

^{36}Cl $Z = 17$ $N = 19$ [link to full NNDC output](#)

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

BE = 306.789 (0.000) MeV
 Qbeta- = 0.710 (0.000) MeV
 Qbeta+ = 1.142 (0.000) MeV

	Energy T	J+	J-	J-other	T1/2
36CL 1	0.000	2+			1 3.013E+5 Y15
36CL 2	0.788	3+			2 14.7 PS 10
36CL 3	1.165	1+			3 6.9 PS 4
36CL 4	1.601	1+			4 0.64 PS 4
36CL 5			1.951 2-		5 1.87 PS 21
36CL 6	1.959	2+			6 43.6 FS 14
36CL 7			2.468 3-		7 0.97 PS 10
36CL 8	2.492	2+			8 40 FS 9
36CL 9			2.518 5-		9 1.61 NS 8
36CL 10				2.676 1+, (2+)	10 21 FS 3
36CL 11			2.811 4-		11 2.36 PS 21
36CL 12				2.864 (3)+	12 14.6 FS 7
36CL 13				2.896 (2,3)-	13 596 FS 55
36CL 14				2.995 (1,2,3)-	14 62 FS 8
36CL 15				3.101 (4)-	15 149 FS +49-28
36CL 16	3.120	0+			16
36CL 17				3.207 (0:3)-	17 97 FS 14
36CL 18				3.332 (2)-	18 73 FS 7
36CL 19				3.470 1+, (2)+	19 24 FS LT
36CL 20				3.566 +	20
36CL 21				3.600 (3)-	21 40.9 FS 21
36CL 22				3.635 (1)-	22 21 FS 10
36CL 23				3.660 (1-,2)	23 55 FS LT
36CL 24				3.661	24
36CL 25			3.723 4-		25 49 FS 10
36CL 26				3.772 -	26
36CL 27				3.826	27
36CL 28				3.941 (1+,2,3+,4+)	28
36CL 29				3.963 (2)-	29 21 FS LT
36CL 30				3.992 (1,2,3)-	30 21 FS 7
36CL 31				4.032 (0,1,2)-	31
36CL 32				4.061 (1,2,3)-	32
36CL 33				4.139 (2)-	33
36CL 34				4.206 (0:3)+	34
36CL 35				4.262	35
36CL 36			4.295 6-		36 5.2 PS 48

36CL 37				4.300	(0)+	37
36CL 38				4.316	(1,2)-	38
36CL 39				4.410	(1+,2,3+)	39
36CL 40				4.497	(2)-	40

36CL 41				4.525	(-)	41
36CL 42				4.551	(0:3)+	42
36CL 43		4.598	3-			43
36CL 44				4.724	-	44
36CL 45				4.738		45
36CL 46				4.754	(1,2)-	46
36CL 47		4.758	3-			47
36CL 48				4.824		48
36CL 49				4.830	(2-,3-)	49
36CL 50				4.847	-	50

36CL 51				4.877		51
36CL 52				4.884	(1,2,3)+	52
36CL 53				4.916		53
36CL 54				4.957	-	54
36CL 55				4.997	(3)+	55
36CL 56				4.998	(3)-	56
36CL 57				5.018		57
36CL 58				5.079	(1,2,3)-	58
36CL 59				5.151	(1,2)-	59
36CL 60				5.205	(2)-	60

36CL 61				5.247	(1+,2+,3+)	61
36CL 62				5.263	(1,2)-	62
36CL 63				5.308	-	63
36CL 64	5.314	7+				64 19.7 PS 15
36CL 65				5.329	(2-,3+)	65
36CL 66				5.370		66
36CL 67				5.464	(2)-	67
36CL 68				5.474	(3)	68
36CL 69				5.518	(2)-	69
36CL 70				5.545		70

36CL 71				5.564	(2-,3-)	71
36CL 72				5.578	(1,2)-	72
36CL 73				5.578	(2-)	73
36CL 74				5.604	(2,3+)	74
36CL 75				5.604		75
36CL 76				5.605	+	76
36CL 77				5.619	-	77
36CL 78				5.660		78
36CL 79				5.694	-	79
36CL 80				5.703	(1,2,3)-	80

36CL 81				5.734	(2)-	81

36CL 82			5.766	-	82
36CL 83			5.778	(2-,3)	83
36CL 84			5.779	(2,3,4)	84
36CL 85			5.780	(8)	85
36CL 86			5.832	-	86
36CL 87			5.867		87
36CL 88			5.898	-	88
36CL 89			5.912		89
36CL 90			5.948	-	90

36CL 91			5.957	(0:4)+	91
36CL 92			5.959	(1+,2,3+)	92
36CL 93			5.986	(-)	93
36CL 94			6.027		94
36CL 95			6.042	(2-,3-)	95
36CL 96			6.051	-	96
36CL 97			6.085	-	97
36CL 98			6.090	(1+,2)	98
36CL 99			6.096	+	99
36CL 100			6.147	+	100

36CL 101			6.154	-	101
36CL 102			6.185	+	102
36CL 103			6.236	-	103
36CL 104			6.254	(1,2)-	104
36CL 105			6.268	(2-,3+)	105
36CL 106			6.340	(1,2,3)-	106
36CL 107			6.344	(1-,2,3-)	107
36CL 108			6.355	(2,3)+	108
36CL 109			6.379	(4)+	109
36CL 110			6.423	(2,3)-	110

36CL 111			6.441	-	111
36CL 112			6.469		112
36CL 113			6.488	(1,2,3)-	113
36CL 114			6.488	(1+,2,3,4-)	114
36CL 115			6.505	-	115
36CL 116			6.528		116
36CL 117			6.538	(2,3+)	117
36CL 118			6.545	(1,2,3)+	118
36CL 119			6.577	-	119
36CL 120			6.595	(-)	120

36CL 121			6.604	(2)	121
36CL 122			6.618	+	122
36CL 123			6.643	(1-,2+)	123
36CL 124			6.673	-	124
36CL 125			6.750	+	125
36CL 126			6.771		126
36CL 127			6.773	+	127

36CL 128				6.774	+	128
36CL 129				6.826	+	129
36CL 130				6.836		130

36CL 131				6.894	+	131
36CL 132				6.950		132
36CL 133				6.953	(1,2,3)	133
36CL 134				6.997	-	134
36CL 135				7.083	(2)	135
36CL 136				7.085	+	136
36CL 137				7.165		137
36CL 138				7.339		138
36CL 139				7.512	+	139
36CL 140				7.559	(1,2,3)+	140

36CL 141				7.565	(0+,1,2,3+)	141

S-alpha=	7.642	(0.000)	-----			
36CL 142				7.663	+	142
36CL 143				7.755	(-)	143
36CL 144				7.870	+	144

S-p =	7.965	(0.000)	-----			
36CL 145				8.184	(+)	145

S-n =	8.580	(0.000)	-----			
36CL 146	8.580	2+				146
36CL 147			8.580	2-		147
36CL 148			8.584	1-		148
36CL 149					8.585 (1-)	149
36CL 150	8.594	2+				150

36CL 151				8.596	(3-)	151
36CL 152			8.596	3-		152
36CL 153				8.602	(0-)	153
36CL 154	8.606	2+				154
36CL 155				8.606	(2-)	155
36CL 156				8.616	(1-)	156
36CL 157				8.619	(3-)	157
36CL 158				8.623	(1-)	158
36CL 159				8.630	(3-)	159
36CL 160				8.631	(2-)	160

36CL 161	8.633	1+				161
36CL 162				8.636	(2-)	162
36CL 163			8.641	1-		163
36CL 164	8.646	1+				164
36CL 165				8.653	(2+)	165
36CL 166				8.668	(2-)	166
36CL 167				8.668	(2-)	167
36CL 168				8.672	(3-)	168
36CL 169				8.674	(0-)	169
36CL 170				8.676	(3-)	170

36CL 171				8.680	1-		171
36CL 172							172
36CL 173							173
36CL 174							174
36CL 175							175
36CL 176							176
36CL 177							177
36CL 178							178
36CL 179							179
36CL 180							180

36CL 181							181
36CL 182							182
36CL 183							183
36CL 184							184
36CL 185							185
36CL 186							186
36CL 187		8.757			1+		187
36CL 188							188
36CL 189							189
36CL 190							190

36CL 191							191
36CL 192							192
36CL 193							193
36CL 194							194
36CL 195							195
36CL 196							196
36CL 197							197
36CL 198							198
36CL 199							199
36CL 200		8.789			2+		200

36CL 201							201
36CL 202							202
36CL 203							203
36CL 204							204
36CL 205							205
36CL 206							206
36CL 207							207
36CL 208							208
36CL 209							209
36CL 210		8.816			2+		210

36CL 211							211
36CL 212							212
36CL 213							213
36CL 214							214
36CL 215							215

36CL 216				8.851	1(-)	216
36CL 217				8.856	(2-)	217
36CL 218				8.856	(1-)	218
36CL 219				8.856	(2+)	219
36CL 220				8.857	(2-)	220

36CL 221				8.859	(2-)	221
36CL 222				8.862	(2-)	222
36CL 223				8.865	(3-)	223
36CL 224				8.866	(2-)	224
36CL 225				8.873	(2-)	225
36CL 226				8.874		226
36CL 227			8.875 2-			227
36CL 228				8.877	(1-)	228
36CL 229				8.879	1(-)	229
36CL 230	8.885	2+				230

36CL 231				8.902	(2+)	231
36CL 232				8.906	(1+)	232
36CL 233				8.907	(3-)	233
36CL 234	8.909	2+				234
36CL 235			8.911 1-			235
36CL 236				8.912	(0-)	236
36CL 237				8.916	(2-)	237
36CL 238				8.924	(2-)	238
36CL 239				8.942	1(-)	239
36CL 240				8.949	(2)+	240

36CL 241				8.950		241
36CL 242				8.951	(1-)	242
36CL 243				8.953	(2-)	243
36CL 244	8.955	2+				244
36CL 245				8.957	(1-)	245
36CL 246				8.968	(1)+	246
36CL 247				8.970	(1-)	247
36CL 248				8.973	(1-)	248
36CL 249				8.976	2(-)	249
36CL 250				8.984	(1+)	250

36CL 251				8.990	(1-)	251
36CL 252				9.006	2(-)	252
36CL 253				9.012	(2-)	253
36CL 254				9.018	(1+)	254
36CL 255				9.019	(2-)	255
36CL 256				9.020	(1-)	256
36CL 257				9.025	(2-)	257
36CL 258				9.026	(2+)	258
36CL 259				9.032	(1-)	259
36CL 260				9.032	2(-)	260

36CL 261				9.036	(2-)	261
36CL 262				9.042	3(-)	262
36CL 263				9.044	(2-)	263
36CL 264				9.048	(0-)	264
36CL 265				9.050	(1-)	265
36CL 266				9.052	(2-)	266
36CL 267				9.055	(2+)	267
36CL 268				9.066	(1+)	268
36CL 269				9.071	(0-)	269
36CL 270				9.075	(3-)	270

36CL 271	9.080	2+				271
36CL 272				9.093	(2)+	272
36CL 273				9.095	(3-)	273
36CL 274				9.100	(3-)	274
36CL 275				9.107	(1+)	275
36CL 276				9.108	(2-)	276
36CL 277				9.112	(0-)	277
36CL 278				9.117	(1-)	278
36CL 279				9.123	(2)+	279
36CL 280				9.123	(1-)	280

36CL 281				9.129	(2-)	281
36CL 282				9.138	(2-)	282
36CL 283				9.145	(1-)	283
36CL 284				9.154	(2-)	284
36CL 285				9.154	(2)+	285
36CL 286				9.155	(1-)	286
36CL 287				9.164	(1-)	287
36CL 288				9.171	(3-)	288
36CL 289				9.177	(1-)	289
36CL 290				9.181	(2-)	290

36CL 291				9.184	(2+)	291
36CL 292				9.192	(1-)	292
36CL 293	9.193	2+				293
36CL 294				9.195	(2-)	294
36CL 295	9.203	2+				295
36CL 296				9.205	(2-)	296
36CL 297				9.216	(1+)	297
36CL 298				9.219	(2+)	298
36CL 299				9.221	(1-)	299
36CL 300				9.226	(1+)	300

36CL 301				9.227	(3-)	301
36CL 302				9.233	(1+)	302
36CL 303				9.235	(3-)	303
36CL 304				9.239	(1+)	304
36CL 305				9.242	(2)+	305
36CL 306				9.242	(3-)	306

36CL 307			9.246	(3-)	307
36CL 308			9.251	(2)+	308
36CL 309			9.255	(1)+	309
36CL 310			9.261	(3-)	310

36CL 311			9.264	(2-)	311
36CL 312			9.272	2(-)	312
36CL 313			9.278	(1-)	313
36CL 314			9.282	(1-)	314
36CL 315			9.285	(1+)	315
36CL 316			9.289	(2-)	316
36CL 317			9.292	(1-)	317
36CL 318			9.294	(2-)	318
36CL 319			9.299	2(-)	319
36CL 320			9.307	(1-)	320

36CL 321			9.313	(1)+	321
36CL 322			9.316	3(-)	322
36CL 323			9.320	3(-)	323
36CL 324			9.324	(1-)	324
36CL 325			9.328	(2-)	325
36CL 326			9.333	(3-)	326
36CL 327			9.338	(2)+	327
36CL 328			9.339	(1+)	328
36CL 329			9.350	(1-)	329
36CL 330			9.356	(2-)	330

36CL 331			9.359	(2-)	331
36CL 332			9.364	(3-)	332
36CL 333			9.367	(1-)	333
36CL 334	9.382	2+			334
36CL 335			9.384	(2-)	335
36CL 336			9.388	(1+)	336
36CL 337			9.389	(2-)	337
36CL 338			9.392	(2-)	338
36CL 339			9.395	(3-)	339
36CL 340			9.401	(1-)	340

36CL 341			9.404	(2-)	341
36CL 342			9.408	(2-)	342
36CL 343	9.417	2+			343
36CL 344			9.418	(3-)	344
36CL 345			9.427	(1-)	345
36CL 346			9.432	(2-)	346
36CL 347			9.438	(1)+	347
36CL 348			9.442	(3-)	348
36CL 349			9.450	(2-)	349
36CL 350			9.460	(3-)	350

36CL 351			9.465	(3-)	351

36CL 352				9.470	(2-)	352
36CL 353				9.476	(2-)	353
36CL 354				9.487	(2-)	354
36CL 355				9.490	(1-)	355
36CL 356				9.497	(1-)	356
36CL 357				9.499	(2-)	357
36CL 358				9.504	(3-)	358
36CL 359				9.506	(2-)	359
36CL 360				9.527	(1-)	360

36CL 361				9.533	(2-)	361
36CL 362				9.537	(1-)	362
36CL 363				9.544	(2-)	363
36CL 364				9.552	(2-)	364
36CL 365				9.558	(2-)	365
36CL 366				9.562	(3-)	366
36CL 367				9.568	(2-)	367
36CL 368				9.580	(2-)	368
36CL 369				9.585	(3-)	369
36CL 370				9.601	(2-)	370

36CL 371		9.604	2+			371
36CL 372				9.606	(2-)	372
36CL 373				9.612	(3-)	373
36CL 374				9.621	(3-)	374
36CL 375				9.624	(2-)	375
36CL 376				9.630	(2-)	376
36CL 377				9.635	(3-)	377
36CL 378				9.638	(2-)	378
36CL 379				9.641	(1-)	379
36CL 380				9.653	(3-)	380

36CL 381				9.658	(1+)	381
36CL 382				9.664	(2-)	382
36CL 383				9.665	(2-)	383
36CL 384				9.669	(3-)	384
36CL 385				9.675	(3-)	385
36CL 386				9.680	(2-)	386
36CL 387				9.686	(2+)	387
36CL 388				9.687	(1-)	388
36CL 389				9.693	(3-)	389
36CL 390				9.703	(3-)	390

36CL 391				9.712	(2-)	391
36CL 392				9.719	(2-)	392
36CL 393				9.724	(1-)	393
36CL 394				9.736	(3-)	394
36CL 395				9.745	(2-)	395
36CL 396				9.752	(1+)	396
36CL 397				9.755	(3-)	397

36CL 398				9.764	(2-)	398
36CL 399				9.771	(1-)	399
36CL 400				9.782	(3-)	400

36CL 401				9.788	(2-)	401
36CL 402				9.802	(2+)	402
36CL 403				9.813	(3-)	403
36CL 404				9.822	(3-)	404
36CL 405				9.828	(2-)	405
36CL 406				9.855	(2-)	406
36CL 407				9.858	(3-)	407
36CL 408				9.879	(2-)	408
36CL 409				9.895	(1-)	409
36CL 410				9.896	(2-)	410

36CL 411				9.908	(2-)	411
36CL 412				9.932	(3-)	412
36CL 413				9.944	(2-)	413
36CL 414				9.965	(3-)	414
36CL 415				9.974	(2-)	415
36CL 416				9.975	(1-)	416
36CL 417				9.981	(2-)	417
36CL 418				10.023	(3-)	418
36CL 419				10.099	(2+)	419
36CL 420				11.240		420

36CL 421				11.440		421
36CL 422				12.230		422

S-p = 7.965 (0.000)-----
S-n = 8.580 (0.000)-----
S-2p = 19.551 (0.001)-----
S-2n = 21.225 (0.000)-----
S-alpha= 7.642 (0.000)-----

S+p = -8.715 (0.000)
S+n = -10.311 (0.000)
S+2p = -13.857 (0.000)
S+2n = -16.419 (0.000)
S+alpha = -6.438 (0.000)

gap p = -0.750 (0.000)
gap n = -1.731 (0.000)
gap 2p = 5.695 (0.001)
gap 2n = 4.806 (0.000)
gap alpha = 1.204 (0.000)