

^{139}Cs $Z = 55$ $N = 84$ adopted link ENSDF link

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

BE = 1159.585 (0.003) MeV

Qbeta- = 4.213 (0.003) MeV

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

S-alpha=	-0.653	(0.004)	-----		
139CS 1	0.000	7/2+			1 9.27 M 5
139CS 2				0.219 5/2+,7/2+	2 2.23 NS 5
139CS 3				0.290 3/2+,5/2+,7/2+	3 96 PS 25
139CS 4				0.394 3/2+,5/2+,7/2+	4 24 PS 15
139CS 5				0.394 (3/2+,5/2+,7/2+	5) 1.71 NS 2
139CS 6				0.515 3/2+,5/2+	6 6 PS +10-6
139CS 7				0.595 (9/2+)	7
139CS 8				0.602 (11/2+)	8
139CS 9				0.647 3/2,5/2,7/2+	9
139CS 10				0.710	10

139CS 11				0.732 3/2+,5/2,7/2+	11
139CS 12				0.892 3/2,5/2,7/2+	12
139CS 13				0.943 3/2,5/2,7/2+	13
139CS 14				1.007 1/2(+),3/2,5/2	14 15 PS 10
139CS 15				1.020 3/2,5/2,7/2+	15
139CS 16				1.037	16
139CS 17				1.071 (13/2+)	17
139CS 18				1.139	18
139CS 19				1.146 (15/2+)	19
139CS 20				1.214	20

139CS 21				1.395	21
139CS 22				1.412	22
139CS 23				1.461	23
139CS 24				1.499 (17/2+)	24
139CS 25				1.508	25
139CS 26				1.510	26
139CS 27				1.600	27
139CS 28				1.653	28
139CS 29				1.694	29
139CS 30				1.718	30

139CS 31				1.722	31
139CS 32				1.736 (19/2+)	32
139CS 33				1.739	33
139CS 34				1.793	34
139CS 35				1.816 3/2,5/2,7/2+	35
139CS 36				1.831	36

139CS 37				1.847		37
139CS 38				2.064	3/2, 5/2, 7/2+	38
139CS 39				2.100		39
139CS 40				2.104	3/2, 5/2, 7/2+	40

139CS 41				2.119		41
139CS 42				2.186	1/2(+), 3/2, 5/2	42
139CS 43				2.239	(21/2+)	43
139CS 44				2.305	3/2, 5/2	44
139CS 45				2.329	3/2, 5/2	45
139CS 46				2.373	1/2(+), 3/2, 5/2	46
139CS 47				2.391		47
139CS 48				2.424	3/2, 5/2, 7/2+	48
139CS 49				2.432		49
139CS 50				2.492	(23/2+)	50

139CS 51				2.510	3/2, 5/2	51
139CS 52				2.586	1/2(+), 3/2, 5/2	52
139CS 53				2.620	1/2(+), 3/2, 5/2	53
139CS 54				2.728		54
139CS 55				2.754	3/2, 5/2	55
139CS 56				2.782		56
139CS 57				2.797	1/2(+), 3/2, 5/2	57
139CS 58				2.852	1/2(+), 3/2, 5/2	58
139CS 59				2.937	3/2, 5/2	59
139CS 60				2.967	(25/2+)	60

139CS 61				2.968	1/2(+), 3/2, 5/2	61
139CS 62				2.980	1/2(+), 3/2, 5/2	62
139CS 63				3.130	3/2(+), 5/2	63
139CS 64				3.147	3/2, 5/2	64
139CS 65				3.156	3/2, 5/2	65
139CS 66				3.190		66
139CS 67				3.209	1/2, 3/2, 5/2	67
139CS 68				3.338	(27/2+)	68
139CS 69				3.343		69
139CS 70				3.373	1/2, 3/2, 5/2	70

139CS 71				3.375	3/2, 5/2	71
139CS 72				3.496	(29/2+)	72
139CS 73				3.505	3/2, 5/2	73
139CS 74				3.746	1/2, 3/2, 5/2	74
139CS 75				3.776	1/2, 3/2, 5/2	75
139CS 76				3.815	1/2, 3/2, 5/2	76
139CS 77				3.925	1/2, 3/2, 5/2	77
139CS 78				4.145	(31/2+)	78
139CS 79				4.228	1/2-, 3/2-, 5/2-	79
139CS 80				4.324	(33/2+)	80

139CS 81				4.670	(37/2+)	81

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S-p    =  8.018 ( 0.004)-----
S-n    =  5.885 ( 0.010)-----
S-2p   = 18.923 ( 0.009)-----
S-2n   = 10.298 ( 0.003)-----
S-alpha= -0.653 ( 0.004)-----

S+p    = -9.856 ( 0.008)
S+n    = -4.420 ( 0.009)
S+2p   = -16.807 ( 0.005)
S+2n   = -9.919 ( 0.010)
S+alpha =  0.105 ( 0.008)

gap p   = -1.838 ( 0.009)
gap n   =  1.466 ( 0.013)
gap 2p  =  2.116 ( 0.010)
gap 2n  =  0.379 ( 0.010)
gap alpha = -0.548 ( 0.009)
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