

$^{165}\text{Ho}$        $Z = 67$        $N = 98$       adopted link      ENSDF link

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

BE      =      1344.248 ( 0.001) MeV

	Energy T	J+	J-	J-other	T1/2
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S-alpha=	-0.139	( 0.001)	-----		
165HO 1			0.000	7/2-	1 STABLE
165HO 2			0.095	9/2-	2 22.3 PS 10
165HO 3			0.210	11/2-	3 12.7 PS 7
165HO 4			0.345	13/2-	4 7.0 PS 6
165HO 5	0.362	3/2+			5 1.512 US 4
165HO 6	0.420	5/2+			6
165HO 7	0.429	1/2+			7
165HO 8	0.449	3/2+			8
165HO 9	0.491	7/2+			9
165HO 10			0.499	15/2-	10 5.4 PS 10
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165HO 11			0.515	3/2-	11 10.5 PS 10
165HO 12	0.539	5/2+			12
165HO 13				0.567 (5/2)-	13 34 PS 8
165HO 14	0.590	7/2+			14
165HO 15	0.602	9/2+			15
165HO 16				0.638 (7/2)-	16
165HO 17			0.673	17/2-	17 2.7 PS 6
165HO 18				0.681 (1/2)-	18
165HO 19				0.689 (11/2)-	19 4.6 PS 3
165HO 20			0.702	5/2-	20
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165HO 21	0.704	11/2+			21
165HO 22	0.715	7/2+			22 0.1 US LT
165HO 23				0.731 (9/2-)	23
165HO 24	0.744	9/2+			24
165HO 25			0.791	3/2-	25
165HO 26			0.802	9/2-	26
165HO 27				0.820 (13/2-)	27
165HO 28				0.820 (9/2+)	28
165HO 29	0.827	11/2+			29
165HO 30				0.842 (11/2-)	30
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165HO 31			0.863	19/2-	31
165HO 32	0.871	13/2+			32
165HO 33				0.946 (11/2+)	33
165HO 34				0.956 (7/2-)	34
165HO 35				0.969 (15/2-)	35
165HO 36				0.972 (13/2-)	36
165HO 37				0.986 (13/2)	37

165HO	38	0.995	5/2+					38
165HO	39	0.998	15/2+					39
165HO	40					1.038	(1/2+)	40
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165HO	41	1.056	5/2+					41
165HO	42					1.067	(3/2+)	42
165HO	43			1.073	21/2-			43
165HO	44					1.076	(5/2-,7/2-)	44
165HO	45	1.080	7/2+					45
165HO	46					1.094	(13/2+)	46
165HO	47					1.122	(15/2-)	47
165HO	48					1.130	(5/2+)	48
165HO	49					1.137	(17/2-)	49
165HO	50	1.140	7/2+					50
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165HO	51	1.152	15/2+					51
165HO	52					1.170	(15/2)	52
165HO	53	1.187	9/2+					53
165HO	54					1.196	(11/2-)	54
165HO	55	1.221	17/2+					55
165HO	56					1.237		56
165HO	57					1.247	(17/2)	57
165HO	58					1.248	(9/2+)	58
165HO	59					1.288		59
165HO	60					1.292	(17/2-)	60
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165HO	61			1.295	23/2-			61
165HO	62					1.314	(11/2+)	62
165HO	63					1.321	(19/2-)	63
165HO	64					1.338		64
165HO	65	1.368	19/2+					65
165HO	66					1.376	(11/2+)	66
165HO	67					1.381	(5/2,7/2,9/2)	67
165HO	68					1.389	(5/2,7/2,9/2)	68
165HO	69					1.391		69
165HO	70					1.410	(5/2,7/2,9/2)	70
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165HO	71					1.416	(5/2-)	71
165HO	72					1.466	(7/2-,9/2-)	72
165HO	73					1.476	(19/2)	73
165HO	74					1.476	(19/2-)	74
165HO	75					1.480	(9/2-)	75
165HO	76			1.483	7/2-			76
165HO	77					1.505	11/2-,9/2-	77
165HO	78					1.523	(21/2-)	78
165HO	79					1.534		79
165HO	80			1.537	25/2-			80
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165HO	81					1.547		81
165HO	82	1.554	19/2+					82

165HO 83						1.574	(9/2-)	83
165HO 84						1.591	(21/2)	84
165HO 85				1.592	11/2-			85
165HO 86						1.606	(5/2,7/2,9/2)	86
165HO 87						1.615	(5/2,7/2,9/2)	87
165HO 88						1.616	(1/2+)	88
165HO 89						1.627	(5/2,7/2,9/2)	89
165HO 90		1.644	21/2+					90
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165HO 91						1.649		91
165HO 92				1.674	11/2-			92
165HO 93						1.679	(21/2-)	93
165HO 94						1.704	(1/2+)	94
165HO 95						1.706	(7/2,9/2)	95
165HO 96						1.711	(5/2,7/2,9/2)	96
165HO 97						1.720		97
165HO 98						1.740	(23/2-)	98
165HO 99						1.756	(5/2,7/2,9/2)	99
165HO 100						1.762	(1/2+)	100
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165HO 101						1.766	(5/2,7/2,9/2)	101
165HO 102						1.776		102
165HO 103				1.786	27/2-			103
165HO 104						1.789	(5/2,7/2,9/2)	104
165HO 105						1.797	(5/2)+	105
165HO 106						1.807	(5/2-,7/2-,9/2-	106)
165HO 107		1.808	23/2+					107
165HO 108						1.816	(5/2,7/2,9/2)	108
165HO 109						1.828	(7/2,9/2)	109
165HO 110						1.835	(1/2+)	110
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165HO 111						1.844		111
165HO 112						1.864	(23/2)	112
165HO 113						1.873	7/2+,9/2+	113
165HO 114						1.896	(23/2-)	114
165HO 115						1.903	(9/2)	115
165HO 116						1.907	(11/2)-	116
165HO 117						1.939	(7/2-)	117
165HO 118						1.972	(25/2-)	118
165HO 119						1.984	(5/2,7/2,9/2)	119
165HO 120						1.986		120
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165HO 121						2.011	(25/2)	121
165HO 122						2.012	(5/2,7/2,9/2)	122
165HO 123						2.016		123
165HO 124						2.025		124
165HO 125						2.053		125
165HO 126				2.056	29/2-			126
165HO 127						2.085		127
165HO 128						2.099	(5/2,7/2,9/2)	128

165HO 129						2.111		129
165HO 130						2.121		130
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165HO 131						2.125	(9/2)	131
165HO 132		2.129	25/2+					132
165HO 133						2.131	(25/2-)	133
165HO 134						2.146	(5/2,7/2,9/2)	134
165HO 135						2.171	(5/2,7/2,9/2)	135
165HO 136						2.178	(5/2,7/2,9/2)	136
165HO 137						2.194	(5/2,7/2,9/2)	137
165HO 138						2.218	(27/2-)	138
165HO 139						2.233	(5/2,7/2,9/2)	139
165HO 140						2.265	(5/2,7/2,9/2)	140
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165HO 141		2.309	27/2+					141
165HO 142				2.328	31/2-			142
165HO 143						2.329	(5/2,7/2,9/2)	143
165HO 144						2.337	(5/2,7/2,9/2)	144
165HO 145						2.340	(5/2,7/2,9/2)	145
165HO 146						2.356	(9/2)	146
165HO 147						2.377	(5/2,7/2,9/2)	147
165HO 148						2.377	(27/2-)	148
165HO 149						2.447	(5/2,7/2,9/2)	149
165HO 150						2.477	(29/2-)	150
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165HO 151						2.480	(5/2,7/2,9/2)	151
165HO 152						2.492	(7/2,9/2)	152
165HO 153						2.502	(29/2)	153
165HO 154						2.509	(5/2,7/2,9/2)	154
165HO 155						2.519	(5/2,7/2,9/2)	155
165HO 156						2.538	(5/2,7/2,9/2)	156
165HO 157						2.551	(7/2,9/2)	157
165HO 158						2.561	(5/2,7/2,9/2)	158
165HO 159						2.571	(5/2,7/2,9/2)	159
165HO 160						2.580	(5/2,7/2,9/2)	160
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165HO 161						2.592	(5/2,7/2,9/2)	161
165HO 162						2.596	(7/2,9/2)	162
165HO 163						2.601	(5/2,7/2,9/2)	163
165HO 164				2.623	33/2-			164
165HO 165						2.632	(5/2,7/2,9/2)	165
165HO 166						2.639	(29/2-)	166
165HO 167						2.652	(5/2,7/2,9/2)	167
165HO 168						2.656	(5/2,7/2,9/2)	168
165HO 169						2.663	(5/2,7/2,9/2)	169
165HO 170						2.666	(5/2,7/2,9/2)	170
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165HO 171		2.668	29/2+					171
165HO 172						2.672	(5/2,7/2,9/2)	172
165HO 173						2.675	(5/2,7/2,9/2)	173

165HO 174				2.683	(9/2)	174
165HO 175				2.689	(5/2,7/2,9/2)	175
165HO 176				2.749	(31/2-)	176
165HO 177				2.752	(5/2,7/2,9/2)	177
165HO 178				2.768	(5/2,7/2,9/2)	178
165HO 179				2.806	(5/2,7/2,9/2)	179
165HO 180				2.816	(5/2,7/2,9/2)	180
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165HO 181				2.820	(7/2,9/2)	181
165HO 182				2.836	(5/2,7/2,9/2)	182
165HO 183				2.839	(5/2,7/2,9/2)	183
165HO 184				2.855	(5/2,7/2,9/2)	184
165HO 185				2.858	(5/2,7/2,9/2)	185
165HO 186	2.864	31/2+				186
165HO 187				2.878	(5/2,7/2,9/2)	187
165HO 188				2.896	(5/2,7/2,9/2)	188
165HO 189				2.911	(31/2-)	189
165HO 190			2.912	35/2-		190
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165HO 191				2.913	(5/2,7/2,9/2)	191
165HO 192				2.917	(5/2,7/2,9/2)	192
165HO 193				2.921	(5/2,7/2,9/2)	193
165HO 194				2.951	(5/2,7/2,9/2)	194
165HO 195				2.958	(5/2,7/2,9/2)	195
165HO 196				2.963	(5/2,7/2,9/2)	196
165HO 197				2.973	(7/2,9/2)	197
165HO 198				2.991	(9/2)	198
165HO 199				3.002	(7/2,9/2)	199
165HO 200				3.030	(33/2-)	200
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165HO 201				3.035	(5/2,7/2,9/2)	201
165HO 202				3.077	(5/2,7/2,9/2)	202
165HO 203				3.086	(7/2,9/2)	203
165HO 204				3.094	(9/2)	204
165HO 205				3.105	(5/2,7/2,9/2)	205
165HO 206				3.120	(5/2,7/2,9/2)	206
165HO 207				3.125	(7/2)	207
165HO 208				3.131	(5/2,7/2,9/2)	208
165HO 209				3.134	(5/2,7/2,9/2)	209
165HO 210				3.144	(5/2,7/2,9/2)	210
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165HO 211				3.147	(5/2,7/2,9/2)	211
165HO 212				3.167	(5/2,7/2,9/2)	212
165HO 213				3.183	(9/2)	213
165HO 214				3.187	(5/2,7/2,9/2)	214
165HO 215				3.191	(9/2)	215
165HO 216				3.200	(33/2-)	216
165HO 217				3.213	(5/2,7/2,9/2)	217
165HO 218				3.220	(5/2,7/2,9/2)	218
165HO 219			3.230	37/2-		219

165HO 220			3.237	(9/2)	220
165HO 221			3.247	(5/2,7/2,9/2)	221
165HO 222			3.259	(5/2,7/2,9/2)	222
165HO 223			3.287	(5/2,7/2,9/2)	223
165HO 224			3.313	(5/2,7/2,9/2)	224
165HO 225			3.321	(35/2-)	225
165HO 226			3.329	(5/2,7/2,9/2)	226
165HO 227			3.352	(5/2,7/2,9/2)	227
165HO 228			3.358	(9/2)	228
165HO 229			3.371	(5/2,7/2,9/2)	229
165HO 230			3.400	(5/2,7/2,9/2)	230
165HO 231			3.407	(5/2,7/2,9/2)	231
165HO 232			3.418	(5/2,7/2,9/2)	232
165HO 233			3.423	(5/2,7/2,9/2)	233
165HO 234			3.427	(5/2,7/2,9/2)	234
165HO 235			3.439	(5/2,7/2,9/2)	235
165HO 236			3.455	(5/2,7/2,9/2)	236
165HO 237			3.468	(5/2,7/2,9/2)	237
165HO 238			3.472	(7/2,9/2)	238
165HO 239			3.478	(5/2,7/2,9/2)	239
165HO 240			3.503	(5/2,7/2,9/2)	240
165HO 241			3.509	(7/2,9/2)	241
165HO 242			3.513	(5/2,7/2,9/2)	242
165HO 243			3.525	(5/2,7/2,9/2)	243
165HO 244	3.529	39/2-			244
165HO 245			3.544	(5/2,7/2,9/2)	245
165HO 246			3.549	(5/2,7/2,9/2)	246
165HO 247			3.559	(5/2,7/2,9/2)	247
165HO 248			3.589	(5/2,7/2,9/2)	248
165HO 249			3.598	(5/2,7/2,9/2)	249
165HO 250			3.604	(5/2,7/2,9/2)	250
165HO 251			3.619	(37/2-)	251
165HO 252			3.651	(5/2,7/2,9/2)	252
165HO 253			3.679	(5/2,7/2,9/2)	253
165HO 254			3.702	(9/2)	254
165HO 255			3.728	(5/2,7/2,9/2)	255
165HO 256			3.735	(7/2,9/2)	256
165HO 257			3.756	(5/2,7/2,9/2)	257
165HO 258			3.762	(5/2,7/2,9/2)	258
165HO 259			3.773	(5/2,7/2,9/2)	259
165HO 260			3.779	(5/2,7/2,9/2)	260
165HO 261			3.809	(7/2,9/2)	261
165HO 262			3.818	(5/2,7/2,9/2)	262
165HO 263			3.839	(5/2,7/2,9/2)	263
165HO 264			3.843	(5/2,7/2,9/2)	264

165H0 265				3.858	(5/2,7/2,9/2)	265
165H0 266				3.891	(5/2,7/2,9/2)	266
165H0 267				3.895	(5/2,7/2,9/2)	267
165H0 268				3.900	(5/2,7/2,9/2)	268
165H0 269				3.918	(5/2,7/2,9/2)	269
165H0 270				3.974	(5/2,7/2,9/2)	270
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165H0 271				3.999	(5/2,7/2,9/2)	271
165H0 272				4.061	(5/2,7/2,9/2)	272
165H0 273				4.109	(5/2,7/2,9/2)	273

S-p = 6.219 ( 0.001)-----  
 S-n = 7.989 ( 0.002)-----  
 S-2p = 14.880 ( 0.004)-----  
 S-2n = 14.663 ( 0.001)-----  
 S-alpha= -0.139 ( 0.001)-----

S+p = -7.315 ( 0.001)  
 S+n = -6.244 ( 0.001)  
 S+2p = -12.223 ( 0.001)  
 S+2n = -13.524 ( 0.005)  
 S+alpha = 1.198 ( 0.001)

gap p = -1.096 ( 0.001)  
 gap n = 1.745 ( 0.002)  
 gap 2p = 2.657 ( 0.004)  
 gap 2n = 1.139 ( 0.005)  
 gap alpha = 1.060 ( 0.002)