

Electronic Supplementary Information

**High-resolution vibration-rotational spectra and rotational perturbation of the
OO-stretching (ν_6) band of CH_2OO between 879.5 and 932 cm^{-1}**

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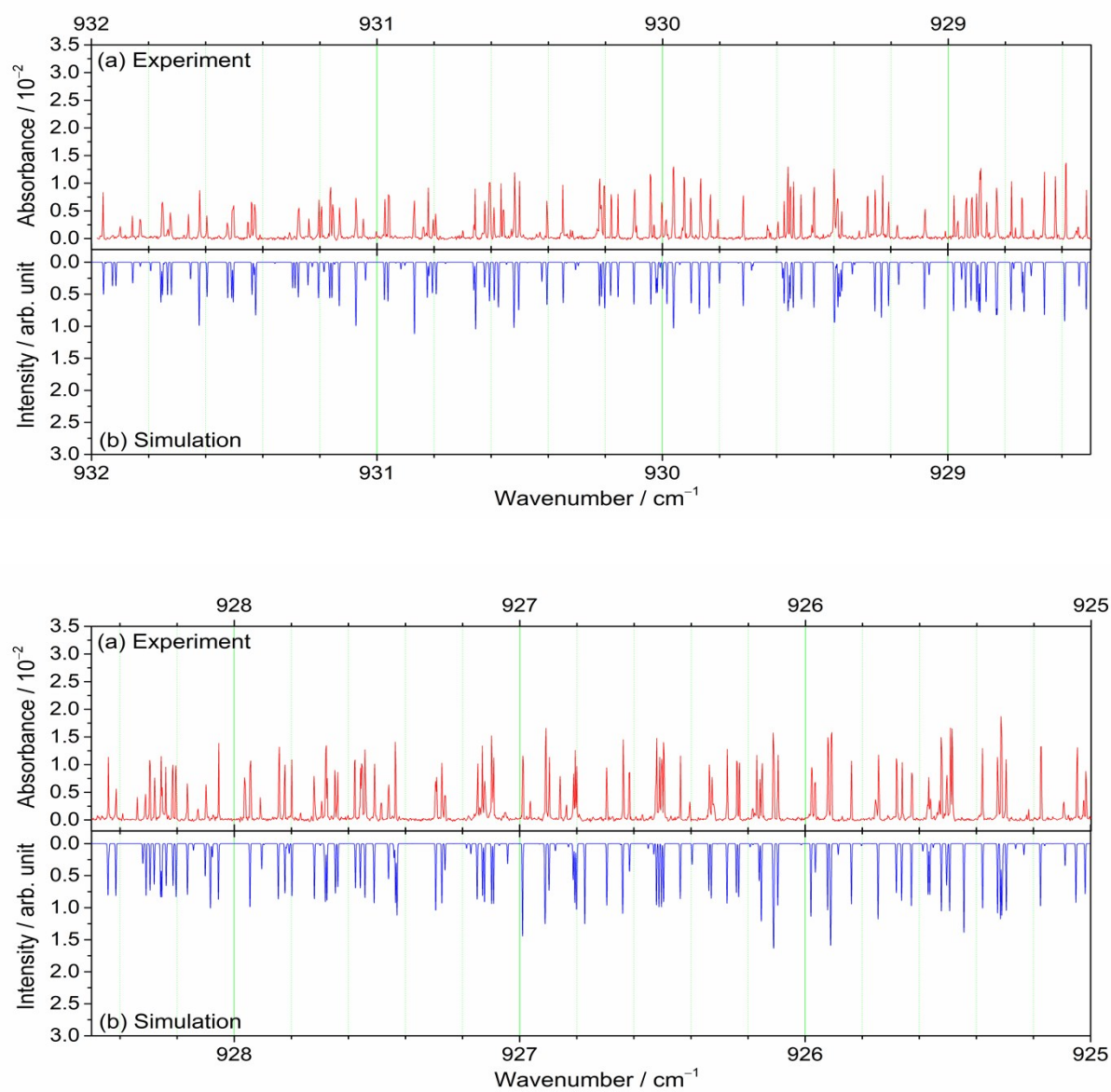
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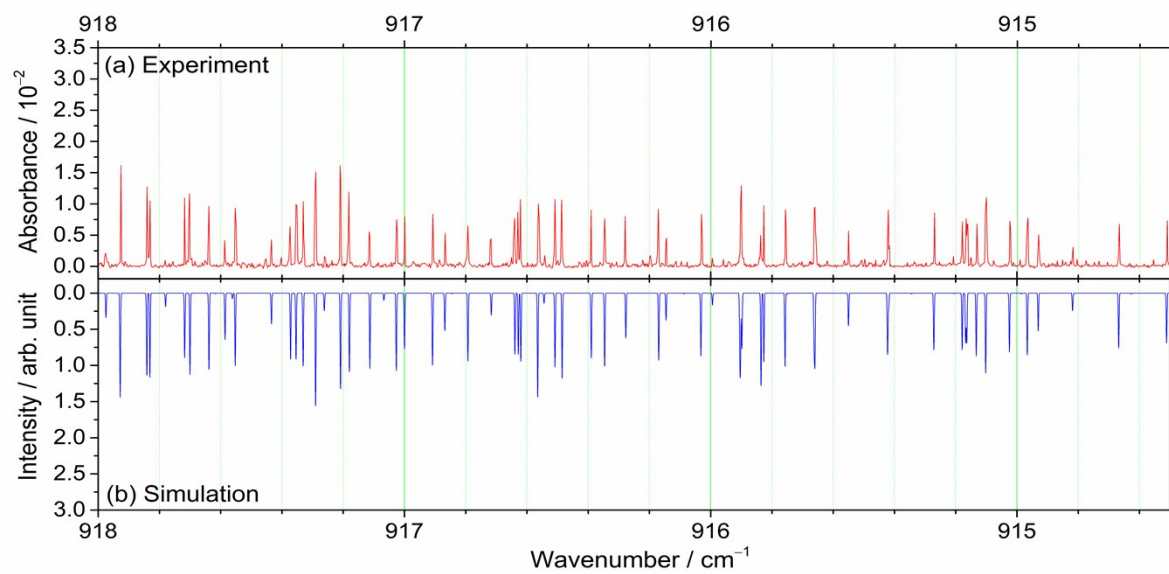
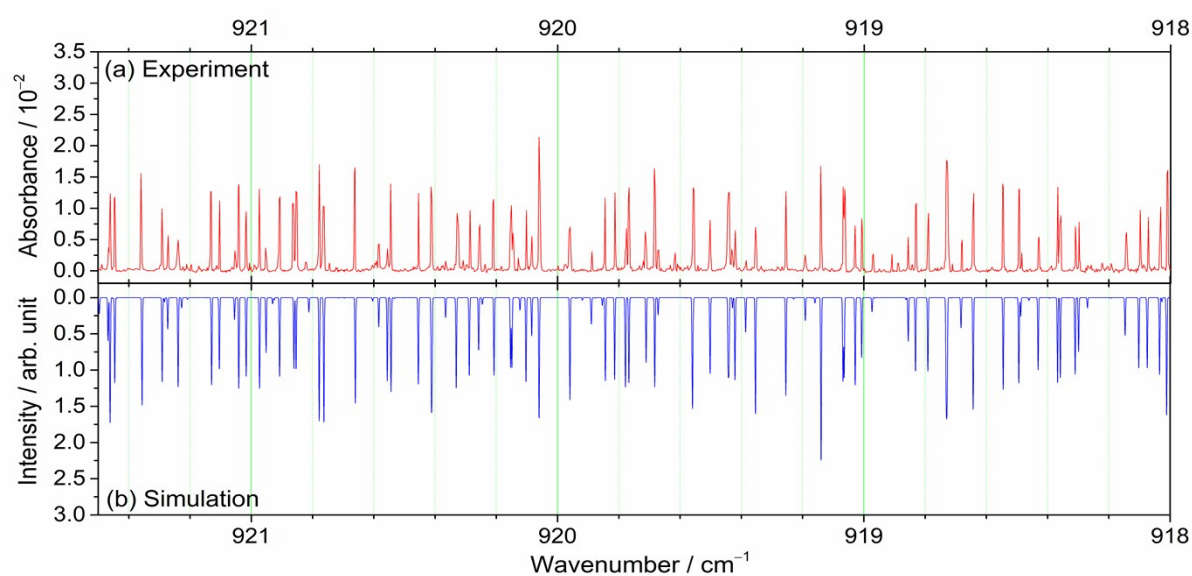
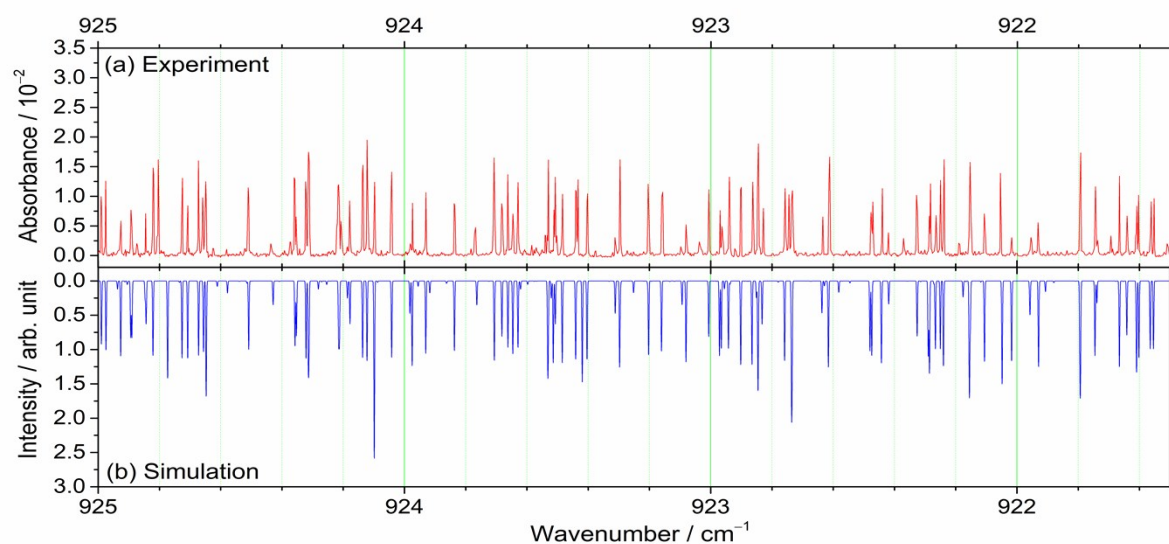
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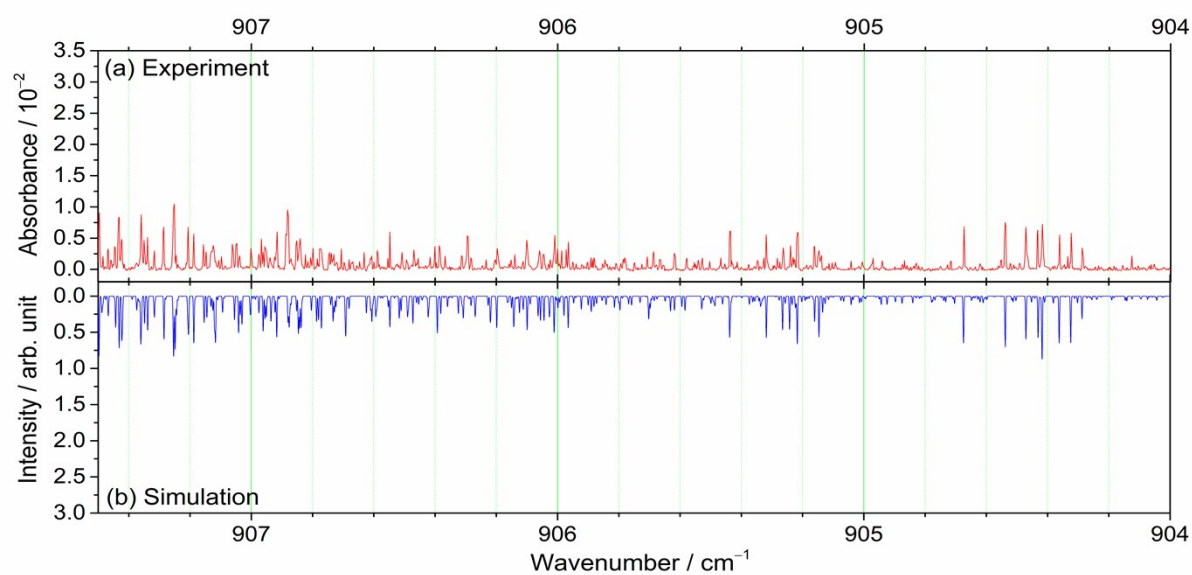
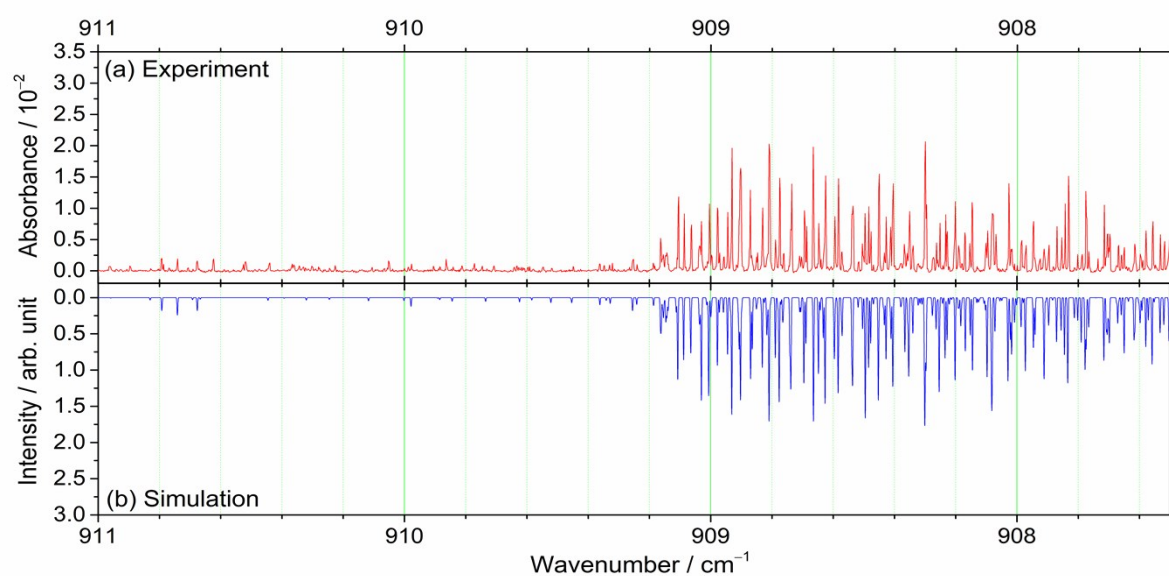
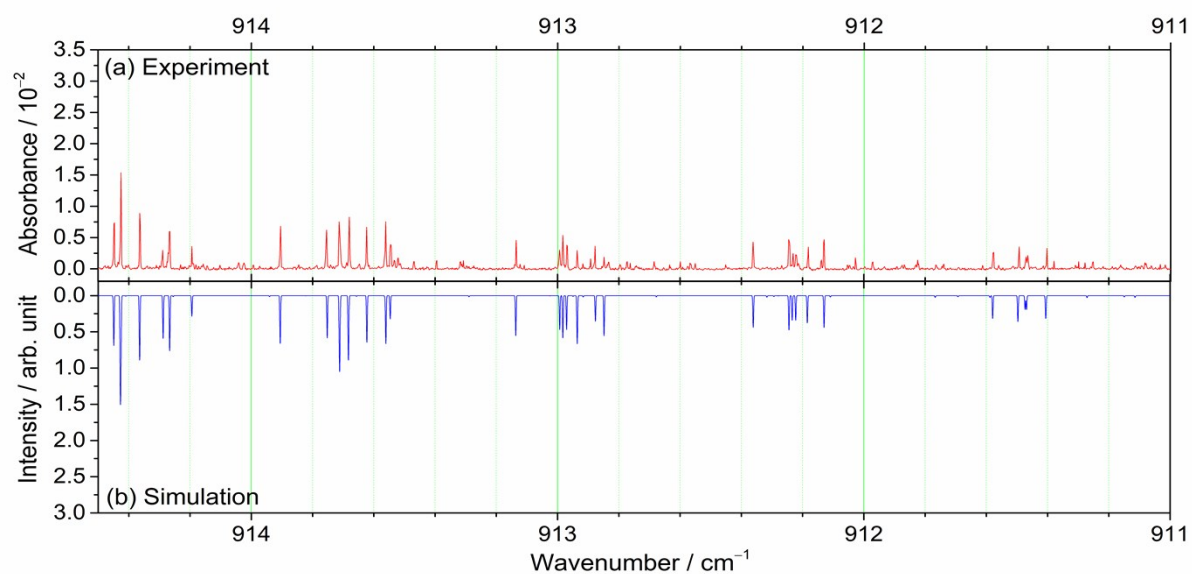
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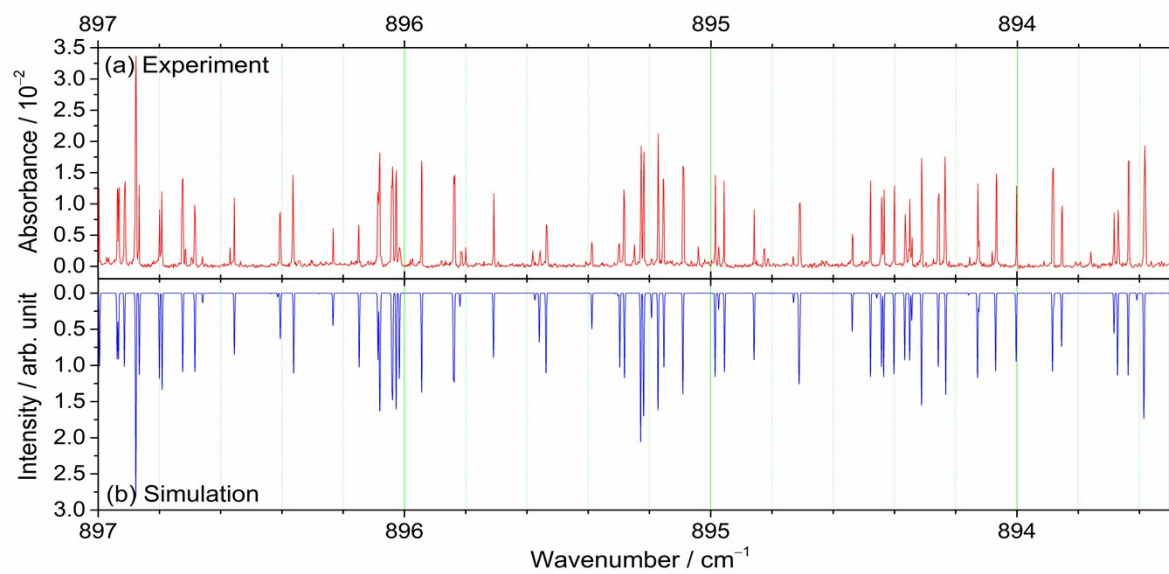
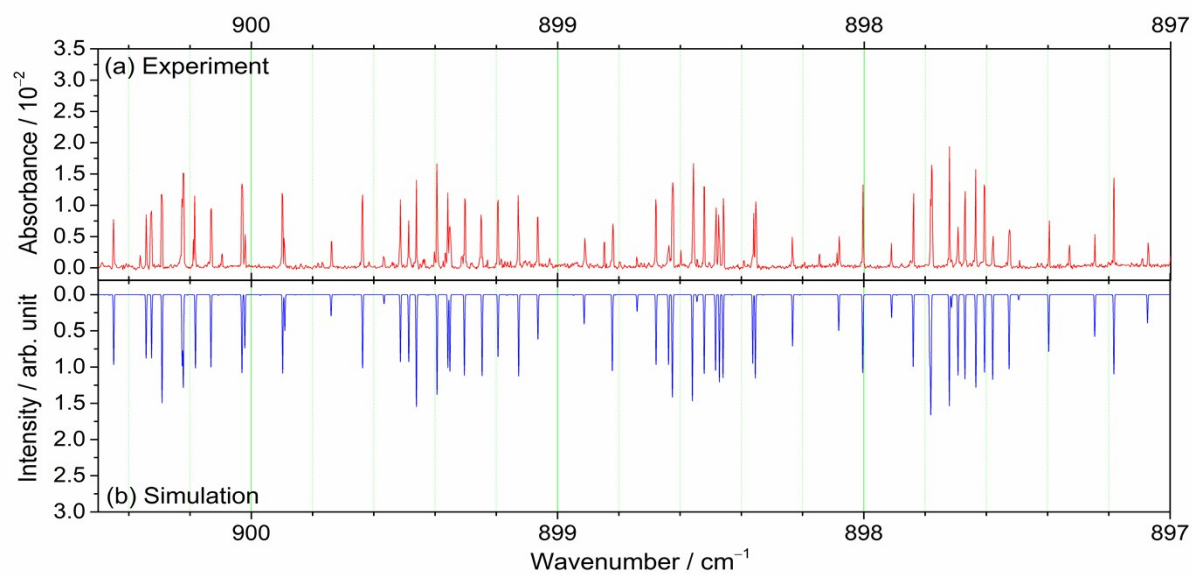
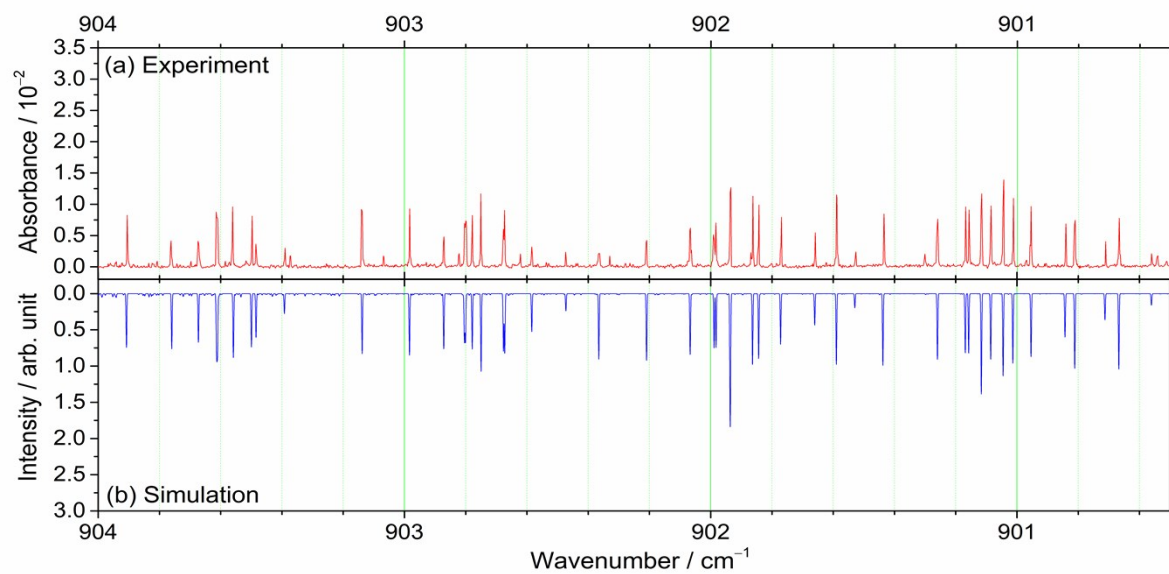
Figure S1 shows the comparison of observed and simulated spectra of CH_2OO in region 879.5–932.0 cm^{-1} . Figure S2 and S3 show example spectra of the rotational perturbation. Figure S4 shows a plot of the a -axis rotational terms E_{rot} (in vibrational mode m) = $E_m + (A_m - B_m)$ against $K_a'^2$ for states ν_6 and ν_8 of CH_2OO . Figure S5 show the spectral shifts (from calculated values) of lines for $K_a' = 12$ and 13 of band ν_6 of CH_2OO against J' of the upper level. The transition wavenumbers of the observed and predicted lines are compared in Tables S1 (for the unperturbed lines) and S2 (for the perturbed lines).

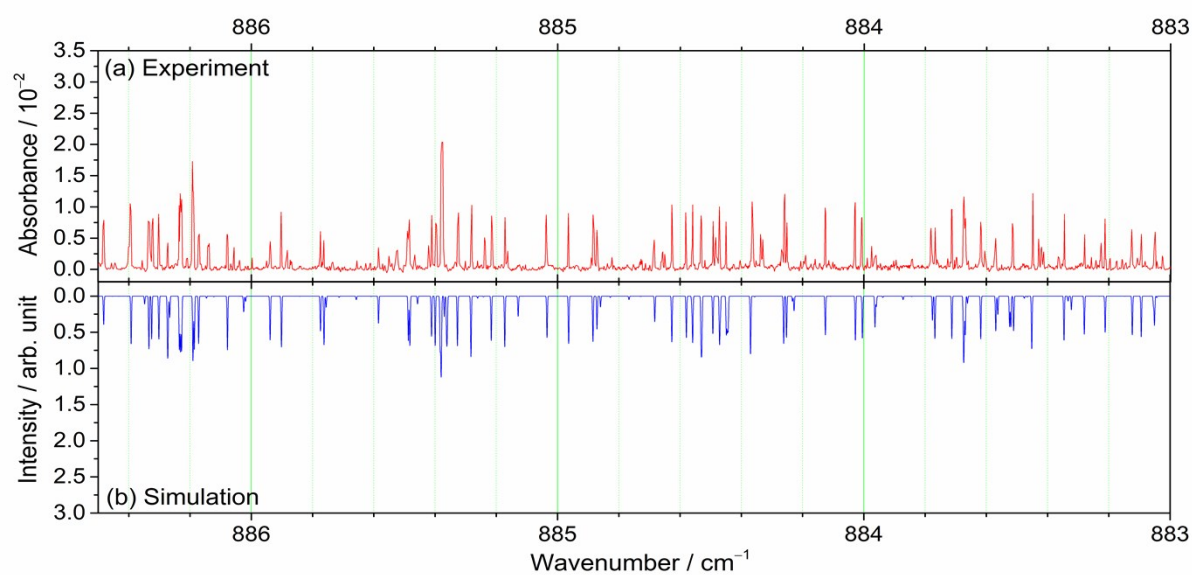
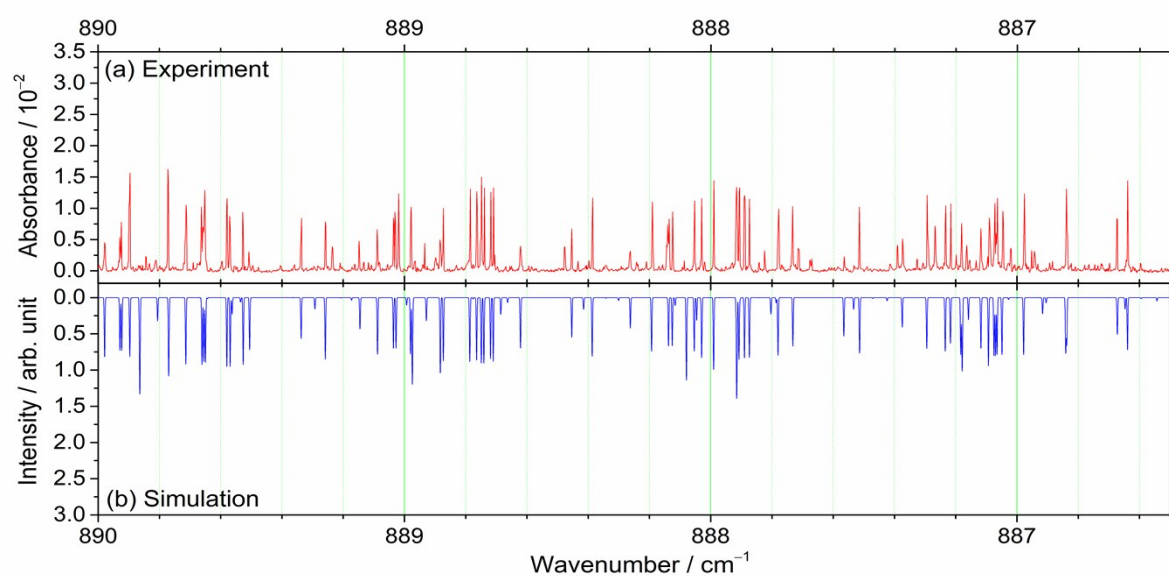
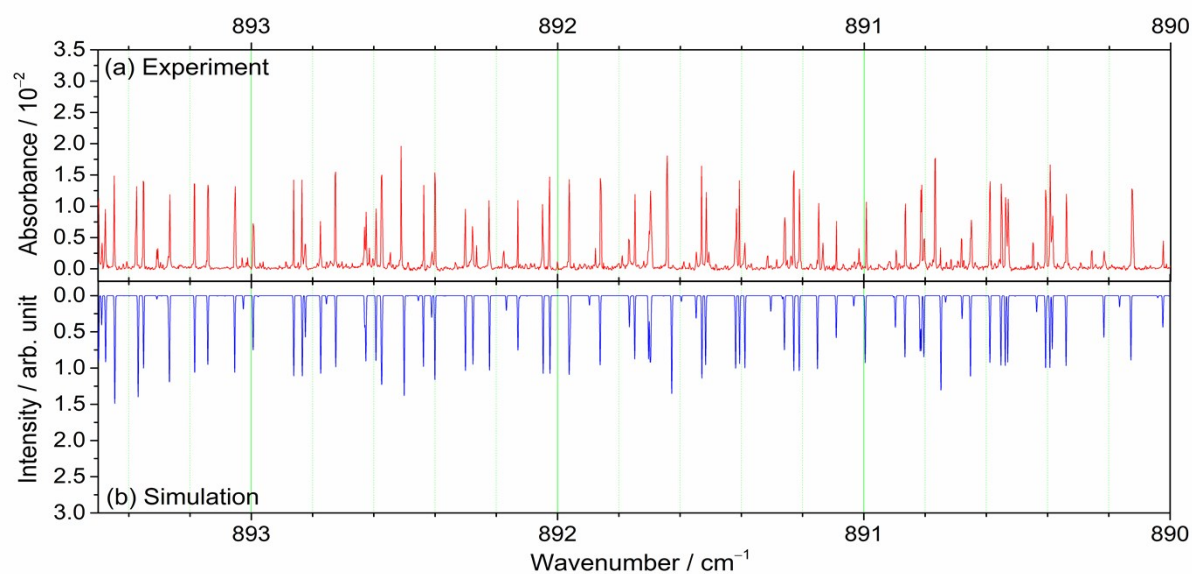
Fig. S1 Comparison of observed and simulated spectra of CH₂OO in region 879.5–932.0 cm⁻¹. Each frame covers 3.5 cm⁻¹ spectral region.

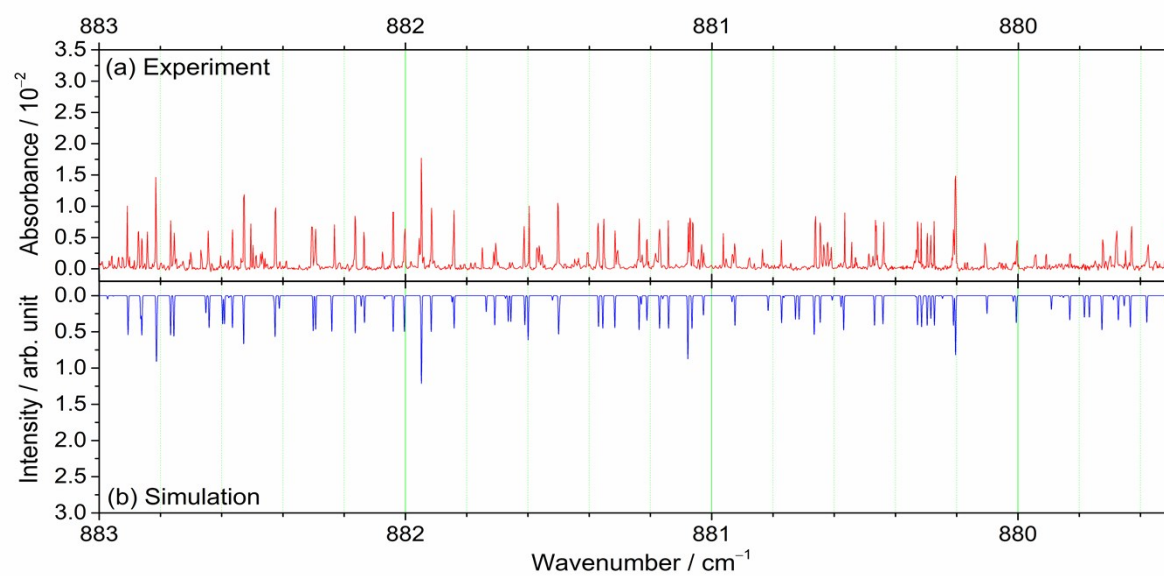












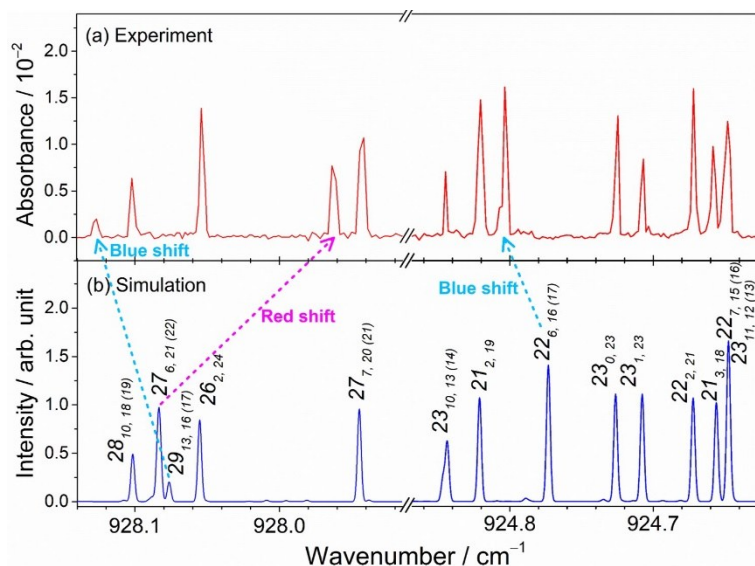


Fig. S2 Comparison of observed lines of CH_2OO with simulations in regions 924.628–924.868 and 927.915–928.140 cm^{-1} . (a) Experimental data recorded at 50 μs after irradiation of the sample at 248 nm and (b) simulated spectrum for mode ν_6 (a-type) using spectral parameters listed in Table 1. Gaussian line width = 0.003 cm^{-1} , $J_{\text{max}} = 100$, $T = 298$ K. Several blue-shifted lines are observed in branch $^{\circ}\text{Q}$.

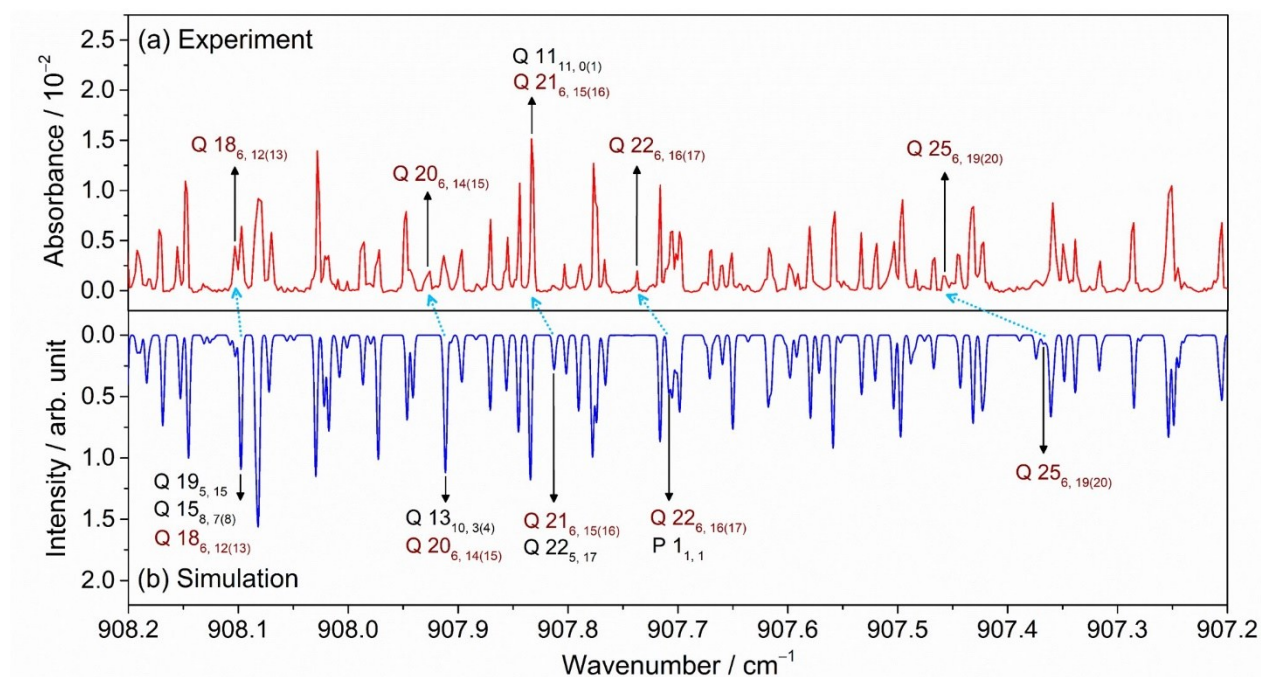


Fig. S3 Comparison of observed lines with simulations in region 908.2–907.2 cm^{-1} . (a) Experimental data recorded at 50 μs after irradiation of the sample at 248 nm and (b) simulated spectrum for mode ν_6 (a-type) using spectral parameters listed in Table 1. Gaussian line width = 0.003 cm^{-1} , $J_{\text{max}} = 100$, $T = 298$ K. Several blue-shifted lines are observed in branch $^{\circ}\text{Q}$.

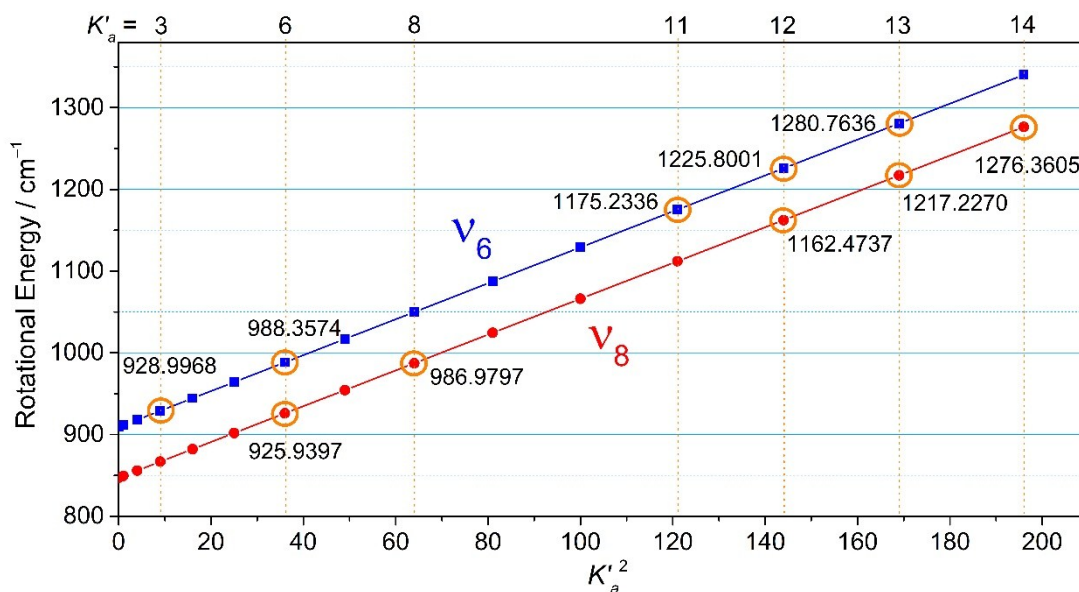


Fig. S4 Rotational terms E_{rot} (in vibrational mode m) = $E_m + (A_m - \bar{B}_m)$ against $K_a'^2$ for states v_6 and v_8 of CH_2OO . The parameters of mode v_6 are $E_6 = 909.20995 \text{ cm}^{-1}$, $A_6 = 2.5828784 \text{ cm}^{-1}$, and $\bar{B}_6 = 0.384336 \text{ cm}^{-1}$; those of mode v_8 are $E_8 = 847.095 \text{ cm}^{-1}$, $A_8 = 2.576 \text{ cm}^{-1}$, and $\bar{B}_8 = 0.38587 \text{ cm}^{-1}$. Possible perturbed states are marked with red circles.

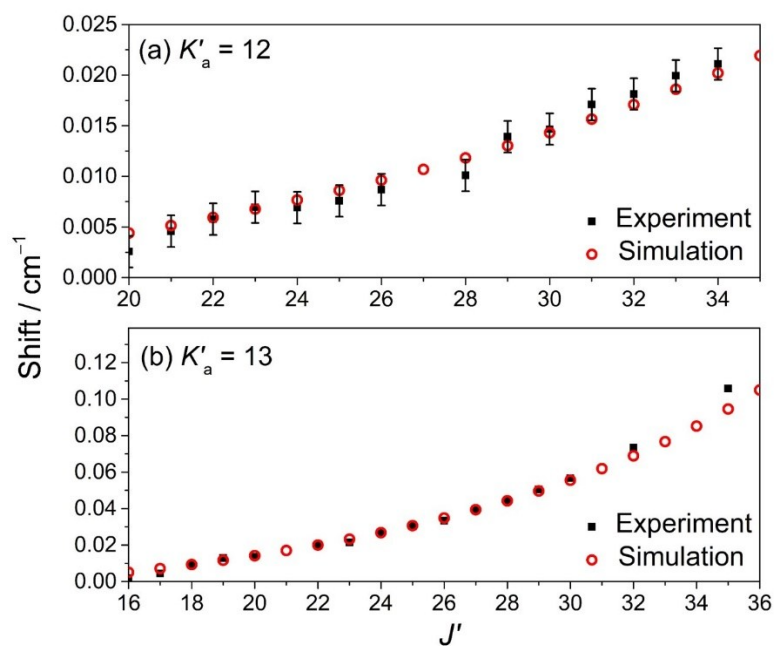


Fig. S5 Spectral shifts (from calculated values) of lines for $K_a' = 12$ (a) and 13 (b) of band v_6 of CH_2OO against J' of the upper level. The experimental shifts are displayed with black squares and the calculated shifts, obtained from equations (4)–(6), with red open circles.

Table S1. Line list and assignments of the unperturbed lines in band ν_6 employed in the fitting. The value -1 for K_c' and K_c'' indicates that the asymmetry splitting is too small to resolve.

J'	K_a'	K_c'	J''	K_a''	K_c''	calculation / cm^{-1}	observation / cm^{-1}	$o - c$ / cm^{-1}	Weight
33	9	-1	34	9	-1	879.5074	879.5071	-0.0003	1.0
33	8	-1	34	8	-1	879.6332	879.6312	-0.0020	1.0
33	5	28	34	5	29	879.6724	879.6746	0.0022	1.0
33	7	-1	34	7	-1	879.7259	879.7241	-0.0018	1.0
33	5	29	34	5	30	879.8307	879.8317	0.0010	1.0
33	4	30	34	4	31	880.0055	880.0060	0.0005	1.0
35	1	35	36	1	36	880.2041	880.2053	0.0012	0.5
35	0	35	36	0	36	880.2035	880.2053	0.0018	0.5
33	2	31	34	2	32	880.2107	880.2117	0.0010	1.0
34	1	33	35	1	34	880.2731	880.2751	0.0020	1.0
32	10	-1	33	10	-1	880.2845	880.2862	0.0017	1.0
34	2	33	35	2	34	880.2965	880.2978	0.0013	1.0
32	4	28	33	4	29	880.3278	880.3283	0.0005	1.0
32	9	-1	33	9	-1	880.4409	880.4395	-0.0014	1.0
32	8	-1	33	8	-1	880.5691	880.5666	-0.0025	1.0
32	5	27	33	5	28	880.6459	880.6457	-0.0002	1.0
32	7	-1	33	7	-1	880.6654	880.6625	-0.0029	1.0
32	5	28	33	5	29	880.7715	880.7735	0.0020	1.0
32	4	29	33	4	30	880.9241	880.9257	0.0016	1.0
32	2	30	33	2	31	881.0643	881.0630	-0.0013	1.0
34	1	34	35	1	35	881.0783	881.0777	-0.0006	0.5
34	0	34	35	0	35	881.0776	881.0777	0.0001	0.5
33	1	32	34	1	33	881.1408	881.1426	0.0018	1.0
33	2	32	34	2	33	881.1701	881.1710	0.0009	1.0
31	10	-1	32	10	-1	881.2115	881.2122	0.0007	1.0
31	4	27	32	4	28	881.3165	881.3160	-0.0005	1.0
31	9	-1	32	9	-1	881.3696	881.3717	0.0021	1.0
31	8	-1	32	8	-1	881.4999	881.5022	0.0023	1.0
31	7	-1	32	7	-1	881.5994	881.5970	-0.0024	1.0
31	5	26	32	5	27	881.6100	881.6129	0.0029	1.0
31	5	27	32	5	28	881.7084	881.7051	-0.0033	1.0
31	4	28	32	4	29	881.8410	881.8418	0.0008	1.0
31	2	29	32	2	30	881.9160	881.9146	-0.0014	1.0
33	1	33	34	1	34	881.9482	881.9482	0.0000	0.5

33	0	33	34	0	34	881.9472	881.9482	0.0010	0.5
32	1	31	33	1	32	882.0034	882.0025	-0.0009	1.0
32	2	31	33	2	32	882.0399	882.0403	0.0004	1.0
30	10	-1	31	10	-1	882.1338	882.1353	0.0015	1.0
30	9	-1	31	9	-1	882.2932	882.2934	0.0002	1.0
30	4	26	31	4	27	882.3011	882.3037	0.0026	1.0
30	8	-1	31	8	-1	882.4256	882.4244	-0.0012	1.0
30	7	-1	31	7	-1	882.5282	882.5273	-0.0009	1.0
30	5	25	31	5	26	882.5649	882.5642	-0.0007	1.0
30	5	26	31	5	27	882.6410	882.6439	0.0029	1.0
30	4	27	31	4	28	882.7560	882.7546	-0.0014	1.0
30	2	28	31	2	29	882.7668	882.7642	-0.0026	1.0
32	1	32	33	1	33	882.8136	882.8144	0.0008	0.5
32	0	32	33	0	33	882.8123	882.8144	0.0021	0.5
31	1	30	32	1	31	882.8607	882.8600	-0.0007	1.0
31	2	30	32	2	31	882.9058	882.9083	0.0025	1.0
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29	9	-1	30	9	-1	883.2120	883.2141	0.0021	1.0
29	4	25	30	4	26	883.2802	883.2808	0.0006	1.0
29	8	-1	30	8	-1	883.3463	883.3465	0.0002	1.0
29	7	-1	30	7	-1	883.4517	883.4496	-0.0021	1.0
29	5	24	30	5	25	883.5112	883.5141	0.0029	1.0
29	5	25	30	5	26	883.5693	883.5708	0.0015	1.0
29	2	27	30	2	28	883.6182	883.6190	0.0008	1.0
29	4	26	30	4	27	883.6689	883.6700	0.0011	1.0
31	1	31	32	1	32	883.6747	883.6747	0.0000	0.5
31	0	31	32	0	32	883.6729	883.6747	0.0018	0.5
30	1	29	31	1	30	883.7125	883.7140	0.0015	1.0
30	2	29	31	2	30	883.7681	883.7685	0.0004	1.0
28	10	-1	29	10	-1	883.9637	883.9631	-0.0006	1.0
28	9	-1	29	9	-1	884.1258	884.1269	0.0011	1.0
28	4	24	29	4	25	884.2525	884.2522	-0.0003	1.0
28	8	-1	29	8	-1	884.2618	884.2601	-0.0017	1.0
28	7	-1	29	7	-1	884.3699	884.3679	-0.0020	1.0
28	5	23	29	5	24	884.4491	884.4509	0.0018	1.0
28	2	26	29	2	27	884.4712	884.4725	0.0013	1.0
28	5	24	29	5	25	884.4929	884.4927	-0.0002	1.0
30	1	30	31	1	31	884.5313	884.5315	0.0002	0.5

30	0	30	31	0	31	884.5290	884.5315	0.0025	0.5
29	1	28	30	1	29	884.5589	884.5594	0.0005	1.0
28	4	25	29	4	26	884.5794	884.5819	0.0025	1.0
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25	5	21	26	5	22	887.2343	887.2344	0.0001	1.0
25	4	22	26	4	23	887.2945	887.2946	0.0001	1.0
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24	4	20	25	4	21	888.0537	888.0537	0.0000	1.0
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24	5	20	25	5	21	888.1378	888.1360	-0.0018	1.0
24	4	21	25	4	22	888.1931	888.1911	-0.0020	1.0
23	11	-1	24	11	-1	888.2623	888.2640	0.0017	1.0
24	3	22	25	3	23	888.3870	888.3865	-0.0005	1.0
23	10	-1	24	10	-1	888.4538	888.4545	0.0007	1.0
23	9	-1	24	9	-1	888.6210	888.6212	0.0002	1.0
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25	1	25	26	1	26	888.7492	888.7485	-0.0007	1.0
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24	2	23	25	2	24	888.8730	888.8733	0.0003	1.0
23	7	-1	24	7	-1	888.8827	888.8830	0.0002	1.0
23	4	19	24	4	20	888.9800	888.9787	-0.0013	1.0
23	5	18	24	5	19	889.0275	889.0303	0.0028	1.0

23	5	19	24	5	20	889.0361	889.0356	-0.0005	1.0
23	4	20	24	4	21	889.0880	889.0887	0.0006	1.0
22	11	-1	23	11	-1	889.1453	889.1480	0.0027	1.0
23	3	21	24	3	22	889.2585	889.2578	-0.0007	1.0
22	10	-1	23	10	-1	889.3374	889.3365	-0.0009	1.0
22	9	-1	23	9	-1	889.5054	889.5074	0.0021	1.0
23	1	22	24	1	23	889.5265	889.5272	0.0007	1.0
24	0	24	25	0	25	889.5690	889.5700	0.0009	1.0
24	1	24	25	1	25	889.5799	889.5793	-0.0006	1.0
22	8	-1	23	8	-1	889.6497	889.6517	0.0021	1.0
22	3	19	23	3	20	889.6554	889.6572	0.0018	1.0
22	2	20	23	2	21	889.6610	889.6627	0.0017	1.0
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22	5	17	23	5	18	889.9231	889.9240	0.0009	1.0
22	5	18	23	5	19	889.9290	889.9286	-0.0004	1.0
22	4	19	23	4	20	889.9790	889.9781	-0.0010	1.0
21	11	-1	22	11	-1	890.0235	890.0241	0.0006	1.0
22	3	20	23	3	21	890.1280	890.1255	-0.0026	1.0
21	10	-1	22	10	-1	890.2161	890.2166	0.0005	1.0
22	1	21	23	1	22	890.3398	890.3399	0.0000	1.0
21	9	-1	22	9	-1	890.3849	890.3854	0.0005	1.0
23	0	23	24	0	24	890.3925	890.3928	0.0002	1.0
23	1	23	24	1	24	890.4063	890.4070	0.0007	1.0
21	8	-1	22	8	-1	890.5302	890.5303	0.0002	1.0
21	2	19	22	2	20	890.5384	890.5376	-0.0008	1.0
22	2	21	23	2	22	890.5522	890.5516	-0.0005	1.0
21	3	18	22	3	19	890.5884	890.5897	0.0013	1.0
21	7	-1	22	7	-1	890.6518	890.6508	-0.0010	1.0
21	4	17	22	4	18	890.8041	890.8042	0.0000	1.0
21	5	-1	22	5	-1	890.8145	890.8137	-0.0008	1.0
21	4	18	22	4	19	890.8658	890.8658	0.0000	1.0
20	11	-1	21	11	-1	890.8970	890.8951	-0.0019	1.0
21	3	19	22	3	20	890.9956	890.9928	-0.0028	1.0
20	10	-1	21	10	-1	891.0901	891.0908	0.0008	1.0
21	1	20	22	1	21	891.1513	891.1485	-0.0028	1.0
22	0	22	23	0	23	891.2111	891.2109	-0.0002	1.0

22	1	22	23	1	23	891.2287	891.2298	0.0011	1.0
20	9	-1	21	9	-1	891.2595	891.2591	-0.0004	1.0
21	2	20	22	2	21	891.3883	891.3901	0.0018	1.0
20	8	-1	21	8	-1	891.4057	891.4074	0.0017	1.0
20	2	18	21	2	19	891.4186	891.4165	-0.0021	1.0
20	3	17	21	3	18	891.5165	891.5154	-0.0011	1.0
20	7	-1	21	7	-1	891.5287	891.5308	0.0020	1.0
19	12	-1	20	12	-1	891.5476	891.5475	-0.0002	1.0
20	5	-1	21	5	-1	891.6972	891.6972	0.0000	1.0
20	4	16	21	4	17	891.7028	891.7014	-0.0015	1.0
20	4	17	21	4	18	891.7482	891.7482	0.0000	1.0
19	11	-1	20	11	-1	891.7657	891.7674	0.0017	1.0
20	3	18	21	3	19	891.8611	891.8595	-0.0015	1.0
19	10	-1	20	10	-1	891.9593	891.9623	0.0030	0.5
20	1	19	21	1	20	891.9621	891.9623	0.0002	0.5
21	0	21	22	0	22	892.0248	892.0272	0.0024	1.0
21	1	21	22	1	22	892.0470	892.0491	0.0021	1.0
19	9	-1	20	9	-1	892.1293	892.1305	0.0012	1.0
20	2	19	21	2	20	892.2222	892.2238	0.0016	1.0
19	8	-1	20	8	-1	892.2763	892.2779	0.0016	1.0
19	2	17	20	2	18	892.3009	892.3018	0.0010	1.0
19	7	-1	20	7	-1	892.4005	892.4003	-0.0002	1.0
18	12	-1	19	12	-1	892.4113	892.4101	-0.0012	1.0
19	3	16	20	3	17	892.4381	892.4370	-0.0011	1.0
19	5	-1	20	5	-1	892.5743	892.5744	0.0002	1.0
19	4	15	20	4	16	892.5931	892.5931	0.0000	1.0
19	4	16	20	4	17	892.6259	892.6253	-0.0006	1.0
18	11	-1	19	11	-1	892.6297	892.6301	0.0005	1.0
19	3	17	20	3	18	892.7241	892.7259	0.0018	1.0
19	1	18	20	1	19	892.7734	892.7744	0.0009	1.0
18	10	-1	19	10	-1	892.8236	892.8246	0.0009	1.0
20	0	20	21	0	21	892.8334	892.8348	0.0014	1.0
20	1	20	21	1	21	892.8613	892.8619	0.0006	1.0
18	9	-1	19	9	-1	892.9941	892.9927	-0.0015	1.0
19	2	18	20	2	19	893.0541	893.0533	-0.0008	1.0
18	8	-1	19	8	-1	893.1419	893.1412	-0.0008	1.0
18	2	16	19	2	17	893.1848	893.1852	0.0004	1.0
18	7	-1	19	7	-1	893.2673	893.2660	-0.0013	1.0

17	12	-1	18	12	-1	893.2703	893.2693	-0.0010	1.0
18	3	15	19	3	16	893.3520	893.3517	-0.0003	1.0
18	5	-1	19	5	-1	893.4457	893.4471	0.0014	1.0
18	4	14	19	4	15	893.4755	893.4763	0.0007	1.0
17	11	-1	18	11	-1	893.4889	893.4880	-0.0009	1.0
18	4	15	19	4	16	893.4987	893.4988	0.0002	1.0
18	3	16	19	3	17	893.5846	893.5836	-0.0010	0.5
18	1	17	19	1	18	893.5863	893.5836	-0.0027	0.5
19	0	19	20	0	20	893.6369	893.6368	-0.0001	1.0
19	1	19	20	1	20	893.6718	893.6709	-0.0008	1.0
17	10	-1	18	10	-1	893.6832	893.6844	0.0012	1.0
17	9	-1	18	9	-1	893.8542	893.8544	0.0002	1.0
18	2	17	19	2	18	893.8840	893.8844	0.0004	1.0
17	8	-1	18	8	-1	894.0027	894.0026	-0.0001	1.0
17	2	15	18	2	16	894.0697	894.0684	-0.0013	1.0
16	12	-1	17	12	-1	894.1245	894.1254	0.0009	1.0
17	7	-1	18	7	-1	894.1290	894.1287	-0.0002	1.0
17	3	14	18	3	15	894.2571	894.2574	0.0003	1.0
17	5	-1	18	5	-1	894.3116	894.3119	0.0002	1.0
16	11	-1	17	11	-1	894.3434	894.3440	0.0006	1.0
17	4	13	18	4	14	894.3505	894.3509	0.0004	1.0
17	4	14	18	4	15	894.3664	894.3654	-0.0010	1.0
17	1	16	18	1	17	894.4017	894.4014	-0.0003	1.0
18	0	18	19	0	19	894.4353	894.4350	-0.0003	1.0
17	3	15	18	3	16	894.4422	894.4425	0.0002	1.0
18	1	18	19	1	19	894.4784	894.4794	0.0009	1.0
16	10	-1	17	10	-1	894.5380	894.5379	-0.0002	1.0
16	9	-1	17	9	-1	894.7094	894.7101	0.0007	0.5
17	2	16	18	2	17	894.7119	894.7101	-0.0018	0.5
16	8	-1	17	8	-1	894.8585	894.8592	0.0008	1.0
16	2	14	17	2	15	894.9550	894.9574	0.0023	1.0
16	7	-1	17	7	-1	894.9857	894.9856	-0.0001	1.0
16	3	13	17	3	14	895.1528	895.1549	0.0022	1.0
16	5	-1	17	5	-1	895.1721	895.1721	0.0000	1.0
15	11	-1	16	11	-1	895.1932	895.1934	0.0002	1.0
16	4	12	17	4	13	895.2183	895.2194	0.0012	0.5
16	1	15	17	1	16	895.2199	895.2194	-0.0005	0.5
16	4	13	17	4	14	895.2290	895.2281	-0.0009	0.5

17	0	17	18	0	18	895.2286	895.2281	-0.0005	0.5
17	1	17	18	1	18	895.2815	895.2834	0.0020	1.0
16	3	14	17	3	15	895.2968	895.2996	0.0028	1.0
15	10	-1	16	10	-1	895.3880	895.3884	0.0004	1.0
16	2	15	17	2	16	895.5378	895.5360	-0.0018	1.0
15	9	-1	16	9	-1	895.5598	895.5580	-0.0018	1.0
15	8	-1	16	8	-1	895.7094	895.7083	-0.0011	1.0
15	7	-1	16	7	-1	895.8374	895.8384	0.0010	0.5
15	2	13	16	2	14	895.8401	895.8384	-0.0017	0.5
15	6	-1	16	6	-1	895.9437	895.9439	0.0002	1.0
16	0	16	17	0	17	896.0168	896.0162	-0.0006	1.0
15	5	-1	16	5	-1	896.0271	896.0274	0.0003	1.0
14	11	-1	15	11	-1	896.0382	896.0381	0.0000	1.0
15	3	12	16	3	13	896.0385	896.0389	0.0004	1.0
15	1	14	16	1	15	896.0413	896.0419	0.0006	1.0
15	4	11	16	4	12	896.0793	896.0811	0.0018	0.5
16	1	16	17	1	17	896.0810	896.0811	0.0001	0.5
15	4	12	16	4	13	896.0863	896.0858	-0.0005	1.0
15	3	13	16	3	14	896.1479	896.1494	0.0015	1.0
14	10	-1	15	10	-1	896.2333	896.2327	-0.0006	1.0
15	2	14	16	2	15	896.3618	896.3635	0.0018	1.0
14	9	-1	15	9	-1	896.4054	896.4061	0.0007	1.0
14	8	-1	15	8	-1	896.5554	896.5558	0.0004	1.0
14	7	-1	15	7	-1	896.6841	896.6840	0.0000	1.0
14	2	12	15	2	13	896.7240	896.7242	0.0002	1.0
14	6	-1	15	6	-1	896.7915	896.7923	0.0008	1.0
15	0	15	16	0	16	896.8002	896.7994	-0.0008	1.0
14	1	13	15	1	14	896.8656	896.8660	0.0004	1.0
13	11	-1	14	11	-1	896.8784	896.8763	-0.0021	0.3
14	5	-1	15	5	-1	896.8767	896.8763	-0.0004	0.3
15	1	15	16	1	16	896.8771	896.8763	-0.0008	0.3
14	3	11	15	3	12	896.9145	896.9125	-0.0019	1.0
14	4	10	15	4	11	896.9337	896.9318	-0.0019	1.0
14	4	11	15	4	12	896.9383	896.9364	-0.0018	1.0
14	3	12	15	3	13	896.9954	896.9970	0.0016	1.0
13	10	-1	14	10	-1	897.0737	897.0729	-0.0008	1.0
14	2	13	15	2	14	897.1837	897.1853	0.0016	1.0
13	9	-1	14	9	-1	897.2461	897.2472	0.0011	1.0

13	8	-1	14	8	-1	897.3966	897.3963	-0.0002	1.0
13	7	-1	14	7	-1	897.5258	897.5260	0.0002	1.0
14	0	14	15	0	15	897.5793	897.5799	0.0006	1.0
13	2	11	14	2	12	897.6058	897.6074	0.0015	1.0
13	6	-1	14	6	-1	897.6341	897.6363	0.0022	1.0
14	1	14	15	1	15	897.6700	897.6710	0.0010	1.0
13	1	12	14	1	13	897.6925	897.6937	0.0012	1.0
13	5	-1	14	5	-1	897.7209	897.7215	0.0006	1.0
13	3	10	14	3	11	897.7807	897.7793	-0.0013	1.0
13	4	-1	14	4	-1	897.7834	897.7831	-0.0003	1.0
13	3	11	14	3	12	897.8390	897.8392	0.0002	1.0
12	10	-1	13	10	-1	897.9094	897.9115	0.0021	1.0
13	2	12	14	2	13	898.0036	898.0038	0.0002	1.0
12	9	-1	13	9	-1	898.0820	898.0812	-0.0009	1.0
12	8	-1	13	8	-1	898.2328	898.2345	0.0017	1.0
13	0	13	14	0	14	898.3546	898.3534	-0.0012	1.0
12	7	-1	13	7	-1	898.3626	898.3606	-0.0019	1.0
13	1	13	14	1	14	898.4598	898.4590	-0.0008	1.0
12	6	-1	13	6	-1	898.4717	898.4741	0.0024	1.0
12	2	10	13	2	11	898.4843	898.4837	-0.0006	1.0
12	1	11	13	1	12	898.5213	898.5219	0.0005	1.0
12	5	-1	13	5	-1	898.5599	898.5572	-0.0027	1.0
12	4	-1	13	4	-1	898.6250	898.6249	-0.0002	1.0
12	3	9	13	3	10	898.6376	898.6379	0.0003	1.0
12	3	10	13	3	11	898.6784	898.6797	0.0013	1.0
11	10	-1	12	10	-1	898.7404	898.7407	0.0003	1.0
12	2	11	13	2	12	898.8212	898.8197	-0.0015	1.0
11	9	-1	12	9	-1	898.9132	898.9114	-0.0017	1.0
11	8	-1	12	8	-1	899.0642	899.0652	0.0010	1.0
12	0	12	13	0	13	899.1269	899.1284	0.0014	1.0
11	7	-1	12	7	-1	899.1944	899.1944	0.0000	1.0
12	1	12	13	1	13	899.2466	899.2495	0.0030	1.0
11	6	-1	12	6	-1	899.3042	899.3025	-0.0017	1.0
11	1	10	12	1	11	899.3516	899.3519	0.0003	1.0
11	2	9	12	2	10	899.3581	899.3589	0.0008	1.0
11	5	-1	12	5	-1	899.3936	899.3941	0.0005	1.0
11	4	-1	12	4	-1	899.4610	899.4611	0.0001	1.0
11	3	8	12	3	9	899.4858	899.4863	0.0005	1.0

11	3	9	12	3	10	899.5133	899.5136	0.0004	1.0
11	2	10	12	2	11	899.6365	899.6372	0.0007	1.0
10	9	-1	11	9	-1	899.7395	899.7379	-0.0016	1.0
10	8	-1	11	8	-1	899.8908	899.8921	0.0013	1.0
11	0	11	12	0	12	899.8975	899.8984	0.0009	1.0
10	7	-1	11	7	-1	900.0213	900.0199	-0.0015	1.0
11	1	11	12	1	12	900.0304	900.0298	-0.0006	1.0
10	6	-1	11	6	-1	900.1317	900.1307	-0.0010	1.0
10	1	9	11	1	10	900.1825	900.1845	0.0020	1.0
10	5	-1	11	5	-1	900.2221	900.2212	-0.0009	1.0
10	2	8	11	2	9	900.2258	900.2258	0.0000	1.0
10	4	-1	11	4	-1	900.2914	900.2921	0.0007	1.0
10	3	7	11	3	8	900.3256	900.3268	0.0012	1.0
10	3	8	11	3	9	900.3435	900.3426	-0.0009	1.0
10	2	9	11	2	10	900.4494	900.4491	-0.0003	1.0
10	0	10	11	0	11	900.6673	900.6676	0.0003	1.0
9	8	-1	10	8	-1	900.7125	900.7115	-0.0010	1.0
10	1	10	11	1	11	900.8115	900.8128	0.0013	1.0
9	7	-1	10	7	-1	900.8433	900.8426	-0.0007	1.0
9	6	-1	10	6	-1	900.9542	900.9555	0.0013	1.0
9	1	8	10	1	9	901.0134	901.0131	-0.0003	1.0
9	5	-1	10	5	-1	901.0454	901.0455	0.0001	1.0
9	2	7	10	2	8	901.0858	901.0863	0.0005	1.0
9	4	-1	10	4	-1	901.1163	901.1171	0.0008	1.0
9	3	6	10	3	7	901.1577	901.1574	-0.0003	1.0
9	3	7	10	3	8	901.1688	901.1687	-0.0001	1.0
9	2	8	10	2	9	901.2596	901.2610	0.0013	1.0
9	0	9	10	0	10	901.4377	901.4351	-0.0027	1.0
9	1	9	10	1	10	901.5898	901.5896	-0.0002	1.0
8	7	-1	9	7	-1	901.6605	901.6596	-0.0008	1.0
8	6	-1	9	6	-1	901.7717	901.7704	-0.0013	1.0
8	1	7	9	1	8	901.8436	901.8438	0.0002	1.0
8	5	-1	9	5	-1	901.8635	901.8628	-0.0007	1.0
8	4	-1	9	4	-1	901.9357	901.9363	0.0005	0.5
8	2	6	9	2	7	901.9370	901.9363	-0.0007	0.5
8	3	5	9	3	6	901.9826	901.9840	0.0014	1.0
8	3	6	9	3	7	901.9891	901.9910	0.0019	1.0
8	2	7	9	2	8	902.0671	902.0678	0.0007	1.0

8	0	8	9	0	9	902.2095	902.2107	0.0012	1.0
8	1	8	9	1	9	902.3653	902.3654	0.0001	1.0
7	7	0	8	7	1	902.4727	902.4735	0.0008	1.0
7	7	1	8	7	2	902.4727	902.4735	0.0008	1.0
7	6	-1	8	6	-1	902.5842	902.5844	0.0002	1.0
7	5	-1	8	5	-1	902.6766	902.6746	-0.0020	0.5
7	1	6	8	1	7	902.6725	902.6746	0.0021	0.5
7	4	-1	8	4	-1	902.7498	902.7509	0.0010	1.0
7	2	5	8	2	6	902.7786	902.7793	0.0007	1.0
7	3	-1	8	3	-1	902.8024	902.8011	-0.0013	1.0
7	2	6	8	2	7	902.8716	902.8720	0.0004	1.0
7	0	7	8	0	8	902.9835	902.9831	-0.0004	1.0
7	1	7	8	1	8	903.1380	903.1391	0.0012	1.0
6	6	-1	7	6	-1	903.3918	903.3900	-0.0018	1.0
6	5	-1	7	5	-1	903.4846	903.4845	-0.0001	1.0
6	1	5	7	1	6	903.4997	903.4975	-0.0022	1.0
6	4	-1	7	4	-1	903.5586	903.5609	0.0023	1.0
6	3	-1	7	3	-1	903.6131	903.6118	-0.0013	0.5
6	2	4	7	2	5	903.6099	903.6118	0.0019	0.5
6	2	5	7	2	6	903.6729	903.6726	-0.0003	1.0
6	0	6	7	0	7	903.7598	903.7617	0.0019	1.0
6	1	6	7	1	7	903.9078	903.9049	-0.0029	1.0
5	5	-1	6	5	-1	904.2876	904.2875	-0.0001	1.0
5	1	4	6	1	5	904.3245	904.3239	-0.0005	1.0
5	4	-1	6	4	-1	904.3622	904.3628	0.0006	1.0
5	3	-1	6	3	-1	904.4180	904.4183	0.0003	1.0
5	2	3	6	2	4	904.4311	904.4340	0.0029	1.0
5	2	4	6	2	5	904.4708	904.4719	0.0011	1.0
5	0	5	6	0	6	904.5383	904.5396	0.0013	1.0
5	1	5	6	1	6	904.6746	904.6740	-0.0007	1.0
4	1	3	5	1	4	905.1465	905.1487	0.0022	1.0
4	4	-1	5	4	-1	905.1606	905.1625	0.0018	1.0
4	3	-1	5	3	-1	905.2175	905.2184	0.0010	1.0
4	2	2	5	2	3	905.2424	905.2414	-0.0011	1.0
4	2	3	5	2	4	905.2653	905.2637	-0.0016	1.0
4	0	4	5	0	5	905.3184	905.3193	0.0009	1.0
4	1	4	5	1	5	905.4383	905.4375	-0.0009	1.0
3	1	2	4	1	3	905.9653	905.9652	-0.0001	1.0

3	3	-1	4	3	-1	906.0115	906.0100	-0.0015	1.0
3	2	1	4	2	2	906.0445	906.0460	0.0015	1.0
3	2	2	4	2	3	906.0559	906.0577	0.0017	1.0
3	0	3	4	0	4	906.0994	906.1005	0.0012	1.0
3	1	3	4	1	4	906.1987	906.1974	-0.0013	1.0
22	10	-1	22	10	-1	907.1449	907.1476	0.0027	1.0
20	11	-1	20	11	-1	907.1541	907.1564	0.0023	1.0
14	13	-1	14	13	-1	907.1875	907.1878	0.0003	1.0
17	12	-1	17	12	-1	907.2050	907.2059	0.0009	1.0
16	12	-1	16	12	-1	907.2852	907.2867	0.0015	1.0
22	9	-1	22	9	-1	907.3166	907.3166	0.0000	1.0
18	11	-1	18	11	-1	907.3384	907.3387	0.0003	1.0
20	10	-1	20	10	-1	907.3484	907.3494	0.0010	1.0
15	12	-1	15	12	-1	907.3607	907.3590	-0.0017	1.0
17	11	-1	17	11	-1	907.4234	907.4231	-0.0003	1.0
14	12	-1	14	12	-1	907.4314	907.4324	0.0010	1.0
19	10	-1	19	10	-1	907.4431	907.4449	0.0018	1.0
22	8	-1	22	8	-1	907.4671	907.4675	0.0004	1.0
13	12	-1	13	12	-1	907.4975	907.4963	-0.0012	1.0
16	11	-1	16	11	-1	907.5037	907.5044	0.0007	1.0
20	9	-1	20	9	-1	907.5204	907.5201	-0.0003	1.0
18	10	-1	18	10	-1	907.5330	907.5336	0.0007	1.0
12	12	-1	12	12	-1	907.5588	907.5583	-0.0005	1.0
15	11	-1	15	11	-1	907.5793	907.5799	0.0006	1.0
1	1	0	2	1	1	907.5920	907.5911	-0.0009	1.0
22	7	-1	22	7	-1	907.5974	907.5978	0.0004	1.0
17	10	-1	17	10	-1	907.6181	907.6173	-0.0008	0.5
19	9	-1	19	9	-1	907.6151	907.6173	0.0022	0.5
14	11	-1	14	11	-1	907.6501	907.6516	0.0015	1.0
1	0	1	2	0	2	907.6595	907.6603	0.0007	1.0
20	8	-1	20	8	-1	907.6711	907.6703	-0.0008	1.0
16	10	-1	16	10	-1	907.6985	907.6980	-0.0005	1.0
21	7	-1	21	7	-1	907.7019	907.7018	-0.0001	1.0
18	9	-1	18	9	-1	907.7051	907.7057	0.0006	1.0
13	11	-1	13	11	-1	907.7162	907.7165	0.0003	1.0
19	8	-1	19	8	-1	907.7659	907.7668	0.0009	1.0
15	10	-1	15	10	-1	907.7742	907.7745	0.0003	1.0
12	11	-1	12	11	-1	907.7776	907.7764	-0.0012	1.0

17	9	-1	17	9	-1	907.7903	907.7892	-0.0011	1.0
20	7	-1	20	7	-1	907.8015	907.8031	0.0016	1.0
11	11	-1	11	11	-1	907.8343	907.8329	-0.0014	1.0
14	10	-1	14	10	-1	907.8451	907.8442	-0.0009	1.0
18	8	-1	18	8	-1	907.8560	907.8557	-0.0003	1.0
16	9	-1	16	9	-1	907.8708	907.8707	-0.0001	1.0
19	7	-1	19	7	-1	907.8965	907.8972	0.0007	1.0
13	10	-1	13	10	-1	907.9113	907.9127	0.0014	1.0
15	9	-1	15	9	-1	907.9465	907.9476	0.0011	1.0
12	10	-1	12	10	-1	907.9727	907.9730	0.0003	1.0
18	7	-1	18	7	-1	907.9866	907.9869	0.0003	1.0
11	10	-1	11	10	-1	908.0294	908.0278	-0.0016	1.0
17	7	-1	17	7	-1	908.0720	908.0699	-0.0021	1.0
10	10	-1	10	10	-1	908.0814	908.0815	0.0001	1.0
13	9	-1	13	9	-1	908.0838	908.0815	-0.0023	1.0
15	8	-1	15	8	-1	908.0976	908.0969	-0.0007	1.0
12	9	-1	12	9	-1	908.1453	908.1472	0.0019	1.0
16	7	-1	16	7	-1	908.1526	908.1550	0.0024	1.0
14	8	-1	14	8	-1	908.1687	908.1710	0.0023	1.0
18	5	-1	18	5	-1	908.1907	908.1909	0.0002	1.0
11	9	-1	11	9	-1	908.2021	908.2027	0.0007	1.0
15	7	-1	15	7	-1	908.2285	908.2294	0.0009	1.0
13	8	-1	13	8	-1	908.2350	908.2347	-0.0003	1.0
10	9	-1	10	9	-1	908.2541	908.2527	-0.0014	1.0
17	5	-1	17	5	-1	908.2762	908.2744	-0.0019	1.0
12	8	-1	12	8	-1	908.2966	908.2968	0.0002	1.0
9	9	-1	9	9	-1	908.3014	908.3010	-0.0004	1.0
14	7	-1	14	7	-1	908.2996	908.3010	0.0014	1.0
15	6	-1	15	6	-1	908.3400	908.3412	0.0012	1.0
11	8	-1	11	8	-1	908.3534	908.3523	-0.0011	1.0
13	7	-1	13	7	-1	908.3660	908.3678	0.0018	1.0
10	8	-1	10	8	-1	908.4055	908.4061	0.0006	1.0
14	6	-1	14	6	-1	908.4112	908.4135	0.0023	0.5
16	4	13	16	4	12	908.4142	908.4135	-0.0007	0.5
12	7	-1	12	7	-1	908.4276	908.4279	0.0004	1.0
15	5	-1	15	5	-1	908.4330	908.4341	0.0011	0.5
0	0	0	1	0	1	908.4365	908.4341	-0.0024	0.5
9	8	-1	9	8	-1	908.4528	908.4515	-0.0013	1.0

13	6	-1	13	6	-1	908.4776	908.4781	0.0005	1.0
11	7	-1	11	7	-1	908.4845	908.4853	0.0008	1.0
8	8	-1	8	8	-1	908.4954	908.4971	0.0017	1.0
14	5	-1	14	5	-1	908.5042	908.5050	0.0008	1.0
15	4	11	15	4	12	908.5188	908.5183	-0.0005	1.0
10	7	-1	10	7	-1	908.5366	908.5367	0.0001	1.0
12	6	-1	12	6	-1	908.5393	908.5396	0.0003	1.0
13	5	-1	13	5	-1	908.5707	908.5728	0.0021	1.0
9	7	-1	9	7	-1	908.5840	908.5836	-0.0004	1.0
11	6	-1	11	6	-1	908.5962	908.5951	-0.0011	1.0
8	7	-1	8	7	-1	908.6266	908.6272	0.0005	1.0
13	4	10	13	4	9	908.6424	908.6408	-0.0016	1.0
10	6	-1	10	6	-1	908.6483	908.6476	-0.0007	0.5
13	4	9	13	4	10	908.6494	908.6476	-0.0017	0.5
7	7	-1	7	7	-1	908.6645	908.6658	0.0013	1.0
11	5	-1	11	5	-1	908.6893	908.6874	-0.0019	1.0
9	6	-1	9	6	-1	908.6957	908.6941	-0.0017	1.0
8	6	-1	8	6	-1	908.7384	908.7365	-0.0019	1.0
10	5	-1	10	5	-1	908.7415	908.7401	-0.0014	1.0
11	4	-1	11	4	-1	908.7646	908.7627	-0.0019	1.0
7	6	-1	7	6	-1	908.7763	908.7752	-0.0012	1.0
9	5	-1	9	5	-1	908.7890	908.7888	-0.0002	1.0
6	6	-1	6	6	-1	908.8095	908.8091	-0.0005	1.0
8	5	-1	8	5	-1	908.8317	908.8315	-0.0002	1.0
10	3	8	10	3	7	908.8508	908.8495	-0.0012	1.0
7	5	-1	7	5	-1	908.8696	908.8716	0.0020	1.0
6	5	-1	6	5	-1	908.9028	908.9036	0.0008	1.0
8	4	-1	8	4	-1	908.9070	908.9076	0.0006	0.5
9	3	7	9	3	6	908.9093	908.9076	-0.0017	0.5
5	5	-1	5	5	-1	908.9313	908.9314	0.0001	1.0
9	3	6	9	3	7	908.9353	908.9356	0.0003	1.0
7	4	-1	7	4	-1	908.9450	908.9451	0.0001	1.0
8	3	6	8	3	5	908.9586	908.9579	-0.0007	1.0
8	3	5	8	3	6	908.9716	908.9720	0.0004	1.0
6	4	-1	6	4	-1	908.9782	908.9780	-0.0002	1.0
6	2	5	6	2	4	908.9978	908.9970	-0.0007	1.0
4	4	-1	4	4	-1	909.0304	909.0309	0.0005	1.0
6	3	-1	6	3	-1	909.0363	909.0374	0.0011	1.0

5	3	-1	5	3	-1	909.0648	909.0640	-0.0008	0.5
5	2	4	5	2	3	909.0659	909.0640	-0.0019	0.5
4	3	-1	4	3	-1	909.0885	909.0871	-0.0014	1.0
3	3	-1	3	3	-1	909.1075	909.1063	-0.0012	1.0
4	2	3	4	2	2	909.1125	909.1102	-0.0023	1.0
1	1	1	1	1	0	909.1389	909.1388	-0.0001	1.0
3	2	2	3	2	1	909.1430	909.1448	0.0019	0.3
5	2	3	5	2	4	909.1460	909.1448	-0.0011	0.3
4	2	2	4	2	3	909.1469	909.1448	-0.0021	0.3
3	2	1	3	2	2	909.1544	909.1569	0.0024	0.5
6	2	4	6	2	5	909.1571	909.1569	-0.0003	0.5
2	2	-1	2	2	-1	909.1629	909.1639	0.0009	1.0
1	1	0	1	1	1	909.2551	909.2543	-0.0008	1.0
1	0	1	0	0	0	909.9786	909.9770	-0.0016	1.0
2	1	2	1	1	1	910.6764	910.6765	0.0000	1.0
2	0	2	1	0	1	910.7414	910.7410	-0.0004	1.0
2	1	1	1	1	0	910.7923	910.7927	0.0004	1.0
3	1	3	2	1	2	911.4060	911.4038	-0.0022	1.0
3	2	2	2	2	1	911.4690	911.4663	-0.0027	1.0
3	2	1	2	2	0	911.4735	911.4719	-0.0016	1.0
3	0	3	2	0	2	911.4971	911.4948	-0.0023	1.0
3	1	2	2	1	1	911.5796	911.5786	-0.0010	1.0
4	1	4	3	1	3	912.1301	912.1314	0.0013	1.0
4	3	-1	3	3	-1	912.1845	912.1827	-0.0018	1.0
4	2	3	3	2	2	912.2225	912.2222	-0.0002	1.0
4	2	2	3	2	1	912.2339	912.2322	-0.0017	1.0
4	0	4	3	0	3	912.2446	912.2450	0.0004	1.0
4	1	3	3	1	2	912.3611	912.3623	0.0011	1.0
5	1	5	4	1	4	912.8483	912.8488	0.0004	1.0
5	4	-1	4	4	-1	912.8765	912.8783	0.0019	1.0
5	3	-1	4	3	-1	912.9358	912.9363	0.0004	1.0
5	2	4	4	2	3	912.9704	912.9695	-0.0009	1.0
5	0	5	4	0	4	912.9828	912.9833	0.0004	1.0
5	2	3	4	2	2	912.9932	912.9941	0.0009	1.0
5	1	4	4	1	3	913.1366	913.1355	-0.0011	1.0
6	5	-1	5	5	-1	913.5465	913.5453	-0.0012	1.0
6	1	6	5	1	5	913.5606	913.5615	0.0009	1.0
6	4	-1	5	4	-1	913.6227	913.6233	0.0006	1.0

6	3	-1	5	3	-1	913.6830	913.6802	-0.0028	1.0
6	2	5	5	2	4	913.7126	913.7122	-0.0004	0.5
6	0	6	5	0	5	913.7108	913.7122	0.0014	0.5
6	2	4	5	2	3	913.7522	913.7546	0.0024	1.0
6	1	5	5	1	4	913.9056	913.9049	-0.0008	1.0
7	6	-1	6	6	-1	914.1940	914.1936	-0.0004	1.0
7	1	7	6	1	6	914.2667	914.2670	0.0004	1.0
7	5	-1	6	5	-1	914.2878	914.2898	0.0020	1.0
7	4	-1	6	4	-1	914.3646	914.3634	-0.0012	1.0
7	3	-1	6	3	-1	914.4263	914.4252	-0.0011	0.5
7	0	7	6	0	6	914.4277	914.4252	-0.0025	0.5
7	2	6	6	2	5	914.4489	914.4475	-0.0014	1.0
7	2	5	6	2	4	914.5116	914.5112	-0.0003	1.0
7	1	6	6	1	5	914.6678	914.6679	0.0001	1.0
8	7	-1	7	7	-1	914.8184	914.8192	0.0008	1.0
8	6	-1	7	6	-1	914.9305	914.9299	-0.0006	1.0
8	1	8	7	1	7	914.9664	914.9671	0.0007	1.0
8	5	-1	7	5	-1	915.0247	915.0237	-0.0010	1.0
8	4	-1	7	4	-1	915.1022	915.1022	0.0000	1.0
8	0	8	7	0	7	915.1330	915.1319	-0.0011	1.0
8	3	6	7	3	5	915.1640	915.1648	0.0008	1.0
8	3	5	7	3	4	915.1675	915.1667	-0.0008	1.0
8	2	7	7	2	6	915.1790	915.1796	0.0006	1.0
8	2	6	7	2	5	915.2715	915.2706	-0.0010	1.0
8	1	7	7	1	6	915.4226	915.4214	-0.0012	1.0
9	7	-1	8	7	-1	915.5501	915.5511	0.0010	1.0
9	6	-1	8	6	-1	915.6625	915.6610	-0.0014	0.5
9	1	9	8	1	8	915.6597	915.6610	0.0014	0.5
9	5	-1	8	5	-1	915.7571	915.7562	-0.0009	1.0
9	0	9	8	0	8	915.8265	915.8275	0.0010	1.0
9	4	-1	8	4	-1	915.8356	915.8380	0.0024	1.0
9	3	-1	8	3	-1	915.9016	915.9018	0.0002	0.5
9	2	8	8	2	7	915.9028	915.9018	-0.0010	0.5
9	2	7	8	2	6	916.0321	916.0303	-0.0018	1.0
10	8	-1	9	8	-1	916.1458	916.1461	0.0003	1.0
9	1	8	8	1	7	916.1697	916.1721	0.0024	1.0
10	7	-1	9	7	-1	916.2772	916.2799	0.0027	1.0
10	1	10	9	1	9	916.3464	916.3467	0.0002	1.0

10	6	-1	9	6	-1	916.3899	916.3912	0.0013	1.0
10	5	-1	9	5	-1	916.4851	916.4871	0.0020	1.0
10	0	10	9	0	9	916.5086	916.5094	0.0009	1.0
10	4	-1	9	4	-1	916.5649	916.5622	-0.0027	1.0
10	2	9	9	2	8	916.6201	916.6219	0.0018	1.0
10	3	8	9	3	7	916.6283	916.6298	0.0015	1.0
10	3	7	9	3	6	916.6394	916.6414	0.0020	1.0
11	9	-1	10	9	-1	916.7167	916.7187	0.0020	1.0
10	2	8	9	2	7	916.7927	916.7932	0.0006	1.0
11	8	-1	10	8	-1	916.8681	916.8671	-0.0010	1.0
10	1	9	9	1	8	916.9084	916.9071	-0.0013	1.0
11	7	-1	10	7	-1	916.9997	916.9991	-0.0006	1.0
11	1	11	10	1	10	917.0266	917.0255	-0.0011	1.0
11	6	-1	10	6	-1	917.1128	917.1143	0.0015	1.0
11	0	11	10	0	10	917.1798	917.1819	0.0021	1.0
11	5	-1	10	5	-1	917.2088	917.2092	0.0004	1.0
12	10	-1	11	10	-1	917.2617	917.2592	-0.0025	1.0
11	4	-1	10	4	-1	917.2901	917.2905	0.0005	1.0
11	2	10	10	2	9	917.3308	917.3301	-0.0006	1.0
11	3	9	10	3	8	917.3539	917.3526	-0.0013	1.0
11	3	8	10	3	7	917.3717	917.3738	0.0021	1.0
12	9	-1	11	9	-1	917.4342	917.4336	-0.0006	1.0
11	2	9	10	2	8	917.5525	917.5513	-0.0012	1.0
12	8	-1	11	8	-1	917.5857	917.5865	0.0008	1.0
11	1	10	10	1	9	917.6382	917.6387	0.0006	1.0
12	1	12	11	1	11	917.7003	917.7023	0.0020	1.0
12	7	-1	11	7	-1	917.7176	917.7177	0.0001	1.0
12	6	-1	11	6	-1	917.8312	917.8306	-0.0006	1.0
12	0	12	11	0	11	917.8412	917.8397	-0.0015	1.0
12	5	-1	11	5	-1	917.9281	917.9252	-0.0029	1.0
13	10	-1	12	10	-1	917.9745	917.9751	0.0005	1.0
12	4	-1	11	4	-1	918.0112	918.0105	-0.0007	1.0
12	2	11	11	2	10	918.0345	918.0334	-0.0011	1.0
12	3	10	11	3	9	918.0748	918.0729	-0.0019	1.0
12	3	9	11	3	8	918.1023	918.0992	-0.0031	1.0
13	9	-1	12	9	-1	918.1470	918.1446	-0.0024	1.0
13	8	-1	12	8	-1	918.2987	918.2985	-0.0002	1.0
12	2	10	11	2	9	918.3102	918.3102	0.0000	1.0

12	1	11	11	1	10	918.3583	918.3602	0.0018	1.0
13	1	13	12	1	12	918.3675	918.3686	0.0011	1.0
13	7	-1	12	7	-1	918.4310	918.4303	-0.0007	1.0
14	11	-1	13	11	-1	918.4880	918.4859	-0.0021	1.0
13	0	13	12	0	12	918.4940	918.4944	0.0004	1.0
13	6	-1	12	6	-1	918.5451	918.5472	0.0021	1.0
13	5	-1	12	5	-1	918.6431	918.6440	0.0009	1.0
14	10	-1	13	10	-1	918.6826	918.6813	-0.0013	1.0
13	4	-1	12	4	-1	918.7285	918.7298	0.0014	0.5
13	2	12	12	2	11	918.7313	918.7298	-0.0014	0.5
13	3	11	12	3	10	918.7909	918.7908	-0.0001	1.0
13	3	10	12	3	9	918.8316	918.8310	-0.0005	1.0
14	9	-1	13	9	-1	918.8552	918.8563	0.0011	1.0
14	8	-1	13	8	-1	919.0071	919.0073	0.0002	1.0
14	1	14	13	1	13	919.0282	919.0298	0.0016	1.0
13	2	11	12	2	10	919.0644	919.0631	-0.0012	1.0
13	1	12	12	1	11	919.0683	919.0683	0.0000	1.0
14	7	-1	13	7	-1	919.1398	919.1408	0.0011	0.5
14	0	14	13	0	13	919.1394	919.1408	0.0014	0.5
15	11	-1	14	11	-1	919.1913	919.1924	0.0012	1.0
14	6	-1	13	6	-1	919.2547	919.2552	0.0006	1.0
14	5	-1	13	5	-1	919.3539	919.3540	0.0000	1.0
15	10	-1	14	10	-1	919.3860	919.3854	-0.0005	1.0
14	2	13	13	2	12	919.4209	919.4206	-0.0003	1.0
14	4	-1	13	4	-1	919.4418	919.4427	0.0008	1.0
14	3	12	13	3	11	919.5019	919.5031	0.0012	1.0
15	9	-1	14	9	-1	919.5587	919.5568	-0.0019	0.5
14	3	11	13	3	10	919.5601	919.5568	-0.0033	0.5
16	12	-1	15	12	-1	919.6718	919.6719	0.0001	1.0
15	1	15	14	1	14	919.6827	919.6836	0.0009	1.0
15	8	-1	14	8	-1	919.7109	919.7134	0.0025	1.0
14	1	13	13	1	12	919.7672	919.7676	0.0004	1.0
15	0	15	14	0	14	919.7785	919.7761	-0.0024	1.0
14	2	12	13	2	11	919.8135	919.8127	-0.0008	1.0
15	7	-1	14	7	-1	919.8440	919.8457	0.0017	1.0
16	11	-1	15	11	-1	919.8899	919.8878	-0.0021	1.0
15	6	-1	14	6	-1	919.9597	919.9608	0.0011	1.0
15	5	-1	14	5	-1	920.0605	920.0599	-0.0006	1.0

16	10	-1	15	10	-1	920.0846	920.0846	0.0000	1.0
15	2	14	14	2	13	920.1033	920.1019	-0.0014	1.0
15	4	-1	14	4	-1	920.1514	920.1522	0.0008	1.0
15	3	13	14	3	12	920.2076	920.2105	0.0029	1.0
16	9	-1	15	9	-1	920.2575	920.2552	-0.0023	1.0
15	3	12	14	3	11	920.2884	920.2862	-0.0022	1.0
16	1	16	15	1	15	920.3310	920.3284	-0.0025	1.0
17	12	-1	16	12	-1	920.3657	920.3656	-0.0001	1.0
16	8	-1	15	8	-1	920.4101	920.4120	0.0019	0.5
16	0	16	15	0	15	920.4121	920.4120	-0.0002	0.5
15	1	14	14	1	13	920.4546	920.4540	-0.0006	1.0
16	7	-1	15	7	-1	920.5437	920.5447	0.0010	1.0
15	2	13	14	2	12	920.5561	920.5553	-0.0008	1.0
17	11	-1	16	11	-1	920.5837	920.5839	0.0002	1.0
16	5	-1	15	5	-1	920.7629	920.7635	0.0006	1.0
17	10	-1	16	10	-1	920.7786	920.7785	-0.0001	0.5
16	2	15	15	2	14	920.7783	920.7785	0.0002	0.5
16	4	13	15	4	12	920.8538	920.8527	-0.0011	1.0
16	4	12	15	4	11	920.8609	920.8633	0.0025	1.0
16	3	14	15	3	13	920.9076	920.9075	-0.0001	1.0
17	9	-1	16	9	-1	920.9517	920.9521	0.0004	1.0
17	1	17	16	1	16	920.9732	920.9735	0.0003	1.0
16	3	13	15	3	12	921.0167	921.0170	0.0003	1.0
17	0	17	16	0	16	921.0410	921.0410	0.0000	1.0
18	12	-1	17	12	-1	921.0548	921.0526	-0.0021	1.0
17	8	-1	16	8	-1	921.1046	921.1036	-0.0010	1.0
16	1	15	15	1	14	921.1298	921.1316	0.0018	1.0
17	7	-1	16	7	-1	921.2389	921.2390	0.0001	1.0
18	11	-1	17	11	-1	921.2729	921.2716	-0.0013	1.0
16	2	14	15	2	13	921.2912	921.2909	-0.0002	1.0
17	2	16	16	2	15	921.4459	921.4458	-0.0001	1.0
17	5	-1	16	5	-1	921.4611	921.4606	-0.0006	1.0
18	10	-1	17	10	-1	921.4678	921.4657	-0.0022	1.0
17	4	14	16	4	13	921.5542	921.5542	0.0000	1.0
17	4	13	16	4	12	921.5650	921.5636	-0.0014	1.0
17	3	15	16	3	14	921.6018	921.6048	0.0030	1.0
18	1	18	17	1	17	921.6096	921.6106	0.0010	1.0
18	9	-1	17	9	-1	921.6412	921.6416	0.0004	1.0

18	0	18	17	0	17	921.6654	921.6671	0.0017	1.0
19	12	-1	18	12	-1	921.7391	921.7390	-0.0001	1.0
17	3	14	16	3	13	921.7453	921.7461	0.0008	1.0
18	8	-1	17	8	-1	921.7946	921.7945	-0.0001	0.5
17	1	16	16	1	15	921.7926	921.7945	0.0019	0.5
18	7	-1	17	7	-1	921.9296	921.9323	0.0027	1.0
19	11	-1	18	11	-1	921.9573	921.9551	-0.0022	1.0
17	2	15	16	2	14	922.0175	922.0190	0.0016	1.0
18	2	17	17	2	16	922.1060	922.1072	0.0012	1.0
19	10	-1	18	10	-1	922.1524	922.1542	0.0018	0.5
18	5	-1	17	5	-1	922.1553	922.1542	-0.0011	0.5
19	1	19	18	1	18	922.2402	922.2398	-0.0004	1.0
18	4	15	17	4	14	922.2504	922.2511	0.0007	1.0
18	4	14	17	4	13	922.2664	922.2654	-0.0010	1.0
19	0	19	18	0	18	922.2857	922.2834	-0.0024	1.0
18	3	16	17	3	15	922.2898	922.2874	-0.0023	1.0
19	9	-1	18	9	-1	922.3261	922.3279	0.0018	1.0
18	1	17	17	1	16	922.4428	922.4409	-0.0019	1.0
18	3	15	17	3	14	922.4742	922.4718	-0.0024	1.0
19	8	-1	18	8	-1	922.4799	922.4775	-0.0024	1.0
19	7	-1	18	7	-1	922.6158	922.6135	-0.0023	1.0
20	11	-1	19	11	-1	922.6369	922.6351	-0.0018	1.0
18	2	16	17	2	15	922.7343	922.7344	0.0001	1.0
19	2	18	18	2	17	922.7587	922.7579	-0.0008	1.0
20	10	-1	19	10	-1	922.8322	922.8290	-0.0032	1.0
19	5	-1	18	5	-1	922.8454	922.8459	0.0005	1.0
20	1	20	19	1	19	922.8652	922.8627	-0.0024	1.0
20	0	20	19	0	19	922.9020	922.9025	0.0005	1.0
19	4	16	18	4	15	922.9421	922.9399	-0.0022	1.0
19	4	15	18	4	14	922.9653	922.9631	-0.0022	1.0
19	3	17	18	3	16	922.9713	922.9699	-0.0014	1.0
20	9	-1	19	9	-1	923.0063	923.0066	0.0003	1.0
19	1	18	18	1	17	923.0805	923.0804	-0.0001	1.0
20	8	-1	19	8	-1	923.1607	923.1589	-0.0018	1.0
19	3	16	18	3	15	923.2028	923.2039	0.0012	1.0
20	7	-1	19	7	-1	923.2975	923.2965	-0.0010	1.0
21	11	-1	20	11	-1	923.3118	923.3123	0.0004	1.0
20	2	19	19	2	18	923.4039	923.4035	-0.0004	1.0

19	2	17	18	2	16	923.4409	923.4402	-0.0007	1.0
21	1	21	20	1	20	923.4847	923.4844	-0.0003	1.0
21	10	-1	20	10	-1	923.5074	923.5081	0.0007	1.0
21	0	21	20	0	20	923.5142	923.5123	-0.0019	1.0
20	5	-1	19	5	-1	923.5315	923.5308	-0.0007	1.0
20	4	17	19	4	16	923.6294	923.6299	0.0006	1.0
20	3	18	19	3	17	923.6461	923.6462	0.0001	1.0
20	4	16	19	4	15	923.6622	923.6626	0.0004	1.0
21	9	-1	20	9	-1	923.6818	923.6817	-0.0001	1.0
20	1	19	19	1	18	923.7064	923.7076	0.0011	1.0
21	8	-1	20	8	-1	923.8369	923.8366	-0.0003	1.0
20	3	17	19	3	16	923.9305	923.9302	-0.0003	1.0
21	7	-1	20	7	-1	923.9747	923.9739	-0.0008	1.0
22	11	-1	21	11	-1	923.9820	923.9805	-0.0015	1.0
21	2	20	20	2	19	924.0417	924.0429	0.0012	1.0
22	1	22	21	1	21	924.0988	924.0981	-0.0007	1.0
22	0	22	21	0	21	924.1223	924.1217	-0.0006	1.0
20	2	18	19	2	17	924.1367	924.1360	-0.0007	1.0
22	10	-1	21	10	-1	924.1778	924.1788	0.0010	1.0
21	5	-1	20	5	-1	924.2136	924.2156	0.0020	1.0
21	4	18	20	4	17	924.3119	924.3128	0.0009	0.5
21	3	19	20	3	18	924.3140	924.3128	-0.0012	0.5
21	1	20	20	1	19	924.3214	924.3219	0.0006	1.0
22	9	-1	21	9	-1	924.3527	924.3534	0.0007	1.0
21	4	17	20	4	16	924.3574	924.3588	0.0014	1.0
22	8	-1	21	8	-1	924.5085	924.5093	0.0008	1.0
23	11	-1	22	11	-1	924.6475	924.6478	0.0003	0.5
22	7	-1	21	7	-1	924.6475	924.6478	0.0003	0.5
21	3	18	20	3	17	924.6561	924.6582	0.0021	1.0
22	2	21	21	2	20	924.6721	924.6721	0.0000	1.0
23	1	23	22	1	22	924.7076	924.7076	0.0000	1.0
23	0	23	22	0	22	924.7262	924.7252	-0.0010	1.0
21	2	19	20	2	18	924.8211	924.8197	-0.0014	1.0
23	10	-1	22	10	-1	924.8436	924.8447	0.0011	1.0
22	5	-1	21	5	-1	924.8919	924.8919	0.0000	1.0
22	1	21	21	1	20	924.9264	924.9256	-0.0008	1.0
22	3	20	21	3	19	924.9746	924.9749	0.0003	1.0
22	4	19	21	4	18	924.9895	924.9891	-0.0004	1.0

23	9	-1	22	9	-1	925.0189	925.0178	-0.0011	1.0
22	4	18	21	4	17	925.0513	925.0491	-0.0022	1.0
23	8	-1	22	8	-1	925.1755	925.1753	-0.0002	1.0
23	2	22	22	2	21	925.2954	925.2974	0.0020	1.0
24	1	24	23	1	23	925.3112	925.3143	0.0031	0.5
23	7	-1	22	7	-1	925.3158	925.3143	-0.0015	0.5
24	0	24	23	0	23	925.3259	925.3264	0.0005	1.0
22	3	19	21	3	18	925.3784	925.3801	0.0017	1.0
22	2	20	21	2	19	925.4936	925.4922	-0.0014	1.0
24	10	-1	23	10	-1	925.5046	925.5051	0.0005	1.0
23	1	22	22	1	21	925.5229	925.5233	0.0004	1.0
23	5	19	22	5	18	925.5633	925.5623	-0.0010	1.0
23	5	18	22	5	17	925.5692	925.5687	-0.0005	1.0
23	3	21	22	3	20	925.6279	925.6275	-0.0004	1.0
23	4	20	22	4	19	925.6620	925.6612	-0.0008	1.0
24	9	-1	23	9	-1	925.6805	925.6809	0.0004	1.0
23	4	19	22	4	18	925.7444	925.7439	-0.0005	1.0
24	8	-1	23	8	-1	925.8379	925.8389	0.0010	1.0
24	2	23	23	2	22	925.9116	925.9095	-0.0021	0.5
25	1	25	24	1	24	925.9098	925.9095	-0.0003	0.5
25	0	25	24	0	24	925.9212	925.9209	-0.0003	1.0
25	11	-1	24	11	-1	925.9641	925.9665	0.0024	1.0
24	7	-1	23	7	-1	925.9796	925.9778	-0.0018	1.0
23	3	20	22	3	19	926.0958	926.0953	-0.0005	1.0
24	1	23	23	1	22	926.1120	926.1114	-0.0006	1.0
23	2	21	22	2	20	926.1537	926.1538	0.0001	1.0
25	10	-1	24	10	-1	926.1609	926.1592	-0.0017	1.0
24	5	20	23	5	19	926.2325	926.2314	-0.0011	1.0
24	5	19	23	5	18	926.2411	926.2402	-0.0009	1.0
24	3	22	23	3	21	926.2736	926.2735	-0.0001	1.0
24	4	21	23	4	20	926.3290	926.3273	-0.0017	1.0
25	9	-1	24	9	-1	926.3374	926.3362	-0.0012	1.0
24	4	20	23	4	19	926.4372	926.4370	-0.0002	1.0
25	8	-1	24	8	-1	926.4958	926.4961	0.0003	1.0
26	1	26	25	1	25	926.5032	926.5030	-0.0002	1.0
26	0	26	25	0	25	926.5121	926.5107	-0.0014	1.0
25	2	24	24	2	23	926.5209	926.5208	-0.0001	1.0
25	7	-1	24	7	-1	926.6391	926.6377	-0.0014	1.0

25	1	24	24	1	23	926.6949	926.6959	0.0010	1.0
24	2	22	23	2	21	926.8009	926.8005	-0.0004	1.0
24	3	21	23	3	20	926.8068	926.8062	-0.0006	1.0
26	10	-1	25	10	-1	926.8125	926.8118	-0.0007	1.0
25	5	21	24	5	20	926.8975	926.8965	-0.0010	1.0
25	5	20	24	5	19	926.9097	926.9091	-0.0006	0.5
25	3	23	24	3	22	926.9116	926.9091	-0.0025	0.5
26	9	-1	25	9	-1	926.9897	926.9891	-0.0006	0.5
25	4	22	24	4	21	926.9904	926.9891	-0.0013	0.5
27	1	27	26	1	26	927.0917	927.0913	-0.0004	1.0
27	0	27	26	0	26	927.0986	927.0989	0.0003	1.0
26	2	25	25	2	24	927.1233	927.1230	-0.0003	1.0
25	4	21	24	4	20	927.1298	927.1311	0.0013	1.0
26	8	-1	25	8	-1	927.1492	927.1473	-0.0019	1.0
26	1	25	25	1	24	927.2726	927.2728	0.0002	1.0
26	7	-1	25	7	-1	927.2941	927.2919	-0.0022	0.5
25	2	23	24	2	22	927.4349	927.4354	0.0005	1.0
27	10	-1	26	10	-1	927.4594	927.4594	0.0000	1.0
25	3	22	24	3	21	927.5099	927.5084	-0.0015	1.0
26	3	24	25	3	23	927.5418	927.5421	0.0003	1.0
26	5	22	25	5	21	927.5581	927.5576	-0.0005	1.0
26	5	21	25	5	20	927.5754	927.5771	0.0017	1.0
27	9	-1	26	9	-1	927.6373	927.6377	0.0004	1.0
26	4	23	25	4	22	927.6458	927.6467	0.0009	1.0
28	1	28	27	1	27	927.6751	927.6741	-0.0010	1.0
28	0	28	27	0	27	927.6805	927.6790	-0.0015	1.0
27	2	26	26	2	25	927.7192	927.7203	0.0011	1.0
27	8	-1	26	8	-1	927.7980	927.7986	0.0006	1.0
26	4	22	25	4	21	927.8225	927.8225	0.0000	1.0
27	1	26	26	1	25	927.8457	927.8427	-0.0030	1.0
27	7	-1	26	7	-1	927.9447	927.9438	-0.0009	1.0
26	2	24	25	2	23	928.0553	928.0540	-0.0013	1.0
28	10	-1	27	10	-1	928.1015	928.0990	-0.0025	1.0
27	3	25	26	3	24	928.1641	928.1643	0.0002	1.0
26	3	23	25	3	22	928.2039	928.2047	0.0008	1.0
27	5	23	26	5	22	928.2144	928.2149	0.0005	1.0
27	5	22	26	5	21	928.2383	928.2393	0.0010	1.0
29	1	29	28	1	28	928.2537	928.2523	-0.0014	1.0

29	0	29	28	0	28	928.2579	928.2558	-0.0021	1.0
28	9	-1	27	9	-1	928.2803	928.2785	-0.0018	1.0
27	4	24	26	4	23	928.2950	928.2953	0.0003	1.0
28	2	27	27	2	26	928.3087	928.3103	0.0016	1.0
28	1	27	27	1	26	928.4147	928.4135	-0.0012	1.0
28	8	-1	27	8	-1	928.4422	928.4403	-0.0019	1.0
27	4	23	26	4	22	928.5152	928.5163	0.0011	1.0
28	7	-1	27	7	-1	928.5910	928.5883	-0.0027	1.0
27	2	25	26	2	24	928.6621	928.6631	0.0010	1.0
29	10	-1	28	10	-1	928.7390	928.7411	0.0021	1.0
30	1	30	29	1	29	928.8273	928.8294	0.0021	0.5
30	0	30	29	0	29	928.8305	928.8294	-0.0011	0.5
28	5	24	27	5	23	928.8661	928.8652	-0.0009	1.0
27	3	24	26	3	23	928.8875	928.8865	-0.0010	1.0
29	2	28	28	2	27	928.8920	928.8896	-0.0024	1.0
28	5	23	27	5	22	928.8987	928.9010	0.0023	1.0
29	9	-1	28	9	-1	928.9186	928.9178	-0.0008	1.0
28	4	25	27	4	24	928.9376	928.9370	-0.0006	1.0
29	1	28	28	1	27	928.9800	928.9799	-0.0001	1.0
29	8	-1	28	8	-1	929.0819	929.0816	-0.0003	1.0
28	4	24	27	4	23	929.2077	929.2083	0.0006	1.0
29	7	-1	28	7	-1	929.2328	929.2295	-0.0033	1.0
28	2	26	27	2	25	929.2555	929.2559	0.0004	1.0
30	10	-1	29	10	-1	929.3717	929.3726	0.0009	1.0
31	1	31	30	1	30	929.3961	929.3996	0.0035	0.5
31	0	31	30	0	30	929.3986	929.3996	0.0010	0.5
30	2	29	29	2	28	929.4691	929.4695	0.0004	1.0
29	5	25	28	5	24	929.5132	929.5155	0.0023	1.0
30	1	29	29	1	28	929.5417	929.5417	0.0000	1.0
30	9	-1	29	9	-1	929.5523	929.5532	0.0009	0.5
29	5	24	28	5	23	929.5570	929.5532	-0.0038	0.5
29	4	26	28	4	25	929.5735	929.5744	0.0009	1.0
30	8	-1	29	8	-1	929.7170	929.7175	0.0005	1.0
29	2	27	28	2	26	929.8360	929.8332	-0.0028	1.0
30	7	-1	29	7	-1	929.8703	929.8669	-0.0034	1.0
29	4	25	28	4	24	929.8992	929.9013	0.0021	1.0
32	1	32	31	1	31	929.9600	929.9614	0.0014	0.5
32	0	32	31	0	31	929.9619	929.9614	-0.0005	0.5

31	10	-1	30	10	-1	929.9997	930.0023	0.0026	1.0
31	2	30	30	2	29	930.0404	930.0421	0.0017	1.0
31	1	30	30	1	29	930.0997	930.0982	-0.0015	1.0
30	5	26	29	5	25	930.1553	930.1562	0.0009	1.0
31	9	-1	30	9	-1	930.1813	930.1802	-0.0011	1.0
30	4	27	29	4	26	930.2022	930.2045	0.0023	1.0
30	5	25	29	5	24	930.2136	930.2149	0.0013	1.0
31	8	-1	30	8	-1	930.3477	930.3496	0.0019	1.0
30	2	28	29	2	27	930.4043	930.4049	0.0006	1.0
31	7	-1	30	7	-1	930.5034	930.5008	-0.0026	1.0
33	1	33	32	1	32	930.5190	930.5182	-0.0008	0.5
33	0	33	32	0	32	930.5204	930.5182	-0.0022	0.5
30	4	26	29	4	25	930.5890	930.5903	0.0013	1.0
32	2	31	31	2	30	930.6059	930.6060	0.0001	1.0
32	10	-1	31	10	-1	930.6230	930.6224	-0.0006	1.0
32	1	31	31	1	30	930.6541	930.6561	0.0020	1.0
31	5	27	30	5	26	930.7925	930.7944	0.0019	1.0
32	9	-1	31	9	-1	930.8057	930.8035	-0.0022	1.0
31	4	28	30	4	27	930.8237	930.8207	-0.0030	1.0
31	5	26	30	5	25	930.8687	930.8692	0.0005	0.5
31	2	29	30	2	28	930.9616	930.9587	-0.0029	1.0
32	8	-1	31	8	-1	930.9737	930.9722	-0.0015	1.0
34	1	34	33	1	33	931.0731	931.0725	-0.0006	0.5
34	0	34	33	0	33	931.0742	931.0725	-0.0017	0.5
32	7	-1	31	7	-1	931.1322	931.1308	-0.0014	1.0
33	2	32	32	2	31	931.1658	931.1632	-0.0026	1.0
33	1	32	32	1	31	931.2048	931.2030	-0.0018	1.0
33	10	-1	32	10	-1	931.2416	931.2385	-0.0031	1.0
31	4	27	30	4	26	931.2757	931.2743	-0.0014	1.0
33	9	-1	32	9	-1	931.4254	931.4267	0.0013	0.5
32	5	28	31	5	27	931.4243	931.4267	0.0024	0.5
32	4	29	31	4	28	931.4376	931.4388	0.0012	1.0
32	2	30	31	2	29	931.5090	931.5059	-0.0031	1.0
32	5	27	31	5	26	931.5229	931.5236	0.0007	1.0
33	8	-1	32	8	-1	931.5953	931.5958	0.0005	1.0
35	1	35	34	1	34	931.6224	931.6208	-0.0016	0.5
35	0	35	34	0	34	931.6233	931.6208	-0.0025	0.5
34	2	33	33	2	32	931.7202	931.7226	0.0024	1.0

34	1	33	33	1	32	931.7515	931.7511	-0.0004	1.0
33	7	-1	32	7	-1	931.7567	931.7561	-0.0006	1.0
34	10	-1	33	10	-1	931.8554	931.8567	0.0013	1.0
32	4	28	31	4	27	931.9578	931.9593	0.0015	1.0

Table S2. Line list and assignments of the perturbed lines for $K_a' = 3, 6, 11, 12$, and 13 of band ν_6 . The value -1 for K_c' and K_c'' indicates that the asymmetry splitting is too small to resolve.

J'	K_a'	K_c'	J''	K_a''	K_c''	calculation / cm^{-1}	observation / cm^{-1}	$o - c$ / cm^{-1}	cal. shift ^a / cm^{-1}
28	3	25	29	3	26	884.0277	884.0293	0.0016	—
28	3	26	29	3	27	884.8845	884.8836	-0.0009	—
28	3	26	27	3	25	928.7786	928.7788	0.0002	—
28	3	25	27	3	24	929.5600	929.5616	0.0016	—
29	3	26	30	3	27	883.0943	883.0959	0.0016	—
29	3	27	30	3	28	884.0049	884.0079	0.0030	—
29	3	27	28	3	26	929.3852	929.3879	0.0027	—
29	3	26	28	3	25	930.2206	930.2211	0.0005	—
30	3	27	31	3	28	882.1640	882.1644	0.0004	—
30	3	28	31	3	29	883.1235	883.1274	0.0039	—
30	3	28	29	3	27	929.9839	929.9898	0.0059	—
30	3	27	29	3	26	930.8686	930.8692	0.0006	—
31	3	28	32	3	29	881.2374	881.2377	0.0003	—
31	3	29	32	3	30	882.2404	882.2317	-0.0087	—
31	3	29	30	3	28	930.5747	930.5658	-0.0089	—
31	3	28	30	3	27	931.5035	931.5025	-0.0010	—
32	3	29	33	3	30	880.3148	880.3173	0.0025	—
32	3	30	33	3	31	881.3554	881.3528	-0.0026	—
32	3	30	31	3	29	931.1579	931.1544	-0.0035	—
33	3	31	34	3	32	880.4684	880.4651	-0.0033	—
33	3	31	32	3	30	931.7336	931.7318	-0.0018	—
34	3	32	35	3	33	879.5793	879.5773	-0.0020	—
16	6	-1	17	6	-1	895.0908	895.0901	-0.0006	0.0037
16	6	-1	16	6	-1	908.2641	908.2638	-0.0003	0.0037
16	6	-1	15	6	-1	920.6604	920.6623	0.0019	0.0037
17	6	-1	18	6	-1	894.2327	894.2358	0.0031	0.0053
17	6	-1	16	6	-1	921.3567	921.3593	0.0027	0.0053
18	6	-1	19	6	-1	893.3694	893.3746	0.0052	0.0075
18	6	-1	18	6	-1	908.0979	908.1031	0.0052	0.0075
18	6	-1	17	6	-1	922.0486	922.0548	0.0062	0.0075
19	6	-1	20	6	-1	892.5009	892.5107	0.0098	0.0106
19	6	-1	18	6	-1	922.7362	922.7457	0.0095	0.0106
20	6	-1	21	6	-1	891.6272	891.6430	0.0158	0.0150
20	6	-1	20	6	-1	907.9126	907.9273	0.0147	0.0150

20	6	-1	19	6	-1	923.4194	923.4340	0.0146	0.0150
21	6	-1	22	6	-1	890.7481	890.7686	0.0205	0.0212
21	6	-1	20	6	-1	924.0984	924.1217	0.0233	0.0212
22	6	-1	23	6	-1	889.8638	889.8968	0.0330	0.0304
22	6	-1	22	6	-1	907.7081	907.7376	0.0295	0.0304
22	6	-1	21	6	-1	924.7731	924.8035	0.0304	0.0304
23	6	-1	24	6	-1	888.9741	889.0192	0.0451	0.0440
23	6	-1	22	6	-1	925.4435	925.4864	0.0429	0.0440
24	6	-1	25	6	-1	888.0789	888.1409	0.0620	0.0645
24	6	-1	23	6	-1	926.1096	926.1704	0.0608	0.0645
25	6	-1	26	6	-1	887.1783	887.2680	0.0897	0.0951
25	6	-1	25	6	-1	907.3676	907.4572	0.0896	0.0951
25	6	-1	24	6	-1	926.7715	926.8591	0.0876	0.0951
26	6	-1	27	6	-1	886.2722	886.1388	-0.1334	-0.1385
26	6	-1	27	6	-1	886.2722	886.4002	0.1280	0.1385
26	6	-1	25	6	-1	927.4292	927.2941	-0.1351	-0.1385
26	6	-1	25	6	-1	927.4292	927.5540	0.1248	0.1385
27	6	-1	28	6	-1	885.3605	885.2376	-0.1229	-0.1296
27	6	-1	26	6	-1	928.0841	927.9624	-0.1217	-0.1296
28	6	-1	29	6	-1	884.4461	884.3375	-0.1086	-0.1119
28	6	-1	27	6	-1	928.7340	928.6250	-0.1090	-0.1119
29	6	-1	30	6	-1	883.5199	883.4220	-0.0979	-0.1002
29	6	-1	28	6	-1	929.3800	929.2825	-0.0975	-0.1002
30	6	-1	31	6	-1	882.5908	882.4976	-0.0932	-0.0925
30	6	-1	29	6	-1	930.0178	929.9243	-0.0935	-0.0925
31	6	-1	32	6	-1	881.6558	881.5635	-0.0923	-0.0874
31	6	-1	30	6	-1	930.6543	930.5627	-0.0916	-0.0874
32	6	-1	33	6	-1	880.7145	880.6244	-0.0901	-0.0842
32	6	-1	31	6	-1	931.2866	931.1976	-0.0890	-0.0842
33	6	-1	34	6	-1	879.7669	879.6805	-0.0864	-0.0822
33	6	-1	32	6	-1	931.9145	931.8288	-0.0857	-0.0822
26	11	-1	27	11	-1	885.5848	885.5850	0.0002	—
26	11	-1	25	11	-1	926.6153	926.6161	0.0008	—
27	11	-1	28	11	-1	884.6828	884.6852	0.0024	—
27	11	-1	26	11	-1	927.2617	927.2619	0.0002	—
28	11	-1	29	11	-1	883.7760	883.7810	0.0050	—
28	11	-1	27	11	-1	927.9033	927.9083	0.0050	—
29	11	-1	30	11	-1	882.8644	882.8711	0.0067	—

29	11	-1	28	11	-1	928.5402	928.5455	0.0053	—
30	11	-1	31	11	-1	881.9481	881.9549	0.0068	—
30	11	-1	29	11	-1	929.1723	929.1787	0.0064	—
31	11	-1	32	11	-1	881.0269	881.0338	0.0069	—
31	11	-1	30	11	-1	929.7997	929.8064	0.0067	—
32	11	-1	33	11	-1	880.1010	880.1087	0.0077	—
32	11	-1	31	11	-1	930.4222	930.4296	0.0074	—
33	11	-1	32	11	-1	931.0400	931.0482	0.0082	—
34	11	-1	33	11	-1	931.6530	931.6620	0.0090	—
20	12	-1	21	12	-1	890.6793	890.6823	0.0030	0.0044
20	12	-1	19	12	-1	922.4187	922.4208	0.0021	0.0044
21	12	-1	20	12	-1	923.0935	923.0981	0.0046	0.0051
22	12	-1	23	12	-1	888.9284	888.9341	0.0057	0.0059
22	12	-1	21	12	-1	923.7636	923.7694	0.0058	0.0059
23	12	-1	22	12	-1	924.4289	924.4358	0.0069	0.0068
24	12	-1	25	12	-1	887.1586	887.1659	0.0073	0.0077
24	12	-1	23	12	-1	925.0894	925.0959	0.0065	0.0077
25	12	-1	26	12	-1	886.2667	886.2731	0.0064	0.0086
25	12	-1	24	12	-1	925.7451	925.7538	0.0087	0.0086
26	12	-1	25	12	-1	926.3960	926.4047	0.0087	0.0096
28	12	-1	27	12	-1	927.6835	927.6936	0.0101	0.0118
29	12	-1	30	12	-1	882.6517	882.6664	0.0147	0.0130
29	12	-1	28	12	-1	928.3201	928.3331	0.0130	0.0130
30	12	-1	31	12	-1	881.7361	881.7496	0.0135	0.0143
30	12	-1	29	12	-1	928.9518	928.9676	0.0158	0.0143
31	12	-1	30	12	-1	929.5787	929.5958	0.0171	0.0156
32	12	-1	33	12	-1	879.8908	879.9089	0.0181	0.0171
33	12	-1	32	12	-1	930.8181	930.8380	0.0199	0.0186
34	12	-1	33	12	-1	931.4305	931.4516	0.0211	0.0202
13	13	-1	13	13	-1	907.2535	907.2528	-0.0007	0.0000
14	13	-1	14	13	-1	907.1875	907.1879	0.0004	0.0015
15	13	-1	16	13	-1	894.7294	894.7316	0.0022	0.0032
16	13	-1	15	13	-1	919.4290	919.4308	0.0018	0.0051
17	13	-1	18	13	-1	893.0260	893.0299	0.0039	0.0071
17	13	-1	16	13	-1	920.1229	920.1278	0.0049	0.0071
18	13	-1	19	13	-1	892.1672	892.1761	0.0089	0.0093
18	13	-1	17	13	-1	920.8120	920.8216	0.0096	0.0093
19	13	-1	20	13	-1	891.3038	891.3153	0.0115	0.0116

19	13	-1	18	13	-1	921.4964	921.5105	0.0141	0.0116
20	13	-1	21	13	-1	890.4357	890.4490	0.0133	0.0142
20	13	-1	19	13	-1	922.1760	922.1899	0.0139	0.0142
22	13	-1	23	13	-1	888.6854	888.7056	0.0202	0.0200
22	13	-1	21	13	-1	923.5208	923.5406	0.0198	0.0200
23	13	-1	24	13	-1	887.8033	887.8249	0.0217	0.0233
23	13	-1	22	13	-1	924.1860	924.2072	0.0212	0.0233
24	13	-1	25	13	-1	886.9164	886.9441	0.0277	0.0268
24	13	-1	23	13	-1	924.8465	924.8726	0.0261	0.0268
25	13	-1	26	13	-1	886.0249	886.0569	0.0320	0.0306
25	13	-1	24	13	-1	925.5021	925.5314	0.0293	0.0306
26	13	-1	27	13	-1	885.1287	885.1630	0.0343	0.0348
26	13	-1	25	13	-1	926.1529	926.1853	0.0324	0.0348
27	13	-1	28	13	-1	884.2279	884.2679	0.0400	0.0393
27	13	-1	26	13	-1	926.7989	926.8371	0.0382	0.0393
28	13	-1	29	13	-1	883.3223	883.3657	0.0434	0.0443
29	13	-1	28	13	-1	928.0765	928.1269	0.0504	0.0496
30	13	-1	29	13	-1	928.708	928.7646	0.0566	0.0555
32	13	-1	31	13	-1	929.9565	930.0299	0.0734	0.0690
35	13	-1	34	13	-1	931.7928	931.8986	0.1058	0.0946

^a Calculated shifts according to according to equations (2)–(6) of the main text.