

^{56}Fe $Z = 26$ $N = 30$ [link to full NNDC output](#)

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

BE = 492.260 (0.000) MeV

	Energy T	J+	J-	J-other	T1/2
56FE 1	0.000	0+			1 STABLE
56FE 2	0.847	2+			2 6.07 PS 23
56FE 3	2.085	4+			3 0.64 PS 12
56FE 4	2.658	2+			4 21 FS 1
56FE 5	2.941	0+			5 0.45 PS +21-12
56FE 6	2.960	2+			6 28 FS 3
56FE 7				3.076 (3-)	7
56FE 8				3.120 (1+)	8 19 FS 1
56FE 9	3.123	4+			9 47 FS 12
56FE 10	3.370	2+			10 17 FS 3
56FE 11	3.389	6+			11 2.9 PS 2
56FE 12	3.445	3+			12 29 FS 5
56FE 13	3.448	1+			13 8 FS 3
56FE 14				3.600 (1,2+)	14 59 FS LT
56FE 15	3.606	2+			15 0.15 PS 4
56FE 16				3.610 0(+)	16 52 FS 21
56FE 17	3.744	2+			17
56FE 18	3.756	6+			18 0.13 PS 2
56FE 19				3.760	19
56FE 20	3.830	2+			20 39 FS 5
56FE 21	3.856	3+			21 25 FS 3
56FE 22	4.049	3+			22 7 FS 3
56FE 23				4.086 (1,2+)	23
56FE 24	4.100	4+			24 43 FS 5
56FE 25	4.120	3+			25 0.14 PS 4
56FE 26	4.298	4+			26 110 FS 50
56FE 27	4.302	0+			27
56FE 28	4.320	2+			28
56FE 29			4.368 3-		29
56FE 30	4.395	3+			30 35 FS 17
56FE 31	4.401	2+			31 56 FS +48-22
56FE 32				4.448	32
56FE 33	4.459	4+			33 26 FS +12-8
56FE 34			4.510 3-		34 83 FS 28
56FE 35				4.540 1+,2+	35 25 FS +20-14
56FE 36	4.555	4+			36 94 FS +43-24
56FE 37	4.609	2+			37 47 FS +33-18
56FE 38	4.611	4+			38 27 FS +45-15

56FE 39						4.620		39		
56FE 40						4.658	2+,3+,4+	40	49 FS	+8-7

56FE 41						4.673		41		
56FE 42						4.683	(2+),3+	42	66 FS	+63-25
56FE 43		4.692	4+					43	33 FS	+10-7
56FE 44		4.701	7+					44	0.083 PS	+82-14
56FE 45		4.728	2+					45	63 FS	+57-20
56FE 46		4.730	0+					46		
56FE 47		4.737	2+					47	32 FS	+7-6
56FE 48						4.784	(1,2+)	48		
56FE 49						4.802		49		
56FE 50						4.813	4+,5+	50		

56FE 51						4.820		51		
56FE 52						4.848	(2+)	52	64 FS	27
56FE 53						4.867	(1,2+)	53	9.7 FS	20
56FE 54		4.878	2+					54		
56FE 55						4.882		55		
56FE 56						4.887		56		
56FE 57						5.023	(1,2+)	57	6 FS	3
56FE 58						5.027		58		
56FE 59						5.033	(4,5)+	59	10 FS	+3-2
56FE 60		5.038	4+					60	78 FS	+36-22

56FE 61						5.056	4+, (3+)	61	66 FS	+63-25
56FE 62					5.122 5-			62		
56FE 63						5.132	3+,4+, (2+)	63	73 FS	+28-17
56FE 64		5.150	2+					64		
56FE 65						5.184	8(+)	65		
56FE 66		5.187	2+					66		
56FE 67						5.195	(1,2+)	67		
56FE 68						5.219		68		
56FE 69						5.227	1	69	12.3 FS	20
56FE 70						5.233	2+, (3+)	70	8 FS	+6-5

56FE 71		5.236	4+					71	104 FS	+55-28
56FE 72		5.249	4+					72		
56FE 73		5.256	8+					73	0.35 PS	4
56FE 74		5.257	2+					74	20 FS	4
56FE 75						5.284		75		
56FE 76		5.296	0+					76		
56FE 77		5.303	4+					77	28 FS	+15-9
56FE 78						5.308		78		
56FE 79		5.386	0+					79		
56FE 80						5.402	GE 1	80	17 FS	4

56FE 81		5.452	4+					81	98 FS	+40-28
56FE 82						5.479	(4+)	82	25 FS	+24-9
56FE 83						5.488	2,3,4	83	3 FS	2

56FE 84						5.503	(2,3,4)+	84	5 FS	2
56FE 85		5.512	2+					85		
56FE 86						5.528		86		
56FE 87						5.538	(1,2+)	87		
56FE 88						5.562		88		
56FE 89		5.574	2+					89		
56FE 90						5.590	1+,2,3+	90		

56FE 91		5.618	4+					91	76 FS	+51-24
56FE 92						5.624	(4,5)+	92	19 FS	+14-10
56FE 93		5.627	8+					93	0.069 PS	+21-14
56FE 94						5.661		94	14 FS	LT
56FE 95						5.670	(2,3,4)+	95	16 FS	+8-6
56FE 96						5.684		96		
56FE 97						5.698	(2+)	97	85 FS	+42-33
56FE 98		5.705	2+					98	3 FS	2
56FE 99						5.725		99		
56FE 100						5.737		100		

56FE 101						5.774	(4+)	101	12 FS	+9-6
56FE 102						5.795		102		
56FE 103						5.801		103		
56FE 104						5.806		104		
56FE 105						5.817		105		
56FE 106						5.824		106		
56FE 107						5.853		107	19 FS	5
56FE 108		5.861	4+					108		
56FE 109						5.871	(2,3,4)	109	12 FS	+27-10
56FE 110						5.874		110		

56FE 111						5.883		111		
56FE 112		5.914	2+					112		
56FE 113						5.915	(2,3,4)+	113	22 FS	+14-8
56FE 114						5.921		114		
56FE 115		5.936	2+					115		
56FE 116						5.941		116		
56FE 117						5.966		117		
56FE 118						5.987	(1+ TO 3+)	118		
56FE 119						6.002		119		
56FE 120						6.013		120		

56FE 121						6.021		121		
56FE 122						6.032		122		
56FE 123						6.041	(7-)	123		
56FE 124						6.048		124		
56FE 125		6.055	2+					125		
56FE 126		6.062	4+					126		
56FE 127		6.072	6+					127		
56FE 128						6.078		128	16 FS	3
56FE 129						6.092	(3-)	129		

56FE 130			6.102	(0 TO 3+)	130
56FE 131			6.111		131
56FE 132			6.116		132
56FE 133	6.131	2+			133 5 FS +4-3
56FE 134			6.146		134
56FE 135			6.174		135
56FE 136			6.201		136
56FE 137			6.219		137 13 FS 3
56FE 138			6.251	1	138 8.1 FS 15
56FE 139	6.265	4+			139
56FE 140			6.289		140
56FE 141			6.313		141
56FE 142			6.316		142
56FE 143			6.328		143
56FE 144			6.351		144
56FE 145			6.363		145
56FE 146			6.387		146
56FE 147			6.397		147
56FE 148			6.435		148
56FE 149			6.437		149
56FE 150			6.439		150
56FE 151			6.443		151
56FE 152			6.447	2+,3+	152 11 FS +7-4
56FE 153			6.454		153
56FE 154			6.472		154
56FE 155			6.489	(2+)	155
56FE 156	6.512	0+			156
56FE 157			6.527		157
56FE 158			6.543		158
56FE 159			6.555		159
56FE 160	6.567	0+			160
56FE 161			6.593		161
56FE 162			6.613		162
56FE 163			6.622		163
56FE 164			6.625	(0 TO 3+)	164
56FE 165			6.652		165
56FE 166			6.667	3-	166
56FE 167			6.670		167
56FE 168			6.698	1	168 0.65 FS 10
56FE 169	6.700	0+			169
56FE 170			6.716		170
56FE 171			6.725		171
56FE 172			6.742		172
56FE 173			6.767		173
56FE 174			6.781	3-	174

56FE 175	6.800	0+							175
56FE 176					6.808				176
56FE 177					6.843				177
56FE 178					6.851	9(+)			178
56FE 179					6.855				179
56FE 180					6.870	(3-)			180

56FE 181					6.883				181
56FE 182					6.890				182
56FE 183					6.916				183
56FE 184			6.926	1-				1.10 EV	29
56FE 185					6.940				185
56FE 186					6.978				186
56FE 187					6.982	(0 TO 3+)			187
56FE 188					6.994				188
56FE 189					7.008				189
56FE 190					7.011	(>3-)			190

56FE 191					7.030	(>3-)			191
56FE 192					7.055				192
56FE 193	7.062	1+						0.41 FS	8
56FE 194					7.071				194
56FE 195					7.085				195
56FE 196					7.090				196
56FE 197					7.102				197
56FE 198	7.124	0+							198
56FE 199					7.135	1		8.1 FS	15
56FE 200					7.154				200

56FE 201					7.167	1		5.1 FS	9
56FE 202					7.177	(10+)			202
56FE 203					7.178				203
56FE 204					7.199				204
56FE 205					7.204				205
56FE 206					7.212	1		0.77 EV	22
56FE 207	7.220	0+							207
56FE 208					7.248	1		2.3 FS	3
56FE 209	7.254	0+							209
56FE 210					7.286			1.6 FS	7

56FE 211					7.312				211
56FE 212					7.398				212
56FE 213					7.423	(1,2+)			213
56FE 214					7.446	1		2.7 FS	8
56FE 215					7.469	1		2.5 FS	4
56FE 216					7.475	(3-)			216
56FE 217					7.504	9(+)			217
56FE 218					7.541				218
56FE 219					7.580				219

S-alpha=	7.613	(0.000)	-----						

56FE 220			7.630	3-		220		
56FE 221					7.670	221		
56FE 222					7.720	222		
56FE 223					7.769	223		
56FE 224					7.821	224	10(+)	
56FE 225	7.876	2+				225		
56FE 226					7.887	226	(1,2+)	1.6 FS 3
56FE 227					8.050	227		
56FE 228	8.110	0+				228		
56FE 229	8.120	2+				229		
56FE 230					8.128	230	1	3.55 EV 74
56FE 231					8.138	231		
56FE 232					8.219	232		1.8 FS 3
56FE 233					8.240	233	1	5.75 EV 92
56FE 234					8.248	234	(0 TO 3+)	
56FE 235					8.310	235	(1,2+)	1.9 FS 6
56FE 236					8.330	236		
56FE 237					8.415	237	(10+)	
56FE 238					8.448	238	(0 TO 3+)	
56FE 239					8.536	239	1	4.92 EV 95
56FE 240					8.680	240	11(+)	
56FE 241					8.758	241	(0 TO 3+)	
56FE 242					8.767	242		1.1 FS 2
56FE 243					8.879	243		1.5 FS 4
56FE 244					8.910	244	(1,2+)	0.97 FS 21
56FE 245					8.962	245		1.2 FS 2
56FE 246					8.989	246		1.5 FS 3
56FE 247					9.107	247		0.53 FS 11
56FE 248			9.140	1-		248		1.28 EV 17
56FE 249					9.154	249		0.47 FS 15
56FE 250	9.200	0+				250		
56FE 251					9.280	251	(8+)	
56FE 252					9.287	252		0.61 FS 14
56FE 253					9.311	253		0.71 FS 14
56FE 254					9.322	254		0.70 FS 15
56FE 255					9.345	255	(11+)	
56FE 256					9.378	256	(11+)	
56FE 257					9.402	257		0.70 FS 16
56FE 258					9.558	258	(1,2+)	1.2 FS 4
56FE 259					9.666	259		
56FE 260					9.737	260		0.48 FS 13
56FE 261					9.768	261		1.0 FS 3
56FE 262					9.895	262		1.1 FS 3
56FE 263					9.900	263	(6+)	
56FE 264					9.948	264		0.61 FS 14

56FE 265				9.969		265	1.5 FS	5
56FE 266				10.060		266	0.81 FS	23
56FE 267				10.094	(12+)	267		
S-p = 10.184 (0.000)-----								
56FE 268				10.497	1	268	3.44 EV	64
56FE 269				10.563	(12+)	269		
56FE 270				10.899	(13+)	270		

56FE 271				11.133	1	271	2.08 EV	52
S-n = 11.197 (0.000)-----								
56FE 272		11.504	3+			272		
56FE 273		11.594	1+			273		
56FE 274		11.599	1+			274		
56FE 275		11.604	1+			275		
56FE 276				11.610		276		
56FE 277		11.613	1+			277		
56FE 278				11.618		278		
56FE 279				11.638	3(-)	279		
56FE 280				11.641	3(-)	280		

56FE 281				11.644	3(-)	281		
56FE 282				11.664	3(-)	282		
56FE 283		11.678	4+			283		
56FE 284		11.681	4+			284		
56FE 285		11.688	4+			285		
56FE 286		11.692	2+			286	9 KEV	AP
56FE 287		11.833	3+			287	17 KEV	AP
56FE 288		11.841	3+			288		
56FE 289		11.850	3+			289		
56FE 290				11.880	(5+)	290		

56FE 291				11.887	(5+)	291		
56FE 292				11.913	(4+)	292		
56FE 293		11.925	3+			293	11 KEV	AP
56FE 294				11.948	(4-)	294		
56FE 295		11.953	4+			295		
56FE 296		11.958	3+			296	11 KEV	AP
56FE 297				11.964	(13+)	297		
56FE 298				12.440		298		
56FE 299				12.520		299		

S-p = 10.184 (0.000)-----
S-n = 11.197 (0.000)-----
S-2p = 18.250 (0.000)-----
S-2n = 20.495 (0.000)-----
S-alpha= 7.613 (0.000)-----

S+p = -6.027 (0.001)
S+n = -7.646 (0.000)

S+2p = -14.200 (0.000)
S+2n = -17.691 (0.000)
S+alpha = -6.291 (0.000)

gap p = 4.156 (0.001)
gap n = 3.551 (0.001)
gap 2p = 4.051 (0.001)
gap 2n = 2.805 (0.001)
gap alpha = 1.322 (0.001)