

^{126}Ba $Z = 56$ $N = 70$ [link to full NNDC output](#)

Based on ENSDF from Dec 2018, and mass evaluation from 2016

BE = 1055.844 (0.012) MeV

Qbeta+ = 1.681 (0.016) MeV

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

S-alpha=	-0.260	(0.017)	-----		
126BA 1	0.000	0+			1 100 M 2
126BA 2	0.256	2+			2 137 PS 7
126BA 3	0.711	4+			3 5.98 PS 12
126BA 4	0.874	2+			4
126BA 5	0.983	0+			5
126BA 6	1.236	3+			6
126BA 7				1.296 2(+)	7
126BA 8	1.332	6+			8 0.94 PS 4
126BA 9	1.345	4+			9
126BA 10				1.718 (2+)	10

126BA 11			1.743 3-		11
126BA 12				1.754 (2+,3,4+)	12
126BA 13				1.808 5(+)	13
126BA 14				1.810 (2+,3,4+)	14
126BA 15				1.877	15
126BA 16				1.890 6(+)	16
126BA 17				1.936 1,3	17
126BA 18			1.939 5-		18
126BA 19				2.018 (2+,3,4+)	19
126BA 20				2.030 0(+)	20

126BA 21			2.056 4-		21
126BA 22	2.090	8+			22 0.28 PS 2
126BA 23				2.100	23
126BA 24				2.103	24
126BA 25				2.117	25
126BA 26				2.179 (2+,3,4+)	26
126BA 27				2.248 3-,5-	27
126BA 28				2.255 5	28
126BA 29			2.303 7-		29 3.3 PS 11
126BA 30				2.379	30

126BA 31				2.386	31
126BA 32				2.399 (2+,3,4+)	32
126BA 33				2.408 6(-)	33
126BA 34				2.430 6(-)	34
126BA 35				2.459	35
126BA 36				2.485 7(+)	36

126BA 37						2.499	(3-,4+)	37		
126BA 38						2.512	(4+,5,6+)	38		
126BA 39						2.530	8(+)	39		
126BA 40						2.566	(4+,5,6+)	40		

126BA 41						2.567		41		
126BA 42						2.577	(3,4)	42		
126BA 43						2.606		43		
126BA 44						2.609	7	44		
126BA 45						2.657	(2+,3,4+)	45		
126BA 46						2.684	(4)	46		
126BA 47						2.716	(4+,5,6+)	47		
126BA 48						2.733	(3-,4,5+)	48		
126BA 49						2.749	(4+,5,6+)	49		
126BA 50						2.773	8(-)	50		

126BA 51				2.787	9-			51	2.8 PS	3
126BA 52						2.813	8(-)	52		
126BA 53						2.872	(2,3,4)	53		
126BA 54						2.886		54		
126BA 55		2.942	10+					55	0.17 PS	2
126BA 56						2.954	(2+,3,4+)	56		
126BA 57						3.096	9	57		
126BA 58						3.108	(2+,3,4+)	58		
126BA 59						3.186	(2+,3,4+)	59		
126BA 60						3.237	10(-)	60		

126BA 61						3.244		61		
126BA 62						3.261	10(+)	62		
126BA 63				3.375	11-			63	1.4 PS	2
126BA 64						3.390		64		
126BA 65						3.403	(2+,3,4+)	65		
126BA 66						3.420	10(-)	66		
126BA 67						3.451	(8)	67		
126BA 68						3.485	(2+,3,4+)	68		
126BA 69						3.589		69		
126BA 70						3.704	(2+,3,4+)	70		

126BA 71						3.747	11	71		
126BA 72		3.747	12+					72	0.40 PS	4
126BA 73						3.759		73		
126BA 74						3.887		74		
126BA 75		3.888	12+					75		
126BA 76						4.074	12(+)	76		
126BA 77				4.079	13-			77	0.3 PS	1
126BA 78						4.093		78		
126BA 79						4.110	12(-)	79		
126BA 80						4.121	(10)	80		

126BA 81		4.420	14+					81	0.69 PS	5

126BA 82				4.457	13	82
126BA 83				4.671	14(+)	83
126BA 84				4.714		84
126BA 85				4.764		85
126BA 86				4.846	14(-)	86
126BA 87				4.852	14(+)	87
126BA 88				4.856		88
126BA 89				4.896		89
126BA 90			4.900	15-		90 0.3 PS 1

126BA 91				4.905	(13)	91
126BA 92				5.087		92
126BA 93				5.122	(14)	93
126BA 94				5.200	15	94
126BA 95		5.245	16+			95 0.32 PS 5
126BA 96				5.256		96
126BA 97				5.398	(15)	97
126BA 98				5.510	16(+)	98
126BA 99				5.651		99
126BA 100				5.662		100

126BA 101				5.708	16(-)	101
126BA 102				5.725	(16)	102
126BA 103			5.806	17-		103 0.3 PS 1

S-p	=	5.871 (0.015)		-----		
126BA 104				6.043	17	104
126BA 105				6.098		105
126BA 106				6.183		106
126BA 107		6.195	18+			107 0.5 PS LT
126BA 108				6.416		108
126BA 109				6.513		109
126BA 110				6.531		110

126BA 111				6.585		111
126BA 112				6.701		112
126BA 113				6.722	19(-)	113
126BA 114				6.968		114
126BA 115				6.996		115
126BA 116				7.183	20(+)	116
126BA 117				7.388		117
126BA 118				7.461		118
126BA 119				7.637	21(-)	119
126BA 120				8.145	22(+)	120

126BA 121				8.389		121
126BA 122				8.622	23(-)	122
126BA 123				9.202		123

S-2p	=	9.586 (0.013)		-----		
126BA 124				9.701		124
126BA 125				10.308		125

126BA 126			10.873	126
S-n	=	11.072 (0.017)	-----	
126BA 127			11.475	127
126BA 128			12.133	128
126BA 129			12.718	129
126BA 130			13.470	130

126BA 131			14.041	131
126BA 132			14.879	132
126BA 133			15.434	133
126BA 134			16.895	134
126BA 135			X+0.0	135
126BA 136			180.0+X	136
126BA 137			425.0+X	137
126BA 138			693.0+X	138
126BA 139			1012.0+X	139
126BA 140			1377.0+X	140

126BA 141			1773.0+X	141
126BA 142			2206.0+X	142

S-p = 5.871 (0.015)-----
S-n = 11.072 (0.017)-----
S-2p = 9.586 (0.013)-----
S-2n = 19.723 (0.018)-----
S-alpha= -0.260 (0.017)-----

S+p = -2.515 (0.029)
S+n = -8.219 (0.017)
S+2p = -7.442 (0.031)
S+2n = -18.851 (0.014)
S+alpha = 0.822 (0.031)

gap p = 3.356 (0.032)
gap n = 2.853 (0.024)
gap 2p = 2.144 (0.033)
gap 2n = 0.872 (0.022)
gap alpha = 0.562 (0.035)