

The term values of the $A(v) \ ^3\Sigma_u^+$ level of the $^{16}\text{O}_2$.

N	$v = 4$			$v = 5$		
	$F_1(N)$	$F_2(N)$	$F_3(N)$	$F_1(N)$	$F_2(N)$	$F_3(N)$
1	37914.007	37911.938	37921.919	38549.989	38547.989	38557.877
3	37923.267	37920.247	37928.174	38558.997	38556.029	38563.902
5	37938.678	37935.151	37942.041	38573.970	38570.476	38577.383
7	37960.494	37956.650	37963.035	38595.158	38591.360	38597.738
9	37988.797	37984.770	37990.836	38622.653	38618.642	38624.706
11	38023.643	38019.458	38025.326	38656.472	38652.330	38658.195
13	38065.032	38060.741	38066.417	38696.646	38692.390	38698.116
15	38112.967	38108.591	38114.278	38743.158	38738.829	38744.448
17	38167.418	38162.975	38168.554	38796.002	38791.602	38797.142
19	38228.390	38223.917	38229.391	38855.154	38850.709	38856.179
21	38295.843	38291.348	38296.779	38920.597	38916.104	38921.526
23				38992.310	38987.778	38993.174
25				39070.247	39065.672	39071.068

N	$v = 6$			$v = 7$		
	$F_1(N)$	$F_2(N)$	$F_3(N)$	$F_1(N)$	$F_2(N)$	$F_3(N)$
1	39142.189	39140.236	39150.051	39684.808	39682.904	39692.753
3	39150.916	39147.998	39155.883	39693.215	39690.344	39698.276
5	39165.406	39161.964	39168.868	39707.137	39703.740	39710.701
7	39185.881	39182.127	39188.514	39726.790	39723.070	39729.512
9	39212.440	39208.477	39214.506B	39752.262	39748.339	39754.469
11	39245.103	39241.011	39246.877	39783.577	39779.514	39785.431
13	39283.897	39279.686	39285.417	39820.763	39816.587	39822.352
15	39328.802	39324.514	39330.127	39863.789	39859.530	39865.189
17	39379.802	39375.452	39380.996	39912.635	39908.316	39914.542
19	39436.875	39432.470	39437.960	39967.278	39962.910	39968.466
21	39500.014	39495.563	39500.985	40027.684	40023.266	40028.776
23	39569.155	39564.671	39570.075	40093.807	40089.364	40094.827
25	39644.306		39646.504	40165.618	40161.154	40166.589

N	$v = 8$			$v = 9$		
	$F_1(N)$	$F_2(N)$	$F_3(N)$	$F_1(N)$	$F_2(N)$	$F_3(N)$
1	40170.166	40168.313	40178.314	40587.858	40586.066	40596.452
3	40178.205	40175.379	40183.514	40595.436	40592.642	40601.238
5	40191.450	40188.078	40195.240	40607.841	40604.473	40612.073
7	40210.117	40206.414	40213.041	40625.265	40621.542	40628.579
9	40234.286	40230.367	40236.666	40647.787	40643.825	40650.520
11	40263.987	40259.922	40266.026	40675.426	40671.301	40677.770
13	40299.216	40295.036	40300.974	40708.170	40703.923	40710.251
15	40339.957	40335.693	40341.529	40745.993	40741.654	40747.858
17	40386.181	40381.854	40387.615	40788.846	40784.436	40790.627
19	40437.856	40433.471	40439.173	40836.678	40832.206	40838.335
21	40494.929	40490.499	40496.157	40889.410	40884.900	40891.008
23	40557.343	40552.882	40558.539	40947.046	40942.424	40948.519
25				41009.293	41004.692	

N	$v = 10$			$v = 11$		
	$F_1(N)$	$F_2(N)$	$F_3(N)$	$F_1(N)$	$F_2(N)$	$F_3(N)$
1	40923.454	40921.731	40933.131	41156.616	41155.020	41170.595
3	40930.440	40927.655	40937.499	41162.644	41159.925	41173.899
5	40941.741	40938.303	40947.113	41172.396	41168.922	41181.636
7	40957.511	40953.664	40961.837	41185.424	41181.327	41193.761
9	40977.815	40973.672	40981.468	41201.679	41197.307	41209.615
11	41002.658	40998.307	41005.864	41223.861	41219.230	41229.563
13	41032.000	41027.493	41034.911	41247.628	41242.557	41252.624
15	41065.797	41061.161	41068.498	41271.144	41266.902	
17	41103.953	41099.215	41106.520			
19	41146.368	41141.541	41148.853			
21	41192.906	41187.993	41195.369			
23	41243.401	41238.414	41245.862			
25	41207.620	41292.537	41300.100			

B: Values are averaged of all blended lines.

References:

1. *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).