

**List of the observed wavenumber of absorption bands of N<sub>2</sub>.**

A: Wavelength region of 80.720nm - 83.912nm

Wavenumber	$b'(34) - X(0)$	$c'_9(0) - X(0)$
123883.97	R(0)R(1)	
123881.45	R(2)	
123878.44	P(1)	
123877.19	R(3)	
123872.10	P(2)	
123870.22	R(4)	
123863.93	P(3)	
123861.61	R(5)	
123853.53	P(4)	
123850.73	R(6)	
123841.16	P(5)	
123837.89		
123837.32	R(7)	
123833.13		
123831.23		
123830.28		
123827.42		
123826.64	P(6)	
123822.85		
123822.28	R(8)	
123816.29		
123810.49		
123805.06		
123803.64		
123795.17		
123791.65		
123785.28		
123769.98		
123768.45		
123763.32		
123758.95		
123753.63		
123752.11		
123748.95		
123747.35		
123743.27		
123738.42		
123735.57		
123732.25		R(12)
123726.83		R(11)
123721.11		R(10)
123715.27		R(9)
123709.33		R(8)
123703.45		R(7)
123697.51		R(6)

Wavenumber	$c'_9(0) - X(0)$	$c_8(0) - X(0)$	$b'(33) - X(0)$	7f
123693.97				
123691.62	R(5)			
123685.79	R(4)			
123681.82				
123680.09	R(3)			
123674.54	R(2)			
123669.27	R(1)			
123664.25	R(0)			
123655.89	P(1)			
123652.52	P(2)			
123649.49	P(3)			
123646.83	P(4)			
123644.46	P(5)			
123642.18	P(6)			
123640.00	P(7)			
123638.01	P(8)			
123635.92	P(9)			
123633.88	P(10)			
123631.80	P(11)			
123629.56	P(12)			
123624.70				
123622.61				
123623.55		R(2)		
123621.43		R(1)		
123619.54				
123618.49		R(0)		
123614.10		Q(1)		
123612.94				
123610.72		Q(9)		
123609.81				
123608.06		Q(10)P(2)		
123606.64		Q(11)		
123604.93		Q(12)		
123603.16		Q(13)		
123601.40		Q(14)P(3)		
123599.50		Q(15)		
123597.18		Q(16)		
123595.15		Q(17)P(4)		
123592.54		Q(18)		
123589.79		Q(19)P(5)		
123587.18		Q(20)		
123584.15		Q(21)		
123581.40		Q(22)P(6)		
123578.15				
123577.50			R(1)R(0)	
123574.62			R(2)	
123572.00		P(7)	P(1)	
123570.29				x
123575.12				

Wavenumber	$b'(33) - X(0)$	7f
123570.29		x
123569.69	R(3)	
123566.40		x
123565.86	P(2)	
123563.18		x
123562.56	R(4)	
123560.06		x
123558.35		x
123557.40	P(3)	
123553.80		x
123553.21	R(5)	
123550.11		x
123547.36		x
123546.67	P(4)	
123542.37		x
123541.87	R(6)	
123534.58		x
123533.80	P(5)	
123527.66		x
123526.88	R(7)	
123519.22		x
123518.65	P(6)	
123517.63		x
123511.36		x
123510.98	R(8)	
123505.70		x
123502.01		x
123501.56	P(7)	
123500.02		x
123495.57		x
123493.37		x
123492.99	R(9)	
123489.90		x
123487.53		x
123484.31		x
123482.59		x
123482.26	P(8)	
123481.38		x
123474.85		x
123471.64		x
123468.23		x
123466.43		x
123461.14		x
123459.81		x
123459.32	P(9)	
123453.95		x
123453.48		x
123448.56		x
123446.48		x

Wavenumber	7f	$b'(32) - X(0)$
123437.59	x	
123436.36	x	
123431.45	x	
123426.72	x	
123423.41	x	
123422.65	x	
123413.96	x	
123411.78	x	
123410.08	x	
123404.89	x	
123404.41	x	
123396.95	x	
123395.72	x	
123389.01	x	
123387.79	x	
123379.28	x	
123373.05	x	
123370.59	x	
123362.10	x	
123357.94	x	
123353.31	x	
123349.16	x	
123344.53	x	
123339.81	x	
123329.53	x	
123326.98	x	
123326.41	x	
123323.30	x	
123318.67	x	
123315.09	x	
123311.22	x	
123306.50	x	
123302.82	x	
123301.03	x	
123296.41	x	
123294.24	x	
123287.64	x	
123283.49	x	
123280.28	x	
123274.91	x	
123269.06	x	
123265.57	x	
123258.97	x	
123255.58	x	
123248.04	x	
123236.92	x	
123234.85		R1)R(0)
123231.36		R(2)
123228.59		P(1)

Wavenumber	$b'(32) - X(0)$
123225.34	R(3)
123222.50	P(2)
123218.92	R(4)
123213.71	P(3)
123209.41	R(5)
123203.29	P(4)
123202.03	
123197.73	R(6)
123190.63	P(5)
123182.19	R(7)
123177.31	
123175.04	P(6)
123170.90	
123166.75	R(8)
123165.41	
123162.43	
123157.91	P(7)
123153.31	R(9)
123150.85	
123148.78	
123146.05	
123143.38	
123140.37	
123138.02	P(8)
123132.85	
123130.17	
123128.66	
123126.64	
123123.57	
123121.50	
123118.17	
123115.48	
123112.86	
123109.43	
123105.70	
123099.34	
123096.58	
123094.91	
123092.82	
123090.40	
123087.96	
123085.32	
123082.31	
123080.44	
123077.04	
123076.19	
123072.15	
123070.82	
123068.82	

Wavenumber	$c'_8(0) - X(0)$
123064.50	
123060.50	
123057.07	
123055.71	
123050.74	
123049.17	
123041.38	
123039.60	
123037.52	
123033.57	
123025.75	
123023.20	
123017.44	
123012.05	R(10)
123010.36	R(9)
123009.14	
123008.58	R(8)
123004.16	R(7)
123000.43	R(6)
122996.84	
122995.53	R(5)
122991.96	
122989.71	R(4)
122986.14	
122983.48	R(3)
122979.78	R(2)
122974.23	R(1)
122971.04	R(0)
122965.22	
122961.66	
122957.25	P(2)
122953.87	P(3)
122951.15	P(4)
122948.24	P(5)
122945.62	P(6)
122942.62	P(7)
122939.58	P(8)
122936.07	P(9)
122931.80	P(10)
122926.97	P(11)
122920.55	P(12)
122917.18	
122912.67	P(13)
122905.05	
122902.98	
122901.67	
122897.17	
122893.89	

Wavenumber	6f-complex
122892.21	
122890.80	
122886.58	
122884.43	
122880.50	
122874.97	
122869.91	
122858.20	
122844.81	
122837.22	
122829.63	
122825.24	
122820.37	
122816.25	
122804.37	
122802.09	
122799.56	
122796.38	
122792.83	
122789.08	
122784.82	
122782.76	
122780.48	
122778.61	
122777.49	
122773.84	
122770.17	
122766.66	
122761.68	
122759.63	
122757.03	
122755.61	
122753.55	
122750.00	
122748.03	
122744.74	
122737.10	
122735.25	
122730.96	
122722.71	
122708.69	
122704.28	
122691.70	
122668.17	x
122664.90	x
122660.04	x
122655.10	x
122651.27	x
122648.94	x

Wavenumber	6f-complex
122643.99	x
122639.98	x
122636.37	x
122630.26	x
122623.22	x
122616.59	x
122609.79	x
122608.36	x
122606.68	x
122602.76	x
122599.81	x
122597.82	x
122595.49	x
122593.90	x
122591.95	x
122589.80	
122587.66	x
122584.11	x
122580.29	x
122578.24	x
122573.38	x
122565.38	x
122564.51	x
122559.79	x
122557.58	x
122556.43	x
122549.91	x
122548.83	x
122546.74	x
122540.81	x
122539.66	x
122532.43	x
122529.98	x
122523.81	x
122521.60	x
122515.02	x
122512.66	x
122506.51	x
122505.83	x
122503.63	x
122497.29	x
122494.69	x
122488.03	x
122484.54	x
122478.63	x
122474.49	x
122469.18	x
122464.63	x



Wavenumber	6f-complex	$o_4(0) - X(0)$	$c'_6(1) - X(0)$
122459.79	x		
122455.14	x		
122449.79	x		
122439.98	x		
122430.12	x		
122202.10	x		
122183.39	x		
122169.09		R(5)-R(8)	
122168.45		R(4)R(9)	
122164.46		R(2)	
122161.96		R(1)	
122158.80		R(0)	
122153.82		Q(2)Q(1)	
122152.52		Q(3)	
122150.02		Q(4)	
122147.43		Q(5)P(2)	
122144.38		Q(6)	
122140.77		Q(7)	
122136.51		Q(8)P(4)	
122131.79		Q(9)	
122131.61		P(5)	
122126.52		Q(10)	
122124.30		P(6)	
122120.96		Q(11)	
122117.08		P(7)	
122114.77		Q(12)	
122109.77		P(8)	
122108.29		Q(13)	
122101.63		P(9)	
122101.03		Q(14)	
122093.68		P(10)	
122093.35		Q(15)	
122084.89		Q(16)P(11)	
122076.25		Q(17)P(12)	
122066.92		Q(18)P(13)	
122059.20		P(14)	
122055.51		Q(19)	P(12)
122051.35			P(15)
122047.28		Q(20)	P(13)
122044.33			P(16)
122041.93			P(14)
122037.79			P(17)
122036.63		Q(21)	
122033.87		P(15)	
122031.83			P(18)
122024.20		Q(22)P(16)	
122017.59			
122013.37		Q(23)P(17)	
122001.42		Q(24)P(18)	

Wavenumber	$o_4(0) - X(0)$	$c_5(1) - X(0)$	$c_7'(0) - X(0)$
121988.63	Q(25)P(19)		
121975.39	Q(26)P(20)		
121969.05			
121965.45			
121962.50	Q(27)P(21)		
121961.81			
121958.90			
121951.34			
121948.39			
121946.20			
121943.60		R(8)	
121942.21			
121941.63		R(7)	
121940.28		R(6)	
121938.43		R(5)	
121936.22		R(4)	
121933.46		R(3)	
121931.43			
121930.90		R(2)	
121928.11		R(1)	
121924.88		R(0)	
121922.03			R(12)
121919.67		Q-head	
121919.12		Q(3)	
121918.56			R(11)
121916.34		Q(4)	
121914.67			R(10)
121913.48			
121912.95		P(2)	
121910.25			R(9)
121905.97			R(8)
121903.04			
121901.64			R(7)
121897.03			R(6)
121892.42			R(5)
121887.91			R(4)
121883.44			R(3)
121879.06			R(2)
121874.74			R(1)
121870.59			R(0)
121862.44			P(1)
121858.67			P(2)
121854.89			P(3)
121851.18			P(4)
121847.65			P(5)
121844.13			P(6)
121840.69			P(7)
121837.28			P(8)
121833.88			P(9)

Wavenumber	$c_7'(0) - X(0)$	$c_6(0) - X(0)$
121830.31	P(10)	
121826.85	P(11)	
121822.95	P(12)	
121819.14	P(13)	
121814.95	P(14)	
121810.03	P(15)	
121808.12		
121804.51	P(16)	
121797.66	P(17)	
121788.87		
121787.34		R(6)
121784.30		R(4)
121782.64		R(3)
121780.07		R(2)
121777.28		R(1)
121774.49		R(0)
121769.51		Q(2)Q(1)
121768.02		Q(3)
121765.81		Q(4)
121763.05		Q(5)
121760.11		Q(6)
121754.45		Q(9)
121752.34		P(4)
121750.03		Q(10)
121747.23		P(5)
121745.21		Q(11)
121742.13		Q(12)
121740.76		P(6)
121736.34		Q(13)
121734.46		P(7)
121729.95		Q(14)
121727.79		P(8)
121723.28		Q(15)
121720.76		P(9)
121713.42		P(10)
121705.70		P(11)
121704.18		
121697.89		P(12)
121689.77		P(13)
121681.37		P(14)
121672.96		P(15)
121664.06		P(16)
121655.07		P(17)
121645.62		P(18)
121636.08		P(19)
121626.82		P(20)

Wavenumber	$b'(28) - X(0)$	5f-complex
121454.02	R(1)R(0)	
121451.73	R(2)	
121447.62	R(3)	
121445.15		
121441.53	R(4)P(2)	
121433.41	R(5)P(3)	
121423.26	R(6)P(4)	
121411.97		
121411.08	R(7)P(5)	
121397.01	R(8)P(6)	
121381.46	P(7)	
121379.92	R(9)	
121365.21		
121361.33	R(10)	
121356.08		
121351.06		
121345.92		
121343.30	P(9)	
121340.64	R(11)	
121335.16		x
121333.26		x
121329.76		x
121329.41		x
121327.24		x
121324.23		x
121323.26		x
121321.03		x
121318.55		x
121317.73		x
121312.46		x
121310.79		x
121306.67		x
121304.34		x
121300.68		x
121297.83		x
121296.77		x
121294.55		x
121293.31		x
121291.11		x
121288.25		x
121284.32		x
121281.87		x
121277.40		x
121275.33		x
121270.41		x

Wavenumber	5f-complex
121269.13	x
121265.22	x
121262.93	x
121253.95	x
121253.15	x
121252.17	x
121250.93	x
121249.50	x
121248.77	x
121247.85	x
121246.48	x
121246.09	x
121244.17	x
121242.82	x
121241.79	x
121240.01	x
121238.30	x
121237.34	x
121235.07	x
121234.71	x
121232.32	x
121230.93	x
121225.16	x
121223.87	x
121218.56	x
121215.47	x
121212.50	x
121210.68	x
121210.30	x
121207.00	x
121206.83	x
121201.19	x
121199.20	x
121197.65	x
121196.05	x
121191.16	x
121187.09	x
121184.11	x
121183.46	x
121182.85	x
121180.69	x
121178.91	x
121174.27	x
121168.69	x
121165.85	x
121160.85	x
121157.31	x
121148.67	x

Wavenumber	5f-complex	$A^+3d\sigma(0)$	$\nu(27) - X(0)$
121147.03	x		
121142.71	x		
121140.04	x		
121135.85	x		
121133.60	x		
121129.93		R(3)-R(6)	
121128.40		R(2)R(7)	
121126.25		R(1)R(8)	
121123.78		R(0)	
121120.84			
121119.02		Q(1)	
121117.74		Q(2)	
121115.47		Q(3)	
121112.72		Q(4)	
121112.06		P(2)	
121109.81		Q(5)	
121106.36		Q(6)P(3)	
121102.31		Q(7)	
121100.58		P(4)	
121097.63		Q(8)	
121095.52			
121093.99		P(5)	
121091.00			
121086.58		P(6)	
121082.76			
121078.36		P(7)	
121077.76			
121071.82			
121069.77		P(8)	
121066.80			
121062.71			
121059.99		P(9)	
121059.08			
121055.57			
121050.17		P(10)	
121045.34			
121042.89			
121040.09		P(11)	
121037.18			R(1)R(0)
121035.59			R(2)
121031.18			R(3)
121029.97			P(1)
121025.34			R(4)P(2)
121019.48			
121017.94			R(5)P(3)
121016.03			
121014.17			
121010.45			
121007.59			R(6)P(4)

Wavenumber	$b'(27) - X(0)$
121004.82	
121000.29	
120998.15	
120995.57	P(5)
120991.12	
120990.08	
120986.72	
120984.86	
120981.41	P(6)
120977.29	
120971.74	
120969.29	
120966.67	P(7)
120963.60	
120962.51	
120960.10	
120957.34	
120954.88	
120950.89	
120947.91	P(8)
120945.73	
120940.01	
120937.16	
120933.22	
120932.23	
120930.95	
120928.86	
120927.60	
120925.34	
120923.07	
120920.76	
120918.04	
120915.54	
120914.82	
120912.46	
120910.74	
120909.56	
120906.30	
120901.64	
120899.69	
120897.06	
120893.81	
120889.73	
120888.46	
120885.25	
120880.99	
120879.09	
120876.24	

Wavenumber	$c'_4(8) - X(0)$
120875.11	
120872.43	
120868.68	
120867.81	
120865.10	
120861.84	
120857.49	
120854.29	
120851.16	
120849.76	
120846.36	
120844.64	
120841.38	
120838.08	
120836.68	
120832.84	
120829.53	
120824.24	
120819.99	
120818.40	
120815.33	
120811.57	
120806.28	
120802.12	
120796.61	
120795.70	
120792.40	
120787.34	
120782.69	
120777.44	
120772.83	
120767.45	
120762.53	
120761.22	
120757.29	
120752.32	
120748.16	
120745.91	
120741.47	
120727.88	
120723.05	
120695.04	R(6)
120694.79	R(3)
120694.14	R(7)
120693.57	R(2)
120692.24	R(8)
120691.50	R(1)
120689.46	R(9)
120688.99	R(0)



Wavenumber	$c'_4(8) - X(0)$	$b'(26) - X(0)$
120687.20	R(10)	
120683.78		
120682.07		
120681.72	P(1)	
120679.90		
120677.32	P(2)	
120674.94		
120671.78		
120665.82	P(4)	
120659.09	P(5)	
120656.84		
120651.65	P(6)	
120643.58	P(7)	
120635.33	P(8)	
120626.04	P(9)	
120620.19		
120618.66		
120616.44	P(10)	
120606.48	P(11)	
120595.84	P(12)	
120586.31		R(1)R(0)
120585.89		R(2)
120582.46		R(3)
120580.54		P(1)
120577.19		R(4)
120574.54		P(2)
120572.44		
120570.21		R(5)
120566.94		P(3)
120564.96		
120561.29		R(6)
120557.69		P(4)
120550.44		R(7)
120546.57		P(5)
120537.75		R(8)
120533.43		P(6)
120523.03		R(9)
120518.53		P(7)
120506.61		R(10)
120501.61		P(8)
120488.25		R(11)
120482.86		P(9)
120468.02		R(12)
120462.22		P(10)
120445.99		R(13)
120439.65		P(11)
120422.40		R(14)
120415.17		P(12)

Wavenumber	$b'(26) - X(0)$	$c'_5(2) - X(0)$	$c'_6(0) - X(0)$
120397.11	R(15)		
120388.98	P(13)		
120370.13	R(16)		
120360.79	P(14)		
120341.76	R(17)		
120330.87	P(15)		
120312.25	R(18)		
120299.26	P(16)		
120281.50	R(19)		
120265.82	P(17)		
120248.98	R(20)		
120231.15	P(18)		
120194.18		R(2)-R(0)	
120191.31		R(3)	
120190.74		P(1)	
120187.10		R(4)	
120182.23		P(2)	
120181.33		R(5)	
120174.97		P(3)	
120173.76		R(6)	
120166.02		P(4)	
120165.08		R(7)	
120157.06	P(20)		
120155.32		P(5)	
120154.43		R(8)	
120143.10		P(6)R(9)	
120129.14		P(7)R(10)	
120114.07		P(8)	
120098.36			
120097.21		P(9)	
120078.79		P(10)	
120058.93		P(11)	
120054.02			
120052.41			
120038.20		P(12)	
120030.07			
120018.64			
120006.05			
119998.27			R(14)
119994.88			R(13)
119991.35			R(12)
119987.60			R(11)
119983.85			R(10)
119980.02			R(9)
119976.12			R(8)
119972.31			R(7)
119968.32			R(6)
119964.46			R(5)

Wavenumber	$c'_6(0) - X(0)$	$b'(25) - X(0)$
119960.41	R(4)	
119956.34	R(3)	
119952.41	R(2)	
119948.57	R(1)	
119944.55	R(0)	
119936.62	P(1)	
119932.64	P(2)	
119928.63	P(3)	
119924.72	P(4)	
119920.66	P(5)	
119916.71	P(6)	
119912.76	P(7)	
119908.72	P(8)	
119904.70	P(9)	
119900.69	P(10)	
119896.56	P(11)	
119892.38	P(12)	
119888.25	P(13)	
119885.38		
119884.03	P(14)	
119882.62		
119879.79	P(15)	
119877.99		
119875.16	P(16)	
119873.91		
119868.88		
119866.83	P(18)	
119863.93		
119858.68		
119853.10		
119848.97		
119847.01		
119844.05		
119840.65		
119839.62		
119836.33		R(2)-R(0)
119833.57		R(3)
119830.60		P(1)
119828.89		R(4)
119826.45		
119825.07		P(2)
119822.84		R(5)
119818.44		
119817.77		P(3)
119815.01		R(6)
119810.29		
119808.38		P(4)
119805.71		R(7)
119800.99		

Wavenumber	$b'(25) - X(0)$	$c5(0) - X(0)$
119797.57	P(5)	
119794.81	R(8)	
119791.27		
119785.16	P(6)	
119782.73		
119780.59		
119771.19	P(7)	
119768.49		
119762.90		R(8)
119761.48		R(7)
119759.70		R(6)
119757.64		R(5)
119755.21		R(4)
119752.54		R(3)
119749.43		R(2)
119746.41		R(1)
119742.88		R(0)
119734.45		Q(5)
119733.38		Q(6)
119731.82		Q(7)
119730.89		P(2)
119729.06		Q(8)
119726.98		Q(9)P(3)
119725.33		Q(10)
119723.27		Q(11)
119721.43		Q(12)P(4)
119719.03		Q(13)
119716.66		Q(14)P(5)
119714.09		Q(15)
119711.36		Q(16)P(6)
119708.64		Q(17)
119705.74		Q(18)P(7)
119702.76		Q(19)
119699.73		P(8)
119696.32		Q(20)
119693.72		P(9)
119689.70	R(14)	
119687.26		P(10)
119679.89		P(11)
119669.15		P(12)P(13)
119665.66	R(15)	
119661.10		P(14)
119653.35		P(15)
119649.44	P(13)	
119645.51		P(16)
119639.60	R(16)	
119637.51		P(17)
119629.08		P(18)
119624.07	P(14)	

Wavenumber	$b'(25) - X(0)$	$c5(0) - X(0)$	$b'(24) - X(0)$
119620.65		P(19)	
119611.83	R(17)	P(20)	
119603.35		P(21)	
119597.83			
119596.36	P(15)		
119594.05		P(22)	
119584.24		P(23)	
119581.20	R(18)		
119574.67		P(24)	
119566.53	P(16)		
119548.68	R(19)		
119534.64	P(17)		
119513.56	R(20)		
119500.77	P(18)		
119476.71	R(21)		
119464.68	P(19)		
119437.17	R(22)		
119431.40			R(1)R(0)
119430.12			R(2)
119426.53			R(3)
119425.32			P(1)
119421.27			R(4)
119419.55			P(2)
119414.07			R(5)
119411.86			P(3)
119404.90			R(6)
119402.28			P(4)
119393.92			R(7)
119390.88			P(5)
119380.96			R(8)
119377.51			P(6)
119366.09			R(9)
119362.44			P(7)
119349.22			R(10)
119345.28			P(8)
119330.45			R(11)
119326.30			P(9)
119309.68			R(12)
119305.41			P(10)
119287.21			R(13)
119282.58			P(11)
119262.12			R(14)
119257.72			P(12)
119235.33			R(15)
119231.10			P(13)
119206.83			R(16)
119202.30			P(14)
119175.88			R(17)
119171.98			P(15)