

$^{145}\text{Sm}$        $Z = 62$        $N = 83$       adopted link      ENSDF link

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

BE = 1202.487 ( 0.001) MeV

Qbeta+ = 0.616 ( 0.003) MeV

	Energy T	J+	J-	J-other	T1/2
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S-alpha=	-1.115	( 0.004)	-----		
145SM 1			0.000	7/2-	1 340 D 3
145SM 2			0.894	3/2-	2 36 PS 12
145SM 3	1.105	13/2+			3 13.5 NS 15
145SM 4			1.423	9/2-	4
145SM 5	1.436	1/2+			5
145SM 6			1.538	11/2-	6
145SM 7	1.547	3/2+			7
145SM 8			1.607	1/2-	8
145SM 9	1.628	3/2+			9
145SM 10			1.659	5/2-	10
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145SM 11			1.706	9/2-	11
145SM 12	1.729	1/2+			12
145SM 13				1.774 (15/2+)	13
145SM 14				1.774 (9/2)-	14
145SM 15			1.780	9/2-	15
145SM 16	1.804	5/2+			16
145SM 17	1.848	9/2+			17
145SM 18	1.858	7/2+			18
145SM 19			1.877	7/2-	19
145SM 20				1.951 -	20
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145SM 21				1.963 1/2+,3/2+	21
145SM 22				1.966 (11/2+)	22
145SM 23			1.973	3/2-	23
145SM 24			1.997	5/2-	24
145SM 25			2.050	15/2-	25 3 NS AP
145SM 26				2.111 5/2-,7/2-,9/2-	26
145SM 27				2.113 (11/2+)	27
145SM 28			2.133	3/2-	28
145SM 29				2.155 (5/2-,7/2-)	29
145SM 30			2.160	1/2-	30
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145SM 31				2.193 5/2-,7/2-,9/2-	31
145SM 32			2.230	17/2-	32
145SM 33	2.277	5/2+			33
145SM 34	2.293	9/2+			34
145SM 35				2.329 5/2-,7/2-,3/2-	35
145SM 36				2.341	36

145SM	37			2.346	5/2-			37
145SM	38	2.386	3/2+					38
145SM	39					2.388	(-)	39
145SM	40			2.426	5/2-			40
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145SM	41	2.438	17/2+					41
145SM	42					2.455	(11/2-)	42
145SM	43					2.482		43
145SM	44					2.508	5/2-, 7/2-	44
145SM	45					2.513	-	45
145SM	46					2.559		46
145SM	47					2.629		47
145SM	48					2.670	(13/2+)	48
145SM	49					2.678	1/2-, 3/2-	49
145SM	50			2.711	19/2-			50
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145SM	51					2.713	(13/2)+	51
145SM	52					2.724		52
145SM	53					2.750		53
145SM	54					2.797		54
145SM	55					2.810	(15/2)	55
145SM	56					2.824		56
145SM	57					2.842		57
145SM	58					2.899		58
145SM	59					2.926		59
145SM	60	2.931	21/2+					60
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145SM	61					2.960		61
145SM	62					2.964	19/2(+)	62
145SM	63	2.979	21/2+					63 0.12 NS
145SM	64					3.018		64
145SM	65					3.030		65
145SM	66					3.096		66
145SM	67	3.120	23/2+					67
145SM	68					3.131	(3/2)-	68
145SM	69			3.140	3/2-			69
145SM	70					3.141		70
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145SM	71					3.183		71
145SM	72					3.246		72
145SM	73					3.275		73
145SM	74					3.302		74
145SM	75					3.323	(21/2)	75
145SM	76					3.335		76
145SM	77					3.366		77
145SM	78	3.369	25/2+					78
145SM	79					3.376		79
145SM	80					3.397		80
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145SM	81					3.433		81

145SM 82						3.446			82
145SM 83						3.480			83
145SM 84		3.484	25/2+						84
145SM 85						3.506			85
145SM 86						3.534			86
145SM 87						3.558			87
145SM 88						3.596			88
145SM 89						3.633			89
145SM 90						3.655			90
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145SM 91						3.679			91
145SM 92						3.726			92
145SM 93						3.783			93
145SM 94						3.833			94
145SM 95						3.856			95
145SM 96						3.882			96
145SM 97						3.916			97
145SM 98		3.922	27/2+						98 1.1 NS 2
145SM 99						4.010			99
145SM 100						4.027			100
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145SM 101						4.229	(27/2)		101
145SM 102						4.316			102
145SM 103						4.390			103
145SM 104		4.421	29/2+						104
145SM 105						4.587			105
145SM 106						4.648	(29/2)		106
145SM 107						4.741	(29/2)		107
145SM 108						4.869	(29/2)		108
145SM 109						5.030	(31/2)		109
145SM 110						5.032	(31/2)		110
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145SM 111						5.248	(31/2)		111
145SM 112						5.507	(33/2)		112
145SM 113						5.526			113
145SM 114						5.681	(33/2)		114
145SM 115						5.720			115
145SM 116						5.904	(35/2)		116
145SM 117						5.957			117
145SM 118						6.123			118
145SM 119						6.217	(37/2)		119
145SM 120						6.362	(37/2)		120
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S-p	=	6.524	( 0.003)	-----					
145SM 121						6.720	(39/2)		121
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S-n	=	6.757	( 0.002)	-----					
145SM 122						6.758	(39/2)		122
145SM 123						7.328	(43/2)		123
145SM 124						7.405	(41/2)		124
145SM 125						7.450	(41/2)		125

145SM 126				7.744	(45/2)	126		
145SM 127				7.804	(45/2)	127		
145SM 128				7.927	(41/2)	128		
145SM 129				8.073	(47/2)	129		
145SM 130				8.191	(45/2)	130		
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145SM 131				8.334	(45/2)	131		
145SM 132				8.378	(47/2)	132		
145SM 133				8.580	(47/2)	133		
145SM 134				8.786	(49/2+)	134	0.96 US	+19-15
145SM 135				9.981	(53/2)	135		

S-p = 6.524 ( 0.003)-----  
 S-n = 6.757 ( 0.002)-----  
 S-2p = 11.227 ( 0.002)-----  
 S-2n = 17.277 ( 0.003)-----  
 S-alpha= -1.115 ( 0.004)-----

S+p = -3.755 ( 0.006)  
 S+n = -8.416 ( 0.003)  
 S+2p = -9.283 ( 0.002)  
 S+2n = -14.757 ( 0.002)  
 S+alpha = 3.099 ( 0.004)

gap p = 2.769 ( 0.007)  
 gap n = -1.659 ( 0.004)  
 gap 2p = 1.944 ( 0.003)  
 gap 2n = 2.520 ( 0.004)  
 gap alpha = 1.984 ( 0.005)