

⁷⁶Se(t,p) 1987Wa05

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Ameenah R. Farhan, Balraj Singh		NDS 110, 1917 (2009)	30-Jun-2009

1987Wa05 (also 1986Fo01): E=17 MeV. Measured $\sigma(\theta)$, FWHM=19 keV, absolute cross sections accurate to 10%. DWBA analysis.

⁷⁸Se Levels

E(level)	L	Enhancement factor (ϵ) [#]	Comments
0	0	3.23	$d\sigma/d\Omega(\text{max})=2.44$ mb/sr 12.
616 6	2	2.33	$d\sigma/d\Omega(\text{max})=58$ $\mu\text{b/sr}$ 3.
1307 6	2	0.61	$d\sigma/d\Omega(\text{max})=15$ $\mu\text{b/sr}$ 2.
1498 14	‡		$d\sigma/d\Omega(\text{max})=34$ $\mu\text{b/sr}$ 4.
2002 10	2	0.25	$d\sigma/d\Omega(\text{max})=9$ $\mu\text{b/sr}$ 1.
2355 8	0	0.06	$d\sigma/d\Omega(\text{max})=71$ $\mu\text{b/sr}$ 4.
2509 8	3	0.08	$d\sigma/d\Omega(\text{max})=62$ $\mu\text{b/sr}$ 3.
2535 10	2	0.31	$d\sigma/d\Omega(\text{max})=8$ $\mu\text{b/sr}$ 1.
2677 11	4	0.34	$d\sigma/d\Omega(\text{max})=7$ $\mu\text{b/sr}$ 1.
2753 8	0	0.03	$d\sigma/d\Omega(\text{max})=38$ $\mu\text{b/sr}$ 3.
2893 15	5	0.08	$d\sigma/d\Omega(\text{max})=16$ $\mu\text{b/sr}$ 2.
2915 12	4	1.50	$d\sigma/d\Omega(\text{max})=29$ $\mu\text{b/sr}$ 2.
3003 9	3	0.02	$d\sigma/d\Omega(\text{max})=18$ $\mu\text{b/sr}$ 2.
3017 10			$d\sigma/d\Omega(\text{max})=13$ $\mu\text{b/sr}$ 1.
3061 [†] 12	5+0	0.01,0.02	$d\sigma/d\Omega(\text{max})=21$ $\mu\text{b/sr}$ 2.
3088 [†] 12	0+4	0.04,0.20	$d\sigma/d\Omega(\text{max})=52$ $\mu\text{b/sr}$ 3.
3138 12	3	<0.01	$d\sigma/d\Omega(\text{max})=5$ $\mu\text{b/sr}$ 1.
3182 11	2	0.48	$d\sigma/d\Omega(\text{max})=11$ $\mu\text{b/sr}$ 1.
3288 9	1	0.03	$d\sigma/d\Omega(\text{max})=320$ $\mu\text{b/sr}$ 2.
3295 10	4	0.45	$d\sigma/d\Omega(\text{max})=8$ $\mu\text{b/sr}$ 1.
3329 10			
3391 [†] 8	5+2	0.03,0.22	$d\sigma/d\Omega(\text{max})=10$ $\mu\text{b/sr}$ 1.
3411 10	(4)	0.03	$d\sigma/d\Omega(\text{max})=9$ $\mu\text{b/sr}$ 1.
3457 9	0	0.07	$d\sigma/d\Omega(\text{max})=86$ $\mu\text{b/sr}$ 4.
3527 14	1	0.07	$d\sigma/d\Omega(\text{max})=134$ $\mu\text{b/sr}$ 7.
3548 15			
3598 9	1	0.05	$d\sigma/d\Omega(\text{max})=54$ $\mu\text{b/sr}$ 3.
3627 9	2	0.82	$d\sigma/d\Omega(\text{max})=25$ $\mu\text{b/sr}$ 2.
3689 9	3	0.03	$d\sigma/d\Omega(\text{max})=22$ $\mu\text{b/sr}$ 2.
3754 15			$d\sigma/d\Omega(\text{max})=7$ $\mu\text{b/sr}$ 1.
3776 8	3	0.04	$d\sigma/d\Omega(\text{max})=34$ $\mu\text{b/sr}$ 2.
3899 10	2	0.56	$d\sigma/d\Omega(\text{max})=12$ $\mu\text{b/sr}$ 1.
3933 9	2	0.29	$d\sigma/d\Omega(\text{max})=9$ $\mu\text{b/sr}$ 1.
3993 9	1	0.01	$d\sigma/d\Omega(\text{max})=11$ $\mu\text{b/sr}$ 1.
4038 [†] 10	1+3	0.03,0.01	$d\sigma/d\Omega(\text{max})=34$ $\mu\text{b/sr}$ 2.
4106 12	1	0.05	$d\sigma/d\Omega(\text{max})=55$ $\mu\text{b/sr}$ 3.
4132 9	4	0.82	$d\sigma/d\Omega(\text{max})=15$ $\mu\text{b/sr}$ 2.
4146 9			$d\sigma/d\Omega(\text{max})=5$ $\mu\text{b/sr}$ 1.
4181 10	0	0.04	$d\sigma/d\Omega(\text{max})=45$ $\mu\text{b/sr}$ 3.
4224 10	3	0.02	$d\sigma/d\Omega(\text{max})=13$ $\mu\text{b/sr}$ 1.
4254 [†] 10	5+2	0.06,2.24	$d\sigma/d\Omega(\text{max})=63$ $\mu\text{b/sr}$ 3.
4265 10	0	0.10	$d\sigma/d\Omega(\text{max})=111$ $\mu\text{b/sr}$ 2.
4296 11	2	1.42	$d\sigma/d\Omega(\text{max})=36$ $\mu\text{b/sr}$ 2.
4345 11	3	0.02	$d\sigma/d\Omega(\text{max})=133$ $\mu\text{b/sr}$ 1.
4369 [†] 11	3+1	0.02,0.01	$d\sigma/d\Omega(\text{max})=23$ $\mu\text{b/sr}$ 2.
4409 11	2	1.42	$d\sigma/d\Omega(\text{max})=38$ $\mu\text{b/sr}$ 2.

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$^{76}\text{Se}(\text{t,p})$ 1987Wa05 (continued) ^{78}Se Levels (continued)

E(level)	L	Enhancement factor (ϵ) [#]	Comments
4451 [†] 11	0+3	0.03,0.02	$d\sigma/d\Omega(\text{max})=39 \mu\text{b/sr } 3.$
4483 11	4	0.49	$d\sigma/d\Omega(\text{max})=11 \mu\text{b/sr } 1.$
4509 11	2	0.83	$d\sigma/d\Omega(\text{max})=20 \mu\text{b/sr } 2.$
4569 [†] 11	0+4	0.07,0.30	$d\sigma/d\Omega(\text{max})=81 \mu\text{b/sr } 4.$
4591 11	(3)	0.01	$d\sigma/d\Omega(\text{max})=7 \mu\text{b/sr } 1.$
4616 11	4	0.58	$d\sigma/d\Omega(\text{max})=13 \mu\text{b/sr } 1.$
4639 11	3	0.01	$d\sigma/d\Omega(\text{max})=13 \mu\text{b/sr } 1.$
4692 11	2	1.56	$d\sigma/d\Omega(\text{max})=36 \mu\text{b/sr } 2.$
4728 11	2	1.67	$d\sigma/d\Omega(\text{max})=47 \mu\text{b/sr } 2.$
4758 [†] 11	4+1	0.63,0.01	$d\sigma/d\Omega(\text{max})=14 \mu\text{b/sr } 1.$
4791 11	0	0.10	$d\sigma/d\Omega(\text{max})=114 \mu\text{b/sr } 6.$
4815 11	2	0.10	$d\sigma/d\Omega(\text{max})=12 \mu\text{b/sr } 2.$
4857 11	1	0.04	$d\sigma/d\Omega(\text{max})=36 \mu\text{b/sr } 2.$
4879 11	3	0.03	$d\sigma/d\Omega(\text{max})=25 \mu\text{b/sr } 2.$
4904 10	2	0.85	$d\sigma/d\Omega(\text{max})=22 \mu\text{b/sr } 2.$
4944 11	2	0.85	$d\sigma/d\Omega(\text{max})=21 \mu\text{b/sr } 2.$
4980 11	1	0.05	$d\sigma/d\Omega(\text{max})=58 \mu\text{b/sr } 2.$
5034 11	2	1.68	$d\sigma/d\Omega(\text{max})=51 \mu\text{b/sr } 3.$
5055 12			
5081 12			
5102 15			
5136 15			
5169 15			
5186 15			
5205 15			
5235 15			
5247 15			
5293 15			
5391 15			
5422 15			
5580 15			
5709 15			
5837 15			
6161 15			

[†] Mixed L-transfer indicates a doublet.

[‡] Yield is consistent with L=0 for a weakly excited level.

[#] Enhancement factor (ϵ)= $d\sigma/d\Omega(\text{exp})(\theta)/[(230)(d\sigma/d\Omega(L)(\text{DWUCK4}))]$.