

^{120}Xe $Z = 54$ $N = 66$ [link to full NNDC output](#)

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

BE = 1008.484 (0.012) MeV

Qbeta+ = 1.581 (0.019) MeV

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

S-alpha=	-0.672	(0.030)	-----		
120XE 1	0.000	0+			1 40 M 1
120XE 2	0.323	2+			2 45.7 PS 20
120XE 3	0.796	4+			3 5.8 PS 4
120XE 4	0.876	2+			4
120XE 5	0.909	0+			5 6.2 PS LT
120XE 6	1.272	3+			6
120XE 7				1.274 (2)+	7
120XE 8	1.397	6+			8 1.73 PS 25
120XE 9	1.401	4+			9
120XE 10	1.623	0+			10 83 PS 28

120XE 11				1.712 (4)+	11
120XE 12	1.725	2+			12 0.6 NS 5
120XE 13				1.745 +	13
120XE 14				1.768 (2+,3,4+)	14
120XE 15				1.817 (5)+	15
120XE 16	1.924	2+			16
120XE 17	1.941	2+			17
120XE 18				1.982 (1,2+)	18
120XE 19	1.986	6+			19
120XE 20				1.995 2	20

120XE 21				2.051 (2+,3,4+)	21
120XE 22	2.072	4+			22
120XE 23				2.073	23
120XE 24	2.099	8+			24 0.97 PS 17
120XE 25				2.165 (2+,3,4+)	25
120XE 26				2.187 (2,3,4)	26
120XE 27	2.237	0+			27
120XE 28				2.242	28
120XE 29				2.273 (4-,5-)	29
120XE 30				2.295	30

120XE 31				2.402 (1,2)+	31
120XE 32	2.411	0+			32
120XE 33				2.448 (3,4)+	33
120XE 34	2.461	7+			34 0.62 PS +35-14
120XE 35				2.495 (7-)	35
120XE 36				2.536	36

120XE 37						2.545	(6-)	37
120XE 38						2.638	(1,2+)	38
120XE 39						2.654	(8+)	39
120XE 40						2.670		40

120XE 41						2.682		41
120XE 42						2.722	(3,4,5)+	42
120XE 43						2.727	(4+,5,6+)	43
120XE 44						2.728	(6-)	44
120XE 45						2.813	(4)	45
120XE 46				2.830	7-			46
120XE 47						2.831		47
120XE 48						2.854		48
120XE 49		2.873	10+					49 0.63 PS 10
120XE 50						2.912		50

120XE 51						2.930	(7-)	51
120XE 52						2.967		52
120XE 53						2.967	(8-)	53
120XE 54						2.971	(9-)	54
120XE 55						3.003	(8-)	55
120XE 56						3.076	(8-)	56
120XE 57						3.149	(9-)	57
120XE 58						3.149		58
120XE 59		3.174	9+					59 0.52 PS 7
120XE 60						3.281	(9-)	60

120XE 61						3.326	(10+)	61
120XE 62						3.357	(2+)	62
120XE 63						3.383	(10-)	63
120XE 64						3.471	(2+)	64
120XE 65						3.535	(10-)	65
120XE 66						3.575	(10-)	66
120XE 67						3.592	(11-)	67
120XE 68						3.648	(11-)	68
120XE 69		3.677	12+					69 0.58 PS 9
120XE 70						3.803	(2+)	70

120XE 71						3.852	(11-)	71
120XE 72		3.919	12+					72 1.2 PS +10-3
120XE 73						3.934	(11+)	73 0.55 PS +21-14
120XE 74						3.957	(12-)	74
120XE 75						4.158	(12+)	75 0.58 PS +14-10
120XE 76						4.168	(12-)	76
120XE 77						4.213	(12-)	77
120XE 78						4.293	(13-)	78
120XE 79						4.306	(13-)	79
120XE 80						4.313	(2+)	80

120XE 81		4.459	14+					81 0.69 PS 10

120XE 82						4.558	(13-)	82		
120XE 83						4.608	(14+)	83	1.1 PS	+5-3
120XE 84						4.664	(14-)	84		
120XE 85						4.696	(13+)	85	0.87 PS	+22-17
120XE 86						4.847	(14+)	86	0.21 PS	3
120XE 87						4.889	(14-)	87		
120XE 88						4.938	(14-)	88		
120XE 89						5.059	(15-)	89		
120XE 90						5.085	(15-)	90		

120XE 91		5.232	16+					91	0.48 PS	+15-8
120XE 92						5.406	(16+)	92	0.45 PS	+19-9
120XE 93						5.480	(16-)	93		
120XE 94						5.637	(16+)	94	0.49 PS	+21-7
120XE 95						5.692	(16-)	95		
S-p	=	5.696	(0.030)	-----						
120XE 96						5.920	(17-)	96		
120XE 97						5.929	(17-)	97		
120XE 98		6.051	18+					98	0.26 PS	4
120XE 99						6.339	(18+)	99	0.22 PS	5
120XE 100						6.383	(18-)	100		

120XE 101						6.457	(18+)	101	0.22 PS	+9-5
120XE 102						6.575	(18-)	102		
120XE 103						6.833	(19-)	103		
120XE 104						6.863	(19-)	104		
120XE 105		6.955	20+					105	0.12 PS	3
120XE 106						7.320	(20+)	106	0.12 PS	4
120XE 107						7.364	(20-)	107		
120XE 108						7.427	(20+)	108		
120XE 109						7.512	(20-)	109		
120XE 110						7.799	(21-)	110		

120XE 111						7.878	(21-)	111		
120XE 112		7.955	22+					112	0.09 PS	4
120XE 113						8.467	(22-)	113		
120XE 114						8.810	(23-)	114		
120XE 115						9.051	(24+)	115		
S-2p	=	9.054	(0.022)	-----						
120XE 116						9.483	(24-)	116		
120XE 117						9.875	(25-)	117		
120XE 118						10.241	(26+)	118		
120XE 119						10.643	(26-)	119		
120XE 120						11.002	(27-)	120		

S-n	=	11.449	(0.016)	-----						
120XE 121						11.524	(28+)	121		
120XE 122						12.150	(29-)	122		

S-p = 5.696 (0.030)-----
S-n = 11.449 (0.016)-----
S-2p = 9.054 (0.022)-----
S-2n = 20.236 (0.016)-----
S-alpha= -0.672 (0.030)-----

S+p = -2.219 (0.018)
S+n = -8.380 (0.016)
S+2p = -7.014 (0.030)
S+2n = -19.325 (0.016)
S+alpha = 0.658 (0.017)

gap p = 3.477 (0.036)
gap n = 3.069 (0.022)
gap 2p = 2.039 (0.037)
gap 2n = 0.911 (0.023)
gap alpha = -0.014 (0.035)