

$^{56}\text{Fe}$        $Z = 26$        $N = 30$       adopted link      ENSDF link

Based on ensdf\_240402 (Apr 2024), and mass evaluation from 2020

BE = 492.260 ( 0.000) MeV

	Energy T	J+		J-		J-other		T1/2
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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
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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
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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
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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		
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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 +)			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-		184	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+					193	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	199	8.1 FS	15
56FE 200							7.154	200		
-----										
56FE 201							7.167 1	201	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	206	0.77 EV	22
56FE 207		7.220	0+					207		
56FE 208							7.248 1	208	2.3 FS	3
56FE 209		7.254	0+					209		
56FE 210							7.286	210	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	214	2.7 FS	8
56FE 215							7.469 1	215	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	10(+)		224
56FE 225	7.876	2+		225
56FE 226			7.887 (1,2+)	226 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 1	230 3.55 EV 74
-----				
56FE 231			8.138	231
56FE 232			8.219	232 1.8 FS 3
56FE 233			8.240 1	233 5.75 EV 92
56FE 234	8.248	(0 TO 3 )		234
56FE 235			8.310 (1,2+)	235 1.9 FS 6
56FE 236			8.330	236
56FE 237	8.415	(10+)		237
56FE 238	8.448	(0 TO 3 )		238
56FE 239			8.536 1	239 4.92 EV 95
56FE 240	8.680	11(+)		240
-----				
56FE 241	8.758	(0 TO 3 )		241
56FE 242			8.767	242 1.1 FS 2
56FE 243			8.879	243 1.5 FS 4
56FE 244			8.910 (1,2+)	244 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	(8+)		251
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	(11+)		255
56FE 256	9.378	(11+)		256
56FE 257			9.402	257 0.70 FS 16
56FE 258			9.558 (1,2+)	258 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	(6+)		263

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 = 4.050 ( 0.001)  
gap 2n = 2.805 ( 0.001)  
gap alpha = 1.322 ( 0.001)