

^{147}Sm $Z = 62$ $N = 85$ adopted link ENSDF link

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

BE = 1217.244 (0.001) MeV

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

S-alpha=	-2.311	(0.002)	-----		
147SM 1			0.000	7/2-	1 1.073E11 Y10
147SM 2			0.121	5/2-	2 0.798 NS 17
147SM 3			0.197	3/2-	3 1.25 NS 4
147SM 4			0.717	11/2-	4 2.35 PS 5
147SM 5				0.720 (1/2+)	5
147SM 6			0.799	3/2-	6 1.00 PS 21
147SM 7			0.809	9/2-	7 3.1 PS 5
147SM 8				0.884 (1/2+)	8
147SM 9				0.900	9
147SM 10				0.923 (1/2-)	10

147SM 11	0.932	11/2+			11
147SM 12				0.978	12
147SM 13				1.020	13
147SM 14	1.031	13/2+			14
147SM 15				1.044 1/2-,3/2-	15
147SM 16	1.054	3/2+			16
147SM 17	1.063	5/2+			17
147SM 18			1.069	9/2-	18
147SM 19			1.077	5/2-	19
147SM 20				1.107 (3/2-:9/2-)	20

147SM 21				1.162	21
147SM 22				1.169 (-)	22
147SM 23				1.173 (-)	23
147SM 24	1.180	5/2+			24
147SM 25	1.220	1/2+			25
147SM 26				1.258	26
147SM 27				1.318 1/2-,3/2-,5/2-	27
147SM 28				1.318 5/2-,7/2-,9/2-	28
147SM 29				1.318 3/2-,5/2-	29
147SM 30				1.350 (3/2-,5/2-)	30

147SM 31				1.430	31
147SM 32				1.438 (-)	32
147SM 33			1.449	7/2-	33
147SM 34			1.453	3/2-	34
147SM 35			1.458	15/2-	35
147SM 36				1.464 3/2+,5/2+	36
147SM 37				1.471 3/2-,5/2-,7/2-	37

147SM	38				1.472	-	38
147SM	39				1.549	3/2+,5/2+	39
147SM	40			1.551	13/2-		40

147SM	41				1.601	3/2(-),5/2(+)	41
147SM	42				1.642		42
147SM	43	1.668	1/2+				43
147SM	44				1.690		44
147SM	45	1.716	17/2+				45
147SM	46			1.717	9/2-		46
147SM	47				1.728	(-)	47
147SM	48				1.749		48
147SM	49	1.762	15/2+				49
147SM	50				1.763		50

147SM	51				1.776	(+)	51
147SM	52				1.803	(13/2)	52
147SM	53			1.844	5/2-		53
147SM	54				1.848	(1/2+)	54
147SM	55				1.868		55
147SM	56			1.896	15/2-		56
147SM	57				1.899		57
147SM	58				1.919	(1/2+)	58
147SM	59				1.946		59
147SM	60				1.975	(3/2+,5/2+)	60

147SM	61				1.983		61
147SM	62				2.011	17/2	62
147SM	63				2.055		63
147SM	64				2.065	(3/2+,5/2+)	64
147SM	65				2.070	(7/2-)	65
147SM	66				2.090		66
147SM	67				2.097	(1/2-,3/2-)	67
147SM	68			2.109	17/2-		68
147SM	69				2.114	(9/2-)	69
147SM	70				2.203	(3/2-,5/2,7/2)	70

147SM	71				2.207		71
147SM	72				2.265	(+)	72
147SM	73				2.298	(17/2)	73
147SM	74				2.374		74
147SM	75	2.430	21/2+				75
147SM	76			2.450	19/2-		76
147SM	77				2.470	19/2	77
147SM	78				2.514		78
147SM	79				2.555		79
147SM	80			2.559	21/2-		80

147SM	81				2.566		81
147SM	82				2.592	(19/2+)	82

147SM 83				2.595		83
147SM 84				2.689		84
147SM 85				2.702		85
147SM 86				2.704	(19/2-)	86
147SM 87				2.720		87
147SM 88				2.766	21/2	88
147SM 89				2.800		89
147SM 90				2.845		90

147SM 91				2.940		91
147SM 92				2.979	23/2	92
147SM 93				3.057	(23/2+)	93
147SM 94				3.207	23/2(+)	94
147SM 95		3.309	25/2+			95
147SM 96				3.310		96
147SM 97				3.468	27/2(+)	97
147SM 98				4.400		98

S-p = 7.101 (0.004)-----
S-n = 6.341 (0.003)-----
S-2p = 12.412 (0.002)-----
S-2n = 14.757 (0.002)-----
S-alpha= -2.311 (0.002)-----

S+p = -4.320 (0.010)
S+n = -8.141 (0.002)
S+2p = -10.439 (0.004)
S+2n = -14.013 (0.002)
S+alpha = 2.652 (0.003)

gap p = 2.780 (0.011)
gap n = -1.800 (0.004)
gap 2p = 1.973 (0.004)
gap 2n = 0.745 (0.003)
gap alpha = 0.341 (0.004)