JOURNAL OF MOLECULAR SPECTROSCOPY 84, 405–423 (1980)

High Resolution Pure Rotational Spectrum of Water Vapor Enriched by $H_2{}^{17}O$ and $H_2{}^{18}O$

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The pure rotational spectrum of a mixture of $H_2{}^{16}O$, $H_2{}^{17}O$ and $H_2{}^{18}O$ between 50 and 730 cm^{-1} was recorded on the Fourier transform spectrometer at the University of Oulu. The resolution achieved was about 0.010 cm^{-1} and the precision of the unblended lines was better than 0.001 cm^{-1}. About 1100 lines were assigned. The measured line positions of $H_2{}^{17}O$ and $H_2{}^{18}O$ were compared with the values derived from the rotation and distortion constants given in the literature.

I. INTRODUCTION

As our previous work (*1*) indicated, the rotational levels of $H_2{}^{17}O$ and $H_2{}^{18}O$ in the ground state are known quite inaccurately. In that work we observed the strongest lines of $H_2{}^{17}O$ and $H_2{}^{18}O$ because the sample was in natural abundance. In the literature there are only a few laboratory works (e.g., (*1–5*)) concerning the pure rotational infrared spectra of $H_2{}^{17}O$ and $H_2{}^{18}O$, and they usually cover a narrow wavenumber region or the sample is in natural abundance.[1]

We felt there was a need for more extensive laboratory data on $H_2{}^{17}O$ and $H_2{}^{18}O$, for example in the field of atmospheric research. There is also a certain purely theoretical interest in the accurate rotational spectra of light asymmetric-top molecules to test the centrifugal distortion theory.

Because of these facts we decided to extend our previous work by measuring the pure rotational spectrum of water vapor enriched by $H_2{}^{17}O$ and $H_2{}^{18}O$.

II. EXPERIMENTAL DETAILS

The interferograms of water vapor enriched by $H_2{}^{17}O$ and $H_2{}^{18}O$ were recorded on the Michelson-type Fourier transform spectrometer (*9–12*) constructed in our laboratory. The water sample was from Norsk Hydro with the following relative abundances of $H_2{}^{16}O$, $H_2{}^{17}O$, and $H_2{}^{18}O$: 47, 24, and 29%, respectively. The whole region between 50 and 730 cm^{-1} was recorded in three parts using beam splitters 12, 5, and 2.5 μm in thickness. The measurement conditions are specified in Table I.

The interferograms, typically including 80 000–150 000 sampling points, were recorded out to an optical path difference of about 70 cm, which gives a truncation broadening of 0.0086 cm^{-1}. The aperture broadening was kept smaller than 0.0080 cm^{-1} in all cases, thus giving a theoretical resolution of about 0.0098

[1] In addition there are works (e.g., (*6–8*)) concerning the vibration–rotation bands of $H_2{}^{17}O$ and $H_2{}^{18}O$.

0022-2852/80/120405-19$02.00/0

TABLE I

The Measurement Conditions of the Spectra Shown in Figs. 1 and 2

Range (cm^{-1})	Total pressure (Torr)	Thickness of beam splitter (μm)	Filters	Windows of gas cell	Absorption path length (m)
50 - 210	0.8	12	black polyethylene	polyethylene	1
210 - 400	0.5	5	black polyethylene	polyethylene	3
400 - 730	4.2	2.5	OCLI*, L13200-9	KBr	3

* Optical Coating Laboratory, INC

cm^{-1}. The theoretical resolution is defined as the half-width of the line due to the convolution of the truncation and aperture broadening profiles. The optical path difference was measured by a stabilized single-frequency He–Ne laser (*13*) partly constructed in our laboratory.

The spectra were computed by the fast Fourier transform of 16 384 points using mathematical filtering and phase correction (*14*) simultaneously. The interval between the adjacent spectral points computed was typically 3×10^{-3} cm^{-1}. The line positions were computed directly from the spectral points produced by the fast Fourier transform by evaluating the center of gravity of the line in the three different ways described in our previous work (*1*). The wavenumber scale of the spectrum was calibrated using the most accurate rotational lines of $H_2{}^{16}O$.

III. RESULTS

The results are mainly represented in Figs. 1 and 2 and in Table II.

Figure 1 shows an overall view of the apodized spectrum recorded in three runs under the measurement conditions specified in Table I. In this spectrum the resolution is only 0.014 cm^{-1} because of apodization. The intensity scale of the spectrum was fixed so that the strongest line in each recording has 100% absorption in that scale. In Fig. 1 the line strengths are comparable with each other only within a narrow region, because no background correction has been made. The unapodized spectra with a resolution of about 0.010 cm^{-1} were used for assignment and for calculating the line positions. Figure 2 shows a part of the unapodized spectrum in the extended scale, verifying the achieved resolution of 0.010 cm^{-1} defined as the half-width of a weak absorption line.

Table II gives the observed wavenumbers of $H_2{}^{16}O$, $H_2{}^{17}O$, and $H_2{}^{18}O$ compared with the calculated ones. The calculated frequencies of the $H_2{}^{16}O$ lines were derived from the rotational energy levels given by Flaud *et al.* (*15*) and the calculated wavenumbers of the $H_2{}^{17}O$ and $H_2{}^{18}O$ lines were derived from the constants given by Helminger and De Lucia (*16*). In order to convert megahertz into cm^{-1}, we used the value 2.997925×10^8 $msec^{-1}$ for the velocity of light.

The calculated relative intensities of the lines were taken from our previous work (*1*) and they only give rough estimates, especially for the transitions with high J values, to help assignment. The intensity of the strongest line of $H_2{}^{16}O$, $H_2{}^{17}O$, and $H_2{}^{18}O$ at 202.686, 201.442, and 200.338 cm^{-1}, respectively, was set equal to unity. However, the line strengths in Fig. 1 depend on the relative abundances of $H_2{}^{16}O$, $H_2{}^{17}O$, and $H_2{}^{18}O$ in the sample.

The precision of the line position (*1*, *12*, *17*) is better than $\pm 10^{-3}$ cm^{-1} for unblended lines with absorption between 20 and 85%. The precision of frequency is therefore lower for the lines which are blended or weak or broadened by absorption. As an example of blended lines we can give a doublet with the line numbers 100 and 101. Because of partial overlapping, the observed wavenumbers 96.2133 and 96.2262 cm^{-1} of the doublet components are shifted towards each other as compared with the calculated wavenumbers 96.2089 $\pm$ 0.0019 and 96.2316 $\pm$ 0.0018 cm^{-1}.

In Table II there are lines which are not clearly resolved in Fig. 1 because of apodization. Lower pressures than those given in Table I were also used in order to obtain the positions of the lines which are strong and very near each other.

Because of our earlier work (*1*), there were no difficulties in assigning all the observed lines due to $H_2{}^{16}O$. A majority of the lines of $H_2{}^{17}O$ and $H_2{}^{18}O$ were also successfully assigned with the help of the calculated wavenumbers and intensities listed in Table II. However, as it can be seen from this table, the coefficients of Ref. (*16*) fail to predict satisfactorily the line positions of the transitions where high J values are involved. Especially when both J and K_a are large, the difference between the observed and the calculated wavenumbers can be more than 1 cm^{-1}. Despite the application of the Fraley–Rao interpolation rule (*18*), some lines remained unassigned until we got more reliable values for the levels with high J values. These were obtained in the usual manner by fitting the observed differences in frequencies to the Watson-type Hamiltonian. The results of Ref. (*16*) were used as the initial values for the parameters. It was also necessary to add some higher-order coefficients, e.g., the coefficient of the operator $\hat{P}_z^{12}$, so that we had 23 parameters in our Hamiltonian. After the first fit it was possible to assign additional transitions, which were then included in the fit. This process was repeated until practically all the lines of $H_2{}^{17}O$ and $H_2{}^{18}O$ appearing in the spectrum were successfully assigned. The greatest differences between the calculated and the observed wavenumbers after this procedure were less than 0.008 cm^{-1} for both $H_2{}^{17}O$ and $H_2{}^{18}O$ lines.

We emphasize that the purpose of the fit at that stage of our work was only to complete the assignment of the spectrum. The work (*19*), where more attention will be paid to the statistical aspects, such as the weighting of the observations as well as the examination of different models, is now going on.

IV. DISCUSSION

As Table II shows, we were able to improve considerably the precision of the line positions of $H_2{}^{17}O$ and $H_2{}^{18}O$ over the whole far-infrared spectral region. Further, our preliminary fits predict that the precision of the centrifugal distortion coefficients and energy levels can be increased by using our observed data. How-

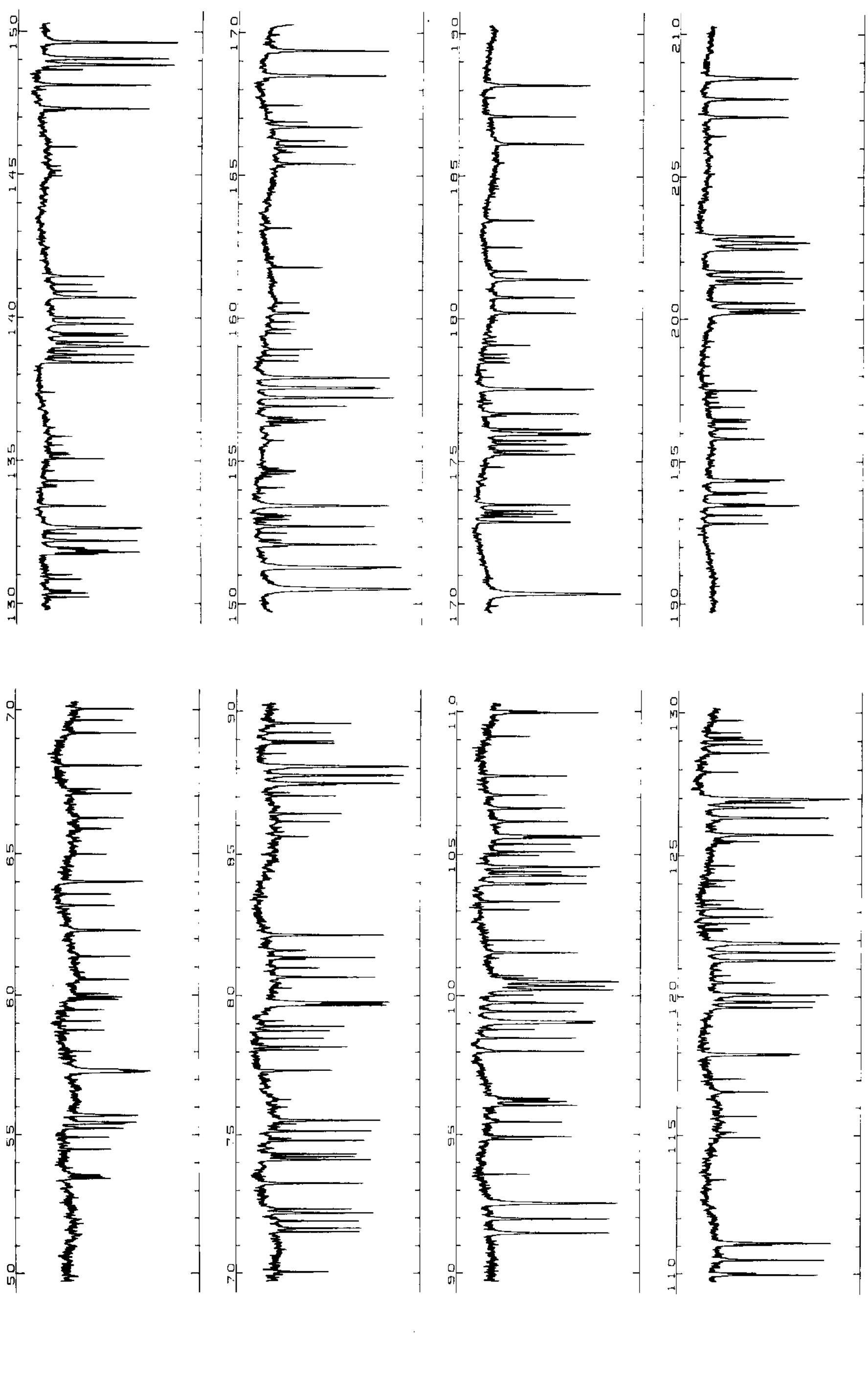

FIG. 1. Pure rotational spectrum of the mixture of $H_2{}^{16}O$, $H_2{}^{17}O$, and $H_2{}^{18}O$ between 50 and 730 cm^{-1}. The measurement conditions are specified in Table I. The relative abundances of $H_2{}^{16}O$, $H_2{}^{17}O$, and $H_2{}^{18}O$ are 47, 24, and 29%, respectively. Resolution is about 0.014 cm^{-1} limited by apodization. The very weak lines between 650 and 700 cm^{-1} are the rotational lines of the ν_2 band of CO_2.

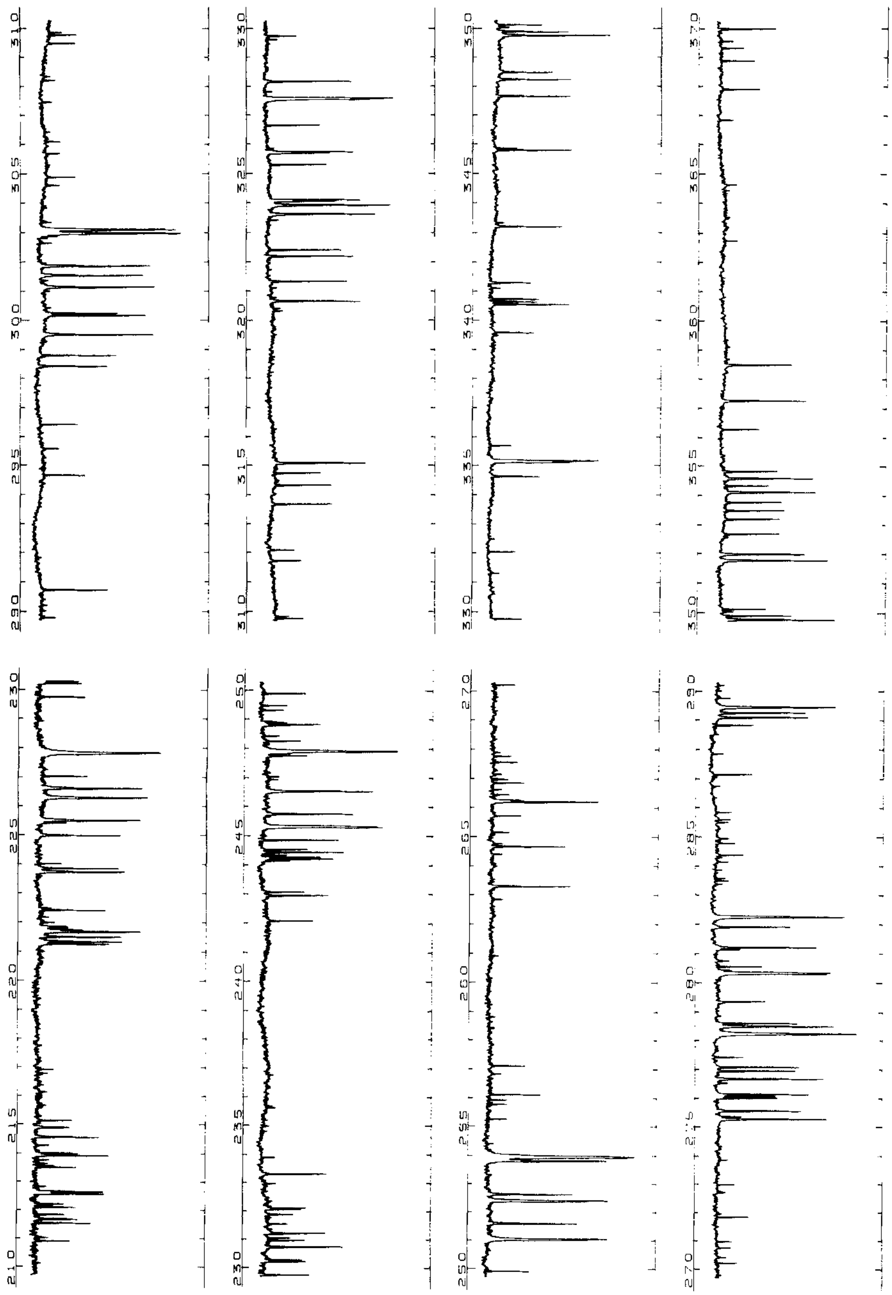

FIGURE 1—*Continued*

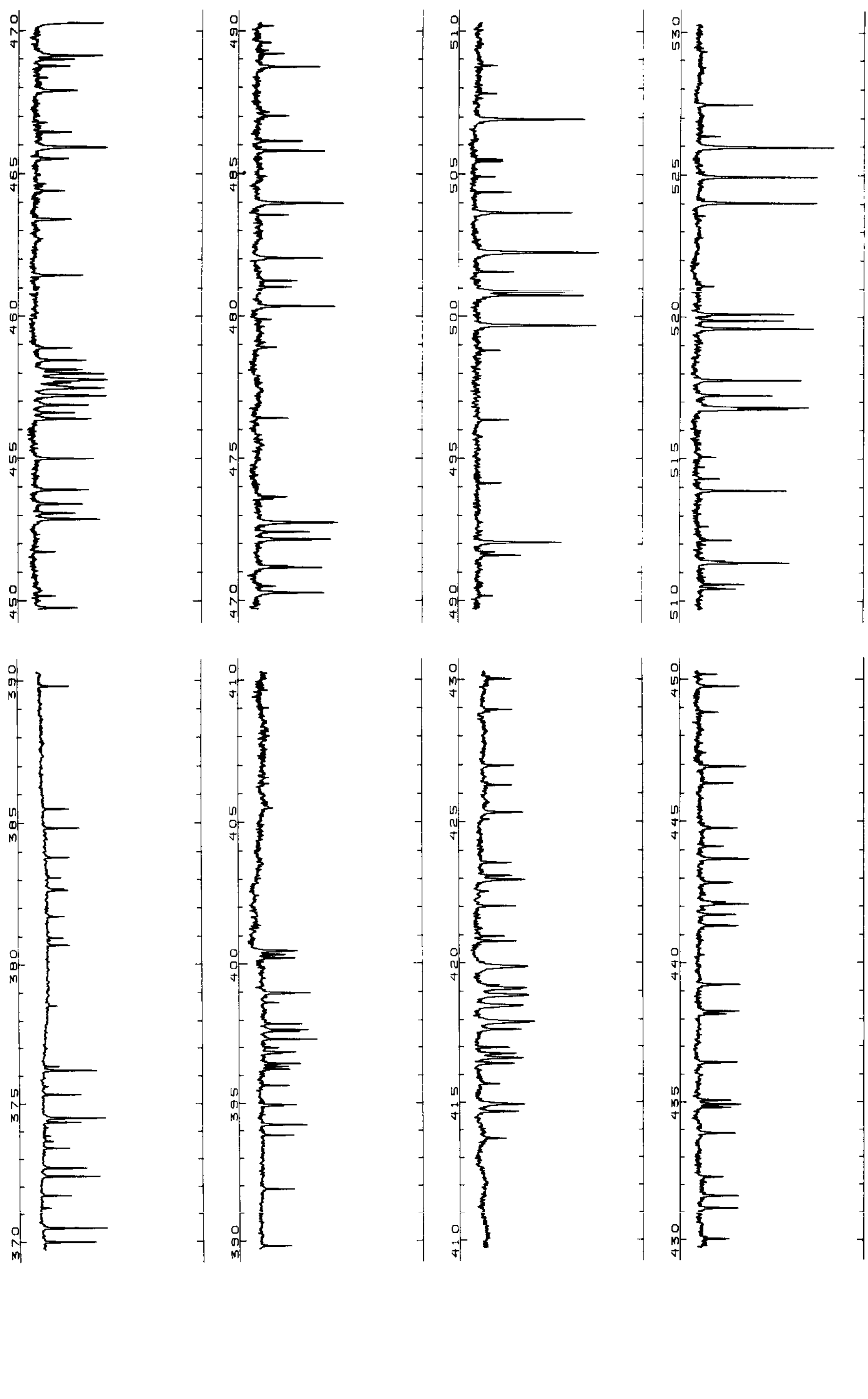

FIGURE 1—*Continued*

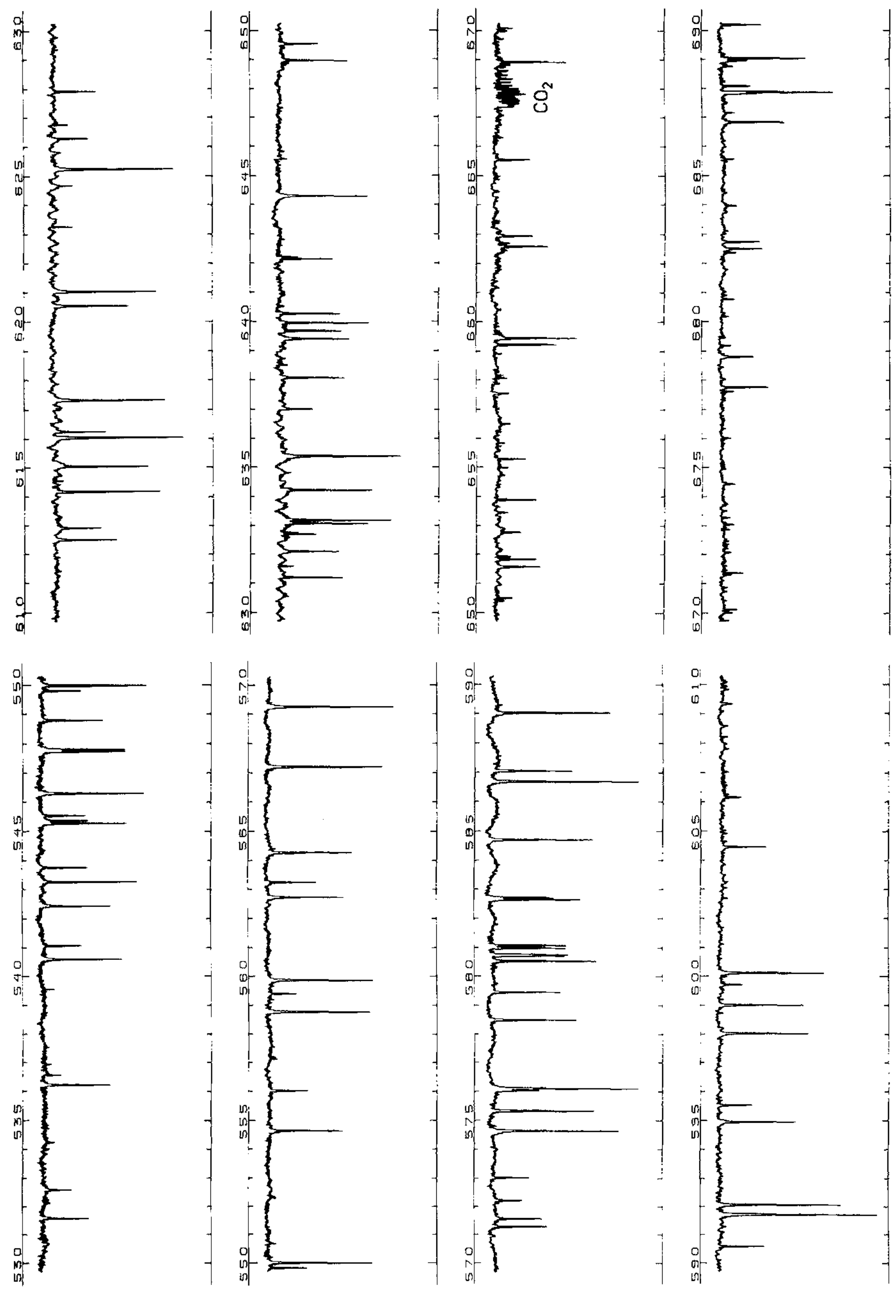

FIGURE 1—*Continued*

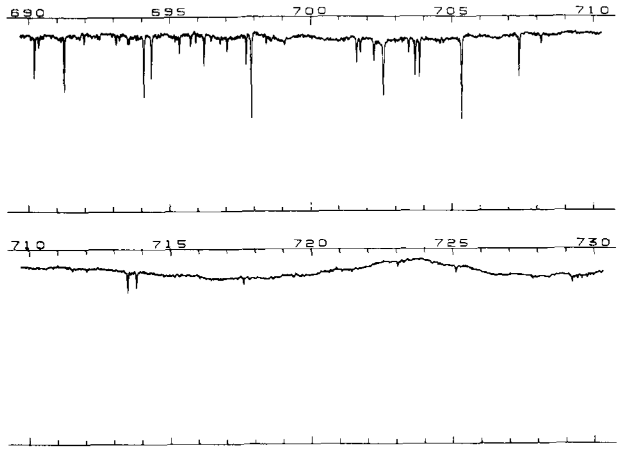

FIGURE 1—*Continued*

ever, in this work we have concentrated on the strongest lines only, but after this it will be easy to continue the work concerning weaker lines and higher J values.

It was a pleasure to find out that the very weak $H_2{}^{17}O$ and $H_2{}^{18}O$ lines observed in the natural abundance of water in our previous work were successfully assigned. There is only one very weak "line," with the line number 111, which is probably misassigned.

The pure rotational spectra of $H_2{}^{16}O$, $H_2{}^{17}O$, and $H_2{}^{18}O$ are spread out in quite a wide range in the far infrared. The relative changes in the frequencies of the lines are large, thus requiring a flexible performance of the instrument. In this work we tried to maintain the performance of the interferometer nearly constant over the whole spectrum observed. There are, however, certain regions where the signal-to-noise ratio is lower than usual, such as the region below 80 cm^{-1}

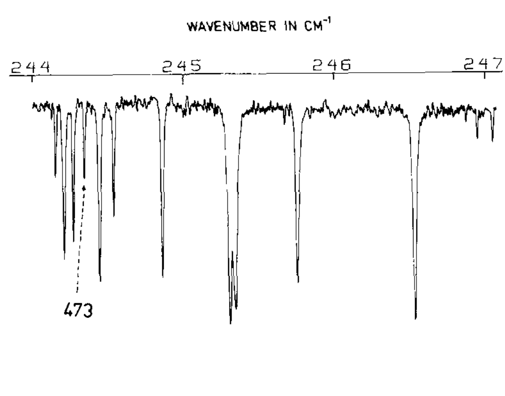

FIG. 2. Extended part of the unapodized spectrum of the mixture of $H_2{}^{16}O$, $H_2{}^{17}O$, and $H_2{}^{18}O$ at a total pressure of about 0.5 Torr. The spectrum is transformed from the same interferograms as in Fig. 1. Resolution is about 0.010 cm^{-1}. The half-width of the line 473 at 244.3429 cm^{-1} is 0.010 ± 0.0005 cm^{-1}.

TABLE II

LN	MO	$J'(K'_a,K'_c)-J''(K''_a,K''_c)$	FREQ	OBS	DIFF	I
1	16	4(1, 3)- 4(0, 4)	53.4447	53.4449	-2	0.268E-01
2	17	4(1, 3)- 4(0, 4)	53.5093	53.5101	-8	.268E-01
3	18	4(1, 3)- 4(0, 4)	53.5693	53.5709	-16	.268E-01
4	18	2(2, 1)- 2(1, 2)	54.4872	54.4882	-10	.671E-01
5	17	2(2, 1)- 2(1, 2)	54.9180	54.9187	-7	.671E-01
6	18	2(1, 2)- 1(0, 1)	55.2338	55.2353	-15	.159E+00
7	16	2(2, 1)- 2(1, 2)	55.4061	55.4083	-22	.671E-01
8	17	2(1, 2)- 1(0, 1)	55.4538	55.4542	-4	.159E+00
9	16	2(1, 2)- 1(0, 1)	55.7016	55.7039	-23	.159E+00
10	16	3(0, 3)- 2(1, 2)	57.2656	57.2681	-25	.148E+00
11	17	3(0, 3)- 2(1, 2)	57.3105	57.3086	19	.148E+00
12	18	3(0, 3)- 2(1, 2)	57.3482	57.3447	35	.148E+00
13	18	6(3, 3)- 6(2, 4)	57.3729	57.3703	26	.114E-01
14	17	6(3, 3)- 6(2, 4)	58.0296	58.0251	45	.114E-01
15	16	6(3, 3)- 6(2, 4)	58.7750	58.7759	-9	.114E-01
16	16	7(3, 5)- 6(4, 2)	58.9139	58.9133	6	.493E-03
17	18	7(3, 4)- 7(2, 5)	59.0976	59.0966	10	.186E-01
18	17	7(3, 4)- 7(2, 5)	59.4942	59.4878	64	.186E-01
19	16	6(2, 4)- 6(1, 5)	59.8679	59.8678	1	.147E-01
20	16	7(3, 4)- 7(2, 5)	59.9470	59.9590	-120	.186E-01
20	17	6(2, 4)- 6(1, 5)	59.9652	59.9590	62	.147E-01
21	18	6(2, 4)- 6(1, 5)	60.0572	60.0581	-9	.147E-01
22	18	5(3, 2)- 5(2, 3)	60.5707	60.5703	4	.591E-01
23	17	5(3, 2)- 5(2, 3)	61.3833	61.3815	18	.591E-01
24	16	5(3, 2)- 5(2, 3)	62.3014	62.3020	-6	.591E-01
25	18	3(2, 2)- 3(1, 3)	63.1879	63.1876	3	.338E-01
26	17	3(2, 2)- 3(1, 3)	63.5795	63.5787	8	.338E-01
27	16	5(2, 3)- 4(3, 2)	63.9941	63.9960	-19	.116E-01
28	16	3(2, 2)- 3(1, 3)	64.0228	64.0222	6	.338E-01
29	17	5(2, 3)- 4(3, 2)	64.9863	64.9876	-13	.116E-01
30	18	5(2, 3)- 4(3, 2)	65.8667	65.8667	0	.116E-01
31	18	4(3, 1)- 4(2, 2)	66.2434	66.2430	4	.281E-01
32	17	4(3, 1)- 4(2, 2)	67.0986	67.0993	-7	.281E-01
32	18	8(3, 5)- 8(2, 6)	67.1086	67.0993	93	.330E-02
33	17	8(3, 5)- 8(2, 6)	67.1750	67.1603	147	.330E-02
34	16	8(3, 5)- 8(2, 6)	67.2454	67.2460	-6	.330E-02
35	16	4(3, 1)- 4(2, 2)	68.0632	68.0623	9	.281E-01
36	16	4(1, 3)- 3(2, 2)	69.1957	69.1945	12	.190E-01
37	17	4(1, 3)- 3(2, 2)	69.6485	69.6474	11	.190E-01
38	18	4(1, 3)- 3(2, 2)	70.0475	70.0465	10	.190E-01
39	16	3(3, 0)- 3(2, 1)	71.5080	71.5089	-9	.798E-01
40	18	3(1, 3)- 2(0, 2)	71.6406	71.6422	-16	.990E-01
41	17	3(1, 3)- 2(0, 2)	71.8977	71.8990	-13	.990E-01
42	16	3(1, 3)- 2(0, 2)	72.1877	72.1894	-17	.990E-01
43	17	3(3, 0)- 3(2, 1)	72.3318	72.3322	-4	.798E-01
44	16	3(3, 0)- 3(2, 1)	73.2626	73.2643	-17	.798E-01
45	16	5(1, 4)- 5(0, 5)	74.1097	74.1104	-7	.845E-01
46	17	5(1, 4)- 5(0, 5)	74.2174	74.2182	-8	.845E-01
47	18	5(1, 4)- 5(0, 5)	74.3140	74.3142	-2	.845E-01
48	18	4(2, 3)- 4(1, 4)	74.7918	74.7921	-3	.112E+00
49	16	8(3, 6)- 7(4, 3)	74.8787	74.8788	-1	.124E-02
50	17	4(2, 3)- 4(1, 4)	75.1346	75.1355	-9	.112E+00
51	18	9(4, 5)- 9(3, 6)	75.4049	75.4008	41	.322E-02
52	17	8(3, 6)- 7(4, 3)	75.4590	75.4884	-294	.124E-02
53	16	4(2, 3)- 4(1, 4)	75.5242	75.5254	-12	.112E+00
54	18	8(3, 6)- 7(4, 3)	76.0042	76.0056	-14	.124E-02
55	17	9(4, 5)- 9(3, 6)	76.2849	76.2867	-18	.322E-02
56	16	9(4, 5)- 9(3, 6)	77.3164	77.3174	-10	.322E-02
57	18	3(3, 1)- 3(2, 2)	77.3388	77.3368	20	.293E-01
58	17	3(3, 1)- 3(2, 2)	78.0796	78.0795	1	.293E-01
59	16	7(2, 5)- 7(1, 6)	78.1957	78.1957	0	0.322E-01
60	16	10(4, 6)-10(3, 7)	78.3018	78.3014	4	0.382E-03
61	17	7(2, 5)- 7(1, 6)	78.4939	78.4911	28	.322E-01
62	18	7(2, 5)- 7(1, 6)	78.7578	78.7585	-7	.322E-01
63	16	3(3, 1)- 3(2, 2)	78.9181	78.9174	7	.293E-01
64	18	8(4, 4)- 8(3, 5)	79.1121	79.1095	26	.291E-02
65	18	4(0, 4)- 3(1, 3)	79.6662	79.6665	-3	.110E+00
66	17	4(0, 4)- 3(1, 3)	79.7188	79.7192	-4	.110E+00
67	16	4(0, 4)- 3(1, 3)	79.7738	79.7739	-1	.110E+00
68	17	8(4, 4)- 8(3, 5)	80.2794	80.2802	-8	.291E-02
69	18	4(3, 2)- 4(2, 3)	80.6718	80.6716	2	.107E+00
70	16	9(3, 6)- 9(2, 7)	80.9977	80.9967	10	.500E-02
71	17	9(3, 6)- 9(2, 7)	81.3326	81.3050	276	.500E-02
72	17	4(3, 2)- 4(2, 3)	81.3679	81.3665	14	.107E+00
73	18	9(3, 6)- 9(2, 7)	81.6042	81.5990	52	.500E-02
74	16	8(4, 4)- 8(3, 5)	81.6184	81.6166	18	.291E-02
75	16	4(3, 2)- 4(2, 3)	82.1542	82.1554	-12	.107E+00
76	16	7(3, 4)- 6(4, 3)	85.6322	85.6312	10	.432E-02
77	16	11(4, 7)-11(3, 8)	85.7843	85.7839	4	.399E-03
78	16	10(3, 8)- 9(4, 5)	85.8929	85.8920	9	.191E-03
79	18	7(4, 3)- 7(3, 4)	86.1518	86.1494	24	.216E-01
80	18	5(3, 3)- 5(2, 4)	86.4284	86.4270	14	.312E-01
81	17	5(3, 3)- 5(2, 4)	87.0533	87.0506	27	.312E-01
82	17	7(3, 4)- 6(4, 3)	87.1597	87.1582	15	.432E-02
83	17	7(4, 3)- 7(3, 4)	87.4333	87.4311	22	.216E-01
84	18	4(1, 4)- 3(0, 3)	87.4919	87.4911	8	.432E+00
85	16	5(3, 3)- 5(2, 4)	87.7592	87.7647	-55	.312E-01
85	17	4(1, 4)- 3(0, 3)	87.7665	87.7647	18	.432E+00
86	16	4(1, 4)- 3(0, 3)	88.0766	88.0765	1	.432E+00
87	18	7(3, 4)- 6(4, 3)	88.5152	88.5154	-2	.432E-02
88	16	7(4, 3)- 7(3, 4)	88.8804	88.8787	17	.216E-01
89	18	5(2, 4)- 5(1, 5)	88.9528	88.9510	18	.346E-01
90	17	5(2, 4)- 5(1, 5)	89.2467	89.2463	4	.346E-01
91	16	5(2, 4)- 5(1, 5)	89.5837	89.5822	15	.346E-01
92	18	2(2, 1)- 1(1, 0)	91.4525	91.4500	25	.370E+00
93	17	2(2, 1)- 1(1, 0)	91.9583	91.9571	12	.370E+00
94	16	2(2, 1)- 1(1, 0)	92.5305	92.5279	26	.370E+00
95	18	6(4, 2)- 6(3, 3)	93.5788	93.5765	23	.146E-01
96	17	6(4, 2)- 6(3, 3)	94.8288	94.8240	48	.146E-01
97	18	6(3, 4)- 6(2, 5)	94.9318	94.9310	8	.684E-01
98	17	6(3, 4)- 6(2, 5)	95.4636	95.4625	11	.684E-01
99	16	6(3, 4)- 6(2, 5)	96.0672	96.0668	4	.684E-01
100	16	6(1, 5)- 6(0, 6)	96.2089	96.2133	-44	.244E-01
101	16	6(4, 2)- 6(3, 3)	96.2316	96.2262	54	.146E-01
102	17	6(1, 5)- 6(0, 6)	96.2753	96.2755	-2	.244E-01
103	18	6(1, 5)- 6(0, 6)	96.3343	96.3326	17	.244E-01
104	18	2(2, 0)- 1(1, 1)	98.0346	98.0339	7	.118E+00
105	17	2(2, 0)- 1(1, 1)	98.5001	98.4992	9	.118E+00
106	16	6(2, 4)- 5(3, 3)	98.8057	98.8050	7	.943E-02
107	16	2(2, 0)- 1(1, 1)	99.0270	99.0274	-4	.118E+00
108	18	5(4, 1)- 5(3, 2)	99.0651	99.0660	-9	.666E-01
109	16	5(1, 4)- 4(2, 3)	99.0951	99.0922	29	.133E+00
110	17	5(1, 4)- 4(2, 3)	99.4398	99.4394	4	.133E+00
111	18	5(1, 4)- 4(2, 3)	99.7406	99.7392	14	.133E+00
112	17	6(2, 4)- 5(3, 3)	99.7795	99.7788	7	.943E-02
113	16	8(2, 6)- 8(1, 7)	100.0213	100.0214	-1	.676E-02
114	16	10(3, 7)-10(2, 8)	100.1809	100.2189	-380	.763E-03
114	18	5(0, 5)- 4(1, 4)	100.2184	100.2189	-5	.466E+00
114	17	5(4, 1)- 5(3, 2)	100.2250	100.2189	61	.666E-01
115	17	5(0, 5)- 4(1, 4)	100.3570	100.3561	9	.466E+00
116	17	8(2, 6)- 8(1, 7)	100.3992	100.3958	34	.676E-02
117	16	5(0, 5)- 4(1, 4)	100.5096	100.5107	-11	0.466E+00

Note. The meanings of the different columns are as follows: LN: line number; MO: molecule; $J'(K'_a,K'_c) - J''(K''_a,K''_c)$: rotational quantum numbers of the upper and lower levels in the rotational transition; FREQ: calculated wavenumber in cm^{-1}; OBS: observed wavenumber in cm^{-1}; DIFF: calculated wavenumber − observed wavenumber in 10^{-4} cm^{-1}; I: calculated relative intensity; the zero in front of decimal applies to all the numbers in this column. In the column MO: 16 = $H_2{}^{16}O$, 17 = $H_2{}^{17}O$, 18 = $H_2{}^{18}O$, HDO = $HD^{16}O$, and 010 = the rotational transition at the (010) level of $H_2{}^{16}O$. The same line number is used for the unresolved lines.

TABLE II—*Continued*

LN	MO	$J'(K'_a,K'_c)-J''(K''_a,K''_c)$	FREQ	OBS	DIFF	I
118	18	6(2, 4)- 5(3, 3)	100.6409	100.6392	17	0.943E-02
119	18	8(2, 6)- 8(1, 7)	100.7263	100.7256	7	.676E-02
120	17	10(3, 7)-10(2, 8)	100.8307	100.7870	437	.763E-03
121	18	10(3, 7)-10(2, 8)	101.3545	101.3367	178	.763E-03
122	16	5(4, 1)- 5(3, 2)	101.5287	101.5288	-1	.666E-01
123	18	4(4, 0)- 4(3, 1)	101.9703	101.9686	17	.220E-01
124	17	4(4, 0)- 4(3, 1)	103.0589	103.0590	-1	.220E-01
125	18	4(4, 1)- 4(3, 2)	103.3521	103.3509	12	.672E-01
126	18	5(4, 2)- 5(3, 3)	103.9489	103.9488	1	.236E-01
127	18	5(1, 5)- 4(0, 4)	103.9818	103.9799	19	.172E+00
128	17	5(1, 5)- 4(0, 4)	104.2591	104.2594	-3	.172E+00
129	16	4(4, 0)- 4(3, 1)	104.2916	104.2893	23	.220E-01
130	17	4(4, 1)- 4(3, 2)	104.4014	104.4018	-4	.672E-01
131	16	5(1, 5)- 4(0, 4)	104.5728	104.5708	20	.172E+00
132	17	5(4, 2)- 5(3, 3)	104.9827	104.9780	47	.236E-01
133	16	9(4, 5)- 8(5, 4)	105.0690	105.0699	-9	.722E-03
134	18	6(2, 5)- 6(1, 6)	105.1052	105.1028	24	.820E-01
135	17	6(2, 5)- 6(1, 6)	105.3611	105.3631	-20	.820E-01
136	16	4(4, 1)- 4(3, 2)	105.5911	105.5907	4	.672E-01
137	18	6(4, 3)- 6(3, 4)	105.6516	105.6544	-28	.515E-01
137	16	6(2, 5)- 6(1, 6)	105.6591	105.6544	47	.820E-01
138	16	5(4, 2)- 5(3, 3)	106.1458	106.1481	-23	.236E-01
138	18	7(3, 5)- 7(2, 6)	106.1636	106.1481	155	.146E-01
139	17	7(3, 5)- 7(2, 6)	106.5915	106.5933	-18	.146E-01
140	17	6(4, 3)- 6(3, 4)	106.6401	106.6310	91	.515E-01
141	16	7(3, 5)- 7(2, 6)	107.0856	107.0851	5	.146E-01
142	16	6(4, 3)- 6(3, 4)	107.7460	107.7455	5	.515E-01
143	18	7(4, 4)- 7(3, 5)	109.1356	109.1319	37	.102E-01
144	18	3(2, 2)- 2(1, 1)	109.9674	109.9652	22	.148E+00
145	17	7(4, 4)- 7(3, 5)	110.0395	110.0281	114	.102E-01
146	17	3(2, 2)- 2(1, 1)	110.5113	110.5093	20	.148E+00
147	16	7(4, 4)- 7(3, 5)	111.0501	111.0506	-5	.102E-01
148	16	3(2, 2)- 2(1, 1)	111.1254	111.1260	-6	.148E+00
149	18	9(5, 4)- 9(4, 5)	113.4156	113.4110	46	.364E-02
150	18	8(4, 5)- 8(3, 6)	114.9325	114.9297	28	.159E-01
151	17	9(5, 4)- 9(4, 5)	115.0954	115.1278	-324	.364E-02
152	17	8(4, 5)- 8(3, 6)	115.7119	115.7059	60	.159E-01
153	16	8(4, 5)- 8(3, 6)	116.5930	116.5929	1	.159E-01
154	16	9(5, 4)- 9(4, 5)	117.0617	117.0624	-7	.364E-02
155	18	7(1, 6)- 7(0, 7)	117.9170	117.9171	-1	.534E-01
156	17	7(1, 6)- 7(0, 7)	117.9409	117.9478	-69	.534E-01
157	16	7(1, 6)- 7(0, 7)	117.9710	117.9685	25	.534E-01
158	18	6(0, 6)- 5(1, 5)	119.6305	119.6301	4	.166E+00
159	18	8(3, 6)- 8(2, 7)	119.7909	119.7914	-5	.247E-01
160	17	6(0, 6)- 5(1, 5)	119.8390	119.8380	10	.166E+00
161	16	6(0, 6)- 5(1, 5)	120.0718	120.0714	4	.166E+00
162	17	8(3, 6)- 8(2, 7)	120.1186	120.1272	-86	.247E-01
163	16	8(3, 6)- 8(2, 7)	120.5156	120.5155	1	.247E-01
164	18	8(5, 3)- 8(4, 4)	120.7702	120.7656	46	.320E-02
165	18	6(1, 6)- 5(0, 5)	121.2995	121.3001	-6	.518E+00
166	17	6(1, 6)- 5(0, 5)	121.5833	121.5843	-10	.518E+00
167	16	6(1, 6)- 5(0, 5)	121.9047	121.9074	-27	.518E+00
168	17	8(5, 3)- 8(4, 4)	122.3478	122.3520	-42	.320E-02
169	16	8(3, 5)- 7(4, 4)	122.4135	122.4139	-4	.199E-02
170	16	11(3, 8)-11(2, 9)	122.5583	122.5580	3	.930E-03
171	18	7(2, 6)- 7(1, 7)	122.6123	122.6102	21	.188E-01
172	16	9(2, 7)- 9(1, 8)	122.8417	122.8477	-60	.110E-01
172	17	7(2, 6)- 7(1, 7)	122.8482	122.8477	5	.188E-01
173	16	7(2, 6)- 7(1, 7)	123.1294	123.1282	12	.188E-01
174	17	9(2, 7)- 9(1, 8)	123.1595	123.1597	-2	.110E-01
175	18	9(4, 6)- 9(3, 7)	123.2981	123.[illegible]	83	.244E-02
175	17	11(3, 8)-11(2, 9)	123.3260	123.2898	362	0.930E-03

LN	MO	$J'(K'_a,K'_c)-J''(K''_a,K''_c)$	FREQ	OBS	DIFF	I
176	18	9(2, 7)- 9(1, 8)	123.4344	123.4356	-12	0.110E-01
177	17	9(4, 6)- 9(3, 7)	123.9200	123.9243	-43	.244E-02
177	18	11(3, 8)-11(2, 9)	123.9526	123.9243	283	.930E-03
178	17	8(3, 5)- 7(4, 4)	124.0269	124.0159	110	.199E-02
179	16	8(5, 3)- 8(4, 4)	124.1364	124.1351	13	.320E-02
180	16	9(4, 6)- 9(3, 7)	124.6532	124.6527	5	.244E-02
181	18	8(3, 5)- 7(4, 4)	125.4321	125.4315	6	.199E-02
182	18	7(5, 2)- 7(4, 3)	125.5063	125.5021	42	.199E-01
183	18	4(2, 3)- 3(1, 2)	125.7374	125.7377	-3	.457E+00
184	17	4(2, 3)- 3(1, 2)	126.3287	126.3291	-4	.457E+00
185	16	6(1, 5)- 5(2, 4)	126.6970	126.6969	1	.630E-01
186	17	6(1, 5)- 5(2, 4)	126.8676	126.8692	-16	.630E-01
187	17	7(5, 2)- 7(4, 3)	126.9642	126.9990	-348	.199E-01
187	16	4(2, 3)- 3(1, 2)	126.9971	126.9990	-19	.457E+00
187	18	6(1, 5)- 5(2, 4)	127.0121	126.9990	131	.630E-01
188	18	6(5, 1)- 6(4, 2)	127.9290	127.9255	35	.106E-01
189	16	7(5, 2)- 7(4, 3)	128.5980	128.5970	10	.199E-01
190	18	5(5, 0)- 5(4, 1)	128.8906	128.8886	20	.341E-01
191	18	6(5, 2)- 6(4, 3)	129.0453	129.0426	27	.321E-01
192	18	7(5, 3)- 7(4, 4)	129.0975	129.0928	47	.682E-02
193	18	5(5, 1)- 5(4, 2)	129.1356	129.1335	21	.114E-01
194	17	6(5, 1)- 6(4, 2)	129.3046	129.3011	35	.106E-01
195	18	8(5, 4)- 8(4, 5)	129.7366	129.7314	52	.105E-01
196	17	5(5, 0)- 5(4, 1)	130.2211	130.2256	-45	.341E-01
197	17	6(5, 2)- 6(4, 3)	130.3770	130.3709	61	.321E-01
198	17	7(5, 3)- 7(4, 4)	130.4239	130.4109	130	.682E-02
199	17	5(5, 1)- 5(4, 2)	130.4561	130.4597	-36	.114E-01
200	16	6(5, 1)- 6(4, 2)	130.8519	130.8511	8	.106E-01
201	17	8(5, 4)- 8(4, 5)	131.0228	131.0091	137	.105E-01
202	16	5(5, 0)- 5(4, 1)	131.7354	131.7348	6	.341E-01
203	18	3(2, 1)- 2(1, 2)	131.8106	131.8113	-5	.366E+00
204	16	6(5, 2)- 6(4, 3)	131.8741	131.8744	-3	.321E-01
205	16	7(5, 3)- 7(4, 4)	131.9028	131.9004	24	.682E-02
206	16	5(5, 1)- 5(4, 2)	131.9594	131.9586	8	.114E-01
207	17	3(2, 1)- 2(1, 2)	132.2086	132.2087	-1	.366E+00
208	16	8(5, 4)- 8(4, 5)	132.4578	132.4583	-5	.105E-01
209	16	3(2, 1)- 2(1, 2)	132.6602	132.6629	-27	.366E+00
210	16	7(2, 5)- 6(3, 4)	133.4312	133.4312	0	.405E-01
211	16	9(5, 5)- 9(4, 6)	134.0956	134.0951	5	.152E-02
212	18	10(4, 7)-10(3, 8)	134.1718	134.1613	105	.303E-02
213	17	7(2, 5)- 6(3, 4)	134.3056	134.3039	17	.405E-01
214	17	10(4, 7)-10(3, 8)	134.6155	134.6465	-310	.303E-02
215	18	7(2, 5)- 6(3, 4)	135.0692	135.0696	-4	.405E-01
215	18	10(5, 6)-10(4, 7)	135.1044	135.0696	348	.174E-02
216	16	10(4, 7)-10(3, 8)	135.2077	135.2079	-2	.303E-02
217	18	9(3, 7)- 9(2, 8)	135.2744	135.2748	-4	.414E-02
218	17	9(3, 7)- 9(2, 8)	135.5187	135.5406	-219	.414E-02
219	16	9(3, 7)- 9(2, 8)	135.8468	135.8462	6	.414E-02
220	17	10(5, 6)-10(4, 7)	136.1391	136.1613	-222	.174E-02
221	16	10(5, 6)-10(4, 7)	137.3822	137.3827	-5	.174E-02
222	18	7(0, 7)- 6(1, 6)	138.4315	138.4317	-2	.436E+00
223	18	8(1, 7)- 8(0, 8)	138.5831	138.5809	22	.111E-01
224	17	8(1, 7)- 8(0, 8)	138.6953	138.6959	-6	.111E-01
224	17	7(0, 7)- 6(1, 6)	138.6956	138.6959	-3	.436E+00
225	16	8(1, 7)- 8(0, 8)	138.8269	138.8269	0	.111E-01
226	16	7(0, 7)- 6(1, 6)	138.9906	138.9920	-12	.436E+00
227	18	7(1, 7)- 6(0, 6)	139.1402	139.1390	12	.148E+00
228	18	5(2, 4)- 4(1, 3)	139.3652	139.3643	9	.139E+00
229	17	7(1, 7)- 6(0, 6)	139.4417	139.4415	2	.148E+00
230	16	7(1, 7)- 6(0, 6)	139.7823	139.7827	-4	.148E+00
231	17	5(2, 4)- 4(1, 3)	139.9964	139.9963	1	0.139E+00

TABLE II—*Continued*

LN	MO	$J'(K'_a,K'_c)-J''(K''_a,K''_c)$	FREQ	OBS	DIFF	I
232	16	5(2, 4)- 4(1, 3)	140.7118	140.7121	-3	0.139E+00
233	18	8(2, 7)- 8(1, 8)	140.9166	140.9155	11	.342E-01
234	17	8(2, 7)- 8(1, 8)	141.1533	141.1601	-68	.342E-01
235	16	8(2, 7)- 8(1, 8)	141.4374	141.4371	3	.342E-01
236	16	10(2, 8)-10(1, 9)	144.9499	144.9493	6	.174E-02
237	17	10(2, 8)-10(1, 9)	145.1259	145.1373	-114	.174E-02
238	18	10(2, 8)-10(1, 9)	145.2890	145.2937	-47	.174E-02
239	18	3(3, 0)- 3(0, 3)	145.9706	145.9693	13	.570E-02
240	17	3(3, 0)- 3(0, 3)	147.2299	147.2289	10	.570E-02
241	18	3(3, 1)- 2(2, 0)	147.3117	147.3110	7	.289E+00
242	16	11(4, 8)-11(3, 9)	147.9592	147.9648	-56	.376E-03
243	17	3(3, 1)- 2(2, 0)	148.1303	148.1299	4	.289E+00
244	16	3(3, 0)- 3(0, 3)	148.6572	148.6573	-1	.570E-02
245	18	3(3, 0)- 2(2, 1)	148.8316	148.8331	-15	.874E+00
246	16	3(3, 1)- 2(2, 0)	149.0555	149.0557	-2	.289E+00
247	17	3(3, 0)- 2(2, 1)	149.6224	149.6219	5	.874E+00
248	18	9(6, 3)- 9(5, 4)	150.4552	150.5173	-621	.265E-02
248	16	3(3, 0)- 2(2, 1)	150.5167	150.5173	-6	.874E+00
249	18	7(1, 6)- 6(2, 5)	151.2433	151.2461	-28	.190E+00
250	17	7(1, 6)- 6(2, 5)	151.2753	151.2856	-103	.190E+00
250	16	7(1, 6)- 6(2, 5)	151.3027	151.2856	171	.190E+00
251	18	10(3, 8)-10(2, 9)	152.0165	152.0198	-33	.557E-02
252	18	6(2, 5)- 5(1, 4)	152.0907	152.0902	5	.339E+00
253	17	9(6, 3)- 9(5, 4)	152.1402	152.1548	-146	.265E-02
254	17	10(3, 8)-10(2, 9)	152.2037	152.2445	-408	.557E-02
254	18	8(6, 2)- 8(5, 3)	152.2627	152.2445	182	.196E-02
255	16	10(3, 8)-10(2, 9)	152.4944	152.4943	1	.557E-02
256	17	6(2, 5)- 5(1, 4)	152.7271	152.7301	-30	.339E+00
257	18	9(6, 4)- 9(5, 5)	152.8895	152.8749	146	.892E-03
258	18	10(6, 5)-10(5, 6)	152.9368	152.9139	229	.102E-02
259	18	7(6, 1)- 7(5, 2)	152.9735	152.9709	26	.103E-01
260	18	8(6, 3)- 8(5, 4)	153.0646	153.0579	67	.589E-02
261	18	6(6, 0)- 6(5, 1)	153.0802	153.0779	23	.408E-02
262	18	6(6, 1)- 6(5, 2)	153.1180	153.1167	13	.122E-01
263	18	7(6, 2)- 7(5, 3)	153.1808	153.1780	28	.345E-02
264	16	6(2, 5)- 5(1, 4)	153.4541	153.4549	-8	.339E+00
265	17	8(6, 2)- 8(5, 3)	153.8934	153.8891	43	.196E-02
266	16	9(6, 3)- 9(5, 4)	154.0866	154.0858	8	.265E-02
267	17	10(6, 5)-10(5, 6)	154.4491	154.4734	-243	.102E-02
268	17	7(6, 1)- 7(5, 2)	154.5656	154.5612	44	.103E-01
269	17	8(6, 3)- 8(5, 4)	154.6580	154.6480	100	.589E-02
269	17	6(6, 0)- 6(5, 1)	154.6420	154.6480	-60	.408E-02
270	17	6(6, 1)- 6(5, 2)	154.6780	154.6857	-77	.122E-01
271	17	7(6, 2)- 7(5, 3)	154.7628	154.7573	55	.345E-02
272	16	8(6, 2)- 8(5, 3)	155.7341	155.7310	31	.196E-02
273	16	10(6, 5)-10(5, 6)	156.2550	156.2600	-50	.102E-02
273	16	9(6, 4)- 9(5, 5)	156.2698	156.2600	98	.892E-03
274	16	7(6, 1)- 7(5, 2)	156.3583	156.3589	-6	.103E-01
275	16	6(6, 0)- 6(5, 1)	156.4265	156.4518	-253	.408E-02
275	16	8(6, 3)- 8(5, 4)	156.4455	156.4518	-63	.589E-02
275	16	6(6, 1)- 6(5, 2)	156.4590	156.4518	72	.122E-01
276	16	7(6, 2)- 7(5, 3)	156.5419	156.5427	-8	.345E-02
277	18	8(0, 8)- 7(1, 7)	156.9257	156.9250	7	.108E+00
278	18	8(1, 8)- 7(0, 7)	157.2207	157.2271	-64	.327E+00
278	17	8(0, 8)- 7(1, 7)	157.2367	157.2271	96	.108E+00
279	17	8(1, 8)- 7(0, 7)	157.5492	157.5530	-38	.327E+00
280	16	8(0, 8)- 7(1, 7)	157.5850	157.5821	29	.108E+00
281	16	8(1, 8)- 7(0, 7)	157.9198	157.9190	8	.327E+00
282	18	9(1, 8)- 9(0, 9)	158.5050	158.5042	8	.181E-01
283	17	9(1, 8)- 9(0, 9)	158.6986	158.6969	17	.181E-01
284	16	9(1, 8)- 9(0, 9)	158.9109	158.9103	6	0.181E-01
285	18	4(3, 1)- 4(0, 4)	159.4689	159.4670	19	0.395E-02
286	18	9(2, 8)- 9(1, 9)	159.6164	159.6151	13	.611E-02
287	17	9(2, 8)- 9(1, 9)	159.8765	159.8790	-25	.611E-02
288	16	9(2, 8)- 9(1, 9)	160.1744	160.1754	-10	.611E-02
289	16	9(3, 6)- 8(4, 5)	160.2104	160.2097	7	.568E-02
290	17	4(3, 1)- 4(0, 4)	160.5560	160.5532	28	.395E-02
291	17	9(3, 6)- 8(4, 5)	161.8202	161.7861	341	.568E-02
291	16	4(3, 1)- 4(0, 4)	161.7902	161.7861	41	.395E-02
292	18	9(3, 6)- 8(4, 5)	163.1628	163.1592	36	.568E-02
293	010	3(3, 0)- 2(2, 1)	165.3100	165.3098	2	.415E-03
294	18	7(2, 6)- 6(1, 5)	165.4182	165.4169	13	.834E-01
295	16	11(2, 9)-11(1,10)	165.8161	165.8150	11	.216E-02
296	17	11(2, 9)-11(1,10)	165.8414	165.8645	-231	.216E-02
297	18	11(2, 9)-11(1,10)	165.8844	165.8957	-113	.216E-02
298	17	7(2, 6)- 6(1, 5)	166.0146	166.0189	-43	.834E-01
299	16	8(2, 6)- 7(3, 5)	166.2182	166.2171	11	.135E-01
300	16	7(2, 6)- 6(1, 5)	166.7028	166.7025	3	.834E-01
301	17	8(2, 6)- 7(3, 5)	166.8913	166.8837	76	.135E-01
302	18	8(2, 6)- 7(3, 5)	167.4591	167.4598	-7	.135E-01
303	18	4(3, 2)- 3(2, 1)	168.4929	168.4922	7	.733E+00
304	17	4(3, 2)- 3(2, 1)	169.3709	169.3689	20	.733E+00
305	16	11(3, 9)-11(2,10)	169.9338	169.9320	18	.746E-03
306	16	4(3, 2)- 3(2, 1)	170.3604	170.3588	16	.733E+00
307	18	4(2, 2)- 3(1, 3)	172.8917	172.8919	-2	.968E-01
307	18	8(1, 7)- 7(2, 6)	172.8964	172.8919	45	.489E-01
308	17	8(1, 7)- 7(2, 6)	173.0837	173.0806	31	.489E-01
309	17	4(2, 2)- 3(1, 3)	173.1762	173.1750	12	.968E-01
310	16	8(1, 7)- 7(2, 6)	173.2825	173.2809	16	.489E-01
311	16	4(2, 2)- 3(1, 3)	173.5008	173.5002	6	.968E-01
312	18	7(7, 0)- 7(6, 1)	174.8078	174.8113	-35	.323E-02
312	18	7(7, 1)- 7(6, 2)	174.8133	174.8113	20	.108E-02
313	18	8(7, 1)- 8(6, 2)	175.2086	175.2162	-76	.816E-03
314	18	8(7, 2)- 8(6, 3)	175.2431	175.2590	-159	.245E-02
314	18	9(0, 9)- 8(1, 8)	175.2593	175.2590	3	.211E+00
315	18	9(7, 2)- 9(6, 3)	175.3282	175.3230	52	.125E-02
316	18	9(1, 9)- 8(0, 8)	175.3816	175.3795	21	.705E-01
317	18	9(7, 3)- 9(6, 4)	175.4817	175.4756	61	.417E-03
317	18	10(7, 4)-10(6, 5)	175.5059	175.4756	303	.510E-03
318	17	9(0, 9)- 8(1, 8)	175.6134	175.6098	36	.211E+00
319	17	9(1, 9)- 8(0, 8)	175.7435	175.7404	31	.705E-01
320	18	4(3, 1)- 3(2, 2)	175.9471	175.9471	0	.248E+00
321	16	9(0, 9)- 8(1, 8)	176.0061	176.0043	18	.211E+00
322	16	9(1, 9)- 8(0, 8)	176.1470	176.1454	16	.705E-01
323	17	7(7, 0)- 7(6, 1)	176.5857	176.6014	-157	.323E-02
323	17	7(7, 1)- 7(6, 2)	176.5909	176.6014	-105	.108E-02
324	17	4(3, 1)- 3(2, 2)	176.6952	176.6930	22	.248E+00
325	17	8(7, 1)- 8(6, 2)	177.0109	177.0148	-39	.816E-03
326	17	8(7, 2)- 8(6, 3)	177.0437	177.0467	-30	.245E-02
327	17	9(7, 2)- 9(6, 3)	177.1344	177.1464	-120	.125E-02
328	17	9(7, 3)- 9(6, 4)	177.2806	177.2985	-179	.417E-03
328	17	10(7, 4)-10(6, 5)	177.2626	177.2985	-359	.510E-03
329	16	4(3, 1)- 3(2, 2)	177.5412	177.5404	8	.248E+00
330	18	10(1, 9)-10(0,10)	177.9444	177.9467	-23	.291E-02
331	17	10(1, 9)-10(0,10)	178.2237	178.2008	229	.291E-02
332	18	10(2, 9)-10(1,10)	178.4627	178.4648	-21	.877E-02
333	16	10(1, 9)-10(0,10)	178.4855	178.4841	14	.291E-02
334	16	7(7, 0)- 7(6, 1)	178.6202	178.6213	-11	.323E-02
334	16	7(7, 1)- 7(6, 2)	178.6248	178.6213	35	.108E-02
335	17	10(2, 9)-10(1,10)	178.7749	178.7560	189	.877E-02
336	16	8(7, 1)- 8(6, 2)	179.0442	179.0519	-77	.816E-03
337	16	8(7, 2)- 8(6, 3)	179.0780	179.0814	-34	.245E-02
337	16	10(2, 9)-10(1,10)	179.0847	179.0814	33	0.877E-02

TABLE II—*Continued*

LN	MO	$J'(K'_a,K'_c)-J''(K''_a,K''_c)$	FREQ	OBS	DIFF	I
338	16	9(7, 2)- 9(6, 3)	179.2045	179.2049	-4	0.125E-02
339	16	9(7, 3)- 9(6, 4)	179.3330	179.3388	-58	.417E-03
340	16	10(7, 4)-10(6, 5)	179.3743	179.3727	16	.510E-03
341	18	8(2, 7)- 7(1, 6)	180.2204	180.2192	12	.166E+00
342	17	8(2, 7)- 7(1, 6)	180.7617	180.7655	-38	.166E+00
343	16	8(2, 7)- 7(1, 6)	181.3862	181.3858	4	.166E+00
344	18	5(3, 2)- 5(0, 5)	181.6826	181.6805	21	.126E-01
345	17	5(3, 2)- 5(0, 5)	182.5151	182.5119	32	.126E-01
346	16	5(3, 2)- 5(0, 5)	183.4643	183.4635	8	.126E-01
347	HDO	5(4, 2)- 4(3, 1)	184.5650	184.5682	-32	.854E-04
348	18	11(4, 7)-10(5, 6)	184.6809	184.6520	289	.414E-03
349	010	4(3, 2)- 3(2, 1)	185.4770	185.4813	-43	.348E-03
350	18	5(3, 3)- 4(2, 2)	186.1374	186.1358	16	.177E+00
351	17	5(3, 3)- 4(2, 2)	187.1016	187.1000	16	.177E+00
352	16	12(3,10)-12(2,11)	187.7563	187.7536	27	.806E-03
353	16	5(3, 3)- 4(2, 2)	188.1887	188.1889	-2	.177E+00
354	18	9(1, 8)- 8(2, 7)	192.8476	192.8473	3	.929E-01
355	17	9(1, 8)- 8(2, 7)	193.1587	193.1478	109	.929E-01
356	16	9(1, 8)- 8(2, 7)	193.4796	193.4821	-25	.929E-01
356	18	10(0,10)- 9(1, 9)	193.4953	193.4821	132	.402E-01
357	18	10(1,10)- 9(0, 9)	193.5462	193.5420	42	.121E+00
358	17	10(0,10)- 9(1, 9)	193.8924	193.8826	98	.402E-01
359	17	10(1,10)- 9(0, 9)	193.9467	193.9373	94	.121E+00
360	16	10(0,10)- 9(1, 9)	194.3228	194.3221	7	.402E-01
361	16	10(1,10)- 9(0, 9)	194.3805	194.3798	7	.121E+00
362	16	9(2, 7)- 8(3, 6)	195.8057	195.8055	2	.307E-01
363	17	9(2, 7)- 8(3, 6)	196.1996	196.1796	200	.307E-01
364	18	9(2, 8)- 8(1, 7)	196.4149	196.4128	21	.327E-01
365	18	9(2, 7)- 8(3, 6)	196.4911	196.4919	-8	.307E-01
366	17	9(2, 8)- 8(1, 7)	196.9246	196.9200	46	.327E-01
367	18	11(1,10)-11(0,11)	197.0771	197.0872	-101	.375E-02
368	16	10(3, 7)- 9(4, 6)	197.2647	197.2641	6	.136E-02
369	18	11(2,10)-11(1,11)	197.3170	197.3185	-15	.125E-02
370	17	11(1,10)-11(0,11)	197.4708	197.3943	765	.375E-02
371	16	9(2, 8)- 8(1, 7)	197.4945	197.4949	-4	.327E-01
372	17	11(2,10)-11(1,11)	197.7261	197.6466	795	.125E-02
373	16	11(1,10)-11(0,11)	197.7397	197.7380	17	.375E-02
374	16	11(2,10)-11(1,11)	198.0182	198.0219	-37	.125E-02
375	16	8(8, 0)- 8(7, 1)	198.3504	198.3504	0	.215E-03
375	16	8(8, 1)- 8(7, 2)	198.3510	198.3504	6	.646E-03
376	17	10(3, 7)- 9(4, 6)	198.7575	198.6682	893	.136E-02
377	16	9(8, 1)- 9(7, 2)	199.2161	199.2191	-30	.439E-03
377	16	9(8, 2)- 9(7, 3)	199.2206	199.2191	15	.146E-03
378	18	10(3, 7)- 9(4, 6)	199.8942	199.8843	99	.136E-02
379	16	10(8, 3)-10(7, 4)	199.9354	199.9406	-52	.201E-03
380	18	6(3, 4)- 5(2, 3)	200.2247	200.2244	3	.340E+00
381	18	4(4, 1)- 3(3, 0)	200.3370	200.3375	-5	.100E+01
382	18	4(4, 0)- 3(3, 1)	200.5786	200.5785	1	.334E+00
383	17	6(3, 4)- 5(2, 3)	201.2762	201.2808	-46	.340E+00
384	17	4(4, 1)- 3(3, 0)	201.4405	201.4423	-18	.100E+01
385	17	4(4, 0)- 3(3, 1)	201.6746	201.6760	-14	.334E+00
386	16	6(3, 4)- 5(2, 3)	202.4681	202.4701	-20	.340E+00
387	16	4(4, 1)- 3(3, 0)	202.6889	202.6875	14	.100E+01
388	16	4(4, 0)- 3(3, 1)	202.9147	202.9150	-3	.334E+00
389	16	13(2,11)-13(1,12)	204.5760	204.5745	15	.259E-03
390	18	5(4, 1)- 5(1, 4)	206.4336	206.4322	14	.563E-02
391	18	5(3, 2)- 4(2, 3)	207.1092	207.1096	-4	.531E+00
392	17	5(3, 2)- 4(2, 3)	207.7375	207.7369	6	.531E+00
393	18	4(4, 0)- 4(1, 3)	207.8699	207.8690	9	.851E-03
394	16	5(3, 2)- 4(2, 3)	208.4497	208.4520	-23	.531E+00
395	17	5(4, 1)- 5(1, 4)	208.5227	208.5158	69	0.563E-02
396	17	4(4, 0)- 4(1, 3)	210.1056	210.1080	-24	0.851E-03
397	16	5(4, 1)- 5(1, 4)	210.8833	210.8841	-8	.563E-02
398	18	6(4, 2)- 6(1, 5)	211.0089	211.0077	12	.221E-02
399	18	7(3, 5)- 6(2, 4)	211.5246	211.5247	-1	.661E-01
400	18	11(0,11)-10(1,10)	211.6581	211.6534	47	.614E-01
401	18	11(1,11)-10(0,10)	211.6796	211.6730	66	.205E-01
402	18	10(1, 9)- 9(2, 8)	211.8232	211.8257	-25	.168E-01
403	17	11(0,11)-10(1,10)	212.1013	212.0816	197	.614E-01
404	17	11(1,11)-10(0,10)	212.1241	212.1038	203	.205E-01
405	18	3(3, 1)- 2(0, 2)	212.1674	212.1679	-5	.452E-02
406	17	10(1, 9)- 9(2, 8)	212.2397	212.2085	312	.168E-01
407	16	11(0,11)-10(1,10)	212.5599	212.5619	-20	.614E-01
408	16	11(1,11)-10(0,10)	212.5852	212.5844	8	.205E-01
409	16	10(1, 9)- 9(2, 8)	212.6339	212.6345	-6	.168E-01
409	16	4(4, 0)- 4(1, 3)	212.6371	212.6345	26	.851E-03
410	17	7(3, 5)- 6(2, 4)	212.6410	212.6497	-87	.661E-01
411	17	6(4, 2)- 6(1, 5)	212.8236	212.8152	84	.221E-02
412	18	10(2, 9)- 9(1, 8)	213.5039	213.5056	-17	.515E-01
413	17	3(3, 1)- 2(0, 2)	213.5568	213.5580	-12	.452E-02
414	HDO	5(5, 1)- 4(4, 0)	213.6380	213.6380	0	.831E-04
414	HDO	5(5, 0)- 4(4, 1)	213.6400	213.6380	20	.831E-04
415	HDO	7(4, 4)- 6(3, 3)	213.6610	213.6618	-8	.468E-04
416	18	6(3, 3)- 6(0, 6)	213.7644	213.7639	5	.284E-02
417	16	7(3, 5)- 6(2, 4)	213.9205	213.9222	-17	.661E-01
418	17	10(2, 9)- 9(1, 8)	214.0230	213.9979	251	.515E-01
419	17	6(3, 3)- 6(0, 6)	214.2701	214.2683	18	.284E-02
420	16	10(2, 9)- 9(1, 8)	214.5543	214.5553	-10	.515E-01
421	16	6(3, 3)- 6(0, 6)	214.8518	214.8553	-35	.284E-02
422	16	6(4, 2)- 6(1, 5)	214.8745	214.8740	5	.221E-02
423	16	3(3, 1)- 2(0, 2)	215.1286	215.1298	-12	.452E-02
424	18	12(2,11)-12(1,12)	216.1070	216.1338	-268	.145E-02
425	17	12(2,11)-12(1,12)	216.6868	216.4964	1904	.145E-02
426	16	12(1,11)-12(0,12)	216.7747	216.7723	24	.483E-03
427	16	12(2,11)-12(1,12)	216.9020	216.9032	-12	.145E-02
428	18	8(3, 6)- 7(2, 5)	221.2535	221.2542	-7	.106E+00
429	18	5(2, 3)- 4(1, 4)	221.3303	221.3311	-8	.189E+00
430	17	5(2, 3)- 4(1, 4)	221.4888	221.4905	-17	.189E+00
431	16	5(2, 3)- 4(1, 4)	221.6725	221.6739	-14	.189E+00
432	16	10(2, 8)- 9(3, 7)	221.7370	221.7366	4	.612E-02
433	17	10(2, 8)- 9(3, 7)	221.8469	221.8048	421	.612E-02
434	18	10(2, 8)- 9(3, 7)	221.8378	221.8437	-59	.612E-02
435	010	4(4, 1)- 3(3, 0)	221.9830	221.9835	-5	.475E-03
436	010	4(4, 0)- 3(3, 1)	222.1670	222.1660	10	.159E-03
437	17	8(3, 6)- 7(2, 5)	222.3864	222.4047	-183	.106E+00
438	010	5(3, 2)- 4(2, 3)	222.4770	222.4792	-22	.252E-03
439	16	8(3, 6)- 7(2, 5)	223.7061	223.7073	-12	.106E+00
440	18	5(4, 2)- 4(3, 1)	223.8429	223.8424	5	.239E+00
441	18	7(4, 3)- 7(1, 6)	224.0071	224.0059	12	.565E-02
442	17	5(4, 2)- 4(3, 1)	224.9857	224.9837	20	.239E+00
443	17	7(4, 3)- 7(1, 6)	225.4213	225.4113	100	.565E-02
444	18	5(4, 1)- 4(3, 2)	225.5025	225.5024	1	.720E+00
445	16	5(4, 2)- 4(3, 1)	226.2713	226.2720	-7	.239E+00
446	17	5(4, 1)- 4(3, 2)	226.5946	226.5921	25	.720E+00
447	16	7(4, 3)- 7(1, 6)	227.0231	227.0237	-6	.565E-02
448	16	5(4, 1)- 4(3, 2)	227.8242	227.8272	-30	.720E+00
449	18	12(0,12)-11(1,11)	229.7563	229.7483	80	.930E-02
449	18	12(1,12)-11(0,11)	229.7655	229.7483	172	.279E-01
450	17	12(0,12)-11(1,11)	230.2511	230.2130	381	.930E-02
450	17	12(1,12)-11(0,11)	230.2608	230.2130	478	.279E-01
451	18	11(1,10)-10(2, 9)	230.2725	230.2757	-32	.239E-01
452	17	11(1,10)-10(2, 9)	230.7972	230.7306	666	.239E-01
452	16	12(0,12)-11(1,11)	230.7252	230.7306	-54	.930E-02
452	16	12(1,12)-11(0,11)	230.7402	230.7306	96	0.279E-01

TABLE II—*Continued*

LN	MO	$J'(K'_a,K'_c)-J''(K''_a,K''_c)$	FREQ	OBS	DIFF	I
453	18	9(3, 7)- 8(2, 6)	230.9631	230.9636	-5	0.176E-01
454	18	11(2,10)-10(1, 9)	231.0522	231.0530	-8	.803E-02
455	16	11(1,10)-10(2, 9)	231.2149	231.2145	4	.239E-01
456	17	11(2,10)-10(1, 9)	231.6265	231.5544	721	.803E-02
457	16	11(3, 8)-10(4, 7)	231.8872	231.8879	-7	.233E-02
458	17	9(3, 7)- 8(2, 6)	232.0442	232.0665	-223	.176E-01
459	16	11(2,10)-10(1, 9)	232.1179	232.1180	-1	.803E-02
460	17	11(3, 8)-10(4, 7)	233.1454	232.9797	1657	.233E-02
461	16	9(3, 7)- 8(2, 6)	233.3200	233.3200	0	.176E-01
462	18	11(3, 8)-10(4, 7)	233.9213	233.9132	81	.233E-02
463	18	13(1,12)-13(0,13)	234.7420	234.7990	-570	.505E-03
464	17	13(1,12)-13(0,13)	235.6109	235.2005	4104	.505E-03
465	16	13(1,12)-13(0,13)	235.6398	235.6418	-20	.505E-03
466	16	13(2,12)-13(1,13)	235.7011	235.7020	-9	.168E-03
467	18	10(3, 8)- 9(2, 7)	242.0860	242.0888	-28	.243E-01
468	18	4(3, 2)- 3(0, 3)	242.9555	242.9552	3	.406E-01
469	17	10(3, 8)- 9(2, 7)	243.0673	243.0792	-119	.243E-01
470	18	11(2, 9)-10(3, 8)	244.1405	244.1518	-113	.897E-02
471	16	10(3, 8)- 9(2, 7)	244.2070	244.2073	-3	.243E-01
472	17	4(3, 2)- 3(0, 3)	244.2690	244.2687	3	.406E-01
473	17	11(2, 9)-10(3, 8)	244.4349	244.3429	920	.897E-02
474	18	6(3, 3)- 5(2, 4)	244.4422	244.4428	-6	.105E+00
475	16	11(2, 9)-10(3, 8)	244.5366	244.5368	-2	.897E-02
476	17	6(3, 3)- 5(2, 4)	244.8624	244.8593	31	.105E+00
477	18	6(4, 3)- 5(3, 2)	245.3056	245.3063	-7	.440E+00
478	16	6(3, 3)- 5(2, 4)	245.3399	245.3394	5	.105E+00
479	16	4(3, 2)- 3(0, 3)	245.7550	245.7565	-15	.406E-01
480	17	6(4, 3)- 5(3, 2)	246.5330	246.5311	19	.440E+00
481	18	8(4, 4)- 8(1, 7)	246.9469	246.9452	17	.115E-02
482	010	5(4, 1)- 4(3, 2)	247.0460	247.0481	-21	.342E-03
483	16	13(0,13)-12(1,12)	247.7926	247.7633	293	.114E-01
483	18	13(1,13)-12(0,12)	247.7966	247.7633	333	.380E-02
484	17	8(4, 4)- 8(1, 7)	247.8536	247.8427	109	.115E-02
485	16	6(4, 3)- 5(3, 2)	247.9127	247.9138	-11	.440E+00
486	17	13(0,13)-12(1,12)	248.3473	248.2633	840	.114E-01
486	17	13(1,13)-12(0,12)	248.3515	248.2633	882	.380E-02
487	18	12(1,11)-11(2,10)	248.4350	248.4374	-24	.335E-02
488	18	12(2,11)-11(1,10)	248.7955	248.7978	-23	.101E-01
489	16	13(0,13)-12(1,12)	248.8222	248.8242	-20	.114E-01
489	16	13(1,13)-12(0,12)	248.8290	248.8242	48	.380E-02
490	16	8(4, 4)- 8(1, 7)	248.8851	248.8851	0	.115E-02
491	17	12(1,11)-11(2,10)	249.0940	248.9305	1635	.335E-02
492	17	12(2,11)-11(1,10)	249.4768	249.3184	1584	.101E-01
493	16	12(1,11)-11(2,10)	249.4817	249.4809	8	.335E-02
494	16	12(2,11)-11(1,10)	249.9025	249.9036	-11	.101E-01
495	18	5(5, 1)- 4(4, 0)	251.0081	251.0084	-3	.234E+00
496	18	5(5, 0)- 4(4, 1)	251.0409	251.0387	22	.701E+00
497	18	6(4, 2)- 5(3, 3)	251.5926	251.5920	6	.149E+00
498	17	5(5, 1)- 4(4, 0)	252.3829	252.3853	-24	.234E+00
499	17	5(5, 0)- 4(4, 1)	252.4143	252.4142	1	.701E+00
500	17	6(4, 2)- 5(3, 3)	252.6380	252.6325	55	.149E+00
501	16	6(4, 2)- 5(3, 3)	253.8123	253.8135	-12	.149E+00
502	16	5(5, 1)- 4(4, 0)	253.9391	253.9641	-250	.234E+00
502	16	5(5, 0)- 4(4, 1)	253.9685	253.9641	44	.701E+00
503	16	14(2,13)-14(1,14)	254.3954	254.3980	-26	.160E-03
504	18	11(3, 9)-10(2, 8)	255.2504	255.2581	-77	.344E-02
505	18	7(3, 4)- 7(0, 7)	255.7723	255.7716	7	.402E-02
506	17	7(3, 4)- 7(0, 7)	255.9289	255.9243	46	.402E-02
507	16	7(3, 4)- 7(0, 7)	256.1137	256.1146	-9	.402E-02
507	17	11(3, 9)-10(2, 8)	256.1527	256.1146	381	.344E-02
508	HDO	6(6, 1)- 5(5, 0)	256.8220	256.8238	-18	.479E-04
508	HDO	6(6, 0)- 5(5, 1)	256.8220	256.8238	-18	0.479E-04
509	16	11(3, 9)-10(2, 8)	257.1018	257.1005	13	0.344E-02
510	16	13(4, 9)-12(5, 8)	258.4203	258.4194	9	.835E-04
511	18	4(4, 1)- 4(1, 4)	258.8157	258.8154	3	.666E-03
512	17	4(4, 1)- 4(1, 4)	260.9039	260.9045	-6	.666E-03
513	16	12(3, 9)-11(4, 8)	262.8456	262.8389	67	.365E-03
514	16	4(4, 1)- 4(1, 4)	263.2695	263.2845	-150	.666E-03
514	18	7(4, 4)- 6(3, 3)	263.2872	263.2845	27	.773E-01
515	17	12(3, 9)-11(4, 8)	263.7953	263.5165	2788	.365E-03
516	18	12(3, 9)-11(4, 8)	264.0834	264.0754	80	.365E-03
517	18	12(2,10)-11(3, 9)	264.3717	264.3918	-201	.124E-02
518	17	7(4, 4)- 6(3, 3)	264.6508	264.6550	-42	.773E-01
519	17	12(2,10)-11(3, 9)	264.9447	264.7503	1944	.124E-02
520	16	12(2,10)-11(3, 9)	265.1368	265.1387	-19	.124E-02
521	18	14(0,14)-13(1,13)	265.7687	265.7079	608	.140E-02
521	18	14(1,14)-13(0,13)	265.7705	265.7079	626	.420E-02
522	16	7(4, 4)- 6(3, 3)	266.1956	266.1954	2	.773E-01
523	17	14(0,14)-13(1,13)	266.3940	266.2416	1524	.140E-02
523	17	14(1,14)-13(0,13)	266.3959	266.2416	1543	.420E-02
524	18	13(1,12)-12(2,11)	266.4276	266.4275	1	.378E-02
525	18	13(2,12)-12(1,11)	266.5951	266.5925	26	.126E-02
526	16	14(0,14)-13(1,13)	266.8446	266.8452	-6	.140E-02
526	16	14(1,14)-13(0,13)	266.8468	266.8452	16	.420E-02
527	17	13(1,12)-12(2,11)	267.2714	266.9621	3093	.378E-02
528	18	8(5, 3)- 8(2, 6)	266.9909	266.9841	68	.431E-03
529	17	13(2,12)-12(1,11)	267.4479	267.1413	3066	.126E-02
530	16	13(1,12)-12(2,11)	267.5600	267.5599	1	.378E-02
531	16	13(2,12)-12(1,11)	267.7554	267.7585	-31	.126E-02
532	010	6(4, 3)- 5(3, 2)	267.8870	267.8865	5	.209E-03
533	17	8(5, 3)- 8(2, 6)	269.8022	269.7947	75	.431E-03
534	18	12(3,10)-11(2, 9)	270.1987	270.2146	-159	.397E-02
535	18	9(5, 4)- 9(2, 7)	270.4247	270.4121	126	.817E-03
536	18	7(5, 2)- 7(2, 5)	270.7557	270.7498	59	.184E-02
537	17	12(3,10)-11(2, 9)	271.1134	270.9752	1382	.397E-02
538	16	12(3,10)-11(2, 9)	271.8427	271.8431	-4	.397E-02
539	HDO	7(6, 2)- 6(5, 1)	271.9630	271.9622	8	.330E-04
539	HDO	7(6, 1)- 6(5, 2)	271.9640	271.9622	18	.330E-04
540	17	9(5, 4)- 9(2, 7)	272.7129	272.7219	-90	.817E-03
541	16	8(5, 3)- 8(2, 6)	273.0002	273.0004	-2	.431E-03
542	17	7(5, 2)- 7(2, 5)	273.8917	273.8774	143	.184E-02
543	18	6(5, 2)- 5(4, 1)	275.2858	275.2837	21	.435E+00
544	16	9(5, 4)- 9(2, 7)	275.3758	275.3761	-3	.817E-03
545	18	6(5, 1)- 5(4, 2)	275.5728	275.5701	27	.145E+00
546	18	6(2, 4)- 5(1, 5)	276.0221	276.0220	1	.360E-01
547	17	6(2, 4)- 5(1, 5)	276.0795	276.0807	-12	.360E-01
548	16	6(2, 4)- 5(1, 5)	276.1486	276.1482	4	.360E-01
549	010	5(5, 1)- 4(4, 0)	276.5230	276.5228	2	.111E-03
550	010	5(5, 0)- 4(4, 1)	276.5440	276.5443	-3	.333E-03
551	17	6(5, 2)- 5(4, 1)	276.6850	276.6800	50	.435E+00
552	17	6(5, 1)- 5(4, 2)	276.9599	276.9547	52	.145E+00
553	18	8(4, 5)- 7(3, 4)	277.0884	277.0867	17	.106E+00
554	16	7(5, 2)- 7(2, 5)	277.4254	277.4266	-12	.184E-02
555	16	6(5, 2)- 5(4, 1)	278.2581	278.2575	6	.435E+00
556	16	6(5, 1)- 5(4, 2)	278.5184	278.5181	3	.145E+00
557	17	8(4, 5)- 7(3, 4)	278.6042	278.6231	-189	.106E+00
558	18	6(5, 1)- 6(2, 4)	278.8807	278.8764	43	.597E-03
559	18	5(4, 2)- 5(1, 5)	279.3300	279.3325	-25	.458E-03
560	18	5(3, 3)- 4(0, 4)	279.3629	279.3626	3	.200E-01
561	18	7(4, 3)- 6(3, 4)	280.3186	280.3188	-2	.239E+00
562	16	8(4, 5)- 7(3, 4)	280.3521	280.3520	1	.106E+00
563	18	9(4, 5)- 9(1, 8)	280.4435	280.4350	85	.149E-02
564	17	5(3, 3)- 4(0, 4)	280.5590	280.5588	2	0.200E-01

TABLE II—*Continued*

LN	MO	$J'(K'_a,K'_c)-J''(K''_a,K''_c)$	FREQ	OBS	DIFF	I
565	17	9(4, 5)- 9(1, 8)	280.7770	280.7548	222	0.149E-02
566	16	9(4, 5)- 9(1, 8)	281.1558	281.1562	-4	.149E-02
567	17	7(4, 3)- 6(3, 4)	281.2330	281.2236	94	.239E+00
568	17	5(4, 2)- 5(1, 5)	281.2827	281.2776	51	.458E-03
569	16	5(3, 3)- 4(0, 4)	281.9157	281.9157	0	.200E-01
570	17	6(5, 1)- 6(2, 4)	282.1631	282.1551	80	.597E-03
571	16	7(4, 3)- 6(3, 4)	282.2586	282.2585	1	.239E+00
572	18	13(2,11)-12(3,10)	283.3436	283.3787	-351	.131E-02
573	16	5(4, 2)- 5(1, 5)	283.4887	283.4891	-4	.458E-03
574	18	15(0,15)-14(1,14)	283.6874	283.5733	1141	.140E-02
574	18	15(1,15)-14(0,14)	283.6883	283.5733	1150	.466E-03
575	17	13(2,11)-12(3,10)	284.2322	283.8525	3797	.131E-02
576	17	15(0,15)-14(1,14)	284.3963	284.1454	2509	.140E-02
576	17	15(1,15)-14(0,14)	284.3971	284.1454	2517	.466E-03
577	18	14(1,13)-13(2,12)	284.3043	284.2966	77	.428E-03
578	16	13(2,11)-12(3,10)	284.3797	284.3764	33	.131E-02
578	18	14(2,13)-13(1,12)	284.3830	284.3764	66	.128E-02
579	16	15(0,15)-14(1,14)	284.7857	284.7663	-6	.140E-02
579	16	15(1,15)-14(0,14)	284.7867	284.7863	4	.466E-03
580	17	14(1,13)-13(2,12)	285.4100	284.8684	5416	.428E-03
581	17	14(2,13)-13(1,12)	285.4917	284.9533	5384	.128E-02
582	16	14(1,13)-13(2,12)	285.5167	285.5091	76	.428E-03
583	16	14(2,13)-13(1,12)	285.6024	285.6039	-15	.128E-02
584	16	6(5, 1)- 6(2, 4)	285.8585	285.8585	0	.597E-03
585	16	13(3,11)-12(2,10)	286.3225	286.3508	-283	.459E-03
586	16	10(5, 5)-10(2, 8)	286.7380	286.7375	5	.143E-03
587	17	13(3,11)-12(2,10)	287.3853	287.0593	3260	.459E-03
588	18	9(4, 6)- 8(3, 5)	287.1527	287.1506	21	.146E-01
589	16	13(3,11)-12(2,10)	287.8590	287.8568	22	.459E-03
590	18	5(5, 0)- 5(2, 3)	288.5264	288.5262	2	.768E-03
591	17	9(4, 6)- 8(3, 5)	288.7892	288.8323	-431	.146E-01
592	18	7(3, 4)- 6(2, 5)	289.0986	289.0989	-3	.155E+00
593	17	7(3, 4)- 6(2, 5)	289.2634	289.2554	80	.155E+00
594	16	7(3, 4)- 6(2, 5)	289.4454	289.4454	0	.155E+00
595	16	13(3,10)-12(4, 9)	289.7726	289.7717	9	.416E-03
596	17	13(3,10)-12(4, 9)	290.4810	290.0212	4598	.416E-03
597	18	13(3,10)-12(4, 9)	290.2005	290.2055	-50	.416E-03
598	16	9(4, 6)- 8(3, 5)	290.7278	290.7278	0	.146E-01
599	17	5(5, 0)- 5(2, 3)	291.8294	291.8254	40	.768E-03
600	18	10(4, 7)- 9(3, 6)	294.6536	294.6519	17	.164E-01
601	16	5(5, 0)- 5(2, 3)	295.5655	295.5656	-1	.768E-03
602	17	10(4, 7)- 9(3, 6)	296.3502	296.4197	-695	.164E-01
603	16	10(4, 7)- 9(3, 6)	298.4170	298.4171	-1	.164E-01
604	18	7(5, 3)- 6(4, 2)	298.8060	298.8030	30	.784E-01
605	18	6(6, 1)- 5(5, 0)	299.5132	299.5121	11	.334E+00
605	18	6(6, 0)- 5(5, 1)	299.5173	299.5121	52	.111E+00
606	18	7(5, 2)- 6(4, 3)	300.1733	300.1700	33	.236E+00
607	17	7(5, 3)- 6(4, 2)	300.2459	300.2421	38	.784E-01
608	010	7(4, 3)- 6(3, 4)	300.4280	300.4271	9	.144E-03
609	010	6(5, 2)- 5(4, 1)	300.9950	300.9951	-1	.207E-03
610	18	11(4, 8)-10(3, 7)	301.1172	301.1421	-249	.191E-02
610	17	6(6, 1)- 5(5, 0)	301.1419	301.1421	-2	.334E+00
610	17	6(6, 0)- 5(5, 1)	301.1458	301.1421	37	.111E+00
611	18	16(0,16)-15(1,15)	301.5539	301.3579	1960	.141E-03
611	18	16(1,16)-15(0,15)	301.5543	301.3579	1964	.427E-03
612	17	7(5, 2)- 6(4, 3)	301.5572	301.5499	73	.236E+00
613	16	7(5, 3)- 6(4, 2)	301.8668	301.8665	3	.784E-01
614	17	16(0,16)-15(1,15)	302.3606	301.9630	3976	.141E-03
614	17	16(1,16)-15(0,15)	302.3610	301.9630	3980	.427E-03
615	16	16(0,16)-15(1,15)	302.6450	302.6451	-1	.141E-03
615	16	16(1,16)-15(0,15)	302.6455	302.6451	4	0.427E-03
616	16	14(2,12)-13(3,11)	302.8156	302.8181	-25	0.144E-03
617	17	11(4, 8)-10(3, 7)	302.8021	302.8825	-804	.191E-02
618	16	6(6, 1)- 5(5, 0)	302.9817	302.9826	-9	.334E+00
618	16	6(6, 0)- 5(5, 1)	302.9855	302.9826	29	.111E+00
619	18	14(3,12)-13(2,11)	303.0909	303.1096	-187	.432E-03
619	16	7(5, 2)- 6(4, 3)	303.1106	303.1096	10	.236E+00
620	16	15(1,14)-14(2,13)	303.3577	303.3544	33	.393E-03
621	16	15(2,14)-14(1,13)	303.3904	303.3991	-87	.132E-03
622	17	14(3,12)-13(2,11)	304.4713	303.8257	6456	.432E-03
623	16	14(3,12)-13(2,11)	304.5988	304.5980	8	.432E-03
624	16	11(4, 8)-10(3, 7)	304.8801	304.8802	-1	.191E-02
625	18	6(4, 3)- 6(1, 6)	305.6887	305.6865	22	.142E-02
626	16	8(3, 5)- 8(0, 8)	306.0936	306.0934	2	.499E-03
627	17	8(3, 5)- 8(0, 8)	306.2695	306.2598	97	.499E-03
628	18	8(3, 5)- 8(0, 8)	306.4179	306.4173	6	.499E-03
629	17	6(4, 3)- 6(1, 6)	307.4648	307.4606	42	.142E-02
630	18	12(4, 9)-11(3, 8)	308.1935	308.2026	-91	.187E-02
631	16	11(5, 6)-11(2, 9)	308.3303	308.3302	1	.168E-03
632	16	6(4, 3)- 6(1, 6)	309.4723	309.4722	1	.142E-02
633	18	4(4, 1)- 3(1, 2)	309.7613	309.7605	8	.645E-02
634	17	12(4, 9)-11(3, 8)	309.8148	309.8489	-341	.187E-02
635	16	12(4, 9)-11(3, 8)	311.7291	311.7279	12	.187E-02
636	17	4(4, 1)- 3(1, 2)	312.0980	312.0989	-9	.645E-02
637	18	8(4, 4)- 7(3, 5)	313.6798	313.6775	23	.365E-01
638	17	8(4, 4)- 7(3, 5)	314.3458	314.3275	183	.365E-01
639	16	4(4, 1)- 3(1, 2)	314.7424	314.7421	3	.645E-02
640	16	8(4, 4)- 7(3, 5)	315.0820	315.0815	5	.365E-01
641	16	13(4,10)-12(3, 9)	320.3189	320.3274	-85	.185E-03
642	16	17(0,17)-16(1,16)	320.4131	320.4120	11	.385E-04
642	16	17(1,17)-16(0,16)	320.4134	320.4120	14	.389E-04
643	18	8(5, 4)- 7(4, 3)	320.6732	320.6686	46	.111E+00
644	16	15(2,13)-14(3,12)	320.7911	320.7892	19	.124E-03
645	16	16(1,15)-15(2,14)	321.1074	321.1236	-162	.366E-04
645	16	16(2,15)-15(1,14)	321.1244	321.1236	8	.108E-03
646	18	6(3, 4)- 5(0, 5)	321.3365	321.3361	4	.586E-01
647	17	8(5, 4)- 7(4, 3)	322.1937	322.2023	-86	.111E+00
648	17	6(3, 4)- 5(0, 5)	322.4081	322.4112	-31	.586E-01
649	16	10(4, 6)-10(1, 9)	323.4326	323.4363	-37	.160E-03
650	16	6(3, 4)- 5(0, 5)	323.6310	323.6310	0	.586E-01
651	16	8(5, 4)- 7(4, 3)	323.9295	323.9289	6	.111E+00
652	18	7(6, 2)- 6(5, 1)	324.0577	324.0552	25	.602E-01
653	18	7(6, 1)- 6(5, 2)	324.1015	324.0983	32	.181E+00
654	18	8(5, 3)- 7(4, 4)	325.3144	325.3101	43	.370E-01
655	17	7(6, 2)- 6(5, 1)	325.7042	325.6996	46	.602E-01
656	17	7(6, 1)- 6(5, 2)	325.7458	325.7404	54	.181E+00
657	16	5(5, 1)- 5(2, 4)	325.8644	325.8632	12	.130E-03
658	17	8(5, 3)- 7(4, 4)	326.6540	326.6494	46	.370E-01
659	16	7(6, 2)- 6(5, 1)	327.5568	327.5627	-59	.602E-01
660	16	7(6, 1)- 6(5, 2)	327.5948	327.5942	6	.181E+00
661	010	6(6, 1)- 5(5, 0)	327.8200	327.8190	10	.159E-03
661	010	6(6, 0)- 5(5, 1)	327.8230	327.8190	40	.527E-04
662	16	8(5, 3)- 7(4, 4)	328.1683	328.1675	8	.370E-01
663	18	6(5, 2)- 6(2, 5)	329.6287	329.6238	49	.740E-03
664	18	5(4, 2)- 4(1, 3)	329.7425	329.7409	16	.662E-02
665	16	14(4,11)-13(3,10)	331.2991	331.3001	-10	.151E-03
666	17	5(4, 2)- 4(1, 3)	332.0324	332.0283	41	.662E-02
667	17	6(5, 2)- 6(2, 5)	332.4807	332.4664	143	.740E-03
668	16	5(4, 2)- 4(1, 3)	334.6168	334.6176	-8	.662E-02
669	18	7(2, 5)- 6(1, 6)	335.1063	335.1062	1	.572E-01
670	17	7(2, 5)- 6(1, 6)	335.1303	335.1333	-30	.572E-01
671	16	7(2, 5)- 6(1, 6)	335.1575	335.1572	3	0.572E-01

TABLE II—*Continued*

LN	MO	$J'(K'_a,K'_c)-J''(K''_a,K''_c)$	FREQ	OBS	DIFF	I
672	16	6(5, 2)- 6(2, 5)	335.6873	335.6862	11	0.740E-03
673	17	7(4, 4)- 7(1, 7)	339.4793	339.4814	-21	.357E-03
674	18	9(5, 5)- 8(4, 4)	339.5863	339.5788	75	.150E-01
675	16	8(3, 5)- 7(2, 6)	340.5492	340.5496	-4	.218E-01
676	17	8(3, 5)- 7(2, 6)	340.6579	340.6400	179	.218E-01
677	18	8(3, 5)- 7(2, 6)	340.7312	340.7306	6	.218E-01
678	18	4(4, 0)- 3(1, 3)	341.1054	341.1044	10	.717E-03
679	16	7(4, 4)- 7(1, 7)	341.2651	341.2858	-207	.357E-03
679	17	9(5, 5)- 8(4, 4)	341.2487	341.2858	-371	.150E-01
680	16	9(5, 5)- 8(4, 4)	343.2050	343.2053	-3	.150E-01
681	17	4(4, 0)- 3(1, 3)	343.3337	343.3331	6	.717E-03
682	18	7(7, 1)- 6(6, 0)	345.7908	345.7916	-8	.382E-01
682	18	7(7, 0)- 6(6, 1)	345.7913	345.7916	-3	.115E+00
683	16	4(4, 0)- 3(1, 3)	345.8556	345.8552	4	.717E-03
684	17	7(7, 1)- 6(6, 0)	347.6530	347.6530	0	.382E-01
684	17	7(7, 0)- 6(6, 1)	347.6535	347.6530	5	.115E+00
685	18	8(6, 3)- 7(5, 2)	348.2315	348.2245	70	.861E-01
686	16	9(6, 3)- 9(3, 6)	348.4647	348.4722	-75	.288E-03
686	18	8(6, 2)- 7(5, 3)	348.4796	348.4722	74	.287E-01
687	16	7(7, 1)- 6(6, 0)	349.7551	349.7557	-6	.382E-01
687	16	7(7, 0)- 6(6, 1)	349.7560	349.7557	3	.115E+00
688	17	8(6, 3)- 7(5, 2)	349.8874	349.8922	-48	.861E-01
689	16	7(5, 3)- 7(2, 6)	350.0385	350.0372	13	.257E-03
690	17	8(6, 2)- 7(5, 3)	350.1235	350.1261	-26	.287E-01
691	16	8(6, 3)- 7(5, 2)	351.7770	351.7756	14	.861E-01
692	18	9(5, 4)- 8(4, 5)	351.9833	351.9869	-36	.456E-01
692	16	8(6, 2)- 7(5, 3)	351.9996	351.9869	127	.287E-01
693	18	6(4, 3)- 5(1, 4)	352.6742	352.6722	20	.296E-01
694	17	9(5, 4)- 8(4, 5)	353.2005	353.1961	44	.456E-01
695	18	9(4, 5)- 8(3, 6)	353.5002	353.4931	71	.427E-01
696	17	9(4, 5)- 8(3, 6)	353.8170	353.7736	434	.427E-01
697	16	9(4, 5)- 8(3, 6)	354.1198	354.1192	6	.427E-01
698	18	10(5, 6)- 9(4, 5)	354.3531	354.3401	130	.158E-01
699	16	9(5, 4)- 8(4, 5)	354.5885	354.5885	0	.456E-01
700	17	6(4, 3)- 5(1, 4)	354.8308	354.8250	58	.296E-01
701	17	10(5, 6)- 9(4, 5)	356.2044	356.2932	-888	.158E-01
702	16	6(4, 3)- 5(1, 4)	357.2673	357.2672	1	.296E-01
703	16	10(5, 6)- 9(4, 5)	358.4828	358.4830	-2	.158E-01
704	16	9(3, 6)- 9(0, 9)	362.7503	362.7501	2	.489E-03
705	17	9(3, 6)- 9(0, 9)	363.1907	363.1704	203	.489E-03
706	18	9(3, 6)- 9(0, 9)	363.5436	363.5386	50	.489E-03
707	18	8(5, 4)- 8(2, 7)	364.4600	364.4541	59	.572E-03
708	18	11(5, 7)-10(4, 6)	364.6624	364.6423	201	.163E-02
709	17	11(5, 7)-10(4, 6)	366.6950	366.8491	-1541	.163E-02
709	17	8(5, 4)- 8(2, 7)	366.8533	366.8491	42	.572E-03
710	18	7(3, 5)- 6(0, 6)	367.9161	367.9150	11	.143E-01
711	17	7(3, 5)- 6(0, 6)	368.8815	368.8913	-98	.143E-01
712	16	11(5, 7)-10(4, 6)	369.3356	369.3318	38	.163E-02
713	16	8(5, 4)- 8(2, 7)	369.5664	369.5663	1	.572E-03
714	16	7(3, 5)- 6(0, 6)	369.9973	369.9980	-7	.143E-01
715	18	8(7, 2)- 7(6, 1)	370.5011	370.5049	-38	.544E-01
715	18	8(7, 1)- 7(6, 2)	370.5074	370.5049	25	.181E-01
716	18	12(5, 8)-11(4, 7)	371.2667	371.2410	257	.136E-02
717	18	9(6, 4)- 8(5, 3)	371.7056	371.6896	160	.120E-01
718	17	8(7, 2)- 7(6, 1)	372.3656	372.3799	-143	.544E-01
718	17	8(7, 1)- 7(6, 2)	372.3716	372.3799	-83	.181E-01
719	18	9(6, 3)- 8(5, 4)	372.7019	372.6870	149	.360E-01
720	17	9(6, 4)- 8(5, 3)	373.3682	373.4018	-336	.120E-01
721	17	12(5, 8)-11(4, 7)	373.4299	373.6500	-2201	.136E-02
722	16	7(6, 1)- 7(3, 4)	373.8367	373.8365	2	.283E-03
723	16	11(4, 7)-11(1,10)	374.1587	374.1620	-33	0.120E-03
724	17	9(6, 3)- 8(5, 4)	374.3179	374.3436	-257	0.360E-01
725	16	8(7, 2)- 7(6, 1)	374.4967	374.4972	-5	.544E-01
725	16	8(7, 1)- 7(6, 2)	374.5019	374.4972	47	.181E-01
726	16	9(6, 4)- 8(5, 3)	375.3384	375.3337	47	.120E-01
727	18	8(4, 5)- 8(1, 8)	375.6400	375.6375	25	.619E-03
728	16	9(6, 3)- 8(5, 4)	376.2173	376.2170	3	.360E-01
729	16	12(5, 8)-11(4, 7)	376.3651	376.3638	13	.136E-02
730	17	8(4, 5)- 8(1, 8)	376.9838	376.9951	-113	.619E-03
731	16	8(4, 5)- 8(1, 8)	378.5460	378.5442	18	.619E-03
732	18	7(4, 4)- 6(1, 5)	380.7174	380.7150	24	.101E-01
733	18	5(4, 1)- 4(1, 4)	380.9661	380.9644	17	.445E-02
734	18	10(5, 5)- 9(4, 6)	381.7375	381.7185	190	.547E-02
735	17	7(4, 4)- 6(1, 5)	382.6457	382.6439	18	.101E-01
736	17	10(5, 5)- 9(4, 6)	382.7147	382.6953	194	.547E-02
737	17	5(4, 1)- 4(1, 4)	383.0971	383.0926	45	.445E-02
738	16	10(5, 5)- 9(4, 6)	383.8218	383.8200	18	.547E-02
739	16	7(4, 4)- 6(1, 5)	384.8385	384.8382	3	.101E-01
740	16	5(4, 1)- 4(1, 4)	385.5026	385.5029	-3	.445E-02
741	18	8(8, 1)- 7(7, 0)	389.8243	389.8148	95	.295E-01
741	18	8(8, 0)- 7(7, 1)	389.8243	389.8148	95	.983E-02
742	17	8(8, 1)- 7(7, 0)	391.8781	391.8874	-93	.295E-01
742	17	8(8, 0)- 7(7, 1)	391.8781	391.8874	-93	.983E-02
743	18	10(6, 5)- 9(5, 4)	393.8744	393.8428	316	.132E-01
744	16	8(8, 1)- 7(7, 0)	394.2275	394.2286	-11	.295E-01
744	16	8(8, 0)- 7(7, 1)	394.2275	394.2286	-11	.983E-02
745	18	9(7, 3)- 8(6, 2)	394.9247	394.9123	124	.762E-02
746	18	9(7, 2)- 8(6, 3)	394.9655	394.9520	135	.229E-01
747	17	10(6, 5)- 9(5, 4)	395.5581	395.6457	-876	.132E-01
748	18	8(2, 6)- 7(1, 7)	396.2350	396.2359	-9	.960E-02
749	17	8(2, 6)- 7(1, 7)	396.3311	396.3330	-19	.960E-02
750	16	8(2, 6)- 7(1, 7)	396.4332	396.4321	11	.960E-02
751	17	9(7, 3)- 8(6, 2)	396.7554	396.8046	-492	.762E-02
752	17	9(7, 2)- 8(6, 3)	396.7943	396.8406	-463	.229E-01
753	16	10(6, 4)- 9(5, 5)	397.0314	397.0005	309	.437E-02
754	16	9(3, 6)- 8(2, 7)	397.3190	397.3193	-3	.251E-01
755	17	9(3, 6)- 8(2, 7)	397.6507	397.6168	339	.251E-01
756	16	10(6, 5)- 9(5, 4)	397.6761	397.6751	10	.132E-01
757	18	9(3, 6)- 8(2, 7)	397.8862	397.8832	30	.251E-01
758	17	10(6, 4)- 9(5, 5)	398.5750	398.6321	-571	.437E-02
759	16	9(7, 3)- 8(6, 2)	398.9373	398.9447	-74	.762E-02
760	16	9(7, 2)- 8(6, 3)	398.9763	398.9750	13	.229E-01
761	16	10(4, 6)- 9(3, 7)	400.2197	400.2227	-30	.472E-02
762	17	10(4, 6)- 9(3, 7)	400.4313	400.3384	929	.472E-02
763	18	10(4, 6)- 9(3, 7)	400.4879	400.4763	116	.472E-02
763	16	10(6, 4)- 9(5, 5)	400.4832	400.4763	69	.437E-02
764	16	8(6, 3)- 8(3, 6)	405.4963	405.5012	-49	.217E-03
765	18	11(6, 6)-10(5, 5)	413.7559	413.6979	580	.141E-02
766	18	9(8, 2)- 8(7, 1)	414.6789	414.6736	53	.411E-02
766	18	9(8, 1)- 8(7, 2)	414.6798	414.6736	62	.123E-01
767	18	8(4, 5)- 7(1, 6)	414.9438	414.9458	-20	.235E-01
768	17	11(6, 6)-10(5, 5)	415.5033	415.6776	-1743	.141E-02
769	18	11(5, 6)-10(4, 7)	416.4498	416.4091	407	.513E-02
770	17	8(4, 5)- 7(1, 6)	416.5922	416.6030	-108	.235E-01
771	17	9(8, 2)- 8(7, 1)	416.6938	416.7615	-677	.411E-02
771	17	9(8, 1)- 8(7, 2)	416.6946	416.7615	-669	.123E-01
772	17	11(5, 6)-10(4, 7)	417.0571	416.9749	822	.513E-02
773	16	11(5, 6)-10(4, 7)	417.6592	417.6609	-17	.513E-02
774	16	11(6, 6)-10(5, 5)	417.8900	417.9219	-319	.141E-02
774	18	8(3, 6)- 7(0, 7)	417.9283	417.9219	64	.257E-01
775	16	8(4, 5)- 7(1, 6)	418.4948	418.4960	-12	.235E-01
776	17	8(3, 6)- 7(0, 7)	418.8211	418.8603	-392	.257E-01
776	18	10(7, 4)- 9(6, 3)	418.9251	418.8603	648	0.848E-02

TABLE II—*Continued*

LN	MO	$J'(K'_a,K'_c)-J''(K''_a,K''_c)$	FREQ	OBS	DIFF	I
777	18	10(7, 3)- 9(6, 4)	419.1118	419.0687	431	0.283E-02
778	16	9(8, 2)- 8(7, 1)	419.1137	419.1149	-12	.411E-02
778	16	9(8, 1)- 8(7, 2)	419.1144	419.1149	-5	.123E-01
779	18	5(5, 1)- 4(2, 2)	419.2219	419.2184	35	.756E-03
780	16	8(3, 6)- 7(0, 7)	419.8728	419.8773	-45	.257E-01
781	17	10(7, 4)- 9(6, 3)	420.6805	420.7977	-1172	.848E-02
782	17	10(7, 3)- 9(6, 4)	420.8589	420.9703	-1114	.283E-02
783	18	11(6, 5)-10(5, 6)	422.0817	422.0263	554	.421E-02
784	17	5(5, 1)- 4(2, 2)	422.5404	422.5414	-10	.756E-03
785	16	10(7, 4)- 9(6, 3)	422.9638	422.9659	-21	.848E-02
786	16	10(7, 3)- 9(6, 4)	423.1179	423.1229	-50	.283E-02
787	17	11(6, 5)-10(5, 6)	423.4849	423.5706	-857	.421E-02
788	16	10(5, 6)-10(2, 9)	425.0843	425.0847	-4	.151E-03
789	16	11(6, 5)-10(5, 6)	425.3287	425.3268	19	.421E-02
790	16	5(5, 1)- 4(2, 2)	426.2939	426.2950	-11	.756E-03
791	18	6(4, 2)- 5(1, 5)	426.9737	426.9724	13	.163E-02
792	16	10(6, 5)-10(3, 8)	428.8449	428.8498	-49	.786E-04
793	17	6(4, 2)- 5(1, 5)	428.9379	428.9333	46	.163E-02
794	18	12(6, 7)-11(5, 6)	430.1213	430.0284	929	.118E-02
795	16	6(4, 2)- 5(1, 5)	431.1552	431.1542	10	.163E-02
796	18	9(9, 0)- 8(8, 1)	431.7841	431.6053	1788	.586E-02
796	18	9(9, 1)- 8(8, 0)	431.7841	431.6053	1788	.195E-02
797	17	12(6, 7)-11(5, 6)	431.9941	432.2879	-2938	.118E-02
798	17	9(9, 0)- 8(8, 1)	433.8981	433.8701	280	.586E-02
798	17	9(9, 1)- 8(8, 0)	433.8981	433.8701	280	.195E-02
799	16	12(6, 7)-11(5, 6)	434.8074	434.8054	20	.118E-02
800	18	6(5, 2)- 5(2, 3)	434.9216	434.9191	25	.628E-02
801	18	5(5, 0)- 4(2, 3)	435.0648	435.0639	9	.156E-02
802	16	9(9, 0)- 8(8, 1)	436.4269	436.4287	-18	.586E-02
802	16	9(9, 1)- 8(8, 0)	436.4269	436.4287	-18	.195E-02
803	17	5(5, 0)- 4(2, 3)	438.1836	438.1848	-12	.156E-02
804	17	6(5, 2)- 5(2, 3)	438.2933	438.2850	83	.628E-02
805	18	10(8, 3)- 9(7, 2)	439.2666	439.2245	421	.458E-02
805	18	10(8, 2)- 9(7, 3)	439.2729	439.2245	484	.153E-02
806	17	10(8, 3)- 9(7, 2)	441.1646	441.3266	-1620	.458E-02
806	17	10(8, 2)- 9(7, 3)	441.1708	441.3266	-1556	.153E-02
807	16	5(5, 0)- 4(2, 3)	441.7138	441.7140	-2	.156E-02
808	16	6(5, 2)- 5(2, 3)	442.0882	442.0846	36	.628E-02
809	18	11(7, 5)-10(6, 4)	442.2791	442.1749	1042	.924E-03
810	18	11(7, 4)-10(6, 5)	442.9519	442.8504	1015	.276E-02
811	16	10(8, 3)- 9(7, 2)	443.6947	443.7014	-67	.458E-02
811	16	10(8, 2)- 9(7, 3)	443.7000	443.7014	-14	.153E-02
812	17	11(7, 5)-10(6, 4)	443.9207	444.1389	-2182	.924E-03
813	17	11(7, 4)-10(6, 5)	444.5651	444.7653	-2002	.276E-02
814	16	11(7, 5)-10(6, 4)	446.3500	446.3524	-24	.924E-03
815	16	11(7, 4)-10(6, 5)	446.9313	446.9326	-13	.276E-02
816	16	13(6, 8)-12(5, 7)	447.4166	447.4197	-31	.945E-04
817	18	12(6, 6)-11(5, 7)	448.9267	448.8256	1011	.399E-03
818	18	7(5, 3)- 6(2, 4)	449.7576	449.7563	13	.304E-02
819	17	12(6, 6)-11(5, 7)	450.0967	450.1733	-766	.399E-03
820	16	12(6, 6)-11(5, 7)	451.7132	451.7161	-29	.399E-03
821	16	11(4, 7)-10(3, 8)	452.8792	452.8823	-31	.412E-02
822	17	7(5, 3)- 6(2, 4)	453.1044	453.0944	100	.304E-02
823	17	11(4, 7)-10(3, 8)	453.5909	453.4173	1736	.412E-02
824	18	11(4, 7)-10(3, 8)	453.9571	453.9106	465	.412E-02
825	18	9(4, 6)- 8(1, 7)	454.9875	454.9858	17	.471E-02
826	17	9(4, 6)- 8(1, 7)	456.3634	456.3926	-292	.471E-02
827	18	10(9, 2)- 9(8, 1)	456.7714	456.6030	1684	.216E-02
827	18	10(9, 1)- 9(8, 2)	456.7716	456.6030	1686	.720E-03
828	16	7(5, 3)- 6(2, 4)	456.8734	456.8750	-16	.304E-02
829	18	9(2, 7)- 8(1, 8)	457.1986	457.2012	-26	0.137E-01
830	17	9(2, 7)- 8(1, 8)	457.4715	457.4723	-8	0.137E-01
831	16	12(5, 7)-11(4, 8)	457.6589	457.6566	23	.457E-03
832	16	9(2, 7)- 8(1, 8)	457.7587	457.7671	-84	.137E-01
832	16	10(3, 7)- 9(2, 8)	457.7647	457.7671	-24	.301E-02
833	16	9(4, 6)- 8(1, 7)	457.9945	457.9946	-1	.471E-02
834	17	10(3, 7)- 9(2, 8)	458.1963	458.1354	609	.301E-02
835	18	10(3, 7)- 9(2, 8)	458.4667	458.4606	61	.301E-02
836	17	10(9, 2)- 9(8, 1)	458.7571	458.8802	-1231	.216E-02
836	17	10(9, 1)- 9(8, 2)	458.7572	458.8802	-1230	.720E-03
837	16	10(9, 2)- 9(8, 1)	461.4489	461.4501	-12	.216E-02
837	16	10(9, 1)- 9(8, 2)	461.4490	461.4501	-11	.720E-03
838	18	11(8, 4)-10(7, 3)	463.5070	463.3799	1271	.502E-03
839	18	11(8, 3)-10(7, 4)	463.5391	463.4075	1316	.150E-02
840	18	12(7, 6)-11(6, 5)	464.5935	464.4089	1846	.801E-03
841	18	10(4, 7)-10(1,10)	464.6509	464.6468	41	.115E-03
842	17	11(8, 4)-10(7, 3)	465.2015	465.5000	-2985	.502E-03
843	17	11(8, 3)-10(7, 4)	465.2330	465.5273	-2943	.150E-02
844	18	8(5, 4)- 7(2, 5)	465.9226	465.9174	52	.821E-02
845	18	6(5, 1)- 5(2, 4)	465.9500	465.9399	101	.102E-02
846	18	12(7, 5)-11(6, 6)	466.6166	466.4485	1681	.264E-03
846	17	12(7, 6)-11(6, 5)	466.1010	466.4485	-3475	.801E-03
847	16	10(4, 7)-10(1,10)	466.7868	466.7936	-68	.115E-03
848	16	11(8, 4)-10(7, 3)	467.8939	467.9005	-66	.502E-03
849	16	11(8, 3)-10(7, 4)	467.9187	467.9199	-12	.150E-02
850	17	12(7, 5)-11(6, 6)	468.0432	468.3482	-3050	.264E-03
851	16	12(7, 6)-11(6, 5)	468.7541	468.7542	-1	.801E-03
852	17	6(5, 1)- 5(2, 4)	468.9959	468.9865	94	.102E-02
853	17	8(5, 4)- 7(2, 5)	469.1211	469.1238	-27	.821E-02
854	18	9(3, 7)- 8(0, 8)	470.2724	470.2742	-18	.441E-02
855	16	12(7, 5)-11(6, 6)	470.5065	470.5085	-20	.264E-03
856	17	9(3, 7)- 8(0, 8)	471.1386	471.1651	-265	.441E-02
857	18	10(10, 1)- 9(9, 0)	472.3126	471.2240	10886	.918E-03
857	18	10(10, 0)- 9(9, 1)	472.3126	471.2240	10886	.306E-03
858	16	9(3, 7)- 8(0, 8)	472.1682	472.1678	4	.441E-02
859	16	6(5, 1)- 5(2, 4)	472.4234	472.4255	-21	.102E-02
860	16	8(5, 4)- 7(2, 5)	472.7569	472.7595	-26	.821E-02
861	16	7(5, 2)- 7(0, 7)	473.5921	473.5948	-27	.710E-04
862	17	10(10, 1)- 9(9, 0)	474.0949	473.6669	4280	.918E-03
862	17	10(10, 0)- 9(9, 1)	474.0949	473.6669	4280	.306E-03
863	16	10(10, 1)- 9(9, 0)	476.4223	476.4208	15	.918E-03
863	16	10(10, 0)- 9(9, 1)	476.4223	476.4208	15	.306E-03
864	18	13(6, 7)-12(5, 8)	479.0889	478.9061	1828	.195E-03
865	17	13(6, 7)-12(5, 8)	479.9186	479.8853	333	.195E-03
866	18	7(4, 3)- 6(1, 6)	480.3556	480.3551	5	.371E-02
867	16	13(6, 7)-12(5, 8)	481.0445	481.0423	22	.195E-03
868	18	11(9, 3)-10(8, 2)	481.4893	481.2603	2290	.236E-03
868	18	11(9, 2)-10(8, 3)	481.4903	481.2603	2300	.708E-03
869	17	7(4, 3)- 6(1, 6)	482.0578	482.0504	74	.371E-02
870	17	11(9, 3)-10(8, 2)	483.2356	483.5519	-3163	.236E-03
870	17	11(9, 2)-10(8, 3)	483.2366	483.5519	-3153	.708E-03
871	16	7(4, 3)- 6(1, 6)	483.9849	483.9876	-27	.371E-02
872	18	13(7, 7)-12(6, 6)	485.2039	484.9112	2927	.670E-04
873	18	9(5, 5)- 8(2, 6)	485.8070	485.7959	111	.187E-02
874	16	11(9, 3)-10(8, 2)	486.1363	486.1370	-7	.236E-03
874	16	11(9, 2)-10(8, 3)	486.1371	486.1370	1	.708E-03
875	18	12(8, 5)-11(7, 4)	487.2943	487.0321	2622	.439E-03
876	18	12(8, 4)-11(7, 5)	487.4228	487.1621	2607	.146E-03
877	17	9(5, 5)- 8(2, 6)	488.7032	488.7304	-272	.187E-02
878	17	12(8, 5)-11(7, 4)	488.7041	489.1823	-4782	.439E-03
879	17	12(8, 4)-11(7, 5)	488.8302	489.2977	-4675	.146E-03
880	16	13(7, 7)-12(6, 6)	489.5754	489.5743	11	0.670E-04

TABLE II—*Continued*

LN	MU	$J'(K'_a,K'_c)-J''(K''_a,K''_c)$	FREQ	OBS	DIFF	I
881	18	13(7, 6)-12(6, 7)	490.4552	490.1797	2755	0.205E-03
882	16	12(8, 5)-11(7, 4)	491.6097	491.6074	23	.439E-03
883	16	12(8, 4)-11(7, 5)	491.7182	491.7205	-23	.146E-03
884	17	13(7, 6)-12(6, 7)	491.6492	492.0696	-4204	.205E-03
884	16	9(5, 5)- 8(2, 6)	492.0688	492.0696	-8	.187E-02
885	16	13(7, 6)-12(6, 7)	494.1359	494.1418	-59	.205E-03
886	18	11(10, 1)-10(9, 2)	497.4284	496.3585	10699	.299E-03
886	18	11(10, 2)-10(9, 1)	497.4284	496.3585	10699	.996E-04
887	17	11(10, 1)-10(9, 2)	498.8969	498.8052	917	.299E-03
887	17	11(10, 2)-10(9, 1)	498.8969	498.8052	917	.996E-04
888	18	10(4, 7)- 9(1, 8)	499.6922	499.6866	56	.683E-02
889	18	7(5, 2)- 6(2, 5)	500.7567	500.7532	35	.325E-02
890	17	10(4, 7)- 9(1, 8)	500.8423	500.8890	-467	.683E-02
891	16	11(10, 1)-10(9, 2)	501.5707	501.5729	-22	.299E-03
891	16	11(10, 2)-10(9, 1)	501.5707	501.5729	-22	.996E-04
892	16	10(4, 7)- 9(1, 8)	502.2564	502.2581	-17	.683E-02
893	17	7(5, 2)- 6(2, 5)	503.6609	503.6470	139	.325E-02
894	16	13(5, 8)-12(4, 9)	504.3839	504.3845	-6	.271E-03
895	17	13(5, 8)-12(4, 9)	505.3781	504.9222	4559	.271E-03
896	18	13(5, 8)-12(4, 9)	505.6606	505.4457	2149	.271E-03
897	18	12(9, 4)-11(8, 3)	505.8658	505.5075	3583	.207E-03
897	18	12(9, 3)-11(8, 4)	505.8710	505.5075	3635	.689E-04
898	16	7(5, 2)- 6(2, 5)	506.9238	506.9254	-16	.325E-02
899	17	12(9, 4)-11(8, 3)	507.2662	507.8173	-5511	.207E-03
899	17	12(9, 3)-11(8, 4)	507.2716	507.8173	-5457	.689E-04
900	18	11(11, 0)-10(10, 1)	513.1596	508.7756	43840	.116E-03
900	18	11(11, 1)-10(10, 0)	513.1596	508.7756	43840	.385E-04
901	16	12(9, 4)-11(8, 3)	510.4236	510.4265	-29	.207E-03
901	16	12(9, 3)-11(8, 4)	510.4280	510.4265	15	.689E-04
902	18	13(8, 5)-12(7, 6)	510.8959	510.4725	4234	.112E-03
903	16	12(4, 8)-11(3, 9)	510.5811	510.5848	-37	.364E-03
904	17	11(11, 0)-10(10, 1)	513.5805	511.3411	22394	.116E-03
904	17	11(11, 1)-10(10, 0)	513.5805	511.3411	22394	.385E-04
904	18	10(5, 6)- 9(2, 7)	511.3622	511.3411	211	.327E-02
905	17	12(4, 8)-11(3, 9)	511.7083	511.4144	2939	.364E-03
906	18	12(4, 8)-11(3, 9)	512.2546	512.1517	1029	.364E-03
907	17	13(8, 5)-12(7, 6)	511.9581	512.6339	-6758	.112E-03
908	17	10(5, 6)- 9(2, 7)	513.8219	513.8875	-656	.327E-02
909	16	11(11, 0)-10(10, 1)	514.2945	514.3041	-96	.116E-03
909	16	11(11, 1)-10(10, 0)	514.2945	514.3041	-96	.385E-04
910	16	13(8, 6)-12(7, 5)	514.7037	514.7019	18	.370E-04
911	16	13(8, 5)-12(7, 6)	515.0605	515.0604	1	.112E-03
912	18	10(2, 8)- 9(1, 9)	516.7286	516.7367	-81	.202E-02
913	16	10(5, 6)- 9(2, 7)	516.7969	516.7990	-21	.327E-02
914	17	10(2, 8)- 9(1, 9)	517.2420	517.2275	145	.202E-02
915	16	10(2, 8)- 9(1, 9)	517.7582	517.7598	-16	.202E-02
916	16	11(3, 8)-10(2, 9)	519.5893	519.5898	-5	.311E-02
917	17	11(3, 8)-10(2, 9)	519.9646	519.8690	956	.311E-02
918	18	11(3, 8)-10(2, 9)	520.1096	520.0952	144	.311E-02
919	18	12(10, 3)-11(9, 2)	522.1539	521.0988	10551	.867E-04
919	18	12(10, 2)-11(9, 3)	522.1540	521.0988	10552	.289E-04
920	17	12(10, 3)-11(9, 2)	523.3143	523.5636	-2493	.867E-04
920	17	12(10, 2)-11(9, 3)	523.3145	523.5636	-2491	.289E-04
921	18	10(3, 8)- 9(0, 9)	524.0253	524.0305	-52	.603E-02
922	17	10(3, 8)- 9(0, 9)	524.9254	524.9395	-141	.603E-02
923	16	10(3, 8)- 9(0, 9)	525.9596	525.9622	-26	.603E-02
924	16	12(10, 3)-11(9, 2)	526.3413	526.3439	-26	.867E-04
924	16	12(10, 2)-11(9, 3)	526.3414	526.3439	-25	.289E-04
925	18	6(6, 1)- 5(3, 2)	527.4689	527.4653	36	.710E-03
926	18	13(9, 4)-12(8, 5)	529.8341	529.3096	5245	.534E-04
927	17	6(6, 1)- 5(3, 2)	531.5880	531.5914	-34	0.710E-03

LN	MO	$J'(K'_a,K'_c)-J''(K''_a,K''_c)$	FREQ	OBS	DIFF	I
928	18	6(6, 0)- 5(3, 3)	532.6018	532.5996	22	0.213E-03
929	16	13(9, 5)-12(8, 4)	534.2441	534.2689	-248	.178E-04
929	16	13(9, 4)-12(8, 5)	534.2655	534.2689	-34	.534E-04
930	16	6(6, 1)- 5(3, 2)	536.2458	536.2461	-3	.710E-03
931	17	6(6, 0)- 5(3, 3)	536.5846	536.5856	-10	.213E-03
932	16	12(11, 2)-11(10, 1)	539.5770	539.5787	-17	.332E-04
932	16	12(11, 1)-11(10, 2)	539.5770	539.5787	-17	.111E-04
933	18	8(5, 3)- 7(2, 6)	540.6136	540.6086	50	.823E-03
934	16	6(6, 0)- 5(3, 3)	541.0907	541.0913	-6	.213E-03
935	18	8(4, 4)- 7(1, 7)	542.4557	542.4531	26	.683E-03
936	17	8(5, 3)- 7(2, 6)	543.2851	543.2715	136	.823E-03
936	18	11(5, 7)-10(2, 8)	543.3125	543.2715	410	.532E-03
937	17	8(4, 4)- 7(1, 7)	543.7855	543.7770	85	.683E-03
938	16	8(4, 4)- 7(1, 7)	545.2970	545.2968	2	.683E-03
939	17	11(5, 7)-10(2, 8)	545.2794	545.3872	-1078	.532E-03
940	18	7(6, 2)- 6(3, 3)	545.5655	545.5608	47	.528E-03
941	16	8(5, 3)- 7(2, 6)	546.3040	546.3042	-2	.823E-03
942	18	11(4, 8)-10(1, 9)	547.7607	547.7534	73	.925E-03
943	16	11(5, 7)-10(2, 8)	547.8183	547.8175	8	.532E-03
944	17	11(4, 8)-10(1, 9)	548.7587	548.8099	-512	.925E-03
945	17	7(6, 2)- 6(3, 3)	549.8376	549.8275	101	.528E-03
946	16	11(4, 8)-10(1, 9)	550.0109	550.0120	-11	.925E-03
947	16	7(6, 2)- 6(3, 3)	554.6403	554.6416	-13	.528E-03
948	18	6(5, 2)- 5(0, 5)	556.0334	556.0302	32	.230E-03
949	18	7(6, 1)- 6(3, 4)	558.7984	558.7928	56	.117E-02
950	17	6(5, 2)- 5(0, 5)	559.4251	559.4177	74	.230E-03
951	18	8(6, 3)- 7(3, 4)	559.8896	559.8789	107	.212E-02
952	17	7(6, 1)- 6(3, 4)	562.7628	562.7467	161	.117E-02
953	16	6(5, 2)- 5(0, 5)	563.2511	563.2522	-11	.230E-03
954	17	8(6, 3)- 7(3, 4)	564.2850	564.2834	16	.212E-02
955	16	7(6, 1)- 6(3, 4)	567.2149	567.2166	-17	.117E-02
956	16	8(6, 3)- 7(3, 4)	569.2554	569.2555	-1	.212E-02
957	16	13(4, 9)-12(3,10)	571.2853	571.2865	-12	.282E-03
958	18	9(6, 4)- 8(3, 5)	571.5880	571.5675	205	.634E-03
959	17	13(4, 9)-12(3,10)	572.6729	572.2213	4516	.282E-03
960	18	13(4, 9)-12(3,10)	573.2212	573.0354	1858	.282E-03
961	18	11(2, 9)-10(1,10)	574.6196	574.6375	-179	.247E-02
962	17	11(2, 9)-10(1,10)	575.4135	575.3416	719	.247E-02
963	17	9(6, 4)- 8(3, 5)	575.9953	576.0397	-444	.634E-03
964	16	11(2, 9)-10(1,10)	576.1157	576.1152	5	.247E-02
965	18	11(3, 9)-10(0,10)	578.4838	578.4994	-156	.823E-03
966	17	11(3, 9)-10(0,10)	579.5023	579.4604	419	.823E-03
967	16	11(3, 9)-10(0,10)	580.5372	580.5365	7	.823E-03
968	16	12(3, 9)-11(2,10)	580.7386	580.7325	61	.340E-03
969	17	12(3, 9)-11(2,10)	580.9275	580.7732	1543	.340E-03
969	18	12(3, 9)-11(2,10)	580.7920	580.7732	188	.340E-03
970	18	12(5, 8)-11(2, 9)	581.0833	580.9991	842	.636E-03
971	16	9(6, 4)- 8(3, 5)	581.0932	581.0887	45	.634E-03
972	18	10(6, 5)- 9(3, 6)	582.6948	582.6576	372	.114E-02
973	17	12(5, 8)-11(2, 9)	582.5859	582.7247	-1388	.636E-03
974	16	12(5, 8)-11(2, 9)	584.7077	584.7092	-15	.636E-03
975	18	9(5, 4)- 8(2, 7)	586.7067	586.6993	74	.148E-02
975	18	8(6, 2)- 7(3, 5)	586.7126	586.6993	133	.380E-03
976	17	10(6, 5)- 9(3, 6)	586.9384	587.0626	-1242	.114E-02
977	17	9(5, 4)- 8(2, 7)	589.0310	589.0330	-20	.148E-02
978	17	8(6, 2)- 7(3, 5)	590.5869	590.5697	172	.380E-03
979	16	9(5, 4)- 8(2, 7)	591.6971	591.6980	-9	.148E-02
980	16	10(6, 5)- 9(3, 6)	592.0542	592.0544	-2	.114E-02
981	16	8(6, 2)- 7(3, 5)	594.9525	594.9486	39	.380E-03
982	18	11(6, 6)-10(3, 7)	595.5993	595.5298	695	.176E-03
983	18	12(4, 9)-11(1,10)	598.0305	598.0217	88	0.984E-03

TABLE II—*Continued*

LN	MO	$J'(K'_a,K'_c)-J''(K''_a,K''_c)$	FREQ	OBS	DIFF	I
984	17	12(4, 9)-11(1,10)	598.9822	598.9991	-169	0.984E-03
985	17	11(6, 6)-10(3, 7)	599.4605	599.7031	-2426	.176E-03
986	16	12(4, 9)-11(1,10)	600.1035	600.1036	-1	.984E-03
987	16	11(6, 6)-10(3, 7)	604.4471	604.4489	-18	.176E-03
988	18	7(5, 3)- 6(0, 6)	606.1492	606.1459	33	.871E-04
989	17	7(5, 3)- 6(0, 6)	609.3449	609.3370	79	.871E-04
990	18	12(6, 7)-11(3, 8)	612.6499	612.5227	1272	.218E-03
991	16	7(5, 3)- 6(0, 6)	612.9502	612.9510	-8	.871E-04
992	18	9(4, 5)- 8(1, 8)	614.2077	614.2003	74	.843E-03
993	17	9(4, 5)- 8(1, 8)	615.0890	615.0649	241	.843E-03
994	16	9(4, 5)- 8(1, 8)	616.0728	616.0720	8	.843E-03
995	17	12(6, 7)-11(3, 8)	615.9058	616.2795	-3737	.218E-03
996	18	9(6, 3)- 8(3, 6)	617.3709	617.3506	203	.787E-03
997	16	12(6, 7)-11(3, 8)	620.5794	620.5780	14	.218E-03
998	17	9(6, 3)- 8(3, 6)	621.0526	621.0616	-90	.787E-03
999	18	13(5, 9)-12(2,10)	623.4389	623.2931	1458	.609E-04
1000	17	13(5, 9)-12(2,10)	624.5685	624.7031	-1346	.609E-04
1001	16	9(6, 3)- 8(3, 6)	625.2681	625.2675	6	.787E-03
1002	16	13(5, 9)-12(2,10)	626.3206	626.3221	-15	.609E-04
1003	18	7(7, 1)- 6(4, 2)	626.8000	626.7990	10	.652E-04
1004	18	7(7, 0)- 6(4, 3)	627.9546	627.9539	7	.189E-03
1005	18	12(2,10)-11(1,11)	631.1758	631.2178	-420	.305E-03
1006	17	7(7, 1)- 6(4, 2)	631.5997	631.6079	-82	.652E-04
1007	17	12(2,10)-11(1,11)	632.3229	632.1073	2156	.305E-03
1008	17	7(7, 0)- 6(4, 3)	632.7085	632.7145	-60	.189E-03
1009	16	12(2,10)-11(1,11)	633.0888	633.0892	-4	.305E-03
1010	18	12(3,10)-11(0,11)	633.1602	633.1990	-388	.916E-03
1011	17	12(3,10)-11(0,11)	634.4256	634.2366	1890	.916E-03
1012	16	12(3,10)-11(0,11)	635.3985	635.3973	12	.916E-03
1013	16	7(7, 1)- 6(4, 2)	637.0335	637.0333	2	.652E-04
1014	16	7(7, 0)- 6(4, 3)	638.0891	638.0900	-9	.189E-03
1015	18	13(3,10)-12(2,11)	639.4356	639.4325	31	.286E-03
1016	17	13(3,10)-12(2,11)	639.9864	639.7045	2819	.286E-03
1017	16	13(3,10)-12(2,11)	639.9736	639.9723	13	.286E-03
1018	18	10(5, 5)- 9(2, 8)	640.3101	640.2903	198	.233E-03
1019	17	10(5, 5)- 9(2, 8)	642.1535	642.1635	-100	.233E-03
1020	16	10(5, 5)- 9(2, 8)	644.3218	644.3201	17	.233E-03
1021	18	8(7, 2)- 7(4, 3)	648.9809	648.9785	24	.347E-03
1022	18	13(4,10)-12(1,11)	649.5527	649.5580	-53	.106E-03
1023	17	13(4,10)-12(1,11)	650.6157	650.5101	1056	.106E-03
1024	16	13(4,10)-12(1,11)	651.5758	651.5804	-46	.106E-03
1025	18	10(6, 4)- 9(3, 7)	651.8754	651.8346	408	.143E-03
1026	18	8(7, 1)- 7(4, 4)	652.7857	652.7842	15	.104E-03
1027	17	8(7, 2)- 7(4, 3)	653.8954	653.9012	-58	.347E-03
1028	17	10(6, 4)- 9(3, 7)	655.2340	655.2969	-629	.143E-03
1029	17	8(7, 1)- 7(4, 4)	657.5583	657.5568	15	.104E-03
1030	16	10(6, 4)- 9(3, 7)	659.2320	659.2316	4	.143E-03
1031	16	8(7, 2)- 7(4, 3)	659.4530	659.4530	0	.347E-03
1032	18	8(5, 4)- 7(0, 7)	662.5973	662.5913	60	.207E-03
1033	16	8(7, 1)- 7(4, 4)	662.9466	662.9486	-20	.104E-03
1034	17	8(5, 4)- 7(0, 7)	665.5559	665.5583	-24	.207E-03
1035	18	9(7, 3)- 8(4, 4)	667.9576	667.9365	211	.127E-03
1036	16	8(5, 4)- 7(0, 7)	668.9236	668.9230	6	.207E-03
1037	16	14(5,10)-13(2,11)	671.3560	671.3636	-76	.492E-04
1038	17	9(7, 3)- 8(4, 4)	672.9966	673.0477	-511	.127E-03
1039	18	9(7, 2)- 8(4, 5)	677.7667	677.7440	227	.282E-03
1040	16	9(7, 3)- 8(4, 4)	678.8078	678.8074	4	.127E-03
1041	17	9(7, 2)- 8(4, 5)	682.4751	682.5027	-276	.282E-03
1042	18	10(7, 4)- 9(4, 5)	682.7959	682.7345	614	.323E-03
1043	18	13(2,11)-12(1,12)	686.7383	686.8269	-886	.984E-04
1044	18	13(3,11)-12(0,12)	687.7420	687.8287	-867	0.103E-03
1045	16	9(7, 2)- 8(4, 5)	687.8796	687.8776	20	0.282E-03
1045	17	13(2,11)-12(1,12)	688.3970	687.8776	5194	.984E-04
1046	17	10(7, 4)- 9(4, 5)	687.9161	688.0828	-1667	.323E-03
1047	17	13(3,11)-12(0,12)	689.4571	688.9575	4996	.103E-03
1048	16	13(2,11)-12(1,12)	689.0380	689.0377	3	.984E-04
1049	16	13(3,11)-12(0,12)	690.2226	690.2205	21	.103E-03
1050	18	11(6, 5)-10(3, 8)	691.3579	691.2789	790	.201E-03
1051	18	11(7, 5)-10(4, 6)	693.6666	693.5517	1149	.666E-04
1052	16	10(7, 4)- 9(4, 5)	694.1121	694.1102	19	.323E-03
1053	17	11(6, 5)-10(3, 8)	694.2395	694.3794	-1399	.201E-03
1054	18	10(4, 6)- 9(1, 9)	695.3787	695.3594	193	.855E-04
1055	17	10(4, 6)- 9(1, 9)	695.8265	695.7593	672	.855E-04
1056	18	14(3,11)-13(2,12)	695.9103	695.9496	-393	.245E-05
1057	16	10(4, 6)- 9(1, 9)	696.2409	696.2437	-28	.855E-04
1058	17	14(3,11)-13(2,12)	697.0459	696.4904	5555	.245E-05
1059	16	14(3,11)-13(2,12)	697.0711	697.0563	148	.245E-05
1060	18	8(6, 3)- 7(1, 6)	697.7450	697.7345	105	.118E-03
1061	16	11(6, 5)-10(3, 8)	697.9186	697.9185	1	.201E-03
1062	17	11(7, 5)-10(4, 6)	698.7233	699.0985	-3752	.666E-04
1063	18	14(4,11)-13(1,12)	701.6037	701.6541	-504	.854E-04
1064	18	12(7, 6)-11(4, 7)	701.9943	701.7815	2128	.861E-04
1065	17	8(6, 3)- 7(1, 6)	702.2730	702.2627	103	.118E-03
1066	16	11(5, 6)-10(2, 9)	702.6381	702.5905	476	.254E-03
1067	17	14(4,11)-13(1,12)	703.0213	702.6249	3964	.854E-04
1068	18	10(7, 3)- 9(4, 6)	703.5471	703.4811	660	.593E-04
1069	16	14(4,11)-13(1,12)	703.7127	703.7139	-12	.854E-04
1070	17	11(5, 6)-10(2, 9)	703.8763	703.8658	105	.254E-03
1071	16	11(5, 6)-10(2, 9)	705.3613	705.3606	7	.254E-03
1071	16	11(7, 5)-10(4, 6)	705.3623	705.3606	17	.666E-04
1072	16	8(6, 3)- 7(1, 6)	707.3981	707.3999	-18	.118E-03
1072	17	12(7, 6)-11(4, 7)	706.7496	707.3999	-6503	.861E-04
1073	17	10(7, 3)- 9(4, 6)	708.0651	708.1812	-1161	.593E-04
1074	16	10(7, 3)- 9(4, 6)	713.4833	713.4846	-13	.593E-04
1075	16	12(7, 6)-11(4, 7)	713.7935	713.7910	25	.861E-04
1076	18	8(8, 1)- 7(5, 2)	717.6056	717.5997	59	.441E-04
1077	17	8(8, 1)- 7(5, 2)	723.0293	723.0463	-170	.441E-04
1078	18	9(5, 5)- 8(0, 8)	725.1163	725.1067	96	.406E-04
1079	17	9(5, 5)- 8(0, 8)	727.7976	727.8281	-305	.406E-04
1080	16	8(8, 1)- 7(5, 2)	729.2061	729.2074	-13	0.441E-04

and that around 400 cm^{-1}. The transmission of the interferometer was low in these regions. This disadvantage could be cancelled by using more than three different thicknesses of the beam splitter.

RECEIVED: January 15, 1980

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