

Herzberg I Bands ($A(v) {}^3\Sigma_u^+ - X(v) {}^3\Sigma_g^+$) of the ${}^{16}\text{O}_2$. Values with B are blended lines.

A(4)-X(0) band:

N	${}^Q Q_1$	${}^Q Q_2$	${}^Q Q_3$	${}^Q R_{12}$	${}^Q R_{23}$	${}^Q P_{21}$	${}^Q P_{32}$	${}^O P_{12}$	${}^O P_{23}$	${}^S R_{21}$
1	37913.010B	37909.099		37911.121		37910.915B	37919.044			
3	37907.970	37903.034	37913.010B	37906.016	37905.082	37904.940	37910.915B	37896.771		
5	37897.541	37892.053	37900.930	37895.549	37894.022B	37894.022B	37898.914	37880.129	37879.165	
7	37882.014	37876.160	37884.506	37879.999	37878.150B	37878.150B	37882.542	37858.189	37856.639	37906.277
9	37861.483B	37855.459	37863.436	37859.449	37857.369	37857.463	37861.483B	37831.199	37829.238	
11	37836.014	37829.747	37837.565	37833.955	37831.694	37831.835	37835.636	37799.094		37873.116
13	37805.619	37799.185	37806.816	37803.532	37801.153	37801.324	37804.923	37762.142		37849.209
15	37770.306	37763.834		37768.202	37765.707	37765.926	37769.514			
17	37730.064			37727.941	37725.359	37725.621	37729.078			
19	37684.913			37682.768	37680.147	37680.428	37683.773			
21	37634.836			37632.649	37629.998	37630.332	37633.605			

A(5)-X(0) band:

N	${}^Q Q_1$	${}^Q Q_2$	${}^Q Q_3$	${}^Q R_{12}$	${}^Q R_{23}$	${}^Q P_{21}$	${}^Q P_{32}$	${}^O P_{12}$	${}^O P_{23}$	${}^S R_{21}$
1	38548.992	38545.111	38559.003	38547.112		38546.993	38555.002			
3	38543.693	38538.776	38548.733	38541.746	38540.865	38540.730	38546.651			38555.172
5	38532.826	38527.347	38536.268	38530.847	38529.351B	38529.351B	38534.257	38515.877	38514.891	38550.231
7	38516.681	38510.866	38519.220	38514.662	38512.859B	38512.859B	38517.243	38493.486	38491.936	38540.175
9	38495.345B	38489.290	38497.310	38493.295	38491.238	38491.328	38495.345B	38465.803	38463.976	38525.033
11	38468.846	38462.632	38470.438	38466.781	38464.562	38464.704	38468.504			38504.772
13	38437.230	38430.889	38438.510	38435.146	38432.794	38432.976	38436.619	38394.968	38392.743	38479.424
15	38400.497	38394.061	38401.564	38398.391	38395.946	38396.168	38399.684	38351.900	38349.477	
17	38358.646	38352.180	38359.515	38356.526	38353.986	38354.247	38357.669	3803.6254		
19	38311.675	38305.079		38309.535	38306.941	38307.225	38310.561	38250.396		
21	38259.578	38252.916		38257.428	38254.757	38255.090	38258.352			
23	38202.362	38195.652		38200.188	38197.442	38197.852	38201.051			
25	38139.995			38137.791	38135.023	38135.411	38138.623			

A(6)-X(0) band:

N	${}^Q Q_1$	${}^Q Q_2$	${}^Q Q_3$	${}^Q R_{12}$	${}^Q R_{23}$	${}^Q P_{21}$	${}^Q P_{32}$	${}^O P_{12}$	${}^O P_{23}$	${}^S R_{21}$
1	39141.187	39137.361	39151.074	39139.272B	39141.303	39139.272B	39147.176			
3	39135.613	39130.736	39140.713	39133.662	39132.832	39132.698	39138.633	39124.942	39125.106	
5	39124.268	39118.849	39127.747	39122.280	39120.837B	39120.837B	39125.744	39107.800	39106.927	
7	39107.401	39101.632	39109.992	39105.388	39103.627B	39103.627B	39108.020	39084.908	39083.448	39130.020
9	39085.154B	39079.131	39087.158	39083.086	39081.118B	39081.118B	39085.154B	39056.537	39054.777	39113.696
11	39057.475	39051.317	39061.167	39055.416	39053.243	39053.381	39057.188	39022.768	39020.720	39092.309
13	39024.480	39018.193	39025.814	39022.402	39020.088	39020.272	39023.921	38983.602	38981.441	39065.100
15	38986.137	38979.770	38987.198	38984.037	38981.627	38981.850	38985.363	38939.166	38936.848	
17	38942.446	38935.977		38940.326	38937.833	38938.099	38941.520	38889.345		
19	38893.393	38886.863		38891.260	38888.699	38888.981	38892.342			
21	38838.994			38836.848	38834.210	38834.549	38837.811	38773.717		
23	38779.208			38777.033	38774.340	38774.737	38777.952			
25	38714.058			38711.857			38712.713			

A(7)-X(0) band:

N	${}^Q Q_1$	${}^Q Q_2$	${}^Q Q_3$	${}^Q R_{12}$	${}^Q R_{23}$	${}^Q P_{21}$	${}^Q P_{32}$	${}^O P_{12}$	${}^O P_{23}$	${}^S R_{21}$
1	39683.809	39680.029	39693.757	39681.910B	39683.989	39681.910B	39689.878			
3	39677.914	39673.101	39683.110	39675.963	39675.177	39675.040	39681.025	39667.573B		39688.447
5	39666.002	39660.617	39669.592	39664.009	39662.614B	39662.614B	39667.573B	39650.084	39649.238	
7	39648.311	39642.580	39650.989	39646.296	39644.570B	39644.570B	39649.018	39626.640		39669.862
9	39624.951	39618.977	39627.059	39622.909	39620.939	39621.022	39625.118	39597.436		39652.221
11	39595.951	39589.822	39597.660	39593.885	39591.747	39591.885	39595.742	39562.577	39560.570	39628.952
13	39561.346	39555.081	39562.751	39559.269	39556.992	39557.172	39560.856	39522.090	39519.932	
15	39521.125	39514.772	39522.315	39519.024	39516.644	39516.868	39520.424	39475.996	39473.674	
17	39475.280	39468.836	39476.927	39473.158	39470.699	39470.963	39475.066	39424.331		
19	39423.797	39417.286		39421.663	39419.134	39419.432	39422.848	39367.006		
21	39366.667	39360.079		39364.511	39361.920	39362.257	39365.602	39304.094		
23	39303.857	39297.228		39301.688	39299.056	39299.421	39302.704			
25	39235.370			39233.169	39230.493	39230.905	39234.144			

A(8)-X(0) band:

N	${}^Q Q_1$	${}^Q Q_2$	${}^Q Q_3$	${}^Q R_{12}$	${}^Q R_{23}$	${}^Q P_{21}$	${}^Q P_{32}$	${}^O P_{12}$	${}^O P_{23}$	${}^S R_{21}$
1	40169.170	40165.438	40179.404	40167.304B	40169.400	40167.304B	40175.433			
3	40162.903	40158.134	40168.351	40160.954	40160.209	40160.078	40166.261	40152.913	40153.163	40172.784
5	40150.312	40144.951	40154.123	40148.326	40146.952B	40146.952B	40152.114	40135.080	40134.272	40165.279
7	40131.638	40125.895	40134.518	40129.622	40127.914B	40127.914B	40132.546	40110.953	40109.559	40151.883
9	40106.974	40101.018	40109.255	40104.933	40103.008B	40103.008B	40107.315	40080.769	40079.026	
11	40076.337B	40070.230	40078.262	40074.298	40072.159	40072.293	40076.337B	40044.599	40042.607	
13	40039.801	40033.541	40041.383	40037.718	40035.438	40035.621	40039.476	40002.498	40000.321	
15	39997.296	39990.932	39998.637	39995.194	39992.809	39993.030	39996.766	39954.453	39952.138	40039.194
17	39948.825	39942.372		39946.705	39944.240	39944.498	39948.139	39900.467	39898.064	
19	39894.376	39887.859	39895.374	39892.239	39889.692	39889.991	39893.555			
21	39833.911	39827.316		39831.757	39829.149	39829.488	39832.983			
23	39767.387	39760.727		39765.245	39762.567	39762.931	39766.416			

A(9)-X(0) band:

N	${}^Q Q_1$	${}^Q Q_2$	${}^Q Q_3$	${}^Q R_{12}$	${}^Q R_{23}$	${}^Q P_{21}$	${}^Q P_{32}$	${}^O P_{12}$	${}^O P_{23}$	${}^S R_{21}$
1	40586.860	40583.191		40585.019B	40587.151	40585.019B	40593.577			
3	40580.135	40575.388	40586.067	40578.184	40577.474	40577.340	40583.988	40570.606		
5	40566.704	40561.344	40570.954	40564.713	40563.347B	40563.347B	40568.950	40552.306	40551.534	40580.420
7	40546.785	40541.050	40550.060	40544.770	40543.042B	40543.042B	40548.084	40527.349	40525.974	40565.349
9	40520.476	40514.482	40523.111	40518.435	40516.466B	40516.466B	40521.169	40495.915	40494.141	40543.988
11	40487.798	40481.609	40490.005	40485.737	40483.534	40483.673	40488.080	40458.100	40456.047	
13	40448.754B	40442.414	40450.649	40446.674	40444.327	40444.508	40448.754B	40413.928	40411.702	40482.222
15	40403.330	40396.882	40404.973	40401.231	40398.772	40398.992	40403.094	40363.403	40361.070	40441.778
17	40351.493	40344.956	40353.023	40349.370	40346.821	40347.081	40351.149	40306.518	40304.057	40394.860
19	40293.199	40286.569	40291.059	40288.433	40288.730	40292.717	40243.216			
21	40228.394	40221.719		40226.235	40223.551	40223.884	40227.834	40173.510		
23	40157.099			40154.922		40152.477	40156.396			

A(10)-X(0) band:

N	${}^Q Q_1$	${}^Q Q_2$	${}^Q Q_3$	${}^Q R_{12}$	${}^Q R_{23}$	${}^Q P_{21}$	${}^Q P_{32}$	${}^O P_{12}$	${}^O P_{23}$	${}^S R_{21}$
1	40922.451	40918.855	40934.466	40920.585	40922.809	40920.736	40930.256			
3	40915.138	40910.403		40913.190	40912.489B	40912.353	40920.249	40906.204	40906.546	
5	40900.603	40895.175	40905.998	40898.615	40897.177B	40897.177B	40903.987	40887.310	40886.527	40912.489B
7	40879.032	40873.169	40883.311	40877.016	40875.157B	40875.157B	40881.343	40861.245	40859.783	40895.175B
9	40850.504	40844.313	40854.068	40848.463	40846.299B	40846.299B	40852.116	40828.162	40826.219	40870.965
11	40815.030	40808.621	40818.086	40812.968	40810.539	40810.677	40816.178	40788.125	40785.913	
13	40772.586	40766.006	40775.321	40770.503	40767.894	40768.077	40773.413	40741.164	40738.692	
15	40723.134	40716.397	40725.613	40721.035	40718.278	40718.498	40723.735	40687.228	40684.631	
17	40666.597	40659.741		40664.478	40661.598	40661.860	40667.044	40626.321		
19	40602.886	40595.922		40600.753	40597.763	40598.063	40603.235			
21	40531.889	40524.816		40529.734	40526.650	40526.973	40532.195			
23	40453.453	40446.300		40451.279	40448.099	40448.464	40453.739			
25	40367.376			40365.158	40361.866	40362.298	40367.655			

A(11)-X(0) band:

N	${}^Q Q_1$	${}^Q Q_2$	${}^Q Q_3$	${}^Q R_{12}$	${}^Q R_{23}$	${}^Q P_{21}$	${}^Q P_{32}$	${}^O P_{12}$
1	41155.616	41152.138		41153.749	41156.080	41154.035	41167.672	
3	41147.341	41142.669	41158.724	41145.393	41144.759	41144.626	41156.648	41139.367
5	41131.257	41125.839	41140.511	41129.270	41127.793B	41127.793B	41138.517	41119.521
7	41106.945	41100.862	41115.261	41104.931	41102.827B	41102.827B	41113.261	41091.913
9	41074.368	41067.960	41082.211	41072.324	41069.948B	41069.948B	41080.263	41056.071
11	41036.234	41029.543	41041.803	41034.171	41031.460	41031.603	41039.872	41011.995
13	40988.215	40981.088	40993.047	40986.129	40982.958	40983.144	40991.127	40962.364
15	40928.488			40926.374	40924.029	40924.228		

References:

Fourier Transform Spectroscopy of the Herzberg I Bands of O₂, K. Yoshino, J.E. Murray, J.R. Esmond, Y. Sun and W.H. Parkinson, A.P. Thorne, R.C.M. Learner and G. Cox, *Can. J. Phys.* **72**, 1101-1108 (1994).