

^{163}Tm $Z = 69$ $N = 94$ adopted link ENSDF link

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

BE = 1324.371 (0.006) MeV

Qbeta+ = 2.439 (0.007) MeV

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

S-alpha=	-2.176	(0.006)	-----		
163TM 1	0.000	1/2+			1 1.810 H 5
163TM 2	0.014	3/2+			2 0.9 NS LT
163TM 3				0.023 (7/2)+	3
163TM 4				0.087 (7/2)-	4 0.38 US 3
163TM 5	0.137	5/2+			5 60 PS 10
163TM 6				0.144 (5/2)+	6 110 PS 25
163TM 7				0.165 (9/2+)	7 43 NS AP
163TM 8				0.175 (9/2)-	8
163TM 9				0.175 (7/2)+	9
163TM 10				0.217 (1/2)-	10

163TM 11				0.248 (5/2-)	11
163TM 12				0.254 (LE 7/2)	12
163TM 13				0.258 (7/2)+	13
163TM 14				0.290 (11/2-)	14 43 NS AP
163TM 15			0.326 3/2-		15
163TM 16				0.331 (11/2+)	16
163TM 17	0.366	3/2+			17
163TM 18				0.369 (9/2-)	18
163TM 19				0.383 (9/2+)	19
163TM 20				0.437 (13/2-)	20 8.5 NS AP

163TM 21				0.449 (5/2)+	21
163TM 22				0.451 (11/2+)	22
163TM 23				0.498 (7/2)-	23
163TM 24				0.521 (13/2+)	24
163TM 25				0.560 (7/2)+	25
163TM 26				0.586 (13/2-)	26
163TM 27				0.604 (15/2-)	27
163TM 28				0.629 (LE 7/2)	28
163TM 29				0.684 (LE 7/2)	29
163TM 30				0.728 (13/2+)	30

163TM 31				0.733 (15/2+)	31
163TM 32				0.774 (5/2,7/2)+	32
163TM 33				0.805 (17/2-)	33 8.5 NS AP
163TM 34				0.806 (3/2,5/2+)	34
163TM 35				0.824 (5/2-)	35
163TM 36				0.830 (15/2+)	36

163TM	37				0.900	(17/2-)	37
163TM	38				0.947	(5/2)-	38
163TM	39				0.963	(17/2+)	39
163TM	40				1.012	(19/2-)	40

163TM	41				1.121		41
163TM	42				1.131	(3/2+,5/2-)	42
163TM	43				1.160	(17/2+)	43
163TM	44				1.211	(19/2+)	44
163TM	45				1.261	(21/2-)	45
163TM	46				1.294	(19/2+)	46
163TM	47				1.308	(21/2-)	47
163TM	48				1.345	1/2,3/2,5/2(+)	48
163TM	49				1.363	(LE 7/2)	49
163TM	50				1.474	(21/2+)	50

163TM	51				1.498	(23/2-)	51
163TM	52				1.552		52
163TM	53				1.661	(21/2+)	53
163TM	54				1.750	(23/2+)	54
163TM	55				1.780	(1/2+,3/2,5/2)	55
163TM	56				1.786	(25/2-)	56
163TM	57				1.804	(25/2-)	57
163TM	58				1.820	(3/2,5/2)	58
163TM	59				1.821	(1/2+,3/2,5/2)	59
163TM	60				1.827	(23/2+)	60

163TM	61				1.833	(5/2-)	61
163TM	62				1.995	(5/2-)	62
163TM	63				2.034	(25/2+)	63
163TM	64				2.046	(27/2-)	64
163TM	65				2.206	(25/2+)	65
163TM	66				2.323	(27/2+)	66
163TM	67				2.356	(29/2-)	67
163TM	68				2.377	(29/2-)	68
163TM	69				2.397	(27/2+)	69
163TM	70				2.608	(29/2+)	70

163TM	71				2.626	(31/2-)	71
163TM	72				2.742	(29/2+)	72
163TM	73				2.879	(31/2+)	73
163TM	74				2.921	(33/2-)	74
163TM	75				2.933	(31/2+)	75
163TM	76				3.014	(33/2-)	76
163TM	77				3.171	(35/2-)	77
163TM	78				3.207	(33/2+)	78
163TM	79				3.265	(35/2-)	79
163TM	80				3.420	(35/2+)	80

163TM	81				3.428	(37/2-)	81

S-p = 3.683 (0.006)		-----			
163TM 82			3.690	(39/2-)	82
163TM 83			3.714	(37/2-)	83
163TM 84			3.722	(37/2+)	84
163TM 85			3.965	(39/2+)	85
163TM 86			3.968	(41/2-)	86
163TM 87			4.095	(39/2-)	87
163TM 88			4.266	(43/2-)	88
163TM 89			4.320	(41/2+)	89
163TM 90			4.443	(41/2-)	90

163TM 91			4.502	(41/2-)	91
163TM 92			4.587	(45/2-)	92
163TM 93			4.588	(43/2+)	93
163TM 94			4.775	(43/2-)	94
163TM 95			4.918	(47/2-)	95
163TM 96			4.997	(45/2+)	96
163TM 97			5.099	(45/2-)	97
163TM 98			5.172	(45/2-)	98
163TM 99			5.286	(49/2-)	99 0.388 PS 14
163TM 100			5.417	(47/2-)	100

163TM 101			5.643	(51/2-)	101
163TM 102			5.740	(49/2+)	102
163TM 103			5.751	(49/2-)	103
163TM 104			5.893	(49/2-)	104
163TM 105			6.058	(53/2-)	105 0.353 PS 21
163TM 106			6.097	(51/2-)	106
163TM 107			6.433	(55/2-)	107
163TM 108			6.462	(53/2-)	108
163TM 109			6.569	(53/2+)	109
163TM 110			6.838	(55/2-)	110

163TM 111			6.846	(57/2-)	111 0.347 PS 21
163TM 112			6.894	(57/2-)	112
163TM 113			7.237	(57/2-)	113
163TM 114			7.280	(59/2-)	114
163TM 115			7.642	(59/2-)	115
163TM 116			7.786	(61/2-)	116
163TM 117			8.076	(61/2-)	117
163TM 118			8.175	(63/2-)	118
163TM 119			8.507	(63/2-)	119
163TM 120			8.730	(65/2-)	120

163TM 121			8.978	(65/2-)	121
163TM 122			9.120	(67/2-)	122
S-n = 9.322 (0.027)		-----			
163TM 123			9.431	(67/2-)	123
163TM 124			9.730	(69/2-)	124
163TM 125			9.945	(69/2-)	125

S-p	=	3.683	(0.006)	-----
S-n	=	9.322	(0.027)	-----
S-2p	=	10.110	(0.006)	-----
S-2n	=	16.972	(0.028)	-----
S-alpha	=	-2.176	(0.006)	-----
S+p	=	-5.573	(0.016)	
S+n	=	-7.252	(0.026)	
S+2p	=	-8.292	(0.027)	
S+2n	=	-16.344	(0.006)	
S+alpha	=	2.777	(0.038)	
gap p	=	-1.890	(0.017)	
gap n	=	2.070	(0.037)	
gap 2p	=	1.818	(0.028)	
gap 2n	=	0.628	(0.029)	
gap alpha	=	0.601	(0.038)	