

$^{77}\text{Se}$        $Z = 34$        $N = 43$       [link to full NNDC output](#)

Based on ENSDF from Dec 2018, and mass evaluation from 2016

BE = 669.491 ( 0.000) MeV

	Energy T	J+	J-	J-other	T1/2
77SE 1			0.000	1/2-	1 STABLE
77SE 2	0.162	7/2+			2 17.36 S 5
77SE 3	0.175	9/2+			3
77SE 4			0.239	3/2-	4 18 PS 4
77SE 5			0.250	5/2-	5 9.68 NS 6
77SE 6	0.301	5/2+			6
77SE 7			0.439	5/2-	7 23.0 PS 13
77SE 8			0.521	3/2-	8 4 PS 2
77SE 9			0.581	7/2-	9 34 PS 6
77SE 10	0.680	5/2+			10
77SE 11				0.796 7/2(+)	11 0.62 PS +21-17
77SE 12			0.808 7/2-		12 0.31 PS +14-7
77SE 13			0.818 1/2-		13
77SE 14				0.824 (5/2)-	14 0.45 PS +21-14
77SE 15				0.912 (3/2)+	15
77SE 16	0.947	1/2+			16
77SE 17				0.970 (11/2+)	17 0.62 PS 21
77SE 18			0.978 9/2-		18 0.69 PS +35-21
77SE 19				0.999	19
77SE 20			1.005 3/2-		20 0.14 PS +28-7
77SE 21				1.024 (13/2+)	21 0.35 PS +14-10
77SE 22				1.051	22
77SE 23				1.089	23
77SE 24				1.127 (11/2+)	24 0.76 PS +35-21
77SE 25	1.128	1/2+			25
77SE 26				1.132	26
77SE 27			1.172 9/2-		27 0.38 PS +14-10
77SE 28				1.179 (5/2,7/2,9/2-)	28 0.90 PS +28-14
77SE 29				1.187 (3/2)	29
77SE 30				1.193 (9/2+)	30 1.18 PS 21
77SE 31				1.231 (5/2)-	31 0.21 PS GT
77SE 32	1.253	5/2+			32 0.62 PS +28-14
77SE 33				1.283 (7/2-)	33
77SE 34				1.352 (11/2-)	34 0.49 PS +21-10
77SE 35				1.364 (3/2-,5/2+)	35 0.49 PS GT
77SE 36				1.402 (3/2-)	36
77SE 37				1.412 (3/2-)	37
77SE 38	1.439	3/2+			38

77SE 39						1.488	(3/2)-	39
77SE 40						1.511	(3/2)	40
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77SE 41						1.529	5/2-,7/2-	41
77SE 42						1.608	3/2+,5/2+	42 0.42 PS GT
77SE 43						1.617	(11/2-)	43
77SE 44						1.620	(11/2+)	44
77SE 45						1.623	(1/2-)	45 0.14 PS +14-7
77SE 46						1.715	1/2-,3/2-	46
77SE 47						1.722	(13/2+)	47
77SE 48				1.818	1/2-			48 0.055 PS +28-21
77SE 49						1.831	(1/2-,3/2)	49
77SE 50				1.887	13/2-			50 0.49 PS +21-14
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77SE 51						1.889		51
77SE 52						1.916	(1/2+,3/2)	52
77SE 53						1.999		53 0.31 PS +10-7
77SE 54						2.055	(15/2+)	54 0.24 PS 7
77SE 55		2.057	5/2+					55
77SE 56						2.092	(13/2-)	56 0.69 PS 14
77SE 57						2.103	(17/2+)	57 0.35 PS +14-7
77SE 58						2.143	(1/2,3/2,5/2-)	58
77SE 59		2.157	5/2+					59
77SE 60						2.212	1/2-,3/2-	60
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77SE 61						2.240	(15/2+)	61 0.97 PS 35
77SE 62						2.249	3/2+,5/2+	62
77SE 63						2.264	(15/2-)	63 0.42 PS +17-10
77SE 64						2.264	(3/2-)	64
77SE 65						2.320	(1/2+,3/2,5/2+)	65
77SE 66						2.340	(3/2-,5/2+)	66
77SE 67						2.375	(3/2+,5/2+)	67
77SE 68				2.393	3/2-			68 0.10 PS +6-3
77SE 69						2.455	(1/2+,3/2,5/2+)	69
77SE 70						2.492	(3/2+)	70
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77SE 71						2.552	(3/2-)	71
77SE 72						2.554	(1/2,3/2,5/2+)	72
77SE 73						2.580	(15/2+)	73
77SE 74						2.584	(3/2+,5/2+)	74
77SE 75						2.611	(15/2-)	75
77SE 76						2.641	(3/2+,5/2+)	76
77SE 77						2.716	(3/2)	77
77SE 78						2.777	(1/2-,3/2)	78
77SE 79						2.790	(17/2+)	79
77SE 80						2.809	(1/2,3/2)	80
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77SE 81						2.815	(1/2-,3/2,5/2+)	81
77SE 82						2.818	(15/2-)	82
77SE 83						2.853	(1/2-,3/2-)	83

77SE 84			2.864	(17/2-)	84	0.42 PS +14-7
77SE 85			2.869	(15/2-)	85	
77SE 86			2.873	(3/2)	86	
77SE 87			2.892	(3/2-)	87	0.049 PS +21-14
77SE 88			2.950	3/2+,5/2+	88	
77SE 89			2.967	(17/2-)	89	
77SE 90			2.983	(1/2,3/2)	90	
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77SE 91			2.994	(1/2,3/2,5/2+)	91	
77SE 92			3.015	(17/2-)	92	
77SE 93			3.040	(3/2-,5/2+)	93	
77SE 94			3.051	(1/2+,3/2,5/2+)	94	
77SE 95			3.064	(3/2,5/2+)	95	
77SE 96			3.072	(17/2-)	96	
77SE 97			3.107		97	
77SE 98			3.132	(1/2,3/2,5/2+)	98	
77SE 99			3.148	(17/2-)	99	
77SE 100			3.168	(3/2+,5/2+)	100	
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77SE 101			3.192	(1/2+,3/2,5/2+)	101	
77SE 102			3.201	(17/2-)	102	
77SE 103			3.233	(1/2,3/2)	103	
77SE 104			3.244	(1/2-,3/2,5/2+)	104	
77SE 105			3.246	(19/2+)	105	
77SE 106			3.265	(19/2-)	106	
77SE 107			3.268	(3/2+,5/2+)	107	
77SE 108			3.313	(1/2,3/2)	108	
77SE 109			3.327	(3/2-,5/2+)	109	
77SE 110			3.334	(21/2+)	110	0.28 PS +14-7
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77SE 111			3.349	(1/2,3/2)	111	
77SE 112			3.354	(1/2,3/2)	112	
77SE 113			3.362	(1/2-,3/2,5/2+)	113	
77SE 114			3.396	(1/2,3/2,5/2+)	114	
77SE 115			3.404	(19/2-)	115	
77SE 116			3.410	(19/2+)	116	
77SE 117			3.412	(1/2,3/2)	117	
77SE 118			3.415	(1/2,3/2)	118	
77SE 119			3.440	(19/2-)	119	
77SE 120			3.450	(3/2+,5/2+)	120	
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77SE 121			3.472	(19/2-)	121	
77SE 122			3.473	(1/2,3/2,5/2+)	122	
77SE 123			3.481	(1/2,3/2,5/2+)	123	
77SE 124			3.518	(3/2+)	124	
77SE 125			3.546	(3/2+,5/2+)	125	
77SE 126			3.552	(3/2-)	126	
77SE 127			3.561	(1/2,3/2,5/2+)	127	
77SE 128			3.641	(19/2-)	128	
77SE 129			3.642	(5/2+)	129	

77SE 130				3.694	(3/2+,5/2+)	130	
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77SE 131				3.718	(1/2-,3/2,5/2+)	131	
77SE 132				3.765	(21/2-)	132	
77SE 133				3.772	(5/2+)	133	
77SE 134				3.798	(3/2+,5/2+)	134	
77SE 135				3.827	(1/2,3/2,5/2+)	135	
77SE 136				3.865	(21/2+)	136	
77SE 137				3.869	(5/2+)	137	
77SE 138				3.880	(21/2-)	138	
77SE 139				3.885	(21/2+)	139	
77SE 140				3.935	(3/2-,5/2+)	140	
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77SE 141				3.989	(21/2-)	141	
77SE 142				4.068	(5/2+)	142	
77SE 143				4.180	(23/2+)	143	
77SE 144				4.212	(1/2,3/2,5/2+)	144	
77SE 145				4.244		145	
77SE 146				4.289	(1/2,3/2)	146	
77SE 147				4.302	(23/2-)	147	
77SE 148				4.321	(23/2-)	148	
77SE 149				4.340	(3/2+,5/2+)	149	
77SE 150				4.392	(23/2-)	150	
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77SE 151				4.430	(3/2+,5/2+)	151	
77SE 152				4.532	(23/2+)	152	
77SE 153				4.626	(25/2+)	153	0.21 PS +14-7
77SE 154				4.640		154	
77SE 155				4.670	(23/2+)	155	
77SE 156				4.750		156	
77SE 157				4.847	(25/2-)	157	
77SE 158				4.862	(25/2+)	158	
77SE 159				5.001	(25/2-)	159	
77SE 160				5.259	(27/2+)	160	
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77SE 161				5.584	(27/2-)	161	
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S-alpha=	5.727	(	0.000)				
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77SE 162				5.941	(29/2+)	162	
77SE 163				6.655	(31/2+)	163	
77SE 164	7.419	1/2+				164	
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S-n	=	7.419	(	0.000)			
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77SE 165	7.419	1/2+				165	
77SE 166	7.420	1/2+				166	
77SE 167				7.420	1/2-,3/2-	167	
77SE 168				7.420	1/2-,3/2-	168	
77SE 169				7.420	1/2-,3/2-	169	
77SE 170				7.420	1/2-,3/2-	170	
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77SE 171				7.420	1/2-,3/2-	171	
77SE 172				7.421		172	

77SE 173		7.421	1/2+				173
77SE 174					7.422	1/2-, 3/2-	174
77SE 175		7.422	1/2+				175
77SE 176					7.423		176
77SE 177		7.423	1/2+				177
77SE 178					7.424		178
77SE 179		7.424	1/2+				179
77SE 180		7.425	1/2+				180
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77SE 181		7.426	1/2+				181
77SE 182		7.427	1/2+				182
77SE 183		7.429	1/2+				183
77SE 184		7.430	1/2+				184
77SE 185		7.432	1/2+				185

S-p = 9.597 ( 0.001)-----  
S-n = 7.419 ( 0.000)-----  
S-2p = 17.320 ( 0.000)-----  
S-2n = 18.573 ( 0.000)-----  
S-alpha= 5.727 ( 0.000)-----

S+p = -6.142 ( 0.004)  
S+n = -10.498 ( 0.000)  
S+2p = -14.421 ( 0.003)  
S+2n = -17.461 ( 0.000)  
S+alpha = -5.522 ( 0.001)

gap p = 3.456 ( 0.004)  
gap n = -3.079 ( 0.000)  
gap 2p = 2.900 ( 0.003)  
gap 2n = 1.112 ( 0.000)  
gap alpha = 0.205 ( 0.001)