

^{23}Mg $Z = 12$ $N = 11$ [link to full NNDC output](#)

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

BE = 181.726 (0.000) MeV

Qbeta+ = 4.056 (0.000) MeV

	Energy T	J+	J-	J-other	T1/2
23MG 1	0.000	3/2+			1 11.317 S 11
23MG 2	0.451	5/2+			2 1.25 PS 8
23MG 3	2.052	7/2+			3 55 FS 14
23MG 4	2.359	1/2+			4 575 FS 118
23MG 5				2.715 9/2+,5/2+	5 91 FS 16
23MG 6			2.771 1/2-		6 107 FS 21
23MG 7				2.908 (3/2,5/2)+	7 17 FS LT
23MG 8			3.798 3/2-		8 14 NS LT
23MG 9				3.864 (3/2,5/2)+	9
23MG 10			3.973 5/2-		10 14 NS LT
23MG 11	4.353	1/2+			11 14 NS LT
23MG 12				4.685 (1/2 TO 9/2)+	12
23MG 13				5.287 (3/2,5/2)+	13
23MG 14				5.453	14
23MG 15	5.656	5/2+			15
23MG 16				5.691 (1/2 TO 9/2)+	16
23MG 17				5.711 (1/2 TO 9/2)+	17
23MG 18				5.932	18
23MG 19				5.984 (1/2,3/2)-	19
23MG 20				6.125	20
23MG 21				6.191 (13/2+)	21
23MG 22				6.236 (1/2 TO 9/2)+	22
23MG 23				6.375	23
23MG 24				6.442	24
23MG 25				6.507 (1/2 TO 9/2)+	25
23MG 26				6.538 (1/2 TO 9/2)+	26
23MG 27	6.568	5/2+			27
23MG 28				6.771	28
23MG 29				6.799	29
23MG 30				6.810	30
23MG 31	6.899	5/2+			31
23MG 32	6.984	5/2+			32
23MG 33				7.017 (1/2 TO 9/2)+	33
23MG 34				7.111	34
23MG 35				7.146 (5/2)+	35
23MG 36				7.229	36
23MG 37				7.258	37

23MG	38						7.381			38
23MG	39						7.444			39
23MG	40						7.493	(1/2 TO 9/2)+		40

S-p	=		7.581	(0.000)					
23MG	41		7.586		5/2+					41
23MG	42						7.624	(9/2)+		42
23MG	43						7.648	(3/2)+		43
23MG	44						7.770	(9/2)+		44
23MG	45						7.782	(11/2)+		45
23MG	46						7.786	(7/2)+		46
23MG	47		7.802		3/2 5/2+					47
23MG	48						7.855	(7/2)+		48
23MG	49						8.017			49
23MG	50						8.059			50

23MG	51						8.076			51
23MG	52		8.163		5/2+					52
23MG	53						8.193			53
23MG	54						8.287			54
23MG	55						8.393			55
23MG	56						8.420			56
23MG	57						8.453	3/2+,5/2+,7/2+		57
23MG	58						8.557			58
23MG	59						8.617			59
23MG	60						8.758			60

23MG	61						8.793			61
23MG	62						8.870			62
23MG	63						8.916			63
23MG	64						8.943	(15/2+)		64
23MG	65						8.990	(1/2 TO 9/2)+		65
23MG	66						9.018			66
23MG	67						9.060			67
23MG	68						9.103			68
23MG	69						9.138			69
23MG	70						9.253			70

23MG	71						9.328			71
23MG	72						9.374			72
23MG	73						9.403			73
23MG	74						9.420			74
23MG	75						9.465	(1/2 TO 9/2)+		75
23MG	76						9.596	(17/2+)		76
23MG	77						9.642			77

S-alpha	=		9.650	(0.000)					
23MG	78						9.662			78
23MG	79						9.717			79
23MG	80						9.750	(3/2+,5/2+)		80

23MG 81				9.850		81
23MG 82				9.970	(3/2-)	82
23MG 83				10.120		83
23MG 84				10.270	(3/2-)	84
23MG 85				10.440	(3/2-)	85
23MG 86		10.570	3/2-			86
23MG 87				10.750	(3/2+,5/2+)	87
23MG 88				10.920		88
23MG 89				11.030		89
23MG 90				11.210		90

23MG 91				11.380		91
23MG 92				11.540		92
23MG 93				11.800		93
23MG 94				11.990		94
23MG 95				12.480		95
23MG 96				12.690		96
23MG 97				12.940		97
S-n	=	13.145	(0.000)	-----		
23MG 98				13.280		98
23MG 99				14.130	(21/2+)	99
S-2p	=	14.320	(0.000)	-----		
23MG 100				14.560	(19/2+)	100

S-p = 7.581 (0.000)-----
S-n = 13.145 (0.000)-----
S-2p = 14.320 (0.000)-----
S-2n = 32.520 (0.001)-----
S-alpha= 9.650 (0.000)-----

S+p = -1.864 (0.000)
S+n = -16.531 (0.000)
S+2p = -5.277 (0.010)
S+2n = -23.862 (0.000)
S+alpha = -9.336 (0.000)

gap p = 5.717 (0.000)
gap n = -3.386 (0.000)
gap 2p = 9.043 (0.010)
gap 2n = 8.658 (0.001)
gap alpha = 0.315 (0.000)