

^{120}Ba $Z = 56$ $N = 64$ [link to full NNDC output](#)

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

BE = 993.635 (0.300) MeV

Qbeta+ = 5.000 (0.300) MeV

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

S-alpha=	-1.733	(0.300)	-----		
120BA 1	0.000	0+			1 24 S 2
120BA 2				0.186 (2+)	2
120BA 3				0.544 (4+)	3
120BA 4				1.040 (6+)	4
120BA 5				1.645 (8+)	5
120BA 6				1.764 (5-)	6
120BA 7				2.105 (7-)	7
120BA 8				2.336 (10+)	8
120BA 9				2.567 (9-)	9
120BA 10				3.083 (12+)	10

120BA 11				3.138 (11-)	11
120BA 12				3.815 (13-)	12
120BA 13				3.856 (14+)	13
S-p	= 3.872	(0.300)	-----		
120BA 14				4.244 (14+)	14
120BA 15				4.588 (15-)	15
120BA 16				4.656 (16+)	16
120BA 17				5.064 (16+)	17
S-2p	= 5.387	(0.300)	-----		
120BA 18				5.434 (17-)	18
120BA 19				5.517 (18+)	19
120BA 20				5.876	20

120BA 21				6.455 (20+)	21
120BA 22				6.688 (20+)	22
120BA 23				7.471 (22+)	23
120BA 24				7.569 (22+)	24
120BA 25				8.502 (24+)	25
120BA 26				8.602 (24+)	26
120BA 27				9.548 (26+)	27
120BA 28				9.786 (26+)	28
120BA 29				10.668 (28+)	29
120BA 30				11.016 (28+)	30

120BA 31				11.872 (30+)	31
120BA 32				12.339 (30+)	32
S-n	= 12.370	(0.361)	-----		
120BA 33				13.160 (32+)	33

120BA	34				13.743	(32+)	34
120BA	35				14.510	(34+)	35
120BA	36				15.897	(36+)	36
120BA	37				17.378	(38+)	37
120BA	38				18.956	(40+)	38

S-p = 3.872 (0.300)-----
 S-n = 12.370 (0.361)-----
 S-2p = 5.387 (0.300)-----
 S-2n = 0.000 (0.000)-----
 S-alpha= -1.733 (0.300)-----

S+p = 0.000 (0.000)
 S+n = -9.927 (0.332)
 S+2p = 0.000 (0.000)
 S+2n = -21.863 (0.301)
 S+alpha = 0.000 (0.000)

gap p = 0.000 (0.000)
 gap n = 2.442 (0.490)
 gap 2p = 0.000 (0.000)
 gap 2n = 0.000 (0.000)
 gap alpha = 0.000 (0.000)