

^{159}Dy $Z = 66$ $N = 93$ adopted link ENSDF link

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

BE = 1300.872 (0.001) MeV

Qbeta+ = 0.365 (0.002) MeV

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

S-alpha=	-0.478 (0.002)-----				
159DY 1			0.000	3/2-	1 144.4 D 2
159DY 2			0.057	5/2-	2 0.21 NS 4
159DY 3			0.136	7/2-	3
159DY 4	0.178	5/2+			4 9.3 NS 5
159DY 5	0.209	7/2+			5 1.35 NS 7
159DY 6			0.236	9/2-	6
159DY 7	0.239	9/2+			7
159DY 8			0.310	5/2-	8 0.2 NS LT
159DY 9	0.328	11/2+			9
159DY 10			0.353	11/2-	10 122 US 3

159DY 11			0.361	11/2-	11
159DY 12				0.365 (13/2+)	12
159DY 13			0.395	7/2-	13
159DY 14	0.417	3/2+			14
159DY 15				0.470	15
159DY 16			0.498	13/2-	16
159DY 17			0.505	9/2-	17
159DY 18			0.515	13/2-	18
159DY 19			0.533	1/2-	19
159DY 20	0.543	15/2+			20

159DY 21				0.549 (3/2+)	21
159DY 22	0.562	1/2+			22
159DY 23	0.576	17/2+			23
159DY 24			0.586	3/2-	24
159DY 25				0.607	25
159DY 26			0.621	5/2-	26
159DY 27			0.627	3/2-	27
159DY 28				0.635 (11/2-)	28
159DY 29			0.667	15/2-	29
159DY 30			0.689	5/2-	30

159DY 31			0.700	15/2-	31
159DY 32			0.746	7/2-	32
159DY 33			0.746	3/2-	33
159DY 34			0.773	7/2-	34
159DY 35			0.773	5/2-	35
159DY 36				0.796	36

159DY 37				0.826	7/2-			37
159DY 38				0.832	17/2-			38
159DY 39							0.856	39
159DY 40		0.860	19/2+					40

159DY 41		0.879	21/2+					41
159DY 42				0.903	17/2-			42
159DY 43							0.983	43
159DY 44				1.016	5/2-			44
159DY 45				1.042	19/2-			45
159DY 46				1.076	5/2-			46
159DY 47				1.091	7/2-			47
159DY 48				1.125	19/2-			48
159DY 49							1.154	5/2-,7/2-
159DY 50							1.189	(9/2-)

159DY 51							1.202	5/2-,7/2-
159DY 52							1.213	
159DY 53				1.228	21/2-			53
159DY 54		1.273	25/2+					54
159DY 55		1.274	23/2+					55
159DY 56							1.287	56
159DY 57							1.341	57
159DY 58				1.363	21/2-			58
159DY 59		1.371	5/2+					59
159DY 60							1.391	60

159DY 61							1.411	61
159DY 62							1.431	62
159DY 63				1.471	23/2-			63
159DY 64							1.473	(3/2-)
159DY 65							1.515	65
159DY 66							1.535	(5/2-)
159DY 67							1.558	67
159DY 68							1.590	68
159DY 69				1.617	23/2-			69
159DY 70							1.621	(7/2-)

159DY 71							1.643	71
159DY 72							1.673	72
159DY 73				1.673	25/2-			73
159DY 74							1.696	74
159DY 75							1.727	75
159DY 76							1.748	76
159DY 77		1.750	29/2+					77
159DY 78		1.776	27/2+					78
159DY 79							1.786	79
159DY 80							1.797	80

159DY 81							1.824	81

159DY 82						1.849		82
159DY 83				1.885		25/2-		83
159DY 84							1.891	84
159DY 85							1.918	85
159DY 86				1.941		27/2-		86
159DY 87							1.961	87
159DY 88							1.989	88
159DY 89							2.016	89
159DY 90				2.158		29/2-		90

159DY 91				2.164		27/2-		91
159DY 92		2.303		33/2+				92
159DY 93		2.355		31/2+				93
159DY 94				2.446		31/2-		94
159DY 95				2.452		29/2-		95
159DY 96				2.683		33/2-		96
159DY 97				2.746		31/2-		97
159DY 98		2.922		37/2+				98
159DY 99				2.986		35/2-		99
159DY 100		3.002		35/2+				100

159DY 101				3.043		33/2-		101
159DY 102				3.251		37/2-		102
159DY 103				3.342		35/2-		103
159DY 104				3.568		39/2-		104
159DY 105		3.600		41/2+				105
159DY 106		3.709		39/2+				106
159DY 107				3.870		41/2-		107
159DY 108				4.202		43/2-		108
159DY 109		4.327		45/2+				109
159DY 110		4.467		43/2+				110

159DY 111				4.541		45/2-		111
159DY 112				4.890		47/2-		112
159DY 113		5.096		49/2+				113
159DY 114				5.264		49/2-		114
159DY 115		5.281		47/2+				115
159DY 116				5.633		51/2-		116
159DY 117		5.900		53/2+				117
159DY 118				6.039		53/2-		118
159DY 119				6.427		55/2-		119
159DY 120		6.743		57/2+				120

S-n	=	6.831	(0.003)	-----			
159DY 121				6.862		57/2-		121

S-p	=	6.985	(0.002)	-----			
159DY 122		7.624		61/2+				122
159DY 123		8.546		65/2+				123
159DY 124		9.514		69/2+				124

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S-p    =  6.985 ( 0.002)-----
S-n    =  6.831 ( 0.003)-----
S-2p   = 12.921 ( 0.002)-----
S-2n   = 15.885 ( 0.005)-----
S-alpha= -0.478 ( 0.002)-----

S+p    = -4.504 ( 0.015)
S+n    = -8.577 ( 0.002)
S+2p   = -10.612 ( 0.009)
S+2n   = -15.031 ( 0.002)
S+alpha =  1.575 ( 0.005)

gap p   =  2.481 ( 0.015)
gap n   = -1.745 ( 0.003)
gap 2p  =  2.309 ( 0.009)
gap 2n  =  0.854 ( 0.006)
gap alpha =  1.097 ( 0.005)
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