

^{60}Ni $Z = 28$ $N = 32$ [link to full NNDC output](#)

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

BE = 526.846 (0.000) MeV

	Energy T	J+	J-	J-other	T1/2
60NI 1	0.000	0+			1 STABLE
60NI 2	1.333	2+			2 0.735 PS 21
60NI 3	2.159	2+			3 0.59 PS 17
60NI 4	2.285	0+			4 1.5 PS GT
60NI 5	2.506	4+			5 3.3 PS 10
60NI 6	2.626	3+			6 0.6 PS AP
60NI 7	3.120	4+			7 0.24 PS 10
60NI 8	3.124	2+			8 0.23 PS +17-10
60NI 9				3.186 (3+)	9 0.14 PS 4
60NI 10	3.194	1+			10 53 FS 14
60NI 11	3.269	2+			11 71 FS 21
60NI 12	3.318	0+			12 0.24 PS +28-11
60NI 13				3.381	13 0.23 PS +35-11
60NI 14	3.393	2+			14 0.13 PS +6-4
60NI 15	3.588	0+			15 40 PS LT
60NI 16	3.619	3+			16 0.2 PS +5-1
60NI 17	3.671	4+			17 0.06 PS 4
60NI 18	3.703	4+			18
60NI 19	3.731	4+			19 0.21 PS +29-9
60NI 20	3.734	2+			20 0.11 PS 4
60NI 21				3.798 1	21 118 FS 15
60NI 22	3.871	2+			22 3.0 PS GT
60NI 23	3.887	2+			23 0.07 PS +7-4
60NI 24				3.895	24 59 FS 25
60NI 25				3.908 1	25 27 FS 5
60NI 26				3.925 2+,3+	26 0.19 PS +19-8
60NI 27	4.006	2+			27 21 FS 7
60NI 28	4.020	1+			28 12 FS 3
60NI 29				4.035	29 25 FS 14
60NI 30			4.040 3-		30 22 FS 10
60NI 31				4.078 1+,2+	31 12 FS GT
60NI 32	4.112	2+			32
60NI 33	4.166	5+			33 0.8 PS 4
60NI 34				4.186 (4+)	34
60NI 35				4.191	35
60NI 36	4.265	6+			36 0.45 PS +11-21
60NI 37				4.294	37
60NI 38				4.301	38

60NI 39		4.319	2+					39
60NI 40						4.336	2	40

60NI 41						4.341	(0+)	41 29 FS +31-21
60NI 42		4.356	2+					42 45 FS +26-18
60NI 43						4.400		43
60NI 44		4.407	5+					44
60NI 45						4.451		45
60NI 46		4.493	2+					46 16 FS 14
60NI 47		4.534	2+					47
60NI 48						4.548	1+,2+	48
60NI 49		4.577	2+					49 18 FS LT
60NI 50						4.579	(4+)	50

60NI 51						4.613		51
60NI 52						4.760	1,2	52
60NI 53						4.768		53 0.05 PS +6-3
60NI 54						4.779		54
60NI 55						4.800		55
60NI 56		4.844	2+					56 6.9 FS 21
60NI 57						4.849	1,2,3	57
60NI 58						4.859		58
60NI 59						4.891		59
60NI 60						4.929		60

60NI 61						4.953		61
60NI 62		4.958	4+					62 61 FS 21
60NI 63						4.971		63 0.06 PS +5-3
60NI 64						4.986	(6+)	64 1.0 PS +25-7
60NI 65						5.014	(5-)	65
60NI 66						5.048	1,2	66
60NI 67						5.065	(1-)	67 2.98 FS 28
60NI 68						5.091		68
60NI 69						5.106		69 0.03 PS +5-3
60NI 70					5.110	8-		70

60NI 71		5.121	4+					71
60NI 72						5.127		72
60NI 73						5.133		73
60NI 74		5.149	6+					74
60NI 75						5.174		75
60NI 76						5.192		76
60NI 77						5.205		77 16 FS 16
60NI 78						5.236	5(+)	78
60NI 79		5.244	4+					79 0.05 PS +5-3
60NI 80						5.264		80

60NI 81						5.289		81
60NI 82						5.307		82
60NI 83						5.318		83

60NI 84				5.349	7-				84	250 PS	21
60NI 85							5.379		85		
60NI 86				5.396	3-				86		
60NI 87							5.411		87		
60NI 88							5.428		88		
60NI 89		5.447	2+						89		
60NI 90		5.450	6+						90		

60NI 91							5.476		91		
60NI 92							5.530	(2+)	92	20 FS	14
60NI 93							5.612		93		
60NI 94							5.642		94		
60NI 95							5.650		95		
60NI 96		5.663	7+						96	0.7 PS	+21-3
60NI 97							5.672		97		
60NI 98							5.711		98		
60NI 99							5.741		99		
60NI 100							5.780		100		

60NI 101							5.785	(7+)	101		
60NI 102		5.799	2+						102		
60NI 103							5.831		103		
60NI 104							5.860		104		
60NI 105							5.878		105		
60NI 106				5.902	6-				106		
60NI 107							5.902		107		
60NI 108							5.919		108		
60NI 109							5.931	1	109	21 FS	6
60NI 110							5.946		110		

60NI 111							5.968		111		
60NI 112				5.973	5-				112		
60NI 113							5.992		113		
60NI 114							6.028		114		
60NI 115							6.054		115		
60NI 116							6.067		116		
60NI 117							6.077	(8)	117		
60NI 118							6.111		118		
60NI 119		6.112	7+						119		
60NI 120							6.142		120		

60NI 121				6.181	1-				121	1.80 FS	28
60NI 122							6.192		122		
60NI 123							6.229	(2+)	123	20 FS	4
60NI 124							6.239		124		
60NI 125							6.278	(6-)	125		

S-alpha=	6.291	(0.000)									
60NI 126							6.292		126		
60NI 127		6.327	2+						127		
60NI 128							6.362		128		

60NI 129				6.382	1	129	12 FS	3
60NI 130				6.403		130		

60NI 131				6.431		131		
60NI 132		6.461	8+			132	1.2 PS	+16-5
60NI 133				6.465	1-	133	1.7 FS	5
60NI 134						134		
60NI 135		6.515	1+			135	3.0 FS	5
60NI 136						136		
60NI 137						137		
60NI 138						138		
60NI 139				6.588	1-	139	1.25 FS	28
60NI 140						140		

60NI 141						141		
60NI 142						142		
60NI 143						143		
60NI 144						144		
60NI 145						145		
60NI 146				6.719	1-	146	6.7 FS	13
60NI 147						147	6 FS	3
60NI 148						148		
60NI 149						149		
60NI 150						150		

60NI 151						151		
60NI 152				6.811	9-	152	0.55 PS	28
60NI 153						153		
60NI 154						154		
60NI 155				6.837	8-	155	0.6 PS	+5-2
60NI 156						156		
60NI 157						157		
60NI 158		6.912	1+			158	1.46 FS	28
60NI 159						159		
60NI 160						160		

60NI 161		7.028	8+			161		
60NI 162				7.039	1-	162	1.3 FS	4
60NI 163						163		
60NI 164						164		
60NI 165						165		
60NI 166						166		
60NI 167						167		
60NI 168		7.250	8+			168		
60NI 169						169		
60NI 170						170		

60NI 171						171		
60NI 172						172		
60NI 173		7.380	8+			173		

60NI 174						7.414				174
60NI 175		7.433		9+						175
60NI 176						7.466		(7-)		176
60NI 177		7.473		1+						177 2.1 FS 3
60NI 178						7.495				178
60NI 179		7.531		8+						179
60NI 180						7.550		8-		180

60NI 181						7.552				181
60NI 182						7.560		1-		182 6.5 FS 22
60NI 183										183
60NI 184						7.570				184
60NI 185						7.590				185
60NI 186						7.627				186 0.27 FS 3
60NI 187		7.658		1+		7.647		1-		187 0.97 FS 14
60NI 188										188
60NI 189						7.684				189 0.208 FS 28
60NI 190						7.690		1-		190
60NI 191		7.733		8+						191
60NI 192						7.748		1-		192 0.55 FS 21
60NI 193						7.760		8-		193
60NI 194		7.762		1+						194 1.7 FS 4
60NI 195										195
60NI 196						7.799				196
60NI 197						7.813				197
60NI 198		7.850		1+						198 1.66 FS 28
60NI 199		7.880		1+						199 2.6 FS 6
60NI 200		7.927		1+						200 8.2 FS 36

60NI 201		7.951		1+						201 0.76 FS 14
60NI 202		7.981		9+						202
60NI 203		8.043		1+						203 7.7 FS 28
60NI 204						8.044		9-		204 0.04 PS +31-4
60NI 205		8.074		8+						205
60NI 206						8.086		1-		206 0.201 FS 35
60NI 207		8.112		1+						207 3.0 FS 7
60NI 208						8.127		1-		208 0.45 FS 6
60NI 209										209 1.04 FS 21
60NI 210						8.189		1		210 0.40 FS 6

60NI 211						8.272		10-		211
60NI 212										212
60NI 213						8.286		(1+)		213 0.76 FS 28
60NI 214		8.352		1+						214 2.4 FS 6
60NI 215		8.359		1+						215 3.4 FS 11
60NI 216						8.390		9-		216
60NI 217						8.407		1-		217 6.3 FS 37
60NI 218						8.427		9-		218
60NI 219						8.430		3-		219

60NI 220			8.433	8-			220		

60NI 221					8.451	1	221	2.3 FS	6
60NI 222			8.464	1-			222	2.7 FS	7
60NI 223			8.486	9-			223		
60NI 224					8.505		224		
60NI 225			8.515	1-			225	0.69 FS	14
60NI 226			8.521	10-			226	0.5 PS	+6-2
60NI 227					8.566		227		
60NI 228					8.639		228		
60NI 229			8.655	1-			229	1.32 FS	28
60NI 230	8.657	1+					230	0.7 FS	6

60NI 231					8.666		231		
60NI 232	8.688	1+					232	2.6 FS	7
60NI 233	8.689	10+					233		
60NI 234			8.747	1-			234	0.90 FS	21
60NI 235	8.768	1+					235	8 FS	8
60NI 236	8.779	1+					236	1.25 FS	35
60NI 237			8.782	1-			237	1.25 FS	35
60NI 238	8.794	1+					238	1.11 FS	35
60NI 239	8.847	1+					239	1.5 FS	4
60NI 240	8.872	1+					240	1.6 FS	4

60NI 241	8.891	1+					241	0.83 FS	21
60NI 242			8.924	1-			242	0.36 FS	6
60NI 243			8.959	8-			243	79 KEV	
60NI 244			9.010	1-			244	2.1 FS	7
60NI 245					9.045		245		
60NI 246			9.053	1-			246	2.9 FS	12
60NI 247					9.060		247		
60NI 248	9.069	1+					248	1.04 FS	28
60NI 249					9.077		249		
60NI 250			9.092	1-			250	0.132 FS	28

60NI 251			9.123	10-			251		
60NI 252			9.132	1-			252	0.90 FS	21
60NI 253			9.132	11-			253	0.18 PS	+10-8
60NI 254			9.149	1-			254	0.69 FS	35
60NI 255			9.208	8-			255	127 KEV	
60NI 256			9.256	1-			256	1.5 FS	7
60NI 257			9.264	11-			257		
60NI 258			9.267	1-			258	1.4 FS	7
60NI 259					9.275	1	259	2.6 FS	19
60NI 260	9.301	1+					260	0.55 FS	21

60NI 261			9.308	1-			261	0.49 FS	21
60NI 262					9.347		262		
60NI 263			9.353	1-			263	1.9 FS	8
60NI 264			9.396	1-			264	0.83 FS	35

60NI 265				9.411	1-				265	1.2 FS	5
60NI 266		9.426	10+						266		
60NI 267		9.453	1+						267	1.0 FS	4
60NI 268					9.464	1-			268	0.21 FS	21
60NI 269		9.468	1+						269	1.9 FS	12
60NI 270					9.505	1-			270	10 FS	4

S-p	=	9.532 (0.001)-----									
60NI 271					9.599	1-			271	0.62 FS	28
60NI 272					9.623	10-			272		
60NI 273					9.640	1-			273	3.0 FS	26
60NI 274					9.659	1-			274	0.049 FS	14
60NI 275		9.666	10+						275		
60NI 276					9.701	1-			276	0.8 FS	5
60NI 277								9.715 (10+)	277		
60NI 278					9.718	11-			278		
60NI 279					9.721	1-			279	1.2 FS	8
60NI 280					9.752	1-			280	4.2 FS	35

60NI 281					9.760	11-			281		
60NI 282					9.775	1-			282	1.9 FS	14
60NI 283					9.807	1-			283	1.6 FS	10
60NI 284		9.831	1+						284	1.3 FS	6
60NI 285					9.832	1-			285	1.3 FS	6
60NI 286					9.871	1-			286	0.8 FS	6
60NI 287		9.888	10+						287		
60NI 288					9.894	1-			288	0.49 FS	28
60NI 289								9.954	289		
60NI 290					9.960	11-			290		

60NI 291								9.989 (12-)	291	0.21 PS	+21-7
60NI 292								10.029	292		
60NI 293								10.054 (11-)	293		
60NI 294								10.159 (12-)	294		
60NI 295								10.242 (11-)	295		
60NI 296					10.697	12-			296		
60NI 297					10.789	12-			297		
60NI 298		10.825	11+						298		
60NI 299		10.873	11+						299		
60NI 300		10.978	11+						300		

60NI 301								10.985	301		
60NI 302		11.031	11+						302		
60NI 303		11.044	12+						303		
60NI 304								11.079 (12-)	304		
60NI 305					11.113	13-			305		
60NI 306					11.121	12-			306		
60NI 307								11.138	307		
60NI 308								11.149	308		
60NI 309								11.158	309		

60NI 310	11.207	2+				310

60NI 311					11.225 (11+)	311
60NI 312	11.255	12+				312
60NI 313					11.388 (1-,2-)	313
S-n	= 11.388	(0.001)	-----			
60NI 314					11.429	314
60NI 315			11.443	13-		315
60NI 316					11.494 (12+)	316
60NI 317			11.553	13-		317
60NI 318					11.599	318
60NI 319					11.620 (1+)	319
60NI 320					11.647	320

60NI 321					11.702	321
60NI 322					11.732	322
60NI 323					11.750	323
60NI 324					11.786 (12+)	324
60NI 325	11.851	13+				325
60NI 326					11.860 (1+)	326
60NI 327					11.878 (13)	327
60NI 328					11.932	328
60NI 329					11.950	329
60NI 330					12.130	330

60NI 331			12.274	14-		331
60NI 332			12.333	8-		332
60NI 333					12.355	333
60NI 334					12.465	334
60NI 335					12.486 (13+)	335
60NI 336			12.515	8-		336
60NI 337	12.578	14+				337
60NI 338	12.742	13+				338
60NI 339	12.775	14+				339
60NI 340	12.859	13+				340

60NI 341			13.038	14-		341
60NI 342	13.246	13+				342
60NI 343					13.282 (14+)	343
60NI 344					13.353 (14+)	344
60NI 345			13.615	15-		345
60NI 346	13.662	15+				346
60NI 347					13.760	347
60NI 348					13.810 (15-)	348
60NI 349			13.908	8-		349
60NI 350					14.201 (15+)	350

60NI 351	14.464	15+				351
60NI 352	14.646	16+				352
60NI 353					14.670	353

60NI 354		14.803	16+						354
60NI 355					14.817	8-			355 64 KEV
60NI 356		14.934	16+						356
60NI 357								15.165 (16+)	357
60NI 358								15.281 (16-)	358
60NI 359					15.499	8-			359
60NI 360		16.027	17+						360

60NI 361								16.098 (17+)	361
60NI 362					16.110	8-			362
60NI 363					16.194	17-			363
60NI 364								16.242 (17+)	364
60NI 365		16.842	18+						365
S-2p	=	16.896 (0.001)							

60NI 366		17.236	18+						366
60NI 367		17.912	19+						367
60NI 368								18.131 (18-)	368
60NI 369								19.238 (19-)	369
60NI 370		19.504	20+						370

S-p = 9.532 (0.001)-----
S-n = 11.388 (0.001)-----
S-2p = 16.896 (0.001)-----
S-2n = 20.387 (0.001)-----
S-alpha= 6.291 (0.000)-----

S+p = -4.800 (0.001)
S+n = -7.820 (0.001)
S+2p = -11.273 (0.001)
S+2n = -18.416 (0.001)
S+alpha = -3.956 (0.001)

gap p = 4.732 (0.001)
gap n = 3.568 (0.001)
gap 2p = 5.623 (0.001)
gap 2n = 1.971 (0.001)
gap alpha = 2.335 (0.001)