

^{124}Sn $Z = 50$ $N = 74$ adopted link ENSDF link

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

BE = 1049.958 (0.001) MeV

	Energy T	J+	J-	J-other	T1/2
124SN 1	0.000	0+			1 STABLE
124SN 2	1.132	2+			2 0.92 PS 3
124SN 3	2.102	4+			3 3.7 PS 4
124SN 4	2.130	2+			4 0.8 PS +5-2
124SN 5	2.192	0+			5 0.55 PS GT
124SN 6				2.205 (5-)	6 0.27 US 6
124SN 7	2.222	4+			7 0.9 PS +9-3
124SN 8				2.325 (7-)	8 3.1 US 5
124SN 9				2.366	9
124SN 10	2.426	2+			10 0.35 PS +20-10
124SN 11				2.448 (8+)	11
124SN 12	2.454	6+			12
124SN 13			2.568 6-		13
124SN 14				2.578 8(+)	14
124SN 15			2.602 3-		15 0.068 PS 6
124SN 16			2.614 4-		16
124SN 17				2.657 (10+)	17 45 US 5
124SN 18	2.688	0+			18 0.28 PS GT
124SN 19			2.702 5-		19
124SN 20	2.703	2+			20 0.4 PS +4-1
124SN 21				2.706 (4+)	21
124SN 22			2.753 4-		22
124SN 23				2.819 (6+)	23 0.4 PS GT
124SN 24	2.837	3+			24 0.28 PS GT
124SN 25			2.855 6-		25
124SN 26	2.875	2+			26 0.13 PS +7-3
124SN 27	2.879	2+			27 0.067 PS +18-14
124SN 28	2.958	4+			28 0.9 PS GT
124SN 29			2.988 3-		29 0.55 PS GT
124SN 30				3.011 (7,8,9)	30
124SN 31				3.109 1,2+	31
124SN 32				3.130 (3-,5-)	32
124SN 33	3.144	4+			33 0.11 PS +9-4
124SN 34	3.214	2+			34 0.025 PS 6
124SN 35				3.228	35 0.07 PS +23-3
124SN 36				3.240 (7,8,9)	36
124SN 37	3.264	2+			37 0.19 PS +22-8
124SN 38				3.267 1,2,3	38 0.14 PS GT

124SN 39						3.293	2,3	39
124SN 40						3.313	2,3,4	40

124SN 41						3.330	2,3	41 0.07 PS +9-3
124SN 42						3.334	2(+)	42
124SN 43						3.346	(3,4)	43
124SN 44		3.360	4+					44
124SN 45						3.362	(7,8,9)	45
124SN 46						3.364	3(+)	46
124SN 47						3.397	1,2+	47
124SN 48						3.410	1	48
124SN 49		3.414	4+					49
124SN 50				3.490	1-			50 0.0051 PS 5

124SN 51						3.499	1,2,3	51
124SN 52						3.509	3(+)	52
124SN 53						3.524	(7-,8-)	53
124SN 54						3.552	(3-)	54
124SN 55		3.584	2+					55
124SN 56						3.604	2,3	56
124SN 57						3.643	(7,8,9)	57
124SN 58						3.655	2,3	58
124SN 59						3.685	(7-)	59
124SN 60						3.697	1	60 0.029 PS +13-10

124SN 61		3.710	2+					61 0.030 PS +28-15
124SN 62						3.725	1,2+	62
124SN 63						3.742	(2)+	63
124SN 64						3.760	(0+,1,2)	64
124SN 65		3.762	2+					65 0.05 PS +7-3
124SN 66						3.765	(7-,8-,9-)	66
124SN 67						3.787		67
124SN 68						3.803	2,3	68
124SN 69						3.810	(7,8,9)	69
124SN 70						3.820	(3-,5-)	70

124SN 71						3.831	2,3,4	71
124SN 72						3.834	1,2+	72
124SN 73						3.864	1,2+	73
124SN 74						3.872	(6+)	74
124SN 75						3.888	1,2+	75
124SN 76		3.911	2+					76
124SN 77		3.917	2+					77
124SN 78		3.923	4+					78
124SN 79						3.931	(7,8,9)	79
124SN 80						3.964	1,2	80

124SN 81						4.044	1,2+	81
124SN 82						4.074	2	82
124SN 83						4.094	2,3	83

124SN 84						4.120				84
124SN 85		4.156		2+						85
124SN 86						4.208		2,3		86
124SN 87						4.219		1		87 13.1 FS 14
124SN 88						4.228		1,2+		88
124SN 89						4.264		1		89 23 FS 4
124SN 90						4.264		1,2+		90

124SN 91						4.270		(4)		91
124SN 92						4.331		1,2+		92
124SN 93		4.360		0+ TO 4+						93
124SN 94						4.400				94
124SN 95						4.470		1,2+		95
124SN 96						4.529		1,2+		96
124SN 97						4.560				97
124SN 98						4.570				98
124SN 99						4.605		1,2+		99
124SN 100						4.606				100 10.1 FS 25

124SN 101						4.620		(4+)		101
124SN 102						4.620		(3-,4-,5-)		102
124SN 103				4.672		3-				103
124SN 104				4.707		3-				104
124SN 105						4.770		(3-,4-)		105
124SN 106						4.818		(5-)		106
124SN 107				4.880		3-				107
124SN 108				4.916		3-				108
124SN 109						4.948		(5-)		109
124SN 110						4.954		1		110 14 FS 3

124SN 111						4.970		(2+,3-)		111
124SN 112				5.014		3-				112
124SN 113						5.050				113
124SN 114						5.065				114 7.0 FS 15
124SN 115						5.100				115
124SN 116						5.131		(4+)		116
124SN 117				5.166		3-				117
124SN 118				5.196		3-				118
124SN 119						5.267		(7-)		119
124SN 120						5.290				120

124SN 121						5.313		(5-)		121
124SN 122						5.345		(5-)		122
124SN 123						5.379		(5-)		123
124SN 124						5.430		(5-)		124
124SN 125						5.459		(5-)		125
124SN 126						5.520				126
124SN 127						5.552				127
124SN 128						5.614				128
124SN 129						5.640				129

124SN 130				5.710		130		

124SN 131				5.760		131		
124SN 132				5.800		132		
124SN 133		5.843	1-			133	1.02 FS	8
124SN 134				5.866		134		
124SN 135				5.870	(1)	135	5.1 FS	10
124SN 136				5.903	1	136	5.4 FS	20
124SN 137				5.952	1	137	1.38 FS	19
124SN 138				5.969	1	138	2.2 FS	4
124SN 139				6.002	1	139	1.7 FS	3
124SN 140				6.129	1	140	0.82 FS	9

124SN 141				6.171	1	141	1.04 FS	10
124SN 142		6.184	1-			142	0.94 FS	11
124SN 143				6.237	1	143	0.64 FS	6
124SN 144				6.287	1	144	1.52 FS	24
124SN 145		6.322	1-			145	0.70 FS	6
124SN 146		6.369	1-			146	0.277 FS	16
124SN 147				6.453	1	147	1.30 FS	16
124SN 148				6.468	1	148	0.95 FS	9
124SN 149				6.503	1	149	1.26 FS	20
124SN 150		6.524	1-			150	0.56 FS	6

124SN 151				6.549	1	151	0.65 FS	7
124SN 152		6.561	1-			152	0.35 FS	3
124SN 153				6.566	1	153	0.85 FS	11
124SN 154		6.584	1-			154	0.75 FS	8
124SN 155				6.600	1	155	1.4 FS	3
124SN 156		6.636	1-			156	0.39 FS	3
124SN 157		6.678	1-			157	0.42 FS	3
124SN 158		6.683	1-			158	0.71 FS	9

S-alpha=	6.699	(0.004)						

124SN 159		6.706	1-			159	0.97 FS	14
124SN 160		6.714	1-			160	0.52 FS	5

124SN 161				6.722	1	161	0.66 FS	7
124SN 162		6.764	1-			162	0.58 FS	7
124SN 163				6.776	1	163	0.84 FS	15
124SN 164		6.791	1-			164	0.71 FS	8
124SN 165				6.808	1(+)	165	1.08 FS	14
124SN 166		6.847	1-			166	0.90 FS	10
124SN 167		6.902	1-			167	1.13 FS	14
124SN 168				6.928	(1)	168	1.4 FS	4
124SN 169				6.939	1	169	1.6 FS	3
124SN 170				6.948	1	170	1.6 FS	3

124SN 171				7.018	1	171	1.07 FS	13
124SN 172		7.033	1-			172	0.97 FS	11
124SN 173				7.062	1	173	2.6 FS	6

124SN 174				7.071	1	174	1.31 FS	18
124SN 175				7.087	1	175	1.46 FS	25
124SN 176				7.126	1	176	1.22 FS	17
124SN 177				7.234	1	177	1.8 FS	5
124SN 178				7.259	1	178	1.7 FS	5
124SN 179		7.296	1-			179	0.63 FS	5
124SN 180				7.309	1	180	1.7 FS	4

124SN 181				7.326	1	181	1.7 FS	4
124SN 182		7.338	1-			182	0.76 FS	11
124SN 183				7.345	1	183	1.06 FS	21
124SN 184		7.395	1-			184	0.93 FS	15
124SN 185		7.488	1-			185	0.72 FS	9
124SN 186		7.537	1-			186	0.70 FS	11
124SN 187		7.551	1-			187	0.83 FS	12
124SN 188				7.567	1	188	1.33 FS	18
124SN 189		7.576	1-			189	0.96 FS	12
124SN 190		7.597	1-			190	0.64 FS	6

124SN 191		7.604	1-			191	0.59 FS	8
124SN 192		7.643	1-			192	1.22 FS	24
124SN 193				7.666	1	193	1.9 FS	3
124SN 194				7.679	1	194	1.7 FS	4
124SN 195		7.684	1-			195	0.92 FS	17
124SN 196				7.692	1	196	1.08 FS	18
124SN 197				7.703	1	197	2.2 FS	5
124SN 198		7.748	1-			198	0.76 FS	8
124SN 199		7.759	1-			199	0.62 FS	6
124SN 200				7.771	1	200	1.09 FS	20

124SN 201				7.778	1	201	1.6 FS	3
124SN 202				7.789	1	202	0.78 FS	9
124SN 203		7.816	1-			203	0.345 FS	25
124SN 204		7.864	1-			204	0.90 FS	11
124SN 205				7.872	1	205	0.78 FS	12
124SN 206		7.880	1-			206	0.39 FS	3
124SN 207				7.905	1	207	1.6 FS	3
124SN 208				7.913	1	208	1.03 FS	21
124SN 209				7.939	1	209	1.6 FS	3
124SN 210				7.957	1	210	0.53 FS	3

124SN 211		7.999	1-			211	0.90 FS	12
124SN 212				8.112	1	212	1.22 FS	18
124SN 213				8.119	1	213	0.55 FS	4
124SN 214				8.132	1	214	0.64 FS	6
124SN 215				8.163	1	215	1.17 FS	16
124SN 216				8.215	1	216	1.6 FS	3
124SN 217				8.229	1	217	0.72 FS	8
124SN 218				8.257	1	218	1.43 FS	18
124SN 219				8.270	1(+)	219	0.81 FS	6

124SN 220				8.350	1		220	1.44	FS	19

124SN 221		8.377	1-				221	0.78	FS	7
124SN 222					8.423	1	222	0.92	FS	9
124SN 223					8.434	1	223	1.08	FS	13

S-p = 12.091 (0.020)-----
 S-n = 8.488 (0.003)-----
 S-2p = 22.197 (0.003)-----
 S-2n = 14.434 (0.003)-----
 S-alpha= 6.699 (0.004)-----

S+p = -7.313 (0.003)
 S+n = -5.734 (0.002)
 S+2p = -16.411 (0.002)
 S+2n = -13.926 (0.011)
 S+alpha = -3.187 (0.001)

gap p = 4.779 (0.020)
 gap n = 2.755 (0.003)
 gap 2p = 5.786 (0.003)
 gap 2n = 0.508 (0.011)
 gap alpha = 3.512 (0.004)