

^{131}Ce $Z = 58$ $N = 73$ adopted link ENSDF link

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

BE = 1091.675 (0.033) MeV

Qbeta+ = 4.061 (0.043) MeV

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

S-alpha=	-0.684	(0.035)	-----		
131CE 1	0.000	7/2+			1 10.3 M 3
131CE 2				0.063 (1/2+)	2 5.4 M 4
131CE 3				0.136 (3/2+)	3
131CE 4			0.162 9/2-		4 88 NS 2
131CE 5				0.182 (7/2-)	5
131CE 6	0.257	9/2+			6
131CE 7			0.300 11/2-		7 120 PS 8
131CE 8				0.329 (5/2+,3/2+)	8
131CE 9				0.343 (3/2+,5/2+)	9
131CE 10				0.348 (5/2+)	10

131CE 11				0.385 (11/2-)	11
131CE 12				0.387 (5/2+,3/2+)	12
131CE 13				0.428 (3/2+,5/2+,7/2+)	13
131CE 14				0.471 (1/2+,3/2+,5/2+)	14
131CE 15				0.475 (7/2+)	15
131CE 16	0.543	11/2+			16
131CE 17				0.549	17
131CE 18				0.577 (1/2+,3/2+,5/2+)	18
131CE 19				0.589 (5/2-:13/2-)	19
131CE 20				0.601 (7/2-:13/2-)	20

131CE 21				0.610	21
131CE 22			0.637 13/2-		22
131CE 23				0.645	23
131CE 24				0.648 (5/2+,7/2+)	24
131CE 25				0.687	25
131CE 26				0.718 (3/2+,5/2+)	26
131CE 27				0.740 (3/2+,5/2+)	27
131CE 28				0.745	28
131CE 29				0.753 (3/2+,5/2+)	29
131CE 30				0.762 (3/2+,5/2+,7/2+)	30

131CE 31				0.792 (5/2+)	31
131CE 32				0.810 (15/2-)	32 5.21 PS 26
131CE 33				0.848 (3/2+,5/2+)	33
131CE 34	0.867	13/2+			34 1.0 PS 4
131CE 35				0.903	35
131CE 36				0.929 (3/2+,5/2+,7/2+)	36

131CE	37				0.984	(11/2+)	37		
131CE	38				0.986		38		
131CE	39				1.010	(3/2+,5/2+,7/2+)	39		
131CE	40				1.117	(3/2,5/2)	40		

131CE	41				1.177	(15/2-)	41		
131CE	42		1.212	15/2+			42		
131CE	43				1.237		43		
131CE	44				1.276	(3/2+,5/2+,7/2+	44)		
131CE	45				1.295	(17/2-)	45		
131CE	46				1.409		46		
131CE	47				1.452	(19/2-)	47	2.8 PS	GT
131CE	48				1.592	(17/2+)	48	0.91 PS	7
131CE	49		1.609	15/2+			49		
131CE	50				1.696	(13/2-,17/2-)	50		

131CE	51				1.805	(19/2-)	51		
131CE	52				1.977	(19/2+)	52		
131CE	53				2.057	(1/2+,3/2+,5/2+)	53		
131CE	54				2.068	(21/2-)	54		
131CE	55				2.202	(23/2-)	55	1.0 PS	4
131CE	56				2.287	(17/2+)	56		
131CE	57				2.313	(19/2-)	57		
131CE	58				2.353	(19/2+)	58		
131CE	59				2.388	(21/2+)	59	0.42 PS	18
131CE	60				2.506	(21/2+)	60		

131CE	61				2.564	(23/2-)	61		
131CE	62				2.686	(23/2+)	62		
131CE	63				2.762	(23/2+)	63		
131CE	64				2.910	(25/2+)	64		
131CE	65				2.912	(25/2-)	65		
131CE	66				3.029	(27/2-)	66	0.85 PS	16
131CE	67				3.036	(25/2+)	67	1.52 PS	LT
131CE	68				3.069	(25/2-)	68		
131CE	69				3.199	(27/2+)	69		
131CE	70				3.273	(27/2+)	70		

131CE	71				3.288	(27/2-)	71		
131CE	72				3.523	(29/2+)	72		
131CE	73				3.540	(29/2+)	73		
131CE	74				3.544	(29/2-)	74		
131CE	75				3.818	(31/2-)	75		
131CE	76				3.841	(31/2+)	76		
131CE	77				3.894	(31/2+)	77		
131CE	78				3.921	(31/2-)	78	0.72 PS	LT
131CE	79				4.153	(33/2-)	79		
131CE	80				4.178	(33/2+)	80		

131CE	81				4.314	(33/2+)	81		

131CE 82			4.511	(35/2-)	82
131CE 83			4.550	(35/2+)	83
131CE 84			4.746	(35/2+)	84
131CE 85			4.843	(35/2-)	85
131CE 86			4.909	(37/2-)	86
131CE 87			4.956	(37/2+)	87
131CE 88			5.245	(37/2+)	88
131CE 89			5.342	(39/2-)	89

S-p	=	5.370 (0.042)			
131CE 90			5.390	(39/2+)	90

131CE 91			5.715	(39/2+)	91
131CE 92			5.797	(41/2-)	92
131CE 93			5.805	(39/2-)	93
131CE 94			5.861	(41/2+)	94
131CE 95			6.293	(43/2-)	95
131CE 96			6.352	(43/2+)	96
131CE 97			6.743	(43/2+)	97
131CE 98			6.809	(45/2-)	98
131CE 99			6.881	(45/2+)	99
131CE 100			7.355	(47/2-)	100

131CE 101			7.422	(47/2+)	101
131CE 102			7.802	(47/2+)	102
131CE 103			7.932	(49/2-)	103
131CE 104			8.010	(49/2+)	104

S-n	=	8.357 (0.043)			
131CE 105			8.577	(51/2+)	105

S-p	=	5.370 (0.042)			
S-n	=	8.357 (0.043)			
S-2p	=	9.226 (0.034)			
S-2n	=	19.564 (0.043)			
S-alpha	=	-0.684 (0.035)			

S+p	=	-2.808 (0.044)			
S+n	=	-10.831 (0.039)			
S+2p	=	-7.202 (0.057)			
S+2n	=	-18.852 (0.037)			
S+alpha	=	1.070 (0.038)			

gap p	=	2.562 (0.060)			
gap n	=	-2.474 (0.058)			
gap 2p	=	2.024 (0.067)			
gap 2n	=	0.711 (0.057)			
gap alpha	=	0.385 (0.051)			