

^{149}Sm $Z = 62$ $N = 87$ adopted link ENSDF link

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

BE = 1231.257 (0.001) MeV

	Energy T	J+	J-	J-other	T1/2

S-alpha=	-1.871	(0.002)	-----		
149SM 1			0.000	7/2-	1 STABLE
149SM 2			0.023	5/2-	2 7.33 NS 9
149SM 3			0.277	5/2-	3 0.2 NS LE
149SM 4			0.286	9/2-	4 0.22 NS 4
149SM 5			0.350	3/2-	5 9.5 PS 3
149SM 6				0.399 (1/2-,3/2-)	6
149SM 7			0.529	3/2-	7 24 PS 3
149SM 8			0.558	5/2-	8 24 PS 8
149SM 9			0.591	9/2-	9 3.0 PS 7
149SM 10			0.636	7/2-	10 1.5 PS LT

149SM 11				0.659 (LE 7/2)	11
149SM 12			0.664	11/2-	12 2.7 PS 3
149SM 13				0.697 (3/2)-	13
149SM 14				0.710 (3/2,5/2+)	14
149SM 15			0.748	13/2-	15
149SM 16			0.785	5/2-	16
149SM 17	0.789	11/2+			17
149SM 18				0.830 (5/2-,7/2,9/2-)	18
149SM 19				0.833 (5/2-:11/2-)	19
149SM 20				0.836 (5/2-,7/2,9/2-)	20

149SM 21	0.879	13/2+			21
149SM 22				0.882 (5/2,7/2-)	22
149SM 23				0.925 (3/2+,5/2+)	23
149SM 24				0.953 (5/2,7/2,9/2-)	24
149SM 25				0.967 (1/2+)	25
149SM 26				0.995 (9/2,11/2,13/2-)	26
149SM 27				1.012 (1/2-,3/2-)	27
149SM 28				1.039 (5/2-)	28
149SM 29				1.048 (3/2+)	29
149SM 30				1.083 (LE 7/2)	30

149SM 31				1.113	31
149SM 32				1.123 (LE 7/2)	32
149SM 33				1.132 (9/2-,11/2,13/2-	33)
149SM 34				1.154 (3/2+,5/2,7/2-)	34
149SM 35				1.173 (7/2+,9/2,11/2)	35
149SM 36				1.181 (3/2,5/2+)	36
149SM 37			1.187	5/2-	37

149SM	38					1.193	(13/2)+	38
149SM	39	1.195	1/2+					39
149SM	40					1.207	(5/2-)	40

149SM	41					1.238	(9/2-,11/2-)	41
149SM	42					1.240	(15/2)+	42
149SM	43					1.282		43
149SM	44			1.309	11/2-			44
149SM	45					1.325		45
149SM	46			1.339	5/2-			46
149SM	47					1.343	(13/2-)	47
149SM	48					1.353	(5/2-,7/2-)	48
149SM	49			1.361	17/2-			49
149SM	50	1.362	17/2+					50

149SM	51					1.378	(5/2-,7/2,9/2+)	51
149SM	52					1.393	(5/2)-	52
149SM	53			1.399	15/2-			53
149SM	54					1.413	(11/2,13/2,15/2+	54)
149SM	55					1.428	(1/2-,3/2,5/2+)	55
149SM	56					1.442	(LE 5/2)	56
149SM	57					1.470	(3/2,5/2)+	57
149SM	58					1.483	(LE 5/2)	58
149SM	59					1.505		59
149SM	60					1.535	(1/2+)	60

149SM	61			1.549	5/2-			61
149SM	62					1.558		62
149SM	63					1.571	(7/2+,9/2,11/2-	63)
149SM	64					1.575	(13/2)-	64
149SM	65					1.584	(3/2,5/2)+	65
149SM	66					1.617	(5/2)-	66
149SM	67					1.641		67
149SM	68					1.656		68
149SM	69					1.670	(19/2)+	69
149SM	70			1.672	5/2-			70

149SM	71					1.685	(15/2,17/2,19/2	71-)
149SM	72					1.685		72
149SM	73					1.696	(17/2+)	73
149SM	74			1.699	5/2-			74
149SM	75					1.731		75
149SM	76			1.757	5/2-			76
149SM	77					1.776	(7/2+)&(5/2+)	77
149SM	78			1.782	5/2-			78
149SM	79			1.817	5/2-			79
149SM	80					1.837		80

149SM	81					1.847	(15/2)-	81
149SM	82					1.851	(17/2+)	82

149SM 83				1.857		83
149SM 84				1.880	(7/2)+	84
149SM 85		1.891	5/2-			85
149SM 86		1.917	5/2-			86
149SM 87				1.924	(7/2+)&(5/2+)	87
149SM 88				1.926	(21/2)+	88
149SM 89				1.950	(7/2+)&(5/2+)	89
149SM 90				1.979		90

149SM 91				1.993		91
149SM 92				2.005		92
149SM 93				2.026	(5/2+)&(11/2-)	93
149SM 94				2.041	(19/2-)	94
149SM 95		2.059	5/2-			95
149SM 96		2.098	5/2-			96
149SM 97		2.117	5/2-			97
149SM 98				2.131	(17/2)-	98
149SM 99				2.139	(5/2+)&(11/2-)	99
149SM 100				2.142	(21/2-)	100

149SM 101				2.146	(15/2,17/2,19/2	101-)
149SM 102				2.183	(5/2+)&(11/2-)	102
149SM 103				2.192	(23/2)+	103
149SM 104				2.210	(5/2+)&(11/2-)	104
149SM 105				2.242	(5/2+)&(11/2-)	105
149SM 106				2.272	(5/2+)&(7/2+)	106
149SM 107				2.280	(5/2+)&(7/2+)	107
149SM 108				2.299		108
149SM 109				2.332		109
149SM 110				2.345	(21/2+)	110

149SM 111				2.358		111
149SM 112				2.377		112
149SM 113				2.387		113
149SM 114				2.415	(5/2+) & (11/2-)	114
149SM 115				2.427	(19/2-)	115
149SM 116				2.442	(5/2+) AND (11/2116-)	
149SM 117				2.487	(11/2-)	117
149SM 118				2.508		118
149SM 119				2.534		119
149SM 120				2.537	(25/2)+	120

149SM 121				2.568		121
149SM 122				2.590	(5/2)+	122
149SM 123				2.622		123
149SM 124				2.640		124
149SM 125				2.671		125
149SM 126				2.702	(23/2-)	126
149SM 127				2.711	(5/2+)&(11/2-)	127
149SM 128				2.723	(5/2+)&(11/2-)	128

149SM 129				2.735	(21/2-)	129
149SM 130				2.737		130

149SM 131				2.762		131
149SM 132				2.797		132
149SM 133				2.830		133
149SM 134				2.834	(27/2+)	134
149SM 135				2.842	(25/2-)	135
149SM 136				2.858		136
149SM 137				2.876	(25/2+)	137
149SM 138				2.891		138
149SM 139				2.923		139
149SM 140				2.933	(21/2,23/2,25/2-140)	

149SM 141				2.949		141
149SM 142				2.968		142
149SM 143				2.995		143
149SM 144				3.015		144
149SM 145				3.055	(23/2-)	145
149SM 146				3.072		146
149SM 147				3.094		147
149SM 148				3.160		148
149SM 149				3.181	(29/2+)	149

S-p = 7.559 (0.006)-----
S-n = 5.871 (0.002)-----
S-2p = 13.567 (0.002)-----
S-2n = 14.013 (0.002)-----
S-alpha= -1.871 (0.002)-----

S+p = -4.945 (0.006)
S+n = -7.987 (0.002)
S+2p = -11.631 (0.003)
S+2n = -13.583 (0.002)
S+alpha = 1.828 (0.002)

gap p = 2.614 (0.009)
gap n = -2.115 (0.002)
gap 2p = 1.936 (0.004)
gap 2n = 0.429 (0.002)
gap alpha = -0.043 (0.002)