

$^{137}\text{Ce}$        $Z = 58$        $N = 79$       adopted link      ENSDF link

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

BE = 1146.313 ( 0.000) MeV

Qbeta+ = 1.222 ( 0.002) MeV

	Energy T	J+	J-	J-other	T1/2
137CE 1	0.000	3/2+			1 9.0 H 3
137CE 2				0.160 (1/2)+	2 0.79 NS 14
137CE 3			0.254 11/2-		3 34.4 H 3
137CE 4				0.434 (3/2)+	4
137CE 5				0.514 (3/2)+	5
137CE 6				0.763 (5/2,3/2)+	6
S-alpha= 0.790 ( 0.001)					
137CE 7				0.826 (1/2,3/2)	7
137CE 8				0.837 (5/2)+	8
137CE 9				0.867 (5/2,3/2)	9
137CE 10			0.928 15/2-		10
137CE 11				1.105 3/2	11
137CE 12			1.144 13/2-		12
137CE 13				1.147	13
137CE 14				1.180 (5/2+)	14
137CE 15				1.259	15
137CE 16				1.271 3/2	16
137CE 17				1.289	17
137CE 18				1.337	18
137CE 19				1.435	19
137CE 20				1.477 (5/2+,3/2+)	20
137CE 21				1.570	21
137CE 22				1.577 (1/2)	22
137CE 23				1.603 3/2	23
137CE 24				1.643 (1/2)	24
137CE 25				1.687 (1/2)	25
137CE 26				1.693	26
137CE 27				1.715 (1/2)	27
137CE 28				1.728 (1/2)	28
137CE 29				1.801	29
137CE 30				1.888 3/2	30
137CE 31				1.909 (1/2)	31
137CE 32				1.925 (3/2,5/2)+	32
137CE 33	1.934	3/2+			33
137CE 34				1.952 3/2	34
137CE 35			1.980 15/2-		35
137CE 36			2.039 19/2-		36

137CE 37				2.041	(1/2)	37
137CE 38				2.061	(1/2)	38
137CE 39				2.114		39
137CE 40				2.134	3/2(+)	40
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137CE 41				2.143	(1/2)	41
137CE 42				2.153		42
137CE 43		2.191	19/2-			43
137CE 44				2.198		44
137CE 45				2.207	(5/2+,3/2+)	45
137CE 46				2.275	3/2(+)	46
137CE 47				2.293	(1/2)	47
137CE 48				2.305	3/2(+)	48
137CE 49				2.309		49
137CE 50				2.336	(21/2)	50
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137CE 51				2.347		51
137CE 52				2.437	(17/2-)	52
137CE 53				2.454	(1/2)	53
137CE 54				2.466		54
137CE 55				2.480		55
137CE 56		2.490	21/2-			56
137CE 57				2.539		57
137CE 58				2.562	(19/2+)	58
137CE 59				2.566	(1/2)	59
137CE 60				2.587		60
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137CE 61				2.703		61
137CE 62				2.768	(1/2)	62
137CE 63				2.812	(23/2)-	63
137CE 64				2.888		64
137CE 65				2.928	(19/2+)	65
137CE 66				2.973	(-)	66
137CE 67				3.067	(21/2+)	67
137CE 68				3.129		68
137CE 69				3.225	(23/2)	69
137CE 70				3.304	(25/2-)	70
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137CE 71				3.405	(23/2+)	71
137CE 72				3.416	(25/2)	72
137CE 73				3.684		73
137CE 74				3.694		74
137CE 75				3.703	(27/2)	75
137CE 76				3.725	(25/2+)	76
137CE 77				3.744		77
137CE 78				3.764		78
137CE 79				3.891		79
137CE 80		3.936	25/2-			80
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137CE 81				3.986		81

137CE 82				4.115	(29/2)	82
137CE 83				4.174		83
137CE 84				4.256	(31/2)	84
137CE 85				4.340		85
137CE 86				4.586		86
137CE 87				4.668		87
137CE 88				4.705	(31/2)	88
137CE 89				4.732	(33/2+)	89
137CE 90				5.305	(35/2+)	90
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137CE 91				5.380	(33/2)	91
137CE 92				5.546	(35/2-)	92
137CE 93				5.852	(37/2-)	93
137CE 94				6.111		94
137CE 95				6.322	(39/2-)	95
137CE 96				6.460		96
137CE 97				6.930		97
S-p	=	7.170	( 0.053)	-----		
S-n	=	7.481	( 0.000)	-----		
137CE 98				7.661		98

S-p = 7.170 ( 0.053)-----  
S-n = 7.481 ( 0.000)-----  
S-2p = 12.646 ( 0.000)-----  
S-2n = 17.445 ( 0.010)-----  
S-alpha= 0.790 ( 0.001)-----

S+p = -4.499 ( 0.010)  
S+n = -9.718 ( 0.001)  
S+2p = -10.676 ( 0.028)  
S+2n = -17.182 ( 0.002)  
S+alpha = -0.698 ( 0.003)

gap p = 2.671 ( 0.054)  
gap n = -2.237 ( 0.001)  
gap 2p = 1.970 ( 0.028)  
gap 2n = 0.263 ( 0.010)  
gap alpha = 0.092 ( 0.003)