

^{48}V $Z = 23$ $N = 25$ adopted link ENSDF link

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

BE = 413.907 (0.001) MeV

Qbeta+ = 4.015 (0.001) MeV

	Energy T	J+	J-	J-other	T1/2
48V 1	0.000	4+			1 15.974 D 3
48V 2	0.308	2+			2 7.11 NS 4
48V 3	0.421	1+			3 135 PS LT
48V 4	0.428	5+			4 6.4 PS 10
48V 5			0.519 1-		5 2.72 NS 6
48V 6	0.613	4+			6 15.0 PS 8
48V 7	0.627	6+			7 76 PS 6
48V 8			0.745 2-		8 17.3 PS 18
48V 9	0.765	3+			9 2.6 PS LE
48V 10				0.776 3,5	10
48V 11			1.056 3-		11 4.5 PS 13
48V 12			1.099 4-		12 4.5 PS 4
48V 13				1.120 (2,3,4)+	13
48V 14	1.254	7+			14 0.41 PS 10
48V 15	1.265	5+			15 1.9 PS LE
48V 16				1.326	16
48V 17	1.521	2+			17 3.0 PS LE
48V 18			1.558 4-		18 0.97 PS 28
48V 19				1.686 5(-)	19 0.60 PS 7
48V 20				1.691 (2+,3-)	20
48V 21				1.728 5+,6+,7+	21
48V 22				1.750 (6+)	22
48V 23				1.764	23
48V 24	1.781	3+			24
48V 25				1.998 2-,3-	25
48V 26				2.062 5(-)	26 0.76 PS 21
48V 27				2.097	27
48V 28				2.118 1+,2+,3+	28
48V 29	2.180	1+			29
48V 30				2.196 (3,4)-	30
48V 31	2.231	8+			31 0.215 PS 35
48V 32				2.258 1+,2+,3+,4+	32
48V 33	2.289	1+			33
48V 34				2.322	34
48V 35				2.333	35
48V 36				2.338 (3,4+)	36
48V 37				2.373	37

48V	38						2.391				38
48V	39				2.398	6-					39 0.222 PS 21
48V	40		2.408	1+							40

48V	41						2.447	(2+,3-)			41
48V	42						2.458				42
48V	43						2.472	(2,3)-			43
48V	44						2.495	(3+,4,5-)			44
48V	45						2.575				45
48V	46						2.579				46
48V	47						2.587				47
48V	48						2.605	(2+,3,4+)			48
48V	49						2.607	(1+)			49
48V	50		2.626	9+							50 0.56 PS 8

48V	51						2.703	(7+)			51
48V	52						2.716	4-,5-,6-			52
48V	53						2.760				53
48V	54						2.775	1+,2+,3+,4+			54
48V	55						2.779	(6-)			55 0.194 PS 28
48V	56						2.793	(3,4)-			56
48V	57						2.823	(4-)			57
48V	58						2.885				58
48V	59						2.915				59
48V	60						2.925				60

48V	61						2.954				61
48V	62						2.969				62
48V	63						2.985				63
48V	64						3.012	(1+,2,3,4+)			64
48V	65		3.023	0+							65
48V	66						3.049				66
48V	67						3.074	1+,2+,3+,4+			67
48V	68						3.101				68
48V	69						3.168	1+,2+,3+,4+			69
48V	70						3.174	(7-)			70 0.139 PS 14

48V	71						3.201				71
48V	72						3.210	(8+)			72
48V	73						3.243	(2)+			73
48V	74						3.294	1+,2+,3+,4+			74
48V	75						3.322	1+,2+,3+,4+			75
48V	76		3.382	1+							76
48V	77						3.423	(7-)			77 0.132 PS 28
48V	78						3.451	1+,2+,3+,4+			78
48V	79						3.507	1+,2+,3+,4+			79
48V	80						3.565	(3,4)+			80

48V	81						3.633				81
48V	82						3.660				82

48V	83	3.702	1+					83
48V	84				3.736	1+,2+,3+,4+		84
48V	85				3.806	1+,2+,3+,4+		85
48V	86	3.866	1+					86
48V	87				3.945	0+,1+		87
48V	88				3.981	(8-)	0.152 PS	21
48V	89				4.024	(2)+		89
48V	90				4.073	(8-)	0.097 PS	28

48V	91				4.086	1+,2+,3+,4+		91
48V	92				4.150	(10+)		92
48V	93				4.181	0+,1+		93
48V	94				4.201	(0+,1+)		94
48V	95				4.245	0+,1+		95
48V	96				4.307	(11+)	0.36 PS	4
48V	97				4.361	(8-)	0.083 PS	28
48V	98				4.368	(9+)		98
48V	99				4.396	(9-)	0.90 PS	14
48V	100				4.456	0+,1+		100

48V	101				4.554	0+,1+		101
48V	102				4.581	(9-)	0.39 PS	4
48V	103				4.595	0+,1+		103
48V	104				4.675			104
48V	105	4.684	1+					105
48V	106	4.781	1+					106
48V	107				4.857	0+,1+		107
48V	108				4.924	0+,1+		108
48V	109				4.969	(10+)		109
48V	110				4.971	0+,1+		110

48V	111				5.067	0+,1+		111
48V	112				5.130	0+,1+		112
48V	113				5.164	0+,1+		113
48V	114				5.199	0+,1+		114
48V	115				5.204	(10-)	0.28 PS	7
48V	116				5.246	(0+,1+)		116
48V	117				5.277	0+,1+		117
48V	118				5.388	0+,1+		118
48V	119				5.430	0+,1+		119
48V	120				5.477			120

48V	121				5.516			121
48V	122				5.567	0+,1+		122
48V	123				5.569	(11+)		123
48V	124				5.702	0+,1+		124
48V	125				5.739	0+,1+		125
48V	126				5.766	0+,1+		126
48V	127				5.820	0+,1+		127
48V	128				5.898	(11-)	0.62 PS	7

48V 129			5.913		129
48V 130			5.965	0+,1+	130

48V 131			6.005	0+,1+	131
48V 132			6.085		132
48V 133			6.192	0+,1+	133
48V 134			6.208	0+,1+	134
48V 135			6.215	(12+)	135
48V 136			6.243	(13+)	136 0.194 PS 28
48V 137			6.280	0+,1+	137
48V 138			6.401	0+,1+	138
48V 139			6.464	0+,1+	139
48V 140			6.501	0+,1+	140

48V 141			6.516	(0+,1+)	141
48V 142			6.548	0+,1+	142
48V 143			6.568	(0+,1+)	143
48V 144			6.603	(0+,1+)	144
48V 145			6.641	0+,1+	145
48V 146			6.697	0+,1+	146
48V 147			6.748		147
48V 148			6.770	0+,1+	148
48V 149			6.819	0+,1+	149
S-p = 6.829 (0.001)	-----				
48V 150			6.874	0+,1+	150

48V 151			6.924	0+,1+	151
48V 152			6.950	0+,1+	152
48V 153			6.982	0+,1+	153
48V 154			7.038	0+,1+	154
48V 155			7.061	0+,1+	155
48V 156			7.106	0+,1+	156
48V 157			7.163	0+,1+	157
48V 158			7.219	0+,1+	158
48V 159			7.247		159
48V 160			7.308	0+,1+	160

48V 161			7.334	(12-)	161 0.118 PS 21
48V 162			7.335	(12+)	162
48V 163			7.350		163
48V 164			7.374	0+,1+	164
48V 165			7.398	0+,1+	165
48V 166			7.428	0+,1+	166
48V 167			7.455	0+,1+	167
48V 168			7.496	0+,1+	168
48V 169			7.520	0+,1+	169
48V 170			7.558	0+,1+	170

48V 171			7.580	0+,1+	171
48V 172			7.639	0+,1+	172

48V 173			7.702	173
48V 174			7.706	174
48V 175			7.709	175
48V 176			7.712	176
48V 177			7.717	177
48V 178			7.723	178
48V 179			7.730	179
48V 180			7.746	180

48V 181			7.751	181
48V 182			7.755	182
48V 183			7.768	183
48V 184			7.773	184
48V 185			7.778	185
48V 186			7.781	186
48V 187			7.788	187
48V 188			7.791	188
48V 189			7.794	189
48V 190			7.797	190

48V 191			7.804	191
48V 192			7.806	192
48V 193			7.809	193
48V 194			7.815	194
48V 195			7.821	195
48V 196			7.825	196
48V 197			7.831	197
48V 198			7.835	198
48V 199			7.838	199
48V 200			7.840	200

48V 201			7.843	201
48V 202			7.846	202
48V 203			7.850	203
48V 204			7.852	204
48V 205			7.856	205
48V 206			7.858	206
48V 207			7.863	207
48V 208			7.864	208
48V 209			7.870	209
48V 210			7.873	210

48V 211			7.875	211
48V 212			7.879	212
48V 213			7.884	213
48V 214			7.886	214
48V 215			7.894	215
48V 216			7.895	216
48V 217			7.899	217
48V 218			7.904	218

48V 219				7.909		219
48V 220				7.912		220

48V 221				7.917		221
48V 222				7.920		222
48V 223				7.924		223
48V 224				7.926		224
48V 225				7.928		225
48V 226				7.931		226
48V 227				7.934		227
48V 228				7.938		228
48V 229				7.941		229
48V 230				7.944		230

48V 231				7.944	(13-)	231 0.090 PS 14
48V 232				7.949		232
48V 233				7.952		233
48V 234				7.954		234
48V 235				7.957		235
48V 236				7.960		236
48V 237				7.964		237
48V 238				7.967		238
48V 239				7.969		239
48V 240				7.972		240

48V 241				7.973	(13+)	241 0.14 PS LT
48V 242				7.974		242
48V 243				7.977		243
48V 244				7.981		244
48V 245				7.985		245
48V 246				7.988		246
48V 247				7.998		247
48V 248				8.003		248
48V 249				8.006		249
48V 250				8.012		250

48V 251				8.014		251
48V 252				8.018		252
48V 253				8.022		253
48V 254				8.029		254
48V 255				8.032		255
48V 256				8.037		256
48V 257				8.040		257
48V 258				8.042		258
48V 259				8.044		259
48V 260				8.048		260

48V 261				8.054		261
48V 262				8.058		262
48V 263				8.059		263

48V 264			8.062		264
48V 265			8.071		265
48V 266			8.075		266
48V 267			8.078		267
48V 268			8.082		268
48V 269			8.084		269
48V 270			8.089		270

48V 271			8.091		271
48V 272			8.093		272
48V 273			8.096		273
48V 274			8.098		274
48V 275			8.101		275
48V 276			8.103		276
48V 277			8.107		277
48V 278			8.112		278
48V 279			8.115		279
48V 280			8.118		280

48V 281			8.161	0+,1+	281
48V 282			8.216	(0+,1+)	282
48V 283			8.262	0+,1+	283
48V 284			8.279	0+,1+	284
48V 285			8.286	(15,13)	285
48V 286			8.316	0+,1+	286
48V 287			8.353	0+,1+	287
48V 288			8.401	(0+,1+)	288
48V 289			8.440	0+,1+	289
48V 290			8.465	0+,1+	290

48V 291			8.496	(14+)	291 0.07 PS LT
48V 292			8.505	0+,1+	292
48V 293			8.530	(0+,1+)	293
48V 294			8.572	(0+,1+)	294
48V 295			8.589	(14)	295
48V 296			8.600	(0+,1+)	296
48V 297			8.645	0+,1+	297
48V 298			8.666	(0+,1+)	298
48V 299			8.713	(15+)	299 0.118 PS 28
48V 300			8.744	(0+,1+)	300

48V 301			8.767	0+,1+	301
48V 302			8.821		302
48V 303			8.887	0+,1+	303
48V 304			8.904	(0+,1+)	304
48V 305			8.967	0+,1+	305
48V 306			8.998	(0+,1+)	306
48V 307			9.027	0+,1+	307
48V 308			9.061	0+,1+	308

S-alpha= 9.087 (0.002)-----					

48V 309				9.105	0+,1+	309
48V 310				9.157	(0+,1+)	310

48V 311				9.198	(0+,1+)	311
48V 312				9.220	0+,1+	312
48V 313				9.232	0+,1+	313
48V 314				9.268		314
48V 315				9.301	0+,1+	315
48V 316				9.333	0+,1+	316
48V 317				9.362		317
48V 318				9.397	0+,1+	318
48V 319				9.446	0+,1+	319
48V 320				9.492	0+,1+	320

48V 321				9.606	0+,1+	321
48V 322				9.651	(0+,1+)	322
48V 323				9.699		323
48V 324				9.732	0+,1+	324
48V 325				9.770	0+,1+	325
48V 326				9.808	0+,1+	326
48V 327				9.846	0+,1+	327
48V 328				9.891	0+,1+	328
48V 329				9.910	(14-)	329 0.056 PS LT
48V 330				9.930	0+,1+	330

48V 331				9.962	0+,1+	331

S-p = 6.829 (0.001)-----
S-n = 10.542 (0.001)-----
S-2p = 17.294 (0.001)-----
S-2n = 23.545 (0.001)-----
S-alpha= 9.087 (0.002)-----

S+p = -8.143 (0.002)
S+n = -11.555 (0.001)
S+2p = -12.727 (0.001)
S+2n = -20.888 (0.001)
S+alpha = -8.658 (0.001)

gap p = -1.314 (0.003)
gap n = -1.013 (0.002)
gap 2p = 4.567 (0.002)
gap 2n = 2.657 (0.001)
gap alpha = 0.429 (0.002)