

^{127}Ba $Z = 56$ $N = 71$ adopted link ENSDF link

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

BE = 1064.064 (0.011) MeV

Qbeta+ = 3.422 (0.013) MeV

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

S-alpha=	-0.006	(0.015)	-----		
127BA 1	0.000	1/2+			1 12.7 M 4
127BA 2	0.056	3/2+			2
127BA 3			0.080	7/2-	3 1.93 S 7
127BA 4				0.081 (5/2)+	4 75 NS 4
127BA 5				0.160 (9/2)-	5 0.4 NS 2
127BA 6				0.196 (7/2)+	6
127BA 7				0.270 (5/2)+	7
127BA 8				0.294 (11/2)-	8
127BA 9				0.324 (7/2)+	9
127BA 10				0.375 (7/2)+	10

127BA 11				0.416 (9/2)+	11
127BA 12				0.580 (13/2)-	12
127BA 13				0.599 (9/2+)	13
127BA 14				0.669 (11/2)+	14
127BA 15				0.715	15
127BA 16				0.729 (9/2+)	16
127BA 17				0.777 (15/2-)	17
127BA 18				0.805	18
127BA 19				0.832	19
127BA 20				0.868 (11/2+)	20

127BA 21				0.877	21
127BA 22				0.906 (11/2+)	22
127BA 23				0.964 (13/2+)	23
127BA 24				0.987	24
127BA 25				0.991	25
127BA 26				1.195 (17/2-)	26
127BA 27				1.220 (15/2-)	27
127BA 28				1.230 (13/2+)	28
127BA 29				1.291 (15/2+)	29
127BA 30				1.305	30

127BA 31				1.403	31
127BA 32				1.410	32
127BA 33				1.422 (19/2-)	33
127BA 34				1.520 (15/2+)	34
127BA 35				1.626	35
127BA 36				1.655 (17/2+)	36

127BA 37				1.674		37
127BA 38				1.765		38
127BA 39				1.778	(19/2-)	39
127BA 40				1.791		40

127BA 41				1.881		41
127BA 42				1.961		42
127BA 43				1.967	(21/2-)	43
127BA 44				2.043	(19/2+)	44
127BA 45				2.196	(23/2-)	45
127BA 46				2.244	(19/2+)	46
127BA 47				2.305	(19/2+)	47
127BA 48				2.352		48
127BA 49				2.452	(21/2+)	49
127BA 50				2.464	(23/2-)	50

127BA 51				2.498	(21/2+)	51
127BA 52				2.737	(23/2+)	52
127BA 53				2.863	(23/2+)	53
127BA 54				2.869	(25/2-)	54
127BA 55				2.875	(23/2+)	55
127BA 56				2.923	(23/2+)	56
127BA 57				2.998	(25/2+)	57
127BA 58				3.059	(27/2-)	58
127BA 59				3.138	(25/2+)	59
127BA 60				3.274	(27/2-)	60

127BA 61				3.287	(27/2+)	61
127BA 62				3.401		62
127BA 63				3.482	(27/2+)	63
127BA 64				3.518	(27/2-)	64
127BA 65				3.622	(29/2+)	65
127BA 66				3.756	(29/2-)	66
127BA 67				3.791	(29/2+)	67
127BA 68				3.950	(31/2+)	68
127BA 69				3.957	(31/2-)	69
127BA 70				4.102	(31/2-)	70

127BA 71				4.217	(31/2-)	71
127BA 72				4.226	(31/2+)	72
127BA 73				4.365	(33/2+)	73
127BA 74				4.408	(33/2-)	74
127BA 75				4.578	(33/2+)	75
127BA 76				4.746	(35/2+)	76
127BA 77				4.817	(35/2-)	77
127BA 78				4.904	(35/2-)	78
127BA 79				5.131	(35/2+)	79
127BA 80				5.214	(37/2-)	80

127BA 81				5.228	(35/2-)	81

127BA 82				5.228	(37/2+)	82
127BA 83				5.256	(35/2-)	83
127BA 84				5.512	(37/2+)	84
127BA 85				5.675	(39/2+)	85
127BA 86				5.742	(39/2-)	86
S-p	=	5.756	(0.015)	-----		
127BA 87				5.921	(39/2-)	87
127BA 88				6.203	(41/2+)	88
127BA 89				6.222	(41/2-)	89
127BA 90				6.320	(39/2-)	90

127BA 91				6.379	(39/2-)	91
127BA 92				6.552	(41/2+)	92
127BA 93				6.726	(43/2+)	93
127BA 94				6.763	(43/2-)	94
127BA 95				7.003	(43/2-)	95
127BA 96				7.277	(45/2+)	96
127BA 97				7.309	(45/2-)	97
127BA 98				7.465	(43/2-)	98
127BA 99				7.590	(43/2-)	99
127BA 100				7.632	(45/2+)	100

127BA 101				7.866	(47/2-)	101
127BA 102				7.882	(47/2+)	102
127BA 103				8.194	(47/2-)	103
S-n	=	8.219	(0.017)	-----		
127BA 104				8.430	(49/2+)	104
127BA 105				8.459	(49/2-)	105
127BA 106				8.756	(49/2+)	106
127BA 107				8.886	(47/2-)	107
127BA 108				9.035	(51/2-)	108
127BA 109				9.121	(51/2+)	109
127BA 110				9.441	(51/2-)	110

127BA 111				9.618	(53/2+)	111
127BA 112				9.677	(53/2-)	112
127BA 113				9.967	(53/2+)	113

S-p	=	5.756	(0.015)	-----		
S-n	=	8.219	(0.017)	-----		
S-2p	=	10.196	(0.011)	-----		
S-2n	=	19.292	(0.016)	-----		
S-alpha	=	-0.006	(0.015)	-----		
S+p	=	-3.097	(0.056)			
S+n	=	-10.623	(0.011)			
S+2p	=	-8.048	(0.030)			
S+2n	=	-18.386	(0.015)			
S+alpha	=	0.684	(0.035)			

gap p = 2.660 (0.058)
gap n = -2.403 (0.020)
gap 2p = 2.149 (0.032)
gap 2n = 0.906 (0.022)
gap alpha = 0.679 (0.038)