

$^{123}\text{I}$        $Z = 53$        $N = 70$       adopted link      ENSDF link

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

BE = 1039.250 ( 0.004) MeV

Qbeta+ = 1.228 ( 0.004) MeV

	Energy T	J+	J-	J-other	T1/2
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123I	1   0.000	5/2+			1 13.2230 H 19
123I	2   0.138	7/2+			2
123I	3   0.149	1/2+			3 2.35 NS 3
123I	4   0.178	3/2+			4 0.36 NS 2
123I	5			0.302	5 0.8 NS 1
123I	6   0.330	3/2+			6 42 PS 13
123I	7   0.474	7/2+			7
123I	8   0.552	9/2+			8
123I	9   0.641	9/2+			9 0.2 NS 1
123I	10   0.671	9/2+			10
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123I	11   0.794	11/2+			11
S-alpha=	0.892 ( 0.008)				-----
123I	12		0.943	11/2-	12 0.2 NS 1
123I	13   0.972	11/2+			13
123I	14			1.011 (3/2)+	14
123I	15   1.049	1/2+			15
123I	16			1.080 11/2(+)	16
123I	17			1.113 (1/2,3/2)+	17
123I	18			1.153 (3/2)+	18
123I	19   1.156	13/2+			19
123I	20			1.190 (1/2+,3/2,5/2+)	20
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123I	21   1.242	1/2+			21
123I	22			1.271	22
123I	23			1.310 (3/2)+	23
123I	24   1.316	13/2+			24
123I	25   1.338	1/2+			25
123I	26			1.368 3/2+,5/2+	26
123I	27			1.391 (1/2,3/2)+	27
123I	28			1.437 13/2(+)	28
123I	29			1.440	29
123I	30		1.453	15/2-	30
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123I	31   1.493	1/2+			31
123I	32			1.577 15/2(+)	32
123I	33			1.583 3/2+,5/2+	33
123I	34			1.602 (15/2+)	34
123I	35			1.607 (15/2+)	35
123I	36			1.623	36

123I	37					1.633	(13/2-)	37
123I	38					1.657	(3/2)+	38
123I	39		1.690	15/2+				39
123I	40					1.718	3/2+,5/2+	40
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123I	41					1.744		41
123I	42					1.791	(15/2+)	42
123I	43					1.808		43
123I	44					1.816		44
123I	45		1.865	1/2+				45
123I	46		1.871	17/2+				46
123I	47					1.929	(+)	47
123I	48					1.934	(1/2,3/2,5/2)+	48
123I	49		1.956	3/2+				49
123I	50					1.983	3/2+,5/2+	50
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123I	51					2.001	(+)	51 0.4 NS 1
123I	52					2.012		52
123I	53					2.016	(17/2+)	53
123I	54				2.040 19/2-			54
123I	55		2.048	1/2+				55
123I	56					2.063	(1/2,3/2,5/2)+	56
123I	57					2.082	17/2(+)	57
123I	58					2.083		58
123I	59					2.110		59
123I	60					2.140	(+)	60
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123I	61					2.152	(1/2+,3/2)	61
123I	62					2.201	(1/2+,3/2)	62
123I	63					2.215		63
123I	64					2.250	(3/2)+	64
123I	65					2.262		65
123I	66					2.266	(17/2-)	66
123I	67					2.283	(17/2+)	67
123I	68		2.286	1/2+				68
123I	69					2.320		69
123I	70					2.323	(1/2,3/2)	70
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123I	71					2.327	(1/2+,3/2)	71
123I	72					2.339		72
123I	73					2.360		73
123I	74					2.362	(19/2+)	74
123I	75					2.368	(1/2+,3/2+)	75
123I	76					2.369		76
123I	77					2.389	(3/2)+	77
123I	78					2.421	(3/2+,5/2+)	78
123I	79					2.440		79
123I	80					2.455	(1/2+)	80
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123I	81					2.466	19/2(+)	81

123I	82				2.477	3/2+,5/2+	82
123I	83				2.482		83
123I	84				2.501	19/2(+)	84
123I	85	2.515	1/2+				85
123I	86				2.542	3/2+,5/2+	86
123I	87				2.560	(1/2+,3/2)	87
123I	88				2.567		88
123I	89				2.580	(1/2+,3/2,5/2+)	89
123I	90			2.614	23/2-		90
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123I	91				2.648	(19/2+)	91
123I	92				2.660	(21/2+)	92
123I	93				2.672		93
123I	94				2.712	21/2(+)	94
123I	95				2.732		95
123I	96				2.766	(1/2+)	96
123I	97				2.790		97
123I	98				2.807	3/2+,5/2+	98
123I	99				2.846		99
123I	100				2.876	(21/2+)	100
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123I	101	2.880	1/2+				101
123I	102				2.937	21/2(+)	102
123I	103				2.948	(21/2-)	103
123I	104				2.963	3/2+,5/2+	104
123I	105				3.001		105
123I	106				3.032		106
123I	107				3.037		107
123I	108	3.059	1/2+				108
123I	109				3.071		109
123I	110				3.084	23/2(+)	110
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123I	111				3.145		111
123I	112	3.178	1/2+				112
123I	113				3.200	(23/2+)	113
123I	114	3.207	1/2+				114
123I	115				3.255		115
123I	116				3.286		116
123I	117				3.309	(1/2+)	117
123I	118				3.324	(25/2+)	118
123I	119	3.337	23/2+				119
123I	120				3.393	23/2(+)	120
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123I	121				3.409		121
123I	122				3.461		122
123I	123				3.491	(25/2+)	123
123I	124				3.512	(27/2-)	124
123I	125				3.688		125
123I	126				3.697		126
123I	127				3.717	(27/2+)	127

123I	128				3.862	(25/2+)	128
123I	129				3.905	(27/2+)	129
123I	130				3.917		130
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123I	131				4.055	(29/2+)	131
123I	132				4.251	(29/2+)	132
123I	133				4.326	(31/2-)	133
123I	134				4.542	(31/2+)	134
123I	135				4.606		135
123I	136				4.701	(31/2+)	136
123I	137				4.901	(33/2+)	137
S-p	=	4.918	(	0.004)	-----		
123I	138				5.001	(35/2-)	138
123I	139				5.489	(35/2+)	139
123I	140				5.592	(39/2-)	140
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123I	141				5.819	(37/2+)	141
123I	142				5.945	(37/2+)	142
123I	143				6.093		143
123I	144				6.424	(41/2-)	144
123I	145				6.651	(41/2+)	145
123I	146				6.777	(43/2-)	146
123I	147				6.785		147
123I	148				6.937	(41/2+)	148
123I	149				7.031	(43/2-)	149
123I	150				7.178	(43/2+)	150
-----							
123I	151				7.550		151
123I	152				7.636	(45/2)	152
123I	153				7.661	(45/2)	153
123I	154				7.697	(47/2+)	154
123I	155				7.767	(47/2-)	155
123I	156				7.886		156
123I	157				7.908	(45/2)	157
123I	158				8.024		158
123I	159				8.315		159
123I	160				8.389	(49/2+)	160
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123I	161				8.568	(49/2-)	161
123I	162				8.986		162
123I	163				9.137	(51/2+)	163
123I	164				9.285	(53/2+)	164
123I	165				9.372	(51/2-)	165
123I	166				9.724	(55/2-)	166
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S-p	=	4.918	(	0.004)	-----		
S-n	=	9.935	(	0.006)	-----		
S-2p	=	12.921	(	0.004)	-----		
S-2n	=	17.840	(	0.006)	-----		

S-alpha= 0.892 ( 0.008)-----

S+p = -7.014 ( 0.004)

S+n = -7.493 ( 0.004)

S+2p = -10.725 ( 0.009)

S+2n = -17.036 ( 0.004)

S+alpha = -0.722 ( 0.007)

gap p = -2.095 ( 0.006)

gap n = 2.442 ( 0.008)

gap 2p = 2.196 ( 0.010)

gap 2n = 0.804 ( 0.007)

gap alpha = 0.170 ( 0.010)