

^{158}Dy $Z = 66$ $N = 92$ adopted link ENSDF link

Based on ensdf_240402 (Apr 2024), and mass evaluation from 2020

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 =		6.932 (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 = 6.932 (0.003) -----
S-n = 9.054 (0.006) -----
S-2p = 12.450 (0.003) -----
S-2n = 16.020 (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 (0.002)
S+alpha = 1.648 (0.002)

gap p = 2.721 (0.005)
gap n = 2.223 (0.006)
gap 2p = 2.215 (0.024)
gap 2n = 0.612 (0.004)
gap alpha = 0.774 (0.004)