

^{37}Ar $Z = 18$ $N = 19$ [link to full NNDC output](#)

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

BE = 315.504 (0.000) MeV

Qbeta+ = 0.814 (0.000) MeV

	Energy T	J+	J-	J-other	T1/2
37AR 1	0.000	3/2+			1 35.011 D 19
37AR 2	1.410	1/2+			2 0.59 PS 10
37AR 3			1.611	7/2-	3 4.38 NS 10
37AR 4	2.217	7/2+			4 283 FS 22
37AR 5			2.490	3/2-	5 462 FS 111
37AR 6	2.796	5/2+			6 14 FS 4
37AR 7	3.170	5/2+			7 56 FS 5
37AR 8			3.185	9/2-	8 195 FS 7
37AR 9			3.274	5/2-	9 25 FS 2
37AR 10			3.518	3/2-	10 41 FS 24
37AR 11			3.527	7/2-	11 409 FS 53
37AR 12	3.602	3/2+			12 23 FS 5
37AR 13			3.706	11/2-	13 256 FS 14
37AR 14				3.751	14
37AR 15				3.900	15
37AR 16	3.937	3/2+			16 17 FS 10
37AR 17				3.981	1/2,3/2,5/2
37AR 18			4.022	9/2-	17 28 FS 28
37AR 19				4.193	18 28 FS 10
37AR 20	4.284	7/2+			19
37AR 21				4.320	20 28 FS 14
37AR 22				4.397	(5/2)-
37AR 23			4.444	1/2-	21
37AR 24				4.573	5/2
37AR 25	4.624	7/2+			22 6.9 FS LT
37AR 26			4.635	3/2-	23 14 FS LT
37AR 27				4.729	24 14 FS LT
37AR 28	4.743	7/2+			25 6.9 FS LT
37AR 29			4.755	3/2-	26 21 FS 14
37AR 30				4.799	5/2
37AR 31				4.830	27
37AR 32				4.886	28 6.9 FS LT
37AR 33				4.981	7/2-,11/2-
37AR 34				4.995	3/2+,5/2+
37AR 35				5.048	5/2
37AR 36				5.090	3/2
37AR 37			5.102	1/2-	29
					30 6.9 FS LT
					31
					32
					33 35 FS 10
					34
					35 21 FS LT
					36 10 FS LT
					37 6.9 FS LT

37AR 38						5.130	5/2	38	17 FS	7
37AR 39		5.213	11/2+					39	2.54 PS	25
37AR 40						5.229	(3/2)-	40		

37AR 41						5.267		41		
37AR 42				5.349	3/2-			42		
37AR 43						5.408		43	3.5 FS	35
37AR 44						5.436	5/2+,9/2+	44	87 FS	17
37AR 45				5.437	3/2-			45		
37AR 46						5.461		46		
37AR 47						5.533		47		
37AR 48				5.573	3/2-			48		
37AR 49						5.669	3/2+,5/2+	49		
37AR 50						5.761		50		

37AR 51				5.793	13/2-			51	35 FS	10
37AR 52						5.845		52		
37AR 53						5.873	(1/2-)	53		
37AR 54						5.961	(7/2-)	54		
37AR 55						6.066		55		
37AR 56						6.102	3/2+,5/2+	56		
37AR 57		6.150	13/2+					57	3.1 PS	3
37AR 58				6.158	1/2-			58		
37AR 59				6.227	1/2-			59		
37AR 60						6.290	3/2+,5/2+	60		

37AR 61				6.315	5/2-			61		
37AR 62						6.416	7/2:17/2+	62		
37AR 63						6.461	7/2:13/2+	63		
37AR 64		6.473	15/2+					64	4.9 PS	7
37AR 65						6.540		65		
37AR 66						6.580		66		
37AR 67						6.604		67		
37AR 68						6.673	1/2+,3/2+	68		
37AR 69						6.752		69		
S-alpha=	6.787	(0.000)	-----	-----	-----	-----	-----	-----	-----	-----
37AR 70						6.790	7/2:13/2+	70		

37AR 71						6.821		71		
37AR 72						6.852		72		
37AR 73						6.875		73		
37AR 74						6.946	(1/2,3/2)-	74		
37AR 75						7.018		75		
37AR 76						7.071	13/2+,17/2+	76	375 FS	80
37AR 77						7.107		77		
37AR 78						7.151	(7/2-)	78		
37AR 79						7.252	(1/2-)	79		
37AR 80						7.263		80		

37AR 81						7.285	(7/2-)	81		

37AR 82				7.290	7/2:13/2+	82
37AR 83				7.329		83
37AR 84				7.440		84
37AR 85				7.478		85
37AR 86		7.571	1/2-			86
37AR 87				7.612		87
37AR 88				7.650	1/2+,3/2+,5/2+	88
37AR 89				7.710	3/2:13/2+	89
37AR 90				7.770	3/2:13/2+	90

37AR 91				7.804		91
37AR 92				7.888	3/2:13/2+	92
37AR 93		7.902	1/2-			93
37AR 94				7.976		94
37AR 95				8.045		95
37AR 96				8.101	(7/2-)	96
37AR 97				8.130	7/2:13/2+	97
37AR 98				8.247		98
37AR 99				8.300	7/2:13/2+	99
37AR 100		8.310	7/2-			100

37AR 101				8.421	(7/2-)	101
37AR 102				8.598		102
S-p	=	8.715	(0.000)	-----		
37AR 103				8.721		103
37AR 104				8.776	(1/2)-	104
S-n	=	8.787	(0.000)	-----		
37AR 105		8.791	1/2+			105
37AR 106				8.865		106
37AR 107				8.897	(1/2-)	107
37AR 108				9.024	(1/2-)	108
37AR 109				9.650	1/2+,3/2+,5/2+	109
37AR 110				11.500	1/2+,3/2+,5/2+	110

S-p = 8.715 (0.000)-----
S-n = 8.787 (0.000)-----
S-2p = 16.679 (0.000)-----
S-2n = 24.043 (0.001)-----
S-alpha= 6.787 (0.000)-----

S+p = -5.142 (0.000)
S+n = -11.839 (0.000)
S+2p = -10.913 (0.001)
S+2n = -18.437 (0.005)
S+alpha = -6.615 (0.000)

gap p = 3.573 (0.000)
gap n = -3.051 (0.000)

gap 2p = 5.766 (0.001)
gap 2n = 5.606 (0.005)
gap alpha = 0.172 (0.000)