

^{164}Dy $Z = 66$ $N = 98$ [link to full NNDC output](#)

Based on ENSDF from Dec 2018, and mass evaluation from 2016

BE = 1338.029 (0.001) MeV

	Energy T	J+	J-	J-other	T1/2
164DY 1	0.000	0+			1 STABLE
164DY 2	0.073	2+			2 2.393 NS 29
164DY 3	0.242	4+			3 201 PS 8
S-alpha= 0.451 (0.002)					
164DY 4	0.501	6+			4 27.2 PS 8
164DY 5	0.762	2+			5 4.6 PS 3
164DY 6	0.828	3+			6
164DY 7	0.844	8+			7 7.2 PS 3
164DY 8	0.916	4+			8
164DY 9			0.977 2-		9
164DY 10	1.025	5+			10
164DY 11			1.039 3-		11
164DY 12			1.123 4-		12
164DY 13	1.154	6+			13
164DY 14				1.166	14
164DY 15			1.225 5-		15
164DY 16	1.261	10+			16 2.29 PS 11
164DY 17	1.302	7+			17
164DY 18			1.350 6-		18
164DY 19				1.394 (2+)	19
164DY 20	1.470	8+			20
164DY 21			1.496 7-		21
164DY 22			1.588 4-		22
164DY 23				1.608 (4+)	23
164DY 24	1.655	9+			24
164DY 25	1.655	0+			25
164DY 26			1.675 1-		26
164DY 27			1.687 5-		27
164DY 28	1.716	2+			28 1.2 PS +15-4
164DY 29				1.725	29
164DY 30				1.738 (1+,2+)	30
164DY 31	1.746	12+			31 1.18 PS 6
164DY 32			1.758 3-		32
164DY 33				1.770 (4,5,3+)	33
164DY 34	1.780	0+			34
164DY 35				1.790	35
164DY 36				1.797 (2)+	36
164DY 37				1.804 6(-)	37

164DY 38			1.810	1-			38
164DY 39					1.841	1(-)	39
164DY 40			1.846	2-			40

164DY 41	1.853	4+					41
164DY 42	1.859	10+					42
164DY 43					1.884	(0+)	43
164DY 44	1.892	4+					44
164DY 45			1.910	3-			45
164DY 46					1.914	(5-)	46
164DY 47	1.921	2+					47
164DY 48					1.933	(2,3)+	48
164DY 49					1.934	4(-)	49
164DY 50					1.941	(7-)	50

164DY 51			1.950	3-			51
164DY 52					1.953	(4+)	52
164DY 53					1.978	(4-)	53
164DY 54					1.979	(3+)	54
164DY 55					1.979	(2+)	55
164DY 56					1.986	(2,3)-	56
164DY 57					1.998	(5)-	57
164DY 58					1.999	(4+)	58
164DY 59					2.015		59
164DY 60					2.032		60

164DY 61					2.042	(4-)	61
164DY 62					2.049	(2)+	62
164DY 63					2.053	(3)+	63
164DY 64					2.054	1(-)	64
164DY 65	2.076	11+					65
164DY 66					2.078	(2,3)+	66
164DY 67					2.078	(4)+	67
164DY 68					2.086		68
164DY 69	2.100	3+					69
164DY 70	2.102	4+					70

164DY 71					2.113	(2+)	71
164DY 72					2.118	(6-)	72
164DY 73					2.124	(3+)	73
164DY 74	2.152	3+					74
164DY 75					2.158	(4+)	75
164DY 76					2.173	(4)+	76
164DY 77					2.195	(4+)	77
164DY 78					2.204		78
164DY 79					2.206	(4+)	79
164DY 80					2.230	(2+)	80

164DY 81					2.235	(3-)	81
164DY 82					2.242		82

0.28 PS +19-9

164DY 83						2.248	(4+)	83
164DY 84						2.248	(2+)	84
164DY 85						2.255		85
164DY 86						2.263		86
164DY 87						2.271		87
164DY 88						2.278		88
164DY 89		2.291	14+					89 0.67 PS 6
164DY 90						2.302	(2+,3)	90

164DY 91						2.313		91
164DY 92		2.314	12+					92
164DY 93				2.330	1-			93 0.065 EV 14
164DY 94						2.333	(6+)	94
164DY 95						2.349		95
164DY 96						2.381		96
164DY 97						2.396		97
164DY 98						2.412	1(-)	98
164DY 99						2.413	(6-)	99
164DY 100						2.429	(1,2+)	100

164DY 101						2.437	(1,2+)	101
164DY 102						2.443		102
164DY 103						2.459		103
164DY 104						2.473	(1,2+)	104
164DY 105						2.496		105
164DY 106						2.518		106
164DY 107						2.520		107
164DY 108		2.531	1+					108 11.8 FS 28
164DY 109						2.537		109
164DY 110		2.539	1+					110 12.5 FS 28

164DY 111						2.555	(7-)	111
164DY 112						2.570		112
164DY 113		2.578	1+					113 9.0 FS 35
164DY 114						2.583	(1,2+)	114
164DY 115						2.595		115
164DY 116						2.604		116
164DY 117						2.630		117
164DY 118		2.654	1+					118
164DY 119						2.662	(1,2+)	119
164DY 120				2.670	1-			120 0.055 EV 14

164DY 121						2.693	(3+)	121
164DY 122		2.694	1+					122 7.6 FS 21
164DY 123						2.711		123
164DY 124						2.722		124
164DY 125						2.731		125
164DY 126						2.738		126
164DY 127						2.753	(4+)	127
164DY 128						2.761		128

164DY 129				2.786		129
164DY 130				2.792		130

164DY 131				2.801	(4+)	131
164DY 132				2.828		132
164DY 133				2.832	(14+)	133
164DY 134				2.862	1(+)	134
164DY 135				2.887		135
164DY 136				2.887	(16+)	136
164DY 137				2.920	(5+)	137
164DY 138				2.946		138
164DY 139				2.986	1(-)	139
164DY 140				2.990	1(+)	140

164DY 141				3.001	(4+,5+)	141
164DY 142				3.006	(4+,5,6+)	142
164DY 143				3.014	(4+,5)	143
164DY 144				3.027		144
164DY 145				3.050		145
164DY 146				3.070		146
164DY 147				3.076	(6+)	147
164DY 148	3.111	1+				148 6.9 FS 28
164DY 149				3.126		149
164DY 150				3.147		150

164DY 151	3.159	1+				151 6.2 FS 28
164DY 152	3.174	1+				152 13.9 FS 42
164DY 153				3.185		153
164DY 154				3.191		154
164DY 155				3.211		155
164DY 156				3.228	1(-)	156
164DY 157				3.231		157
164DY 158				3.239	(7+)	158
164DY 159				3.270	1(-)	159
164DY 160				3.279	1(+)	160

164DY 161				3.293		161
164DY 162				3.316	1(+)	162
164DY 163				3.354		163
164DY 164				3.365	1(+)	164
164DY 165				3.391		165
164DY 166				3.406	(16+)	166
164DY 167				3.414	1(+)	167
164DY 168				3.429	(8+)	168
164DY 169				3.476		169
164DY 170				3.530	(18+)	170

164DY 171				3.603		171
164DY 172				3.621	1	172
164DY 173				3.667	1	173

164DY 174				3.695		174
164DY 175				3.704	1(-)	175
164DY 176		3.718	1+			176
164DY 177				3.754	1(-)	177
164DY 178				3.765	1(+)	178
164DY 179				3.785	1(-)	179
164DY 180				3.836		180

164DY 181				3.853		181
164DY 182				3.868	1(-)	182
164DY 183		3.877	1-			183
164DY 184				3.914	1(-)	184
164DY 185				3.987	1(-)	185
164DY 186				4.038	(18+)	186
164DY 187				4.213	(20+)	187
164DY 188		4.600	1+			188
164DY 189				4.933	(22+)	189
164DY 190				7.658	2-,3-	190

S-n	=	7.658	(0.001)	-----		
164DY 191				7.660	(2-,3-)	191
164DY 192				7.682	(1+,2,3,4+)	192

S-p	=	8.661	(0.004)	-----		
S-n	=	7.658	(0.001)	-----		
S-2p	=	16.265	(0.004)	-----		
S-2n	=	13.929	(0.001)	-----		
S-alpha	=	0.451	(0.002)	-----		
S+p	=	-6.220	(0.001)			
S+n	=	-5.716	(0.001)			
S+2p	=	-13.536	(0.001)			
S+2n	=	-12.759	(0.001)			
S+alpha	=	0.552	(0.001)			
gap p	=	2.441	(0.004)			
gap n	=	1.942	(0.002)			
gap 2p	=	2.729	(0.004)			
gap 2n	=	1.170	(0.002)			
gap alpha	=	1.003	(0.002)			