

^{37}Cl $Z = 17$ $N = 20$ [link to full NNDC output](#)

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

BE = 317.100 (0.000) MeV

	Energy T	J+	J-	J-other	T1/2
37CL 1	0.000	3/2+			1 STABLE
37CL 2	1.727	1/2+			2 0.13 PS 2
37CL 3	3.086	5/2+			3 37 FS 8
37CL 4			3.104	7/2-	4 14.7 PS 12
37CL 5				3.287	5
37CL 6	3.627	3/2+			6 31 FS 14
37CL 7	3.708	3/2+			7 44 FS 14
37CL 8			3.741	5/2-	8 21 FS 7
37CL 9			4.010	9/2-	9 22.8 PS 14
37CL 10	4.016	3/2+			10 0.11 PS 4
37CL 11			4.177	3/2-	11 0.8 PS +14-4
37CL 12	4.262	5/2+			12
37CL 13				4.269 1/2	13 42 FS 14
37CL 14			4.273	7/2-	14 76 FS 28
37CL 15				4.396 5/2	15 13 FS 5
37CL 16			4.460	7/2-	16 55 FS 20
37CL 17			4.546	11/2-	17 2.0 PS 6
37CL 18	4.801	5/2+			18 7 FS LT
37CL 19				4.811 7/2	19 0.35 PS GT
37CL 20				4.838 5/2	20 4 FS 2
37CL 21				4.854 3/2	21 3.5 FS LT
37CL 22	4.904	7/2+			22 24 FS 10
37CL 23			4.921	9/2-	23 55 FS 31
37CL 24				4.923 (5/2-,7/2)	24 0.14 PS LT
37CL 25				4.961 3/2	25 14 FS 6
37CL 26				4.974	26
37CL 27				5.009 (1/2:7/2+)	27 5 FS 3
37CL 28				5.055 (1/2:5/2+)	28
37CL 29				5.059 (3/2-:7/2+)	29
37CL 30				5.143	30
37CL 31				5.229 (1/2:7/2+)	31 7 FS LT
37CL 32			5.271	13/2-	32 2.0 PS 3
37CL 33				5.283 (1/2:5/2+)	33
37CL 34				5.307 (1/2+:5/2+)	34
37CL 35				5.317 (3/2:7/2+)	35
37CL 36				5.350	36
37CL 37				5.372 (1/2-:5/2+)	37
37CL 38				5.379 (3/2-,5/2,9/2)	38 104 FS 38

37CL 39						5.407	(1/2,3/2)	39		
37CL 40		5.491	5/2+					40	15 FS	6

37CL 41						5.528	9/2	41	0.21 PS	7
37CL 42				5.547	11/2-			42	0.14 PS	5
37CL 43						5.570	(3/2-:7/2)	43	12 FS	6
37CL 44		5.595	9/2+					44		
37CL 45						5.618	(1/2-:9/2-)	45		
37CL 46						5.645	3/2+,5/2+	46	8 FS	LT
37CL 47				5.701	9/2-			47	0.2 PS	LT
37CL 48				5.705	11/2-			48	0.16 PS	5
37CL 49				5.726	7/2-			49	15 FS	6
37CL 50						5.909	(3/2-:9/2+)	50		

37CL 51						5.915	(1/2-:7/2-)	51		
37CL 52						5.931	(3/2-:9/2)	52		
37CL 53						5.944	(1/2:9/2-)	53		
37CL 54		5.978	5/2+					54		
37CL 55						5.986	(1/2+:5/2)	55		
37CL 56						6.001	13/2	56		
37CL 57						6.015	(3/2,5/2)	57	6 FS	5
37CL 58						6.042	(1/2:5/2)	58	14 FS	8
37CL 59		6.046	11/2+					59	1.4 PS	GT
37CL 60				6.196	11/2-			60	0.22 PS	6

37CL 61						6.305	(1/2:7/2-)	61		
37CL 62						6.324	(3/2:7/2)	62		
37CL 63						6.358	(1/2+:7/2+)	63		
37CL 64		6.372	5/2+					64		
37CL 65						6.415	(1/2:5/2+)	65		
37CL 66						6.488	(3/2:9/2-)	66		
37CL 67						6.601	(7/2-:13/2-)	67		
37CL 68						6.669	3/2+,5/2+	68		
37CL 69		6.702	5/2+					69	3.5 FS	LT
37CL 70						6.732	(1/2:9/2-)	70		

37CL 71		6.800	13/2+					71	0.41 PS	7
37CL 72		7.020	15/2+					72	2.1 PS	10
37CL 73		7.079	5/2+					73		
37CL 74						7.150	(1/2:9/2-)	74		
37CL 75						7.200	(7/2-:15/2-)	75		
37CL 76						7.224	(5/2,3/2+)	76	7 FS	LT
37CL 77						7.254	(1/2:9/2-)	77		
37CL 78		7.269	13/2+					78		
37CL 79		7.300	5/2+					79		
37CL 80				7.453	15/2-			80	0.13 PS	4

37CL 81		7.561	13/2+					81		
37CL 82						7.687	(1/2:9/2-)	82	13 FS	5
37CL 83						7.735	(7/2-:15/2-)	83		

S-alpha= 7.849 (0.001)-----											
37CL	84		7.858	15/2+					84	0.85 PS	15
37CL	85					7.924	1/2-		85		
37CL	86							7.987	(7/2-:15/2-)		86
37CL	87					8.071	15/2-		87		
37CL	88		8.177	5/2+					88		
S-p = 8.386 (0.000)-----											
37CL	89		8.530	15/2+					89		
37CL	90					8.671	15/2-		90		

37CL	91		8.702	17/2+					91		
37CL	92					8.715	15/2-		92		
37CL	93		8.812	17/2+					93	0.38 PS	11
37CL	94							8.884	(1/2:7/2-)		94
37CL	95					8.911	19/2-		95	0.68 PS	8
37CL	96							8.929	(1/2:9/2-)		96
37CL	97							8.938	(1/2:9/2-)		97
37CL	98							8.949			98
37CL	99							8.988	(1/2:9/2-)		99
37CL	100							9.027	(3/2,5/2+)		100

37CL	101							9.035			101
37CL	102							9.046	3/2		102
37CL	103							9.066	3/2		103
37CL	104							9.091			104
37CL	105							9.100	(1/2,3/2,5/2+)		105
37CL	106							9.112	(1/2,3/2,5/2+)		106
37CL	107							9.134	3/2		107
37CL	108							9.138	3/2		108
37CL	109							9.147	(1/2:9/2-)		109
37CL	110		9.169	17/2+							110

37CL	111							9.171	(1/2:7/2-)		111
37CL	112							9.188	(1/2+,3/2,5/2+)		112
37CL	113							9.194			113
37CL	114							9.203	3/2+,5/2+		114
37CL	115							9.209	3/2+,5/2+		115
37CL	116							9.215	3/2		116
37CL	117							9.221	1/2		117
37CL	118							9.235	(1/2+,3/2,5/2+)		118
37CL	119		9.261	5/2+							119
37CL	120							9.285	1/2		120

37CL	121							9.294	(3/2-,5/2,7/2+)		121
37CL	122							9.298	(3/2-,5/2+)		122
37CL	123							9.300	3/2		123
37CL	124							9.310	(1/2+,3/2,5/2+)		124
37CL	125							9.327	(1/2+,3/2,5/2+)		125
37CL	126							9.329	(3/2,5/2)		126
37CL	127							9.341	(1/2,3/2)		127

37CL 128				9.355	(3/2-,5/2,7/2+)	128		
37CL 129				9.361		129		
37CL 130				9.373	5/2	130		

37CL 131				9.378	(1/2:5/2+)	131		
37CL 132				9.385		132		
37CL 133				9.387		133		
37CL 134				9.393	(1/2+,3/2,5/2+)	134		
37CL 135				9.403		135		
37CL 136				9.412		136		
37CL 137			9.429	17/2-		137		
37CL 138				9.435	5/2	138		
37CL 139				9.436	5/2	139		
37CL 140				9.436		140		

37CL 141				9.448	(1/2+,3/2,5/2+)	141		
37CL 142				9.453	(1/2+,3/2,5/2+)	142		
37CL 143				9.462	5/2	143		
37CL 144				9.474	(1/2,3/2,5/2+)	144		
37CL 145				9.476	3/2	145		
37CL 146				9.495	(3/2,5/2+)	146		
37CL 147	9.500	5/2+				147		
37CL 148				9.501	(3/2-,5/2,7/2+)	148		
37CL 149				9.509		149		
37CL 150				9.518	(1/2,3/2,5/2+)	150		

37CL 151				9.522		151		
37CL 152				9.547	(5/2,7/2+)	152	0.41 EV	7
37CL 153				9.548		153		
37CL 154				9.549		154		
37CL 155				9.563		155		
37CL 156				9.568		156		
37CL 157				9.572	1/2	157		
37CL 158				9.582		158		
37CL 159				9.588		159		
37CL 160				9.592		160		

37CL 161				9.613		161		
37CL 162				9.614		162		
37CL 163				9.616		163		
37CL 164				9.620		164		
37CL 165				9.622		165		
37CL 166				9.634		166		
37CL 167				9.642		167		
37CL 168				9.643		168		
37CL 169				9.647		169		
37CL 170				9.658		170		

37CL 171				9.659		171		
37CL 172				9.671		172		

37CL 173				9.671		173
37CL 174				9.698		174
37CL 175				9.700		175
37CL 176				9.707		176
37CL 177				9.712		177
37CL 178				9.713		178
37CL 179				9.719		179
37CL 180				9.722		180

37CL 181				9.726		181
37CL 182				9.728		182
37CL 183				9.735		183
37CL 184				9.744		184
37CL 185				9.751		185
37CL 186				9.758		186
37CL 187				9.764		187
37CL 188				9.769	7/2	188
37CL 189				9.772		189
37CL 190				9.776		190

37CL 191				9.778		191
37CL 192				9.781		192
37CL 193				9.784		193
37CL 194	9.795	19/2+				194
37CL 195				9.804		195
37CL 196				9.807		196
37CL 197				9.810		197
37CL 198				9.813		198
37CL 199				9.815	(1/2:5/2)	199
37CL 200				9.818		200

37CL 201				9.822		201
37CL 202				9.828		202
37CL 203				9.833		203
37CL 204				9.838		204
37CL 205				9.841		205
37CL 206				9.846	(3/2,5/2)	206
37CL 207				9.859		207
37CL 208				9.860		208
37CL 209				9.864		209
37CL 210				9.868		210

37CL 211				9.872		211
37CL 212				9.875		212
37CL 213				9.888		213
37CL 214				9.893		214
37CL 215				9.898		215
37CL 216				9.905		216
37CL 217				9.912		217
37CL 218				9.912		218

37CL 219				9.929		219
37CL 220				9.933		220

37CL 221				9.941		221
37CL 222				9.945		222
37CL 223				9.949		223
37CL 224				9.954		224
37CL 225				9.960		225
37CL 226				9.974		226
37CL 227				9.984		227
37CL 228				9.986		228
37CL 229				9.987		229
37CL 230				9.992		230

37CL 231				9.996		231
37CL 232				10.002		232
37CL 233				10.011		233
37CL 234				10.018		234
37CL 235				10.026		235
37CL 236				10.029		236
37CL 237				10.041		237
37CL 238				10.043		238
37CL 239				10.049		239
37CL 240				10.050		240

37CL 241				10.059		241
37CL 242				10.060		242
37CL 243				10.068		243
37CL 244				10.071		244
37CL 245				10.081	(3/2,5/2)	245
37CL 246				10.085		246
37CL 247				10.086		247
37CL 248				10.092		248
37CL 249				10.096		249
37CL 250	10.103	17/2+				250

37CL 251				10.105		251
37CL 252				10.109		252
37CL 253				10.116		253
37CL 254				10.123		254
37CL 255				10.137		255
37CL 256				10.140		256
37CL 257				10.142		257
37CL 258				10.144		258
37CL 259				10.151		259
37CL 260				10.169		260

37CL 261				10.175	(1/2:5/2+)	261
37CL 262				10.180		262
37CL 263				10.183	7/2	263

37CL 264				10.184	(1/2+, 3/2, 5/2+)	264
37CL 265				10.191	(3/2, 5/2+)	265
37CL 266				10.197		266
37CL 267				10.201		267
37CL 268				10.201		268
37CL 269				10.208	3/2	269
37CL 270				10.212		270

37CL 271				10.218		271
37CL 272				10.221	(3/2-, 5/2+)	272
37CL 273		10.222	5/2 7/2-			273
37CL 274				10.226	(3/2-, 5/2, 7/2+)	274
37CL 275				10.228	(3/2-, 5/2+)	275
37CL 276				10.234	(1/2+, 3/2, 5/2+)	276
37CL 277				10.236	7/2	277
37CL 278				10.248		278
37CL 279				10.251		279
37CL 280				10.255	(3/2, 5/2)	280

37CL 281				10.258	(3/2-, 5/2, 7/2+)	281
37CL 282				10.263	(3/2-, 5/2, 7/2+)	282
37CL 283				10.269	1/2	283
37CL 284				10.273	3/2	284
37CL 285		10.275	7/2-			285
37CL 286				10.286	(1/2+, 3/2, 5/2+)	286
37CL 287				10.290		287
37CL 288				10.293		288
37CL 289				10.295	3/2	289
37CL 290				10.297	(5/2-, 7/2+)	290

37CL 291				10.305	(1/2, 3/2, 5/2+)	291
37CL 292		10.308	19/2-			292

S-n = 10.311 (0.000)						
37CL 293				10.312	3/2+, 5/2+	293
37CL 294				10.314	(1/2+, 3/2, 5/2+)	294
37CL 295				10.318		295
37CL 296				10.322		296
37CL 297				10.346	(3/2, 5/2)	297
37CL 298				10.361		298
37CL 299				10.369		299
37CL 300				10.392		300

37CL 301				10.413	(3/2, 5/2)	301
37CL 302				10.424		302
37CL 303				10.454		303
37CL 304				10.459		304
37CL 305				10.489		305
37CL 306				10.494		306
37CL 307				10.497		307
37CL 308				10.514		308

37CL 309				10.522		309
37CL 310				10.528		310

37CL 311				10.532		311
37CL 312				10.539		312
37CL 313				10.556		313
37CL 314				10.559		314
37CL 315				10.564		315
37CL 316				10.567		316
37CL 317	10.571	19/2+				317
37CL 318				10.575		318
37CL 319				10.587		319
37CL 320				10.593		320

37CL 321				10.598		321
37CL 322				10.713		322
37CL 323				10.748		323
37CL 324				10.778		324
37CL 325			10.963	21/2-		325
37CL 326			11.399	23/2-		326
37CL 327	11.433	21/2+				327
37CL 328				11.974	(21/2+)	328
37CL 329			12.476	23/2-		329
37CL 330			13.841	25/2-		330

37CL 331				13.843	(25/2+)	331
37CL 332				15.448	(27/2-)	332
37CL 333				17.009	(29/2+)	333

S-p = 8.386 (0.000)-----
S-n = 10.311 (0.000)-----
S-2p = 21.482 (0.002)-----
S-2n = 18.891 (0.000)-----
S-alpha= 7.849 (0.001)-----

S+p = -10.242 (0.000)
S+n = -6.108 (0.000)
S+2p = -16.624 (0.000)
S+2n = -14.181 (0.002)
S+alpha = -6.223 (0.000)

gap p = -1.856 (0.000)
gap n = 4.203 (0.000)
gap 2p = 4.858 (0.002)
gap 2n = 4.709 (0.002)
gap alpha = 1.626 (0.001)