

$^{42}\text{Sc}$        $Z = 21$        $N = 21$       adopted link      ENSDF link

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

BE = 354.687 ( 0.000) MeV

Qbeta+ = 6.426 ( 0.000) MeV

	Energy T	J+	J-	J-other	T1/2
42SC 1	0.000 1	0+			1 680.79 MS 28
42SC 2	0.611 0	1+			2 28 FS 12
42SC 3	0.616 0	7+			3 61.7 S 4
42SC 4	1.491 0	3+			4 31 PS 5
42SC 5	1.510 0	5+			5 44 PS 8
42SC 6	1.586 1	2+			6 54 FS 12
42SC 7				1.704	7
42SC 8				1.845 0 3(+)	8 3.5 NS LT
42SC 9	1.874 1	0+			9 70 FS LT
42SC 10	1.888 0	1+			10 42 FS LT
42SC 11	2.187 0	3+			11 0.54 PS 24
42SC 12	2.223 0	1+			12 87 FS 35
42SC 13	2.223 0	3+			13 0.63 PS 35
42SC 14	2.269 0	2+			14 70 FS GT
42SC 15				2.296 0 (1,2)	15
42SC 16	2.389	3+			16
42SC 17	2.434 0	4+			17 0.14 PS GT
42SC 18	2.455	1+			18 0.18 PS 11
42SC 19	2.487 1	2+			19 50 FS LT
42SC 20				2.507 (1,2,3)+	20
42SC 21				2.535 (1,2+)	21 0.66 PS 28
42SC 22				2.587 0 (2,4)	22
42SC 23				2.607 4(+)	23
42SC 24				2.652 0 (2+)	24 35 FS 21
42SC 25				2.669	25
42SC 26				2.726	26
42SC 27				2.795 (5+,6+)	27
42SC 28	2.816 1	4+			28 35 FS 14
42SC 29				2.833 (2+,3,4+)	29 0.21 PS 11
42SC 30	2.848	3+			30 0.20 PS 13
42SC 31				2.883	31
42SC 32	2.910	4+			32 0.8 PS GT
42SC 33	2.966	1+			33
42SC 34	2.996	4+			34 0.14 PS GT
42SC 35			3.023 4-		35
42SC 36	3.089	5+			36 0.21 PS 4
42SC 37				3.146	37

42SC	38						3.166			38		
42SC	39						3.175	(5)+		39		
42SC	40						3.224	(5+)		40	0.21 PS	GT
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42SC	41						3.238	1	(5,6,7)+	41		
42SC	42		3.285		7+					42		
42SC	43									43	0.14 PS	GT
42SC	44									44	35 FS	LT
42SC	45		3.348		1+					45		
42SC	46									46		
42SC	47		3.391		3+					47	62 FS	49
42SC	48									48		
42SC	49									49		
42SC	50									50		
-----												
42SC	51									51		
42SC	52									52		
42SC	53									53		
42SC	54									54		
42SC	55									55		
42SC	56									56		
42SC	57									57		
42SC	58		3.688	0	1+					58	28 FS	LT
42SC	59									59		
42SC	60									60		
-----												
42SC	61									61	70 FS	GT
42SC	62									62		
42SC	63									63		
42SC	64		3.797		3+					64		
42SC	65									65		
42SC	66		3.866		1+					66		
42SC	67									67		
42SC	68									68		
42SC	69									69		
42SC	70									70		
-----												
42SC	71		3.934	0	3+					71	52 FS	LT
42SC	72									72		
42SC	73									73	14 FS	LT
42SC	74									74		
42SC	75									75		
42SC	76									76	0.5 NS	AP
42SC	77									77		
42SC	78									78		
42SC	79									79		
42SC	80									80		
-----												
42SC	81									81		
S-p	=		4.272		(0.000)							

42SC 82				4.274		82
42SC 83				4.289	(2:5)+	83
42SC 84				4.370		84
42SC 85				4.391	(1,2,3)+	85
42SC 86				4.410	(2:5)+	86
42SC 87				4.469	(2,3)+	87
42SC 88				4.548	(2:5)+	88
42SC 89				4.582	(2:5)+	89
42SC 90				4.604	(2:5)(+)	90
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42SC 91				4.665	(2:5)+	91
42SC 92				4.704		92
42SC 93				4.725	(2:5)+	93
42SC 94				4.755	(3,4,5)+	94
42SC 95				4.786		95
42SC 96				4.808		96
42SC 97				4.828	(2:5)+	97
42SC 98				4.875	(1,2,3)+	98
42SC 99				4.883	(8+)	99
42SC 100		4.928	1+			100
-----						
42SC 101				4.971		101
42SC 102				4.992	9(+)	102
42SC 103				5.001	(1,2,3)+	103
42SC 104				5.028		104
42SC 105				5.048	(3,4,5)+	105
42SC 106				5.084		106
42SC 107				5.120	(1,2,3)+	107
42SC 108		5.140	1+			108
42SC 109				5.305		109
42SC 110				5.326		110
-----						
42SC 111				5.352		111
42SC 112				5.370		112
42SC 113				5.380		113
42SC 114				5.402	(7+)	114
42SC 115				5.436		115
42SC 116				5.451	11(-)	116
42SC 117				5.475		117
42SC 118				5.507	8(+)	118
42SC 119				5.520		119
42SC 120				5.572		120
-----						
42SC 121				5.635	(2:5)+	121
42SC 122				5.651	(2:5)+	122
42SC 123				5.686	(1+)	123
42SC 124		5.716	1+			124
S-alpha=		5.745	( 0.000)	-----		
42SC 125				5.771		125
42SC 126				5.810		126

42SC 127				5.865	(2:5)(+)	127
42SC 128				5.963	(9+)	128
42SC 129				5.966	(2:5)(+)	129
42SC 130				5.996	(3,4)+	130
-----						
42SC 131				6.011		131
42SC 132				6.076	(2+,3,4+)	132
42SC 133				6.090		133
42SC 134				6.118	(8+)	134
42SC 135				6.174	(3+,4+)	135
42SC 136				6.253	(3+,4)	136
42SC 137	6.327	1+				137
42SC 138				6.364		138
42SC 139				6.737		139
42SC 140				6.824	(10+)	140
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42SC 141				6.921	11(+)	141
42SC 142				7.068		142
42SC 143				7.129		143
42SC 144				7.184	10(+)	144
42SC 145				7.261		145
42SC 146				7.295		146
42SC 147				7.307	(11+)	147
42SC 148				7.418		148
42SC 149				7.491		149
42SC 150				7.586		150
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42SC 151				7.676	11(+)	151
42SC 152				7.678		152
42SC 153				7.776		153
42SC 154				7.884		154
42SC 155				7.923		155
42SC 156				7.974		156
42SC 157				8.094	(10-)	157
42SC 158				8.105	(1+)	158
42SC 159				8.182		159
42SC 160				8.205		160
-----						
42SC 161				8.251		161
42SC 162				8.292		162
42SC 163				8.338		163
42SC 164				8.373		164
42SC 165				8.400		165
42SC 166				8.492		166
42SC 167				8.540		167
42SC 168				8.732	(1+)	168
42SC 169				8.798	(13+)	169
42SC 170				8.810		170
-----						
42SC 171				8.854		171

42SC 172			8.887		172
42SC 173			8.887		173
42SC 174			8.920		174
42SC 175			8.929		175
42SC 176			8.981	(1+)	176
42SC 177			9.004		177
42SC 178			9.068		178
42SC 179			9.088		179
42SC 180			9.113		180
-----					
42SC 181			9.156		181
42SC 182			9.203		182
42SC 183			9.236		183
42SC 184			9.280		184
42SC 185			9.312		185
42SC 186			9.406		186
42SC 187			9.511	(13+)	187
42SC 188			9.565		188
42SC 189			9.611		189
42SC 190			9.620	(12)	190
-----					
42SC 191			9.793		191
42SC 192			9.826		192
42SC 193			9.874		193
42SC 194			9.901		194
42SC 195			9.947		195
42SC 196			9.978		196

S-p = 4.272 ( 0.000)-----  
S-n = 11.550 ( 0.000)-----  
S-2p = 13.163 ( 0.000)-----  
S-2n = 27.740 ( 0.003)-----  
S-alpha= 5.745 ( 0.000)-----

S+p = -4.484 ( 0.006)  
S+n = -12.138 ( 0.002)  
S+2p = -6.265 ( 0.007)  
S+2n = -21.838 ( 0.002)  
S+alpha = -7.380 ( 0.000)

gap p = -0.211 ( 0.006)  
gap n = -0.588 ( 0.002)  
gap 2p = 6.898 ( 0.007)  
gap 2n = 5.903 ( 0.003)  
gap alpha = -1.635 ( 0.000)