

Observed term values of the  $B(v) \ ^3\Sigma_u^-$  level of  $^{16}\text{O}^{18}\text{O}$ ,  $\text{cm}^{-1}$

N	B(2) level						B(3) level					
	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>
1	2	50686.08	1	50688.01			2	51311.01	1	51312.94		
2	3	50688.96	2	50690.89	1	50687.87	3	51313.96	2	51315.89	1	51312.87
3	4	50693.30	3	50695.26	2	50693.17	4	51318.70	3	51320.68	2	51318.65
4	5	50699.42	4	50701.39	3	50699.36	5	51324.48	4	51326.46	3	51324.42
5	6	50706.93	5	50708.92	4	50706.91	6	51331.87	5	51333.86	4	51331.86
6	7	50715.75	6	50717.75	5	50715.76	7	51340.52	6	51342.52	5	51340.53
7	8	50726.16	7	50728.17	6	50726.20	8	51350.59	7	51352.61	6	51350.64
8	9	50738.02	8	50740.06	7	50738.12	9	51362.28	8	51364.31	7	51362.35
9	10	50751.31	9	50753.35	8	50751.40	10	51375.09	9	51377.13	8	51375.19
10	11	50766.21	10	50768.26	9	50766.33	11	51389.85	10	51391.90	9	51389.96
11	12	50782.56	11	50784.61	10	50782.68	12	51406.00	11	51408.06	10	51406.14
12	13	50800.23	12	50802.29	11	50800.37	13	51423.29	12	51425.36	11	51423.45
13							14	51442.22	13	51444.30	12	51442.39
14							15	51462.53	14	51464.62	13	51462.73
15							16	51484.45	15	51486.54	14	51484.65
16							17	51507.61	16	51509.71	15	51507.82
17							18	51532.71	17	51534.82	16	51532.94

  

N	B(4) level						B(5) level					
	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>
0							1	52492.00				
1							2	52493.08	1	52495.01		
2	3	51916.78	2	51918.73	1	51916.66	3	52495.54	2	52497.46	1	52494.44
3	4	51920.75	3	51922.71	2	51920.62	4	52500.07	3	52502.02	2	52499.93
4	5	51927.14	4	51929.09	3	51927.02	5	52505.72	4	52507.69	3	52505.66
5	6	51934.13	5	51936.12	4	51934.11	6	52512.44	5	52514.43	4	52512.42
6	7	51942.38	6	51944.38	5	51942.39	7	52520.90	6	52522.90	5	52520.91
7	8	51952.24	7	51954.26	6	51952.29	8	52530.54	7	52532.56	6	52530.59
8	9	51963.97	8	51965.99	7	51964.04	9	52541.28	8	52543.31	7	52541.35
9	10	51976.65	9	51978.67	8	51976.72	10	52554.51	9	52556.55	8	52554.60
10	11	51990.93	10	51992.98	9	51991.04	11	52568.23	10	52570.28	9	52568.34
11	12	52006.30	11	52008.36	10	52006.44	12	52583.52	11	52585.58	10	52583.65
12	13	52023.82	12	52025.88	11	52023.97	13	52599.99	12	52602.06	11	52600.15
13	14	52042.28	13	52044.36	12	52042.45	14	52618.21	13	52620.29	12	52618.39
14	15	52061.80	14	52063.89	13	52061.99	15	52637.73	14	52639.82	13	52637.93
15	16	52083.26	15	52085.35	14	52083.47	16	52658.66	15	52660.76	14	52658.87
16	17	52106.15	16	52108.25	15	52106.38	17	52680.46	16	52682.57	15	52680.69
17	18	52130.21	17	52132.32	16	52130.45	18	52704.58	17	52706.69	16	52704.82
18							19	52729.71	18	52731.83	17	52729.97
19							20	52755.67	19	52757.81	18	52755.96
20							21	52783.57	20	52785.71	19	52783.87
21							22	52813.13	21	52815.28	20	52813.44
22							23	52843.64	22	52845.80	21	52843.97
23							24	52875.60	23	52877.76	22	52875.95
24							25	52908.91	24	52911.07	23	52909.26
25							26	52943.41	25	52945.58	24	52943.78
26							27	52979.47	26	52981.66	25	52979.86

N	B(6) level						B(7) level					
	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>
0							1	53565.84				
1	2	53043.26	1	53045.19			2	53567.03	1	53568.96		
2	3	53045.91	2	53047.83	1	53044.82	3	53569.58	2	53571.50	1	53568.48
3	4	53050.06	3	53052.01	2	53049.92	4	53573.84	3	53575.80	2	53573.71
4	5	53055.50	4	53057.47	3	53055.44	5	53579.18	4	53581.16	3	53579.12
5	6	53062.29	5	53064.28	4	53062.28	6	53585.82	5	53587.81	4	53585.80
6	7	53070.47	6	53072.47	5	53070.48	7	53593.80	6	53595.80	5	53593.82
7	8	53079.98	7	53082.00	6	53080.03	8	53603.20	7	53605.21	6	53603.24
8	9	53090.90	8	53092.92	7	53090.97	9	53613.91	8	53615.93	7	53613.98
9	10	53103.15	9	53105.19	8	53103.25	10	53625.79	9	53627.83	8	53625.89
10	11	53116.74	10	53118.79	9	53116.86	11	53639.02	10	53641.07	9	53639.14
11	12	53131.64	11	53133.70	10	53131.77	12	53653.65	11	53655.71	10	53653.79
12	13	53148.00	12	53150.07	11	53148.16	13	53669.46	12	53671.52	11	53669.61
13	14	53165.66	13	53167.74	12	53165.84	14	53687.13	13	53689.21	12	53687.31
14	15	53184.71	14	53186.80	13	53184.91	15	53705.36	14	53707.45	13	53705.56
15	16	53205.02	15	53207.12	14	53205.23	16	53725.30	15	53727.40	14	53725.51
16	17	53226.76	16	53228.86	15	53226.99	17	53746.38	16	53748.49	15	53746.61
17	18	53249.83	17	53251.95	16	53250.08	18	53769.47	17	53771.58	16	53769.71
18	19	53274.21	18	53276.34	17	53274.48	19	53792.64	18	53794.77	17	53792.91
19	20	53300.00	19	53302.14	18	53300.29	20	53817.80	19	53819.93	18	53818.08
20	21	53327.13	20	53329.27	19	53327.43	21	53843.94	20	53846.08	19	53844.24
21	22	53355.57	21	53357.72	20	53355.88	22	53871.66	21	53873.81	20	53871.98
22	23	53385.31	22	53387.47	21	53385.65	23	53900.68	22	53902.84	21	53901.02
23	24	53416.43	23	53418.59	22	53416.78	24	53931.43	23	53933.59	22	53931.77
24	25	53448.95	24	53451.13	23	53449.32						
25	26	53482.74	25	53484.91	24	53483.11						
26	27	53517.93	26	53520.12	25	53518.32						
27	28	53554.30	27	53556.49	26	53554.70						

N	B(8) level						B(9) level					
	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>
0	1	54058.44					1	54520.28				
1	2	54059.54	1	54061.47			2	54521.80	1	54523.76		
2	3	54062.45	2	54064.37	1	54061.35	3	54524.44	2	54526.36	1	54524.584
3	4	54066.59	3	54068.54	2	54066.45	4	54528.21	3	54530.17	2	54528.205
4	5	54071.89	4	54073.86	3	54071.83	5	54533.22	4	54535.20	3	54533.684
5	6	54078.38	5	54080.37	4	54078.37	6	54539.42	5	54541.41		
6	7	54086.11	6	54088.11	5	54086.13	7	54546.89	6	54548.89		
7	8	54095.17	7	54097.18	6	54095.21	8	54555.58	7	54557.59	6	54555.91
8	9	54105.42	8	54107.44	7	54105.49	9	54565.49	8	54567.52	7	54565.90
9	10	54116.94	9	54118.98	8	54117.04	10	54576.63	9	54578.67	8	54577.02
10	11	54129.71	10	54131.76	9	54129.82	11	54589.13	10	54591.18	9	54589.41
11	12	54143.88	11	54145.94	10	54144.01	12	54602.70	11	54604.76	10	54603.10
12	13	54159.30	12	54161.37	11	54159.46	13	54617.59	12	54619.66	11	54618.02
13	14	54175.95	13	54178.03	12	54176.13	14	54633.70	13	54635.78	12	54634.24
14	15	54193.95	14	54196.04	13	54194.15	15	54650.99	14	54653.08	13	54651.54
15	16	54213.31	15	54215.40	14	54213.52	16	54669.62	15	54671.71	14	54670.24
16	17	54233.74	16	54235.85	15	54233.97	17	54689.41	16	54691.51	15	54690.05
17	18	54255.45	17	54257.57	16	54255.70	18	54710.38	17	54712.50	16	54711.10
18	19	54278.73	18	54280.86	17	54279.00	19	54732.63	18	54734.76	17	54733.38
19	20	54303.36	19	54305.49	18	54303.64	20	54756.04	19	54758.17	18	54756.81
20	21	54328.74	20	54330.88	19	54329.04	21	54780.72	20	54782.85	19	54781.38
21	22	54355.35	20	54330.88	20	54355.67	22	54806.61	21	54808.75	20	54807.51
22	23	54383.61	20	54330.88	21	54383.93	23	54833.66	22	54835.81	21	54834.83
23	24	54413.05	22	54385.76	22	54413.39						
24			23	54415.21								

N	B(10) level						B(11) level					
	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>
0	1						1	55336.59				
1	2	54948.53	1				2	55337.95	1			
2	3	54951.20	2	54953.24	1		3	55340.45	2	55342.70	1	
3	4	54954.92	3	54956.95	2	54954.86	4	55343.85	3	55346.05	2	55343.95
4	5	54959.66	4	54961.64	3	54959.60	5	55348.51	4	55350.76	3	55348.72
5	6	54965.77	5	54967.76	4	54965.76	6	55354.21	5	55356.43	4	55354.42
6	7	54972.94	6	54974.94	5	54972.95	7	55361.06	6	55363.32	5	55361.34
7	8	54981.32	7	54983.34	6	54981.37	8	55369.07	7	55371.32	6	55369.35
8	9	54990.82	8	54992.84	7	54990.89	9	55378.22	8	55380.46	7	55378.50
9	10	55001.58	9	55003.62	8	55002.18	10	55388.39	9	55390.83	8	55388.88
10	11	55013.73	10	55015.78	9	55013.85	11	55399.67	10	55402.22	9	55400.29
11	12	55026.61	11	55028.67	10	55026.75	12	55412.38	11	55414.85	10	55412.92
12	13	55040.93	12	55042.99	11	55041.08	13	55426.01	12	55428.44	11	55426.53
13	14	55056.44	13	55058.52	12	55056.61	14	55440.73	13	55443.29	12	55441.40
14	15	55073.17	14	55075.26	13	55073.37	15	55456.74	14	55459.34	13	55457.58
15	16	55090.97	15	55093.07	14	55091.18	16	55473.52	15	55476.39	14	55474.50
16	17	55110.17	16	55112.27	15	55110.40	17	55491.76	16	55494.56	15	55492.86
17	18	55130.01	17	55132.13	16	55130.26	18	55511.12	17	55513.90	16	55512.25
18	19	55151.54	18	55153.66	17	55151.80	19	55531.50	18	55534.55	17	55532.68
19	20	55173.88	19	55176.00	18	55174.74	20	55552.75	19	55555.75	18	55553.90
20	21	55197.62	20	55199.76	19	55198.47	21	55575.25	20	55578.53	19	55576.79
21	22	55222.54	21	55224.68	20	55223.23	22	55599.18				
22	23	55248.22	22									
23	24	55275.43	23									
24	25	55303.74	24	55306.66	23	55305.36						

N	B(12) level						B(13) level					
	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>
0	1	55686.81					1	55994.91				
1	2	55688.02	1	55690.72			2	55996.19	1	55999.24		
2	3	55690.24	2	55692.86	1	55691.35	3	55998.29	2	56001.45	1	55999.67
3	4	55693.49	3	55696.20	2	55694.46	4	56001.36	3	56004.47	2	56002.37
4	5	55697.81	4	55700.54	3	55698.74	5	56005.42	4	56008.56	3	56006.59
5	6	55703.20	5	55705.99	4	55704.14	6	56010.45	5	56013.68	4	56011.67
6	7	55709.68	6	55712.49	5	55710.65	7	56016.49	6	56019.78	5	56017.84
7	8	55717.22	7	55720.07	6	55718.27	8	56023.57	7	56026.88	6	56024.97
8	9	55725.84	8	55728.72	7	55726.95	9	56031.66	8	56035.00	7	56033.18
9	10	55735.52	9	55738.46	8	55736.70	10	56040.72	9	56044.11	8	56042.39
10	11	55746.27	10	55749.24	9	55747.60	11	56050.72	10	56054.21	9	56052.54
11	12	55758.10	11	55761.12	10	55759.49	12	56061.86	11	56065.33	10	56063.78
12	13	55770.99	12	55774.05	11	55772.51	13	56073.90	12	56077.42	11	56075.97
13	14	55784.94	13	55788.08	12	55786.53	14	56086.96	13	56090.58	12	56089.17
14	15	55799.97	14	55803.11	13	55801.65	15	56101.03	14	56104.67	13	56103.36
15	16	55816.04	15	55819.27	14	55817.86	16	56116.02	15	56119.77	14	56118.59
16	17	55833.13	16	55836.42	15	55835.17	17	56132.00	16	56135.83	15	56134.69
17	18	55851.26	17	55854.69	16	55853.42	18	56148.99	17	56152.89	16	56151.81
18	19	55870.54	18	55873.94	17	55872.78	19	56166.91	18	56170.92	17	56169.99
19	20	55890.69	19	55894.34	18	55893.01	20	56185.79	19	56189.87	18	
20	21	55912.00	20	55915.59	19	55914.54	21	56205.67	20	56209.93	19	56209.08
21	22	55934.32	21	55937.97	20	55937.02	22	56226.41	21	56230.69	20	56229.95
22	23		22		21		23	56248.16	22	56252.49	21	56251.86
23	24	55982.10	23	55985.82	22	55985.03						
24	25	56007.45	24	56011.19								

N	B(14) level						B(15) level					
	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>
0	1	56259.80					1	56481.33				
1	2	56260.87	1	56264.79			2	56482.26	1	56486.55		
2	3	56262.91	2	56266.53	1	56264.95	3	56484.14	2	56488.22	1	56487.05
3	4	56265.74	3	56269.30	2	56267.20	4	56486.73	3	56490.87	2	56489.30
4	5	56269.46	4	56273.07	3	56271.16	5	56490.23	4	56494.42	3	56492.65
5	6	56274.09	5	56277.82	4	56275.82	6	56494.45	5	56498.78	4	56496.89
6	7	56279.69	6	56283.38	5	56281.46	7	56499.53	6	56504.08	5	56502.17
7	8	56286.22	7	56290.01	6	56288.04	8	56505.43	7	56510.08	6	56508.18
8	9	56293.68	8	56297.49	7	56295.79	9	56512.23	8	56517.06	7	56515.36
9	10	56302.02	9	56306.22	8	56304.43	10	56519.85	9	56524.68	8	56523.26
10	11	56311.37	10	56315.47	9	56313.75	11	56528.45	10	56533.27	9	56531.91
11	12	56321.65	11	56325.81	10	56324.22	12	56537.50	11	56542.61	10	56541.42
12	13	56332.77	12	56336.88	11	56335.57	13	56547.76	12	56552.82	11	56551.98
13	14	56344.84	13	56349.17	12	56347.73	14	56558.77	13	56564.04	12	56562.93
14	15	56357.71	14	56362.10	13	56361.12	15	56570.50	14	56575.95	13	56575.07
15	16	56371.61	15	56376.07	14	56375.15	16	56583.11	15	56588.69	14	
16	17	56386.43	16	56391.10	15	56389.99	17	56596.50	16	56602.25	15	56601.66
17	18	56402.00	17		16	56405.85	18	56610.69	17	56616.54	16	
18	19	56418.50	18	56423.26	17	56422.58	19	56625.53	18	56631.70	17	56631.49
19	20	56435.89	19	56440.99	18		20		19	56647.78	18	56647.40
20	21	56454.14	20	56459.37	19	56458.67	21	56657.85				
21	22	56473.28	21	56478.56	20	56478.14						
22	23	56493.17	22	56498.60	21							

N	B(16) level					
	J	F <sub>1</sub>	J	F <sub>2</sub>	J	F <sub>3</sub>
0	1	56660.11				
1	2	56661.31	1	56668.61		
2	3	56662.99	2	56670.41	1	56669.25
3	4	56665.43	3	56672.93	2	56671.32
4	5	56668.42	4	56675.89	3	56673.86
5	6	56672.19	5	56679.62	4	56677.81
6	7	56676.67	6	56684.17	5	56682.18
7	8	56681.88	7	56689.67	6	56687.70
8	9	56687.70	8	56695.79	7	56693.92
9	10	56694.34	9	56702.73	8	56701.00
10	11	56701.66	10	56710.45	9	56708.86
11	12	56709.58	11	56718.94	10	56717.23
12	13	56718.24	12	56728.09	11	56727.56

References:

*The Schumann-Runge Absorption Bands of  $^{16}O^{18}O$  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).