

^{142}Ba $Z = 56$ $N = 86$ [link to full NNDC output](#)

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

BE = 1180.158 (0.006) MeV

Qbeta- = 2.182 (0.009) MeV

	Energy T	J+	J-	J-other	T1/2
142BA 1	0.000	0+			1 10.6 M 2
S-alpha=	0.295 (0.007)				
142BA 2	0.360	2+			2 65 PS 2
142BA 3	0.835	4+			3 12.5 PS 8
142BA 4				1.292 (3-)	4
142BA 5			1.326 1-		5 10 PS 5
142BA 6	1.424	2+			6 9 PS LT
142BA 7	1.466	6+			7 7.2 PS 13
142BA 8	1.536	0+			8 9 PS 7
142BA 9			1.542 5-		9
142BA 10	1.640	0+			10 16 PS LT
142BA 11	1.693	2+			11
142BA 12				1.747 5(+)	12
142BA 13				1.781	13
142BA 14	1.848	6+			14
142BA 15			1.953 7-		15
142BA 16				2.070 7(+)	16
142BA 17	2.128	0+			17
142BA 18	2.159	8+			18
142BA 19				2.229 8(+)	19
142BA 20				2.342 1	20
142BA 21			2.514 9-		21
142BA 22				2.570	22
142BA 23				2.680 (9+)	23
142BA 24				2.815 (10+)	24
142BA 25				2.883 (1,2+)	25
142BA 26				2.926 (10+)	26
142BA 27				3.144 (1)	27
142BA 28				3.154 (11-)	28
142BA 29				3.262 (1)	29
142BA 30				3.283 (1)	30
142BA 31				3.343	31
142BA 32				3.507	32
142BA 33				3.573 (1)	33
142BA 34				3.795	34
142BA 35				3.933	35
142BA 36				4.369 (1)	36

142BA	37				4.517	37
142BA	38				5.280	38

S-p = 10.654 (0.011)-----
 S-n = 6.181 (0.008)-----
 S-2p = 19.434 (0.006)-----
 S-2n = 10.715 (0.010)-----
 S-alpha= 0.295 (0.007)-----

S+p = -7.618 (0.009)
 S+n = -4.166 (0.009)
 S+2p = -17.167 (0.007)
 S+2n = -10.068 (0.009)
 S+alpha = -0.218 (0.017)

gap p = 3.035 (0.014)
 gap n = 2.015 (0.012)
 gap 2p = 2.266 (0.009)
 gap 2n = 0.648 (0.014)
 gap alpha = 0.077 (0.019)