

^{40}Ar $Z = 18$ $N = 22$ adopted link ENSDF link

Based on ensdf_240402 (Apr 2024), and mass evaluation from 2020

BE = 343.810 (0.000) MeV

		Energy T	J+		J-	J-other	T1/2	

40AR	1	0.000	0+	|			1	STABLE
40AR	2	1.461	2+	|			2	1.15 PS 5
40AR	3	2.121	0+	|			3	104 PS 14
40AR	4	2.524	2+	|			4	0.23 PS 4
40AR	5	2.893	4+	|			5	1.95 PS 28
40AR	6	3.208	2+	|			6	34 FS 7
40AR	7	3.465	6+	|			7	0.680 NS 21
40AR	8	3.512	2+	|			8	59 FS 12
40AR	9	3.515	4+	|			9	0.139 PS 28
40AR	10			|	3.681	3-	10	0.132 PS 28

40AR	11	3.919	2+	|			11	0.29 PS 3
40AR	12			|		3.942	12	
40AR	13			|		4.042 NATURAL	13	
40AR	14			|	4.083	3-	14	40 FS 14
40AR	15			|		4.179	15	
40AR	16			|	4.230	4(-)	16	2.8 PS GT
40AR	17			|		4.232 (1+,2-,3+	17	0.166 PS 28
40AR	18			|	4.301	(3)-	18	58 FS 14
40AR	19	4.325	2+	|			19	16 FS 6
40AR	20			|		4.358	20	

40AR	21			|		4.420 (2+,3-)	21	
40AR	22	4.427	(4+)	|			22	0.125 PS 21
40AR	23			|		4.473 1	23	0.070 EV 13
40AR	24			|	4.481	1-	24	0.07 PS LT
40AR	25			|	4.494	5-	25	0.50 PS 7
40AR	26			|		4.562 (1,3)-	26	
40AR	27			|	4.578	3(-)	27	37 FS 14
40AR	28			|		4.602	28	53 FS 20
40AR	29			|		4.674 (1+,2-,3+	29	66 FS 17
40AR	30			|		4.738	30	

40AR	31			|	4.769	1-	31	0.82 EV 6
40AR	32	4.794	4+	|			32	52 FS 14
40AR	33			|	4.858	5-	33	37 FS 10
40AR	34			|	4.870	3-	34	
40AR	35			|		4.901	35	
40AR	36			|		4.929 (1-:4+)	36	
40AR	37			|		4.943	37	

40AR 38	|	4.959	6+	|		|			38	0.10 PS	4
40AR 39	|			|		|	4.972 (2+,3,4+)		39		
40AR 40	|			|	4.991	4(-)			40	2.1 PS	7

40AR 41	|			|			5.110		41		
40AR 42	|			|	5.115	(5-)			42		
40AR 43	|			|			5.143 (5)		43	10 FS	LT
40AR 44	|	5.166	(2)+	|					44		
40AR 45	|			|			5.191		45		
40AR 46	|			|			5.245 (0+:4+)		46		
40AR 47	|			|			5.270 (1-,3-)		47		
40AR 48	|	5.293	(2+)	|					48		
40AR 49	|	5.310	(2+)	|					49		
40AR 50	|			|			5.350		50		

40AR 51	|			|			5.378 (4+,5,6+)		51		
40AR 52	|			|	5.400	1-			52	0.030 EV	7
40AR 53	|			|			5.454 3-,4+		53		
40AR 54	|			|			5.508 NATURAL		54		
40AR 55	|			|			5.544 (0+:4+)		55		
40AR 56	|			|			5.559 (4+,5-,6+)		56		
40AR 57	|			|			5.609 (1,2,3)		57		
40AR 58	|			|			5.611		58		
40AR 59	|			|			5.630		59		
40AR 60	|			|			5.654		60		

40AR 61	|			|			5.662		61		
40AR 62	|			|			5.675 (3-,4+)		62		
40AR 63	|			|			5.718		63		
40AR 64	|			|			5.766		64		
40AR 65	|			|			5.818 (3-,4+)		65		
40AR 66	|			|	5.880	1-			66	0.117 EV	13
40AR 67	|			|	5.885	3-			67		
40AR 68	|			|	5.906	(1-)			68		
40AR 69	|			|			5.912 1		69	0.050 EV	17
40AR 70	|			|			5.912 (1-:4+)		70		

40AR 71	|			|			5.931 (2+,3,4+)		71		
40AR 72	|			|			5.951 (1,2)		72		
40AR 73	|			|	5.973	(6-)			73		
40AR 74	|			|	6.013	(7-)			74		
40AR 75	|			|	6.054	1(-)			75	0.41 EV	6
40AR 76	|	6.054	4+	|					76		
40AR 77	|			|			6.100 (1,2+)		77		
40AR 78	|			|			6.104		78		
40AR 79	|			|			6.138		79		
40AR 80	|			|			6.158 (4+,5,6+)		80		

40AR 81	|			|			6.185		81		
40AR 82	|			|			6.203		82		

40AR 83	|		|	6.208 (1,2)	83	
40AR 84	|		|	6.270	84	
40AR 85	|		|	6.276 1-,2-,3-	85	
40AR 86	|		|	6.305 (4+,5,6+)	86	
40AR 87	|		|	6.339 1-	87	0.29 EV 3
40AR 88	|		|	6.356 (4+:7-)	88	
40AR 89	|		|	6.421 (8-)	89	
40AR 90	|		|	6.450	90	

40AR 91	|		|	6.476 1-	91	0.43 EV 5
40AR 92	|		|	6.652	92	
40AR 93	|		|	6.703 1	93	
40AR 94	|		|	6.760 3-,4+	94	
S-alpha=	6.801	(0.000)				

40AR 95	|	6.806	(8+)		95	
40AR 96	|			6.835 3-,4+	96	
40AR 97	|			6.979 (8-)	97	
40AR 98	|			7.070	98	
40AR 99	|			7.168 1	99	
40AR 100	|			7.246 1	100	

40AR 101	|			7.281 1	101	
40AR 102	|			7.519 1	102	
40AR 103	|			7.626 1	103	
40AR 104	|	7.640	2+		104	
40AR 105	|			7.688 (9-)	105	
40AR 106	|			7.708 1-	106	
40AR 107	|			7.730	107	
40AR 108	|			7.918 1-	108	
40AR 109	|			7.993 1-	109	
40AR 110	|			7.999 (10-)	110	

40AR 111	|			8.032 1-	111	
40AR 112	|			8.163 1-	112	
40AR 113	|			8.191 1-	113	
40AR 114	|			8.303 1-	114	
40AR 115	|			8.552 1-	115	
40AR 116	|			8.585 1-	116	
40AR 117	|			8.644 1-	117	
40AR 118	|			8.676 1,2+	118	
40AR 119	|			8.834 1-	119	
40AR 120	|			8.884 1-	120	

40AR 121	|			8.918 1-	121	0.34 EV 14
40AR 122	|			8.946 (11-)	122	
40AR 123	|	9.070	(10+)		123	
40AR 124	|			9.127 1-	124	0.71 EV 14
40AR 125	|			9.138 (1-,2+)	125	
40AR 126	|			9.147 1-	126	
40AR 127	|			9.178 1-	127	

40AR 128	|		|	9.197 (1-,2+)	128	
40AR 129	|		|	9.216 1-	129	
40AR 130	|		|	9.234 1-	130	

40AR 131	|		|	9.240 1-	131	
40AR 132	|		|	9.264 (1-,2+)	132	
40AR 133	|		|	9.273 1-	133	
40AR 134	|		|	9.287	134	
40AR 135	|		|	9.296 (1-,2+)	135	
40AR 136	|		|	9.314 1-	136	
40AR 137	|		|	9.330 1-	137	
40AR 138	|		|	9.337 1-	138	
40AR 139	|		|	9.355 1-	139	1.0 EV 3
40AR 140	|		|	9.373	140	

40AR 141	|		|	9.416 1-	141	3.4 EV 18
40AR 142	|		|	9.425 (1-,2+)	142	
40AR 143	|		|	9.433 (1-,2+)	143	
40AR 144	|		|	9.450 1-	144	
40AR 145	|		|	9.472 (1-,2+)	145	
40AR 146	|		|	9.485 1-	146	
40AR 147	|		|	9.491	147	
40AR 148	|		|	9.504 1-	148	7.9 EV 13
40AR 149	|		|	9.527	149	
40AR 150	|		|	9.565 1-	150	

40AR 151	|		|	9.583 1-	151	7.3 EV 21
40AR 152	|		|	9.596	152	
40AR 153	|		|	9.608	153	
40AR 154	|		|	9.617 1-	154	
40AR 155	|		|	9.656 1-	155	
40AR 156	|		|	9.669 1-	156	
40AR 157	|		|	9.690 (1-,2+)	157	
40AR 158	|		|	9.736 1-	158	
40AR 159	|	9.757	|	1+	159	0.56 EV 22
40AR 160	|		|	9.769 (1-,2+)	160	

40AR 161	|		|	9.787 1-	161	
40AR 162	|		|	9.813 1-	162	
40AR 163	|		|	9.825 1-	163	
40AR 164	|		|	9.840 1-	164	
40AR 165	|		|	9.851 1-	165	21 EV 4
40AR 166	|		|	9.866	166	

S-n	=	9.869 (0.005)				
40AR 167	|		|	9.881 1-	167	
40AR 168	|		|	9.893 1-	168	
40AR 169	|		|	9.912 (1-,2+)	169	
40AR 170	|		|	9.944 1-	170	

40AR 171	|		|	9.952 1-	171	10 EV 3

40AR 172	|		|	10.090	1-	|		172
40AR 173	|		|	10.151	1-	|		173
40AR 174	|		|	10.179	1-	|		174
40AR 175	|		|			|	10.362 1,2+	175
40AR 176	|		|	10.745	1-	|		176
40AR 177	|		|	10.857	1-	|		177
40AR 178	|	11.769	|		(12+)	|		178
S-p	=	12.529	(	0.002)		-----		
S-2n	=	16.468	(	0.000)		-----		
40AR 179	|	17.700	|		2+	|		179
S-p	=	12.529	(	0.002)		-----		
S-n	=	9.869	(	0.005)		-----		
S-2p	=	22.757	(	0.007)		-----		
S-2n	=	16.468	(	0.000)		-----		
S-alpha	=	6.801	(	0.000)		-----		
S+p	=	-7.809	(	0.000)				
S+n	=	-6.099	(	0.000)				
S+2p	=	-18.085	(	0.000)				
S+2n	=	-15.525	(	0.006)				
S+alpha	=	-8.854	(	0.000)				
gap p	=	4.720	(	0.002)				
gap n	=	3.770	(	0.005)				
gap 2p	=	4.671	(	0.007)				
gap 2n	=	0.942	(	0.006)				
gap alpha	=	-2.053	(	0.000)				