

^{51}Mn $Z = 25$ $N = 26$ [link to full NNDC output](#)

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

BE = 440.322 (0.001) MeV

Qbeta+ = 3.207 (0.001) MeV

	Energy T	J+	J-	J-other	T1/2
51MN 1			0.000	5/2-	1 46.2 M 1
51MN 2			0.237	7/2-	2 14.1 PS 23
51MN 3			1.140	9/2-	3 0.25 PS +8-6
51MN 4			1.488	11/2-	4 0.50 PS +14-10
51MN 5				1.817 3/2(-)	5 0.7 PS GT
51MN 6			1.825	3/2-	6 16 FS 4
51MN 7			1.959	1/2-	7 0.38 PS 12
51MN 8			2.140	3/2-	8 15 FS 4
51MN 9				2.256 (5/2-)	9 79 FS +33-26
51MN 10	2.276	1/2+			10 1.2 FS GT
51MN 11			2.310	5/2-	11 0.9 PS +6-4
51MN 12				2.416 (7/2)-	12 4.2 FS +28-21
51MN 13				2.450 1/2-,3/2-	13
51MN 14				2.650 1/2-,3/2-	14
51MN 15			2.702	3/2-	15 0.5 PS GT
51MN 16			2.841	1/2-	16 0.27 PS +13-8
51MN 17			2.893	5/2-	17
51MN 18			2.914	3/2-	18 21 FS LT
51MN 19			2.957	13/2-	19
51MN 20	2.984	5/2+			20
51MN 21				3.030 (7/2)	21
51MN 22				3.049 (3/2-)	22
51MN 23				3.058 (5/2-,7/2-)	23
51MN 24				3.092 1/2-,3/2-	24
51MN 25				3.131 3/2-,5/2+	25
51MN 26			3.251	15/2-	26
51MN 27				3.281 (1/2,3/2)	27
51MN 28				3.292 5/2-,7/2-	28
51MN 29				3.423 (1/2-:7/2-)	29
51MN 30				3.543 1/2-,3/2-	30
51MN 31			3.554	3/2-	31
51MN 32				3.658	32
51MN 33			3.681	17/2-	33 1.76 NS 4
51MN 34				3.694 1/2-,3/2-	34
51MN 35				3.730 (7/2)	35
51MN 36				3.825 7/2	36
51MN 37				3.835 (7/2)	37

51MN 38				3.877	(3/2,5/2)	38
51MN 39				3.893	1/2-,3/2-	39
51MN 40				3.932	3/2,5/2-	40

51MN 41				3.956	(7/2,9/2)	41
51MN 42				4.000		42
51MN 43				4.006	(3/2-,5/2-)	43
51MN 44				4.017	(1/2,3/2-)	44
51MN 45				4.046		45
51MN 46				4.052		46
51MN 47				4.091	(5/2-,7/2-)	47
51MN 48		4.140	19/2-			48 0.7 PS LT
51MN 49				4.153	(5/2+)	49
51MN 50				4.200	(1/2,3/2)	50

51MN 51				4.206	(5/2)	51
51MN 52				4.352	(1/2-,3/2-)	52
51MN 53		4.451	7/2-			53
51MN 54				4.463		54
51MN 55				4.488	(5/2)	55
51MN 56				4.493	5/2-,7/2-	56
51MN 57				4.523	1/2-,3/2-	57
51MN 58				4.532		58
51MN 59				4.540	(3/2,5/2,7/2)	59
51MN 60				4.601		60

51MN 61				4.710		61
51MN 62				4.723	(1/2,3/2)	62
51MN 63				4.731	(3/2+,5/2+)	63
51MN 64				4.739		64
51MN 65				4.776		65
51MN 66				4.883	1/2,3/2-	66
51MN 67		4.925	1/2- TO 7/2-			67
51MN 68				5.067	(3/2)	68
51MN 69				5.077	1/2-,3/2-	69
51MN 70				5.133	1/2-,3/2-	70

51MN 71				5.174	(1/2,3/2,5/2)	71
51MN 72				5.188	(3/2+,5/2+)	72
51MN 73				5.203		73
51MN 74				5.212		74
51MN 75				5.230		75
51MN 76				5.259	(17/2,19/2)	76

S-p =	5.271	(0.001)	-----		
51MN 77				5.454	1/2-,3/2-	77
51MN 78		5.458	19/2-			78
51MN 79				5.506		79
51MN 80				5.517	(1/2-,3/2-)	80

51MN 81				5.585		81

51MN 82				5.596	(1/2-,3/2-)	82
51MN 83		5.640	21/2-			83
51MN 84				5.692	(1/2-,3/2-)	84
51MN 85				5.729		85
51MN 86				5.787		86
51MN 87				5.867		87
51MN 88				5.899		88
51MN 89				5.944		89
51MN 90				5.975		90

51MN 91				6.012		91
51MN 92				6.047		92
51MN 93				6.072		93
51MN 94				6.118		94
51MN 95				6.299		95
51MN 96		6.309	3/2-			96
51MN 97				6.321		97
51MN 98				6.359		98
51MN 99				6.372		99
51MN 100				6.412		100

51MN 101		6.451	5/2-			101
51MN 102				6.466		102
51MN 103		6.471	23/2-			103
51MN 104				6.682		104
51MN 105		6.694	5/2-			105
51MN 106				6.702		106
51MN 107				6.723		107
51MN 108				6.742		108
51MN 109		6.754	5/2-			109
51MN 110				6.786		110

51MN 111				6.800		111
51MN 112				6.803		112
51MN 113				6.820		113
51MN 114		6.823	21/2-			114
51MN 115				6.840		115
51MN 116				6.849		116
51MN 117				6.916		117
51MN 118				6.927		118
51MN 119		7.034	3/2-			119
51MN 120				7.045	1/2	120

51MN 121		7.065	3/2-			121
51MN 122				7.106	5/2,7/2-	122
51MN 123				7.129	1/2	123
51MN 124		7.141	5/2-			124
51MN 125		7.146	3/2-			125
51MN 126		7.162	1/2-			126
51MN 127		7.169	1/2-			127

51MN 128				7.170	5/2-				128	
51MN 129							7.175	5/2	129	
51MN 130							7.176	(27/2-)	130 69.8 PS 22	

51MN 131		7.176	5/2+						131	
51MN 132					7.190	3/2-			132	
51MN 133								7.210	(5/2)	133
51MN 134								7.213	(1/2,3/2)	134
51MN 135								7.222		135
51MN 136								7.240	5/2(+)	136
51MN 137					7.261	5/2-				137
51MN 138					7.262	3/2-				138
51MN 139								7.273	5/2	139
51MN 140					7.274	3/2-				140

51MN 141					7.296	3/2-				141
51MN 142								7.297	(15/2+)	142
51MN 143		7.310	5/2+							143
51MN 144					7.314	3/2-				144
51MN 145					7.339	3/2-				145
51MN 146		7.342	5/2+							146
51MN 147								7.343	3/2-,5/2-	147
51MN 148					7.357	5/2-				148
51MN 149								7.370	3/2+,5/2-	149
51MN 150					7.371	3/2-				150

51MN 151								7.395	3/2-,5/2-	151
51MN 152								7.415	3/2+,5/2+	152
51MN 153								7.447	3/2-,5/2-	153
51MN 154					7.450	3/2-				154
51MN 155		7.459	5/2+							155
51MN 156								7.463		156
51MN 157					7.467	1/2-				157
51MN 158								7.501	(21/2-,23/2-)	158
51MN 159					7.514	5/2-				159
51MN 160								7.529	3/2-,5/2-	160

51MN 161								7.546	5/2	161
51MN 162					7.550	1/2-				162
51MN 163								7.560	3/2-,5/2-	163
51MN 164								7.572		164
51MN 165								7.587	(3/2-)	165
51MN 166								7.599		166
51MN 167								7.618	1/2	167
51MN 168		7.621	7/2+							168
51MN 169					7.631	5/2-				169
51MN 170								7.635		170

51MN 171								7.643		171
51MN 172					7.667	23/2-				172

51MN 173						7.669	(5/2,7/2)	173	
51MN 174						7.683		174	
51MN 175		7.699	5/2+					175	
51MN 176					7.715	3/2-		176	
51MN 177					7.718	3/2-		177	
51MN 178					7.729	3/2-		178	
51MN 179							1/2	179	
51MN 180					7.786	5/2-		180	

51MN 181					7.791	5/2-		181	
51MN 182		7.798	1/2+					182	
51MN 183							7.844	183	
51MN 184					7.849	3/2-		184	
51MN 185							7.865	(17/2+)	185
51MN 186							7.887		186
51MN 187					7.892	25/2-		187	
51MN 188							7.894		188
51MN 189							7.914		189
51MN 190							7.933	3/2-,5/2-,7/2	190

51MN 191					7.943	3/2-		191	
51MN 192							7.968		192
51MN 193							8.014	9/2	193
51MN 194							8.023		194
51MN 195					8.045	3/2-			195
51MN 196							8.064	3/2	196
51MN 197							8.085	21/2-,23/2	197
51MN 198							8.101		198
51MN 199					8.143	7/2-			199
51MN 200							8.147	3/2-,5/2-,7/2	200

51MN 201							8.169	3/2-,5/2	201
51MN 202							8.175	3/2,5/2-	202
51MN 203							8.186		203
51MN 204							8.199	(3/2-)	204
51MN 205							8.216	3/2-,5/2-	205
51MN 206							8.256		206
51MN 207							8.260	5/2,7/2-,9/2	207
51MN 208							8.266		208
51MN 209					8.269	5/2-			209
51MN 210		8.282	5/2+						210

51MN 211		8.307	5/2+						211
51MN 212		8.336	5/2+						212
51MN 213							8.340	(5/2+)	213
51MN 214		8.352	5/2+						214
51MN 215		8.358	5/2+						215
51MN 216							8.381		216
51MN 217		8.389	3/2+						217
51MN 218					8.391	5/2-			218

51MN 219						8.400				219
51MN 220						8.403	1/2			220

51MN 221		8.408	5/2+							221
51MN 222						8.415	(19/2+)			222
51MN 223					8.425	23/2-				223
51MN 224		8.453	9/2+							224
51MN 225		8.465	9/2+							225
51MN 226		8.473	9/2+							226
51MN 227						8.473				227
51MN 228		8.491	5/2+							228
51MN 229		8.492	5/2+							229
51MN 230						8.499				230

51MN 231						8.556				231
51MN 232						8.556				232

S-alpha=	8.662	(0.001)	-----						
51MN 233		8.749	1/2+							233
51MN 234					8.893	1/2-				234
51MN 235		8.915	1/2+							235
51MN 236					8.973	25/2-				236
51MN 237							9.165	(21/2+)		237
51MN 238					9.186	3/2-				238
51MN 239							9.471	25/2-,27/2		239
51MN 240					9.515	1/2-			0.69 PS	GT

51MN 241					9.516	1/2-				241
51MN 242					9.600	25/2-				242
51MN 243					9.677	25/2-				243
51MN 244					9.920	25/2-				244
51MN 245							9.979	23/2(+)		245
51MN 246					10.469	27/2-				246
51MN 247					10.804	27/2-				247
51MN 248							10.843	25/2(+)		248
51MN 249					11.062	27/2-				249
51MN 250							11.202	(27/2-)		250

51MN 251		11.203	5/2+							251
51MN 252					11.510	29/2-				252
51MN 253					11.671	27/2-				253
51MN 254					11.781	29/2-				254
51MN 255							11.946	27/2(+)		255
51MN 256					12.185	29/2-				256
51MN 257					12.434	29/2-				257
51MN 258					12.792	31/2-				258
51MN 259							12.892	27/2-,29/2		259
51MN 260					13.170	31/2-				260

51MN 261							13.468	29/2-,31/2		261
51MN 262					13.585	31/2-				262

S-n	=	13.688	(0.001)	-----		
51MN 263				13.964	33/2-		263
51MN 264				14.125	31/2-		264
51MN 265					14.318	31/2(+)	265
S-2p	=	14.860	(0.001)	-----		
51MN 266				14.924	33/2-		266
51MN 267					15.387	31/2,33/2-	267
51MN 268					15.863	(35/2)-	268
51MN 269					17.062	35/2(+)	269
51MN 270					19.636	39/2(+)	270

S-p = 5.271 (0.001)-----
S-n = 13.688 (0.001)-----
S-2p = 14.860 (0.001)-----
S-2n = 26.766 (0.002)-----
S-alpha= 8.662 (0.001)-----

S+p = -7.375 (0.005)
S+n = -10.535 (0.002)
S+2p = -8.993 (0.002)
S+2n = -22.589 (0.001)
S+alpha = -8.211 (0.001)

gap p = -2.105 (0.005)
gap n = 3.153 (0.002)
gap 2p = 5.866 (0.002)
gap 2n = 4.177 (0.002)
gap alpha = 0.451 (0.001)