

^{136}Ce $Z = 58$ $N = 78$ adopted link ENSDF link

Based on ensdf_240402 (Apr 2024), and mass evaluation from 2020

BE = 1138.832 (0.000) MeV

	Energy T	J+	J-	J-other	T1/2
136CE 1	0.000	0+			1 STABLE
S-alpha= 0.499 (0.001)					
136CE 2	0.552	2+			2 6.7 PS 8
136CE 3				1.076	3
136CE 4	1.092	2+			4 4.4 PS 7
136CE 5	1.314	4+			5 0.94 PS 17
136CE 6	1.553	3+			6
136CE 7			1.978 5-		7 496 PS 23
136CE 8			1.982 (3-)		8
136CE 9	2.067	2+			9 0.151 PS 16
136CE 10	2.155	2+			10 0.039 PS 5
136CE 11	2.214	6+			11 5 NS LE
136CE 12	2.274	(2+)			12 0.305 PS 25
136CE 13			2.307 7-		13 270 PS 24
136CE 14	2.366	6+			14 5 NS LE
136CE 15			2.425 (6-)		15 3 NS LE
136CE 16	2.451	(2+)			16 0.17 PS 3
136CE 17				2.517 (2+,3)	17
136CE 18	2.595	(2+)			18
136CE 19	2.682	(2+)			19
136CE 20				2.793 (1,2+)	20
136CE 21				2.828 (1,2,3)	21
136CE 22				2.866 (1,2+)	22
136CE 23				2.904 (1,2,3)	23
136CE 24				2.932 (1,2+)	24
136CE 25	2.942	(2+)			25
136CE 26	2.955	(8+)			26
136CE 27	2.989	8+			27
136CE 28				2.991 (2+,3,4+)	28
136CE 29				3.011	29
136CE 30	3.095	10+			30 1.9 US 1
136CE 31			3.146 (8-)		31 3 NS LE
136CE 32				3.174 (1,2+)	32
136CE 33	3.201	(2+)			33
136CE 34				3.233 (1,2,3)	34
136CE 35				3.264 (1,2+)	35
136CE 36			3.278 9-		36 3 NS LE

136CE	37					3.281 (1,2+)		37		
136CE	38					3.362 (1,2+)		38		
136CE	39	3.400	(10+)					39	3 NS	LE
136CE	40	3.441	(9+)					40		

136CE	41					3.575		41		
136CE	42					3.579 (1,2+)		42		
136CE	43					3.705 (1,2,3)		43		
136CE	44	3.760	12+					44		
136CE	45	3.865	(10+)					45		
136CE	46				3.987	(10-)		46	3 NS	LE
136CE	47						4.023 (1,2,3)	47		
136CE	48				4.084	11-		48	3 NS	LT
136CE	49				4.240	(11-)		49		
136CE	50	4.360	(11+)					50		

136CE	51				4.597	(12-)		51		
136CE	52	4.786	14+					52		
136CE	53	4.833	(14+)					53		
136CE	54				4.872	(13-)		54		
136CE	55	4.928	(13+)					55		
136CE	56				5.097	(13-)		56		
136CE	57	5.305	15+					57		
136CE	58	5.568	(15+)					58	0.69 PS	26
136CE	59	5.594	(16+)					59		
136CE	60	5.643	16+					60	0.69 PS	GT

136CE	61				5.645	14-		61		
136CE	62				5.662	(14-)		62		
136CE	63				5.801	(15-)		63		
136CE	64				5.809	15-		64		
136CE	65						5.841 (16)	65		
136CE	66						5.856	66		
136CE	67	5.877	17+					67	0.69 PS	GT
136CE	68				5.995	16-		68		
136CE	69	6.098	(17+)					69	0.56 PS	LT
136CE	70	6.170	(18+)					70	0.69 PS	GT

136CE	71	6.273	(17+)					71	0.35 PS	9
136CE	72				6.282	17-		72		
136CE	73						6.380	73		
136CE	74						6.524 (19)	74		
136CE	75	6.539	(19+)					75	0.40 PS	15
136CE	76	6.642	(18+)					76		
136CE	77				6.663	18-		77	0.509 PS	15
136CE	78				6.832	(17-)		78		
136CE	79						6.885	79		
136CE	80	6.933	(20+)					80	0.55 PS	+17-18

136CE	81	7.086	(19+)					81		

136CE	82				7.099	19-				82	0.315 PS +12-10
S-p	=	7.154	(0.009)	-----							
136CE	83		7.238	(19+)						83	
136CE	84							7.293		84	
136CE	85							7.326		85	
136CE	86		7.345	(21+)						86	0.43 PS LT
136CE	87					7.585	20-			87	0.263 PS +26-31
136CE	88		7.801	(22+)						88	
136CE	89					8.110	21-			89	0.253 PS +18-28
136CE	90							8.215		90	
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136CE	91		8.316	(23+)						91	
136CE	92					8.625	22-			92	0.43 PS LT
136CE	93					9.228	23-			93	

S-p = 7.154 (0.009) -----
 S-n = 9.964 (0.010) -----
 S-2p = 12.137 (0.000) -----
 S-2n = 17.818 (0.020) -----
 S-alpha= 0.499 (0.001) -----

S+p = -3.982 (0.008)
 S+n = -7.481 (0.000)
 S+2p = -10.086 (0.012)
 S+2n = -17.200 (0.001)
 S+alpha = -0.174 (0.003)

gap p = 3.172 (0.012)
 gap n = 2.482 (0.010)
 gap 2p = 2.050 (0.012)
 gap 2n = 0.619 (0.020)
 gap alpha = 0.325 (0.003)