

$^{131}\text{Ba}$        $Z = 56$        $N = 75$       adopted link      ENSDF link

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

BE = 1100.210 ( 0.000) MeV

Qbeta+ = 1.377 ( 0.000) MeV

	Energy T	J+	J-	J-other	T1/2
131BA 1	0.000	1/2+			1 11.50 D 6
131BA 2	0.108	3/2+			2 0.35 NS 5
131BA 3			0.188 9/2-		3 14.6 M 2
131BA 4	0.285	3/2+			4
131BA 5			0.288 11/2-		5
131BA 6	0.317	5/2+			6
131BA 7	0.365	1/2+			7
131BA 8				0.526 (3/2)+	8
131BA 9	0.543	7/2+			9
131BA 10				0.562 3/2+,5/2+	10
131BA 11			0.706 13/2-		11
131BA 12				0.719 3/2+,5/2+	12
131BA 13				0.719 1/2+,3/2+	13
131BA 14				0.757 5/2-,7/2-	14
S-alpha=	0.783 ( 0.004)				
131BA 15				0.783	15
131BA 16	0.803	9/2+			16
131BA 17				0.839	17
131BA 18				0.879 1/2+,3/2+,5/2+	18
131BA 19				0.895 (1/2+)	19
131BA 20			0.899 15/2-		20
131BA 21				0.950 3/2+,5/2+	21
131BA 22				0.974 3/2+,5/2+	22
131BA 23				1.031 (13/2-)	23
131BA 24				1.100 1/2-,3/2-	24
131BA 25	1.119	11/2+			25
131BA 26				1.135	26
131BA 27				1.154 1/2+,3/2+,5/2+	27
131BA 28				1.162 5/2-,7/2-	28
131BA 29				1.202	29
131BA 30				1.243 (5/2-,7/2-)	30
131BA 31				1.244 1/2,3/2,5/2(+)	31
131BA 32				1.292 1/2,3/2,5/2(+)	32
131BA 33				1.317 1/2-,3/2-	33
131BA 34				1.350 (15/2-)	34
131BA 35	1.418	13/2+			35
131BA 36				1.437 (1/2+)	36

131BA 37				1.459	17/2-			37
131BA 38		1.476	1/2+					38
131BA 39						1.495	1/2,3/2,5/2(+)	39
131BA 40						1.565	5/2-,7/2-	40
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131BA 41						1.605		41
131BA 42						1.669	3/2+,5/2+	42
131BA 43				1.683	19/2-			43
131BA 44						1.713	(17/2-)	44
131BA 45						1.747	(1/2+)	45
131BA 46						1.785		46
131BA 47		1.797	15/2+					47
131BA 48		1.820	1/2+					48
131BA 49						1.908	(1/2+)	49
131BA 50						1.943	(1/2+)	50
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131BA 51						1.965		51
131BA 52						1.982	1/2,3/2,5/2	52
131BA 53						2.045	(19/2-)	53
131BA 54						2.051	(5/2-,7/2-)	54
131BA 55						2.065	1/2,3/2,5/2(+)	55
131BA 56						2.100		56
131BA 57						2.109	(15/2+)	57
131BA 58		2.122	17/2+					58
131BA 59						2.163	1/2,3/2,5/2	59
131BA 60						2.195	1/2,3/2,5/2(+)	60
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131BA 61						2.271	1/2,3/2,5/2(+)	61
131BA 62						2.310	5/2-,7/2-	62
131BA 63						2.320	(17/2+)	63
131BA 64						2.347	(5/2-,7/2-)	64
131BA 65				2.358	21/2-			65
131BA 66						2.385	1/2,3/2,5/2	66
131BA 67						2.401		67
131BA 68						2.433		68
131BA 69						2.461	(19/2)	69
131BA 70						2.487	5/2-,7/2-	70
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131BA 71						2.519	(21/2-)	71
131BA 72						2.524	3/2+,5/2+	72
131BA 73		2.534	19/2+					73
131BA 74						2.561	(19/2+)	74
131BA 75						2.592	(5/2-,7/2-)	75
131BA 76				2.612	23/2-			76
131BA 77						2.616	(5/2-,7/2-)	77
131BA 78						2.656	(5/2-,7/2-)	78
131BA 79						2.725	(21/2+)	79
131BA 80						2.795	(21/2+)	80
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131BA 81						2.796	(23/2-)	81

131BA 82		2.863		21/2+						82
131BA 83							2.869			83
131BA 84							2.884	(23/2)		84
131BA 85							3.010			85
131BA 86							3.057	(23/2+)		86
131BA 87							3.119			87
131BA 88							3.139	(23/2-)		88
131BA 89							3.255	(25/2-)		89
131BA 90							3.257			90
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131BA 91							3.273	(25/2+)		91
131BA 92							3.304	(25/2+)		92
131BA 93				3.401		25/2-				93
131BA 94							3.431			94
131BA 95							3.477	(27/2-)		95
131BA 96							3.511	(27/2)		96
131BA 97							3.556	(27/2+)		97
131BA 98							3.585			98
131BA 99							3.653	(27/2-)		99
131BA 100							3.657	(27/2)		100
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131BA 101				3.718		27/2-				101
131BA 102							3.808			102
131BA 103							3.902	(25/2-)		103
131BA 104							3.941	(29/2+)		104
131BA 105							3.950			105
131BA 106							4.047	(27/2-)		106
131BA 107							4.072	(29/2+)		107
131BA 108							4.205			108
131BA 109							4.279	(31/2+)		109
131BA 110							4.308	(29/2-)		110
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131BA 111							4.339	(31/2-)		111
131BA 112							4.410			112
131BA 113							4.502	(31/2-)		113
131BA 114							4.512	(31/2)		114
131BA 115							4.633	(31/2-)		115
131BA 116							4.670			116
131BA 117							4.750	(33/2+)		117
131BA 118							4.975	(33/2-)		118
131BA 119							5.042	(33/2+)		119
131BA 120							5.163	(35/2+)		120
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131BA 121							5.351	(35/2-)		121
131BA 122							5.388	(35/2-)		122
131BA 123							5.405	(35/2-)		123
131BA 124							5.489	(35/2)		124
131BA 125							5.687	(37/2+)		125
131BA 126							5.856	(37/2-)		126
131BA 127							6.174	(39/2+)		127

131BA 128			6.236	(37/2+)	128
131BA 129			6.365	(39/2-)	129
131BA 130			6.441	(39/2-)	130

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S-p	=	7.068	( 0.008)	-----
S-n	=	7.493	( 0.001)	-----
S-2p	=	12.561	( 0.000)	-----
S-2n	=	17.761	( 0.011)	-----
S-alpha	=	0.783	( 0.004)	-----

S+p	=	-4.334	( 0.036)
S+n	=	-9.827	( 0.001)
S+2p	=	-10.317	( 0.016)
S+2n	=	-17.017	( 0.001)
S+alpha	=	-0.362	( 0.010)

gap p	=	2.734	( 0.037)
gap n	=	-2.334	( 0.001)
gap 2p	=	2.243	( 0.016)
gap 2n	=	0.743	( 0.011)
gap alpha	=	0.421	( 0.011)