Configuration and internal dynamics of krypton-chlorofluoromethane

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Supporting Information Available: 1 Table of rotational transition frequencies.

Table S1. Experimental frequencies (ν, MHz) and observed - calculated values (Δν, kHz) for CH_2ClF - Kr

										$^{84}Kr^{35}Cl$		$^{86}Kr^{35}Cl$		$^{84}KrCl^{37}Cl$	
J'	K_a'	K_c'	J''	K_a''	K_c''	v'	v''	F'+½	F''+½	ν	Δν	ν	Δν	ν	Δν
a) μ_c, interstate transitions															
2	1	1	1	0	1	0	1	4	3	8305.4007	2.3	8276.3153	0.4	8148.8769	2.8
						1	0	4	3	8306.6513	0.9	8277.5608	-0.2	8150.1073	3.1
						0	1	3	2	8309.3750	-1.7	8280.2924	-0.8	8152.0314	1.8
						1	0	3	2	8310.6315	0.7	8281.5437	1.6	8153.2631	1.6
						0	1	2	1	8316.3499	-1.5				
						1	0	2	1	8317.6019	-1.8				
						0	1	3	3	8318.4855	-2.2				
						1	0	3	3	8319.7395	-1.9				
						0	1	2	2	8299.9626	0.9				
						1	0	2	2	8301.2154	0.6				
						0	1	1	2	8287.3240	2.1				
						1	0	1	2	8288.5715	-0.4				
2	2	0	1	1	0	0	1	4	3	17189.8395	-0.6	17181.2112	0.7		
						1	0	4	3	17191.0814	0.2	17182.4489	1.5		
						0	1	3	2	17176.7023	-2.2	17168.0560	-0.9		
						1	0	3	2	17177.9520	-2.3	17169.2993	-1.2		
2	2	1	1	1	1	0	1	4	3	17302.8838	2.3	17292.1260	1.3		
						1	0	4	3	17304.1275	2.9	17293.3612	0.7		
						0	1	3	2	17307.1500	2.4	17296.3998	-1.1		
						1	0	3	2	17308.4009	0.8	17297.6443	-1.1		
						1	0	2	1	17292.0098	-2.0				
						0	1	2	2	17313.6488	-3.8				
						1	0	2	2	17314.9001	-0.7				
3	1	2	2	0	2	0	1	5	4	10269.4079	1.4	10220.0670	1.1	10077.7955	2.2
						1	0	5	4	10270.6558	1.6	10221.3082	0.1	10079.0192	0.0
						0	1	4	3	10275.7509	-1.4	10226.4069	-0.4	10082.8153	-2.0
						1	0	4	3	10276.9994	-2.0	10227.6506	-1.4	10084.0427	-1.6
						0	1	3	2			10225.5898	-2.2	10082.1604	-2.0
						1	0	3	2			10226.8340	-1.3	10083.3865	-2.4
						0	1	2	1	10268.7764	0.0			10077.2523	-4.7
						1	0	2	1					10078.4787	-3.7
						0	1	4	4					10089.7769	0.1
						1	0	4	4					10091.0040	-0.1
						0	1	3	3	10268.6040	-1.1	10219.2571	1.5	10077.1958	-3.6
						1	0	3	3			10220.5001	0.1	10078.4222	-3.5
						0	1	2	2	10259.8703	0.2				
						1	0	2	2	10261.1164	-0.9				
4	1	3	3	0	3	0	1	6	5	12296.2238	0.4	12225.3861	0.6	12068.6753	-0.6
						1	0	6	5	12297.4663	1.1	12226.6236	1.6	12069.8958	-0.1
						0	1	5	4	12303.6708	2.2	12232.8239	1.8	12074.5667	0.8
						1	0	5	4	12304.9111	-0.5	12234.0616	0.6	12075.7882	1.7
						0	1	4	3	12302.0094	-0.9	12231.1681	-0.4	12073.2524	0.4
						1	0	4	3	12303.2509	-2.0	12232.4055	-0.9	12074.4736	1.1
						0	1	3	2	12294.6474	3.2	12223.8116	-1.3	12068.6274	2.5
						1	0	3	2	12295.8880	2.5	12225.0483	-0.1	12067.4086	3.4
						0	1	4	4					12070.1322	0.0
						1	0	4	4					12071.3536	1.2
4	2	3	4	1	3	0	1	6	6	13085.0836	5.1	13120.1804	-0.0		
						1	0	6	6	13086.3147	5.6	13121.4076	-0.0		
						0	1	5	5	13072.6687	-2.7				
						1	0	5	5	13073.9001	-5.3				
						0	1	4	4	13077.0547	-2.3				

						1	0	4	4	13078.2969	7.0				

										$^{84}Kr^{35}Cl$		$^{86}Kr^{35}Cl$		$^{84}KrCl^{37}Cl$	
J'	K_a'	K_c'	*J*"	K_a"	K_c"	v'	v"	*F*'+½	*F*"+½	ν	Δν	ν	Δν	ν	Δν
5	1	4	4	0	4	0	1	7	6	14390.0689	0.7			14125.7364	1.5
						1	0	7	6	14391.3043	1.1			14126.9472	-0.2
						0	1	6	5	14398.2610	-0.3			14132.2178	0.6
						1	0	6	5	14399.4975	0.2			14133.4310	0.9
						0	1	5	4	14396.4799	-1.2			14130.8080	-0.3
						1	0	5	4	14397.7142	-2.5			14132.0195	-1.6
						0	1	4	3	14388.3445	-1.7			14124.3626	2.5
						1	0	4	3	14389.5814	0.7			14125.5756	3.2
5	2	4	5	1	4	0	1	7	7	12792.4507	2.1				
						1	0	7	7	12793.6727	0.9				
						0	1	6	6	12781.4728	-1.8				
						1	0	6	6	12782.6945	-5.7				
6	1	5	5	0	5	0	1	8	7	16556.6764	-1.4	16438.4190	1.2	16254.6753	1.0
						1	0	8	7	16557.9067	1.5	16439.6367	-0.4	16255.8780	0.1
						0	1	7	6	16565.4928	-0.1	16447.2132	1.4	16261.6503	1.2
						1	0	7	6	16566.7216	0.3	16448.4349	1.5	16262.8543	1.3
						0	1	6	5	16563.7366	-1.9	16445.4604	-2.8	16260.2600	-0.8
						1	0	6	5	16564.9678	1.1	16446.6831	-1.1	16261.4626	-2.0
						0	1	5	4	16554.9680	2.0			16253.3063	-4.0
						1	0	5	4	16556.1928	-0.4			16254.5123	-1.5
6	2	5	6	1	5	0	1	8	8	12444.1569	1.6				
						1	0	8	8	12445.3685	-1.2				

b) μ_a and μ_b intrastate transitions: v=0 and v=1 lines overlapped unless specified

4	0	4	3	0	3			6	5	7121.7673	1.2
								5	4	7121.3203	1.0
								4	3	7122.4645	-0.2
								3	2	7122.8989	0.3
4	1	4	3	1	3			6	5	6902.6968	-1.4
								5	4	6903.5214	-0.4
								6	5	7376.2183	-2.8
								5	4	7376.9995	5.7
4	2	2	4	1	3			6	6	13119.9114	1.7
								5	5	13108.5017	2.6
5	0	5	4	0	4			7	6	8884.6805	0.3
								6	5	8884.1344	0.9
								5	4	8884.8424	2.2
								4	3	8885.3822	-1.2
5	1	5	4	1	4			7	6	8623.9432	1.8
								6	5	8624.2759	2.4
5	1	4	4	1	3	0	0	7	6	9215.6105	-0.0
						1	1	7	6	9215.6046	0.5
						0	0	6	5	9215.9112	-0.5
						1	1	6	5	9215.9052	0.1
5	1	5	4	0	4			7	6	12619.6050	7.0
								6	5	12610.9760	4.9
5	2	3	5	1	4			7	7	12872.9429	0.4
6	0	6	5	0	5			8	7	10636.1288	3.1
								7	6	10635.4824	0.2
								6	5	10636.0025	5.7
								5	4	10636.6288	-1.0
6	1	6	5	1	5			8	7	10342.1992	1.7
								7	6	10342.3096	1.6
								6	5	10342.2547	1.8
6	1	5	5	1	4	0	0	8	7	11051.2894	-0.3

						1	1	8	7	11051.2820	-0.2
6	1	5	5	1	4	0	0	7	6	11051.3640	-1.1
						1	1	7	6	11051.3566	-0.9