

^{159}Er $Z = 68$ $N = 91$ adopted link ENSDF link

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

BE = 1294.701 (0.004) MeV

Qbeta+ = 2.768 (0.005) MeV

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

S-alpha=	-2.170	(0.010)	-----		
159ER 1			0.000	3/2-	1 36 M 1
159ER 2			0.059	5/2-	2 0.3 NS LE
159ER 3			0.144	7/2-	3 0.17 NS LT
159ER 4	0.183	9/2+			4 0.337 US 14
159ER 5			0.220	5/2-	5 0.210 NS 20
159ER 6	0.225	13/2+			6
159ER 7			0.258	9/2-	7
159ER 8	0.271	5/2+			8
159ER 9	0.302	7/2+			9 220 PS 10
159ER 10			0.307	7/2-	10

159ER 11	0.348	3/2+			11
159ER 12				0.363 (11/2+)	12
159ER 13			0.429	11/2-	13 0.59 US 6
159ER 14				0.435 (17/2+)	14 100 PS 4
159ER 15				0.449 (5/2-,7/2,9/2-	15)
159ER 16				0.468 (3/2,5/2)+	16
159ER 17				0.555 (5/2)-	17
159ER 18				0.566 (7/2)-	18
159ER 19			0.574	13/2-	19
159ER 20				0.591 (15/2+)	20

159ER 21				0.616 (3/2+,5/2,7/2+)	21
159ER 22				0.617 (5/2-,7/2-)	22
159ER 23				0.717 (5/2+,7/2)	23
159ER 24	0.785	21/2+			24 9.1 PS 8
159ER 25				0.791	25
159ER 26			0.833	15/2-	26
159ER 27				0.891	27
159ER 28				0.962 (19/2+)	28
159ER 29				0.964 (3/2,5/2,7/2)+	29
159ER 30			0.990	17/2-	30

159ER 31				0.991	31
159ER 32				1.050	32
159ER 33				1.191	33
159ER 34				1.251 (25/2+)	34 2.1 PS +4-6
159ER 35				1.318 (7/2)	35
159ER 36				1.449 (23/2+)	36

159ER 37				1.479	21/2-			37
159ER 38						1.715	(23/2+)	38
159ER 39						1.807	(29/2+)	39 1.5 PS +3-6
159ER 40				2.012	25/2-			40

159ER 41						2.027	(27/2+)	41
159ER 42				2.089	25/2-			42
159ER 43				2.231	19/2-			43
159ER 44				2.261	27/2-			44
159ER 45				2.293	21/2-			45
159ER 46				2.394	23/2-			46
159ER 47						2.434	(33/2+)	47
159ER 48				2.475	29/2-			48
159ER 49				2.523	25/2-			49
159ER 50				2.551	29/2-			50

159ER 51				2.582	29/2-			51
159ER 52				2.663	31/2-			52
159ER 53						2.677	(31/2+)	53
159ER 54				2.689	27/2-			54
159ER 55				2.883	29/2-			55
159ER 56				2.912	33/2-			56
159ER 57				3.099	33/2-			57
159ER 58				3.106	31/2-			58
159ER 59		3.111	37/2+					59
159ER 60				3.147	35/2-			60

159ER 61				3.200	33/2-			61
159ER 62				3.356	33/2-			62
159ER 63						3.382	(35/2+)	63
159ER 64				3.439	37/2-			64
159ER 65				3.629	35/2-			65
159ER 66				3.695	37/2-			66
159ER 67				3.734	39/2-			67
159ER 68		3.821	41/2+					68
159ER 69				3.864	37/2-			69
159ER 70				3.923	37/2-			70

159ER 71				4.065	41/2-			71
159ER 72						4.130	(39/2+)	72
159ER 73				4.236	39/2-			73
159ER 74				4.353	41/2-			74
159ER 75				4.421	43/2-			75
159ER 76		4.561	45/2+					76
159ER 77				4.564	41/2-			77
159ER 78				4.585	41/2-			78
159ER 79				4.786	45/2-			79
159ER 80						4.905	(43/2+)	80

159ER 81				4.906	43/2-			81

159ER 82				5.075	45/2-		82
159ER 83				5.193	47/2-		83
159ER 84				5.256	45/2-		84
159ER 85		5.343	49/2+				85
159ER 86				5.587	49/2-		86
159ER 87				5.615	47/2-		87
S-p = 5.663 (0.027)-----							
159ER 88				5.851	49/2-		88
159ER 89				5.980	49/2-		89
159ER 90				6.026	51/2-		90

159ER 91		6.175	53/2+				91
159ER 92				6.350	51/2-		92
159ER 93				6.438	53/2-		93
159ER 94				6.670	53/2-		94
159ER 95				6.729	53/2-		95
159ER 96				6.883	55/2-		96
159ER 97						7.052 (57/2+)	97
159ER 98				7.117	55/2-		98
159ER 99				7.295	57/2-		99
S-n = 7.329 (0.025)-----							
159ER 100				7.519	57/2-		100

159ER 101						7.536 (57/2-)	101
159ER 102				7.753	59/2-		102
159ER 103				7.934	59/2-		103
159ER 104		7.958	61/2+				104
159ER 105				8.161	61/2-		105
159ER 106				8.365	61/2-		106
159ER 107						8.441 (61/2-)	107
159ER 108				8.664	63/2-		108
159ER 109				8.812	63/2-		109
159ER 110		8.884	65/2+				110

159ER 111				9.073	65/2-		111
159ER 112						9.276 (65/2-)	112
159ER 113						9.359 (65/2-)	113
159ER 114				9.632	67/2-		114
S-2p = 9.714 (0.006)-----							
159ER 115						9.757 (67/2-)	115
159ER 116		9.840	69/2+				116

S-p = 5.663 (0.027)-----							
S-n = 7.329 (0.025)-----							
S-2p = 9.714 (0.006)-----							
S-2n = 17.290 (0.027)-----							
S-alpha= -2.170 (0.010)-----							

S+p = -3.029 (0.033)							

S+n = -9.574 (0.025)
S+2p = -7.851 (0.016)
S+2n = -16.783 (0.009)
S+alpha = 2.842 (0.016)

gap p = 2.634 (0.043)
gap n = -2.245 (0.035)
gap 2p = 1.864 (0.017)
gap 2n = 0.507 (0.028)
gap alpha = 0.673 (0.019)