

$^{150}\text{Eu}$        $Z = 63$        $N = 87$       adopted link      ENSDF link

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

BE = 1236.202 ( 0.006) MeV  
 Qbeta- = 0.972 ( 0.009) MeV  
 Qbeta+ = 2.259 ( 0.006) MeV

	Energy T	J+		J-		J-other		T1/2
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S-alpha=	-2.237	( 0.008)	-----					
150EU 1				0.000	5-			1 36.9 Y 9
150EU 2				0.042	0-			2 12.8 H 1
150EU 3							0.043 (1-)	3
150EU 4							0.069 (2-)	4
150EU 5							0.119 (2-)	5
150EU 6							0.181 (3-)	6
150EU 7				0.190	6-			7
150EU 8							0.195 (3-)	8
150EU 9							0.237 (1-)	9
150EU 10				0.248	6-			10
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150EU 11							0.269 (4-)	11
150EU 12							0.321 (4-)	12
150EU 13							0.343 (3,2)	13
150EU 14							0.360 (5-)	14
150EU 15							0.406	15
150EU 16				0.413	5-			16
150EU 17				0.417	7-			17
150EU 18							0.421 (3-)	18
150EU 19							0.428	19
150EU 20							0.458	20
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150EU 21							0.465	21
150EU 22							0.488	22
150EU 23							0.496	23
150EU 24							0.511	24
150EU 25							0.532	25
150EU 26		0.562		6+				26
150EU 27		0.589		8+				27 45 NS 3
150EU 28							0.594	28
150EU 29							0.599	29
150EU 30							0.601	30
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150EU 31							0.602	31
150EU 32							0.628	32
150EU 33							0.634	33
150EU 34							0.671	34
150EU 35							0.675	35

150EU 36						0.683		36
150EU 37						0.718		37
150EU 38		0.718		9+				38
150EU 39						0.721		39
150EU 40						0.743		40
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150EU 41						0.762		41
150EU 42		0.779		10+				42
150EU 43						0.877		43
150EU 44		1.208		10+				44
150EU 45						1.224	3-	45
150EU 46						1.233	3-	46
150EU 47		1.236		12+				47
150EU 48						1.268	(9-)	48
150EU 49						1.275	(11+)	49
150EU 50						1.287	(9-)	50
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150EU 51						1.321	(4-)	51
150EU 52						1.372	11-	52
150EU 53						1.382	12-	53
150EU 54						1.438	(5-)	54
150EU 55						1.787	13-	55
150EU 56		1.830		14+				56
150EU 57						1.848	14-	57
150EU 58						1.897	(13+)	58
150EU 59						2.169	14-	59
150EU 60						2.344	15-	60
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150EU 61						2.387	15-	61
150EU 62						2.441	16-	62
150EU 63						2.531	(15+)	63
150EU 64		2.630		16+				64
150EU 65						2.686	16-	65
150EU 66						2.828	17-	66
150EU 67						2.987	17-	67
150EU 68						3.106	18-	68
150EU 69						3.214	(17+)	69
150EU 70						3.253	19-	70
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150EU 71						3.365	18-	71
150EU 72		3.470		18+				72
150EU 73						3.691	20-	73
150EU 74						3.714	(19-)	74
150EU 75						3.841	20-	75
150EU 76						3.968	(19+)	76
150EU 77						3.980	(20-)	77
150EU 78						4.124	21-	78
150EU 79						4.256	(20+)	79
150EU 80						4.394	22-	80
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150EU	81				4.453	(21-)	81
150EU	82		4.577	22-			82
150EU	83				4.619	(22-)	83
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S-p	=	4.945	( 0.006)				
150EU	84		5.077	23-			84
150EU	85		5.198	24-			85
150EU	86				5.250	(23-)	86
150EU	87		5.334	24-			87
150EU	88		6.023	25-			88
150EU	89		6.111	26-			89
150EU	90				6.192	(25-)	90
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S-p = 4.945 ( 0.006)-----  
 S-n = 6.422 ( 0.007)-----  
 S-2p = 12.504 ( 0.008)-----  
 S-2n = 14.638 ( 0.012)-----  
 S-alpha= -2.237 ( 0.008)-----

S+p = -6.686 ( 0.007)  
 S+n = -7.932 ( 0.006)  
 S+2p = -10.503 ( 0.040)  
 S+2n = -14.239 ( 0.006)  
 S+alpha = 2.211 ( 0.046)

gap p = -1.740 ( 0.009)  
 gap n = -1.510 ( 0.010)  
 gap 2p = 2.001 ( 0.041)  
 gap 2n = 0.399 ( 0.013)  
 gap alpha = -0.026 ( 0.046)