

$^{126}\text{Ba}$        $Z = 56$        $N = 70$       adopted link      ENSDF link

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

BE = 1055.844 ( 0.012) MeV

Qbeta+ = 1.681 ( 0.016) MeV

	Energy T	J+	J-	J-other	T1/2
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S-alpha=	-0.260	( 0.017)	-----		
126BA 1	0.000	0+			1 100 M 2
126BA 2	0.256	2+			2 136 PS 5
126BA 3	0.711	4+			3 5.99 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
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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
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126BA 21			2.056 4-		21
126BA 22	2.090	8+			22 0.284 PS 21
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
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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
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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
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126BA 51				2.787	9-			51 2.8 PS 4
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 0.173 PS 21
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
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126BA 61						3.244	(9+)	61
126BA 62						3.261	10(+)	62
126BA 63				3.375	11-			63 1.39 PS 21
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
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126BA 71						3.747	11(-)	71
126BA 72		3.747	12+					72 0.38 PS +6-4
126BA 73						3.759		73
126BA 74						3.887	(12-)	74
126BA 75		3.888	12+					75
126BA 76						4.074	12(+)	76
126BA 77				4.079	13-			77 0.35 PS 14
126BA 78						4.093	(11+)	78
126BA 79						4.110	12(-)	79
126BA 80						4.121	(10)	80
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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	(14-)	84				
126BA 85				4.764	(12)	85				
126BA 86				4.846	14(-)	86				
126BA 87				4.852	14(+)	87				
126BA 88				4.856	(13+)	88				
126BA 89				4.896	(12)	89				
126BA 90			4.900	15-		90	0.35 PS	14		
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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	6		
126BA 96				5.256	(15-)	96				
126BA 97				5.398	(15)	97				
126BA 98				5.510	16(+)	98				
126BA 99				5.651	(16+)	99				
126BA 100				5.662	(16-)	100				
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126BA 101				5.708	16(-)	101				
126BA 102				5.725	(16)	102				
126BA 103			5.806	17-		103	0.28 PS	14		
S-p =	5.869	(	0.015)	-----						
126BA 104				6.043	17	104				
126BA 105				6.098	(17)	105				
126BA 106				6.183	(17-)	106				
126BA 107		6.195	18+			107	0.5 PS	LT		
126BA 108				6.416	(18+)	108				
126BA 109				6.513	(18)	109				
126BA 110				6.531	(18+)	110				
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126BA 111				6.585	(18-)	111				
126BA 112				6.701	(18-)	112				
126BA 113				6.722	19(-)	113				
126BA 114				6.968	(19)	114				
126BA 115				6.996	(19)	115				
126BA 116				7.183	20(+)	116				
126BA 117				7.388	(20+)	117				
126BA 118				7.461	(20)	118				
126BA 119				7.637	21(-)	119				
126BA 120				8.145	22(+)	120				
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126BA 121				8.389	(22+)	121				
126BA 122				8.622	23(-)	122				
126BA 123				9.202	(24+)	123				
S-2p =	9.580	(	0.013)	-----						
126BA 124				9.701	(25-)	124				

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S-p    =  5.869 ( 0.015)-----  
S-n    = 11.072 ( 0.017)-----  
S-2p   =  9.580 ( 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   = -18.842 ( 0.013)  
S+alpha =  0.822 ( 0.031)  
  
gap p   =  3.354 ( 0.032)  
gap n   =  2.853 ( 0.024)  
gap 2p  =  2.138 ( 0.033)  
gap 2n  =  0.881 ( 0.022)  
gap alpha =  0.562 ( 0.035)
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