^{168}Tm $Z = 69$ $N = 99$ adopted link ENSDF link

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

BE = 1363.312 (0.002) MeV
Qbeta- = 0.267 (0.002) MeV
Qbeta+ = 1.677 (0.002) MeV

	Energy T	J+	J-	J-other	T1/2	
S-alpha= -1.243 (0.002)						
168TM 1	0.000	3+			1	93.1 D 2
168TM 2			0.003	(1)-	2	
168TM 3			0.017		3	
168TM 4			0.041	(2-)	4	
168TM 5			0.047		5	
168TM 6			0.064	(4)+	6	
168TM 7			0.080		7	
168TM 8			0.112	(3-)	8	
168TM 9			0.145	(5)+	9	
168TM 10			0.148	(4+)	10	
168TM 11			0.167	(0)-	11	
168TM 12			0.179	(4-)	12	
168TM 13			0.185		13	
168TM 14			0.193	(4-)	14	
168TM 15			0.199	(4-)	15	
168TM 16			0.204	(3-)	16	
168TM 17			0.204		17	
168TM 18			0.229	(5+)	18	
168TM 19			0.230	(1)-	19	
168TM 20			0.235	(2-)	20	
168TM 21			0.242	(6)+	21	
168TM 22			0.242	(5-)	22	
168TM 23			0.247	(5-)	23	
168TM 24			0.308	(6-)	24	
168TM 25			0.313	(7+)	25	
168TM 26			0.314	(6-)	26	
168TM 27			0.325	(3-)	27	
168TM 28			0.328	(6+)	28	
168TM 29			0.338	(4-)	29	
168TM 30			0.347	(3)-	30	
168TM 31			0.349		31	
168TM 32			0.358	(7+)	32	
168TM 33			0.366		33	
168TM 34			0.383	(4)-	34	
168TM 35			0.392	(7-)	35	

168TM	36			0.392	(6-)	36
168TM	37			0.393	(7-)	37
168TM	38			0.439		38
168TM	39			0.442	(7)+	39
168TM	40			0.446	(5-)	40
168TM	41			0.482		41
168TM	42			0.484	(8-)	42
168TM	43			0.493		43
168TM	44			0.494	(8+)	44
168TM	45			0.496	(8-)	45
168TM	46			0.499		46
168TM	47			0.520		47
168TM	48			0.565	(6-)	48
168TM	49			0.578	(8+)	49
168TM	50			0.592	(4)-	50
168TM	51			0.609		51
168TM	52			0.614	(1)-	52
168TM	53			0.620	(9-)	53
168TM	54			0.631		54
168TM	55			0.638	0-,1-,2-	55
168TM	56			0.645	(9+)	56
168TM	57			0.664	(2)-	57
168TM	58			0.674		58
168TM	59			0.675	(8-)	59
168TM	60			0.698	(7-)	60
168TM	61			0.700	(2-)	61
168TM	62			0.708		62
168TM	63			0.717		63
168TM	64			0.726	(3)-	64
168TM	65			0.732	(6+)	65
168TM	66			0.744		66
168TM	67			0.756	(10-)	67
168TM	68			0.759	(10-)	68
168TM	69			0.760		69
168TM	70			0.769	(3+,4+,5+)	70
168TM	71			0.780	(2-)	71
168TM	72			0.790	0-,1-,2-	72
168TM	73			0.794		73
168TM	74			0.798		74
168TM	75			0.817	(10+)	75
168TM	76			0.818	(1+)	76
168TM	77			0.836	0-,1-,2-	77
168TM	78			0.847	(2+)	78
168TM	79			0.849		79
168TM	80			0.859		80

168TM 81			0.866		81
168TM 82			0.887	0-,1-,2-	82
168TM 83			0.890	(3+)	83
168TM 84			0.897	-	84
168TM 85			0.905	-	85
168TM 86			0.915	-	86
168TM 87			0.921	-	87
168TM 88			0.926	(11-)	88
168TM 89			0.937	2-,3-,4-	89
168TM 90			0.945		90
168TM 91			0.953	(3)-	91
168TM 92			0.966	(4-)	92
168TM 93			0.974		93
168TM 94			0.985	2-,3-,4-	94
168TM 95			0.993		95
168TM 96			1.001		96
168TM 97			1.008	(11+)	97
168TM 98			1.009		98
168TM 99			1.019	(2-,3-,4-)	99
168TM 100			1.020	(10-)	100
168TM 101			1.041	2-,3-,4-	101
168TM 102			1.052	(4)-	102
168TM 103			1.056	(0+)	103
168TM 104			1.061		104
168TM 105			1.077	(2-,3-,4-)	105
168TM 106			1.097	(12-)	106
168TM 107			1.098	(5-)	107
168TM 108			1.099	(12-)	108
168TM 109			1.115	(2)+	109
168TM 110			1.127	(1)+	110
168TM 111			1.133	(2+)	111
168TM 112			1.162	(5-)	112
168TM 113			1.170		113
168TM 114			1.182	(3+)	114
168TM 115			1.187		115
168TM 116			1.194	(1+,2+,3+)	116
168TM 117			1.202		117
168TM 118			1.212	(12+)	118
168TM 119			1.225		119
168TM 120			1.240	(3)+	120
168TM 121			1.252		121
168TM 122			1.260	1+,2+,3+	122
168TM 123			1.268		123
168TM 124			1.276	1+,2+,3+	124
168TM 125			1.281		125
168TM 126			1.302	(1+,2+,3+)	126

168TM 127			1.310	(13-)	127
168TM 128			1.311	0+,1+	128
168TM 129			1.322		129
168TM 130			1.330	(2-,3-,4-)	130
168TM 131			1.343		131
168TM 132			1.347	(1)+	132
168TM 133			1.356		133
168TM 134			1.362	(1+,2+,3+)	134
168TM 135			1.378	(2+)	135
168TM 136			1.389	(4-)	136
168TM 137			1.390	(0-,1-,2-)	137
168TM 138			1.407	0+,1+	138
168TM 139			1.414		139
168TM 140			1.421	(12-)	140
168TM 141			1.426	(1)+	141
168TM 142			1.434	(3-)	142
168TM 143			1.445	0+,1+	143
168TM 144			1.451	(13+)	144
168TM 145			1.454		145
168TM 146			1.460		146
168TM 147			1.465	(+)	147
168TM 148			1.472		148
168TM 149			1.482	(5-)	149
168TM 150			1.484	(2+)	150
168TM 151			1.501		151
168TM 152			1.506	(+)	152
168TM 153			1.515	(14-)	153
168TM 154			1.520		154
168TM 155			1.540	(4-)	155
168TM 156			1.554		156
168TM 157			1.563		157
168TM 158			1.568		158
168TM 159			1.590	(6-)	159
168TM 160			1.604		160
168TM 161			1.621		161
168TM 162			1.628	(5-)	162
168TM 163			1.637		163
168TM 164			1.662		164
168TM 165			1.678	(14+)	165
168TM 166			1.690		166
168TM 167			1.742		167
168TM 168			1.775	(15-)	168
168TM 169			1.802		169
168TM 170			1.873	(14-)	170
168TM 171			1.905		171

```
168TM 172 |                |                |   1.968     (15+)          172
168TM 173 |                |                |   2.007     (16-)          173
168TM 174 |                |                |   2.212     (16+)          174
168TM 175 |                |                |   2.318     (17-)          175
168TM 176 |                |                |   2.376     (16-)          176
168TM 177 |                |                |   2.548     (17+)          177
168TM 178 |                |                |   2.575     (18-)          178
168TM 179 |                |                |   2.813     (18+)          179
168TM 180 |                |                |   2.934     (18-)          180
-----------                                                              -----------------
168TM 181 |                |                |   2.937     (19-)          181
168TM 182 |                |                |   3.186     (19+)          182
168TM 183 |                |                |   3.217     (20-)          183
168TM 184 |                |                |   3.476     (20+)          184
168TM 185 |                |                |   3.548     (20-)          185
168TM 186 |                |                |   3.625     (21-)          186
168TM 187 |                |                |   3.881     (21+)          187
168TM 188 |                |                |   3.929     (22-)          188
168TM 189 |                |                |   4.190     (22+)          189
168TM 190 |                |                |   4.220     (22-)          190
-----------                                                              -----------------
168TM 191 |                |                |   4.380     (23-)          191
168TM 192 |                |                |   4.705     (24-)          192
168TM 193 |                |                |   4.951     (24-)          193


S-p    =   5.312 ( 0.002)-------------------------------------------------------------------------
S-n    =   6.841 ( 0.002)-------------------------------------------------------------------------
S-2p   =  12.820 ( 0.002)-------------------------------------------------------------------------
S-2n   =  15.569 ( 0.012)-------------------------------------------------------------------------
S-alpha=  -1.243 ( 0.002)-------------------------------------------------------------------------

S+p       =  -6.352 ( 0.002)
S+n       =  -8.034 ( 0.002)
S+2p      = -10.572 ( 0.017)
S+2n      = -14.625 ( 0.002)
S+alpha   =   2.151 ( 0.003)

gap p     =  -1.040 ( 0.002)
gap n     =  -1.193 ( 0.003)
gap 2p    =   2.248 ( 0.017)
gap 2n    =   0.943 ( 0.012)
gap alpha =   0.908 ( 0.004)
```