

^{48}Ti $Z = 22$ $N = 26$ [link to full NNDC output](#)

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

BE = 418.704 (0.000) MeV

	Energy T	J+	J-	J-other	T1/2
48TI 1	0.000	0+			1 STABLE
48TI 2	0.984	2+			2 4.04 PS 10
48TI 3	2.296	4+			3 0.762 PS 70
48TI 4	2.421	2+			4 27.1 FS 27
48TI 5				2.465	5
48TI 6	2.997	0+			6 78 FS 9
48TI 7	3.062	2+			7
48TI 8	3.224	3+			8 29 FS 6
48TI 9	3.240	4+			9 46 FS 7
48TI 10	3.333	6+			10
48TI 11			3.359 3-		11 184 FS 21
48TI 12	3.371	2+			12 11.0 FS 8
48TI 13	3.509	6+			13
48TI 14	3.617	2+			14 42 FS 11
48TI 15				3.633 (2+)	15 10.3 FS? 21
48TI 16			3.699 1-		16
48TI 17				3.711	17
48TI 18	3.739	1+			18 2.65 FS 4
48TI 19				3.782 3-,4-	19 1.2 PS +11-6
48TI 20			3.803 2-		20
48TI 21	3.852	0+			21
48TI 22			3.852 3-		22 45 FS 10
48TI 23	4.035	2+			23 42 FS 17
48TI 24				4.046 5(-)	24 0.37 PS 10
48TI 25	4.075	2+			25 35 FS 10
48TI 26	4.077	4+			26
48TI 27	4.102	1+			27
48TI 28				4.197 1,2,3,4	28
48TI 29				4.205 1,2	29
48TI 30			4.210 2-		30
48TI 31	4.254	1+			31
48TI 32	4.311	1+			32
48TI 33				4.348 1,2,3,4	33
48TI 34				4.381 2+,3,4,5-	34 24 FS 10
48TI 35				4.388 2+,3,4+	35 35 FS 14
48TI 36				4.398 5,6+	36 45 FS 14
48TI 37				4.404 5	37 42 FS LT
48TI 38				4.407 (2+)	38

48TI	39	4.457	3+					39	49 FS	24
48TI	40			4.472	3-			40		

48TI	41					4.530	(3-,4-)	41		
48TI	42	4.535	0+					42		
48TI	43	4.564	8+					43		
48TI	44					4.567	(-)	44		
48TI	45			4.581	3-			45	28 FS	14
48TI	46	4.589	0+					46		
48TI	47					4.719	2+,4+	47	66 FS	14
48TI	48					4.758	LE 4	48		
48TI	49					4.783	2,3,4	49		
48TI	50					4.792	0+,1,2,3(-)	50	28 FS	14

48TI	51					4.794	2,3,4	51		
48TI	52					4.795	3(-),4	52	69 FS	35
48TI	53					4.861	2+,3+,4+	53	21 FS	10
48TI	54					4.885	(2+,3+,4+)	54		
48TI	55					4.911	LE 4	55		
48TI	56			4.915	5-			56	0.19 PS	11
48TI	57					4.925	2+,3+,4+	57	21 FS	10
48TI	58					4.940	2+,3+,4+	58		
48TI	59					4.956	5,6	59	1.0 PS	GT
48TI	60	4.966	2+					60		

48TI	61	4.972	0+					61		
48TI	62			4.992	5-			62		
48TI	63					5.063		63		
48TI	64	5.146	4+					64	49 FS	28
48TI	65					5.155	5	65	7 FS	LT
48TI	66	5.158	4+					66	25 FS	LT
48TI	67	5.169	7+					67	28 FS	12
48TI	68	5.197	8+					68	76 FS	24
48TI	69	5.241	1+					69		
48TI	70					5.252	3,4	70	49 FS	+19-24

48TI	71					5.274	2,3,4,5	71		
48TI	72					5.300	4+,5,6	72	35 FS	LT
48TI	73					5.312	5(-),6(-),7(-)	73	69 FS	28
48TI	74	5.313	2+					74		
48TI	75					5.340	1(-)	75		
48TI	76					5.356	(2,3,4)	76		
48TI	77					5.385	(3)-	77		
48TI	78	5.391	4+					78		
48TI	79					5.461	2+,3+,4+,5+	79		
48TI	80	5.491	2+					80		

48TI	81	5.500	4+					81	26 FS	12
48TI	82			5.519	3-			82		
48TI	83					5.526	1	83		

48TI 84						5.545	4 TO 8	84		
48TI 85				5.546	3-			85		
48TI 86						5.569	(3-)	86		
48TI 87		5.571	2+					87		
48TI 88						5.616	3-,4-	88		
48TI 89		5.620	2+					89		
48TI 90						5.630	7	90	24 FS	14

48TI 91		5.640	1+					91	0.53 FS	+43-34
48TI 92				5.642	3-			92	24 FS	10
48TI 93		5.657	1+					93		
48TI 94						5.760	(3-)	94		
48TI 95						5.762	4,5,6	95		
48TI 96		5.764	2+					96		
48TI 97						5.805	3-,4-	97	21 FS	12
48TI 98				5.827	3-			98		
48TI 99				5.846	3-			99	21 FS	LT
48TI 100		5.885	2+					100		

48TI 101						5.886	4 TO 8	101		
48TI 102						5.889	1,2,3,4	102		
48TI 103						5.892	1,2	103		
48TI 104		5.916	2+					104		
48TI 105						5.974	5,6,7	105		
48TI 106						5.988	1+,3+	106		
48TI 107						5.990	4,5,6	107		
48TI 108						5.996	(2)+	108		
48TI 109						6.022	(3-)	109		
48TI 110						6.034	9+,7+	110	21 FS	LT

48TI 111						6.036	2 TO 6	111		
48TI 112						6.039	6	112	25 FS	17
48TI 113						6.040	1,2	113		
48TI 114						6.042	(2,3)	114		
48TI 115						6.051		115		
48TI 116						6.055	LE 4	116		
48TI 117						6.084	4,5,6	117		
48TI 118						6.086	1	118		
48TI 119						6.102	10,8	119		
48TI 120		6.115	2+					120		

48TI 121						6.119	4,5,6	121		
48TI 122		6.122	0+					122		
48TI 123						6.126	1	123		
48TI 124						6.138	1(+)	124		
48TI 125						6.147	4 TO 8	125		
48TI 126						6.153	5,6,7	126		
48TI 127						6.168	3-,4-	127		
48TI 128						6.172	8,6+	128	35 FS	28
48TI 129						6.176	2,3,4,5	129		

48TI 130				6.183	2 TO 6	130
48TI 131				6.223	LE 4	131
48TI 132				6.234	LE 4	132
48TI 133	6.236	2+				133
48TI 134				6.240	4,5-	134
48TI 135			6.246	3-		135
48TI 136				6.254	2,3,4	136
48TI 137				6.268	LE 4	137
48TI 138				6.314	4,5-	138
48TI 139				6.316	2,3,4	139
48TI 140				6.322	1 TO 5	140
48TI 141				6.331	1 TO 5	141
48TI 142			6.337	3-		142
48TI 143				6.363	3,4,5,6	143
48TI 144				6.365	2,3,4,5	144
48TI 145				6.394	6,7,8	145
48TI 146				6.400	4 TO 8	146
48TI 147				6.406	1 TO 5	147
48TI 148				6.414	2 TO 6	148
48TI 149				6.434	3 TO 7	149
48TI 150				6.451	2,3,4,5	150
48TI 151			6.460	3-		151
48TI 152				6.476	4 TO 8	152
48TI 153				6.490	2,3,4	153
48TI 154				6.491	LE 4	154
48TI 155				6.493	4,5,6,7	155
48TI 156				6.507	6,7	156
48TI 157	6.514	4+				157
48TI 158				6.524	4 TO 8	158
48TI 159				6.530	2 TO 6	159
48TI 160				6.536	3,4,5,6	160
48TI 161				6.539	1 TO 5	161
48TI 162				6.542	LE 4	162
48TI 163				6.544	2 TO 6	163
48TI 164				6.573	5,6,7	164
48TI 165				6.584	(3-)	165
48TI 166			6.604	1-		166 0.86 EV 20
48TI 167				6.617	4 TO 8	167
48TI 168				6.627	0-,1,2,3	168
48TI 169				6.634	3,4,5	169
48TI 170				6.653	2 TO 6	170
48TI 171				6.661	3 TO 7	171
48TI 172				6.673	1+,2+,3+,4+	172
48TI 173				6.707	2,3,4	173
48TI 174				6.708	2,3,4,5-	174

48TI 175				6.711	4,5,6,7	175
48TI 176				6.740	(2+,3-)	176
48TI 177		6.744	4+			177
48TI 178				6.757	6,7,8,9	178
48TI 179				6.770	4 TO 8	179
48TI 180			6.797	1 TO 5-		180

48TI 181				6.808	2 TO 6	181
48TI 182				6.814	2 TO 6	182
48TI 183				6.825	4 TO 8	183
48TI 184				6.827	2,3,4	184
48TI 185				6.831	LE 4	185
48TI 186				6.841	2 TO 6	186
48TI 187				6.869	1 TO 5	187
48TI 188				6.878	LE 4	188
48TI 189				6.880	6+,7,8,9	189 125 FS +69-55
48TI 190				6.885	4 TO 8	190

48TI 191				6.898	1,2	191
48TI 192				6.906	10,8,6	192 97 FS +76-62
48TI 193				6.916	3 TO 7	193
48TI 194				6.944	4,5,6,7	194
48TI 195				6.955	5,6,7,8	195
48TI 196			6.957	1 TO 5-		196
48TI 197				6.966	2 TO 6	197
48TI 198				6.972	LE 4	198
48TI 199				6.975	3 TO 7	199
48TI 200				6.976	LE 4	200

48TI 201			6.979	1-		201
48TI 202				6.984	1 TO 5	202
48TI 203				6.985	6,7,8	203
48TI 204				7.033	2 TO 6	204
48TI 205				7.040	6,7,8,9	205
48TI 206				7.041	1,2	206
48TI 207				7.054	1 TO 5	207
48TI 208				7.061	0-,1,2,3	208
48TI 209				7.069	1 TO 5	209
48TI 210		7.071	1+			210

48TI 211				7.075	6 TO 10	211
48TI 212				7.093	5,6,7,8	212
48TI 213				7.100	2 TO 6	213
48TI 214				7.110	1	214
48TI 215				7.111	5 TO 9	215
48TI 216				7.118	6,7,8	216
48TI 217			7.124	1-		217
48TI 218				7.129	(2+)	218
48TI 219				7.149	4 TO 8	219
48TI 220				7.162	4 TO 8	220

48TI 221				7.183	LE 4	221		
48TI 222				7.199	LE 4	222		
48TI 223				7.221	LE 4	223		
48TI 224	7.222	1+				224		
48TI 225				7.256	3+,4+	225		
48TI 226	7.274	4+				226		
48TI 227	7.289	3+				227		
48TI 228			7.322	3-		228		
48TI 229				7.326	6 TO 10	229		
48TI 230				7.344	4 TO 8	230		
48TI 231				7.353	5 TO 9	231		
48TI 232	7.359	2+				232		
48TI 233				7.374	11,9,7	233	28 FS	+42-28
48TI 234				7.387	5 TO 9	234		
48TI 235				7.427	9,7	235	0.7 PS	GT
48TI 236				7.431	2 TO 6	236		
48TI 237				7.442	4,5,6	237		
48TI 238			7.450	1-		238		
48TI 239				7.476	3 TO 7	239		
48TI 240				7.483	LE 4	240		
48TI 241				7.484	1	241		
48TI 242				7.497	3 TO 9	242		
48TI 243				7.531	6,7,8	243		
48TI 244				7.535	8,9,10	244		
48TI 245				7.542	2,3,4,5-	245		
48TI 246				7.556	2 TO 6	246		
48TI 247				7.571	4 TO 8	247		
48TI 248			7.574	0- TO 5-		248		
48TI 249				7.586	1(-)	249		
48TI 250				7.587	5,6,7,8	250		
48TI 251				7.616	1,2,3	251		
48TI 252				7.623	6,7,8,9	252		
48TI 253				7.656	6 TO 10	253		
48TI 254				7.668	10,8	254		
48TI 255				7.683	(2+,3-)	255		
48TI 256				7.692		256		
48TI 257				7.709	3 TO 7	257		
48TI 258				7.728	(3-)	258		
48TI 259				7.766	1+,2+,3+,4+	259		
48TI 260	7.846	3+				260		
48TI 261	7.876	3+				261		
48TI 262	7.905	1+				262		
48TI 263				7.969	1	263		
48TI 264	7.986	2+				264		
48TI 265			7.999	3-		265		

48TI 266				8.010	1	266
48TI 267				8.053	1+,3+	267
48TI 268				8.086		268
48TI 269				8.091	12,10,8,6	269 0.21 PS 7
48TI 270	8.199	1+				270

48TI 271			8.212	3-		271
48TI 272				8.246	(2+)	272
48TI 273				8.255	1	273
48TI 274				8.323	10,8,6	274
48TI 275				8.572	1(-)	275
48TI 276				8.592	1	276
48TI 277				8.672	1	277
48TI 278				8.933	1	278
48TI 279				8.996	1(+)	279
48TI 280				9.025	1	280

48TI 281				9.260		281
S-alpha=	9.449	(0.000)	-----			
48TI 282				9.910		282
48TI 283			9.977	1-		283
48TI 284				10.460		284
48TI 285				10.600		285
48TI 286				10.726	(6+)	286
48TI 287				10.982	(4+)	287
S-p	=	11.445	(0.002)	-----		
S-n	=	11.627	(0.000)	-----		
48TI 288				16.200	(2+)	288 4.5 MEV 5
48TI 289				17.379	(0+)	289

S-p	=	11.445	(0.002)	-----		
S-n	=	11.627	(0.000)	-----		
S-2p	=	19.931	(0.002)	-----		
S-2n	=	20.508	(0.000)	-----		
S-alpha=	9.449	(0.000)	-----			
S+p	=	-6.758	(0.001)			
S+n	=	-8.142	(0.000)			
S+2p	=	-16.347	(0.000)			
S+2n	=	-19.082	(0.000)			
S+alpha	=	-9.351	(0.000)			
gap p	=	4.687	(0.002)			
gap n	=	3.484	(0.000)			
gap 2p	=	3.584	(0.002)			
gap 2n	=	1.426	(0.000)			
gap alpha	=	0.097	(0.000)			