

^{128}I $Z = 53$ $N = 75$ adopted link ENSDF link

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

BE = 1079.402 (0.004) MeV
 Qbeta- = 2.123 (0.004) MeV
 Qbeta+ = 1.256 (0.004) MeV

	Energy T	J+	J-	J-other	T1/2
128I	1	0.000	1+		1 24.99 M 2
128I	2	0.027	2+		2
128I	3	0.085	3+		3
128I	4			0.128 (4)+	4
128I	5		0.134 2-		5 12.3 NS 5
128I	6		0.138 4-		6 0.845 US 20
128I	7			0.144 (3)-	7
128I	8			0.152 (3)+	8 0.7 NS LT
128I	9			0.161 1+,2+	9 0.7 NS LT
128I	10			0.167 (6)-	10 175 NS 15
128I	11			0.180 (3)+	11 1.7 NS LT
128I	12			0.183 (7-)	12
128I	13			0.221 (1,2,3)+	13 0.7 NS LT
128I	14			0.226 (5,6,7)-	14
128I	15	0.233	4+		15 1.7 NS LT
128I	16			0.234 (5)-	16
128I	17			0.270 (5,6,7)-	17
128I	18			0.285 (8-)	18
128I	19			0.294 (5)-	19
128I	20			0.296 (2,3,4)+	20 0.8 NS LT
128I	21			0.345 (2,3,4)+	21 1.2 NS LT
128I	22			0.346	22
128I	23			0.372	23 0.4 NS LT
128I	24			0.377 (4)-	24 5 NS LT
128I	25			0.385 2+,3+	25 0.3 NS LT
128I	26			0.387 (3 TO 6)-	26 0.8 NS LT
128I	27			0.392 (1,2,3)+	27 0.5 NS LT
128I	28			0.416 (2,3)+	28 0.4 NS LT
128I	29			0.426 +	29 0.5 NS LT
128I	30			0.434	30
128I	31			0.436 (2,3)-	31 0.6 NS LT
128I	32			0.445	32
128I	33			0.482 (7-)	33
128I	34			0.485 (LE 4)	34 1.4 NS LT
128I	35			0.518 (3,4)-	35 0.2 NS LT
128I	36			0.521 (4-,5-)	36 1.5 NS LT

128I	37				0.530	(3+)	37			
128I	38				0.536		38			
128I	39				0.550	(3+,4+)	39			
128I	40				0.552	(8-)	40	1.0	NS	LT

128I	41				0.554	(2-,3,4-)	41	0.3	NS	LT
128I	42				0.582	(8-)	42			
128I	43				0.589		43			
128I	44				0.609	(3,4)-	44	0.6	NS	LT
128I	45				0.614		45			
128I	46				0.630		46			
128I	47				0.639	(1+)	47			
128I	48				0.657		48			
128I	49				0.661		49			
128I	50				0.677		50			

128I	51				0.679		51			
128I	52				0.687	(3,4)-	52	0.5	NS	LT
128I	53				0.696	(9-)	53			
128I	54				0.705		54			
128I	55				0.715	(1-,2,3+)	55			
128I	56				0.724		56			
128I	57				0.728	-	57			
128I	58				0.735		58			
128I	59				0.750	(LE 4)	59			
128I	60				0.768	(LE 4)	60			

128I	61				0.771		61			
128I	62				0.779		62			
128I	63				0.788		63			
128I	64				0.792		64			
128I	65				0.795		65			
128I	66				0.821		66			
128I	67				0.825		67			
128I	68				0.828		68			
128I	69				0.835	(LE 4)	69			
128I	70				0.840	(1-,2,3+)	70			

128I	71				0.843	(LE 4)	71			
128I	72				0.845		72			
128I	73				0.849	(LE 4)	73			
128I	74				0.857		74			
128I	75				0.864		75			
128I	76				0.867		76			
128I	77				0.867		77			
128I	78				0.876		78			
128I	79				0.881		79			
128I	80				0.885		80			

128I	81				0.911	(8-)	81			

128I	82				0.917	(LE 4)	82
128I	83				0.934	(2-,3,4)	83
128I	84				0.939		84
128I	85				0.942	(3-,4,5-)	85
128I	86				0.945		86
128I	87				0.957		87
128I	88				0.974		88
128I	89				0.984		89
128I	90				0.986		90

128I	91				0.994		91
128I	92				1.007		92
128I	93				1.013	(2,3,4)	93
128I	94				1.016		94
128I	95				1.025	(3-,4,5-)	95
128I	96				1.032	(2+,3,4-)	96
128I	97				1.036	(2-)	97
128I	98				1.042	(10-)	98
128I	99				1.049	(1,2,3+)	99
128I	100				1.062		100

128I	101				1.065		101
128I	102				1.085	(LE 4)	102
128I	103				1.092		103
128I	104				1.100		104
128I	105				1.110		105
128I	106				1.118		106
128I	107				1.128		107
128I	108				1.136		108
128I	109				1.149		109
128I	110				1.150	(9-)	110

128I	111				1.153	(1+)	111
128I	112				1.163	(LE 3)	112
128I	113				1.169		113
128I	114				1.171		114
128I	115				1.179		115
128I	116				1.197		116
128I	117				1.211		117
128I	118				1.219	2+,3,4+	118
128I	119				1.222	(1+)	119
128I	120				1.227	(3-,4-)	120

128I	121				1.232		121
128I	122				1.242		122
128I	123				1.247	2+,3,4-	123
128I	124				1.252	(2-,3,4-)	124
128I	125				1.253		125
128I	126				1.256		126
128I	127				1.266	(2-,3+)	127

128I 128			1.275	(LE 4)	128
128I 129			1.287	(9-)	129
128I 130			1.291		130

128I 131			1.291	(10-)	131
128I 132			1.291	(10-)	132
128I 133			1.302	(2+,3,4-)	133
128I 134			1.304		134
128I 135			1.325		135
128I 136			1.330	(LE 4)	136
128I 137			1.336		137
128I 138			1.343	(3-,4,5)	138
128I 139			1.347	(9-)	139
128I 140			1.349		140

128I 141			1.360	(3-,4-)	141
128I 142			1.363		142
128I 143			1.370		143
128I 144			1.373	(1+)	144
128I 145			1.383		145
128I 146			1.392		146
128I 147			1.404		147
128I 148			1.419		148
128I 149			1.430		149
128I 150			1.439	(1+)	150

128I 151			1.442		151
128I 152			1.454	(11-)	152
128I 153			1.455	(LE 3)	153
128I 154			1.461	(9+)	154
128I 155			1.476	(1+)	155
128I 156			1.487		156
128I 157			1.499	(LE 4)	157
128I 158			1.507		158
128I 159			1.528	(2-,3,4-)	159
128I 160			1.533	2+,3,4-	160

128I 161			1.538		161
128I 162			1.542	(LE 4)	162
128I 163			1.548	(1+)	163
128I 164			1.554		164
128I 165			1.560		165
128I 166			1.562	(10+)	166
128I 167			1.566		167
128I 168			1.575		168
128I 169			1.580		169
128I 170			1.598		170

128I 171			1.607	(1+)	171
128I 172			1.616		172

128I 173			1.619		173
128I 174			1.628	(1,2,3)	174
128I 175			1.634		175
128I 176			1.651		176
128I 177			1.664		177
128I 178			1.677		178
128I 179			1.684	(1+)	179
128I 180			1.692		180

128I 181			1.702	(3-,4,5-)	181
128I 182			1.716		182
128I 183			1.717		183
128I 184			1.724	(3-,4,5-)	184
128I 185			1.730		185
128I 186			1.734	(2,3,4)	186
128I 187			1.740		187
128I 188			1.745		188
128I 189			1.753		189
128I 190			1.761		190

128I 191			1.773		191
128I 192			1.783		192
128I 193			1.793		193
128I 194			1.804		194
128I 195			1.807		195
128I 196			1.818		196
128I 197			1.820		197
128I 198			1.826		198
128I 199			1.837		199
128I 200			1.844		200

128I 201			1.863		201
128I 202			1.866	(3-,4-)	202
128I 203			1.874	(2+,3,4-)	203
128I 204			1.874	(12-)	204
128I 205			1.876		205
128I 206			1.886		206
128I 207			1.894		207
128I 208			1.905		208
128I 209			1.919		209
128I 210			1.922	(LE 4)	210

128I 211			1.933		211
128I 212			1.941	(1+)	212
128I 213			1.943		213
128I 214			1.947		214
128I 215			1.965	(11+)	215
128I 216			1.972		216
128I 217			1.984	(LE 3)	217
128I 218			1.985		218

128I 219				1.988		219
128I 220				1.991	(11+)	220

128I 221				1.995		221
128I 222				2.004		222
128I 223				2.013		223
128I 224				2.025		224
128I 225				2.038		225
128I 226				2.051	(1+)	226
128I 227				2.067		227
128I 228				2.070		228
128I 229				2.082		229
128I 230				2.107	(1+)	230

128I 231				2.111	(12-)	231
128I 232				2.115		232
128I 233				2.130		233
128I 234				2.144	1,2,3	234
128I 235				2.150		235
128I 236				2.162		236
128I 237				2.167		237
128I 238				2.175	(1+)	238
128I 239				2.186	(12+)	239
128I 240				2.188		240

128I 241				2.191		241
128I 242				2.205	(LE 4)	242
128I 243				2.207		243
128I 244				2.229	(1+)	244
128I 245				2.303	(12+)	245
128I 246				2.321	(LE 4)	246
128I 247				2.338	(1+)	247
128I 248				2.341	(13-)	248
128I 249				2.380	(13+)	249
128I 250				2.415	(1+)	250

128I 251				2.425		251
128I 252				2.433	(2-,3,4+)	252
128I 253				2.438	(13+)	253
128I 254				2.454	(3-,4,5-)	254
128I 255				2.477	(1+)	255
128I 256				2.480	(12+)	256
128I 257				2.521	(12+)	257

S-alpha=	2.544	(0.004)	-----		
128I 258				2.567	(LE 4)	258
128I 259				2.573	(1+)	259
128I 260				2.576	(13-)	260

128I 261				2.585	2+,3,4-	261
128I 262				2.641		262

128I	263				2.662	(13+)	263
128I	264				2.665	(14+)	264
128I	265				2.684	(2+,3,4+)	265
128I	266				2.692	(13+)	266
128I	267				2.714	(13+)	267
128I	268				2.717	(1+)	268
128I	269				2.721	(3-,4-)	269
128I	270				2.737		270

128I	271				2.779	(1+)	271
128I	272				2.789	(14-)	272
128I	273				2.848		273
128I	274				2.856	(1+)	274
128I	275				2.900	(2-,3+)	275
128I	276				2.904	(1+)	276
128I	277				2.951		277
128I	278				2.953	(14+)	278
128I	279				3.001		279
128I	280				3.009	(14+)	280

128I	281				3.077	(1-,2,3+)	281
128I	282				3.116	(14-)	282
128I	283				3.152	(15+)	283
128I	284				3.158	(15+)	284
128I	285				3.159	(15-)	285
128I	286				3.183		286
128I	287				3.309	(15-)	287
128I	288				3.556	(16-)	288
128I	289				3.559	(16+)	289
128I	290				3.622	(16+)	290

128I	291				3.794	(0,1,2,3+)	291
128I	292				3.803		292
128I	293				3.834	(2,3,4)	293
128I	294				3.847		294
128I	295				3.863	(3,4,5-)	295
128I	296				3.992	(3,4,5-)	296
128I	297				4.151	(LE 4)	297
S-p	=	6.746	(0.004)	-----		
S-n	=	6.826	(0.005)	-----		
128I	298				6.826	(2+)	298
128I	299				6.826	(3+)	299
128I	300				6.826	(1-)	300

128I	301				6.826	(1-)	301
128I	302				6.826	(2-)	302
128I	303				6.826	(2+)	303
128I	304				6.826	(1-)	304
128I	305				6.826	2+,3+	305
128I	306				6.826	(3+)	306

128I 307				6.826	(3-)	307
128I 308				6.826	(2+)	308
128I 309				6.826	(4-)	309
128I 310				6.826	(1-)	310

128I 311				6.826	(2+)	311
128I 312				6.826	(3+)	312
128I 313				6.826	(3-)	313
128I 314				6.826	(3+)	314
128I 315				6.826	(4-)	315
128I 316				6.826	(2-)	316
128I 317				6.826	(3-)	317
128I 318				6.826	(1-)	318
128I 319				6.826	(3+)	319
128I 320				6.826	(4-)	320

128I 321				6.826	(2-)	321
128I 322				6.826	(3-)	322
128I 323				6.826	(3+)	323
128I 324				6.826	(2+)	324
128I 325				6.826	(2+)	325
128I 326				6.826	(3+)	326
128I 327				6.826	(3+)	327
128I 328				6.826	(4-)	328
128I 329				6.826	(2+)	329
128I 330				6.826	(2-)	330

128I 331				6.826	(3-)	331
128I 332				6.826	(2+)	332
128I 333				6.826	(3+)	333
128I 334				6.826	(4-)	334
128I 335				6.826	(3+)	335
128I 336				6.826	(3+)	336
128I 337				6.826	(3-)	337
128I 338				6.826	(2-)	338
128I 339				6.826	(1-)	339
128I 340				6.826	(2+)	340

128I 341				6.826	(4-)	341
128I 342				6.826	(2+)	342
128I 343				6.826	(3-)	343
128I 344				6.826	(2+)	344
128I 345				6.826	(2+)	345
128I 346				6.826	(3+)	346
128I 347				6.826	(4-)	347
128I 348				6.826	(2-)	348
128I 349				6.826	(1-)	349
128I 350				6.826	(2+)	350

128I 351				6.827	(2+)	351

128I	352				6.827	(3-)	352
128I	353				6.827	(2+)	353
128I	354				6.827	(4-)	354
128I	355				6.827	(2-)	355
128I	356				6.827	(1-)	356
128I	357				6.827	(3+)	357
128I	358				6.827	(3-)	358
128I	359				6.827	(2+)	359
128I	360				6.827	(4-)	360

128I	361				6.827	(3+)	361
128I	362				6.827	(2-)	362
128I	363				6.827	(2+)	363
128I	364				6.827	(3+)	364
128I	365				6.827	(1-)	365
128I	366				6.827	(3-)	366
128I	367				6.827	(2+)	367
128I	368				6.827	(2+)	368
128I	369				6.827	(2+)	369
128I	370				6.827	(2+)	370

128I	371				6.827	(3+)	371
128I	372				6.827	(3+)	372
128I	373				6.827	(4-)	373
128I	374				6.827	(2+)	374
128I	375				6.827	(3-)	375
128I	376				6.827	(3+)	376
128I	377				6.827	(2+)	377
128I	378				6.827	(2-)	378
128I	379				6.827	(2+)	379
128I	380				6.827	(4-)	380

128I	381				6.827	(1-)	381
128I	382				6.827	(3+)	382
128I	383				6.827	(3-)	383
128I	384				6.827	(3+)	384
128I	385				6.827	(4-)	385
128I	386				6.827	(2-)	386
128I	387				6.827	(2+)	387
128I	388				6.827	(1-)	388
128I	389				6.827	(3+)	389
128I	390				6.827	(3-)	390

128I	391				6.827	(2+)	391
128I	392				6.827	(3+)	392
128I	393				6.827	(3+)	393
128I	394				6.827	(2+)	394
128I	395				6.827	(3+)	395
128I	396				6.827	(4-)	396
128I	397				6.827	(2-)	397

128I	398				6.827	(2+)	398
128I	399				6.827	(3-)	399
128I	400				6.827	(3+)	400

128I	401				6.827	(4-)	401
128I	402				6.827	(2+)	402
128I	403				6.827	(1-)	403
128I	404				6.827	(2-)	404
128I	405				6.827	(3-)	405
128I	406				6.827	(3+)	406
128I	407				6.827	(3+)	407
128I	408				6.827	(4-)	408
128I	409				6.827	(1-)	409
128I	410				6.827	(2+)	410

128I	411				6.827	(2-)	411
128I	412				6.827	(3+)	412
128I	413				6.827	(3+)	413
128I	414				6.827	(4-)	414
128I	415				6.827	(3+)	415
128I	416				6.827	(3-)	416
128I	417				6.827	(2+)	417
128I	418				6.827	(4-)	418
128I	419				6.827	(2+)	419
128I	420				6.827	(3+)	420

128I	421				6.827	(3-)	421
128I	422				6.827	(2-)	422
128I	423				6.827	(1-)	423
128I	424				6.827	(4-)	424
128I	425				6.827	(3+)	425
128I	426				6.827	(3+)	426
128I	427				6.827	(3+)	427
128I	428				6.827	(4-)	428
128I	429				6.827	(3-)	429
128I	430				6.827	(2-)	430

128I	431				6.827	(1-)	431
128I	432				6.827	(4-)	432

S-p = 6.746 (0.004)-----
S-n = 6.826 (0.005)-----
S-2p = 15.923 (0.032)-----
S-2n = 15.970 (0.005)-----
S-alpha= 2.544 (0.004)-----

S+p = -8.247 (0.004)
S+n = -8.841 (0.005)
S+2p = -13.740 (0.009)

S+2n = -15.341 (0.005)
S+alpha = -1.840 (0.004)

gap p = -1.501 (0.005)
gap n = -2.015 (0.007)
gap 2p = 2.183 (0.033)
gap 2n = 0.629 (0.007)
gap alpha = 0.704 (0.005)