

$^{143}\text{Sm}$        $Z = 62$        $N = 81$       adopted link      ENSDF link

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

BE = 1185.210 ( 0.003) MeV

Qbeta+ = 3.444 ( 0.004) MeV

	Energy T	J+	J-	J-other	T1/2
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S-alpha=	-0.075	( 0.028)	-----		
143SM 1	0.000	3/2+			1 8.75 M 6
143SM 2	0.108	1/2+			2 800 PS 50
143SM 3			0.754	11/2-	3 66 S 2
143SM 4	1.107	5/2+			4
143SM 5			1.311	7/2-	5
143SM 6	1.369	7/2+			6
143SM 7				1.537 (5/2)+	7
143SM 8				1.566 (3/2)+	8
143SM 9				1.659	9
143SM 10				1.715 (3/2)+	10
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143SM 11				1.748	11
143SM 12				1.877	12
143SM 13				1.891	13
143SM 14				1.913 (3/2)+	14
143SM 15				1.930 3/2+,5/2+	15
143SM 16				1.958 +	16
143SM 17	1.990	1/2+			17
143SM 18				2.070 5/2+,3/2+	18
143SM 19				2.102 (7/2+)	19
143SM 20				2.133 (5/2+,3/2+)	20
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143SM 21	2.167	7/2+			21
143SM 22				2.207 5/2+,3/2+	22
143SM 23				2.228 (5/2)+	23
143SM 24	2.271	7/2+			24
143SM 25				2.284	25
143SM 26				2.294 (7/2-,5/2-)	26
143SM 27				2.327 13/2(-)	27
143SM 28				2.329	28
143SM 29				2.396	29
143SM 30				2.411 (3/2+,5/2+)	30
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143SM 31				2.450 11/2-,9/2-	31
143SM 32				2.451	32
143SM 33				2.459 13/2(+)	33
143SM 34				2.505	34
143SM 35				2.509 15/2(+)	35
143SM 36				2.558	36

143SM	37						2.586	17/2(+)	37
143SM	38						2.586	7/2+,9/2+	38
143SM	39						2.588	5/2+,3/2	39
143SM	40						2.602	11/2-,9/2-	40
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143SM	41						2.662	(3/2+,5/2+)	41
143SM	42						2.686	(5/2)+	42
143SM	43						2.767		43
143SM	44						2.794	23/2(-)	44
143SM	45						2.842		45
143SM	46						2.874		46
143SM	47						2.886	(7/2-,9/2+)	47
143SM	48						2.905	7/2+,9/2+	48
143SM	49						2.970	5/2+,3/2+	49
143SM	50		3.031	7/2+					50
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143SM	51						3.061	7/2+,9/2+	51
143SM	52		3.066	1/2+					52
143SM	53						3.085		53
143SM	54						3.088		54
143SM	55						3.119		55
143SM	56						3.136	3/2+,5/2+	56
143SM	57						3.145	11/2-,9/2-	57
143SM	58						3.154	5/2+,3/2+	58
143SM	59						3.180	3/2+,5/2+	59
143SM	60						3.207	+	60
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143SM	61						3.245	3/2+,5/2+	61
143SM	62						3.275		62
143SM	63						3.297	7/2+,9/2+	63
143SM	64						3.299		64
143SM	65						3.325	(7/2-)	65
143SM	66						3.360		66
143SM	67						3.407	11/2-,9/2-	67
143SM	68						3.474	7/2+,9/2+	68
143SM	69						3.518	7/2+,9/2+	69
143SM	70						3.540		70
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143SM	71						3.594	7/2+,9/2+	71
143SM	72						3.599	27/2(-)	72
143SM	73						3.625		73
143SM	74						3.717		74
143SM	75						3.720		75
143SM	76						3.722	(25/2-)	76
143SM	77						3.780		77
143SM	78						3.867	7/2+,9/2+	78
143SM	79						3.889	27/2	79
143SM	80						3.940	7/2+,9/2+	80
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143SM	81				3.970	25/2-			81

143SM 82						4.075	3/2+,5/2+	82
143SM 83						4.136	7/2+,9/2+	83
143SM 84						4.195	(29/2-)	84
143SM 85						4.272	3/2+,5/2+	85
143SM 86						4.347	7/2+,9/2+	86
143SM 87				4.358	29/2-			87
143SM 88						4.367		88
143SM 89						4.470		89
143SM 90						4.544	7/2+,9/2+	90
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143SM 91						4.561		91
143SM 92				4.648	27/2-			92
143SM 93						4.755	3/2+,5/2+	93
143SM 94						4.769	7/2+,9/2+	94
143SM 95		5.278	31/2+					95
143SM 96		5.450	31/2+					96
143SM 97				5.653	31/2-			97
S-p =		5.664 ( 0.024)		-----				
143SM 98		5.685	33/2+					98
143SM 99		5.835	35/2+					99
143SM 100				5.896	33/2-			100
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143SM 101		5.913	35/2+					101
143SM 102						6.082		102
143SM 103						6.593	(35/2-)	103
143SM 104		6.623	37/2+					104
143SM 105		6.710	39/2+					105
143SM 106		6.760	37/2+					106
143SM 107						6.956	(37/2+)	107
143SM 108				7.026	35/2-			108
143SM 109						7.087		109
143SM 110						7.197	(39/2+)	110
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143SM 111						7.355	(39/2+)	111
143SM 112				7.390	37/2-			112
143SM 113						7.516	(39/2-)	113
143SM 114						7.580	(43/2+)	114
143SM 115						7.598	(41/2+)	115
143SM 116						7.873	(45/2+)	116
143SM 117						8.197	(41/2-)	117
143SM 118						8.362	(47/2+)	118
S-n =		8.607 ( 0.003)		-----				
143SM 119						8.612	(43/2-)	119
143SM 120						8.851	(45/2-)	120
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143SM 121						9.191	(47/2-)	121
143SM 122						9.635	(49/2-)	122
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S-p =		5.664 ( 0.024)		-----				

S-n = 8.607 ( 0.003)-----  
S-2p = 9.903 ( 0.004)-----  
S-2n = 19.726 ( 0.009)-----  
S-alpha= -0.075 ( 0.028)-----

S+p = -3.391 ( 0.011)  
S+n = -10.520 ( 0.003)  
S+2p = -7.987 ( 0.020)  
S+2n = -17.277 ( 0.003)  
S+alpha = 1.735 ( 0.003)

gap p = 2.273 ( 0.026)  
gap n = -1.913 ( 0.005)  
gap 2p = 1.916 ( 0.020)  
gap 2n = 2.449 ( 0.009)  
gap alpha = 1.660 ( 0.028)