

**List of the absorption lines of argon, Ar I.  $[3p^6 \ ^1S \rightarrow nd[3/2]_1^{\circ}, nd[1/2]_1^{\circ}, ns[3/2]_1^{\circ}, nd'[3/2]_1^{\circ}, ns'[1/2]_1^{\circ}]$**

Wavelength Å	Wavenumber cm <sup>-1</sup>	n*	$nd[3/2]_1^{\circ}$	$nd[1/2]_1^{\circ}$	$ns[3/2]_1^{\circ}$	$nd'[3/2]_1^{\circ}$	$ns'[1/2]_1^{\circ}$
894.310	111818.0	2.6788		3			
879.948	113643.1	2.8546			5		
876.058	114147.6	2.9096	3				
869.754	114975.0	2.8440					5
866.801	115366.7	2.8860				3	
842.806	118651.3	3.6018		4			
835.001	119760.3	3.8640			6		
834.390	119848.0	3.8873	4				
826.364	121012.0	3.8175				4	
825.345	121161.5	3.8560					6
820.123	121932.9	4.6040		5			
816.463	122479.5	4.8682			7		
816.231	122514.4	4.8866	5				
809.928	123467.7	5.4890		6			
807.655	123815.3	4.8184				5	
807.219	123882.1	4.8528					7
806.869	123935.8	5.8798			8		
806.470	123997.1	5.9374	6				
802.859	124554.8	6.5534		7			
801.394	124782.6	6.8667			9		
801.357	124788.3	6.8751	7				
799.132	125135.8	7.4557		8			
798.173	125286.2	5.8058				6	
797.882	125331.8	7.8559			10		
797.747	125353.1	5.8663					8
797.595	125376.9	7.9575	8				
796.095	125613.1	8.5623		9			
795.447	125715.4	8.8708			11		
795.430	125718.1	8.8794	9				
794.291	125898.5	9.518		10			
793.781	125979.4	9.852	10				
793.750	125984.3	9.874			12		
793.025	126099.4	10.421		11			
792.632	126161.9	6.7904				7	
792.513	126180.9	10.868			13		
792.367	126204.1	11.007	11				
792.320	126211.6	6.8624					9
791.811	126292.7	11.59		12			
791.566	126331.8	11.88			14		
791.551	126334.2	11.89	12				
791.059	126412.9	12.55		13			

Wavelength Å	Wavenumber cm <sup>-1</sup>	n*	$nd[3/2]_1^{\circ}$	$nd[1/2]_1^{\circ}$	$ns[3/2]_1^{\circ}$	$nd'[3/2]_1^{\circ}$	$ns'[1/2]_1^{\circ}$
790.840	126447.9	12.88			15		
790.840	126447.9	12.87	13				
790.451	126510.1	13.53		14			
790.270	126539.0	13.86	14				
790.266	126539.6	13.87			16		
789.962	126588.3	14.50		15			
789.813	126612.3	14.85	15				
789.803	126613.9	14.87			17		
789.568	126651.5	15.47		16			
789.440	126670.2	15.83	16				
789.425	126674.4	15.87			18		
789.257	126701.4	16.39		17			
789.140	126720.2	16.78	17				
789.113	126724.5	16.87			19		
789.031	126737.7	7.7991				8	
788.902	126758.5	7.8444					10
788.863	126764.7	17.83		18			
788.841	126768.3	17.92			20		
788.827	126770.5	17.98	18				
788.686	126793.2	18.61		19			
788.629	126802.3	18.89			21		
788.623	126803.2	18.92	19				
788.496	126823.8	19.58		20			
788.440	126832.8	19.90			22		
788.440	126832.8	19.90	20				
788.329	126850.6	20.57		21			
788.280	126858.5	20.89	21				
788.185	126873.8	21.56		22			
788.141	126880.8	21.89	22				
788.059	126894.0	22.54		23			
788.020	126900.4	22.89	23				
787.948	126911.9	23.54		24			
787.913	126917.5	23.88	24				
787.850	126927.7	24.54		25			
787.819	126932.7	24.89	25				
787.763	126941.7	25.54		26			
787.736	126946.1	25.88	26				
787.688	126953.9	26.52		27			
787.661	126958.1	26.89	27				
787.619	126965.0	27.52		28			
787.595	126968.8	27.89	28				
787.557	126975.0	28.52		29			
787.535	126978.5	28.90	29				
787.500	126984.0	29.52		30			

Wavelength Å	Wavenumber cm <sup>-1</sup>	n*	$nd[3/2]_1^{\circ}$	$nd[1/2]_1^{\circ}$	$ns[3/2]_1^{\circ}$	$nd'[3/2]_1^{\circ}$	$ns'[1/2]_1^{\circ}$
787.482	126987.0	29.88	30				
787.450	126992.2	30.53		31			
787.434	126994.8	30.88	31				
787.403	126999.7	31.56		32			
787.389	127002.0	31.89	32				
787.361	127006.5	32.58		33			
787.349	127008.4	32.88	33				
787.322	127012.7	33.6		34			
787.312	127014.4	33.9	34				
787.280	127019.7	34.9	35				
787.249	127024.7	35.9	36				
787.220	127029.3	36.9	37				
787.194	127033.5	37.9	38				
787.170	127037.3	38.9	39				
787.148	127041.0	39.9	40				
787.129	127044.2	40.9	41				
787.108	127047.7	41.9	42				
787.090	127050.3	42.9	43				
787.074	127052.8	43.8	44				
787.058	127055.5	44.9	45				
787.044	127057.7	45.9	46				
787.030	127059.9	46.9	47				
787.017	127062.0	47.9	48				
787.006	127063.9	48.8	49				
786.994	127065.7	49.8	50				
786.984	127067.4	50.8	51				
786.973	127069.2	51.9	52				
786.964	127070.6	52.8	53				
786.955	127072.0	53.8	54				
786.947	127073.4	54.8	55				
786.938	127074.9	56.0	56				
786.929	127076.2	57.1	57				
786.923	127077.3	58.0	58				
786.59	127131.	8.821				9	
786.506	127144.6	8.8623					11
784.90	127404.	9.822				10	
784.845	127413.7	9.863					12
783.67	127605.	10.82				11	
783.627	127611.8	10.863					13
782.74	127756.	11.82				12	
782.705	127762.0	11.86					14
782.02	127874.	12.82				13	
781.992	127878.5	12.86					15
781.45	127967.	13.82				14	

Wavelength Å	Wavenumber cm <sup>-1</sup>	n*	$nd[3/2]_1^{\circ}$	$nd[1/2]_1^{\circ}$	$ns[3/2]_1^{\circ}$	$nd'[3/2]_1^{\circ}$	$ns'[1/2]_1^{\circ}$
781.427	127971.0	13.87					16
780.99	128042.	14.82				15	
780.975	128045.0	14.86					17
780.62	128103.	15.82				16	
780.606	128105.6	15.86					18
780.31	128154.	16.8				17	
780.300	128155.8	16.86					19
780.05	128196.	17.8				18	
780.044	128197.9	17.86					20
779.84	128232.	18.8				19	
779.828	128233.4	18.86					21
779.65	128262.	19.8				20	
779.645	128263.5	19.86					22
779.49	128289.	20.8				21	
779.486	128289.6	20.86					23
779.350	128312.1	21.86					24
779.230	128331.8	22.86					25
779.126	128349.0	23.86					26
779.034	128364.1	24.85					27
778.952	128377.6	25.85					28
778.879	128389.6	26.85					29
778.814	128400.4	27.86					30
778.756	128410.0	28.86					31
778.703	128418.7	29.86					32
778.655	128426.5	30.85					33
778.612	128433.7	31.86					34
778.572	128440.3	32.88					35
778.537	128446.1	33.9					36
778.504	128451.5	34.9					37
778.474	128456.5	35.9					38
778.447	128461.0	36.9					39
778.420	128465.4	37.9					40
778.396	128469.3	38.9					41
778.379	128472.7	39.9					42
778.354	128476.2	40.9					43
778.335	128479.4	41.9					44
778.319	128482.0	42.8					45
778.302	128484.8	43.9					46
778.286	128487.5	44.9					47
778.273	128489.6	45.9					48
778.260	128491.8	46.9					49
778.247	128493.9	47.9					50
778.237	128495.5	48.7					51
778.224	128497.7	49.9					52

References:

*Absorption Spectrum of the Argon Atom*, K. Yoshino, J. Opt. Soc. Am. **60**, 1220-1229 (1970).