Table 1: Experimental frequencies (MHz) of the ground state rotational spectrum of 2-azetidinone.

J	KP	KO	J'	KP'	KO'	NUE(EXP)	EXP-CALC
3	1	2	3	1	3	7712.861	-0.014
19	6	13	19	6	14	8063.260	0.040
48	14	34	48	14	35	8240.770	-0.028
37	11	26	37	11	27	8381.430	-0.013
1	1	0	1	0	1	8445.518	-0.008
9	3	6	9	3	7	8468.470	-0.133
63	18	45	63	18	46	8658.630	0.083
1	0	1	0	0	0	8719.122	-0.005
6	2	4	6	2	5	8836.230	0.053
52	15	37	52	15	38	9427.810	0.044
82	23	59	82	23	60	9442.130	0.239
30	9	21	30	9	22	9515.650	0.039
67	19	48	67	19	49	9691.460	0.057
41	12	29	41	12	30	9815.810	0.072
2	1	1	2	0	2	9891.608	0.008
2	0	2	1	1	1	10121.702	0.007
16	5	11	16	5	12	10142.950	0.056
23	7	16	23	7	17	10252.020	0.039
56	16	40	56	16	41	10685.400	0.041
45	13	32	45	13	33	11336.440	0.010
34	10	24	34	10	25	11343.040	0.000
75	21	54	75	21	55	11932.430	0.049
60	17	43	60	17	44	12014.130	0.036
13	4	9	13	4	10	12162.770	0.081
27	8	19	27	8	20	12563.100	0.011
4	1	3	4	1	4	12789.789	-0.016
49	14	35	49	14	36	12943.310	-0.027
20	6	14	20	6	15	13054.020	0.052
79	22	57	79	22	58	13142.330	0.147
38	11	27	38	11	28	13273.890	0.024

64	18	46	64	18	47	13414.170	-0.419
10	3	7	10	3	8	13698.410	-0.088
7	2	5	7	2	6	14161.890	-0.037
83	23	60	83	23	61	14412.820	0.136
53	15	38	53	15	39	14636.560	0.028
68	19	49	68	19	50	14887.610	0.082
31	9	22	31	9	23	14992.940	-0.031
42	12	30	42	12	31	15306.950	-0.031
1	1	1	0	0	0	15877.104	-0.011
17	5	12	17	5	13	15960.880	0.062
24	7	17	24	7	18	16091.340	0.011
2	1	2	1	1	1	16150.685	-0.004
57	16	41	57	16	42	16416.310	0.045
72	20	52	72	20	53	16433.700	0.053
48	14	35	47	16	32	16896.980	0.175
2	0	2	1	0	1	17279.678	-0.005
46	13	33	46	13	34	17441.810	0.066
35	10	25	35	10	26	17539.670	0.293
61	17	44	61	17	45	18282.950	0.038
14	4	10	14	4	11	18575.800	0.081
2	1	1	1	1	0	18725.682	-0.076
5	1	4	5	1	5	18976.830	0.024
28	8	20	28	8	21	19252.550	-0.043
3	0	3	2	1	2	19509.447	0.000
50	14	36	50	14	37	19677.820	-0.014
21	6	15	21	6	16	19869.500	0.010
39	11	28	39	11	29	20200.820	-0.031
65	18	47	65	18	48	20236.990	0.053
11	3	8	11	3	9	20370.510	0.163
8	2	6	8	2	7	20733.100	0.061
54	15	39	54	15	40	22015.120	-0.027
69	19	50	69	19	51	22278.880	0.017
32	9	23	32	9	24	22536.230	-0.044

43	12	31	43	12	32	22976.400	-0.039
18	5	13	18	5	14	23511.290	-0.024
25	7	18	25	7	19	23892.240	-0.025
3	1	3	2	1	2	24132.240	-0.107
73	20	53	73	20	54	24409.270	0.021
58	16	42	58	16	43	24453.680	-0.044
3	0	3	2	0	2	25538.460	0.018
47	13	34	47	13	35	25865.460	-0.051
36	10	26	36	10	27	25941.330	-0.046
6	1	5	6	1	6	26060.540	0.196
3	2	2	2	2	1	26157.330	0.102
15	4	11	15	4	12	26512.290	0.157
77	21	56	77	21	57	26628.820	0.150
3	2	1	2	2	0	26776.020	-0.089
62	17	45	62	17	46	26993.600	-0.103
3	1	2	2	1	1	27982.590	-0.026
29	8	21	29	8	22	28031.310	0.041
12	3	9	12	3	10	28313.170	0.011
9	2	7	9	2	8	28352.110	0.136
22	6	16	22	6	17	28526.440	-0.015
51	14	37	51	14	38	28867.610	-0.035
9	3	6	9	2	7	29380.020	-0.054
40	11	29	40	11	30	29467.140	-0.051
66	18	48	66	18	49	29635.180	-0.105
8	3	5	8	2	6	29985.790	-0.094
10	3	7	10	2	8	30193.500	-0.074
55	15	40	55	15	41	31982.520	-0.034
4	1	4	3	1	3	32017.780	-0.044
33	9	24	33	9	25	32287.760	-0.051
70	19	51	70	19	52	32378.600	-0.101
19	5	14	19	5	15	32656.910	0.118
11	3	8	11	2	9	32696.600	0.148
44	12	32	44	12	33	33113.110	-0.062

4	2	3	4	0	4	33319.720	0.141
4	0	4	3	0	3	33417.140	-0.014
26	7	19	26	7	20	33633.040	-0.072
7	1	6	7	1	7	33727.450	0.201
4	2	3	3	2	2	34752.420	-0.046
4	3	2	3	3	1	35159.450	-0.098
59	16	43	59	16	44	35209.950	-0.081
4	3	1	3	3	0	35232.630	-0.066
5	2	4	5	0	5	35602.180	0.142
16	4	12	16	4	13	35742.310	0.124
4	2	2	3	2	1	36210.850	-0.032
37	10	27	37	10	28	36662.710	0.033
10	2	8	10	2	9	36734.620	0.157
48	13	35	48	13	36	36878.820	-0.040
12	3	9	12	2	10	37011.500	-0.023
4	1	3	3	1	2	37094.790	0.035
13	3	10	13	3	11	37260.150	0.253
78	21	57	78	21	58	38171.740	-0.274
63	17	46	63	17	47	38549.940	0.028
13	4	9	13	3	10	38783.620	-0.005
6	2	5	6	0	6	38895.780	-0.314
14	4	10	14	3	11	39502.480	0.020
12	4	8	12	3	9	39743.780	0.143
52	14	38	52	14	39	40763.880	0.043
41	11	30	41	11	31	41156.240	-0.051
82	22	60	82	22	61	41222.520	0.144
8	1	7	8	1	8	41616.840	-0.028
36	9	28	35	11	25	41843.880	0.078
11	4	7	11	3	8	41946.430	-0.006
67	18	49	67	18	50	42002.120	0.068
15	4	11	15	3	12	42167.350	0.067
7	2	6	7	0	7	43111.730	0.519
20	5	15	20	5	16	43112.330	0.195

34	9	25	34	9	26	44147.740	0.075
56	15	41	56	15	42	44767.840	0.147
27	7	20	27	7	21	45082.460	0.045
11	2	9	11	2	10	45522.500	0.451
71	19	52	71	19	53	45566.390	0.091
45	12	33	45	12	34	45768.770	-0.035
5	2	3	4	2	2	45871.780	0.273
17	4	13	17	4	14	45936.350	0.156
5	1	4	4	1	3	45985.730	-0.311
6	1	6	5	1	5	47482.290	0.447
17	5	12	17	4	13	47820.150	-0.177
6	0	6	5	0	5	48314.080	-0.007
60	16	44	60	16	45	48889.270	-0.731
16	5	11	16	4	12	49041.510	0.183
9	3	7	9	2	8	49263.360	-0.085
9	1	8	9	1	9	49423.280	-0.537
38	10	28	38	10	29	49563.180	-0.112
24	6	18	24	6	19	50471.930	-0.167
49	13	36	49	13	37	50499.720	-0.435
14	3	11	14	2	12	50552.990	-0.026
16	3	13	15	5	10	51100.460	-0.079
19	5	14	19	4	15	51390.720	-0.392
31	8	23	31	8	24	51397.190	0.052
6	2	5	5	2	4	51608.240	0.097
15	5	10	15	4	11	51726.270	-0.097
8	3	6	8	1	7	52081.630	-0.130
7	3	5	7	1	6	52132.300	-0.062
6	4	2	5	4	1	52871.280	-0.598
6	3	4	5	3	3	52884.530	-0.252
6	3	3	5	3	2	53525.560	-0.199
9	2	8	9	0	9	53617.180	0.274
12	2	10	12	2	11	54339.210	-0.121
21	5	16	21	5	17	54490.010	0.056

6	1	5	5	1	4	54565.370	-0.011
40	10	31	39	12	28	54823.440	0.585
7	1	7	6	1	6	55082.220	0.167
42	11	31	42	11	32	55087.370	-0.072
14	5	9	14	4	10	55263.940	-0.123
9	4	6	9	3	7	55299.120	-0.123
53	14	39	53	14	40	55350.040	-0.059
6	2	4	5	2	3	55580.210	-0.093
7	0	7	6	0	6	55615.780	0.007
10	3	8	10	1	9	55706.720	0.111
41	9	33	40	11	30	55819.320	0.079
17	3	14	16	5	11	56202.280	0.088
7	1	7	6	0	6	56311.270	-0.266
10	4	7	10	3	8	56464.190	-0.116
20	5	15	20	4	16	56487.800	-0.172
21	6	15	21	5	16	56587.050	-0.022
18	4	14	18	4	15	56689.500	0.058
15	3	12	15	3	13	56719.320	0.059
83	22	61	83	22	62	56929.770	-0.045
10	1	9	10	1	10	56982.040	-0.099
22	6	16	22	5	17	57318.740	-0.084
68	18	50	68	18	51	57488.180	0.079
18	3	15	17	5	12	57766.810	-0.112
35	9	26	35	9	27	57792.480	-0.170
28	7	21	28	7	22	57851.330	-0.071
20	6	14	20	5	15	57997.410	-0.104
11	4	8	11	3	9	58235.400	-0.289
13	5	8	13	4	9	58992.010	-0.050
11	3	9	11	1	10	59316.820	0.043
10	2	9	10	0	10	59563.170	0.017
7	2	6	6	2	5	59831.010	0.120
57	15	42	57	15	43	60318.200	-0.039
43	11	33	42	13	30	60429.350	-0.239

23	6	17	23	5	18	60439.070	-0.224
12	4	9	12	3	10	60694.700	0.148
46	12	34	46	12	35	60721.260	-0.022
87	23	64	87	23	65	60940.300	-0.128
41	10	32	40	12	29	60987.840	-0.382
19	6	13	19	5	14	61084.760	0.016
19	4	15	18	6	12	61263.660	-0.087
7	6	2	6	6	1	61478.180	0.167
7	3	5	6	3	4	61709.810	0.044
7	4	4	6	4	3	61787.430	0.178
7	4	3	6	4	2	61878.710	-0.065
40	5	36	40	3	37	224814.700	-0.325
46	7	39	46	7	40	227950.800	-0.562
26	25	1	25	25	0	227958.200	0.224
26	19	7	25	19	6	228569.400	0.353
26	18	8	25	18	7	228727.700	0.563
26	17	10	25	17	9	228912.800	0.316
26	16	11	25	16	10	229132.800	0.264
26	15	12	25	15	11	229397.800	0.286
26	6	21	25	6	20	229526.000	0.230
26	11	16	25	11	15	231323.800	0.312
26	11	15	25	11	14	231327.200	0.287
28	4	25	27	4	24	231332.700	0.203
28	3	25	27	3	24	231347.500	0.336
41	4	37	41	3	38	231506.100	1.586
29	3	27	28	3	26	232025.400	0.430
26	10	17	25	10	16	232240.200	0.256
26	10	17	25	10	16	232240.200	0.256
26	10	16	25	10	15	232288.100	0.260
30	2	29	29	2	28	232813.300	-0.204
43	5	38	43	5	39	233137.000	0.270
26	5	21	25	5	20	233137.500	0.397
26	9	18	25	9	17	233411.300	0.237

31	1	31	30	1	30	233639.300	-0.340
26	9	17	25	9	16	233899.000	0.270
25	6	19	24	6	18	234139.900	0.343
26	8	19	25	8	18	234345.500	0.403
47	8	40	47	7	41	234915.200	-2.782
27	24	3	26	24	2	236867.000	0.229
27	23	5	26	23	4	236960.000	0.906
26	8	18	25	8	17	237533.600	0.318
29	3	26	28	3	25	238751.100	0.388
27	14	14	26	14	13	238755.700	0.365
37	4	34	36	4	33	298064.500	-0.099
34	31	3	33	31	2	298072.600	-0.169
34	31	3	33	31	2	298072.700	-0.069
51	4	47	51	4	48	298081.500	-0.238
38	3	36	37	3	35	298834.600	-0.125
34	24	11	33	24	10	298919.100	-0.128
34	23	12	33	23	11	299096.100	-0.103
34	22	13	33	22	12	299295.500	-0.228
34	21	13	33	21	12	299522.100	-0.403
39	2	38	38	2	37	299648.000	-0.392
34	20	14	33	20	13	299782.300	-0.219
40	1	40	39	1	39	300480.500	-0.073
50	4	47	50	2	48	302296.800	0.218
37	5	33	36	5	32	304791.700	-0.152
37	4	33	36	4	32	304792.800	-0.004
38	4	35	37	4	34	305482.900	-0.194
35	33	2	34	33	1	306721.900	-0.204
54	5	49	54	5	50	306824.300	-0.383
35	31	4	34	31	4	306901.200	-0.223
35	30	5	34	30	4	307000.800	-0.121
40	1	39	39	1	38	307073.300	-0.054
40	1	39	39	1	38	307073.300	-0.054
35	29	6	34	29	5	307108.200	-0.140

35	28	7	34	28	6	307224.700	-0.238
41	1	41	40	1	40	307905.700	-0.286
51	3	48	51	3	49	308905.900	-0.262
48	1	47	48	1	48	309754.200	-0.073
35	17	19	34	17	18	309928.800	-0.169
35	16	20	34	16	19	310479.000	-0.145
35	8	28	34	8	27	310642.900	-0.046
35	15	21	34	15	20	311153.400	-0.129
37	5	32	36	5	31	311662.900	-0.104
35	14	22	34	14	21	311998.500	-0.166
35	14	21	34	14	20	311999.700	-0.221
50	2	48	50	2	49	312769.800	-0.265
35	13	23	34	13	22	313084.800	-0.165
35	13	22	34	13	21	313101.200	-0.160
35	7	28	34	7	27	313781.700	-0.166
35	12	24	34	12	23	314491.600	-0.183
41	1	40	40	1	39	314497.900	-0.142
35	12	23	34	12	22	314660.500	-0.173
35	9	27	34	9	26	315471.900	-0.254
58	1	57	57	1	56	440666.700	-0.113
51	10	42	50	10	41	443135.000	-0.045
50	23	28	49	23	27	443182.600	-0.106
25	6	20	24	3	21	443221.200	-0.090
52	9	44	51	9	43	443227.800	0.086
51	9	42	50	9	41	443230.000	-0.014
52	8	44	51	8	43	443233.000	0.049
52	9	44	51	8	43	443239.500	-0.022
50	11	40	49	11	39	443294.400	-0.221
51	41	10	50	41	9	447094.900	-0.444
51	40	12	50	40	11	447237.900	-0.453
58	3	56	57	2	55	447251.800	-1.149
37	12	26	37	9	29	447406.600	0.580
31	12	19	30	11	20	447416.600	-0.130

30	9	21	29	7	22	447422.100	-0.168
26	8	19	25	6	20	447508.000	-0.318
51	38	14	50	38	13	447547.600	-0.060
38	16	23	38	14	24	447649.100	-1.186
51	37	15	50	37	14	447715.800	-0.105
48	13	35	47	13	34	447835.100	-0.354
51	36	15	50	36	14	447894.700	-0.045
59	2	58	58	1	57	448084.900	-0.126
51	34	17	50	34	16	448289.800	-0.093
51	33	18	50	33	17	448509.600	-0.018
26	7	20	25	5	21	448529.800	0.357
51	32	20	50	32	19	448746.600	-0.268
60	1	60	59	1	59	448923.000	-0.484
50	17	34	49	17	33	449334.700	-0.314
51	28	23	50	28	22	449929.000	-0.136
49	11	38	48	11	37	449946.100	-0.353
51	26	25	50	26	24	450719.000	0.016
52	51	1	51	51	0	454724.800	-0.047
51	20	31	50	20	30	454735.000	-0.133
50	28	22	49	28	21	440942.600	-0.058
30	9	21	29	7	22	447422.170	-0.098
50	17	33	50	15	36	447426.500	0.020
31	12	19	30	11	20	447416.600	-0.130
57	30	27	57	29	28	452222.300	10.519
56	5	51	55	5	50	452296.200	0.170
57	4	53	56	4	52	453054.330	0.246
26	15	11	25	14	12	453068.260	0.089
58	18	40	58	16	43	453181.900	0.425
35	16	20	35	14	21	453204.600	0.399
35	16	19	35	14	22	453206.600	0.140
51	21	30	50	21	29	453796.270	-0.046
53	30	24	53	29	25	453787.200	-1.429
50	13	38	49	13	37	454477.700	-0.066

59	2	57	58	2	56	454670.200	-0.011
52	47	5	51	47	4	455160.370	0.071
60	1	59	59	1	58	455502.760	-0.041
61	0	61	60	0	60	456341.290	-0.212
56	5	51	55	5	50	452296.200	0.170
49	30	19	49	29	20	455056.800	3.259
52	48	4	51	48	3	455046.800	0.006
52	38	14	51	38	13	456410.730	0.025
52	37	16	51	37	15	456587.870	0.115
52	36	16	51	36	15	456776.200	0.108
52	35	18	51	35	17	456977.190	0.018
52	34	19	51	34	18	457192.700	0.023
52	10	42	51	11	41	457183.560	0.047
64	18	46	64	16	49	457416.970	-0.033
52	32	21	51	32	20	457675.150	0.031
53	10	44	52	10	43	457751.860	0.176
51	12	40	50	12	39	457762.010	0.094
53	9	44	52	9	43	457784.690	0.126
54	9	46	53	9	45	457941.980	0.116
54	8	46	53	8	45	457943.610	0.109
23	17	6	22	16	7	458097.690	-0.100
52	10	42	51	10	41	458377.430	0.130
55	7	48	54	8	47	458394.000	0.346
56	7	50	55	7	49	459002.450	0.281
57	5	52	56	5	51	459705.710	0.167
52	25	28	51	25	27	460258.640	0.037
58	5	54	57	5	53	460467.990	0.267
56	18	38	56	16	41	461848.020	-0.004
60	3	58	59	3	57	462087.190	0.145
32	9	23	31	7	24	462447.380	-0.169
46	17	30	46	15	31	462450.290	0.062
46	17	29	46	15	32	462847.610	0.031
20	19	2	19	18	1	462908.190	-0.249

61	1	60	60	1	59	462920.120	-0.013
53	51	3	52	51	2	463514.600	-0.043
53	50	3	52	50	2	463623.490	-0.006
53	49	5	52	49	4	463735.190	-0.024
53	48	6	52	48	5	463850.180	0.057
53	47	7	52	47	6	463968.700	0.119
31	13	19	30	12	18	463981.770	0.018
53	46	8	52	46	7	464091.120	0.133
53	45	8	52	45	7	464217.630	-0.157
22	18	4	21	17	5	464890.920	-0.092
53	40	13	52	40	12	464937.580	0.225
45	17	29	45	15	30	465853.910	0.009
53	35	18	52	35	18	465875.080	0.040
35	11	24	34	10	25	466005.330	0.253
62	31	31	62	30	32	466013.220	0.807
55	18	37	55	16	40	466514.540	0.134
66	20	47	66	18	48	467206.370	-0.695
53	30	24	52	30	23	467211.620	0.133
65	18	47	65	16	50	467977.600	0.019
60	4	57	59	4	56	468682.010	0.254
26	16	11	25	15	11	468700.860	-0.039
61	3	59	60	2	58	469503.570	0.128
62	1	61	61	1	60	470337.030	0.019
51	31	21	51	30	22	470321.170	-1.089
52	13	40	51	13	39	471167.660	0.054
63	0	63	62	1	62	471176.020	-0.171
21	19	2	20	18	3	471667.080	-0.175