*	3	0.20	3826[@] *5*			4352 *4*		
3314?[&] *5*			3845?[&] *10*			4420 *4*	(2)	
3318?[&] *5*			3868 *4*			4442 *4*	5	
3354 *4*	3	0.25	3931 *4*	(2)		4511 *4*	4	0.10
3395[@] *5*			3960 *4*	(2)		4570 *4*		
3445 *4*	2	0.09	3996 *4*	5		4682 *4*	4	0.13
3491[@] *5*			4039 *4*			4950 *4*		
3567[@] *5*			4068?[&] *5*			4993 *4*		
3619 *4*	(2)		4130 *4*	3	0.16	5325 *4*	3	0.11

[†] From 1986Og01, unless otherwise stated.
[‡] From 1986Og01.
[#] From 'Adopted Levels', unless otherwise stated.
[@] From 1974MuZB. This level is not reported by 1986Og01, although, the spectrum shown by the authors shows a weakly populated group near this energy.
[&] From 1974MuZB. The level is considered uncertain (evaluator) since it is most likely unresolved from a nearby level.