^{39}Ar $Z = 18$ $N = 21$ link to full NNDC output

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

BE = 333.941 (0.005) MeV
Qbeta- = 0.565 (0.005) MeV

	Energy	T	J+		J-		J-other		T1/2		
39AR	1				0.000	7/2-			1	268 Y	8
39AR	2				1.267	3/2-			2	0.5 NS	LT
39AR	3	1.518		3/2+					3	0.95 NS	5
39AR	4				2.093	5/2-			4	35 FS	LT
39AR	5						2.342	(5/2-,7/2,9/2-)	5	118 FS	35
39AR	6	2.358		1/2+					6	0.42 PS	GT
39AR	7				2.433	3/2-			7	0.69 PS	28
39AR	8				2.481	7/2-			8	0.35 PS	15
39AR	9						2.503	(5/2)+	9	1.0 PS	4
39AR	10						2.524	(5/2-,7/2,9/2-)	10	0.23 PS	9
39AR	11				2.632	3/2-			11	0.7 PS	+10-4
39AR	12				2.651	11/2-			12	0.7 PS	2
39AR	13				2.756	5/2-			13	0.12 PS	5
39AR	14	2.830		1/2+					14	0.69 PS	GT
39AR	15						2.950	(3/2+,5/2)	15	0.30 PS	+28-14
39AR	16						3.062	5/2-,7/2-	16	0.10 PS	4
39AR	17						3.090	(3/2-,5/2)	17		
39AR	18						3.160	5/2-,7/2-	18	1.4 PS	+14-6
39AR	19						3.210		19		
39AR	20				3.266	3/2-			20	48 FS	LT
39AR	21	3.287		1/2+					21	0.25 PS	+28-12
39AR	22	3.361		5/2+					22	0.08 PS	6
39AR	23						3.381	3/2+,5/2+	23		
39AR	24						3.448	(11/2:17/2)+	24		
39AR	25						3.524		25		
39AR	26				3.563	3/2-			26	45 FS	LT
39AR	27						3.625	1/2-,3/2-	27		
39AR	28						3.682		28		
39AR	29						3.740		29		
39AR	30						3.836		30		
39AR	31						3.890	(5/2)+	31		
39AR	32						3.958		32		
39AR	33						3.992	(13/2)+	33	0.8 PS	2
39AR	34						4.040		34		
39AR	35						4.120		35		
39AR	36						4.178	1/2-,3/2-	36		
39AR	37				4.255	7/2-			37		

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 39AR  38 |                |                |   4.332                    38
 39AR  39 |                |                |   4.375     1/2-,3/2-      39
 39AR  40 |                |                |   4.398                    40
----------                                                               ----------
 39AR  41 |                |                |   4.473     3/2+,5/2+      41
 39AR  42 |                |                |   4.504                    42
 39AR  43 |                |                |   4.530     (3/2)+         43
 39AR  44 |                |                |   4.543     (15/2)+        44  1.1 PS    2
 39AR  45 |                |                |   4.572                    45
 39AR  46 |                |                |   4.638                    46
 39AR  47 |                |                |   4.710                    47
 39AR  48 |                |                |   4.816     (3/2)+         48
 39AR  49 |                |                |   4.911     (1/2-,3/2,5/2+ 49)
 39AR  50 |                |                |   4.927     (11/2,13/2)+   50
----------                                                               ----------
 39AR  51 |                |                |   4.991     (11/2:17/2)+   51
 39AR  52 |                |                |   5.005     1/2-,3/2-      52
 39AR  53 |                |                |   5.159     5/2-,7/2-      53
 39AR  54 |                |                |   5.198                    54
 39AR  55 |                |                |   5.245     (11/2,13/2)+   55
 39AR  56 |                |                |   5.320     1/2-,3/2-      56
 39AR  57 |                |                |   5.385                    57
 39AR  58 |  5.422     1/2+|                |                            58
 39AR  59 |                |                |   5.525     5/2-,7/2-      59
 39AR  60 |                |                |   5.536     (17/2)+        60  0.7 PS    LT
----------                                                               ----------
 39AR  61 |                |                |   5.602                    61
 39AR  62 |                |                |   5.670     1/2-,3/2-      62
 39AR  63 |                |                |   5.742                    63
 39AR  64 |                |                |   5.811     (11/2:17/2)+   64
 39AR  65 |                |                |   5.821     1/2-,3/2-      65
 39AR  66 |                |                |   5.926     1/2-,3/2-      66
 39AR  67 |                |                |   5.946                    67
 39AR  68 |                |                |   6.057     5/2-,7/2-      68
 39AR  69 |                |                |   6.120     1/2-,3/2-      69
 39AR  70 |                |                |   6.230     (11/2,13/2)+   70
----------                                                               ----------
 39AR  71 |                |                |   6.278     5/2-,7/2-      71
 39AR  72 |                |                |   6.317                    72
 39AR  73 |                |                |   6.385     5/2-,7/2-      73
 39AR  74 |                |                |   6.490     5/2-,7/2-      74
 39AR  75 |                |                |   6.591                    75
S-n    =   6.599 ( 0.005)-------------------------------------------------------------------------
 39AR  76 |                |                |   6.637                    76
 39AR  77 |                |                |   6.688                    77
 39AR  78 |                |                |   6.759                    78
 39AR  79 |                |                |   6.789     (1/2,5/2)-     79
 39AR  80 |                |                |   6.820                    80
----------                                                               ----------
S-alpha=   6.821 ( 0.005)-------------------------------------------------------------------------
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 39AR  81 |                |                |   6.874                    81
 39AR  82 |                |                |   6.996     (1/2,5/2)-     82
 39AR  83 |                |                |   7.073     (1/2,5/2)-     83
 39AR  84 |                |                |   7.137     (1/2,5/2)-     84
 39AR  85 |                |                |   7.222     (5/2)-         85
 39AR  86 |                |                |   7.288                    86
 39AR  87 |                |                |   7.356     (5/2)-         87
 39AR  88 |                |                |   7.401     (5/2)-         88
 39AR  89 |                |                |   7.465     (5/2)-         89
 39AR  90 |                |                |   7.561     (5/2)-         90
-----------                                                             -----------------
 39AR  91 |                |                |   7.639     (5/2)-         91
 39AR  92 |                |                |   7.729     (5/2)-         92
 39AR  93 |                |                |   7.741                    93
 39AR  94 |                |                |   7.806                    94
 39AR  95 |                |                |   7.925                    95
 39AR  96 |                |                |   8.042                    96
 39AR  97 |                |                |   8.147                    97
 39AR  98 |                |                |   8.174                    98
 39AR  99 |                |                |   8.276                    99
 39AR 100 |                |                |   8.300                   100
-----------                                                             -----------------
 39AR 101 |                |                |   8.395                   101
 39AR 102 |                |                |   8.532                   102
 39AR 103 |                |                |   8.638                   103
 39AR 104 |                |                |   8.820                   104
 39AR 105 |                |                |   8.902                   105
 39AR 106 |                |                |   9.002                   106
 39AR 107 |                |                |   9.075 5/2 3/2+,5/2+     107
 39AR 108 |                |                |   9.239                   108
 39AR 109 |  9.463 5/2 1/2+ |                |                           109
 39AR 110 |                |                |   9.858                   110
-----------                                                             -----------------
 39AR 111 |                |                |  10.455                   111
S-p    =  10.733 ( 0.005)-------------------------------------------------------------------------
 39AR 112 |                |                |  10.755                   112
 39AR 113 |                |                |  10.857                   113
 39AR 114 |                |                |  10.947                   114
 39AR 115 |                |                |  11.148                   115
 39AR 116 | 11.312 5/2 1/2+ |                |                           116


S-p    =  10.733 ( 0.005)-------------------------------------------------------------------------
S-n    =   6.599 ( 0.005)-------------------------------------------------------------------------
S-2p   =  20.924 ( 0.005)-------------------------------------------------------------------------
S-2n   =  18.437 ( 0.005)-------------------------------------------------------------------------
S-alpha=   6.821 ( 0.005)-------------------------------------------------------------------------

S+p       =  -7.582 ( 0.005)
S+n       =  -9.869 ( 0.005)
```

```
S+2p      = -16.474 ( 0.005)
S+2n      = -15.968 ( 0.005)
S+alpha   =  -7.592 ( 0.005)

gap p     =   3.151 ( 0.007)
gap n     =  -3.270 ( 0.007)
gap 2p    =   4.450 ( 0.007)
gap 2n    =   2.469 ( 0.007)
gap alpha =  -0.771 ( 0.007)
```