

^{72}Se $Z = 34$ $N = 38$ [link to full NNDC output](#)

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

BE = 622.403 (0.002) MeV

Qbeta+ = 0.362 (0.005) MeV

	Energy T	J+	J-	J-other	T1/2
72SE 1	0.000	0+			1 8.40 D 8
72SE 2	0.862	2+			2 2.82 PS 20
72SE 3	0.937	0+			3 17.5 NS 17
72SE 4	1.317	2+			4 8.7 PS 3
72SE 5	1.637	4+			5 2.07 PS 16
72SE 6				1.876 (2,4)	6
72SE 7	1.999	2+			7
72SE 8				2.150 (2+)	8
72SE 9				2.294 (2)	9 1.0 PS LT
72SE 10				2.372	10
72SE 11			2.406 3-		11 1.0 PS LT
72SE 12			2.434 3-		12 1.0 PS LT
72SE 13	2.467	6+			13 1.24 PS 8
72SE 14				2.586 (3)	14
72SE 15			2.843 5-		15
72SE 16			2.929 3-		16
72SE 17				2.966	17
72SE 18				3.124 (4+)	18
72SE 19			3.173 5-		19 1.0 PS LT
72SE 20				3.214 (2+,3,4+)	20
72SE 21				3.226 (2,3,4+)	21
72SE 22				3.232	22
72SE 23				3.239	23
S-alpha=	3.314 (0.003)				
72SE 24			3.350 5-		24 1.0 PS LT
72SE 25				3.383	25
72SE 26	3.425	8+			26 0.51 PS 5
72SE 27	3.450	2+			27
72SE 28			3.522 6-		28 2.9 PS 3
72SE 29	3.762	4+			29
72SE 30			3.770 7-		30 2.8 PS 2
72SE 31			3.917 7-		31 0.79 PS 17
72SE 32				4.093	32
72SE 33				4.218	33
72SE 34	4.310	6+			34
72SE 35				4.326	35
72SE 36	4.504	10+			36 0.22 PS 2

72SE	37						4.713			37			
72SE	38						4.763	(9-)		38	0.59	PS	8
72SE	39		5.710		12+					39	0.14	PS	2
72SE	40						5.831	(11-)		40	0.83	PS	10

72SE	41						6.687	(11-)		41			
72SE	42		7.038		14+					42	0.097	PS	8
72SE	43						7.042	(13-)		43	0.69	PS	LT
72SE	44						7.191	(12-)		44			
S-p	=		7.264	(0.005)	-----							
72SE	45						7.796	(13-)		45			
72SE	46						8.090	(14-)		46			
72SE	47		8.495		16+					47	0.040	PS	7
72SE	48		10.095		18+					48	0.042	PS	10
72SE	49		11.832		20+					49	0.069	PS	14
S-n	=		12.793	(0.003)	-----							
S-2p	=		11.884	(0.002)	-----							
72SE	50		13.742		22+					50	0.05	PS	LT

72SE	51		15.896		24+					51	0.3	PS	LT
72SE	52						18.216	(26+)		52	0.3	PS	LT

S-p = 7.264 (0.005)-----
 S-n = 12.793 (0.003)-----
 S-2p = 11.884 (0.002)-----
 S-2n = 22.081 (0.003)-----
 S-alpha= 3.314 (0.003)-----

S+p = -3.068 (0.008)
 S+n = -8.430 (0.008)
 S+2p = -9.042 (0.003)
 S+2n = -20.488 (0.002)
 S+alpha = -3.570 (0.004)

gap p = 4.196 (0.009)
 gap n = 4.363 (0.008)
 gap 2p = 2.843 (0.004)
 gap 2n = 1.593 (0.003)
 gap alpha = -0.256 (0.005)