

<sup>76</sup>Se(p,d) 1979Ba61,2007ScZX

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Alexandru Negret, Balraj Singh	NDS 114, 841 (2013)	30-Jun-2013

1979Ba61: E=33 MeV. Enriched target; surface-barrier detector telescope; measured  $\sigma(\theta)$  from 15° to 65°; FWHM≈50 keV; uncertainty in cross section is ≈15%. DWBA calculations.

2007ScZX, 2008Sc03: E=23 MeV beam provided by Yale tandem accelerator. Enriched target. Particles detected with Enge spectrograph and gas-filled focal plane detector backed by a scintillator. Measured cross sections. FWHM=40 keV. Spectroscopic factors deduced from analysis of cross section data by DWBA calculations using PTOLEMY code. Uncertainty in cross sections: statistical uncertainty of 1% for strong peaks; systematic uncertainties of 5% in absolute values and 3% in relative values.

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Cross-section data	
Level	$d\sigma/d\Omega$ (2007ScZX) (mb/sr) (11°)
0	0.208
138	0.40
295	8.37
434	0.30
586	0.53
643	0.46
768	0.085
860	0.39
895	0.68
962	1.42
1020	0.60
1245	0.165
1715	0.166
1861	0.39

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<sup>75</sup>Se Levels

E(level) <sup>†</sup>	L <sup>‡</sup>	C <sup>2</sup> S <sup>‡</sup>	Comments
0	2	0.08	
132 10	4	2.72	E(level): small mixture of 112 level.
287 10	1	1.6	E(level): doublet mixed with 293 level. C <sup>2</sup> S: 2.49 (2007ScZX).
427 10	3	1.47	
583 10	1	0.09	C <sup>2</sup> S: 0.174 (2007ScZX).
629 10	2	0.10	
667 10	3	0.6	
776 10	3	0.36	
859 10	1	0.10	C <sup>2</sup> S: 0.129 (2007ScZX).
895 10	1	0.10	C <sup>2</sup> S: 0.25 (2007ScZX).
962 10	1	0.4	C <sup>2</sup> S: 0.53 (2007ScZX).
1050 10	3	0.44	C <sup>2</sup> S: 0.23 (2007ScZX). L: 1 (2007ScZX).
1182 15	3	0.18	
1246 15	1	0.03	C <sup>2</sup> S: 0.067 (2007ScZX).
1369 15	(4)	(0.1)	
1403 15	(3)	(0.15)	
1484 15	3	0.22	
1580 20	(2)	(0.02)	
1673 20	(1)	(0.07)	

Continued on next page (footnotes at end of table)

$^{76}\text{Se}(\text{p,d})$  [1979Ba61](#), [2007ScZX](#) (continued) $^{75}\text{Se}$  Levels (continued)

<u>E(level)<sup>†</sup></u>	<u>L<sup>‡</sup></u>	<u>C<sup>2</sup>S<sup>‡</sup></u>	<u>Comments</u>
1768 20	(3)	(0.17)	
1810 20	1	0.16	
1913 20	(1)	(0.1)	
1980 25			
2037 25	(1+3)	(0.03+0.05)	
2232 25			
2288 25	(1+3)	(0.03+0.04)	
2380 25			
2463 25			
2573 25	1	0.06	
2670 25			
2714 25			
2883 25			
3155 25			
3221 25			
3288 25			
3434 25			
x	1 <sup>#</sup>		E(level): levels above 1861. C <sup>2</sup> S: 0.55 ( <a href="#">2007ScZX</a> ).
y	1 <sup>#</sup>		E(level): analog states. C <sup>2</sup> S: 0.27 ( <a href="#">2007ScZX</a> ).

<sup>†</sup> Authors of [1979Ba61](#) suggested an uncertainty of 10 keV for strong states and up to 25 keV for weaker states at high excitation.

<sup>‡</sup> From [1979Ba61](#), unless otherwise stated.

<sup>#</sup> From [2007ScZX](#).