

^{117}Sn $Z = 50$ $N = 67$ adopted link ENSDF link

Based on ENSDF from Oct 2022, and mass evaluation from 2020

BE = 995.625 (0.000) MeV

	Energy T	J+	J-	J-other	T1/2
117SN 1	0.000	1/2+			1 STABLE
117SN 2	0.159	3/2+			2 0.279 NS 9
117SN 3			0.315 11/2-		3 14.00 D 5
117SN 4				0.360	4
117SN 5				0.678	5
117SN 6	0.712	7/2+			6 980 PS 30
117SN 7	1.005	3/2+			7 1.32 PS 6
117SN 8	1.020	5/2+			8 0.46 PS 4
117SN 9	1.180	5/2+			9 0.4 PS LT
117SN 10				1.304 (7/2-)	10
117SN 11				1.340 +	11
117SN 12	1.446	5/2+			12 0.42 PS 3
117SN 13				1.469 3/2+,5/2+	13
117SN 14				1.497 (5/2+,3/2+)	14
117SN 15				1.510	15 0.0025 EV 3
117SN 16				1.530 3/2+,5/2+	16
117SN 17				1.578 (3/2+)	17
117SN 18				1.588 (11/2-)	18
117SN 19				1.589 (3/2+,5/2+)	19
117SN 20				1.593 (15/2-)	20
117SN 21				1.625 (13/2-)	21
117SN 22				1.628 (7/2+,9/2+)	22
117SN 23				1.668 (5/2+,3/2+)	23
117SN 24				1.710 3/2+,5/2+	24
117SN 25				1.770 3/2+,5/2+	25
117SN 26				1.810	26
117SN 27				1.875 (11/2+)	27
117SN 28				1.910	28
117SN 29				1.948	29
117SN 30				2.007 (1/2-,3/2-)	30
117SN 31				2.046 (5/2-,7/2-)	31
117SN 32				2.048 1/2,(3/2)	32 0.0068 EV 5
117SN 33				2.050 7/2+,9/2+	33
117SN 34				2.076 (1/2-,3/2-)	34
117SN 35	2.079	1/2+			35
117SN 36				2.129	36 0.00124 EV25
117SN 37				2.146 3/2+,5/2+	37
117SN 38				2.160 5/2-,7/2-	38

117SN 39				2.203		39
117SN 40				2.220	+	40

117SN 41				2.256		41
117SN 42				2.280	5/2-, 7/2-	42
117SN 43				2.280		43 0.00061 EV22
117SN 44				2.300	3/2+, 5/2+	44
117SN 45				2.305		45 0.00101 EV25
117SN 46				2.331		46
117SN 47				2.350	9/2-, 11/2-	47
117SN 48				2.367	3/2	48 0.0115 EV 8
117SN 49				2.381	(17/2-)	49
117SN 50				2.390	(1/2-, 3/2-)	50

117SN 51		2.400	1/2+			51
117SN 52				2.401	(17/2-)	52
117SN 53				2.406	(19/2+)	53 1.75 US 7
117SN 54				2.416		54 0.0028 EV 4
117SN 55				2.461	(5/2-, 7/2-)	55
117SN 56				2.500	7/2+, 9/2+	56
117SN 57				2.516		57 0.0012 EV 3
117SN 58				2.545	(5/2-, 7/2-)	58
117SN 59				2.590		59 0.0018 EV 4
117SN 60				2.655	(1/2, 3/2)	60

117SN 61				2.656	(5/2-, 7/2-)	61
117SN 62				2.660	3/2+, 5/2+	62
117SN 63				2.690	1/2-, 3/2-	63
117SN 64				2.709		64 0.0028 EV 4
117SN 65				2.718		65 0.0033 EV 8
117SN 66				2.750		66
117SN 67				2.770	(3/2+, 5/2+)	67
117SN 68				2.775		68 0.0020 EV 4
117SN 69				2.808	(19/2-)	69
117SN 70				2.827	3/2+, 5/2+	70

117SN 71				2.864		71 0.0012 EV 4
117SN 72				2.880		72 0.0013 EV 4
117SN 73				2.908	(1/2-, 3/2-)	73 0.0047 EV 6
117SN 74				2.940		74
117SN 75				2.962		75 0.0061 EV 6
117SN 76				2.976		76
117SN 77				2.987	1/2, (3/2)	77 0.0169 EV 20
117SN 78				2.991		78
117SN 79				2.996	3/2	79 0.0128 EV 10
117SN 80				2.998		80

117SN 81				3.024		81
117SN 82				3.040		82
117SN 83				3.101		83 0.0019 EV 4

117SN 84			3.108		84	0.0021	EV 4
117SN 85			3.113	(3/2+,5/2+)	85		
117SN 86			3.134		86	0.0025	EV 4
117SN 87			3.140		87		
117SN 88			3.145		88	0.0029	EV 5
117SN 89			3.153		89		
117SN 90			3.169	3/2	90	0.0088	EV 8

117SN 91			3.172		91		
117SN 92			3.225	1/2,(3/2)	92	0.0155	EV 15
117SN 93			3.228	3/2	93	0.0347	EV 25
117SN 94			3.235	(5/2-,7/2-)	94		
117SN 95			3.286	1/2,(3/2)	95	0.0101	EV 10
117SN 96			3.325	(1/2-,3/2-)	96		
117SN 97			3.350	1/2,(3/2)	97	0.0095	EV 9
117SN 98			3.360		98	0.0016	EV 6
117SN 99			3.385		99	0.0042	EV 6
117SN 100			3.408		100	0.0016	EV 6

117SN 101			3.414		101		
117SN 102			3.426		102	0.0018	EV 8
117SN 103			3.469	(1/2-,3/2-)	103	0.0015	EV 5
117SN 104			3.490	3/2	104	0.0173	EV 15
117SN 105			3.506		105		
117SN 106			3.520		106	0.0017	EV 6
117SN 107			3.560		107	0.0018	EV 5
117SN 108			3.580		108		
117SN 109			3.602	(23/2-)	109		
117SN 110			3.637	(1/2-,3/2-)	110		

117SN 111			3.716	7/2+,9/2+	111		
117SN 112			3.720		112	0.0114	EV 16
117SN 113			3.749		113	0.0076	EV 12
117SN 114			3.773		114	0.0034	EV 14

S-alpha=	3.779	(0.001)					
117SN 115			3.785	(5/2-,7/2-)	115		
117SN 116			3.788		116	0.0059	EV 13
117SN 117			3.824	(27/2-)	117		
117SN 118			3.871	1/2,(3/2)	118	0.0197	EV 26
117SN 119			3.883		119	0.0141	EV 21
117SN 120			3.893		120		

117SN 121			3.900		121	0.0043	EV 12
117SN 122			3.920		122	0.0058	EV 16
117SN 123			3.930		123	0.0045	EV 12
117SN 124			3.950		124	0.013	EV 6
117SN 125			3.981		125	0.014	EV 3
117SN 126			3.994		126	0.0072	EV 19
117SN 127			4.014		127	0.011	EV 3
117SN 128			4.028		128	0.028	EV 5

117SN 129				4.044		129	0.017 EV	5
117SN 130				4.110		130		

117SN 131				4.160		131		
117SN 132				4.210		132		
117SN 133				4.290		133		
117SN 134				4.360		134		
117SN 135				4.970	(1/2-, 3/2-)	135		
117SN 136				5.050		136		
117SN 137				5.300	7/2+, 9/2+	137		
117SN 138				6.400	7/2+, 9/2+	138		
117SN 139		6.943		1/2+		139		
S-n	=	6.943	(0.000)				

117SN 140				7.010		140		

S-p = 9.437 (0.001)-----
 S-n = 6.943 (0.000)-----
 S-2p = 16.891 (0.001)-----
 S-2n = 16.507 (0.000)-----
 S-alpha= 3.779 (0.001)-----

S+p = -4.887 (0.003)
 S+n = -9.326 (0.001)
 S+2p = -11.363 (0.007)
 S+2n = -15.810 (0.001)
 S+alpha = -0.570 (0.026)

gap p = 4.549 (0.003)
 gap n = -2.383 (0.001)
 gap 2p = 5.529 (0.007)
 gap 2n = 0.697 (0.001)
 gap alpha = 3.209 (0.026)