

$^{23}\text{Na}$        $Z = 11$        $N = 12$       adopted link      ENSDF link

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

BE = 186.564 ( 0.000) MeV

	Energy T	J+	J-	J-other	T1/2
23NA 1	0.000	3/2+			1 STABLE
23NA 2	0.440	5/2+			2 1.14 FS 7
23NA 3	2.076	7/2+			3 27 FS 3
23NA 4	2.391	1/2+			4 0.60 PS 14
23NA 5			2.641	1/2-	5 76 FS 9
23NA 6	2.704	9/2+			6 88 FS 7
23NA 7	2.982	3/2+			7 3.3 FS 4
23NA 8			3.678	3/2-	8 21 FS 3
23NA 9			3.848	5/2-	9 87 FS 21
23NA 10	3.915	5/2+			10 6.9 FS 14
23NA 11	4.430	1/2+			11 0.21 FS 2
23NA 12	4.775	7/2+			12 1.4 FS LT
23NA 13	5.379	5/2+			13 143 AS 21
23NA 14	5.534	11/2+			14 10.4 FS 6
23NA 15	5.741	5/2+			15 394 AS 27
23NA 16	5.766	3/2+			16 351 AS 41
23NA 17				5.776	17
23NA 18	5.926	7/2+			18 13 FS 5
23NA 19			5.966	3/2-	19 11 FS LT
23NA 20			6.042	7/2-	20 6 FS 2
23NA 21				6.115 (11/2)+	21 35 FS 9
23NA 22			6.195	5/2-	22 70 FS LT
23NA 23				6.235 (13/2+)	23 16 FS 8
23NA 24	6.306	1/2+			24
23NA 25			6.354	9/2-	25 21 FS 5
23NA 26				6.578 (9/2+,5/2+)	26 11 FS LT
23NA 27				6.618 (7/2,5/2)+	27 0.7 FS LT
23NA 28	6.735	3/2+			28 415 AS 50
23NA 29			6.820	5/2-	29 8 FS LT
23NA 30				6.868 5/2+,3/2+	30 6 FS LT
23NA 31				6.881	31
23NA 32			6.921	3/2-	32
23NA 33				6.947 (3/2+)	33 28 FS LT
23NA 34				7.055	34
23NA 35				7.071	35
23NA 36			7.082	3/2-	36 258 AS 31
23NA 37				7.126 (9/2)	37 13 FS 5
23NA 38				7.134 3/2+,5/2+	38 200 AS 26

23NA 39						7.150				39
23NA 40						7.185	(9/2+)			40
-----										
23NA 41		7.268	13/2+							41 18 FS 6
23NA 42						7.280	5/2-, 7/2-			42 9 FS 6
23NA 43						7.385	1/2-, 3/2-			43
23NA 44						7.393	(11/2+)			44 18 FS 11
23NA 45						7.412	5/2+, 7/2+, 9/2+			45 35 FS LT
23NA 46						7.451	5/2+, 3/2+			46 3 FS LT
23NA 47						7.477				47
23NA 48						7.489	1/2-, 3/2-			48 3 FS LT
23NA 49						7.564	(5/2)+			49 0.26 FS 18
23NA 50						7.687				50
-----										
23NA 51						7.724				51
23NA 52						7.751	(5/2-, 3/2-)			52
23NA 53						7.836	7/2, (5/2+)			53 3.5 FS LT
23NA 54						7.873	3/2, (5/2+)			54 3.5 FS LT
23NA 55						7.876	5/2			55 12 FS LT
23NA 56		7.891	3/2 5/2+							56 162 AS 12
23NA 57						7.964				57
23NA 58						7.974				58 28 FS LT
23NA 59						7.991	(11/2)			59 19 FS 8
23NA 60						8.061	5/2+, 7/2, 9/2+			60
-----										
23NA 61						8.100				61
23NA 62						8.122				62
23NA 63						8.149				63
23NA 64						8.173				64
23NA 65						8.220				65
23NA 66						8.261				66
23NA 67						8.302	5/2-, 7/2-			67 59 FS LT
23NA 68						8.319				68
23NA 69						8.360				69
23NA 70		8.417	3/2+							70 21 FS LT
-----										
23NA 71						8.433				71
23NA 72						8.476	3/2+, 5/2+			72
23NA 73						8.503				73
23NA 74						8.558				74
23NA 75						8.611				75
23NA 76						8.631				76
23NA 77		8.651	1/2+							77 0.53 FS 7
23NA 78		8.665	(3/ 1/2+							78 128 AS 22
23NA 79						8.721				79
-----										
S-p =		8.794	( 0.000)							
23NA 80						8.799				80
-----										
23NA 81						8.821	(9/2-)			81
23NA 82		8.828	1/2+							82 211 AS 70

23NA 83		8.862	1/2+					83		
23NA 84		8.894	1/2+					84		
23NA 85							8.945	(3/2+)		85
23NA 86							8.947	(7/2-)		86 21 FS 10
23NA 87							8.964			87
23NA 88							8.975	3/2+,5/2+		88
23NA 89							9.000			89
23NA 90							9.040	(15/2)		90
-----										
23NA 91							9.043	(7/2,9/2)+		91 10 FS 5
23NA 92							9.072			92
23NA 93							9.101	(13/2+)		93
23NA 94							9.113			94
23NA 95							9.173			95
23NA 96							9.210	(11/2+)		96
23NA 97					9.211	3/2-				97 4.1 FS 15
23NA 98							9.213			98
23NA 99		9.252	1/2+							99
23NA 100							9.285	3/2+,5/2+		100
-----										
23NA 101							9.293			101
23NA 102							9.326	(9/2+,13/2+)		102
23NA 103					9.396	7/2-				103
23NA 104							9.401			104
23NA 105							9.405	1/2		105 65 EV
23NA 106					9.426	3/2-				106
23NA 107							9.475			107
23NA 108							9.488	3/2		108
23NA 109							9.542	(13/2+)		109
23NA 110							9.582			110
-----										
23NA 111		9.608	3/2+							111 6 EV
23NA 112		9.626	1/2+							112 2.2 FS 8
23NA 113					9.628	11/2-				113 2.8 FS 14
23NA 114							9.652	(3/2+,5/2+)		114
23NA 115							9.656	(1/2+)		115 105 EV
23NA 116							9.674	3/2+,5/2+		116
23NA 117							9.683	(3/2+)		117
23NA 118		9.701	3/2+							118 29 EV
23NA 119							9.733	7/2		119
23NA 120							9.738	1/2-,3/2-		120
-----										
23NA 121		9.755	3/2+							121
23NA 122							9.803	(15/2+)		122 4.2 FS 14
23NA 123		9.816	5/2+							123
23NA 124		9.835	3/2+							124 47 EV
23NA 125		9.850	1/2+							125 150 EV
23NA 126							9.876			126
23NA 127							9.891	3/2		127
23NA 128							9.917	(3/2+,5/2,7/2+)		128

23NA 129				9.924	(3/2,7/2)	129
23NA 130				9.939		130
-----						
23NA 131				9.965	(9/2,13/2)	131
23NA 132		9.988	11/2-			132

S-p = 8.794 ( 0.000)-----  
S-n = 12.420 ( 0.000)-----  
S-2p = 24.060 ( 0.002)-----  
S-2n = 23.488 ( 0.000)-----  
S-alpha= 10.467 ( 0.000)-----

S+p = -11.693 ( 0.000)  
S+n = -6.959 ( 0.000)  
S+2p = -13.964 ( 0.000)  
S+2n = -15.971 ( 0.001)  
S+alpha = -10.092 ( 0.000)

gap p = -2.899 ( 0.000)  
gap n = 5.460 ( 0.000)  
gap 2p = 10.096 ( 0.002)  
gap 2n = 7.517 ( 0.001)  
gap alpha = 0.375 ( 0.000)