

^{153}Sm $Z = 62$ $N = 91$ adopted link ENSDF link

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

BE = 1258.966 (0.001) MeV

Qbeta- = 0.807 (0.002) MeV

	Energy T	J+	J-	J-other	T1/2
153SM 1	0.000	3/2+			1 46.284 H 4
153SM 2	0.008	5/2+			2
153SM 3			0.036 3/2-		3 0.1 NS LT
153SM 4	0.054	7/2+			4
153SM 5	0.065	9/2+			5
153SM 6			0.091 5/2-		6 0.52 NS 16
153SM 7			0.098 11/2-		7 10.6 MS 3
153SM 8				0.113	8
153SM 9				0.126 (1/2-)	9
153SM 10			0.127 3/2-		10
153SM 11			0.174 7/2-		11
153SM 12			0.183 5/2-		12 17 NS 7
153SM 13				0.189 (11/2+)	13
153SM 14				0.195 (5/2+)	14
153SM 15				0.196 (13/2+)	15
153SM 16				0.237	16
153SM 17				0.246 (13/2-)	17
153SM 18				0.262 (7/2+)	18
153SM 19				0.266 (7/2-)	19
153SM 20			0.267 9/2-		20
153SM 21				0.277 (3/2+)	21
153SM 22				0.321 (3/2+)	22
153SM 23				0.357 (5/2+)	23
153SM 24				0.362 (5/2+)	24
153SM 25				0.369 (5/2-)	25
153SM 26				0.369 (9/2-, 11/2-)	26
153SM 27			0.404 1/2-		27
153SM 28			0.405 3/2-		28
153SM 29				0.413 (15/2-)	29
153SM 30	0.415	1/2+			30
153SM 31				0.417 (17/2+)	31
153SM 32				0.418	32
153SM 33				0.425 (15/2+)	33
153SM 34				0.447 (9/2-)	34
153SM 35				0.447 (7/2+)	35
153SM 36			0.450 5/2-		36
153SM 37				0.481 (3/2+)	37

153SM	38				0.495	(11/2)-	38
153SM	39				0.508	(7/2,9/2)	39
153SM	40				0.524	(5/2)-	40

153SM	41				0.549	(7/2-)	41
153SM	42				0.584		42
153SM	43				0.598	(17/2-)	43
153SM	44				0.602		44

S-alpha=		0.609 (0.002)		-----			
153SM	45			0.630	3/2-		45
153SM	46					0.648	1/2,3/2,5/2+
153SM	47					0.654	
153SM	48					0.665	
153SM	49			0.696	1/2-		49
153SM	50					0.698	(11/2+,13/2+)

153SM	51			0.728	5/2-		51
153SM	52					0.733	(21/2)+
153SM	53	0.735	1/2+				53
153SM	54					0.735	(3/2+,5/2)
153SM	55					0.745	(9/2-,11/2-)
153SM	56					0.750	(3/2)-
153SM	57					0.764	(19/2)+
153SM	58	0.766	5/2+				58
153SM	59					0.778	(5/2)+
153SM	60	0.789	3/2+				60

153SM	61					0.796	(5/2)-
153SM	62					0.800	(19/2)-
153SM	63					0.816	
153SM	64					0.841	
153SM	65					0.862	(3/2+,5/2+)
153SM	66					0.885	(5/2+)
153SM	67					0.903	(5/2)-
153SM	68					0.917	(3/2+)
153SM	69					0.922	(7/2-)
153SM	70					0.963	(5/2)+

153SM	71					0.984	(3/2)-
153SM	72	0.984	3/2+				72
153SM	73					1.000	(9/2-)
153SM	74					1.004	
153SM	75					1.010	(5/2-,7/2-)
153SM	76					1.018	(21/2-)
153SM	77					1.018	(5/2-)
153SM	78			1.061	5/2-		78
153SM	79			1.079	5/2-		79
153SM	80					1.086	(5/2-,7/2-)

153SM	81					1.097	(3/2)-

153SM 82						1.099	1/2+,3/2+	82
153SM 83						1.107	(3/2+)	83
153SM 84						1.111	1/2+,3/2+	84
153SM 85						1.116	5/2-,7/2-	85
153SM 86						1.118	11/2+,13/2+	86
153SM 87						1.132	5/2-,7/2-	87
153SM 88						1.138	(25/2+)	88
153SM 89				1.140	5/2-			89
153SM 90						1.149		90

153SM 91						1.155	(3/2+,5/2+)	91
153SM 92						1.162	(1/2-,3/2)	92
153SM 93						1.163	(1/2,3/2)	93
153SM 94						1.171	1/2-,3/2-	94
153SM 95						1.173	3/2+,5/2+	95
153SM 96						1.197	(7/2)-	96
153SM 97						1.199	(23/2+)	97
153SM 98		1.209	1/2+					98
153SM 99						1.219	(5/2-,7/2-)	99
153SM 100						1.223	(3/2)+	100

153SM 101						1.235	(7/2)+	101
153SM 102						1.250	(5/2)-	102
153SM 103						1.252	(23/2-)	103
153SM 104						1.261	(11/2)-	104
153SM 105						1.263	(3/2+)	105
153SM 106						1.269	5/2-,7/2-	106
153SM 107						1.276	(1/2-,3/2-)	107
153SM 108						1.280	(3/2+)	108
153SM 109						1.289	(7/2+)	109
153SM 110						1.297	(11/2)-	110

153SM 111		1.310	1/2+					111
153SM 112						1.319	(1/2+)	112
153SM 113						1.322	1/2-,3/2-	113
153SM 114						1.343	(3/2)+	114
153SM 115						1.352	(11/2)-	115
153SM 116						1.361	1/2-,3/2-	116
153SM 117						1.362	(3/2)+	117
153SM 118						1.363	1/2-,3/2-	118
153SM 119						1.365	(3/2)	119
153SM 120						1.376	(11/2)-	120

153SM 121						1.383	(5/2-)	121
153SM 122						1.393	(1/2,3/2)	122
153SM 123						1.397	3/2+,5/2+	123
153SM 124						1.400	(5/2-)	124
153SM 125						1.420	(5/2)+	125
153SM 126						1.422	1/2+,3/2+	126
153SM 127						1.433	(5/2-,7/2-)	127

153SM 128				1.436	1/2+, 3/2+	128
153SM 129	1.441	1/2+				129
153SM 130				1.448	(3/2)-	130

153SM 131				1.455	(5/2)-	131
153SM 132				1.463	(7/2)-	132
153SM 133				1.469	(5/2-, 7/2-)	133
153SM 134				1.478	3/2+, 5/2+	134
153SM 135				1.486	(3/2+)	135
153SM 136				1.494	(9/2)-	136
153SM 137				1.500	(25/2-)	137
153SM 138				1.505	3/2+, 5/2+	138
153SM 139				1.514	(3/2+)	139
153SM 140				1.527	(1/2-, 3/2-)	140

153SM 141				1.532	(5/2)+	141
153SM 142				1.539	1/2+, 3/2+	142
153SM 143				1.542	(5/2)+	143
153SM 144				1.545	3/2+, 5/2+	144
153SM 145				1.552	3/2+, 5/2+	145
153SM 146				1.556	(3/2-)	146
153SM 147				1.557	1/2+, 3/2+	147
153SM 148				1.566	(5/2)+	148
153SM 149				1.590	(5/2)+	149
153SM 150				1.599	(3/2+, 5/2)	150

153SM 151				1.605	(5/2)+	151
153SM 152				1.614	(5/2)+	152
153SM 153				1.620	3/2+, 5/2+	153
153SM 154				1.622	(29/2+)	154
153SM 155				1.623	(1/2+)	155
153SM 156				1.625	(1/2, 3/2)	156
153SM 157				1.632	(5/2)+	157
153SM 158				1.638	3/2+, 5/2+	158
153SM 159				1.645	3/2+, 5/2+	159
153SM 160				1.652	(3/2+, 5/2+)	160

153SM 161				1.659		161
153SM 162				1.661	(3/2)+	162
153SM 163				1.676	(3/2)-	163
153SM 164				1.678	5/2-, 7/2-	164
153SM 165				1.684	(3/2)+	165
153SM 166				1.697	(3/2+)	166
153SM 167				1.706	(5/2)+	167
153SM 168				1.708	11/2+, 13/2+	168
153SM 169				1.716	(5/2-)	169
153SM 170				1.722	(27/2+)	170

153SM 171				1.724	1/2, 3/2(+)	171
153SM 172				1.737	1/2-, 3/2-	172

153SM 173				1.740	(3/2)	173
153SM 174				1.746	(5/2-, 7/2-)	174
153SM 175				1.753	1/2, 3/2	175
153SM 176				1.759	(5/2-, 7/2-)	176
153SM 177				1.762	(5/2-, 7/2-)	177
153SM 178				1.763	(27/2-)	178
153SM 179				1.769	(1/2, 3/2)	179
153SM 180				1.775	(3/2-)	180

153SM 181				1.788	(3/2)+	181
153SM 182				1.790	(3/2)	182
153SM 183				1.794	(5/2-, 7/2-)	183
153SM 184				1.798	(3/2+, 5/2+)	184
153SM 185				1.808	(5/2)+	185
153SM 186				1.818	(1/2+)	186
153SM 187				1.822	(3/2+, 5/2+)	187
153SM 188				1.826	(5/2)+	188
153SM 189				1.833	(3/2)+	189
153SM 190				1.841	(5/2)+	190

153SM 191				1.845	3/2+, 5/2+	191
153SM 192				1.854	(3/2)+	192
153SM 193				1.862	(3/2+, 5/2+)	193
153SM 194				1.873	(1/2+)	194
153SM 195				1.876	(3/2)	195
153SM 196				1.884	(5/2-, 7/2-)	196
153SM 197				1.885	(1/2, 3/2)	197
153SM 198				1.892	(3/2)+	198
153SM 199				1.902		199
153SM 200				1.908	(1/2+)	200

153SM 201				1.916	(3/2)+	201
153SM 202				1.925	3/2+, 5/2+	202
153SM 203				1.934	3/2+, 5/2+	203
153SM 204				1.936	(3/2)	204
153SM 205				1.944	(7/2)-	205
153SM 206				1.951	(5/2-, 7/2-)	206
153SM 207				1.965	1/2-, 3/2-	207
153SM 208	1.975	1/2+				208
153SM 209				1.986	5/2-, 7/2-	209
153SM 210				1.993		210

153SM 211				1.999		211
153SM 212				2.007	(5/2-, 7/2-)	212
153SM 213				2.015		213
153SM 214				2.023	(3/2+, 5/2+)	214
153SM 215				2.030		215
153SM 216				2.038	(1/2, 3/2)	216
153SM 217				2.038	(29/2-)	217
153SM 218				2.040	(5/2-)	218

153SM 219				2.048	(5/2-)	219
153SM 220				2.053	(5/2-, 7/2-)	220

153SM 221				2.062	(3/2+, 5/2+)	221
153SM 222				2.070	(3/2)+	222
153SM 223				2.080	3/2+, 5/2+	223
153SM 224				2.084	(3/2+, 5/2+)	224
153SM 225				2.091	(3/2)+	225
153SM 226				2.097	3/2+, 5/2+	226
153SM 227				2.106	(3/2)+	227
153SM 228				2.111	(3/2)	228
153SM 229				2.114	3/2+, 5/2+	229
153SM 230				2.122	(5/2-, 7/2-)	230

153SM 231				2.130	(5/2-)	231
153SM 232	2.135	3/2+				232
153SM 233				2.142	3/2+, 5/2+	233
153SM 234				2.152	(3/2)+	234
153SM 235				2.158	(3/2)	235
153SM 236				2.167		236
153SM 237				2.175	(1/2, 3/2)	237
153SM 238				2.176	(33/2+)	238
153SM 239				2.188		239
153SM 240				2.192	(1/2, 3/2)	240

153SM 241				2.205		241
153SM 242				2.224	(1/2, 3/2)	242
153SM 243				2.237	(3/2)	243
153SM 244				2.239		244
153SM 245				2.286		245
153SM 246				2.294	(1/2, 3/2)	246
153SM 247				2.302		247
153SM 248				2.324	(31/2+)	248
153SM 249				2.327	(31/2-)	249
153SM 250				2.332		250

153SM 251				2.335	(3/2)	251
153SM 252				2.342	(3/2)	252
153SM 253				2.355		253
153SM 254				2.366		254
153SM 255				2.394		255
153SM 256				2.413		256
153SM 257				2.415	(1/2, 3/2)	257
153SM 258				2.420	(3/2)	258
153SM 259				2.428	(3/2)	259
153SM 260				2.447	(1/2, 3/2)	260

153SM 261				2.456		261
153SM 262				2.461	(3/2)	262
153SM 263				2.484	(1/2, 3/2)	263

153SM 264			2.484		264
153SM 265			2.495	(3/2)	265
153SM 266			2.497	1/2,3/2,5/2	266
153SM 267			2.497	(3/2)	267
153SM 268			2.506		268
153SM 269			2.513	(3/2)	269
153SM 270			2.534		270

153SM 271			2.543	(3/2)	271
153SM 272			2.546	(3/2)	272
153SM 273			2.561		273
153SM 274			2.575		274
153SM 275			2.601		275
153SM 276			2.619		276
153SM 277			2.634		277
153SM 278			2.643	1/2,3/2,5/2	278
153SM 279			2.669		279
153SM 280			2.672	(3/2)	280

153SM 281			2.678	(1/2,3/2)	281
153SM 282			2.681	3/2	282
153SM 283			2.686		283
153SM 284			2.692	(3/2)	284
153SM 285			2.700	(3/2)	285
153SM 286			2.710	3/2	286
153SM 287			2.715	1/2,3/2	287
153SM 288			2.721		288
153SM 289			2.723	3/2	289
153SM 290			2.751		290

153SM 291			2.757	(1/2,3/2)	291
153SM 292			2.788		292
153SM 293			2.789	(3/2)	293
153SM 294			2.793	(37/2+)	294
153SM 295			2.812	(1/2,3/2)	295
153SM 296			2.832		296
153SM 297			2.851	(1/2,3/2)	297
153SM 298			2.859	(1/2,3/2)	298
153SM 299			2.880		299
153SM 300			2.912		300

153SM 301			2.921	(3/2)	301
153SM 302			2.931	(1/2,3/2)	302
153SM 303			2.940	(3/2)	303
153SM 304			2.944		304
153SM 305			2.972		305
153SM 306			2.977	3/2	306
153SM 307			2.987	(1/2,3/2)	307
153SM 308			2.994		308
153SM 309			2.998	(1/2,3/2)	309

153SM 310				3.015	(1/2,3/2)	310

153SM 311				3.021		311
153SM 312				3.021	(1/2,3/2)	312
153SM 313				3.033	(3/2)	313
153SM 314				3.039	(3/2)	314
153SM 315				3.047		315
153SM 316				3.053	(3/2)	316
153SM 317				3.073		317
153SM 318				3.077	(1/2,3/2)	318
153SM 319				3.097		319
153SM 320				3.113		320

153SM 321				3.128	(1/2,3/2)	321
153SM 322				3.135		322
153SM 323				3.158		323
153SM 324				3.172	(1/2,3/2)	324
153SM 325				3.187		325
153SM 326				3.214		326
153SM 327				3.236		327
153SM 328				3.246	(1/2,3/2)	328
153SM 329				3.253		329
153SM 330				3.268		330

153SM 331				3.281	(3/2)	331
153SM 332				3.289	(1/2,3/2)	332
153SM 333				3.291		333
153SM 334				3.305	(3/2)	334
153SM 335				3.314	(1/2,3/2)	335
153SM 336				3.316		336
153SM 337				3.319	(3/2)	337
153SM 338				3.341	(3/2)	338
153SM 339				3.349		339
153SM 340				3.354	(1/2,3/2)	340

153SM 341				3.360	(3/2)	341
153SM 342				3.361		342
153SM 343				3.380		343
153SM 344				3.396		344
153SM 345				3.414		345
153SM 346				3.422	(1/2,3/2)	346
153SM 347				3.467	(41/2+)	347
153SM 348				3.469		348
153SM 349				3.501		349
153SM 350				3.513		350

153SM 351				3.535	(1/2,3/2)	351
153SM 352				3.558		352
153SM 353				3.563		353
153SM 354				3.579		354

153SM 355				3.601		355
153SM 356				3.635		356
153SM 357				3.676		357
153SM 358				3.716		358
153SM 359				3.736		359
153SM 360				3.759		360

153SM 361				3.764	(1/2,3/2)	361
153SM 362				3.809		362
153SM 363				3.834		363
153SM 364				3.856		364
153SM 365				3.890		365
153SM 366				3.913		366
153SM 367				3.929		367

S-n	=	5.868	(0.001)	-----		
153SM 368		5.868	1/2+			368
S-p	=	8.594	(0.026)	-----		
S-n	=	5.868	(0.001)	-----		
S-2p	=	16.195	(0.002)	-----		
S-2n	=	14.126	(0.002)	-----		
S-alpha	=	0.609	(0.002)	-----		
S+p	=	-6.467	(0.002)			
S+n	=	-7.967	(0.002)			
S+2p	=	-14.088	(0.001)			
S+2n	=	-13.774	(0.002)			
S+alpha	=	-0.689	(0.001)			
gap p	=	2.127	(0.026)			
gap n	=	-2.099	(0.002)			
gap 2p	=	2.106	(0.002)			
gap 2n	=	0.352	(0.002)			
gap alpha	=	-0.080	(0.003)			