

TABLES

TABLE I. Rovibrational energies (in cm^{-1}) relative to $O_2(^1\Delta_g)_{v=0} + O_2(^1\Delta_g)_{v=0}$ for the $K = 0$ states of symmetry A_1^+

J=0	J=1	J=2	J=3	J=4	J=5	J=6	$B_p = \frac{B+C}{2}$
-23.8998		-23.5393		-22.6988		-21.3797	.0600
-22.7724		-22.4139		-21.5781		-20.2664	.0597
-21.2466		-20.8980		-20.0852		-18.8097	.0581
-13.8509		-13.4967		-12.6709		-11.3748	.0590
-12.8636		-12.5132		-11.6962		-10.4138	.0584
-5.8321		-5.4790		-4.6556		-3.3634	.0588
-5.4503		-5.0967		-4.2723		-2.9783	.0589
-4.9749		-4.6319		-3.8321		-2.5764	.0571
-4.6750		-4.3232		-3.5027		-2.2147	.0586
-3.7248		-3.3833		-2.5869		-1.3363	.0569
-3.2803		-2.9287		-2.1087		-.8215	.0586
-2.2715		-1.9229		-1.1099			.0581
-1.7117		-1.3667		-.5625			.0574
-.7008		-.3576					.0572
-.1263							.0578
	-14.6544		-14.0603		-12.9920		.0594
	-13.3399		-12.7517		-11.6940		.0588
	-12.7294		-12.1407		-11.0818		.0589
	-1.9785		-1.3900		-.3316		.0588
	-.8183		-.2340				.0584

TABLE II. Rovibrational energies (in cm^{-1}) relative to $O_2(^1\Delta_g)_{v=0} + O_2(^1\Delta_g)_{v=0}$ for the $K = 0$ states of symmetry B_1^-

J=0	J=1	J=2	J=3	J=4	J=5	J=6	$B_p = \frac{B+C}{2}$
-23.1393		-22.7808		-21.9450		-20.6332	.0597
-21.2503		-20.9018		-20.0890		-18.8135	.0581
-14.5252		-14.1692		-13.3390		-12.0360	.0593
-13.4282		-13.0736		-12.2469		-10.9496	.0591
-12.8295		-12.4784		-11.6596		-10.3740	.0585
-5.7460		-5.3924		-4.5677		-3.2734	.0589
-5.1482		-4.7953		-3.9724		-2.6808	.0588
-4.0647		-3.7140		-2.9009		-1.6431	.0581
-4.0222		-3.6797		-2.8764		-1.5964	.0574
-1.9500		-1.6036		-.7959			.0577
-1.2182		-.8740		-.0713			.0573
-.3259							.0571
	-13.9354		-13.3440		-12.2807		.0591
	-12.9596		-12.3741		-11.3213		.0585
	-2.7802		-2.1885		-1.1244		.0592
	-1.3501		-.7633				.0587
	-.6207		-.0336				.0587

TABLE III. Rovibrational energies (in cm^{-1}) relative to $O_2(^1\Delta_g)_{v=0} + O_2(^1\Delta_g)_{v=0}$ for the $K = 1$ states of symmetry A_1^+

J=1	J=2	J=3	J=4	J=5	J=6	$B_p = \frac{B+C}{2}$
-23.0346	-22.7952	-22.4362	-21.9578	-21.3603	-20.6438	.0598
-22.0763	-21.8404	-21.4866	-21.0152	-20.4262	-19.7201	.0589
-14.6212	-14.3837	-14.0277	-13.5531	-12.9603	-12.2494	.0593
-13.9156	-13.6790	-13.3241	-12.8513	-12.2606	-11.5523	.0591
-13.4633	-13.2279	-12.8749	-12.4045	-11.8168	-11.1122	.0588
-13.0862	-12.8507	-12.4977	-12.0272	-11.4394	-10.7346	.0588
-12.5603	-12.3260	-11.9747	-11.5066	-10.9218	-10.2204	.0585
-5.5016	-5.2664	-4.9136	-4.4434	-3.8560	-3.1517	.0588
-4.6814	-4.4465	-4.0943	-3.6249	-3.0385	-2.3353	.0587
-3.9763	-3.7488	-3.4076	-2.9528	-2.3845	-1.7028	.0569
-3.3071	-3.0725	-2.7207	-2.2518	-1.6661	-.9637	.0586
-2.9707	-2.7365	-2.3855	-1.9183	-1.3355	-.6382	.0585
-2.7483	-2.5183	-2.1732	-1.7127	-1.1365	-.4440	.0575
-2.0122	-1.7785	-1.4279	-.9607	-.3767		.0584
-1.3225	-1.0885	-.7377	-.2701			.0585
-.8409	-.6078	-.2581				.0583

TABLE IV. Rovibrational energies (in cm^{-1}) relative to $O_2(^1\Delta_g)_{v=0} + O_2(^1\Delta_g)_{v=0}$ for the $K = 1$ states of symmetry B_1^-

J=1	J=2	J=3	J=4	J=5	J=6	$B_p = \frac{B+C}{2}$
-23.7009	-23.4611	-23.1017	-22.6226	-22.0241	-21.3065	.0599
-22.1463	-21.9106	-21.5571	-21.0861	-20.4976	-19.7920	.0589
-14.6849	-14.4473	-14.0911	-13.6164	-13.0234	-12.3123	.0594
-14.0115	-13.7749	-13.4201	-12.9474	-12.3568	-11.6486	.0591
-13.4220	-13.1854	-12.8305	-12.3576	-11.7669	-11.0587	.0591
-13.2279	-12.9930	-12.6408	-12.1713	-11.5848	-10.8814	.0587
-12.6420	-12.4079	-12.0570	-11.5893	-11.0050	-10.3044	.0585
-5.6804	-5.4453	-5.0927	-4.6228	-4.0358	-3.3318	.0588
-5.1330	-4.8978	-4.5451	-4.0751	-3.4880	-2.7839	.0588
-4.7357	-4.5073	-4.1647	-3.7081	-3.1375	-2.4531	.0571
-4.0598	-3.8251	-3.4731	-3.0040	-2.4180	-1.7153	.0586
-2.9571	-2.7270	-2.3821	-1.9226	-1.3489	-.6614	.0575
-2.4484	-2.2171	-1.8700	-1.4071	-.8284	-.1337	.0579
-1.8627	-1.6289	-1.2782	-.8108	-.2268		.0584
-1.4910	-1.2567	-.9054	-.4372			.0585
-.9903	-.7551	-.4023				.0588
-.1784						.0578

TABLE V. Rovibrational energies (in cm^{-1}) relative to $O_2(^1\Delta_g)_{v=0} + O_2(^1\Delta_g)_{v=0}$ for the $K = 2$ states of symmetry A_1^+

J=2	J=3	J=4	J=5	J=6	$B_p = \frac{B+C}{2}$
-23.2158	-22.8583	-22.3819	-21.7868	-21.0733	.0595
-22.1587	-21.8034	-21.3298	-20.7383	-20.0290	.0592
-14.6278	-14.2714	-13.7965	-13.2033	-12.4919	.0594
-14.1319	-13.7760	-13.3016	-12.7089	-11.9983	.0593
-13.4376	-13.0826	-12.6096	-12.0188	-11.3102	.0591
-12.4212	-12.0703	-11.6026	-11.0183	-10.3177	.0585
-5.5411	-5.1884	-4.7183	-4.1310	-3.4268	.0588
-4.7621	-4.4092	-3.9390	-3.3515	-2.6471	.0588
-4.1927	-3.8496	-3.3923	-2.8211	-2.1360	.0572
-3.4572	-3.1053	-2.6363	-2.0504	-1.3478	.0586
-3.1180	-2.7688	-2.3039	-1.7240	-1.0299	.0581
-2.8577	-2.5132	-2.0533	-1.4778	-.7860	.0575
-2.3202	-1.9677	-1.4978	-.9106	-.2065	.0587
-1.8416	-1.4884	-1.0177	-.4295		.0588
-1.1146	-.7639	-.2966			.0584

TABLE VI. Rovibrational energies (in cm^{-1}) relative to $O_2(^1\Delta_g)_{v=0} + O_2(^1\Delta_g)_{v=0}$ for the $K = 2$ states of symmetry B_1^-

J=2	J=3	J=4	J=5	J=6	$B_p = \frac{B+C}{2}$
-22.4772	-22.1221	-21.6488	-21.0577	-20.3488	.0592
-14.7423	-14.3855	-13.9101	-13.3161	-12.6039	.0594
-14.0185	-13.6626	-13.1882	-12.5956	-11.8850	.0593
-13.5292	-13.1738	-12.7001	-12.1083	-11.3988	.0592
-12.5666	-12.2156	-11.7478	-11.1635	-10.4628	.0585
-5.2198	-4.8667	-4.3961	-3.8082	-3.1033	.0588
-4.1706	-3.8182	-3.3486	-2.7619	-2.0583	.0587
-3.3730	-3.0264	-2.5651	-1.9895	-1.3004	.0577
-3.0194	-2.6706	-2.2051	-1.6226	-.9229	.0582
-2.4530	-2.0988	-1.6267	-1.0369	-.3298	.0590
-1.9752	-1.6213	-1.1497	-.5605		.0590
-1.2695	-.9162	-.4452			.0589
-.0643					.0578

TABLE VII. Rovibrational energies (in cm^{-1}) relative to $O_2(^1\Delta_g)_{v=0} + O_2(^1\Delta_g)_{v=1}$ for the $K = 0$ states of symmetry A_1^+

J=0	J=1	J=2	J=3	J=4	J=5	J=6	$B_p = \frac{B+C}{2}$
-24.0024		-23.6419		-22.8014		-21.4823	.0600
-22.8750		-22.5165		-21.6807		-20.3690	.0597
-21.3492		-21.0006		-20.1878		-18.9123	.0581
-13.9558		-13.6016		-12.7757		-11.4796	.0590
-12.9700		-12.6196		-11.8025		-10.5199	.0584
-6.0332		-5.6801		-4.8567		-3.5644	.0588
-5.6543		-5.3007		-4.4763		-3.1823	.0589
-5.0836		-4.7402		-3.9397		-2.6833	.0572
-4.8702		-4.5188		-3.6991		-2.4119	.0586
-3.8317		-3.4900		-2.6931		-1.4422	.0569
-3.4801		-3.1287		-2.3092		-1.0225	.0585
-2.3755		-2.0269		-1.2139			.0581
-1.8154		-1.4705		-.6662			.0575
-.8045		-.4614					.0572
-.2306							.0578
	-14.7571		-14.1630		-13.0947		.0594
	-13.4425		-12.8543		-11.7967		.0588
	-12.8321		-12.2434		-11.1845		.0589
	-2.0825		-1.4939		-.4355		.0588
	-.9227		-.3383				.0584

TABLE VIII. Rovibrational energies (in cm^{-1}) relative to $O_2(^1\Delta_g)_{v=0} + O_2(^1\Delta_g)_{v=1}$ for the $K = 0$ states of symmetry B_1^-

J=0	J=1	J=2	J=3	J=4	J=5	J=6	$B_p = \frac{B+C}{2}$
-23.2418		-22.8834		-22.0475		-20.7358	.0597
-21.3529		-21.0044		-20.1916		-18.9161	.0581
-14.6288		-14.2727		-13.4425		-12.1395	.0593
-13.5327		-13.1781		-12.3513		-11.0539	.0591
-12.9356		-12.5844		-11.7655		-10.4798	.0585
-5.9488		-5.5951		-4.7705		-3.4762	.0589
-5.3495		-4.9967		-4.1739		-2.8823	.0588
-4.2632		-3.9114		-3.0910		-1.8039	.0586
-4.1279		-3.7866		-2.9905		-1.7399	.0569
-2.0541		-1.7077		-.9000			.0577
-1.3217		-.9775		-.1748			.0573
-.4300		-.0874					.0571
	-14.0381		-13.4467		-12.3834		.0591
	-13.0622		-12.4768		-11.4239		.0585
	-2.8834		-2.2916		-1.2275		.0592
	-1.4541		-.8672				.0587
	-.7244		-.1373				.0587

TABLE IX. Rovibrational energies (in cm^{-1}) relative to $O_2(^1\Delta_g)_{v=0} + O_2(^1\Delta_g)_{v=1}$ for the $K = 0$ states of symmetry A_2^-

J=0	J=1	J=2	J=3	J=4	J=5	J=6	$B_p = \frac{B+C}{2}$
-14.8760		-14.5194		-13.6880		-12.3832	.0594
-13.5602		-13.2072		-12.3841		-11.0924	.0588
-12.9499		-12.5966		-11.7726		-10.4792	.0589
-2.2002		-1.8470		-1.0233			.0588
-1.0396		-.6889					.0584
	-23.8822		-23.2816		-22.2015		.0600
	-22.7555		-22.1582		-21.0842		.0597
	-21.2330		-20.6522		-19.6078		.0581
	-13.8377		-13.2476		-12.1863		.0590
	-12.8532		-12.2693		-11.2193		.0584
	-5.9155		-5.3271		-4.2691		.0588
	-5.5364		-4.9473		-3.8879		.0589
	-4.9691		-4.3970		-3.3684		.0572
	-4.7530		-4.1674		-3.1139		.0586
	-3.7178		-3.1484		-2.1243		.0569
	-3.3630		-2.7774		-1.7242		.0585
	-2.2593		-1.6784		-.6334		.0581
	-1.7004		-1.1257		-.0923		.0575
	-.6901		-.1183				.0572
	-.1149						.0578

TABLE X. Rovibrational energies (in cm^{-1}) relative to $O_2(^1\Delta_g)_{v=0} + O_2(^1\Delta_g)_{v=1}$ for the $K = 0$ states of symmetry B_2^+

J=0	J=1	J=2	J=3	J=4	J=5	J=6	$B_p = \frac{B+C}{2}$
-14.1564		-13.8015		-12.9740		-11.6753	.0591
-13.1794		-12.8280		-12.0087		-10.7226	.0585
-3.0018		-2.6466		-1.8185		-.5188	.0592
-1.5716		-1.2193		-.3980			.0587
-.8419		-.4895					.0587
	-23.1223		-22.5251		-21.4510		.0597
	-21.2367		-20.6559		-19.6116		.0581
	-14.5101		-13.9168		-12.8500		.0593
	-13.4144		-12.8236		-11.7613		.0591
	-12.8185		-12.2334		-11.1809		.0585
	-5.8309		-5.2416		-4.1819		.0589
	-5.2319		-4.6440		-3.5866		.0588
	-4.1459		-3.5597		-2.5056		.0586
	-4.0141		-3.4454		-2.4221		.0569
	-1.9387		-1.3614		-.3235		.0577
	-1.2069		-.6334				.0573
	-.3158						.0571

TABLE XI. Rovibrational energies (in cm^{-1}) relative to $O_2(^1\Delta_g)_{v=0} + O_2(^1\Delta_g)_{v=1}$ for the $K = 1$ states of symmetries A_1^+ and A_2^-

J=1	J=2	J=3	J=4	J=5	J=6	$B_p = \frac{B+C}{2}$
-23.1372	-22.8978	-22.5388	-22.0604	-21.4628	-20.7463	.0598
-22.1789	-21.9429	-21.5892	-21.1178	-20.5288	-19.8226	.0589
-14.7244	-14.4870	-14.1309	-13.6563	-13.0635	-12.3526	.0593
-14.0187	-13.7821	-13.4273	-12.9544	-12.3637	-11.6554	.0591
-13.5678	-13.3324	-12.9793	-12.5089	-11.9212	-11.2166	.0588
-13.1904	-12.9550	-12.6019	-12.1314	-11.5436	-10.8387	.0588
-12.6646	-12.4303	-12.0790	-11.6108	-11.0260	-10.3246	.0585
-5.7027	-5.4674	-5.1147	-4.6445	-4.0572	-3.3529	.0588
-4.8809	-4.6460	-4.2937	-3.8243	-3.2378	-2.5346	.0587
-4.0811	-3.8536	-3.5124	-3.0576	-2.4894	-1.8078	.0569
-3.5087	-3.2741	-2.9223	-2.4534	-1.8677	-1.1653	.0586
-3.0744	-2.8401	-2.4892	-2.0220	-1.4392	-.7420	.0584
-2.8518	-2.6218	-2.2766	-1.8161	-1.2399	-.5474	.0575
-2.1162	-1.8824	-1.5319	-1.0646	-.4807		.0584
-1.4267	-1.1927	-.8418	-.3742			.0585
-.9452	-.7120	-.3624				.0583
-.1020						.0579

TABLE XII. Rovibrational energies (in cm^{-1}) relative to $O_2(^1\Delta_g)_{v=0} + O_2(^1\Delta_g)_{v=1}$ for the $K = 1$ states of symmetries B_1^- and B_2^+

J=1	J=2	J=3	J=4	J=5	J=6	$B_p = \frac{B+C}{2}$
-23.8035	-23.5637	-23.2042	-22.7251	-22.1267	-21.4090	.0599
-22.2489	-22.0132	-21.6597	-21.1886	-20.6002	-19.8945	.0589
-14.7878	-14.5503	-14.1941	-13.7193	-13.1263	-12.4152	.0594
-14.1156	-13.8791	-13.5243	-13.0515	-12.4609	-11.7528	.0591
-13.5254	-13.2888	-12.9339	-12.4610	-11.8703	-11.1621	.0591
-13.3322	-13.0972	-12.7449	-12.2754	-11.6889	-10.9855	.0587
-12.7468	-12.5127	-12.1618	-11.6940	-11.1097	-10.4090	.0585
-5.8815	-5.6464	-5.2938	-4.8239	-4.2369	-3.5329	.0588
-5.3334	-5.0982	-4.7454	-4.2753	-3.6881	-2.9839	.0588
-4.8408	-4.6125	-4.2700	-3.8134	-3.2430	-2.5589	.0571
-4.2611	-4.0264	-3.6745	-3.2054	-2.6194	-1.9168	.0586
-3.0602	-2.8301	-2.4852	-2.0257	-1.4520	-.7644	.0575
-2.5518	-2.3204	-1.9734	-1.5105	-.9318	-.2371	.0578
-1.9670	-1.7331	-1.3824	-.9150	-.3310		.0584
-1.5952	-1.3609	-1.0096	-.5414			.0585
-1.0938	-.8585	-.5057	-.0356			.0588
-.2832	-.0518					.0578

TABLE XIII. Rovibrational energies (in cm^{-1}) relative to $O_2(^1\Delta_g)_{v=0} + O_2(^1\Delta_g)_{v=1}$ for the $K = 2$ states of symmetries A_1^+ and A_2^-

J=2	J=3	J=4	J=5	J=6	$B_p = \frac{B+C}{2}$
-23.3184	-22.9609	-22.4845	-21.8894	-21.1759	.0595
-22.2613	-21.9059	-21.4324	-20.8409	-20.1316	.0592
-14.7309	-14.3745	-13.8997	-13.3064	-12.5950	.0594
-14.2359	-13.8799	-13.4055	-12.8128	-12.1022	.0593
-13.5414	-13.1865	-12.7135	-12.1226	-11.4140	.0591
-12.5258	-12.1749	-11.7072	-11.1229	-10.4223	.0585
-5.7431	-5.3904	-4.9203	-4.3331	-3.6289	.0588
-4.9634	-4.6105	-4.1402	-3.5527	-2.8483	.0588
-4.2968	-3.9537	-3.4965	-2.9253	-2.2404	.0572
-3.6583	-3.3064	-2.8374	-2.2515	-1.5489	.0586
-3.2222	-2.8730	-2.4081	-1.8282	-1.1341	.0581
-2.9609	-2.6163	-2.1565	-1.5810	-.8892	.0575
-2.4244	-2.0718	-1.6019	-1.0147	-.3106	.0587
-1.9455	-1.5923	-1.1215	-.5334		.0588
-1.2188	-.8681	-.4007			.0584

TABLE XIV. Rovibrational energies (in cm^{-1}) relative to $O_2(^1\Delta_g)_{v=0} + O_2(^1\Delta_g)_{v=1}$ for the $K = 2$ states of symmetries B_1^- and B_2^+

J=2	J=3	J=4	J=5	J=6	$B_p = \frac{B+C}{2}$
-22.5798	-22.2246	-21.7514	-21.1602	-20.4514	.0592
-14.8453	-14.4885	-14.0130	-13.4191	-12.7068	.0594
-14.1218	-13.7658	-13.2914	-12.6988	-11.9883	.0593
-13.6322	-13.2767	-12.8030	-12.2113	-11.5017	.0592
-12.6713	-12.3203	-11.8525	-11.2681	-10.5674	.0585
-5.4223	-5.0693	-4.5987	-4.0109	-3.3060	.0588
-4.3727	-4.0204	-3.5507	-2.9640	-2.2605	.0587
-3.4761	-3.1295	-2.6681	-2.0926	-1.4034	.0577
-3.1226	-2.7738	-2.3083	-1.7259	-1.0262	.0582
-2.5572	-2.2029	-1.7308	-1.1410	-.4338	.0590
-2.0793	-1.7254	-1.2538	-.6646		.0590
-1.3730	-1.0196	-.5486			.0589
-.1692					.0578