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SUPPORTING INFORMATION

Rotational Spectra and Structures of the van der Waals Dimers of Argon with 2-Fluoropyridine and 3-Fluoropyridine

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Table S1. Microwave transitions of 2-fluoropyridine- Ar complex.

J'	$K_{a'}$	$K_{c'}$	F'	\rightarrow	J''	$K_{a''}$	$K_{c''}$	F''	V_{obs}	$V_{\text{obs}} - \text{calc}$
2	1	2	1	\rightarrow	1	0	1	1	4680.0931	0.0003
2	1	2	3	\rightarrow	1	0	1	2	4681.3988	-0.0002
2	1	2	2	\rightarrow	1	0	1	1	4681.4216	0.0012
2	1	2	1	\rightarrow	1	0	1	0	4682.1714	-0.0004
2	1	2	2	\rightarrow	1	0	1	2	4682.2511	-0.0009
3	0	3	2	\rightarrow	2	1	1	1	4911.1452	-0.0006
3	0	3	4	\rightarrow	2	1	1	3	4911.5182	-0.0001
3	0	3	3	\rightarrow	2	1	1	2	4912.6000	-0.0002
2	1	1	1	\rightarrow	1	0	1	1	5326.2511	0.0007
2	1	1	2	\rightarrow	1	0	1	1	5326.3072	-0.0008
2	1	1	3	\rightarrow	1	0	1	2	5327.1016	0.0002
2	1	1	1	\rightarrow	1	0	1	0	5328.3300	0.0005
3	0	3	2	\rightarrow	2	1	2	2	5555.9757	0.0000
3	0	3	4	\rightarrow	2	1	2	3	5557.2206	0.0000
3	0	3	2	\rightarrow	2	1	2	1	5557.3034	0.0000
3	0	3	3	\rightarrow	2	1	2	2	5557.4872	-0.0005
3	0	3	3	\rightarrow	2	1	2	3	5558.3392	-0.0015
4	0	4	3	\rightarrow	3	1	2	2	6359.2216	0.0018
4	0	4	5	\rightarrow	3	1	2	4	6359.4397	0.0008
4	0	4	4	\rightarrow	3	1	2	3	6360.3979	0.0008
3	1	3	2	\rightarrow	2	0	2	2	6461.9106	-0.0017
3	1	3	4	\rightarrow	2	0	2	3	6463.2839	0.0000
3	1	3	2	\rightarrow	2	0	2	1	6463.4263	0.0010
3	1	3	3	\rightarrow	2	0	2	2	6463.4513	0.0002
3	1	3	3	\rightarrow	2	0	2	3	6464.4228	-0.0009
2	2	1	2	\rightarrow	1	1	0	2	6555.2694	0.0006
2	2	1	2	\rightarrow	1	1	0	1	6556.0627	-0.0006
2	2	1	3	\rightarrow	1	1	0	2	6556.1601	0.0001
2	2	1	1	\rightarrow	1	1	0	1	6557.4495	-0.0005
2	2	0	2	\rightarrow	1	1	0	2	6596.5300	0.0003
2	2	0	2	\rightarrow	1	1	0	1	6597.3243	0.0000
2	2	0	3	\rightarrow	1	1	0	2	6597.5026	0.0004
2	2	0	1	\rightarrow	1	1	0	1	6598.8377	-0.0002
4	1	3	3	\rightarrow	3	2	1	2	6609.4758	0.0000
4	1	3	5	\rightarrow	3	2	1	4	6609.6614	-0.0004
4	1	3	4	\rightarrow	3	2	1	3	6610.3133	-0.0004
2	2	1	2	\rightarrow	1	1	1	2	6770.5750	-0.0033
2	2	1	2	\rightarrow	1	1	1	1	6770.6157	-0.0001
2	2	1	3	\rightarrow	1	1	1	2	6771.4700	0.0004
2	2	1	1	\rightarrow	1	1	1	1	6772.0025	0.0000
4	1	3	3	\rightarrow	3	2	2	2	6807.0353	-0.0017
4	1	3	5	\rightarrow	3	2	2	4	6807.1533	-0.0010
4	1	3	4	\rightarrow	3	2	2	3	6807.6094	-0.0010

2	2	0	2	→	1	1	1	2	6811.8376	-0.0016
2	2	0	2	→	1	1	1	1	6811.8767	0.0000
2	2	0	3	→	1	1	1	2	6812.8128	0.0009
2	2	0	1	→	1	1	1	1	6813.3899	-0.0004
5	2	3	4	→	4	3	1	3	7147.1225	-0.0020
5	2	3	6	→	4	3	1	5	7147.2755	-0.0006
5	2	3	5	→	4	3	1	4	7147.9107	-0.0003
5	2	3	4	→	4	3	2	3	7181.8468	0.0001
5	2	3	6	→	4	3	2	5	7181.9912	0.0006
5	2	3	5	→	4	3	2	4	7182.5951	-0.0008
6	3	3	5	→	5	4	2	4	7261.1843	0.0002
6	3	3	7	→	5	4	2	6	7261.3351	0.0017
6	3	3	6	→	5	4	2	5	7262.0861	-0.0007
4	0	4	3	→	3	1	3	3	7644.0795	-0.0005
4	0	4	5	→	3	1	3	4	7645.5434	-0.0001
4	0	4	3	→	3	1	3	2	7645.6181	-0.0007
4	0	4	4	→	3	1	3	3	7645.6631	0.0000
4	0	4	4	→	3	1	3	4	7646.8011	-0.0017
6	2	5	5	→	5	3	2	4	7745.4291	0.0005
6	2	5	7	→	5	3	2	6	7745.5724	0.0004
6	2	5	6	→	5	3	2	5	7746.4107	0.0008
3	1	2	2	→	2	0	2	2	7748.3103	-0.0011
3	1	2	3	→	2	0	2	2	7748.7166	-0.0005
3	1	2	4	→	2	0	2	3	7749.3884	-0.0002
3	1	2	3	→	2	0	2	3	7749.6879	-0.0017
3	1	2	2	→	2	0	2	1	7749.8233	-0.0010
6	2	5	5	→	5	3	3	4	7878.2046	-0.0005
6	2	5	7	→	5	3	3	6	7878.3329	-0.0002
6	2	5	6	→	5	3	3	5	7879.0950	-0.0013
4	1	4	5	→	3	0	3	4	8206.4413	0.0003
4	1	4	3	→	3	0	3	2	8206.5004	-0.0003
4	1	4	4	→	3	0	3	3	8206.6121	-0.0006
3	2	2	3	→	2	1	1	2	8427.7115	-0.0006
3	2	2	4	→	2	1	1	3	8427.7519	0.0017
3	2	2	2	→	2	1	1	1	8427.7684	-0.0015
3	2	1	3	→	2	1	1	2	8625.0090	0.0003
3	2	1	4	→	2	1	1	3	8625.2428	0.0000
3	2	1	2	→	2	1	1	1	8625.3317	0.0003
3	2	2	3	→	2	1	2	2	9072.5997	0.0000
3	2	2	4	→	2	1	2	3	9073.4524	-0.0001
3	2	2	2	→	2	1	2	1	9073.9274	0.0000
5	1	4	4	→	4	2	3	3	9229.8654	0.0011
5	1	4	6	→	4	2	3	5	9229.8817	-0.0001
5	1	4	5	→	4	2	3	4	9230.0735	0.0009
3	2	1	3	→	2	1	2	2	9269.8956	-0.0006
3	2	1	4	→	2	1	2	3	9270.9456	0.0005

3	2	1	2	→	2	1	2	1	9271.4884	-0.0004
5	0	5	6	→	4	1	4	5	9657.5985	-0.0001
5	0	5	4	→	4	1	4	3	9657.6530	0.0017
5	0	5	5	→	4	1	4	4	9657.6786	-0.0010
6	2	4	5	→	5	3	3	4	9783.7726	0.0001
6	2	4	7	→	5	3	3	6	9783.8201	0.0000
6	2	4	6	→	5	3	3	5	9784.1056	-0.0009
5	1	5	6	→	4	0	4	5	9964.1773	-0.0002
5	1	5	4	→	4	0	4	3	9964.2160	-0.0016
5	1	5	5	→	4	0	4	4	9964.3120	0.0002
4	2	3	5	→	3	1	2	4	10187.9867	0.0016
4	2	3	3	→	3	1	2	2	10187.9867	-0.0007
4	2	3	4	→	3	1	2	3	10188.0834	0.0007
4	1	3	4	→	3	0	3	3	10322.7218	-0.0003
4	1	3	5	→	3	0	3	4	10323.3859	-0.0002
4	1	3	3	→	3	0	3	2	10323.6606	-0.0006
3	3	1	3	→	2	2	0	2	10392.4594	0.0006
3	3	1	2	→	2	2	0	1	10392.5373	0.0005
3	3	1	4	→	2	2	0	3	10392.6653	0.0003
3	3	0	3	→	2	2	0	2	10397.5213	0.0001
3	3	0	2	→	2	2	0	1	10397.6098	0.0009
3	3	0	4	→	2	2	0	3	10397.7349	0.0002
3	3	1	3	→	2	2	1	2	10433.7194	-0.0002
3	3	1	2	→	2	2	1	1	10433.9237	-0.0010
3	3	1	4	→	2	2	1	3	10434.0078	0.0005
3	3	0	3	→	2	2	1	2	10438.7830	0.0009
3	3	0	2	→	2	2	1	1	10438.9974	0.0004
3	3	0	4	→	2	2	1	3	10439.0771	0.0002
6	1	5	5	→	5	2	3	4	10485.5666	0.0009
6	1	5	7	→	5	2	3	6	10485.6475	0.0042
6	1	5	6	→	5	2	3	5	10486.1487	0.0011
4	2	2	4	→	3	1	2	3	10729.9817	0.0006
4	2	2	5	→	3	1	2	4	10730.1973	0.0002
4	2	2	3	→	3	1	2	2	10730.2804	0.0000
4	2	3	4	→	3	1	3	3	11473.3488	0.0001
4	2	3	5	→	3	1	3	4	11474.0898	0.0000
4	2	3	3	→	3	1	3	2	11474.3865	0.0000
6	1	5	7	→	5	2	4	6	11598.4091	0.0000
6	1	5	5	→	5	2	4	4	11598.4166	0.0016
6	1	5	6	→	5	2	4	5	11598.5040	0.0003
6	0	6	7	→	5	1	5	6	11607.8293	0.0007
6	0	6	5	→	5	1	5	4	11607.8662	0.0001
6	0	6	6	→	5	1	5	5	11607.8933	-0.0006
6	1	6	7	→	5	0	5	6	11760.2617	0.0004
6	1	6	5	→	5	0	5	4	11760.2928	0.0000
6	1	6	6	→	5	0	5	5	11760.3569	-0.0006

5	2	4	4	→	4	1	3	3	11851.8322	-0.0024
5	2	4	6	→	4	1	3	5	11851.8480	0.0025
5	2	4	5	→	4	1	3	4	11852.0187	0.0006
7	1	6	6	→	6	2	4	5	11954.6754	-0.0007
7	1	6	8	→	6	2	4	7	11954.7479	0.0005
7	1	6	7	→	6	2	4	6	11955.2937	0.0006
4	2	2	4	→	3	1	3	3	12015.2463	-0.0008
4	2	2	5	→	3	1	3	4	12016.3013	-0.0004
4	2	2	3	→	3	1	3	2	12016.6782	-0.0011
4	3	2	4	→	3	2	1	3	12392.0919	0.0000
4	3	2	5	→	3	2	1	4	12392.2830	0.0005
4	3	2	3	→	3	2	1	2	12392.3124	-0.0005
4	3	1	4	→	3	2	1	3	12426.7777	0.0009
4	3	1	5	→	3	2	1	4	12426.9978	0.0008
4	3	1	3	→	3	2	1	2	12427.0341	-0.0009
7	2	5	6	→	6	3	4	5	12437.2135	-0.0035
7	2	5	8	→	6	3	4	7	12437.2314	0.0030
7	2	5	7	→	6	3	4	6	12437.3527	0.0001
4	3	2	4	→	3	2	2	3	12589.3886	0.0001
4	3	2	5	→	3	2	2	4	12589.7751	0.0001
4	3	2	3	→	3	2	2	2	12589.8741	-0.0002
4	3	1	4	→	3	2	2	3	12624.0739	0.0004
4	3	1	5	→	3	2	2	4	12624.4897	0.0001
4	3	1	3	→	3	2	2	2	12624.5962	-0.0003
5	2	3	5	→	4	1	3	4	12964.3734	-0.0006
5	2	3	6	→	4	1	3	5	12964.6121	0.0008
5	2	3	4	→	4	1	3	3	12964.6843	0.0004
5	1	4	5	→	4	0	4	4	13057.7583	0.0002
5	1	4	6	→	4	0	4	5	13058.4282	0.0000
5	1	4	4	→	4	0	4	3	13058.6313	-0.0007
6	2	5	5	→	5	1	4	4	13453.5264	-0.0032
6	2	5	7	→	5	1	4	6	13453.5443	0.0018
6	2	5	6	→	5	1	4	5	13453.7396	0.0006
7	0	7	8	→	6	1	6	7	13519.0680	-0.0004
7	0	7	6	→	6	1	6	5	13519.0955	-0.0011
7	0	7	7	→	6	1	6	6	13519.1236	0.0003
7	1	7	8	→	6	0	6	7	13590.0209	-0.0001
7	1	7	6	→	6	0	6	5	13590.0469	0.0000
7	1	7	7	→	6	0	6	6	13590.0898	-0.0007
7	1	6	8	→	6	2	5	7	13860.2325	-0.0017
7	1	6	6	→	6	2	5	5	13860.2436	0.0000
7	1	6	7	→	6	2	5	6	13860.3047	0.0015
5	2	4	5	→	4	1	4	4	13968.1278	0.0003
5	2	4	6	→	4	1	4	5	13968.7917	0.0009
5	2	4	4	→	4	1	4	3	13968.9954	0.0002
4	4	1	4	→	3	3	0	3	14159.9417	-0.0002

4	4	1	3	→	3	3	0	2	14160.0287	-0.0012
4	4	1	5	→	3	3	0	4	14160.1003	0.0006
4	4	0	4	→	3	3	0	3	14160.4545	0.0000
4	4	0	3	→	3	3	0	2	14160.5415	-0.0017
4	4	0	5	→	3	3	0	4	14160.6135	0.0006
4	4	1	4	→	3	3	1	3	14165.0047	0.0002
4	4	1	3	→	3	3	1	2	14165.1004	-0.0017
4	4	1	5	→	3	3	1	4	14165.1696	0.0003
4	4	0	4	→	3	3	1	3	14165.5169	-0.0001
4	4	0	3	→	3	3	1	2	14165.6138	-0.0015
4	4	0	5	→	3	3	1	4	14165.6831	0.0005
5	3	3	5	→	4	2	2	4	14262.8153	-0.0013
5	3	3	6	→	4	2	2	5	14262.8788	-0.0002
5	3	3	4	→	4	2	2	3	14262.9006	0.0044
5	3	2	5	→	4	2	2	4	14395.5024	-0.0008
5	3	2	6	→	4	2	2	5	14395.6400	-0.0003
5	3	2	4	→	4	2	2	3	14395.6709	-0.0018
5	3	3	5	→	4	2	3	4	14804.7154	0.0002
5	3	3	6	→	4	2	3	5	14805.0919	0.0008
5	3	3	4	→	4	2	3	3	14805.1886	-0.0003
5	3	2	5	→	4	2	3	4	14937.4012	-0.0005
5	3	2	6	→	4	2	3	5	14937.8526	0.0002
5	3	2	4	→	4	2	3	3	14937.9639	-0.0016
7	2	6	6	→	6	1	5	5	15046.5060	-0.0027
7	2	6	8	→	6	1	5	7	15046.5177	0.0002
7	2	6	7	→	6	1	5	6	15046.7030	0.0022
6	2	4	6	→	5	1	4	5	15358.7498	0.0006
6	2	4	7	→	5	1	4	6	15359.0300	0.0006
6	2	4	5	→	5	1	4	4	15359.0984	0.0013
8	0	8	7	→	7	1	7	6	15409.0032	0.0020
8	0	8	8	→	7	1	7	7	15409.0295	0.0046
6	1	5	6	→	5	0	5	5	15908.9508	-0.0007
6	1	5	7	→	5	0	5	6	15909.6018	0.0007
6	1	5	5	→	5	0	5	4	15909.7607	0.0019
6	3	4	5	→	5	2	3	4	15984.2250	0.0016
6	3	4	7	→	5	2	3	6	15984.2250	0.0008
6	3	4	6	→	5	2	3	5	15984.2716	-0.0012
5	4	2	5	→	4	3	1	4	16237.3466	0.0001
5	4	2	6	→	4	3	1	5	16237.5576	-0.0012
5	4	2	4	→	4	3	1	3	16237.5822	0.0025
5	4	1	5	→	4	3	1	4	16241.8956	-0.0005
5	4	1	6	→	4	3	1	5	16242.1108	-0.0011
5	4	1	4	→	4	3	1	3	16242.1344	0.0009
5	4	2	5	→	4	3	2	4	16272.0310	-0.0004
5	4	2	6	→	4	3	2	5	16272.2731	-0.0003
5	4	2	4	→	4	3	2	3	16272.3020	0.0001

5	4	1	5	→	4	3	2	4	16276.5800	-0.0010
5	4	1	6	→	4	3	2	5	16276.8259	-0.0005
5	4	1	4	→	4	3	2	3	16276.8566	0.0009
6	3	3	6	→	5	2	3	5	16351.5221	-0.0002
6	3	3	7	→	5	2	3	6	16351.6153	-0.0007
6	3	3	5	→	5	2	3	4	16351.6422	0.0029
6	2	5	6	→	5	1	5	5	16547.1851	-0.0003
6	2	5	7	→	5	1	5	6	16547.7938	0.0008
6	2	5	5	→	5	1	5	4	16547.9448	0.0006
8	2	7	7	→	7	1	6	6	16684.6326	0.0018
8	2	7	9	→	7	1	6	8	16684.6326	-0.0015
8	2	7	8	→	7	1	6	7	16684.7830	-0.0018
6	3	4	6	→	5	2	4	5	17096.6289	-0.0001
6	3	4	7	→	5	2	4	6	17096.9896	-0.0002
6	3	4	5	→	5	2	4	4	17097.0740	0.0013
6	3	3	6	→	5	2	4	5	17463.8777	-0.0006
6	3	3	7	→	5	2	4	6	17464.3827	0.0009
6	3	3	5	→	5	2	4	4	17464.4887	0.0001
7	3	5	6	→	6	2	4	5	17570.7495	-0.0018
7	3	5	8	→	6	2	4	7	17570.7638	0.0020
7	3	5	7	→	6	2	4	6	17570.8849	-0.0011
5	5	1	5	→	4	4	0	4	17908.8294	-0.0005
5	5	1	4	→	4	4	0	3	17908.8954	0.0023
5	5	1	6	→	4	4	0	5	17908.9416	-0.0005
7	2	5	7	→	6	1	5	6	17935.4779	0.0000
7	2	5	8	→	6	1	5	7	17935.8098	0.0006
7	2	5	6	→	6	1	5	5	17935.8733	-0.0014
6	4	3	6	→	5	3	2	5	18262.0237	0.0000
6	4	3	7	→	5	3	2	6	18262.1875	-0.0011
6	4	3	5	→	5	3	2	4	18262.2172	0.0025
6	4	2	6	→	5	3	2	5	18284.2105	-0.0001
6	4	2	7	→	5	3	2	6	18284.3868	-0.0005
6	4	2	5	→	5	3	2	4	18284.4168	0.0015
7	3	4	7	→	6	2	4	6	18379.5344	0.0001
7	3	4	8	→	6	2	4	7	18379.6306	-0.0005
7	3	4	6	→	6	2	4	5	18379.6555	0.0027
6	4	3	6	→	5	3	3	5	18394.7097	-0.0005
6	4	3	7	→	5	3	3	6	18394.9505	0.0005
6	4	3	5	→	5	3	3	4	18394.9888	-0.0024
6	4	2	6	→	5	3	3	5	18416.8968	-0.0004
6	4	2	7	→	5	3	3	6	18417.1489	0.0002
6	4	2	5	→	5	3	3	4	18417.1899	-0.0019
6	2	4	7	→	5	1	5	6	18453.2796	-0.0001
6	2	4	5	→	5	1	5	4	18453.5104	-0.0011
5	3	3	5	→	4	0	4	4	18632.4024	0.0015
5	3	3	6	→	4	0	4	5	18633.6365	-0.0008

5	3	3	4	→	4	0	4	3	18633.9566	0.0000
7	1	6	7	→	6	0	6	6	18799.5951	0.0004
7	1	6	8	→	6	0	6	7	18800.1991	0.0004
7	1	6	6	→	6	0	6	5	18800.3225	0.0008
8	3	6	7	→	7	2	5	6	19056.7199	-0.0047
8	3	6	9	→	7	2	5	8	19056.7411	0.0024
8	3	6	8	→	7	2	5	7	19056.9050	-0.0001
7	2	6	7	→	6	1	6	6	19195.2954	0.0005
7	2	6	8	→	6	1	6	7	19195.8596	0.0022
7	2	6	6	→	6	1	6	5	19195.9753	0.0006
7	3	5	7	→	6	2	5	6	19475.8959	-0.0003
7	3	5	8	→	6	2	5	7	19476.2486	0.0000
7	3	5	6	→	6	2	5	5	19476.3189	0.0000
6	5	2	6	→	5	4	1	5	20002.0881	0.0001
6	5	2	7	→	5	4	1	6	20002.2622	-0.0010
6	5	2	5	→	5	4	1	4	20002.2714	0.0006
6	5	1	6	→	5	4	1	5	20002.5955	-0.0017
6	5	1	7	→	5	4	1	6	20002.7715	-0.0013
6	5	1	5	→	5	4	1	4	20002.7815	0.0011
6	5	2	6	→	5	4	2	5	20006.6361	-0.0015
6	5	2	7	→	5	4	2	6	20006.8151	-0.0011
6	5	2	5	→	5	4	2	4	20006.8246	0.0001
6	5	1	6	→	5	4	2	5	20007.1465	-0.0004
6	5	1	7	→	5	4	2	6	20007.3250	-0.0009
6	5	1	5	→	5	4	2	4	20007.3344	0.0002
7	4	4	7	→	6	3	3	6	20181.7726	-0.0009
7	4	4	8	→	6	3	3	7	20181.8574	-0.0006
7	4	4	6	→	6	3	3	5	20181.8784	0.0050
7	4	3	7	→	6	3	3	6	20259.7971	0.0006
7	4	3	8	→	6	3	3	7	20259.9088	-0.0027
7	4	3	6	→	6	3	3	5	20259.9338	0.0025
7	3	4	7	→	6	2	5	6	20284.5454	0.0009
7	3	4	8	→	6	2	5	7	20285.1183	0.0003
7	3	4	6	→	6	2	5	5	20285.2218	0.0017
9	3	7	8	→	8	2	6	7	20491.0304	-0.0045
9	3	7	10	→	8	2	6	9	20491.0481	-0.0001
9	3	7	9	→	8	2	6	8	20491.2259	-0.0018
7	4	4	7	→	6	3	4	6	20549.0226	-0.0003
7	4	4	8	→	6	3	4	7	20549.2508	0.0008
7	4	4	6	→	6	3	4	5	20549.2884	-0.0008
8	3	5	8	→	7	2	5	7	20552.0317	-0.0009
8	3	5	9	→	7	2	5	8	20552.1582	-0.0020
8	3	5	7	→	7	2	5	6	20552.1848	0.0013
7	4	3	7	→	6	3	4	6	20627.0458	0.0000
7	4	3	8	→	6	3	4	7	20627.3042	0.0007
7	4	3	6	→	6	3	4	5	20627.3449	-0.0023

8	2	6	8	→	7	1	6	7	20694.6545	-0.0024
8	2	6	9	→	7	1	6	8	20695.0299	-0.0006
8	2	6	7	→	7	1	6	6	20695.0887	-0.0045
8	1	7	8	→	7	0	7	7	21673.1851	0.0004
8	1	7	9	→	7	0	7	8	21673.7352	-0.0003
8	1	7	7	→	7	0	7	6	21673.8334	0.0005
8	2	7	8	→	7	1	7	7	21894.2890	0.0001
8	2	7	9	→	7	1	7	8	21894.8119	0.0000
8	2	7	7	→	7	1	7	6	21894.9071	0.0014
7	5	3	7	→	6	4	2	6	22081.0546	0.0000
7	5	3	8	→	6	4	2	7	22081.2245	-0.0018
7	5	3	6	→	6	4	2	5	22081.2476	0.0021
7	5	2	7	→	6	4	2	6	22084.0566	-0.0009
7	5	2	8	→	6	4	2	7	22084.2283	-0.0024
7	5	2	6	→	6	4	2	5	22084.2525	0.0025
7	5	3	7	→	6	4	3	6	22103.2420	0.0004
7	5	3	8	→	6	4	3	7	22103.4228	-0.0022
7	5	3	6	→	6	4	3	5	22103.4478	0.0017
7	5	2	7	→	6	4	3	6	22106.2441	-0.0004
7	5	2	8	→	6	4	3	7	22106.4277	-0.0017
7	5	2	6	→	6	4	3	5	22106.4531	0.0024
8	4	4	8	→	7	3	5	7	22973.4809	0.0004
8	4	4	9	→	7	3	5	8	22973.7654	0.0004
8	4	4	7	→	7	3	5	6	22973.8088	0.0000
7	6	2	7	→	6	5	1	6	23749.7895	0.0007
7	6	1	7	→	6	5	2	6	23750.3495	-0.0001
9	4	5	9	→	8	3	5	8	24048.5049	-0.0001
9	4	5	10	→	8	3	5	9	24048.5431	-0.0026
9	4	5	8	→	8	3	5	7	24048.5566	0.0025
8	5	4	8	→	7	4	3	7	24125.1139	0.0005
8	5	4	9	→	7	4	3	8	24125.2527	-0.0017
8	5	4	7	→	7	4	3	6	24125.2749	0.0024
8	5	3	8	→	7	4	3	7	24137.7803	-0.0008
8	5	3	9	→	7	4	3	8	24137.9255	-0.0016
8	5	3	7	→	7	4	3	6	24137.9480	0.0022
8	5	4	8	→	7	4	4	7	24203.1374	0.0011
8	5	4	9	→	7	4	4	8	24203.3062	-0.0019
8	5	4	7	→	7	4	4	6	24203.3321	0.0017
8	5	3	8	→	7	4	4	7	24215.8072	0.0030
8	5	3	9	→	7	4	4	8	24215.9794	-0.0012
8	5	3	7	→	7	4	4	6	24216.0059	0.0022

Table S2. Microwave transitions of 3-fluoropyridine-Ar complex.

J'	K_{α}'	K_{β}'	F'	\rightarrow	J''	K_{α}''	K_{β}''	F''	V_{obs}	$V_{\text{obs}} - \text{calc}$
2	1	1	2	\rightarrow	1	0	1	1	5216.2965	0.0001
2	1	1	1	\rightarrow	1	0	1	1	5216.5034	-0.0005
2	1	1	2	\rightarrow	1	0	1	2	5217.2025	-0.0017
2	1	1	3	\rightarrow	1	0	1	2	5217.3368	0.0004
2	1	1	1	\rightarrow	1	0	1	0	5218.7743	-0.0002
5	4	2	5	\rightarrow	5	3	2	5	5952.1120	-0.0006
5	4	2	6	\rightarrow	5	3	2	6	5952.7105	-0.0013
5	4	2	4	\rightarrow	5	3	2	4	5952.8322	-0.0016
4	4	1	4	\rightarrow	4	3	1	4	6029.8377	-0.0001
4	4	1	5	\rightarrow	4	3	1	5	6030.8295	0.0001
4	4	1	3	\rightarrow	4	3	1	3	6031.0847	0.0006
4	0	4	3	\rightarrow	3	1	2	2	6215.3308	-0.0008
4	0	4	5	\rightarrow	3	1	2	4	6215.6641	0.0006
4	0	4	4	\rightarrow	3	1	2	3	6217.0094	0.0006
3	1	3	4	\rightarrow	2	0	2	3	6370.8948	0.0010
3	1	3	2	\rightarrow	2	0	2	1	6371.0010	0.0025
3	1	3	3	\rightarrow	2	0	2	2	6371.2363	0.0007
5	2	3	4	\rightarrow	4	3	1	3	6494.6425	0.0005
5	2	3	6	\rightarrow	4	3	1	5	6494.7846	0.0022
5	2	3	5	\rightarrow	4	3	1	4	6495.3472	0.0023
2	2	1	3	\rightarrow	1	1	0	2	6568.0822	0.0003
2	2	1	2	\rightarrow	1	1	0	1	6568.1404	0.0012
2	2	0	2	\rightarrow	1	1	0	2	6599.9535	-0.0001
2	2	0	1	\rightarrow	1	1	0	0	6600.0964	0.0002
2	2	0	2	\rightarrow	1	1	0	1	6600.9840	0.0001
2	2	0	3	\rightarrow	1	1	0	2	6601.0448	-0.0007
2	2	0	1	\rightarrow	1	1	0	1	6602.6824	-0.0007
2	2	1	2	\rightarrow	1	1	1	1	6763.8334	-0.0006
2	2	1	2	\rightarrow	1	1	1	2	6763.9554	-0.0005
2	2	1	3	\rightarrow	1	1	1	2	6764.9285	-0.0003
2	2	1	1	\rightarrow	1	1	1	1	6765.3470	-0.0011
2	2	1	1	\rightarrow	1	1	1	0	6765.6623	-0.0008
2	2	0	2	\rightarrow	1	1	1	1	6796.6793	0.0004
2	2	0	3	\rightarrow	1	1	1	2	6797.8926	0.0001
4	0	4	5	\rightarrow	3	1	3	4	7392.2278	-0.0001
4	0	4	4	\rightarrow	3	1	3	3	7392.2981	-0.0005
4	0	4	3	\rightarrow	3	1	3	2	7392.3423	-0.0007
5	0	5	4	\rightarrow	4	1	3	3	7435.8243	-0.0029
5	0	5	6	\rightarrow	4	1	3	5	7436.0800	-0.0012
5	0	5	5	\rightarrow	4	1	3	4	7437.4154	-0.0015
3	1	2	2	\rightarrow	2	0	2	2	7546.3118	0.0002
3	1	2	3	\rightarrow	2	0	2	2	7546.5243	-0.0010
3	1	2	4	\rightarrow	2	0	2	3	7547.4574	-0.0008

3	1	2	2	→	2	0	2	1	7548.0074	-0.0023
4	1	4	5	→	3	0	3	4	8071.8328	0.0005
4	1	4	3	→	3	0	3	2	8071.8739	0.0021
4	1	4	4	→	3	0	3	3	8072.1500	-0.0006
5	1	4	4	→	4	2	2	3	8282.2615	0.0007
5	1	4	6	→	4	2	2	5	8282.3736	0.0008
5	1	4	5	→	4	2	2	4	8282.9138	0.0002
3	2	2	2	→	2	1	1	1	8396.0711	-0.0002
3	2	2	4	→	2	1	1	3	8396.1468	0.0005
3	2	2	3	→	2	1	1	2	8396.2794	0.0008
3	2	1	3	→	2	1	1	2	8555.0341	0.0000
3	2	1	4	→	2	1	1	3	8555.1912	0.0000
3	2	1	2	→	2	1	1	1	8555.2192	0.0013
5	1	4	6	→	4	2	3	5	8726.5312	-0.0036
3	2	2	3	→	2	1	2	2	8985.2429	-0.0009
3	2	2	4	→	2	1	2	3	8986.3479	-0.0011
3	2	2	2	→	2	1	2	1	8986.9631	-0.0009
3	2	1	3	→	2	1	2	2	9143.9995	0.0000
3	2	1	4	→	2	1	2	3	9145.3929	-0.0012
3	2	1	2	→	2	1	2	1	9146.1121	0.0013
5	0	5	6	→	4	1	4	5	9378.3096	-0.0024
5	0	5	5	→	4	1	4	4	9378.3739	0.0008
5	1	5	6	→	4	0	4	5	9777.8476	-0.0032
5	1	5	4	→	4	0	4	3	9777.8827	0.0004
5	1	5	5	→	4	0	4	4	9778.0892	-0.0022
4	1	3	4	→	3	0	3	3	10013.1057	-0.0011
4	1	3	5	→	3	0	3	4	10014.0615	-0.0015
4	1	3	3	→	3	0	3	2	10014.4273	-0.0024
4	2	3	3	→	3	1	2	2	10122.5202	0.0013
4	2	3	5	→	3	1	2	4	10122.5789	0.0013
4	2	3	4	→	3	1	2	3	10122.8649	0.0036
3	3	1	3	→	2	2	0	2	10421.3525	0.0018
3	3	1	2	→	2	2	0	1	10421.3984	-0.0037
3	3	1	4	→	2	2	0	3	10421.5559	0.0005
3	3	0	3	→	2	2	0	3	10423.7566	-0.0004
3	3	0	3	→	2	2	0	2	10424.8487	-0.0002
3	3	0	2	→	2	2	0	1	10424.9119	-0.0005
3	3	0	4	→	2	2	0	3	10425.0627	0.0001
3	3	0	2	→	2	2	0	2	10426.6110	-0.0008
3	3	1	3	→	2	2	1	3	10453.2220	-0.0005
3	3	1	3	→	2	2	1	2	10454.1954	-0.0001
3	3	1	2	→	2	2	1	1	10454.4321	0.0000
3	3	1	4	→	2	2	1	3	10454.5187	-0.0001
3	3	1	2	→	2	2	1	2	10455.9444	-0.0017
3	3	0	3	→	2	2	1	2	10457.6931	-0.0005
3	3	0	2	→	2	2	1	1	10457.9425	0.0000

3	3	0	4	→	2	2	1	3	10458.0255	-0.0006
4	2	2	4	→	3	1	2	3	10566.5510	-0.0007
4	2	2	5	→	3	1	2	4	10566.7405	0.0007
4	2	2	3	→	3	1	2	2	10566.8028	0.0001
4	2	3	4	→	3	1	3	3	11298.1496	-0.0014
4	2	3	5	→	3	1	3	4	11299.1415	-0.0005
4	2	3	3	→	3	1	3	2	11299.5286	-0.0017
5	2	4	4	→	4	1	3	3	11757.9702	0.0022
5	2	4	6	→	4	1	3	5	11758.0246	0.0006
5	2	4	5	→	4	1	3	4	11758.3874	0.0002
4	3	2	4	→	3	2	1	3	12376.3470	-0.0006
4	3	1	4	→	3	2	1	4	12400.1563	-0.0002
4	3	1	4	→	3	2	1	3	12400.4465	0.0007
4	3	1	5	→	3	2	1	4	12400.6393	-0.0001
4	3	1	3	→	3	2	1	2	12400.6616	-0.0004
4	3	1	3	→	3	2	1	3	12401.0531	-0.0004
4	3	2	4	→	3	2	2	3	12535.1025	-0.0007
4	3	2	5	→	3	2	2	4	12535.5469	-0.0002
4	3	2	3	→	3	2	2	2	12535.6602	-0.0009
4	3	1	4	→	3	2	2	3	12559.2005	-0.0009
4	3	1	5	→	3	2	2	4	12559.6845	0.0000
4	3	1	3	→	3	2	2	2	12559.8083	-0.0004
5	1	4	5	→	4	0	4	4	12632.4557	-0.0008
5	1	4	6	→	4	0	4	5	12633.4484	-0.0005
5	1	4	4	→	4	0	4	3	12633.7308	-0.0008
5	2	3	5	→	4	1	3	4	12687.6468	0.0005
5	2	3	6	→	4	1	3	5	12687.9096	0.0004
5	2	3	4	→	4	1	3	3	12687.9814	0.0003
5	2	4	5	→	4	1	4	4	13699.3431	-0.0002
5	2	4	6	→	4	1	4	5	13700.2546	0.0000
5	2	4	4	→	4	1	4	3	13700.5248	-0.0011
4	4	0	4	→	3	3	0	3	14207.2812	0.0001
4	4	0	3	→	3	3	0	2	14207.3732	0.0002
4	4	0	5	→	3	3	0	4	14207.4513	0.0006
4	4	1	4	→	3	3	1	3	14210.4722	0.0005
4	4	1	3	→	3	3	1	2	14210.5749	0.0000
4	4	1	5	→	3	3	1	4	14210.6502	0.0005
5	3	2	5	→	4	2	2	4	14315.7609	0.0003
5	3	2	6	→	4	2	2	5	14315.8368	-0.0011
5	3	2	4	→	4	2	2	3	14315.8549	0.0030
5	3	3	5	→	4	2	3	4	14666.2124	-0.0010
5	3	3	6	→	4	2	3	5	14666.6613	-0.0002
5	3	3	4	→	4	2	3	3	14666.7759	-0.0004
6	2	4	6	→	5	1	4	5	14949.8423	0.0003
6	2	4	7	→	5	1	4	6	14950.1989	0.0008
6	2	4	5	→	5	1	4	4	14950.2771	0.0009

6	1	5	6	→	5	0	5	5	15379.8732	-0.0009
6	1	5	7	→	5	0	5	6	15380.8583	0.0000
6	1	5	5	→	5	0	5	4	15381.0813	-0.0018
6	2	5	6	→	5	1	5	5	16181.9720	-0.0004
6	2	5	7	→	5	1	5	6	16182.8247	0.0000
6	2	5	5	→	5	1	5	4	16183.0290	-0.0004
6	3	3	6	→	5	2	3	5	16197.4745	-0.0011
6	3	3	7	→	5	2	3	6	16197.4965	0.0007
6	3	3	5	→	5	2	3	4	16197.5038	0.0020
5	4	1	5	→	4	3	1	4	16229.1877	-0.0003
5	4	1	6	→	4	3	1	5	16229.4132	-0.0012
5	4	1	4	→	4	3	1	3	16229.4372	0.0024
5	4	2	5	→	4	3	2	4	16250.5454	-0.0009
5	4	2	6	→	4	3	2	5	16250.8074	-0.0006
5	4	2	4	→	4	3	2	3	16250.8372	-0.0003
5	4	1	5	→	4	3	2	4	16253.2846	-0.0015
5	4	1	6	→	4	3	2	5	16253.5530	0.0010
6	3	4	6	→	5	2	4	5	16863.4148	0.0003
6	3	4	7	→	5	2	4	6	16863.8635	0.0006
6	3	4	5	→	5	2	4	4	16863.9628	-0.0003
7	2	5	7	→	6	1	5	6	17375.7320	0.0006
7	2	5	8	→	6	1	5	7	17376.1874	0.0007
7	2	5	6	→	6	1	5	5	17376.2709	0.0015
5	5	0	5	→	4	4	0	4	17977.1655	0.0027
5	5	0	4	→	4	4	0	3	17977.2336	0.0039
5	5	0	6	→	4	4	0	5	17977.2866	0.0026
5	5	1	5	→	4	4	1	4	17977.4489	0.0029
5	5	1	4	→	4	4	1	3	17977.5171	0.0034
5	5	1	6	→	4	4	1	5	17977.5696	0.0018
7	3	4	7	→	6	2	4	6	18113.1027	0.0028
7	3	4	8	→	6	2	4	7	18113.1364	-0.0005
7	3	4	6	→	6	2	4	5	18113.1471	0.0011
7	1	6	7	→	6	0	6	6	18193.3182	-0.0002
7	1	6	8	→	6	0	6	7	18194.2453	0.0012
7	1	6	6	→	6	0	6	5	18194.4211	-0.0010
6	4	2	6	→	5	3	2	5	18221.4590	-0.0009
6	4	2	7	→	5	3	2	6	18221.6334	-0.0005
6	4	2	5	→	5	3	2	4	18221.6609	0.0014
6	4	3	6	→	5	3	3	5	18301.2558	-0.0014
6	4	3	7	→	5	3	3	6	18301.5186	0.0004
6	4	3	5	→	5	3	3	4	18301.5601	-0.0018
7	2	6	7	→	6	1	6	6	18734.5251	0.0003
7	2	6	8	→	6	1	6	7	18735.3279	0.0009
7	2	6	6	→	6	1	6	5	18735.4882	0.0001
7	3	5	7	→	6	2	5	6	19138.2221	0.0004
7	3	5	8	→	6	2	5	7	19138.6786	0.0014

7	3	5	6	→	6	2	5	5	19138.7670	0.0021
8	2	6	8	→	7	1	6	7	19977.0317	0.0006
8	2	6	9	→	7	1	6	8	19977.5743	0.0002
8	2	6	7	→	7	1	6	6	19977.6600	0.0013
6	5	1	6	→	5	4	1	5	20008.3216	-0.0003
6	5	1	7	→	5	4	1	6	20008.5094	-0.0007
6	5	1	5	→	5	4	1	4	20008.5178	0.0006
6	5	2	6	→	5	4	2	5	20010.7942	-0.0012
6	5	2	7	→	5	4	2	6	20010.9856	-0.0018
6	5	2	5	→	5	4	2	4	20010.9972	0.0020
8	3	5	8	→	7	2	5	7	20135.0925	0.0004
8	3	5	9	→	7	2	5	8	20135.1925	-0.0007
8	3	5	7	→	7	2	5	6	20135.2126	0.0023
7	4	3	7	→	6	3	3	6	20159.0886	-0.0017
7	4	3	8	→	6	3	3	7	20159.1802	-0.0006
7	4	3	6	→	6	3	3	5	20159.1969	0.0015
7	4	4	7	→	6	3	4	6	20374.6537	0.0000
7	4	4	8	→	6	3	4	7	20374.9052	-0.0001
7	4	4	6	→	6	3	4	5	20374.9477	-0.0001
8	1	7	8	→	7	0	7	7	21011.3395	-0.0001
8	1	7	9	→	7	0	7	8	21012.1838	0.0013
8	1	7	7	→	7	0	7	6	21012.3235	0.0000
8	2	7	8	→	7	1	7	7	21342.0715	0.0019
8	2	7	9	→	7	1	7	8	21342.8253	0.0010
8	2	7	7	→	7	1	7	6	21342.9559	0.0013
8	3	6	8	→	7	2	6	7	21496.3502	0.0017
8	3	6	9	→	7	2	6	8	21496.8160	0.0018
8	3	6	7	→	7	2	6	6	21496.8942	0.0023
8	4	4	8	→	7	3	4	7	22026.1051	-0.0017
8	4	4	9	→	7	3	4	8	22026.1217	0.0024
8	4	4	7	→	7	3	4	6	22026.1217	-0.0011
7	5	2	7	→	6	4	2	6	22030.8094	-0.0026
7	5	2	8	→	6	4	2	7	22030.9918	-0.0034
7	5	2	6	→	6	4	2	5	22031.0142	-0.0005
7	5	3	7	→	6	4	3	6	22042.6747	-0.0018
7	5	3	8	→	6	4	3	7	22042.8691	-0.0031
7	5	3	6	→	6	4	3	5	22042.8943	0.0004
9	3	6	9	→	8	2	6	8	22313.7703	-0.0029
9	3	6	10	→	8	2	6	9	22313.9571	-0.0018
9	3	6	8	→	8	2	6	7	22313.9857	0.0012
8	4	5	8	→	7	3	5	7	22486.8503	0.0015
8	4	5	9	→	7	3	5	8	22487.1013	0.0017
8	4	5	7	→	7	3	5	6	22487.1392	0.0001
9	2	7	9	→	8	1	7	8	22734.2040	-0.0020
9	2	7	10	→	8	1	7	9	22734.8007	-0.0013
9	2	7	8	→	8	1	7	7	22734.8826	-0.0011

7	6	1	7	→	6	5	1	6	23777.0884	0.0000
7	6	1	6	→	6	5	1	5	23777.2388	0.0008
7	6	1	8	→	6	5	1	7	23777.2388	0.0003
7	6	2	7	→	6	5	2	6	23777.3291	-0.0021
7	6	2	6	→	6	5	2	5	23777.4813	0.0001
7	6	2	8	→	6	5	2	7	23777.4813	-0.0003
9	1	8	9	→	8	0	8	8	23802.2237	-0.0032
9	1	8	10	→	8	0	8	9	23802.9876	-0.0007
9	1	8	8	→	8	0	8	7	23803.0993	-0.0023
9	4	5	8	→	8	3	5	7	23841.1317	0.0008
9	4	5	10	→	8	3	5	9	23841.1317	-0.0006
9	4	5	9	→	8	3	5	8	23841.1614	-0.0010
9	3	7	9	→	8	2	7	8	23937.0347	0.0012
9	3	7	8	→	8	2	7	7	23937.5780	0.0002
9	2	8	9	→	8	1	8	8	23988.9036	-0.0004
9	2	8	10	→	8	1	8	9	23989.6124	-0.0002
9	2	8	8	→	8	1	8	7	23989.7231	0.0031
