

^{158}Dy $Z = 66$ $N = 92$ [link to full NNDC output](#)

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

BE = 1294.041 (0.002) MeV

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

S-alpha=	-0.874	(0.003)	-----		
158DY 1	0.000	0+			1 STABLE
158DY 2	0.099	2+			2 1.66 NS 3
158DY 3	0.317	4+			3 72 PS 4
158DY 4	0.638	6+			4 9.1 PS 10
158DY 5	0.946	2+			5 0.85 PS 11
158DY 6	0.991	0+			6
158DY 7	1.044	8+			7 2.9 PS 6
158DY 8	1.045	3+			8
158DY 9	1.086	2+			9 0.53 PS 10
158DY 10	1.164	4+			10

158DY 11	1.269	0+			11
158DY 12	1.280	4+			12
158DY 13	1.315	5+			13
158DY 14				1.362 (2+)	14
158DY 15				1.372 (1,2,3)-	15
158DY 16			1.397 3-		16
158DY 17			1.442 1-		17
158DY 18				1.477	18
158DY 19	1.486	6+			19
158DY 20				1.501	20

158DY 21				1.514 2+,3,4+	21
158DY 22				1.518 3-,4-	22
158DY 23	1.520	10+			23 1.41 PS 19
158DY 24			1.528 5-		24
158DY 25	1.547	6+			25
158DY 26	1.559	0+			26
158DY 27				1.608 (2)+	27 0.18 PS GT
158DY 28				1.619 3-,4-,5-	28
158DY 29				1.635	29
158DY 30				1.672 2+,3,4+	30

158DY 31	1.676	7+			31
158DY 32				1.710 (+)	32
158DY 33	1.743	0+			33
158DY 34				1.763 (6-)	34
158DY 35				1.819	35
158DY 36				1.828	36
158DY 37				1.840 2+,3,4+	37

158DY	38	1.852	2+					38
158DY	39					1.893	(8+)	39
158DY	40	1.895	4+					40 0.11 NS LT

158DY	41					1.920	3+,4+,5+	41
158DY	42	1.941	3+					42
158DY	43					1.976	1+,2+	43
158DY	44	2.000	0+					44
158DY	45	2.022	5+					45
158DY	46					2.034		46
158DY	47					2.048		47
158DY	48	2.049	12+					48 0.85 PS 16
158DY	49	2.055	4+					49
158DY	50					2.097	(8-)	50

158DY	51	2.108	4+					51
158DY	52	2.154	6+					52
158DY	53					2.209		53
158DY	54					2.211	(5+)	54
158DY	55					2.231	(8-)	55
158DY	56					2.260		56
158DY	57					2.318		57
158DY	58					2.351		58
158DY	59					2.362	(8-)	59
158DY	60	2.382	4+					60

158DY	61					2.389	(6+)	61
158DY	62					2.410	2-,3-,4-	62
158DY	63	2.410	4+					63
158DY	64					2.437	3+,4+	64
158DY	65					2.453	(11-)	65
158DY	66					2.468	(9-)	66
158DY	67					2.477	(10-)	67
158DY	68					2.512	(10-)	68
158DY	69	2.519	4+					69
158DY	70					2.528	(8+)	70

158DY	71					2.539	3+,4+	71
158DY	72					2.601	(10-)	72
158DY	73			2.606	1-			73
158DY	74	2.612	14+					74 0.73 PS 15
158DY	75					2.645	(+)	75
158DY	76	2.672	4+					76
158DY	77					2.759	(11-)	77
158DY	78					2.807	(12-)	78
158DY	79					2.887	(13-)	79
158DY	80					2.940	(12-)	80

158DY	81					2.985		81
158DY	82	2.989	2+					82

158DY 83						3.144	(13-)	83				
158DY 84		3.190	16+					84	0.63 PS	9		
158DY 85						3.217	(14-)	85				
158DY 86						3.237	(6+)	86				
158DY 87						3.369	(14-)	87				
158DY 88						3.369	(15-)	88				
158DY 89		3.531	4+					89				
158DY 90						3.548	(3-)	90				

158DY 91		3.582	2+					91				
158DY 92						3.613	(15-)	92				
158DY 93						3.700	(16-)	93				
158DY 94		3.781	18+					94	0.55 PS	8		
158DY 95						3.877	(16-)	95				
158DY 96						3.904	(17-)	96				
158DY 97						4.158	(17-)	97				
158DY 98						4.243	(18-)	98				
158DY 99		4.407	20+					99	0.40 PS	8		
158DY 100						4.456	(18-)	100				

158DY 101						4.491	(19-)	101				
158DY 102						4.769	(19-)	102				
158DY 103						4.839	(20-)	103				
158DY 104		5.085	22+					104	0.33 PS	9		
158DY 105						5.098	(20-)	105				
158DY 106						5.128	(21-)	106				
158DY 107						5.439	(21-)	107				
158DY 108						5.484	(22-)	108				
158DY 109						5.794	(22-)	109				
158DY 110						5.811	(23-)	110				

158DY 111						5.820	(24+)	111	0.28 PS	10		
158DY 112						6.161	(23-)	112				
158DY 113						6.178	(24-)	113				
158DY 114						6.519	(24-)	114				
158DY 115						6.543	(25-)	115				
158DY 116						6.613	(26+)	116	0.17 PS	10		
158DY 117						6.924	(26-)	117				

S-p	=	6.933	(0.003)	-----								
158DY 118						7.323	(27-)	118				
158DY 119						7.456	(28+)	119				
158DY 120						7.720	(28-)	120				

158DY 121						8.150	(29-)	121				
158DY 122						8.354	(30+)	122				
158DY 123						8.565	(30-)	123				
158DY 124						9.023	(31-)	124				

S-n	=	9.054	(0.006)	-----								
158DY 125						9.299	(32+)	125				
158DY 126						9.458	(32-)	126				

158DY 127			9.944	(33-)	127
158DY 128			10.294	(34+)	128
158DY 129			10.398	(34-)	129
158DY 130			10.913	(35-)	130

158DY 131			11.331	(36+)	131
158DY 132			11.391	(36-)	132
158DY 133			11.933	(37-)	133
158DY 134			12.416	(38+)	134
158DY 135			12.435	(38-)	135

S-2p	=	12.450 (0.003)	-----		
158DY 136			13.004	(39-)	136
158DY 137			13.534	(40-)	137
158DY 138			13.544	(40+)	138
158DY 139			14.135	(41-)	139
158DY 140			14.718	(42+)	140

158DY 141			15.330	(43-)	141
158DY 142			15.940	(44+)	142

S-p = 6.933 (0.003)-----
S-n = 9.054 (0.006)-----
S-2p = 12.450 (0.003)-----
S-2n = 16.021 (0.003)-----
S-alpha= -0.874 (0.003)-----

S+p = -4.211 (0.004)
S+n = -6.831 (0.003)
S+2p = -10.235 (0.024)
S+2n = -15.408 (0.003)
S+alpha = 1.648 (0.003)

gap p = 2.722 (0.005)
gap n = 2.223 (0.006)
gap 2p = 2.215 (0.025)
gap 2n = 0.613 (0.004)
gap alpha = 0.774 (0.004)