

List of the observed wavelength of the Schumann-Runge absorption bands of  $^{18}\text{O}_2$ .

B: Wavelength region of 179.785nm - 197.869nm

Wavenumber	B(12)-X(0)	B(13)-X(0)	B(14)-X(0)	B(12)-X(0) $^{16}\text{O}^{18}\text{O}$
55622.09		R <sub>3</sub> (19)		P <sub>2</sub> (8)
55621.40		R <sub>2</sub> (19)		P <sub>1</sub> (8)
55619.63		R <sub>1</sub> (19)		
55618.62			P <sub>2</sub> (25)	
55615.81			P <sub>1</sub> (25)	
55611.87				
55610.77				
55606.87				P <sub>3</sub> (9)
55606.33				P <sub>2</sub> (9)
55605.66				P <sub>1</sub> (9)
55600.66				
55599.58				
55594.49				
55593.01				
55591.12				
55589.21				
55588.82				
55586.87				
55586.09				
55585.40				
55576.18				
55588.83				
55586.87	R <sub>2</sub> (1)			
55586.05	R <sub>1</sub> (1)			
55585.39				
55584.65				
55584.33				
55583.64				
55582.69	P <sub>1</sub> (1)			
55581.76				
55581.46	R(3)			
55580.66	R <sub>1</sub> (3)			
55579.66			R <sub>3</sub> (27)	
55577.30			R <sub>2</sub> (27)	
55576.17				
55574.61	P <sub>3</sub> (3)			
55574.06	P <sub>2</sub> (3)		R <sub>1</sub> (27)	
55573.36	P <sub>1</sub> (3)			
55569.93	R(5)			
55569.12	R <sub>1</sub> (5)			
55558.66				
55558.49	P(5)			
55557.72	P <sub>1</sub> (5)			
55556.45		R <sub>1</sub> (21)		

Wavenumber	B(12)-X(0)	B(13)-X(0)	B(14)-X(0)
55552.56			
55552.47	R <sub>3</sub> (7)		
55552.31	R <sub>2</sub> (7)		
55551.48	R <sub>1</sub> (7)		
55544.38			
55538.51			
55536.69	P(7)		
55535.94	P <sub>1</sub> (7)		
55534.05			
55533.40			
55530.54			P <sub>3</sub> (27)
55528.79	R <sub>3</sub> (9)		
55528.64	R <sub>2</sub> (9)		P <sub>2</sub> (27)
55527.74	R <sub>1</sub> (9)		
55525.99			P <sub>1</sub> (27)
55524.44			
55522.72			
55519.89			
55517.62		P <sub>3</sub> (21)	
55516.88		P <sub>2</sub> (21)	
55515.15		P <sub>1</sub> (21)	
55513.71			
55510.67			
55508.88	P(9)		
55508.07	P <sub>1</sub> (9)		
55506.07			
55499.12			
55498.95	R <sub>3</sub> (11)		
55498.65	R <sub>2</sub> (11)		
55497.91	R <sub>1</sub> (11)		
55494.81			
55494.36			
55493.67			
55492.39			
55491.83			
55489.77		R <sub>3</sub> (23)	
55488.75		R <sub>2</sub> (23)	
55486.75		R <sub>1</sub> (23)	
55485.99			R <sub>3</sub> (29)
55483.72			R <sub>2</sub> (29)
55480.16			R <sub>1</sub> (29)
55475.02	P(11)		
55474.11	P <sub>1</sub> (11)		
55469.49			
55468.71			
55463.30	R <sub>3</sub> (13)		
55462.99	R <sub>2</sub> (13)		
55461.98	R <sub>1</sub> (13)		
55458.15			

Wavenumber	B(12)-X(0)	B(13)-X(0)	B(14)-X(0)	B(18)-X(1)	B(19)-X(1)	B(11)-X(0) <sup>16</sup> O <sup>18</sup> O
55454.15						
55452.96						
55451.38						
55450.32						
55448.37						
55444.56		P <sub>3</sub> (23)				
55443.66		P <sub>2</sub> (23)				
55441.79		P <sub>1</sub> (23)				
55435.19	P <sub>3</sub> (13)					
55434.93	P <sub>2</sub> (13)		P <sub>3</sub> (29)			
55434.08	P <sub>1</sub> (13)					
55432.26			P <sub>2</sub> (29)			
55429.01			P <sub>1</sub> (29)			
55425.66					R <sub>1</sub> (9)	
55421.41	R <sub>3</sub> (15)					
55420.98	R <sub>2</sub> (15)					
55419.92	R <sub>1</sub> (15)					
55415.18						
55413.95		R <sub>3</sub> (25)				
55412.73		R <sub>2</sub> (25)				
55410.57		R <sub>1</sub> (25)				
55405.43				R <sub>1</sub> (3)		
55401.14				P <sub>1</sub> (3)		
55400.11						
55396.61				R <sub>2</sub> (5)	R <sub>3</sub> (11)	
55395.40					R <sub>2</sub> (11)	
55389.29	P <sub>3</sub> (15)					
55388.97	P <sub>2</sub> (15)					
55387.97	P <sub>1</sub> (15)					
55386.78						
55385.84						
55385.41						
55383.33					P <sub>2</sub> (11)	
55382.87				P <sub>1</sub> (5)	R <sub>1</sub> (11)	
55379.27						
55373.39	R <sub>3</sub> (17)					
55372.86	R <sub>2</sub> (17)					
55371.73	R <sub>1</sub> (17)					
55365.12		P <sub>3</sub> (25)				
55363.96		P <sub>2</sub> (25)				
55362.02		P <sub>1</sub> (25)				
55356.47				P <sub>1</sub> (7)		
55342.07				R <sub>3</sub> (9)		
55341.17				R <sub>2</sub> (9)		
55339.47						R(1)
55337.16	P <sub>3</sub> (17)					
55336.76	P <sub>2</sub> (17)					
55335.72	P <sub>1</sub> (17)					

Wavenumber	B(12)-X(0)	B(13)-X(0)	B(17)-X(1)	B(18)-X(1)	B(11)-X(0) <sup>16</sup> O <sup>18</sup> O
55334.20					R(3)
55333.50				R <sub>1</sub> (9)	
55331.69					P(2)
55331.31		R <sub>3</sub> (27)			
55329.98		R <sub>2</sub> (27)			
55329.07					R(4)
55327.77		R <sub>1</sub> (27)			
55326.24					P(3)
55325.13					
55323.40					
55322.33				P <sub>1</sub> (9)	R(5)
55319.19	R <sub>3</sub> (19)				
55318.57	R <sub>2</sub> (19)				P(4)
55317.38	R <sub>1</sub> (19)				
55314.06					R(6)
55309.72					P(5)
55304.20					R(7)
55303.30				R <sub>3</sub> (11)	
55293.82				R <sub>1</sub> (11)	
55293.21					
55292.68					R(8)
55290.04			R <sub>1</sub> (1)		
55289.04					
55288.03			R <sub>3</sub> (3)		
55287.03			R <sub>2</sub> (3)		P(7)
55282.37			R <sub>1</sub> (3)		
55281.74			P <sub>2</sub> (3)		
55278.94	P <sub>3</sub> (19)				
55278.46	P <sub>2</sub> (19)				
55277.40	P <sub>1</sub> (19)				
55275.68		P <sub>1</sub> (27)			
55273.35					
55273.02			R <sub>3</sub> (5)		P(8)
55271.71			R <sub>2</sub> (5)		
55267.12			R <sub>1</sub> (5)		
55264.04			P <sub>2</sub> (5)		
55258.87	R <sub>3</sub> (21)				
55258.17	R <sub>2</sub> (21)				P(9)
55256.86	R <sub>1</sub> (21)				
55254.77				R <sub>2</sub> (13)	
55249.56			R <sub>3</sub> (7)		
55249.33					R(11)
55249.17			R <sub>2</sub> (7)		
55246.40				R <sub>1</sub> (13)	
55244.35			R <sub>1</sub> (7)		
55242.20					
55240.70		R <sub>3</sub> (29)		P <sub>3</sub> (13)	
55240.37					P(10)

Wavenumber	B(11)-X(0)	B(12)-X(0)	B(13)-X(0)	B(16)-X(1)	B(17)-X(1)	B(18)-X(1)
55238.73					P <sub>3</sub> (7)	P <sub>2</sub> (13)
55238.26			R <sub>2</sub> (29)		P <sub>2</sub> (7)	
55234.67			R <sub>1</sub> (29)		P <sub>1</sub> (7)	
55234.37						
55232.38	R(1)					
55231.32						P <sub>1</sub> (13)
55230.93						
55228.76						
55227.65	R(3)					
55227.36						
55221.99						
55219.93					R <sub>3</sub> (9)	
55219.76	P(3)					
55216.84	R(5)					
55216.46	R <sub>1</sub> (5)					
55214.60		P <sub>3</sub> (21)				
55214.13		P <sub>2</sub> (21)				
55212.82		P <sub>1</sub> (21)				
55204.79	P(5)					
55204.51	P <sub>1</sub> (5)					
55199.94	R(7)					
55199.60	R <sub>1</sub> (7)					
55196.63						
55192.30		R <sub>3</sub> (23)				
55191.43		R <sub>2</sub> (23)				
55190.07		R <sub>1</sub> (23)				
55186.15			P <sub>3</sub> (29)			
55183.49	P(7)					
55183.28	P <sub>1</sub> (7)					
55177.28	R(9)					
55177.10	R <sub>1</sub> (9)					
55173.13						P <sub>1</sub> (15)
55167.14					P <sub>3</sub> (11)	
55166.44					P <sub>2</sub> (11)	
55161.12					P <sub>1</sub> (11)	
55156.51	P(9)					
55156.33	P <sub>1</sub> (9)					
55148.68	R(11)					
55148.46	R <sub>1</sub> (11)					
55144.14		P <sub>3</sub> (23)				
55143.44		P <sub>2</sub> (23)				
55142.15		P <sub>1</sub> (23)				
55140.11						
55139.37					R <sub>3</sub> (13)	
55138.66						
55137.37					R <sub>2</sub> (13)	
55133.75						
55133.45				R(1)		
55131.31					R <sub>1</sub> (13)	

Wavenumber	B(11)-X(0)	B(12)-X(0)	B(13)-X(0)	B(16)-X(1)	B(17)-X(1)
55129.21				R <sub>2</sub> (3)	
55127.51					
55123.58	P(11)				
55123.40	P <sub>1</sub> (11)				
55119.60		R <sub>3</sub> (25)			
55118.66		R <sub>2</sub> (25)			
55117.10		R <sub>1</sub> (25)			
55114.26	R(13)				
55113.91	R <sub>1</sub> (13)				
55108.12				P <sub>3</sub> (5)	
55106.61				P <sub>2</sub> (5)	
55103.60				P <sub>1</sub> (5)	
55094.02				R <sub>3</sub> (7)	
55093.69				R <sub>2</sub> (7)	
55090.50				R <sub>1</sub> (7)	
55084.84	P(13)		P <sub>3</sub> (31)		
55084.48	P <sub>1</sub> (13)				
55082.26			P <sub>2</sub> (31)	P <sub>2</sub> (7)	
55079.15			P <sub>1</sub> (31)	P <sub>1</sub> (7)	
55078.72					R <sub>1</sub> (15)
55073.98	R(15)				
55073.49	R <sub>1</sub> (15)				
55067.56		P <sub>3</sub> (25)			
55066.72		P <sub>2</sub> (25)			
55065.34		P <sub>1</sub> (25)			
55064.24					P <sub>2</sub> (15)
55061.92				R <sub>1</sub> (9)	
55058.12					P <sub>1</sub> (15)
55056.25					
55050.78				P(9)	
55047.53				P <sub>1</sub> (9)	
55040.38	P <sub>3</sub> (15)				
55040.16	P <sub>2</sub> (15)				
55039.78	P <sub>1</sub> (15)				
55037.91		R <sub>1</sub> (27)			
55034.37					
55028.02	R <sub>3</sub> (17)				
55027.74	R <sub>2</sub> (17)				
55027.16	R <sub>1</sub> (17)				
55018.37					R <sub>1</sub> (17)
55012.72				P <sub>3</sub> (11)	
55012.30				P <sub>2</sub> (11)	
55008.87				P <sub>1</sub> (11)	
55003.72					P <sub>3</sub> (17)
55001.82					P <sub>2</sub> (17)
54995.22					P <sub>1</sub> (17)
54989.79	P(17)				
54989.24	P <sub>1</sub> (17)				
54984.74		P <sub>3</sub> (27)			

Wavenumber	B(11)-X(0)	B(12)-X(0)	B(15)-X(1)	B(16)-X(1)	B(10)-X(0) <sup>16</sup> O <sup>18</sup> O
54983.79		P <sub>2</sub> (27)		R <sub>1</sub> (13)	
54982.31		P <sub>1</sub> (27)			
54979.72					
54976.05	R <sub>3</sub> (19)				
54975.68	R <sub>2</sub> (19)				
54974.95	R <sub>1</sub> (19)				
54967.53				P <sub>3</sub> (13)	
54966.73				P <sub>2</sub> (13)	
54963.04				P <sub>1</sub> (13)	
54955.34		R <sub>3</sub> (29)			
54954.19		R <sub>2</sub> (29)			
54952.41		R <sub>1</sub> (29)			
54950.08					R(1)
54948.82					R(2)
54945.34					R(3)
54942.23					P(2)
54940.56					R(4)
54933.47	P(19)				R(5)
54932.88	P <sub>1</sub> (19)				
54929.62			P(3)		P(4)
54927.47			P <sub>1</sub> (3)		
54926.12					R(6)
54921.77			R(5)		
54920.86					P(5)
54917.71	R(21)				
54916.83	R <sub>1</sub> (21)				R(7)
54914.02				P <sub>2</sub> (15)	
54912.53			P(5)		
54910.53			P <sub>1</sub> (5)		P(6)
54910.20				P <sub>1</sub> (15)	
54906.05					R(8)
54901.75			R(7)		
54899.50			R <sub>1</sub> (7)		
54898.81					P(7)
54895.67		P <sub>3</sub> (29)			
54894.60		P <sub>2</sub> (29)			
54893.21					R(9)
54893.00		P <sub>1</sub> (29)			
54888.95			P(7)		
54886.91			P <sub>1</sub> (7)		
54885.34					P(8)
54882.45				R <sub>3</sub> (17)	
54878.99					R(10)
54874.67			R(9)		
54871.01	P(21)		R <sub>1</sub> (9)		
54870.67					P(9)
54864.23					

Wavenumber	B(10)-X(0)	B(11)-X(0)	B(14)-X(1)	B(15)-X(1)
54863.72				
54862.34				
54860.59				
54858.81				P(9)
54854.03		R(23)		
54852.83		R <sub>1</sub> (23)		
54853.34				
54842.28	R(1)			
54841.48				R <sub>2</sub> (11)
54838.05	R(3)			
54829.83	P(3)			
54827.64	R(5)			
54821.98				P <sub>2</sub> (11)
54814.96	P(5)			
54811.51	R(7)			
54803.19		P(23)		
54802.50		P <sub>1</sub> (23)		
54794.36	P(7)			
54789.76	R(9)			
54784.11		R <sub>2</sub> (25)		
54782.77		R <sub>1</sub> (25)		
54777.93				P(13)
54775.35				P <sub>1</sub> (13)
54768.07	P(9)			
54762.37	R <sub>2</sub> (11)			
54762.09	R <sub>1</sub> (11)			
54750.20				R <sub>1</sub> (15)
54736.09	P(11)			
54729.19	R(13)			
54724.76				P <sub>1</sub> (15)
54707.82		R <sub>2</sub> (27)		
54706.91		R <sub>1</sub> (27)		
54698.47	P(13)			
54690.38	R(15)			
54679.24			P(5)	
54677.85			P <sub>1</sub> (5)	
54670.22			R(7)	
54668.67			R <sub>1</sub> (7)	
54667.03				P <sub>1</sub> (17)
54655.18	P(15)		P <sub>1</sub> (7)	
54645.87	R(17)			
54627.15		R <sub>2</sub> (29)	P(9)	
54625.74		R <sub>1</sub> (29)	P <sub>1</sub> (9)	
54612.64			R(11)	
54610.84			R <sub>1</sub> (11)	
54606.23	P(17)			
54595.68	R(19)			
54591.80			P(11)	
54590.02			P <sub>1</sub> (11)	
54587.22				

Wavenumber	B(9)-X(0)	B(10)-X(0)	B(11)-X(0)	B(13)-X(1)	B(14)-X(1)	B(9)-X(0) <sup>16</sup> O <sup>18</sup> O
54574.29					R(13)	
54572.17					R <sub>1</sub> (13)	
54563.25			P <sub>2</sub> (29)			
54561.92			P <sub>1</sub> (29)			
54551.85						
54551.57		P(19)				
54547.77					P <sub>1</sub> (13)	
54539.84						
54539.55		R(21)				
54529.89					R <sub>3</sub> (15)	
54528.79					R <sub>2</sub> (15)	
54526.96					R <sub>1</sub> (15)	
54523.47						R(1)
54521.83						R(2)
54519.38						P(1)
54518.92						R(3)
54515.38						P(2)
54514.50						R(4)
54508.42						R(5)
54503.20						P(4)
54501.28					P <sub>3</sub> (15)	
54500.80						R(6)
54498.95					P <sub>1</sub> (15)	
54494.51						P(5)
54491.63						
54491.18		P(21)				
54484.56						P(6)
54478.03		R(23)				
54475.07					R <sub>1</sub> (17)	
54473.08						P(7)
54469.59						R(9)
54460.04						P(8)
54455.62						R(10)
54445.85					P <sub>2</sub> (17)	P(9)
54443.67					P <sub>1</sub> (17)	
54440.68						R(11)
54432.54						
54429.56				P <sub>1</sub> (1)		
54425.27						
54425.04		P(23)				
54429.45						
54424.97						

Wavenumber	B(9)-X(0)	B(10)-X(0)	B(13)-X(1)
54418.44	R(1)		
54416.95			
54414.20	R(3)		
54414.09			
54408.46			
54405.60	P(3)		
54404.18	R(5)		
54397.98			R(7)
54396.85			R <sub>1</sub> (7)
54391.13	P(5)		
54388.70	R(7)		
54383.20			P(7)
54382.20			P <sub>1</sub> (7)
54370.95	P(7)		
54367.75	R(9)		
54367.54			
54353.71		P(25)	P <sub>1</sub> (9)
54345.26	P(9)		
54341.25	R(11)		R <sub>1</sub> (11)
54337.24		R(27)	
54327.60			
54320.66			P(11)
54319.38			P <sub>1</sub> (11)
54314.09	P(11)		
54309.22	R(13)		
54306.75			R(13)
54304.96			R <sub>1</sub> (13)
54277.85			
54277.44	P(13)		
54272.38			
54271.73	R(15)		
54263.59			R(15)
54261.75			R <sub>1</sub> (15)
54258.89		R(29)	
54258.11			
54235.76			
54235.22	P(15)		
54229.10			
54228.62	R(17)		
54214.23			R <sub>3</sub> (17)
54213.80			R <sub>2</sub> (17)
54212.25			R <sub>1</sub> (17)
54192.21		P(29)	
54187.81			
54187.58	P(17)		
54187.36			
54180.62	R <sub>s</sub> (19)		
54180.14	R(19)		
54174.45			

Wavenumber	B(9)-X(0)	B(12)-X(1)	B(13)-X(1)
54172.97			
54159.02			R <sub>3</sub> (19)
54158.22			R <sub>2</sub> (19)
54156.52			R <sub>1</sub> (19)
54134.91	P <sub>s</sub> (19)		
54134.37	P(19)		
54134.15			
54126.65	R <sub>s</sub> (21)		
54126.12	R(21)		
54120.78			
54118.84		R <sub>2</sub> (1)	
54117.88		R <sub>1</sub> (1)	
54113.45		R(3)	
54112.56		R <sub>1</sub> (3)	
54106.07		P(3)	
54105.30		P <sub>1</sub> (3)	
54102.09		R(5)	
54101.28		R <sub>1</sub> (5)	
54090.60		P(5)	
54089.88		P <sub>1</sub> (5)	
54084.79		R(7)	
54083.98		R <sub>1</sub> (7)	
54076.11	P <sub>s</sub> (21)		
54075.63	P(21)		
54068.61	R <sub>s</sub> (23)	P <sub>1</sub> (7)	
54067.00			
54066.40	R(23)		
54061.58		R(9)	
54060.69		R <sub>1</sub> (9)	
54053.05			
54041.82		P(9)	
54041.02		P <sub>1</sub> (9)	
54032.72			
54032.34		R(11)	
54031.41		R <sub>1</sub> (11)	
54012.15	P <sub>s</sub> (23)		
54011.43	P(23)		
54008.49		P(11)	
54007.64		P <sub>1</sub> (11)	
54001.88			
54001.26	R(25)		
53997.46		R <sub>3</sub> (13)	
53997.12		R <sub>2</sub> (13)	
53996.14		R <sub>1</sub> (13)	
53969.56		P <sub>3</sub> (13)	
53969.21		P <sub>2</sub> (13)	
53968.25		P <sub>1</sub> (13)	
53964.19			
53969.03			
53968.17			

Wavenumber	B(8)-X(0)	B(9)-X(0)	B(11)-X(1)	B(12)-X(1)
53961.94	R(1)			
53960.37				
53957.85	R(3)			
53954.79				R <sub>1</sub> (15)
53949.11	P <sub>s</sub> (3)			
53948.76	P(3)			
53948.49	R(5)			
53942.19		P(25)		
53941.62		P <sub>1</sub> (25)		
53934.74	P(5)			
53933.52	R(7)			
53930.44				
53923.80				P(15)
53922.84				P <sub>1</sub> (15)
53915.03	P(7)			
53913.19	R(9)			
53909.12				R(17)
53907.48				R <sub>1</sub> (17)
53889.95	P(9)			
53887.66	R(11)			
53872.45				P(17)
53871.45				P <sub>1</sub> (17)
53866.97		P(27)		
53866.39		P <sub>1</sub> (27)		
53859.58	P(11)			
53856.70	R(13)			
53854.10				R <sub>1</sub> (19)
53823.81	P(13)			
53820.72				
53820.41	R(15)			
53815.77				P <sub>3</sub> (19)
53815.22				P <sub>2</sub> (19)
53814.07				P <sub>1</sub> (19)
53795.93				R(21)
53794.66				R <sub>1</sub> (21)
53782.75	P(15)			
53782.28				
53779.58				
53778.87	R(17)			
53771.86		R <sub>1</sub> (31)		
53764.11			R(1)	
53759.41			R(3)	
53751.93			P(3)	
53750.66				P <sub>1</sub> (21)
53748.66			R(5)	
53736.73				
53736.29	P(17)			
53732.37	R <sub>s</sub> (19)			
53731.77	R(19)			

Wavenumber	B(7)-X(0)	B(8)-X(0)	B(9)-X(0)	B(10)-X(1)	B(11)-X(1)
53715.79					P(7)
53709.88					R(9)
53699.52			P(31)		
53698.84			P <sub>1</sub> (31)		
53689.15					P(9)
53684.60		P(19)			
53682.41					R(11)
53679.94		R <sub>s</sub> (21)			
53679.52		R(21)			
53656.88					P(11)
53648.29					R(13)
53628.00		P <sub>s</sub> (21)			
53627.38		P(21)			
53622.48		R <sub>s</sub> (23)			
53621.77		R(23)			
53618.95					P(13)
53608.45					R(15)
53574.85					P(15)
53564.82		P(23)			
53558.60		R(25)			
53525.26					R(19)
53512.26					P(17)
53496.94		P(25)			
53490.11		R(27)			
53476.234	R(1)				
53472.815	P(1)R(3)				
53463.604	P(3)R(5)				
53449.373	P(5)R(7)				
53429.902	P(7)R(9)				
53423.635		P(27)			
53416.182		R(29)			
53405.361	P(9)R(11)				
53375.478	P(11)R(13)				
53361.766				P(3)	
53359.640				R(5)	
53340.556	P(13)R(15)				
53326.894				P(7)	
53322.760				R(9)	
53300.76	P(15)				
53299.94	R(17)				
53269.53				P(11)	
53263.28				R(13)	
53255.33	P(17)				
53254.09	R(19)				
53232.54				P(13)	
53225.27				R(15)	
53204.89	P(19)				
53203.90	R(21)				
53189.95				P(15)	
53181.66				R(17)	

Wavenumber	B(6)-X(0)	B(7)-X(0)	B(9)-X(1)	B(10)-X(1)
53149.35		P(21)		
53147.71		R(23)		
53142.12				P(17)
53132.49				R(19)
53088.34		P(23)		P(19)
53086.06		R(25)		
53077.65				R(21)
53022.45		P(25)		
53019.64		R(27)		
53007.42				
52996.44				
52984.20				
52970.76				
52964.67				
52962.75	R(1)			
52961.04	P(1)			
52959.10	R(3)			
52950.31	R(5)			
52946.41			R(3)	
52936.34	P(5)R(7)			
52923.30			P(5)	
52921.27			R(7)	
52917.33	P(7)R(9)			
52903.57			P(7)	
52900.73			R(9)	
52893.34	P(9)R(11)			
52878.33			P(9)	
52874.85			R(11)	
52864.55				
52864.08	P(11)R(13)			
52847.64			P(11)	
52843.55			R(13)	
52830.17				
52829.88	P(13)R(15)			
52811.68			P(13)	
52807.05			Ri(15)	
52806.69			R(15)	
52790.68	P(15)R(17)			
52770.32			P(15)	
52764.57			R(17)	
52746.19	P(17)R(19)			
52723.98			Pi(17)	
52723.54			P(17)	
52717.01			R(19)	
52697.08	R(21)			
52696.69	P(19)			
52671.26			P(19)	
52664.02			R(21)	
52642.76	R(23)			
52642.15	P(21)			

Wavenumber	B(4)-X(0)	B(5)-X(0)	B(6)-X(0)	B(7)-X(1)	B(8)-X(1)
52613.44			P(21)		
52605.40			R(23)		
52582.61			P(23)R(25)		
52517.91			P(25)R(27)		
52493.69					R(1)
52489.88					R(3)
52481.93					
52480.77					R(5)P(3)
52466.56					R(7)P(5)
52447.82			P(27)R(29)		P(7)
52446.26					R(9)
52422.84		R(1)			
52420.84		R(3)			
52411.92		R(5)P(3)			
52398.26		R(7)P(5)			
52393.23					P(11)
52390.97					R(13)
52379.70		R(9)P(7)			
52356.62		R(11)			
52355.54		P(9)			
52328.52		R(13)			
52327.32		P(11)			
52317.52					P(15)
52314.69					R(17)
52295.10		R(15)			
52293.48		P(13)			
52271.88					P(17)
52256.97		R(17)			
52254.97		P(15)			
52220.84					P(19)
52214.16		R(19)			
52211.42		P(17)			
52165.87		R(21)			
52163.27		P(19)			
52113.19		R(23)			
52109.75		P(21)			
52055.69		R(25)			
52051.62		P(23)			
51995.20				R(5)P(3)	
51982.00				R(7)P(5)	
51962.51				P(7)R(9)	
51938.66				P(9)R(11)	
51909.55				P(11)R(13)	
51875.06				P(13)R(15)	
51858.02	R(1)				
51855.60	R(3)				
51846.74	R(5)				
51833.46	R(7)				
51815.90	R(9)				
51814.54	P(7)				

Wavenumber	B(2)-X(0)	B(3)-X(0)	B(4)-X(0)	B(6)-X(1)
51793.38			R(11)	
51790.99			P(9)	
51766.00			R(13)	
51762.98			P(11)	
51733.61			R(15)	
51730.03			P(13)	
51696.46			R(17)	
51691.97			P(15)	
51654.86			R(19)	
51650.05			P(17)	
51602.54			P(19)	
51491.13				R(3)+P(1)
51482.03				R(5)+P(3)
51468.51				R(7)+P(5)
51450.01				R(9)+P(7)
51426.37				R(11)+P(9)
51397.63				R(13)+P(11)
51364.27				R(15)+P(13)
51271.53		R(1)		
51268.39		R(3)		
51260.57		R(5)		
51259.11		P(3)		
51248.02		R(7)		
51245.52		P(5)		
51230.61		R(9)		
51227.50		P(7)		
51208.56		R(11)		
51204.63		P(9)		
51181.90		R(13)		
51177.08		P(11)		
51150.11		R(15)		
51144.76		P(13)		
51114.14		R(17)		
51107.76		P(15)		
51072.88		R(19)		
51066.08		P(17)		
50663.42	R(1)			
50660.47	R(3)			
50652.70	R(5)			
50640.54	R(7)			
50637.41	P(5)			
50623.68	R(9)			
50619.56	P(7)			
50602.18	R(11)			
50597.14	P(9)			
50576.03	R(13)			
50570.09	P(11)			
50538.40	P(13)			