

**The Schumann-Runge absorption bands ($B(v) \ ^3\Sigma_u^- - X(v) \ ^3\Sigma_g^-$) of the $^{16}\text{O}^{18}\text{O}$.
Lines with **B** are blended.**

N	B(2)-X(0) band		B(3)-X(0) band		B(4)-X(0) band	
	R(N)	P(N)	R(N)	P(N)	R(N)	P(N)
0	50687.98B		51312.69B		51914.73B	
1	50687.98B	50683.37B	51312.69B	51310.17B	51914.73B	51912.80B
2	50687.20	50679.86	51312.69B	51304.79	51914.73B	51908.73B
3	50685.13	50674.78	51310.17	51300.07	51912.80B	51902.44
4	50681.73	50668.01	51306.76B	51293.52	51908.73B	51895.38
5	50677.03	50660.63B	51301.73	51285.72	51903.39	51888.98
6	50671.14	50651.93	51295.57	51276.79	51896.94B	51879.33
7	50663.25B	50641.71	51288.22	51266.55	51889.65	51868.61
8	50655.64	50630.44	51279.34	51254.88	51880.93	51856.81
9	50646.03	50617.89	51269.75	51242.20	51870.31	51844.14
10	50635.30	50604.00	51258.76B	51227.87B	51858.82B	51830.86
11	50623.13	50589.16	51246.30B	51212.71	51846.52B	51814.31B
12	50609.87		51232.60	51196.33	51832.28B	51796.87
13			51217.36	51178.27	51816.30B	51779.10
14			51201.58	51159.31	51800.28	51759.75
15			51184.07	51139.26	51782.96B	51738.85B
16			51165.80		51762.95B	51716.45
17			51145.18B		51742.35	51692.81B
18					51721.52	51668.79

N	B(5)-X(0) band		B(6)-X(0) band		B(7)-X(0) band	
	R(N)	P(N)	R(N)	P(N)	R(N)	P(N)
0	52494.05B		53044.98B		53568.61B	
1	52494.05B	52491.18B	53044.98B		53568.61B	53565.02B
2	52493.57	52486.86B	53043.79	53037.04B	53567.80	53560.81B
3	52491.18B	52481.86B	53041.11	53031.68B	53565.02B	53555.38B
4	52486.86B	52475.17B	53037.04B	53024.93B	53560.81B	53548.49B
5	52481.86B	52467.18B	53031.68B	53016.81B	53555.38B	53540.27B
6	52475.17B	52457.82	53024.93B	53007.35B	53548.49B	53530.63B
7	52467.18B	52447.18	53016.81B	52996.50B	53540.27B	53519.47
8	52458.46	52435.18	53007.35B	52984.30B	53530.63B	53507.17
9	52447.78	52421.24	52996.50B	52970.84B	53519.13	53493.40
10	52435.92	52407.58	52984.30B	52955.98B	53506.82	53477.98
11	52422.52B	52391.44	52970.84B	52939.75B	53492.60	53461.68
12	52408.34	52374.20	52955.98B	52922.06B	53477.38B	53443.57
13	52392.62	52355.45B	52939.75B	52903.15B	53460.77	53424.30
14	52375.33	52335.56	52922.06B	52882.82B	53442.59	53404.36
15	52356.81B	52314.40	52903.15B	52861.23B	53423.00	53381.51
16	52337.44	52292.21	52882.82B	52838.20B	53403.53B	53358.23
17	52316.72	52267.59B	52861.23B	52813.84B	53379.81	53333.24
18	52293.34B	52243.04	52838.20B	52788.17B	53356.11	53306.73
19	52269.57B	52216.48	52813.84B	52760.98B	53330.84	53279.26
20	52245.56	52188.85	52788.17B	52732.65B	53304.14	53250.33
21	52219.36	52160.07	52760.98B	52702.92B	53276.63	53219.54
22	52191.66	52129.48	52732.65B	52671.75B	53247.62	53187.97
23	52162.85B	52097.60	52702.92B	52639.33B	53216.27B	53154.42
24	52132.42	52064.73	52671.75B	52605.40B	53184.63	
25	52100.87		52639.33B	52570.32B		
26	52070.25B		52605.40B			
27			52570.32B			

N	B(8)-X(0) band		B(9)-X(0) band					
	R(N)	P(N)	R ₁ (N)	R ₂ (N)	R ₃ (N)	P ₁ (N)	P ₂ (N)	P ₃ (N)
0	54061.66B		54523.59B					
1	54061.66B	54057.62B	54523.59B	54523.59B	54525.83	54519.46B		
2	54060.48	54053.32B	54522.00B	54522.00B	54522.21	54515.61B	54515.61B	
3	54057.62B	54048.07	54518.90B	54518.90B	54519.46B	54510.12B	54510.12B	
4	54053.32B	54041.30	54514.25B	54514.25B	54503.03B	54503.03B		
5	54047.50	54033.08	54508.15B	54508.15B	54494.47B	54494.47B		
6	54040.29	54023.25	54500.57B	54500.57B	54484.40B	54484.40B		
7	54031.48	54011.97	54491.49B	54491.49B	54491.78	54472.88B	54472.88B	
8	54021.28	53999.31	54480.92B	54480.92B	54481.22	54459.85B	54459.85B	54460.12
9	54009.65	53985.21	54468.92B	54468.92B	54469.18	54445.35B	54445.35B	54445.73
10	53996.67	53969.63	54455.39B	54455.39B	54455.74	54429.36B	54429.36B	54429.65
11	53982.24	53952.53	54440.49B	54440.49B	54440.80	54412.11B	54412.11B	
12	53966.47	53934.17	54424.05B	54424.05B	54424.43	54393.09B	54393.09B	54393.27
13	53948.91B	53914.35	54406.05B	54406.05B	54372.68B	54372.68B	54372.92	
14	53930.46	53892.91	54386.74B	54386.74B	54387.15	54350.82B	54350.82B	
15	53910.31	53870.55	54365.83B	54365.83B	54366.30	54327.49B	54327.49B	54327.79
16	53888.35	53846.37	54343.45B	54343.45B	54302.71B	54302.71B	54303.13	
17	53865.77	53820.65B	54319.64B	54319.64B	54320.20	54276.46B	54276.46B	
18	53841.35B	53793.88	54294.33B	54294.33B	54294.78	54248.64B	54248.64B	54249.07
19	53815.39	53765.48	54267.49B	54267.49B	54267.87	54219.41B	54219.41B	54219.82
20	53787.93	53736.21B	54239.21B	54239.21B	54239.81	54188.59B	54188.59B	
21	53759.35	53704.59B	54209.40B	54209.40B	54210.25	54156.51B	54156.51B	54157.02B
22	53729.24	53671.56	54178.12B	54178.12B	54179.12	54122.89B	54122.89B	
23	53697.31	53637.74	54145.35B	54145.35B	54087.65P	54087.65B	54088.20	
24	53664.27		54111.18B	54111.18B	54112.44	54050.98B	54050.98B	
25								
26						53973.15B	53973.15B	53973.93

N	B(10)-X(0) band					
	$R_1(N)$	$R_2(N)$	$R_3(N)$	$P_1(N)$	$P_2(N)$	$P_3(N)$
0	54950.28B					
1	54950.28B					
2	54948.69	54948.85	54948.85	54942.37		
3	54945.44B	54945.44B	54945.76	54936.95B	54936.95B	
4	54940.62B	54940.62B	54940.62B	54929.75B	54929.75B	54930.12B
5	54934.20B	54934.20B	54934.42	54920.81B	54921.02B	54921.02B
6	54926.29B	54926.29B	54926.61	54910.73B	54910.73B	54910.73B
7	54916.83B	54916.83B	54917.19	54898.92B	54898.92B	54898.92B
8	54905.88B	54905.88B	54906.35	54885.62B	54885.62B	54885.62B
9	54893.42B	54893.42B	54893.42B	54870.66B	54870.66B	54871.41
10	54879.35B	54879.35B	54879.35B	54854.31B	54854.31B	54854.64
11	54863.87B	54863.87B	54863.87B	54836.81B	54836.81B	54836.81B
12	54846.71B	54846.71B	54847.08	54816.96B	54816.96B	54816.96B
13	54828.24B	54828.24B	54828.24B	54795.97B	54795.97B	54795.97B
14	54808.21B	54808.21B	54808.21B	54773.64B	54773.64B	54773.64B
15	54786.59B	54786.59B	54787.18	54749.66B	54749.66B	54749.66B
16	54762.83B	54762.83B	54762.83B	54723.95	54724.39B	54724.39B
17	54738.41	54738.99B	54738.99B	54697.22B	54697.22B	54697.22B
18	54712.12	54712.72B	54712.72B	54668.52B	54668.52B	54668.52B
19	54684.34	54684.95B	54684.95B	54638.45B	54638.45B	54638.45B
20	54655.14B	54655.53B	54655.53R			
21	54623.96			54573.41B	54573.41B	54573.89B
22						
23	54557.68	54558.44	54558.95			
24				54464.44		

N	B(11)-X(0) band					
	$R_1(N)$	$R_2(N)$	$R_3(N)$	$P_1(N)$	$P_2(N)$	$P_3(N)$
0	55339.63B					
1	55339.63B		55335.77			
2	55337.70	55337.95B	55337.95B	55331.87		
3	55334.13	55334.37B	55334.37B	55326.11	55326.41	
4	55328.94	55329.17B	55329.17B	55318.60	55318.84	55318.84
5	55322.42	55322.68B	55322.68B	55309.82	55310.12B	55310.12B
6	55314.26B	55314.26B	55314.26B	55299.28	55299.51B	55299.51B
7	55304.13	55304.55B	55304.55B	55286.95	55287.21B	55287.21B
8	55292.73	55293.11B	55293.11B	55273.36	55273.61B	55273.36B
9	55279.72	55280.13B	55280.13B	55258.17B	55258.17B	55258.17B
10	55265.05	55265.54B	55265.54B	55241.07	55241.49	55241.49
11	55248.91	55249.34B	55249.34B	55222.38	55222.98B	55222.98B
12	55231.25			55202.79		
13	55211.95	55212.52B	55212.52B	55181.09	55181.40B	55181.40B
14	55190.57	55191.42B	55191.42B	55157.68	55158.33B	55158.33B
15	55168.24	55168.96	55169.30	55133.08	55133.54	55133.80
16	55144.03	55144.75	55145.19	55106.69	55107.38B	55107.38B
17	55118.72B	55119.45B	55119.45B	55078.75	55079.43B	55079.43B
18	55090.99	55091.94B	55091.94B	55049.54	55050.15B	55050.15B
19	55062.02	55063.17B	55063.17B	55018.07		
20	55031.78				54986.13B	54986.13B
21	54999.44B	55000.81B	55000.81B			54952.31

N	B(12)-X(0) band					
	$R_1(N)$	$R_2(N)$	$R_3(N)$	$P_1(N)$	$P_2(N)$	$P_3(N)$
0	55689.84					
1	55689.44	55690.11		55685.99		
2	55687.27	55688.05	55688.55	55681.79	55682.57	
3	55683.47	55684.22	55684.53	55675.88	55676.60	55677.13
4	55678.02	55678.82	55678.98	55668.31	55669.04	55669.26
5	55670.94	55671.77	55671.92	55659.07	55659.84	55659.99
6	55662.21	55663.04	55663.23	55648.19	55648.98	55649.13
7	55651.83	55652.69	55652.89	55635.67	55636.46	55636.59
8	55639.81	55640.71	55640.91	55621.50	55622.33	55622.49
9	55626.15	55627.10	55627.37	55605.70	55606.56	55606.72
10	55610.85	55611.83	55612.09	55588.26	55589.16	55589.32
11	55593.91	55594.89	55595.29	55569.16B	55570.05B	
12	55575.30	55576.34	55576.75	55548.43	55549.38	55549.71
13	55555.05	55556.11	55556.54	55526.06	55527.07	55527.40
14	55533.17	55534.32	55534.80	55502.06	55503.14	55503.44
15	55509.61	55510.79	55511.42	55476.44	55477.49	55477.92
16	55484.43	55485.67	55486.31	55449.13	55450.25	55450.72
17	55457.56	55458.83	55459.58	55420.13	55421.32B	
18	55429.04	55430.37B	55430.99	55389.41B	55390.80	55391.36
19	55398.85		55401.03	55357.31	55358.59	55359.24
20	55366.98	55368.43	55369.28	55323.19B	55324.89B	
21				55287.66	55289.18	55289.96
22				55250.45	55252.00	55252.91
23	55261.34	55262.97				
24				55171.11	55172.66	55173.67
25				55128.91		

N	B(13)-X(0) band					
	$R_1(N)$	$R_2(N)$	$R_3(N)$	$P_1(N)$	$P_2(N)$	$P_3(N)$
0	55997.99					
1	55997.47	55998.63	56001.11	55994.09B		
2	55995.15	55996.30B	55996.30B	55989.98	55991.09B	
3	55991.09	55992.29B	55992.29B	55983.95	55985.26B	55985.26B
4	55985.26B	55986.53B	55986.53B	55976.18	55977.33B	55977.33B
5	55977.73	55979.06	55979.16	55966.67	55967.81	55967.93
6	55968.55	55969.85	55969.97	55955.45	55956.65B	55956.65B
7	55957.66	55958.96	55959.12	55942.51	55943.74B	55943.74B
8	55945.01	55946.35	55946.57	55927.86	55929.15B	55929.15
9	55930.66	55932.03	55932.31	55911.51	55912.84	55912.95
10	55914.60	55916.01	55916.39	55893.45	55894.82	55895.04B
11	55896.75	55898.21	55898.74	55873.55	55875.06	55875.30
12	55877.31	55878.85	55879.37	55852.21	55853.62	55853.98
13	55856.11	55857.71	55858.30	55829.03	55830.49	55830.88
14	55833.17	55834.85	55835.50	55804.09	55805.63	55806.10
15	55808.46B	55810.19	55810.94	55777.50	55779.00	55779.59
16	55782.07	55783.89	55784.66	55749.09	55750.72	55751.48
17	55753.94	55755.82	55756.73	55719.02	55720.74	55721.45
18	55724.04	55726.01		55687.24B	55688.99	55689.80B
19	55692.43	55694.65B	55695.67B	55653.66	55655.55B	55656.50B
20		55661.16		55618.39	55620.30	
21	55623.90			55581.41B	55583.43	55584.40
22				55542.60	55544.70	55545.80
23					55504.27	55505.45

N	B(14)-X(0) band					
	$R_1(N)$	$R_2(N)$	$R_3(N)$	$P_1(N)$	$P_2(N)$	$P_3(N)$
0	56262.56					
1	56262.01	56263.88B	56266.27	56258.98		
2	56259.44	56261.09B	56261.09B	56254.78	56256.64	
3	56255.04	56256.81B	56256.81B	56248.65	56250.17	56250.65B
4	56248.87	56250.65B	56250.65B	56240.65	56242.20B	56242.20B
5	56240.91	56242.63B	56242.63B	56230.80	56232.30	56232.55
6	56231.16	56232.91B	56232.91B	56219.12	56220.82B	56220.82B
7	56219.63	56221.45	56221.67	56205.71	56207.38	56207.50
8	56206.32	56208.20	56208.51	56190.54	56192.35B	56192.35B
9	56191.21	56193.18	56193.60	56173.58	56175.33	56175.63
10	56174.37	56176.54B	56176.80	56154.75	56157.18B	56157.18B
11	56155.70	56157.65	56158.29	56134.30	56136.43B	56136.43B
12	56135.18	56137.36	56138.04B	56112.01B	56114.05	56114.45
13	56112.80	56115.09	56115.98	56087.83	56089.97	56090.52
14	56088.74	56091.11	56092.05	56061.98	56064.30B	56064.55B
15	56062.98B	56065.26	56066.24	56034.18	56036.49	56037.43
16	56035.08		56038.72	56004.69	56007.06	56008.04
17	56005.49	56008.12	56009.39	55973.35	55976.20B	
18	55974.14	55977.17B		55940.24		55943.82B
19	55940.89	55943.82B	55945.05B	55905.30B	55907.93	55909.02B
20	55905.88B	55909.02B	55910.44B	55868.48	55871.38	
21	55868.91	55872.19B		55829.89	55833.15B	55834.19
22			55835.48B	55789.52B	55792.51	55794.01
23	55789.52B	55793.02	55794.88	55747.06B		
24	55747.06B			55702.96	55706.39	55708.02

B(15)-X(0) band						
N	$R_1(N)$	$R_2(N)$	$R_3(N)$	$P_1(N)$	$P_2(N)$	$P_3(N)$
0	56484.17					
1	56483.30B	56485.56B	56488.54B	56480.51B		
2	56480.51B	56482.86	56483.30B	56475.94B	56478.40B	
3	56475.94B	56478.22	56478.40B	56469.82B	56471.88B	56472.58
4	56469.27B	56471.65	56471.88B	56461.56	56463.58B	56464.19
5	56460.81	56463.44	56463.58B	56451.44	56453.60	56453.95
6	56450.44	56453.20B	56453.20B	56439.43	56441.73B	56441.73B
7	56438.23	56440.98	56441.30	56425.49	56427.97B	56427.97B
8	56424.14	56426.98	56427.53	56409.69B	56412.20	56412.33
9	56408.34B	56410.97	56411.70	56392.09	56394.94	56395.64B
10	56390.05B	56393.19	56394.12	56372.58	56375.33	56375.82
11	56370.63	56373.69	56374.61	56351.32	56354.23	56354.66B
12	56349.14	56352.41	56353.12	56328.04B	56330.99B	56331.54
13		56328.96	56329.99	56302.87	56305.80	56307.02B
14	56300.19	56303.73		56275.88	56278.99	
15	56272.92	56276.56		56246.96		56250.90
16	56242.90	56247.63		56216.25		
17	56212.61	56216.60		56183.56	56187.21	56188.43
18		56183.90	56185.38	56148.93	56152.54	
19	56144.62			56112.23		56117.98
20	56107.72					

B(16)-X(0) band						
N	$R_1(N)$	$R_2(N)$	$R_3(N)$	$P_1(N)$	$P_2(N)$	$P_3(N)$
0	56663.19B					
1	56662.19B	56667.71B		56659.29B		
2	56659.29B	56664.76	56665.40	56655.03B	56660.46	56662.19B
3	56654.10B	56659.59B	56659.59B	56648.63	56654.10B	56655.03B
4	56647.02	56652.49	56652.88	56640.18	56645.79	56646.12
5	56637.95	56643.42B	56643.42B	56629.67	56635.17B	56635.17B
6	56626.86	56632.58B	56632.58B	56617.17	56622.57B	56622.57B
7	56613.73	56619.72	56619.90	56602.64	56608.16B	56608.16B
8	56598.66	56604.93B	56605.15	56586.16	56591.99B	56591.99B
9	56581.50	56588.23	56588.63	56567.52	56573.66B	56573.66B
10	56562.26	56569.63	56569.85	56547.04	56553.48	56553.68
11	56541.16B	56549.00	56550.25B	56524.59B	56531.33	56531.62
12				56499.98B		
13				56473.31	56481.03	56482.55

References:

The Schumann-Runge Absorption Bands of $^{16}\text{O}^{18}\text{O}$ in the Wavelength Region 175-205 nm and Spectroscopic Constants of Isotopic Oxygen Molecules, A.S.-C. Cheung, K. Yoshino, D.E. Freeman, R.S. Friedman, A. Dalgarno and W.H. Parkinson, J. Mol. Spectrosc. **134**, 362-389 (1989).