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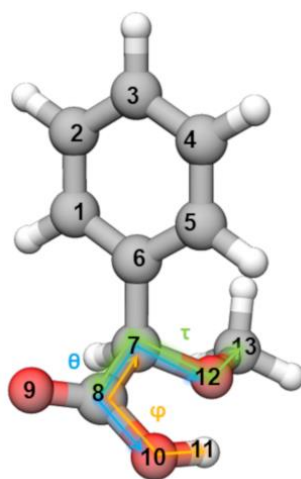


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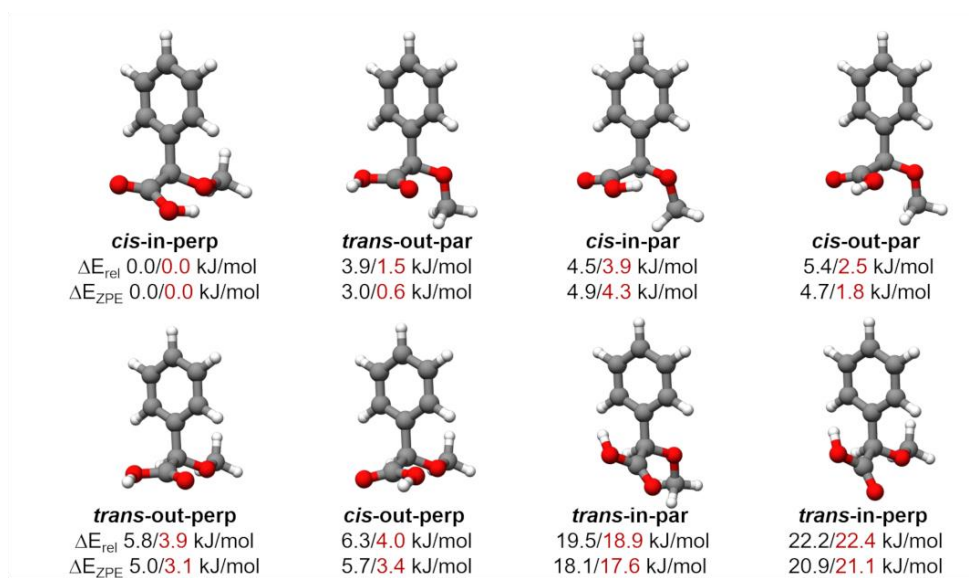


Fig S4: Scan of the potential energy curve for the dihedral angles $\varphi(\text{H}_{11}\text{-O}_{10}\text{-C}_8\text{-C}_7)$ and $\theta(\text{O}_{10}\text{-C}_8\text{-C}_7\text{-O}_{12})$ at the B3LYP-D3(BJ)/def2-TZVP level of theory using ORCA, for in-out and *cis-trans* motions of *cis-in-perp*. The position of the observed conformations is indicated in the plot and illustrated with the corresponding structure. See Figure S1 for atom labelling.

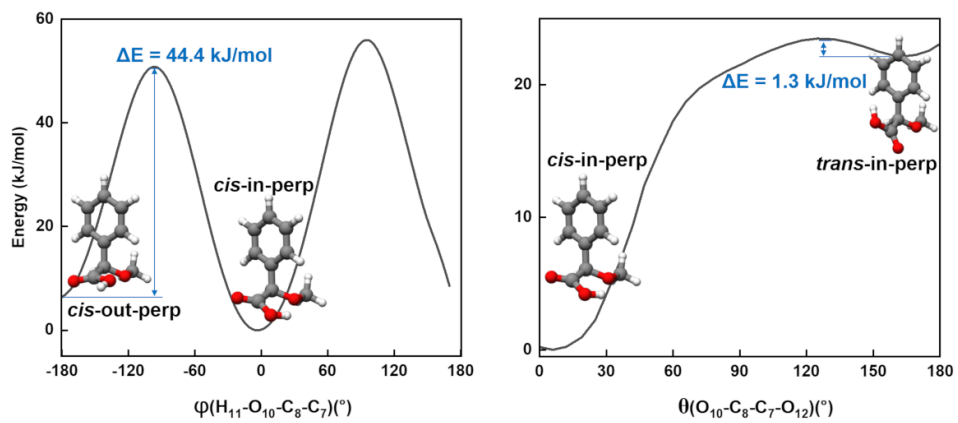


Fig S5: Scan of the potential energy curve for the dihedral angles $\theta(O_{10}-C_8-C_7-O_{12})$, $\varphi(H_{11}-O_{10}-C_8-C_7)$, and $\tau(C_{13}-O_{12}-C_7-C_8)$ at the B3LYP-D3(BJ)/def2-TZVP level of theory using ORCA, for *cis-trans*, in-out, and par-perp motions of *trans-out-par*. The position of the observed conformations is indicated in the plot and illustrated with the corresponding structure. See Figure S1 for atom labelling. A two-dimensional scan was also performed by scanning the τ and θ coordinates in steps of 10° and 20° respectively at the B3LYP-D3(BJ)/def2-TZVP level of theory using Gaussian.

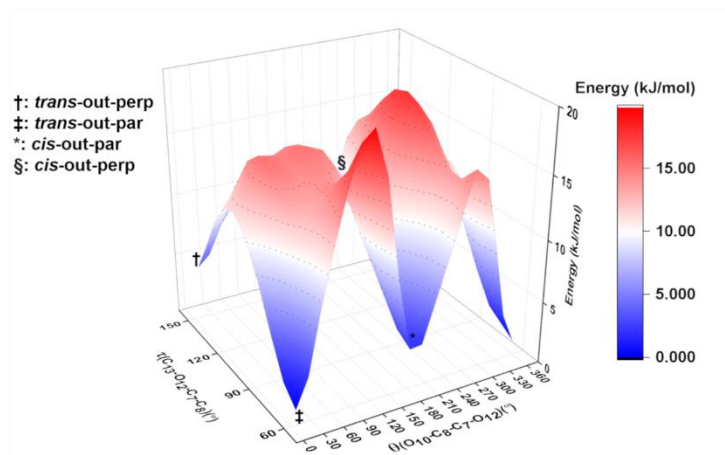
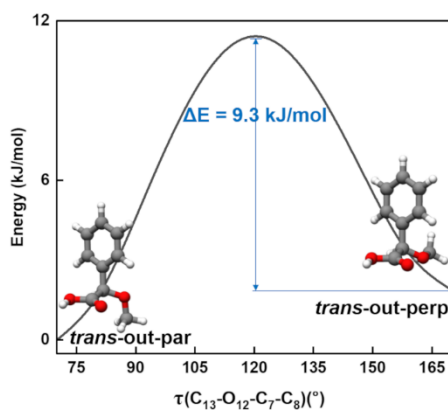
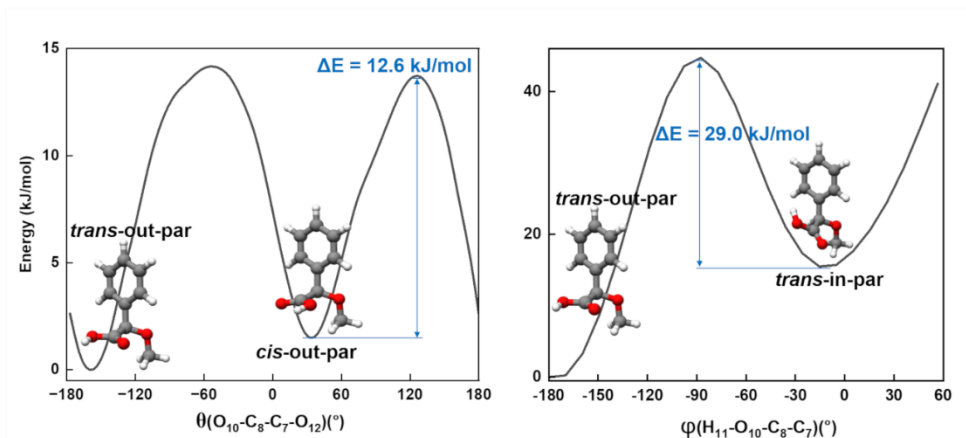


Fig S6: Scan of the potential energy curve for the dihedral angles $\varphi(\text{H}_{11}\text{-O}_{10}\text{-C}_8\text{-C}_7)$ and $\theta(\text{O}_{10}\text{-C}_8\text{-C}_7\text{-O}_{12})$ at the B3LYP-D3(BJ)/def2-TZVP level of theory using ORCA for in-out and *cis-trans* motions of *cis-in-par*. The position of the observed conformations is indicated in the plot and illustrated with the corresponding structure. See Figure S1 for atom labelling.

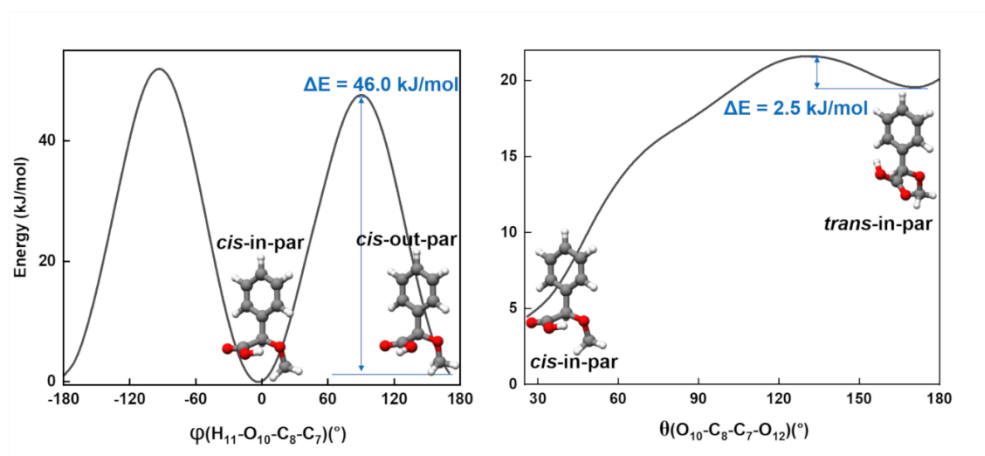


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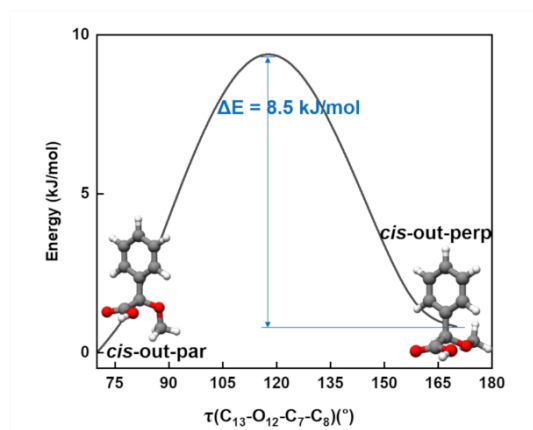


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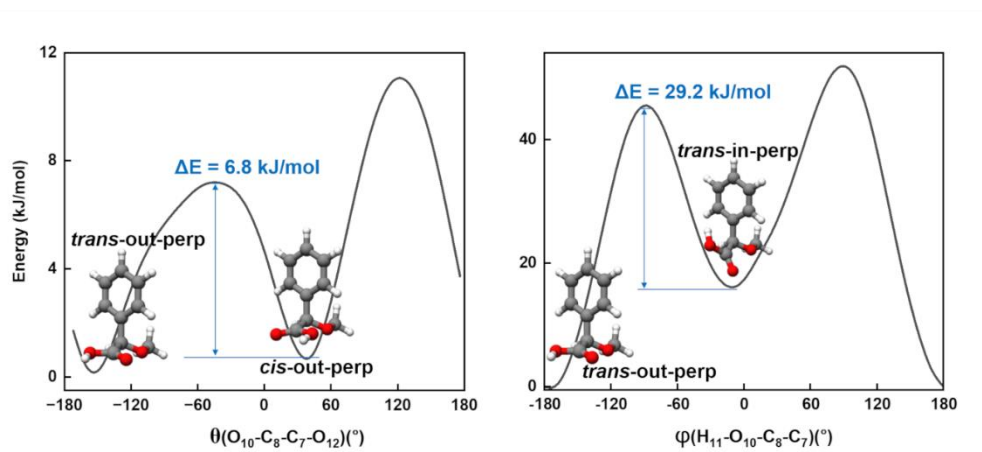


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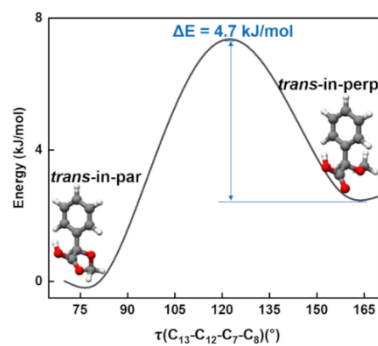


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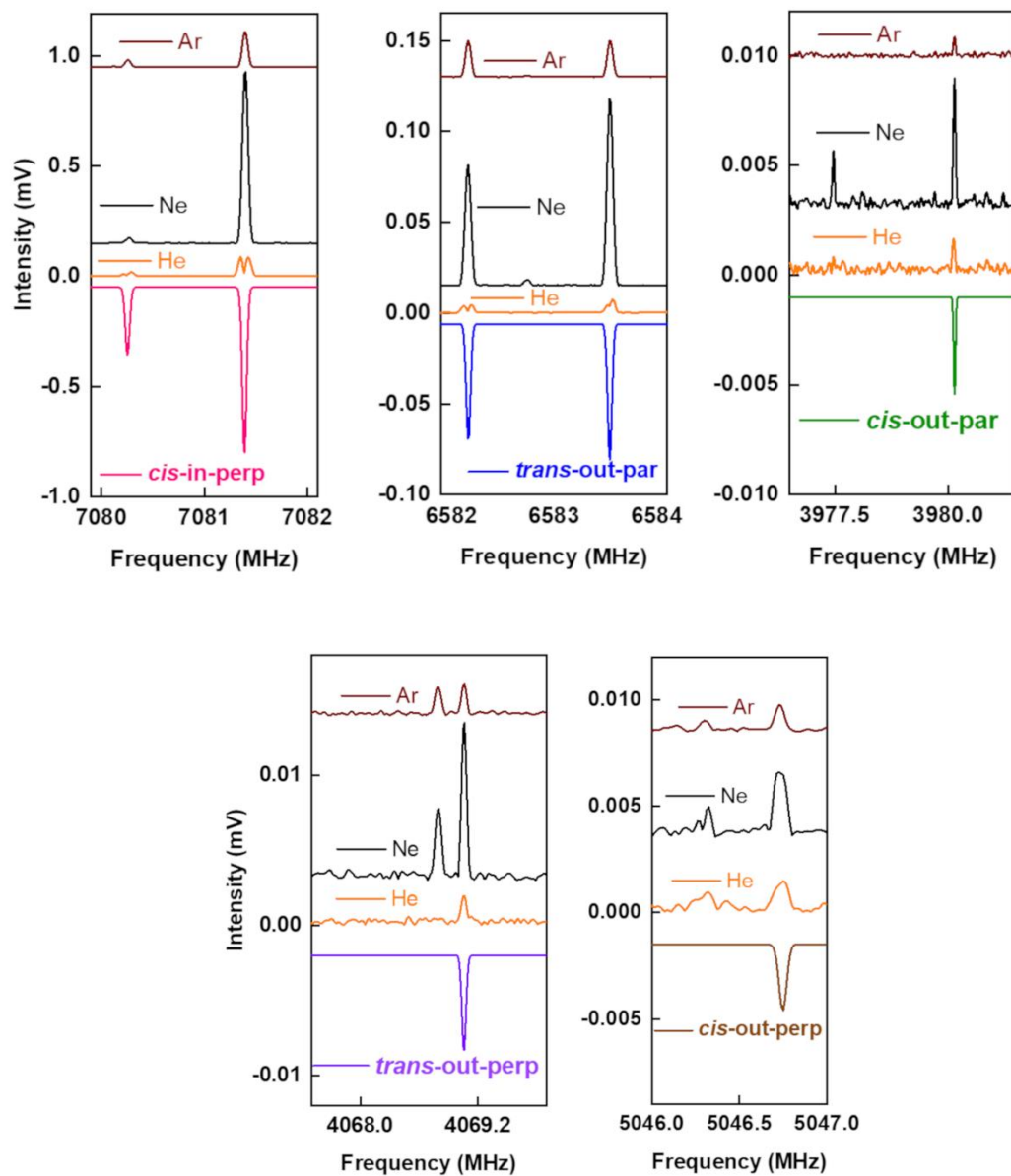


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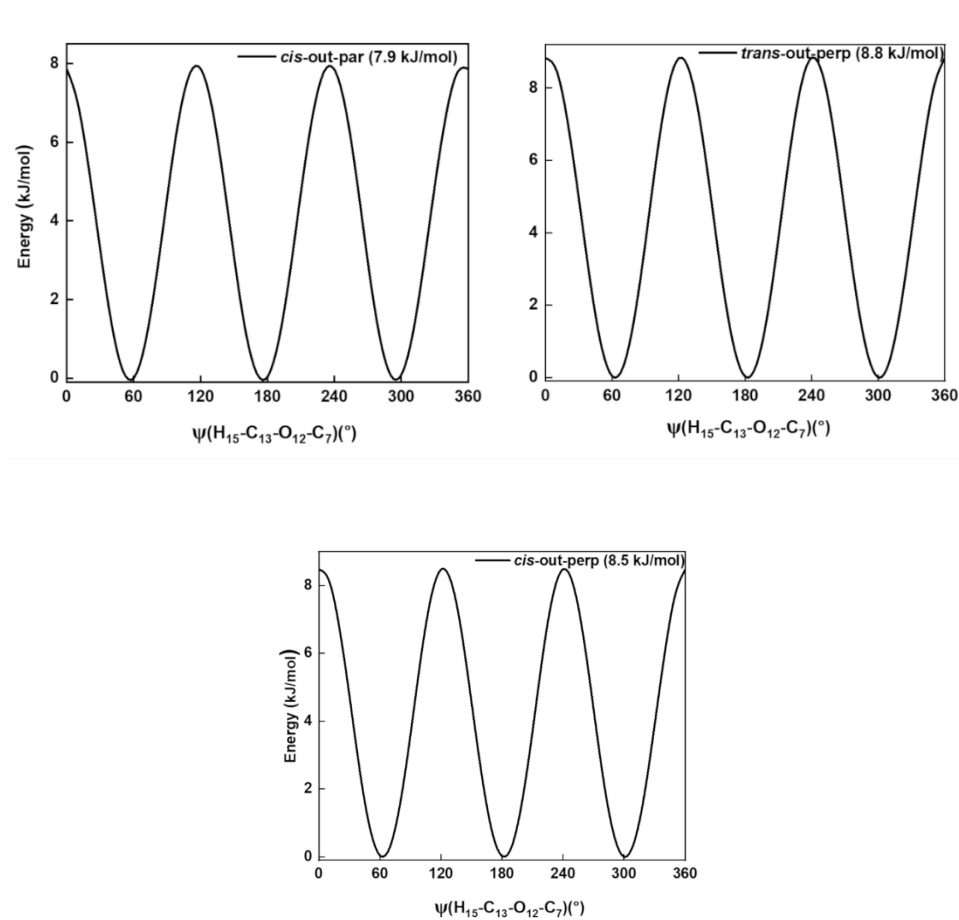


Table S1: Dihedral angles for three motions of eight conformers of AMPA calculated at the B3LYP-D3(BJ)/def2-TZVP level of theory.

Parameters	<i>cis</i> -in-perp	<i>trans</i> -out-par	<i>cis</i> -in-par	<i>cis</i> -out-par	<i>trans</i> -out-perp	<i>cis</i> -out-perp	<i>trans</i> -in-par	<i>trans</i> -in-perp
$\theta(\text{O}_{10}\text{-C}_8\text{-C}_7\text{-O}_{12})$	5.9	-158.6	25.5	34.4	-153.9	37.9	172.0	164.9
$\varphi(\text{H}_{11}\text{-O}_{10}\text{-C}_8\text{-C}_7)$	-3.1	-175.7	-3.3	176.5	-175.3	177.4	12.2	-11.1
$\tau(\text{C}_{13}\text{-O}_{12}\text{-C}_7\text{-C}_8)$	166.2	68.0	81.5	66.9	171.9	168.1	75.8	164.8

Table S2: Experimental rotational parameters obtained for the ^{13}C isotopologues of the lowest energy conformer *cis*-in-perp obtained using SPFIT.

Parameters	Parent	$^{13}\text{C}_1$	$^{13}\text{C}_2$	$^{13}\text{C}_3$	$^{13}\text{C}_4$
<i>A</i> /MHz ^a	1436.68000(29)	1430.33229(39)	1432.23130(88)	1435.92383(68)	1429.22667(32)
<i>B</i> /MHz	692.06967(12)	689.06106(13)	684.44326(21)	682.27648(26)	685.34323(22)
<i>C</i> /MHz	583.21822(12)	581.79936(23)	577.99070(54)	576.32712(24)	579.44712(22)
Δ_I /kHz	0.07892(78)	[0.07892]	[0.07892]	[0.07892]	[0.07892]
Δ_{JK} /kHz	0.3036(19)	0.3036(19)	0.425(40)	0.3036(19)	[0.3036]
Δ_K /kHz	-0.0684(64)	[-0.0684]	[-0.0684]	[-0.0684]	[-0.0684]
δ_J /kHz	0.00462(13)	[0.00462]	[0.00462]	[0.00462]	[-0.00462]
δ_K /kHz	-0.4362(24)	-0.426(34)	-0.74(11)	[-0.4362]	[-0.4362]
<i>N</i> ^b	248	27	23	21	25
σ /kHz	7.9	4.8	4.5	8.0	5.5

Parameters	$^{13}\text{C}_5$	$^{13}\text{C}_6$	$^{13}\text{C}_7$	$^{13}\text{C}_8$	$^{13}\text{C}_{13}$
<i>A</i> /MHz	1431.48506(85)	1436.52869(48)	1435.42559(73)	1432.41928(61)	1409.04381(73)
<i>B</i> /MHz	690.21700(38)	691.78772(22)	690.92780(20)	689.25653(41)	690.30708(37)
<i>C</i> /MHz	582.39519(34)	583.09397(34)	582.60399(18)	580.53179(32)	577.99761(29)
Δ_I /kHz	[0.07892]	[0.07892]	[0.07892]	[0.07892]	[0.07892]
Δ_{JK} /kHz	[0.3036]	[0.3036]	0.344(11)	[0.3036]	[0.3036]
Δ_K /kHz	[-0.0684]	[-0.0684]	[-0.0684]	[-0.0684]	[-0.0684]
δ_J /kHz	[-0.00462]	[-0.00462]	[-0.00462]	[-0.00462]	[-0.00462]
δ_K /kHz	[-0.4362]	-0.461(32)	[-0.4362]	[-0.4362]	[-0.4362]
<i>N</i>	20	32	34	23	20
σ /kHz	7.9	7.2	6.1	7.9	9.8

[a] *A*, *B*, and *C* are the rotational constants. Δ_I , Δ_{JK} , Δ_K , δ_J and δ_K are the quartic centrifugal distortion constants. [b] *N* is the number of fitted transitions. σ is the root-mean-square deviation of the fit.

Table S3: Experimental rotational parameters obtained using XIAM for the conformers *cis-in-perp* and *trans-out-par*.

Parameters	<i>cis-in-perp</i>	<i>trans-out-par</i>
A /MHz ^a	1436.67998(15)	1619.14523(24)
B /MHz	692.06955(10)	635.06309(16)
C /MHz	583.21803(10)	570.21862(16)
Δ_J /kHz	0.0782(60)	0.0731(1)
Δ_{JK} /kHz	0.3081(11)	0.1412(23)
Δ_K /kHz	-0.0797(44)	
δ_J /kHz	0.004664(92)	0.0046(12)
δ_K /kHz	-0.4435(20)	0.8733(64)
$a/b/c^b$	Y/Y/Y	N/Y/Y
V_3 /kJmol ⁻¹	8.263(9)	7.552(2)
N^c	500	332
σ /kHz	7.7	8.5

[a] A , B , and C are the rotational constants. Δ_J , Δ_{JK} , Δ_K , δ_J and δ_K are the quartic centrifugal distortion constants. [b] Y and N indicates whether a, b or c type of rotational transitions were observed or not. [c] N is the number of fitted transitions. σ is the root-mean-square deviation of the fit.

Table S4: Experimentally determined bond distances, bond angles, and dihedral angles of conformer *cis-in-perp* using effective structure, r_o , and substitution structure, r_s , method in comparison with the equilibrium, r_e , values obtained from quantum-chemical calculations at the B3LYP-D3(BJ)/def2-TZVP level of theory.

Bond distance	r_o (Å)	r_s (Å)	r_e (Å)
r(C2-C1)	1.399(62)	1.4037(14)	1.39
r(C3-C2)	1.395(11)	1.4062(46)	1.39
r(C4-C3)	1.3899(79)	1.3883(46)	1.39
r(C5-C4)	1.3955(79)	1.4026(17)	1.39
r(C6-C1)	1.398(15)	1.3470(45)	1.39
r(C5-C6)	1.413(17)	1.4711(52)	1.39
r(C7-C6)	1.467(14)	1.4542(38)	1.51
r(C8-C7)	1.528(12)	1.495(15)	1.54
r(O9-C8)	1.202(19)	-	1.20
r(O10-C8)	1.367(14)	-	1.34
r(O12-C7)	1.435(12)	-	1.42
r(C13-O12)	1.4255(89)	-	1.42

Bond angles	r_o (°)	r_s (°)	r_e (°)
Θ (C ₃ -C ₂ -C ₁)	120.31 (55)	119.94(17)	120.1
Θ (C ₄ -C ₃ -C ₂)	119.48(31)	119.42(10)	119.8
Θ (C ₅ -C ₄ -C ₃)	120.42(51)	120.76(18)	120.1
Θ (C ₆ -C ₁ -C ₂)	121.97(79)	122.49(23)	120.3
Θ (C ₇ -C ₆ -C ₁)	121.39(12)	123.29(47)	120.3
Θ (C ₈ -C ₇ -C ₆)	111.28(78)	112.42(88)	110.7
Θ (C ₄ -C ₅ -C ₆)	120.81(70)	119.18(20)	120.2
Θ (C ₅ -C ₆ -C ₁)	118.01(85)	117.97(25)	119.5
Θ (C ₅ -C ₆ -C ₇)	120.58(11)	118.70(43)	120.2
Θ (C ₆ -C ₇ -O ₁₂)	113.06(79)		113.1
Θ (C ₇ -O ₁₂ -C ₁₃)	114.09(51)		114.1
Θ (C ₇ -C ₈ -O ₁₀)	115.12(10)		115.1
Θ (C ₇ -C ₈ -O ₉)	122.06(83)		122.1
Θ (C ₈ -C ₇ -O ₁₂)	107.43(60)		107.6
Θ (O ₉ -C ₈ -O ₁₀)	122.82(12)		122.8

Dihedral angles	r_o (°)	r_s (°)	r_e (°)
Φ (C ₁ -C ₂ -C ₃ -C ₄)	-0.16(11)	-0.70(77)	-0.2
Φ (C ₁ -C ₆ -C ₇ -C ₈)	-94.86(12)	-100.64(66)	-95.1
Φ (C ₂ -C ₃ -C ₄ -C ₅)	-0.18(10)	-0.28(81)	-0.2
Φ (C ₃ -C ₄ -C ₅ -C ₆)	0.41(11)	-1.71(56)	0.4
Φ (C ₄ -C ₅ -C ₆ -C ₇)	-178.72(83)	-177.34(76)	-178.7
Φ (C ₅ -C ₆ -C ₁ -C ₂)	-0.07(14)	-5.94(33)	-0.1
Φ (C ₆ -C ₁ -C ₂ -C ₃)	0.29(12)	4.03(52)	0.3
Φ (C ₅ -C ₆ -C ₇ -C ₈)	83.54(11)	81.59(11)	83.3
Φ (C ₅ -C ₆ -C ₇ -O ₁₂)	-37.47(13)		-37.4

$\Phi(\text{C}_6\text{-C}_7\text{-O}_{12}\text{-C}_{13})$	-71.35(96)	-71.4
$\Phi(\text{C}_6\text{-C}_7\text{-C}_8\text{-O}_{10})$	-118.84(10)	-118.8
$\Phi(\text{C}_6\text{-C}_7\text{-C}_8\text{-O}_9)$	61.27(12)	61.3

Table S5: Line list for the fit obtained using the SPFIT program for *cis*-in-perp conformer, measured rotational transitions are shown as Obs. and the residuals are shown as Diff.

J'	K'_a	K'_c	J''	K''_a	K''_c	Obs./MHz	Diff./MHz
1	1	1	0	0	0	2019.8957	-0.0009
6	2	4	6	1	5	2022.5574	0.0009
4	2	2	4	1	3	2035.1089	0.0002
4	1	4	3	2	1	2078.2844	-0.0024
3	2	1	3	1	2	2132.5369	0.0043
7	2	5	7	1	6	2162.6566	0.0010
5	2	4	4	3	1	2316.2274	-0.0025
6	1	5	6	0	6	2401.2643	-0.0009
8	2	6	8	1	7	2426.0314	0.0019
2	1	2	1	1	1	2441.7165	-0.0025
2	0	2	1	0	1	2539.4933	0.0038
2	1	1	1	1	0	2659.4259	0.0008
3	2	2	3	1	3	2730.2669	0.0021
9	2	7	9	1	8	2822.6073	0.0004
5	1	5	4	2	2	2943.9093	-0.0061
4	2	3	4	1	4	2959.5135	-0.0006
7	1	6	7	0	7	3015.2416	-0.0032
10	3	7	10	2	8	3018.0417	-0.0056
9	3	6	9	2	7	3061.8296	0.0104
8	4	5	7	5	2	3130.0999	-0.0037
3	0	3	2	1	2	3135.4230	-0.0018
8	4	4	7	5	3	3148.1828	0.0081
2	1	2	1	0	1	3186.3268	-0.0012
8	3	5	8	2	6	3196.9323	-0.0018
4	1	3	3	2	2	3216.5496	-0.0014
5	2	4	5	1	5	3248.6737	-0.0010
12	3	9	12	2	10	3316.2248	0.0085
10	2	8	10	1	9	3349.6321	0.0065
7	3	4	7	2	5	3384.3888	0.0012
6	2	5	5	3	2	3496.1689	-0.0041
2	1	1	1	0	1	3512.8864	-0.0008
7	3	4	6	4	3	3556.5810	0.0166
6	3	3	6	2	4	3581.9832	0.0001
6	2	5	6	1	6	3596.6371	0.0003
6	1	6	5	2	3	3652.8250	-0.0075
3	1	3	2	1	2	3655.9648	-0.0016
8	1	7	8	0	8	3691.5783	-0.0002
5	3	2	5	2	3	3753.2932	-0.0031
3	0	3	2	0	2	3782.2679	0.0047
3	2	2	2	2	1	3825.8417	-0.0061
3	2	1	2	2	0	3869.4402	0.0004
4	3	1	4	2	2	3876.3620	0.0018
3	3	0	3	2	1	3947.8279	0.0196
3	1	2	2	1	1	3981.8129	-0.0022
11	2	9	11	1	10	3987.9264	-0.0095
14	4	10	14	3	11	3996.7294	-0.0002
7	2	6	7	1	7	4000.1542	-0.0004
3	3	1	3	2	2	4001.7632	-0.0110
15	4	11	15	3	12	4006.6981	0.0049
4	3	2	4	2	3	4030.6035	0.0001
4	3	1	4	2	3	4035.5515	0.0083
5	3	3	5	2	4	4086.4105	-0.0025
5	3	2	5	2	4	4105.9442	0.0018
13	4	9	13	3	10	4119.2966	0.0072
6	2	4	5	3	3	4170.1252	0.0034
6	3	4	6	2	5	4179.0181	-0.0031
7	1	7	6	2	4	4187.5877	-0.0065
3	1	3	2	0	2	4302.8006	-0.0043
7	3	5	7	2	6	4317.3961	0.0029
12	4	8	12	3	9	4337.6892	0.0011
9	1	8	9	0	9	4396.2484	-0.0043
9	4	6	8	5	3	4445.8197	-0.0040
8	2	7	8	1	8	4453.8230	-0.0002
4	0	4	3	1	3	4476.0424	-0.0023
8	3	6	8	2	7	4508.7517	0.0014
7	2	6	6	3	3	4605.7630	-0.0027
11	4	7	11	3	8	4606.6703	0.0036
8	3	6	7	4	3	4693.9085	0.0017
12	2	10	12	1	11	4704.4351	0.0030
5	1	4	4	2	3	4716.3585	0.0018
9	3	7	9	2	8	4757.9047	0.0005
4	1	4	3	1	3	4863.2261	-0.0013
10	4	6	10	3	7	4879.8257	-0.0029

2	2	1	1	1	0	4893.2482	-0.0010
9	2	8	9	1	9	4950.5300	-0.0032
3	1	2	2	0	2	4955.2039	-0.0090
8	3	5	7	4	4	4989.2646	-0.0003
2	2	0	1	1	1	5013.1965	0.0103
10	3	8	10	2	9	5066.8451	0.0056
4	2	3	3	2	2	5092.4746	-0.0020
10	1	9	10	0	10	5101.6937	0.0005
4	3	2	3	3	1	5121.3132	0.0073
4	3	1	3	3	0	5125.5311	-0.0047
4	2	2	3	2	1	5196.9813	-0.0026
4	1	3	3	1	2	5294.4069	-0.0010
8	4	4	8	3	5	5303.8702	0.0050
4	1	4	3	0	3	5383.7664	-0.0026
7	4	3	7	3	4	5429.8799	0.0059
11	3	9	11	2	10	5434.5713	0.0004
10	2	9	10	1	10	5482.2591	-0.0041
6	4	2	6	3	3	5506.8924	0.0018
5	4	1	5	3	2	5549.2693	0.0144
7	4	4	7	3	5	5562.4151	0.0064
6	4	3	6	3	4	5562.5949	0.0004
5	4	2	5	3	3	5568.4415	-0.0050
4	4	0	4	3	1	5570.1620	0.0012
4	4	1	4	3	2	5575.0611	-0.0018
8	4	5	8	3	6	5575.1953	0.0087
8	4	4	8	3	6	5593.1513	0.0121
9	4	6	9	3	7	5610.0911	-0.0021
8	2	7	7	3	4	5615.0282	-0.0024
10	4	7	10	3	8	5677.2291	0.0013
7	2	5	6	3	4	5734.7742	0.0028
10	4	7	9	5	4	5765.3921	0.0185
11	4	8	11	3	9	5786.4978	0.0024
11	1	10	11	0	11	5792.1974	0.0054
5	0	5	4	1	4	5795.4563	0.0021
12	3	10	12	2	11	5857.3255	0.0109
10	4	6	9	5	5	5869.8355	0.0136
9	3	7	8	4	4	5944.4489	-0.0090
11	2	10	11	1	11	6040.9650	-0.0078
3	2	2	2	1	1	6059.6670	-0.0049
5	1	5	4	1	4	6062.6110	-0.0015
3	2	1	2	1	1	6114.3419	-0.0058
14	5	9	14	4	10	6158.2334	0.0009
13	4	10	13	3	11	6163.6748	-0.0040
5	0	5	4	0	4	6182.6342	-0.0027
14	2	12	14	1	13	6221.4289	0.0034
6	1	5	5	2	4	6233.9612	-0.0171
13	3	11	13	2	12	6328.9923	0.0010
5	2	4	4	2	3	6351.7760	0.0030
3	2	2	2	1	2	6386.2347	0.0034
5	4	2	4	4	1	6400.9596	-0.0066
5	4	1	4	4	0	6401.2665	0.0002
5	3	3	4	3	2	6407.5867	0.0041
5	3	2	4	3	1	6422.1644	-0.0079
3	2	1	2	1	2	6440.9065	-0.0005
5	1	5	4	0	4	6449.7942	-0.0009
13	5	8	13	4	9	6456.0543	-0.0206
12	1	11	12	0	12	6463.0911	0.0150
4	1	3	3	0	3	6467.3634	0.0059
9	2	8	8	3	5	6490.4228	0.0038
9	3	6	8	4	5	6498.6875	0.0049
5	2	3	4	2	2	6545.2421	0.0060
5	1	4	4	1	3	6592.2835	0.0011
12	2	11	12	1	12	6619.3518	-0.0084
12	5	7	12	4	8	6692.3485	0.0097
14	3	12	14	2	13	6841.9987	-0.0024
11	5	6	11	4	7	6864.7828	0.0005
10	5	5	10	4	6	6982.7622	-0.0192
12	5	8	12	4	9	7052.2776	0.0018
9	5	4	9	4	5	7059.8701	-0.0162
11	5	7	11	4	8	7060.7625	0.0014
13	5	9	13	4	10	7063.7302	0.0014
10	5	6	10	4	7	7080.2649	0.0120
6	0	6	5	1	5	7081.3854	-0.0024
11	4	8	10	5	5	7082.4793	-0.0287
7	1	6	6	2	4	7096.7089	-0.0087
9	5	5	9	4	6	7103.6751	-0.0070
14	5	10	14	4	11	7105.1948	0.0018

8	5	3	8	4	4	7108.7229	-0.0046
13	1	12	13	0	13	7116.2136	0.0059
8	5	4	8	4	5	7126.1615	-0.0095
7	5	2	7	4	3	7138.9927	0.0030
7	5	3	7	4	4	7144.9624	0.0070
10	3	8	9	4	5	7148.0324	0.0004
6	5	1	6	4	2	7157.3615	0.0215
6	5	2	6	4	3	7158.9927	-0.0048
5	5	0	5	4	1	7168.1100	-0.0059
5	5	1	5	4	2	7168.4451	-0.0068
4	2	3	3	1	2	7170.3317	-0.0017
15	5	11	15	4	12	7186.8927	0.0013
10	2	9	9	3	6	7200.5676	-0.0053
13	2	12	13	1	13	7211.3235	-0.0171
8	2	6	7	3	4	7216.1222	0.0015
6	1	6	5	1	5	7254.1603	0.0069
11	4	7	10	5	6	7297.3482	0.0164
4	2	2	3	1	2	7329.5141	-0.0024
6	0	6	5	0	5	7348.5508	0.0048
8	2	6	7	3	5	7354.7456	0.0061
6	1	6	5	0	5	7521.3157	0.0042
6	2	5	5	2	4	7602.1189	0.0035
6	5	2	5	5	1	7679.4205	0.0031
6	5	1	5	5	0	7679.4205	-0.0149
6	4	3	5	4	2	7688.8975	0.0258
6	4	2	5	4	1	7690.2119	0.0006
6	3	4	5	3	3	7694.7486	0.0250
11	2	10	10	3	7	7724.0501	-0.0016
6	3	3	5	3	2	7732.5715	-0.0040
7	1	6	6	2	5	7751.1386	0.0016
14	1	13	14	0	14	7755.7596	0.0264
14	2	13	14	1	14	7812.2060	-0.0069
3	3	1	2	2	0	7816.5341	-0.0042
3	3	0	2	2	0	7817.2559	0.0078
4	2	3	3	1	3	7822.7485	0.0070
3	3	0	2	2	1	7828.3411	0.0092
6	1	5	5	1	4	7869.3891	-0.0055
6	2	4	5	2	3	7903.8830	-0.0057
4	2	2	3	1	3	7981.9213	-0.0032
6	3	3	5	4	2	2183.6638	0.0053
2	2	0	2	1	1	2244.9148	0.0069
5	2	3	4	3	2	2673.8168	0.0011
11	3	8	11	2	9	3095.9666	-0.0113
7	3	5	6	4	2	3416.2827	0.0145
13	3	10	13	2	11	3689.1646	-0.0037
10	5	6	9	6	3	4122.2482	-0.0058
10	5	5	9	6	4	4127.4985	-0.0057
14	3	11	14	2	12	4212.0998	0.0074
7	3	5	7	2	5	3245.7720	0.0031
8	3	6	8	2	6	2907.6618	0.0017
6	3	4	6	2	4	3524.5965	-0.0053
4	3	2	4	2	2	3871.4203	-0.0001
3	3	0	3	2	2	4002.5037	0.0197
6	3	3	6	2	5	4236.3966	-0.0060
6	2	4	6	1	6	4251.0537	-0.0025
11	4	8	11	3	8	4397.0539	-0.0026
7	3	4	7	2	6	4456.0175	0.0056
8	1	8	7	2	5	4545.5989	0.0040
5	1	4	4	2	2	4557.1749	0.0012
8	3	6	7	4	4	4699.9884	-0.0024
11	1	11	10	2	8	4701.1428	0.0166
5	0	5	4	1	3	4711.8573	-0.0085
9	1	9	8	2	6	4736.8302	0.0103
7	1	7	6	2	5	4842.0117	-0.0019
3	0	3	2	1	1	2808.8588	-0.0067
4	1	3	3	2	1	3161.8723	-0.0029
6	1	6	5	2	4	4005.4751	-0.0036
15	3	12	15	2	13	4865.8176	0.0066
4	0	4	3	0	3	4996.5749	-0.0115
9	4	6	9	3	6	5073.8270	0.0058
12	6	7	11	7	4	5110.7185	-0.0083
12	6	6	11	7	5	5112.1809	-0.0034
9	4	5	9	3	6	5119.3669	-0.0134
8	4	5	8	3	5	5285.9113	-0.0012
9	3	6	9	2	8	5294.1543	-0.0219
16	3	13	16	2	14	5615.8259	-0.0158
8	1	8	7	2	6	5617.2179	-0.0014

7	2	5	6	3	3	5677.3940	0.0041
6	1	5	5	2	3	5881.3360	0.0038
12	4	9	12	3	10	5946.5173	0.0093
9	3	7	8	4	5	5962.4079	-0.0027
7	0	7	6	1	5	6104.0310	0.0018
9	1	9	8	2	7	6337.9098	-0.0003
13	6	7	12	7	6	6441.5113	-0.0052
14	4	11	14	3	12	6441.6075	0.0001
8	0	8	7	1	6	6645.5420	-0.0138
9	2	8	8	3	6	6779.6878	-0.0052
12	5	8	11	6	5	6780.3761	0.0004
15	4	12	15	3	13	6780.8011	0.0063
13	4	9	13	3	11	6841.4284	-0.0038
9	5	5	9	4	5	7058.0993	-0.0236
9	0	9	8	1	7	7126.8938	0.0139
10	3	8	9	4	6	7193.5801	-0.0111
10	0	10	9	1	8	7582.5488	-0.0078
5	3	2	5	0	5	7621.7694	-0.0059
10	2	9	9	3	7	7736.8441	-0.0007
14	6	9	13	7	6	7774.8546	0.0056
3	3	1	2	2	1	7827.6051	-0.0169

Table S6: Line list for the fit obtained using the SPFIT program for *trans*-out-par, measured rotational transitions are shown as Obs. and the residuals are shown as Diff.

J'	K' _a	K' _c	J''	K'' _a	K'' _c	Obs./MHz	Diff./MHz
1	1	1	0	0	0	2189.3643	-0.0032
2	1	2	1	0	1	3329.8025	-0.0038
3	1	3	2	0	2	4439.0266	-0.0020
4	1	4	3	0	3	5521.0384	-0.0029
5	1	5	4	0	4	6582.1601	-0.0036
6	1	6	5	0	5	7630.5315	-0.0133
3	0	3	2	1	2	2681.1446	0.0019
4	0	4	3	1	3	3954.9941	0.0018
5	0	5	4	1	4	5235.9150	0.0015
6	0	6	5	1	5	6514.4494	-0.0001
7	0	7	6	1	6	7782.2122	-0.0045
2	2	1	1	1	0	5427.6616	0.0041
3	2	2	2	1	1	6568.0627	-0.0278
3	2	1	2	1	2	6778.0634	0.0021
4	2	3	3	1	2	7675.6660	-0.0067
5	1	5	4	2	2	2426.5207	0.0081
6	1	6	5	2	3	3361.8998	0.0053
7	1	7	6	2	4	4217.5961	0.0028
6	1	5	5	2	4	4821.7642	0.0043
8	1	8	7	2	5	4982.2423	0.0230
7	1	6	6	2	5	6221.2409	0.0110
8	1	7	7	2	6	7636.0275	0.0085
7	2	6	6	3	3	3267.3308	-0.0214
7	2	5	6	3	4	3636.4063	-0.0072
8	2	7	7	3	4	4403.3025	-0.0117
8	2	6	7	3	5	4999.3425	0.0232
9	2	8	8	3	5	5504.5055	-0.0079
1	1	0	0	0	0	2254.2047	-0.0032
2	1	1	1	0	1	3524.3183	-0.0091
3	1	2	2	0	2	4827.9753	-0.0022
4	1	3	3	0	3	6168.7965	0.0021
5	1	4	4	0	4	7552.1723	-0.0047
3	0	3	2	1	1	2486.6213	-0.0002
4	0	4	3	1	2	3566.0319	-0.0115
5	0	5	4	1	3	4588.1479	-0.0125
6	0	6	5	1	4	5544.4442	0.0080
7	0	7	6	1	5	6428.3088	0.0022
8	0	8	7	1	6	7236.9878	-0.0007
9	0	9	8	1	7	7972.5331	-0.0070
2	2	1	1	1	1	5492.5072	0.0092
3	2	1	2	1	1	6583.5437	0.0035
3	2	2	2	1	2	6762.6310	0.0193
4	2	2	3	1	2	7721.6859	-0.0087
4	1	3	3	2	1	2071.8751	-0.0007
5	1	4	4	2	2	3396.5301	0.0043
5	1	4	4	2	3	3442.5663	0.0185
7	1	7	6	2	5	4424.9048	0.0031
6	1	5	5	2	3	4715.8101	0.0055
8	1	8	7	2	6	5343.5604	0.0033
7	1	6	6	2	4	6013.9210	-0.0005
10	1	10	9	2	8	7068.2427	-0.0012
8	1	7	7	2	5	7274.6974	0.0163
6	2	4	5	3	2	2313.0946	-0.0037
7	2	6	6	3	4	3275.0742	-0.0014
7	2	5	6	3	3	3628.6744	-0.0156
8	2	7	7	3	5	4422.5033	0.0156
8	2	6	7	3	4	4980.1406	-0.0053
9	2	7	8	3	5	6363.6659	0.0038
10	2	8	9	3	6	7770.2043	-0.0074
8	3	5	7	4	3	2611.6245	-0.0054
9	3	7	8	4	5	3786.5611	-0.0105
10	3	8	9	4	6	5000.6542	-0.0001
7	1	6	7	0	7	2188.8734	0.0011
8	1	7	8	0	8	2590.6758	-0.0003
9	1	8	9	0	9	3055.7852	0.0038
10	1	9	10	0	10	3575.5153	-0.0003
11	1	10	11	0	11	4137.6497	0.0030
12	1	11	12	0	12	4728.2047	-0.0030
14	1	13	14	0	14	5942.0081	0.0029
8	2	6	8	1	7	2545.3357	-0.0118
7	2	5	7	1	6	2552.9781	-0.0054
9	2	7	9	1	8	2591.6249	-0.0017
6	2	4	6	1	5	2603.2423	-0.0151

5	2	3	5	1	4	2682.8870	-0.0072
10	2	8	10	1	9	2701.0841	-0.0021
4	2	2	4	1	3	2777.3849	-0.0058
3	2	1	3	1	2	2872.4367	0.0084
11	2	9	11	1	10	2881.2324	-0.0029
12	2	10	12	1	11	3137.7103	-0.0016
3	2	2	3	1	3	3245.8939	-0.0337
4	2	3	4	1	4	3379.1037	-0.0181
13	2	11	13	1	12	3473.5233	-0.0035
5	2	4	5	1	5	3546.9571	0.0047
6	2	5	6	1	6	3749.8563	-0.0029
14	2	12	14	1	13	3887.9492	-0.0001
7	2	6	7	1	7	3987.9834	0.0096
8	2	7	8	1	8	4260.9571	-0.0205
15	2	13	15	1	14	4375.6485	-0.0057
9	2	8	9	1	9	4568.0003	0.0048
10	2	9	10	1	10	4907.5373	-0.0080
11	2	10	11	1	11	5277.5525	0.0020
9	3	6	9	2	7	4556.6297	0.0095
8	3	5	8	2	6	4710.9369	-0.0017
7	3	4	7	2	5	4839.8793	-0.0034
6	3	3	6	2	4	4938.2396	0.0246
5	3	2	5	2	3	5005.9664	0.0027
4	3	1	4	2	2	5047.3750	0.0007
3	3	0	3	2	1	5069.0620	0.0025
3	3	1	3	2	2	5084.4143	-0.0022
4	3	2	4	2	3	5092.7476	-0.0007
5	3	3	5	2	4	5109.3356	0.0024
6	3	4	6	2	5	5137.8002	0.0003
7	3	5	7	2	6	5182.0238	-0.0233
8	3	6	8	2	7	5246.0087	-0.0279
10	3	8	10	2	9	5448.2114	0.0102
11	3	9	11	2	10	5592.8917	0.0183
13	3	11	13	2	12	5981.1866	-0.0133
12	4	8	12	3	9	6734.9709	0.0023
10	4	6	10	3	7	6947.3118	-0.0070
9	4	5	9	3	6	7010.4845	-0.0023
8	4	4	8	3	5	7052.6640	0.0037
7	4	3	7	3	4	7079.4728	0.0183
8	4	5	8	3	6	7093.2713	0.0059
6	4	2	6	3	3	7095.5898	0.0028
11	4	8	11	3	9	7096.4505	-0.0054
7	4	4	7	3	5	7098.2438	-0.0066
6	4	3	6	3	4	7103.2147	0.0074
7	2	6	7	1	6	2191.6419	-0.0038
6	2	5	6	1	5	2395.9423	-0.0067
5	2	4	5	1	4	2576.9349	-0.0042
4	2	3	4	1	3	2731.3680	-0.0006
3	2	2	3	1	2	2856.9534	-0.0252
3	2	1	3	1	3	3261.3803	0.0031
4	2	2	4	1	4	3425.1368	-0.0070
5	2	3	5	1	5	3652.9008	-0.0067
6	2	4	6	1	6	3957.1642	-0.0034
7	2	5	7	1	7	4349.3035	-0.0082
8	2	6	8	1	8	4837.8065	-0.0028
9	2	7	9	1	9	5427.1469	0.0026
10	2	8	10	1	10	6117.7449	0.0080
9	3	7	9	2	7	4474.4477	0.0066
8	3	6	8	2	6	4669.1945	-0.0103
7	3	5	7	2	5	4820.6823	-0.0269
6	3	4	6	2	4	4930.4939	0.0024
5	3	3	5	2	3	5003.3852	0.0072
4	3	2	4	2	2	5046.7375	0.0112
3	3	1	3	2	1	5068.9635	-0.0033
3	3	0	3	2	2	5084.5110	0.0019
4	3	1	4	2	3	5093.3988	0.0025
5	3	2	5	2	4	5111.9226	0.0036
6	3	3	6	2	5	5145.5523	0.0289
7	3	4	7	2	6	5201.2230	0.0024
8	3	5	8	2	7	5287.7711	0.0008
9	3	6	9	2	8	5415.7683	-0.0007
10	3	7	10	2	9	5597.5171	0.0036
15	4	12	15	3	12	6010.2819	-0.0057
13	4	10	13	3	10	6524.9225	-0.0102
11	4	8	11	3	8	6842.8511	0.0027
10	4	7	10	3	7	6940.5671	0.0139
9	4	6	9	3	6	7007.5635	-0.0035

8	4	5	8	3	5	7051.5358	0.0040
7	4	4	7	3	4	7079.0777	0.0007
9	4	5	9	3	7	7092.6711	0.0052
8	4	4	8	3	6	7094.3979	0.0038
6	4	3	6	3	3	7095.4898	0.0060
10	4	6	10	3	8	7096.6210	-0.0101
7	4	3	7	3	5	7098.6335	0.0055
6	4	2	6	3	4	7103.3138	0.0033
12	4	8	12	3	10	7141.3109	0.0199
5	4	2	5	3	2	7104.6830	-0.0051
5	4	1	5	3	2	7104.6830	-0.0258
5	4	2	5	3	3	7107.3002	0.0263
5	4	1	5	3	3	7107.3002	0.0057
4	4	1	4	3	1	7109.4685	0.0007
4	4	0	4	3	1	7109.4685	-0.0016
4	4	1	4	3	2	7110.1175	0.0017
4	4	0	4	3	2	7110.1175	-0.0006

Table S7: Line list for the fit obtained using the SPFIT program for *cis*-out-par, measured rotational transitions are shown as Obs. and the residuals are shown as Diff.

J'	K'_a	K'_c	J''	K''_a	K''_c	Obs./MHz	Diff./MHz
6	2	5	5	3	3	2009.3349	0.0153
1	1	1	0	0	0	2196.5750	-0.0033
6	1	5	6	0	6	2210.6445	0.0041
2	0	2	1	0	1	2409.2468	-0.0075
2	1	1	1	1	0	2501.7091	-0.0016
7	2	5	7	1	6	2584.0631	-0.0065
7	1	6	7	0	7	2683.6220	-0.0032
3	0	3	2	1	2	2692.5781	-0.0065
4	2	2	4	1	3	2754.9949	0.0081
3	2	1	3	1	2	2867.9798	-0.0035
2	2	0	2	1	1	2973.1235	0.0176
2	2	1	2	1	2	3228.5175	-0.0188
2	1	2	1	0	1	3316.9650	-0.0094
3	2	2	3	1	3	3362.3227	0.0055
4	0	4	3	1	2	3458.5020	-0.0209
3	1	3	2	1	2	3488.3123	-0.0064
4	2	3	4	1	4	3542.3413	0.0020
2	1	1	1	0	1	3577.8762	-0.0132
3	0	3	2	0	2	3600.2982	-0.0065
3	2	2	2	2	1	3622.1114	0.0118
3	1	2	2	1	1	3749.0139	-0.0033
12	3	9	12	2	10	3936.8310	-0.0138
4	0	4	3	1	3	3980.1340	-0.0024
6	2	5	6	1	6	4043.9255	-0.0043
11	4	8	10	5	5	4134.4926	-0.0076
4	1	4	3	1	3	4645.1629	-0.0040
7	3	4	7	2	5	4769.3792	-0.0093
4	0	4	3	0	3	4775.8679	-0.0026
6	3	3	6	2	4	4921.2079	0.0063
4	1	3	3	1	2	4991.7579	0.0003
4	3	1	4	2	2	5102.0501	0.0011
4	3	2	4	2	3	5181.3878	-0.0003
5	3	3	5	2	4	5210.2240	-0.0021
6	3	4	6	2	5	5259.2651	0.0092
5	0	5	4	1	4	5268.0901	-0.0033
4	1	4	3	0	3	5440.8969	-0.0041
2	2	0	1	1	1	5561.7954	0.0072
5	1	5	4	1	4	5797.5494	0.0035
5	0	5	4	0	4	5933.1242	0.0004
5	2	4	4	2	3	6024.6275	-0.0008
5	2	3	4	2	2	6128.2394	0.0059
5	1	5	4	0	4	6462.5767	0.0003
6	0	6	5	1	5	6542.8750	0.0093
3	2	2	2	1	1	6589.7195	-0.0014
3	2	2	2	1	2	6850.6277	-0.0082
6	1	6	5	1	5	6945.0467	0.0092
6	0	6	5	0	5	7072.3400	0.0217
6	2	5	5	2	4	7219.5355	-0.0101
6	3	4	5	3	3	7268.5754	-0.0001
11	4	7	11	3	9	7284.3050	0.0108
6	1	5	5	1	4	7454.9508	-0.0045
4	2	3	3	1	2	7665.8850	-0.0076
7	0	7	6	1	6	7794.8844	0.0158
8	1	7	7	2	6	7895.3082	-0.0027

Table S8: Line list for the fit obtained using the SPFIT program for *trans*-out-perp conformer, measured rotational transitions are shown as Obs. and the residuals are shown as Diff.

J'	K'_a	K'_c	J''	K''_a	K''_c	Obs./MHz	Diff./MHz
2	1	2	1	1	1	2521.4880	-0.0003
2	0	2	1	0	1	2609.2866	-0.0006
2	1	1	1	1	0	2717.1183	0.0011
3	1	3	2	1	2	3776.2497	-0.0098
3	0	3	2	0	2	3889.5647	0.0007
3	2	2	2	2	1	3928.9448	0.0015
3	2	1	2	2	0	3968.3349	0.0015
3	1	2	2	1	1	4069.0564	-0.0005
4	1	4	3	1	3	5024.7317	0.0070
4	0	4	3	0	3	5144.1700	-0.0040
4	2	3	3	2	2	5230.7728	0.0010
4	3	2	3	3	1	5256.8177	0.0056
4	3	1	3	3	0	5260.6573	0.0001
4	2	2	3	2	1	5325.1668	0.0033
4	1	3	3	1	2	5412.1362	0.0009
5	1	5	4	1	4	6266.0893	0.0002
5	0	5	4	0	4	6373.3585	0.0014
5	2	4	4	2	3	6525.9813	0.0052
5	3	3	4	3	2	6576.3642	-0.0113
5	3	2	4	3	1	6589.6385	0.0031
5	2	3	4	2	2	6700.5919	0.0052
5	1	4	4	1	3	6741.8971	0.0021
6	1	6	5	1	5	7500.3958	0.0037
6	0	6	5	0	5	7584.5254	-0.0057
6	2	5	5	2	4	7813.0888	-0.0043
6	5	2	5	5	1	7882.9344	0.0153
6	5	1	5	5	0	7882.9344	-0.0013
6	4	3	5	4	2	7891.4890	0.0152
6	4	2	5	4	1	7892.6993	0.0006
6	3	4	5	3	3	7896.6880	-0.0088
6	3	3	5	3	2	7931.0826	-0.0047
5	4	2	4	4	1	6570.4677	0.0492
5	4	1	4	4	0	6570.6938	0.0010
1	1	0	0	0	0	2072.4207	-0.0038
2	1	1	1	0	1	3479.8919	0.0030
5	1	5	4	2	3	3619.0406	-0.0042
4	0	4	3	1	2	4094.0834	0.0039
2	2	0	1	1	0	4722.0060	0.0017
2	2	1	1	1	1	4809.8049	0.0033
3	1	2	2	0	2	4939.6630	0.0044
6	0	6	5	1	4	5897.9277	-0.0096
3	2	1	2	1	1	5973.2178	-0.0026
3	2	2	2	1	2	6217.2561	-0.0006
6	1	5	5	2	3	6276.9854	0.0059
4	1	3	3	0	3	6462.2136	-0.0162
9	1	9	8	2	7	7180.3816	-0.0001
4	2	2	3	1	2	7229.3200	-0.0072
3	3	0	2	2	0	7494.8655	0.0050
3	3	1	2	2	1	7504.2335	0.0009
7	1	6	6	2	4	7530.9585	-0.0035
9	2	8	8	3	6	7583.2758	0.0038
4	2	3	3	1	3	7671.7730	0.0040
8	2	6	7	3	4	7815.5739	-0.0032
9	0	9	8	1	7	7880.2145	0.0000
3	2	1	3	1	3	2490.4014	-0.0032
4	2	2	4	1	4	2790.8510	0.0075
6	2	4	6	1	6	3810.1664	0.0020
9	3	7	9	2	7	2246.6253	0.0161
8	3	6	8	2	6	2589.7937	0.0062
7	3	5	7	2	5	2893.7987	0.0017
5	3	3	5	2	3	3333.3172	-0.0021
4	3	2	4	2	2	3457.5344	0.0039
3	3	0	3	2	2	3575.9359	0.0013
4	3	1	4	2	3	3605.8191	-0.0009
5	3	2	5	2	4	3669.4792	-0.0001
6	3	3	6	2	5	3787.4750	0.0014
7	3	4	7	2	6	3986.0954	-0.0110
8	3	5	8	2	7	4295.3765	-0.0031
10	4	7	10	3	7	4258.6744	-0.0210
8	4	5	8	3	5	4718.6376	0.0037
7	4	4	7	3	4	4843.5266	-0.0029
6	4	3	6	3	3	4917.3287	0.0017
5	4	2	5	3	2	4956.9272	-0.0133

6	4	2	6	3	4	4971.0070	0.0057
7	4	3	7	3	5	4974.9956	-0.0012
5	4	1	5	3	3	4974.9956	-0.0039
4	4	0	4	3	2	4980.6856	0.0035
8	4	4	8	3	6	4997.6152	-0.0036
9	4	5	9	3	7	5054.7152	0.0023
9	5	5	9	4	5	6304.0903	-0.0015
11	5	6	11	4	8	6319.9556	0.0083
10	5	5	10	4	7	6329.5118	-0.0028
9	5	4	9	4	6	6347.3420	-0.0014
7	5	3	7	4	3	6377.3542	0.0007
7	5	2	7	4	4	6383.0241	-0.0004
6	5	2	6	4	2	6394.0678	-0.0051
6	5	1	6	4	3	6395.6363	0.0115

Table S9: Line list for the fit obtained using the SPFIT program for *cis*-out-perp conformer, measured rotational transitions are shown as Obs. and the residuals are shown as Diff.

J'	K'_a	K'_c	J''	K''_a	K''_c	Obs./MHz	Diff./MHz
2	1	2	1	1	1	2516.1147	-0.0044
2	1	1	1	1	0	2699.9533	0.0022
3	1	3	2	1	2	3768.9532	-0.0025
3	0	3	2	0	2	3877.6416	0.0030
3	2	2	2	2	1	3912.0408	-0.0031
3	2	1	2	2	0	3946.4622	0.0051
3	1	2	2	1	1	4044.1924	0.0098
4	1	4	3	1	3	5016.2256	0.0018
4	0	4	3	0	3	5133.1169	-0.0014
4	2	3	3	2	2	5209.2453	-0.0019
4	3	2	3	3	1	5232.0558	0.0105
4	3	1	3	3	0	5235.1528	-0.0012
4	2	2	3	2	1	5292.1685	0.0015
4	1	3	3	1	2	5380.7841	0.0048
5	1	5	4	1	4	6257.1285	-0.0083
5	0	5	4	0	4	6365.0753	-0.0016
5	2	4	4	2	3	6500.6809	0.0104
5	3	3	4	3	2	6544.9634	-0.0011
5	2	3	4	2	2	6655.4599	0.0003
5	1	4	4	1	3	6705.9626	-0.0098
6	1	6	5	1	5	7491.6175	0.0046
6	0	6	5	0	5	7579.1450	-0.0105
6	2	5	5	2	4	7785.0139	-0.0001
6	3	4	5	3	3	7858.8274	-0.0032
6	3	3	5	3	2	7886.7971	-0.0118
2	1	2	1	0	1	3193.6974	-0.0066
6	1	6	5	2	3	4322.6203	0.0058
3	1	3	2	0	2	4363.3506	-0.0039
4	0	4	3	1	3	4647.4025	0.0002
2	2	1	1	1	0	4732.6911	-0.0118
2	2	0	1	1	1	4833.3504	0.0003
4	1	4	3	0	3	5501.9385	-0.0012
3	2	2	2	1	1	5944.7773	-0.0183
5	0	5	4	1	4	5996.2588	0.0034
3	2	1	2	1	2	6263.6973	0.0092
6	1	5	5	2	4	6491.3420	0.0018
5	1	5	4	0	4	6625.9502	-0.0080
6	0	6	5	1	5	7318.2857	0.0115
3	3	1	2	2	0	7526.2357	0.0002
3	3	0	2	2	1	7535.4809	-0.0070
6	1	6	5	0	5	7752.4963	0.0020
4	2	2	3	1	3	7786.9203	0.0209
8	2	6	8	1	7	2117.4890	0.0045
5	2	4	5	1	5	2888.1504	0.0053
6	2	5	6	1	6	3181.5453	-0.0009
4	3	2	4	2	3	3645.7207	-0.0003
5	3	3	5	2	4	3690.0227	0.0078
7	3	5	7	2	6	3874.6779	0.0053
8	3	6	8	2	7	4028.8016	-0.0068
9	3	7	9	2	8	4230.7246	-0.0035
11	4	7	11	3	8	4270.5167	-0.0017
9	4	5	9	3	6	4696.0281	0.0187
8	4	4	8	3	5	4841.4936	0.0078
7	4	4	7	3	5	5037.6626	-0.0110
6	4	3	6	3	4	5039.3845	0.0120
8	4	4	8	3	6	5057.5554	0.0026
9	4	6	9	3	7	5069.0534	-0.0210
7	6	1	7	5	2	7931.6898	-0.0166
7	6	2	7	5	3	7931.7961	0.0149

Table S10: Line list for the fit obtained using the XIAM program for *cis*-in-perp conformer, measured rotational transitions are shown as Obs. and the residuals are shown as Diff.

J'	K' _a	K' _c	J''	K'' _a	K'' _c	Symm.	Obs./MHz	Diff./MHz
1	1	0	0	0	0	A	2019.8957	-0.0009
1	1	0	0	0	0	E	2019.8957	-0.0006
6	2	6	6	1	5	A	2022.5574	0.0003
6	2	6	6	1	5	E	2022.5574	0.0007
4	2	4	4	1	3	A	2035.1088	0.0002
4	2	4	4	1	3	E	2035.1088	-0.0005
3	2	3	3	1	2	A	2077.8513	-0.0054
3	2	3	3	1	2	E	2077.8513	-0.0063
4	1	3	3	2	1	A	2078.2844	-0.0013
4	1	3	3	2	1	E	2078.2844	-0.0010
1	1	0	0	0	0	A	2128.7481	-0.0017
1	1	0	0	0	0	E	2128.7481	-0.0012
3	2	3	3	1	2	A	2132.5369	0.0043
3	2	3	3	1	2	E	2132.5369	0.0034
7	2	7	7	1	6	A	2162.6566	-0.0002
7	2	7	7	1	6	E	2162.6566	0.0015
6	3	5	5	4	2	A	2183.6638	0.0065
6	3	5	5	4	2	E	2183.7072	-0.0051
2	2	2	2	1	1	A	2244.9148	0.0067
2	2	2	2	1	1	E	2244.9148	0.0057
5	2	4	4	3	1	A	2316.2274	-0.0016
5	2	4	4	3	1	E	2316.2274	0.0034
6	1	6	6	0	6	A	2401.2643	-0.0030
6	1	6	6	0	6	E	2401.2643	0.0017
8	2	8	8	1	7	A	2426.0314	-0.0003
8	2	8	8	1	7	E	2426.0314	0.0032
2	1	1	1	1	1	A	2441.7165	-0.0024
2	1	1	1	1	1	E	2441.7165	-0.0018
2	0	1	1	0	1	A	2539.4933	0.0038
2	0	1	1	0	1	E	2539.4933	0.0047
2	1	1	1	1	0	A	2659.4259	0.0006
2	1	1	1	1	0	E	2659.4259	0.0018
5	2	4	4	3	2	A	2673.8168	0.0010
5	2	4	4	3	2	E	2673.8168	0.0023
3	2	3	3	1	3	A	2730.2669	0.0014
3	2	3	3	1	3	E	2730.2669	0.0022
3	0	2	2	1	1	A	2808.8588	-0.0063
3	0	2	2	1	1	E	2808.8588	-0.0055
9	2	9	9	1	8	A	2822.6073	-0.0031
9	2	9	9	1	8	E	2822.6073	0.0025
8	3	8	8	2	6	A	2907.6618	0.0042
8	3	8	8	2	6	E	2907.6618	-0.0002
5	1	4	4	2	2	A	2943.9093	-0.0045
5	1	4	4	2	2	E	2943.9093	-0.0053
4	2	4	4	1	4	A	2959.5135	-0.0015
4	2	4	4	1	4	E	2959.5135	-0.0001
7	1	7	7	0	7	A	3015.2416	-0.0059
7	1	7	7	0	7	E	3015.2416	0.0003
10	3	10	10	2	8	A	3018.0417	-0.0060
10	3	10	10	2	8	E	3018.0417	-0.0063
9	3	9	9	2	7	A	3061.8296	0.0109
9	3	9	9	2	7	E	3061.8296	0.0093
11	3	11	11	2	9	A	3095.9666	-0.0132
11	3	11	11	2	9	E	3095.9666	-0.0113
4	2	4	4	1	4	A	3118.6952	-0.0033
4	2	4	4	1	4	E	3118.6952	-0.0011
8	4	7	7	5	2	A	3130.0999	-0.0013
8	4	7	7	5	2	E	3129.9510	-0.0037
3	0	2	2	1	2	A	3135.4230	-0.0018
3	0	2	2	1	2	E	3135.4230	-0.0002
8	4	7	7	5	3	A	3148.1828	0.0104
8	4	7	7	5	3	E	3148.3097	0.0006
4	1	3	3	2	1	A	3161.8723	-0.0032
4	1	3	3	2	1	E	3161.8723	-0.0001
2	1	1	1	0	1	A	3186.3268	-0.0011
2	1	1	1	0	1	E	3186.3268	-0.0006
8	3	8	8	2	6	A	3196.9323	-0.0009
8	3	8	8	2	6	E	3196.9323	-0.0032
4	1	3	3	2	2	A	3216.5496	-0.0018
4	1	3	3	2	2	E	3216.5496	0.0014
7	3	7	7	2	5	A	3245.7720	0.0047
7	3	7	7	2	5	E	3245.7720	0.0014
5	2	5	5	1	5	A	3248.6737	-0.0021

5	2	5	5	1	5	E	3248.6737	0.0001
12	3	12	12	2	10	A	3316.2248	0.0045
12	3	12	12	2	10	E	3316.2248	0.0090
10	2	10	10	1	9	A	3349.6321	0.0018
10	2	10	10	1	9	E	3349.6321	0.0097
7	3	7	7	2	5	A	3384.3888	0.0020
7	3	7	7	2	5	E	3384.3888	-0.0004
7	3	6	6	4	2	A	3416.2827	0.0156
7	3	6	6	4	2	E	3416.2373	-0.0120
6	2	5	5	3	2	A	3496.1689	-0.0031
6	2	5	5	3	2	E	3496.1689	-0.0002
2	1	1	1	0	1	A	3512.8864	-0.0012
2	1	1	1	0	1	E	3512.8864	0.0001
6	3	6	6	2	4	A	3524.5965	-0.0045
6	3	6	6	2	4	E	3524.5965	-0.0068
7	3	6	6	4	3	A	3556.5810	0.0169
7	3	6	6	4	3	E	3556.5810	0.0082
6	3	6	6	2	4	A	3581.9832	0.0005
6	3	6	6	2	4	E	3581.9832	-0.0017
6	2	6	6	1	6	A	3596.6371	-0.0010
6	2	6	6	1	6	E	3596.6371	0.0022
6	1	5	5	2	3	A	3652.8250	-0.0053
6	1	5	5	2	3	E	3652.8250	-0.0077
3	1	2	2	1	2	A	3655.9648	-0.0014
3	1	2	2	1	2	E	3655.9648	-0.0005
13	3	13	13	2	11	A	3689.1646	-0.0103
13	3	13	13	2	11	E	3689.1646	-0.0026
8	1	8	8	0	8	A	3691.5783	-0.0031
8	1	8	8	0	8	E	3691.5783	0.0040
5	3	5	5	2	3	A	3753.2932	-0.0031
5	3	5	5	2	3	E	3753.2932	-0.0052
3	0	2	2	0	2	A	3782.2679	0.0047
3	0	2	2	0	2	E	3782.2679	0.0059
3	2	2	2	2	1	A	3825.8417	-0.0061
3	2	2	2	2	1	E	3825.8417	-0.0051
3	2	2	2	2	0	A	3869.4402	0.0003
3	2	2	2	2	0	E	3869.4402	0.0023
4	3	4	4	2	2	A	3871.4203	-0.0005
4	3	4	4	2	2	E	3871.4203	0.0012
4	3	4	4	2	2	A	3876.3620	0.0014
4	3	4	4	2	2	E	3876.3620	-0.0022
3	3	3	3	2	1	A	3947.8279	0.0188
3	3	3	3	2	1	E	3947.8279	0.0003
3	1	2	2	1	1	A	3981.8129	-0.0024
3	1	2	2	1	1	E	3981.8129	-0.0007
11	2	11	11	1	10	A	3987.9264	-0.0153
11	2	11	11	1	10	E	3987.9264	-0.0052
14	4	14	14	3	11	A	3996.7294	0.0006
14	4	14	14	3	11	E	3996.7294	-0.0011
7	2	7	7	1	7	A	4000.1542	-0.0018
7	2	7	7	1	7	E	4000.1542	0.0026
3	3	3	3	2	2	A	4001.7632	-0.0119
3	3	3	3	2	2	E	4001.7632	0.0057
3	3	3	3	2	2	A	4002.5037	0.0187
3	3	3	3	2	2	E	4002.5037	0.0002
6	1	5	5	2	4	A	4005.4751	-0.0024
6	1	5	5	2	4	E	4005.4751	-0.0031
15	4	15	15	3	12	A	4006.6981	0.0028
15	4	15	15	3	12	E	4006.6981	0.0040
4	3	4	4	2	3	A	4030.6035	-0.0008
4	3	4	4	2	3	E	4030.6035	0.0016
4	3	4	4	2	3	A	4035.5515	0.0074
4	3	4	4	2	3	E	4035.5515	0.0046
5	3	5	5	2	4	A	4086.4105	-0.0034
5	3	5	5	2	4	E	4086.4105	-0.0026
5	3	5	5	2	4	A	4105.9442	0.0008
5	3	5	5	2	4	E	4105.9442	0.0004
13	4	13	13	3	10	A	4119.2966	0.0098
13	4	13	13	3	10	E	4119.2966	0.0061
10	5	9	9	6	3	A	4122.2482	-0.0021
10	5	9	9	6	4	A	4127.4985	-0.0021
10	5	9	9	6	4	E	4127.7132	0.0012
6	2	5	5	3	2	A	4150.5877	-0.0055
6	2	5	5	3	2	E	4150.5877	0.0004
6	2	5	5	3	3	A	4170.1252	0.0024
6	2	5	5	3	3	E	4170.1252	0.0072
6	3	6	6	2	5	A	4179.0181	-0.0041

6	3	6	6	2	5	E	4179.0181	-0.0033
7	1	6	6	2	4	A	4187.5877	-0.0035
7	1	6	6	2	4	E	4187.5877	-0.0081
14	3	14	14	2	12	A	4212.0998	-0.0020
14	3	14	14	2	12	E	4212.0998	0.0090
6	3	6	6	2	5	A	4236.3966	-0.0073
6	3	6	6	2	5	E	4236.3966	-0.0065
6	2	6	6	1	6	A	4251.0537	-0.0055
6	2	6	6	1	6	E	4251.0537	0.0007
3	1	2	2	0	2	A	4302.8006	-0.0040
3	1	2	2	0	2	E	4302.8006	-0.0035
7	3	7	7	2	6	A	4317.3961	0.0017
7	3	7	7	2	6	E	4317.3961	0.0031
12	4	12	12	3	9	A	4337.6892	0.0045
12	4	12	12	3	9	E	4337.6892	-0.0003
9	1	9	9	0	9	A	4396.2484	-0.0070
9	1	9	9	0	9	E	4396.2484	0.0004
11	4	11	11	3	8	A	4397.0539	0.0026
11	4	11	11	3	8	E	4397.0539	-0.0041
9	4	8	8	5	3	A	4445.8197	-0.0024
9	4	8	8	5	3	E	4445.7475	-0.0054
8	2	8	8	1	8	A	4453.8230	-0.0016
8	2	8	8	1	8	E	4453.8230	0.0044
7	3	7	7	2	6	A	4456.0175	0.0036
7	3	7	7	2	6	E	4456.0175	0.0058
4	0	3	3	1	3	A	4476.0424	-0.0025
4	0	3	3	1	3	E	4476.0424	-0.0005
9	4	8	8	5	4	A	4491.8784	-0.0124
9	4	8	8	5	4	E	4491.9336	-0.0149
8	3	8	8	2	7	A	4508.7517	0.0000
8	3	8	8	2	7	E	4508.7517	0.0021
8	1	7	7	2	5	A	4545.5989	0.0078
8	1	7	7	2	5	E	4545.5989	0.0002
5	1	4	4	2	2	A	4557.1749	0.0007
5	1	4	4	2	2	E	4557.1749	0.0042
7	2	6	6	3	3	A	4605.7629	-0.0015
7	2	6	6	3	3	E	4605.7629	0.0005
11	4	11	11	3	8	A	4606.6703	0.0068
11	4	11	11	3	8	E	4606.6703	0.0019
8	3	7	7	4	3	A	4693.9085	0.0024
8	3	7	7	4	3	E	4693.9085	0.0105
8	3	7	7	4	4	A	4699.9884	-0.0017
8	3	7	7	4	4	E	4699.9884	-0.0011
11	1	10	10	2	8	A	4701.1428	0.0212
11	1	10	10	2	8	E	4701.1428	-0.0022
12	2	12	12	1	11	A	4704.4351	-0.0035
12	2	12	12	1	11	E	4704.4351	0.0082
5	0	4	4	1	3	A	4711.8573	-0.0073
5	0	4	4	1	3	E	4711.8573	-0.0078
5	1	4	4	2	3	A	4716.3585	0.0009
5	1	4	4	2	3	E	4716.3585	0.0051
9	1	8	8	2	6	A	4736.8302	0.0147
9	1	8	8	2	6	E	4736.8302	0.0035
9	3	9	9	2	8	A	4757.9047	-0.0012
9	3	9	9	2	8	E	4757.9047	0.0020
8	3	8	8	2	7	A	4798.0216	-0.0058
8	3	8	8	2	7	E	4798.0216	-0.0016
7	1	6	6	2	5	A	4842.0117	-0.0007
7	1	6	6	2	5	E	4842.0117	-0.0024
4	1	3	3	1	3	A	4863.2261	-0.0011
4	1	3	3	1	3	E	4863.2261	0.0000
15	3	15	15	2	13	A	4865.8176	-0.0053
15	3	15	15	2	13	E	4865.8176	0.0088
10	4	10	10	3	7	A	4879.8257	-0.0005
10	4	10	10	3	7	E	4879.8257	-0.0049
2	2	1	1	1	0	A	4893.2482	-0.0013
2	2	1	1	1	0	E	4893.2482	-0.0002
2	2	1	1	1	0	A	4904.3426	0.0093
2	2	1	1	1	0	E	4904.3426	0.0094
19	5	19	19	4	15	A	4911.3012	0.0073
19	5	19	19	4	15	E	4911.3012	0.0071
9	2	9	9	1	9	A	4950.5300	-0.0043
9	2	9	9	1	9	E	4950.5300	0.0036
3	1	2	2	0	2	A	4955.2038	-0.0095
3	1	2	2	0	2	E	4955.2038	-0.0074
18	5	18	18	4	14	A	4974.6658	0.0031
18	5	18	18	4	14	E	4974.6658	-0.0011

8	3	7	7	4	4	A	4989.2646	-0.0012
8	3	7	7	4	4	E	4989.2646	0.0014
4	0	3	3	0	3	A	4996.5749	-0.0114
4	0	3	3	0	3	E	4996.5749	-0.0100
2	2	1	1	1	1	A	5013.1965	0.0099
2	2	1	1	1	1	E	5013.1965	0.0102
10	3	10	10	2	9	A	5066.8451	0.0036
10	3	10	10	2	9	E	5066.8451	0.0080
9	4	9	9	3	6	A	5073.8270	0.0076
9	4	9	9	3	6	E	5073.8270	0.0044
4	2	3	3	2	2	A	5092.4746	-0.0020
4	2	3	3	2	2	E	5092.4746	-0.0003
10	1	10	10	0	10	A	5101.6937	-0.0015
10	1	10	10	0	10	E	5101.6937	0.0049
12	6	11	11	7	4	A	5110.7185	-0.0028
12	6	11	11	7	4	E	5110.4058	-0.0124
12	6	11	11	7	5	A	5112.1809	0.0021
12	6	11	11	7	5	E	5112.4577	-0.0092
9	4	9	9	3	6	A	5119.3669	-0.0121
9	4	9	9	3	6	E	5119.3669	-0.0157
4	3	3	3	3	1	A	5121.3132	0.0074
4	3	3	3	3	1	E	5121.3132	-0.0061
4	3	3	3	3	0	A	5125.5311	-0.0046
4	3	3	3	3	0	E	5125.5311	0.0128
17	5	17	17	4	13	A	5177.0016	-0.0017
17	5	17	17	4	13	E	5177.0016	-0.0084
4	2	3	3	2	1	A	5196.9813	-0.0029
4	2	3	3	2	1	E	5196.9813	-0.0005
8	4	8	8	3	5	A	5285.9113	-0.0007
8	4	8	8	3	5	E	5285.9113	-0.0018
9	3	9	9	2	8	A	5294.1543	-0.0265
9	3	9	9	2	8	E	5294.1543	-0.0196
4	1	3	3	1	2	A	5294.4069	-0.0013
4	1	3	3	1	2	E	5294.4069	0.0010
8	4	8	8	3	5	A	5303.8702	0.0053
8	4	8	8	3	5	E	5303.8702	0.0018
4	1	3	3	0	3	A	5383.7664	-0.0021
4	1	3	3	0	3	E	5383.7664	-0.0017
7	4	7	7	3	4	A	5429.8799	0.0053
7	4	7	7	3	4	E	5429.8799	0.0001
11	3	11	11	2	10	A	5434.5713	-0.0018
11	3	11	11	2	10	E	5434.5713	0.0041
11	5	10	10	6	4	A	5446.5551	-0.0099
11	5	10	10	6	5	A	5460.3647	0.0228
13	2	13	13	1	12	A	5460.3647	0.0129
13	2	13	13	1	12	E	5460.3647	0.0256
6	0	5	5	1	4	A	5468.1349	0.0072
6	0	5	5	1	4	E	5468.1349	0.0055
16	5	16	16	4	12	A	5475.2214	-0.0037
16	5	16	16	4	12	E	5475.2214	-0.0116
10	2	10	10	1	10	A	5482.2591	-0.0047
10	2	10	10	1	10	E	5482.2591	0.0063
6	4	6	6	3	3	A	5506.8924	0.0006
6	4	6	6	3	3	E	5506.8924	-0.0139
5	4	5	5	3	2	E	5548.8573	-0.0027
5	4	5	5	3	2	A	5549.2692	0.0128
5	4	5	5	3	2	E	5549.3131	-0.0021
7	4	7	7	3	5	A	5562.4151	0.0051
7	4	7	7	3	5	E	5562.4151	0.0083
6	4	6	6	3	4	A	5562.5949	-0.0011
6	4	6	6	3	4	E	5562.5949	0.0118
5	4	5	5	3	3	A	5568.4415	-0.0067
5	4	5	5	3	3	E	5568.3934	0.0028
4	4	4	4	3	1	A	5570.1620	-0.0007
4	4	4	4	3	1	E	5570.2912	-0.0046
4	4	4	4	3	2	A	5575.0611	-0.0037
4	4	4	4	3	2	E	5574.9287	-0.0041
8	4	8	8	3	6	A	5575.1952	0.0076
8	4	8	8	3	6	E	5575.1952	0.0085
8	4	8	8	3	6	A	5593.1513	0.0108
8	4	8	8	3	6	E	5593.1513	0.0093
9	4	9	9	3	7	A	5610.0911	-0.0032
9	4	9	9	3	7	E	5610.0911	-0.0027
8	2	7	7	3	4	A	5615.0282	-0.0007
8	2	7	7	3	4	E	5615.0282	0.0001
16	3	16	16	2	14	A	5615.8259	-0.0295
16	3	16	16	2	14	E	5615.8259	-0.0129

8	1	7	7	2	6	A	5617.2178	-0.0004
8	1	7	7	2	6	E	5617.2178	-0.0033
10	4	10	10	3	8	A	5677.2291	0.0001
10	4	10	10	3	8	E	5677.2291	0.0010
7	2	6	6	3	3	A	5677.3940	0.0024
7	2	6	6	3	3	E	5677.3940	0.0091
7	2	6	6	3	4	A	5734.7742	0.0009
7	2	6	6	3	4	E	5734.7742	0.0075
10	4	9	9	5	4	A	5765.3921	0.0192
10	4	9	9	5	4	E	5765.3414	-0.0050
11	4	11	11	3	9	A	5786.4978	0.0009
11	4	11	11	3	9	E	5786.4978	0.0024
11	1	11	11	0	11	A	5792.1974	0.0045
11	1	11	11	0	11	E	5792.1974	0.0074
5	0	4	4	1	4	A	5795.4563	0.0019
5	0	4	4	1	4	E	5795.4563	0.0042
15	5	15	15	4	11	A	5818.6865	-0.0058
15	5	15	15	4	11	E	5818.6865	-0.0138
12	3	12	12	2	11	A	5857.3255	0.0086
12	3	12	12	2	11	E	5857.3255	0.0161
10	4	9	9	5	5	A	5869.8355	0.0132
10	4	9	9	5	5	E	5869.8355	0.0001
6	1	5	5	2	3	A	5881.3360	0.0035
6	1	5	5	2	3	E	5881.3360	0.0069
9	3	8	8	4	4	A	5944.4489	-0.0086
9	3	8	8	4	4	E	5944.4489	-0.0030
12	4	12	12	3	10	A	5946.5173	0.0074
12	4	12	12	3	10	E	5946.5173	0.0100
9	3	8	8	4	5	A	5962.4079	-0.0024
9	3	8	8	4	5	E	5962.4079	0.0008
11	4	11	11	3	9	A	5996.1162	0.0070
11	4	11	11	3	9	E	5996.1162	0.0104
11	2	11	11	1	11	A	6040.9650	-0.0075
11	2	11	11	1	11	E	6040.9650	0.0088
3	2	2	2	1	1	A	6059.6670	-0.0051
3	2	2	2	1	1	E	6059.6670	-0.0042
5	1	4	4	1	4	A	6062.6110	-0.0013
5	1	4	4	1	4	E	6062.6110	0.0000
7	0	6	6	1	5	A	6104.0310	0.0039
7	0	6	6	1	5	E	6104.0310	0.0009
3	2	2	2	1	1	A	6114.3419	-0.0061
3	2	2	2	1	1	E	6114.3419	-0.0051
14	5	14	14	4	10	A	6158.2334	0.0074
14	5	14	14	4	10	E	6158.2334	0.0003
13	4	13	13	3	11	A	6163.6748	-0.0065
13	4	13	13	3	11	E	6163.6748	-0.0025
5	0	4	4	0	4	A	6182.6342	-0.0025
5	0	4	4	0	4	E	6182.6342	-0.0011
14	2	14	14	1	13	A	6221.4289	-0.0023
14	2	14	14	1	13	E	6221.4289	0.0104
6	1	5	5	2	4	A	6233.9612	-0.0184
6	1	5	5	2	4	E	6233.9612	-0.0133
13	3	13	13	2	12	A	6328.9923	-0.0012
13	3	13	13	2	12	E	6328.9923	0.0082
9	1	8	8	2	7	A	6337.9098	0.0003
9	1	8	8	2	7	E	6337.9098	-0.0045
5	2	4	4	2	3	A	6351.7760	0.0029
5	2	4	4	2	3	E	6351.7760	0.0051
3	2	2	2	1	2	A	6386.2347	0.0029
3	2	2	2	1	2	E	6386.2347	0.0046
5	4	4	4	4	1	A	6400.9596	-0.0064
5	4	4	4	4	1	E	6401.0376	-0.0025
5	4	4	4	4	0	A	6401.2665	0.0004
5	4	4	4	4	0	E	6401.1823	-0.0050
5	3	4	4	3	2	A	6407.5867	0.0040
5	3	4	4	3	2	E	6407.5867	0.0045
5	3	4	4	3	1	A	6422.1643	-0.0080
5	3	4	4	3	1	E	6422.1643	-0.0035
13	6	12	12	7	5	A	6437.6179	0.0048
3	2	2	2	1	2	A	6440.9065	-0.0012
3	2	2	2	1	2	E	6440.9065	0.0006
13	6	12	12	7	6	A	6441.5113	-0.0017
14	4	14	14	3	12	A	6441.6075	-0.0031
14	4	14	14	3	12	E	6441.6075	0.0024
5	1	4	4	0	4	A	6449.7942	-0.0004
5	1	4	4	0	4	E	6449.7942	0.0001
13	5	13	13	4	9	A	6456.0543	-0.0161

13	5	13	13	4	9	E	6456.0543	-0.0220
12	1	12	12	0	12	A	6463.0911	0.0157
12	1	12	12	0	12	E	6463.0911	0.0100
4	1	3	3	0	3	A	6467.3634	0.0049
4	1	3	3	0	3	E	6467.3634	0.0082
9	2	8	8	3	5	A	6490.4228	0.0063
9	2	8	8	3	5	E	6490.4228	0.0053
9	3	8	8	4	5	A	6498.6875	0.0023
9	3	8	8	4	5	E	6498.6875	0.0093
5	2	4	4	2	2	A	6545.2421	0.0054
5	2	4	4	2	2	E	6545.2421	0.0085
5	1	4	4	1	3	A	6592.2835	0.0007
5	1	4	4	1	3	E	6592.2835	0.0034
12	2	12	12	1	12	A	6619.3518	-0.0067
12	2	12	12	1	12	E	6619.3518	0.0197
8	0	7	7	1	6	A	6645.5420	-0.0115
8	0	7	7	1	6	E	6645.5420	-0.0155
12	5	12	12	4	8	A	6692.3485	0.0122
12	5	12	12	4	8	E	6692.3485	0.0071
9	2	8	8	3	6	A	6779.6878	-0.0043
9	2	8	8	3	6	E	6779.6878	-0.0033
12	5	11	11	6	5	A	6780.3761	0.0013
12	5	11	11	6	5	E	6780.2730	-0.0037
15	4	15	15	3	13	A	6780.8011	0.0025
15	4	15	15	3	13	E	6780.8011	0.0098
13	4	13	13	3	11	A	6841.4284	-0.0127
13	4	13	13	3	11	E	6841.4284	-0.0027
14	3	14	14	2	13	A	6841.9987	-0.0041
14	3	14	14	2	13	E	6841.9987	0.0076
11	5	11	11	4	7	A	6864.7828	0.0013
11	5	11	11	4	7	E	6864.7828	-0.0040
10	5	10	10	4	6	A	6982.7721	-0.0098
10	5	10	10	4	6	E	6982.8071	0.0166
10	1	9	9	2	8	A	7012.4881	0.0020
10	1	9	9	2	8	E	7012.4881	-0.0057
12	5	12	12	4	9	A	7052.2776	0.0010
12	5	12	12	4	9	E	7052.2776	0.0014
9	5	9	9	4	5	A	7058.0993	-0.0251
9	5	9	9	4	5	E	7058.0993	-0.0059
9	5	9	9	4	5	A	7059.8715	-0.0163
9	5	9	9	4	5	E	7059.9120	0.0032
11	5	11	11	4	8	A	7060.7624	0.0004
11	5	11	11	4	8	E	7060.7624	0.0019
13	5	13	13	4	10	A	7063.7302	0.0007
13	5	13	13	4	10	E	7063.7302	0.0008
10	5	10	10	4	7	A	7080.2649	0.0106
10	5	10	10	4	7	E	7080.2649	0.0162
6	0	5	5	1	5	A	7081.3854	-0.0027
6	0	5	5	1	5	E	7081.3854	-0.0002
11	4	10	10	5	5	A	7082.4793	-0.0290
11	4	10	10	5	5	E	7082.4793	-0.0155
7	1	6	6	2	4	A	7096.7089	-0.0086
7	1	6	6	2	4	E	7096.7089	-0.0059
9	5	9	9	4	6	A	7103.6751	-0.0089
9	5	9	9	4	6	E	7103.6751	0.0097
14	5	14	14	4	11	A	7105.1948	0.0009
14	5	14	14	4	11	E	7105.1948	0.0015
13	1	13	13	0	13	A	7116.2136	0.0087
13	1	13	13	0	13	E	7116.2136	-0.0163
8	5	8	8	4	4	E	7108.1509	-0.0063
8	5	8	8	4	4	A	7108.2202	-0.0004
8	5	8	8	4	4	A	7108.7229	-0.0068
8	5	8	8	4	4	E	7108.7908	-0.0019
8	5	8	8	4	5	A	7126.1615	-0.0119
8	5	8	8	4	5	E	7126.1123	-0.0001
8	5	8	8	4	5	A	7126.7019	0.0194
8	5	8	8	4	5	E	7126.7491	0.0012
9	0	8	8	1	7	A	7126.8938	0.0161
9	0	8	8	1	7	E	7126.8938	0.0117
7	5	7	7	4	3	A	7138.8732	-0.0009
7	5	7	7	4	3	E	7138.7288	-0.0020
7	5	7	7	4	3	A	7138.9927	0.0003
7	5	7	7	4	3	E	7139.1295	-0.0005
7	5	7	7	4	4	A	7144.9624	0.0042
7	5	7	7	4	4	E	7144.8244	0.0020
7	5	7	7	4	4	A	7145.0815	0.0049
7	5	7	7	4	4	E	7145.2249	0.0033

10	3	9	9	4	5	A	7148.0324	0.0008
10	3	9	9	4	5	E	7148.0324	0.0053
6	5	6	6	4	2	A	7157.3575	0.0341
6	5	6	6	4	2	E	7157.1326	0.0034
6	5	6	6	4	2	A	7157.3575	0.0143
6	5	6	6	4	2	E	7157.5195	0.0079
6	5	6	6	4	3	A	7158.9927	-0.0081
6	5	6	6	4	3	E	7158.8261	-0.0080
6	5	6	6	4	3	A	7158.9927	-0.0279
6	5	6	6	4	3	E	7159.2081	-0.0084
5	5	5	5	4	1	A	7168.1140	-0.0037
5	5	5	5	4	1	E	7167.8571	-0.0123
5	5	5	5	4	1	A	7168.1140	-0.0055
5	5	5	5	4	1	E	7168.2463	-0.0054
5	5	5	5	4	2	A	7168.4493	-0.0062
5	5	5	5	4	2	E	7168.3238	-0.0010
5	5	5	5	4	2	A	7168.4493	-0.0080
5	5	5	5	4	2	E	7168.6997	-0.0074
4	2	3	3	1	2	A	7170.3317	-0.0016
4	2	3	3	1	2	E	7170.3317	-0.0008
9	2	9	9	1	9	A	7182.8827	-0.0137
9	2	9	9	1	9	E	7182.8827	0.0028
15	5	15	15	4	12	A	7186.8927	-0.0002
15	5	15	15	4	12	E	7186.8927	0.0013
10	3	9	9	4	6	A	7193.5801	-0.0112
10	3	9	9	4	6	E	7193.5801	-0.0072
10	2	9	9	3	6	A	7200.5676	-0.0015
10	2	9	9	3	6	E	7200.5676	-0.0051
13	2	13	13	1	13	A	7211.3235	-0.0136
13	2	13	13	1	13	E	7211.2813	-0.0085
8	2	7	7	3	4	A	7216.1222	-0.0008
8	2	7	7	3	4	E	7216.1222	0.0065
6	1	5	5	1	5	A	7254.1603	0.0070
6	1	5	5	1	5	E	7254.1603	0.0085
11	4	10	10	5	6	A	7297.3482	0.0140
11	4	10	10	5	6	E	7297.3482	0.0158
16	5	16	16	4	13	A	7318.1448	0.0207
16	5	16	16	4	13	E	7318.1021	-0.0192
4	2	3	3	1	2	A	7329.5141	-0.0028
4	2	3	3	1	2	E	7329.5141	-0.0012
6	0	5	5	0	5	A	7348.5508	0.0049
6	0	5	5	0	5	E	7348.5508	0.0064

Table S11: Line list for the fit obtained using the XIAM program for *trans*-out-perp conformer, measured rotational transitions are shown as Obs. and the residuals are shown as Diff.

J'	K' _a	K' _c	J''	K'' _a	K'' _c	Symm.	Obs./MHz	Diff./MHz
4	1	3	3	2	1	A	2071.8751	0.0007
4	1	3	3	2	1	E	2071.8751	0.0012
7	1	6	7	0	7	A	2188.8734	0.0001
7	1	6	7	0	7	E	2188.8734	0.0025
1	1	1	0	0	0	A	2189.3643	-0.0037
1	1	1	0	0	0	E	2189.3643	0.0011
7	2	6	7	1	6	A	2191.6419	-0.0050
7	2	6	7	1	6	E	2191.6419	0.0074
1	1	0	0	0	0	A	2254.2047	-0.0037
1	1	0	0	0	0	E	2254.2047	-0.0005
6	2	4	5	3	2	A	2313.0946	-0.0007
6	2	4	5	3	2	E	2312.9581	-0.0023
6	2	5	6	1	5	A	2395.9423	-0.0080
6	2	5	6	1	5	E	2395.9423	0.0049
5	1	5	4	2	2	A	2426.5207	0.0101
5	1	5	4	2	2	E	2426.5207	0.0032
3	0	3	2	1	1	A	2486.6213	0.0004
3	0	3	2	1	1	E	2486.6213	-0.0030
8	2	6	8	1	7	A	2545.3357	-0.0128
8	2	6	8	1	7	E	2545.3357	-0.0035
7	2	5	7	1	6	A	2552.9781	-0.0065
7	2	5	7	1	6	E	2552.9781	0.0035
5	2	4	5	1	4	A	2576.9349	-0.0054
5	2	4	5	1	4	E	2576.9349	0.0084
8	1	7	8	0	8	A	2590.6758	-0.0014
8	1	7	8	0	8	E	2590.6758	0.0005
9	2	7	9	1	8	A	2591.6249	-0.0025
9	2	7	9	1	8	E	2591.6249	0.0059
6	2	4	6	1	5	A	2603.2423	-0.0163
6	2	4	6	1	5	E	2603.2423	-0.0060
8	3	5	7	4	3	A	2611.6245	-0.0005
8	3	5	7	4	3	E	2610.9583	-0.0018
3	0	3	2	1	2	A	2681.1446	0.0024
3	0	3	2	1	2	E	2681.1446	-0.0016
5	2	3	5	1	4	A	2682.8870	-0.0085
5	2	3	5	1	4	E	2682.8870	0.0013
10	2	8	10	1	9	A	2701.0841	-0.0026
10	2	8	10	1	9	E	2701.0841	0.0046
4	2	3	4	1	3	A	2731.3826	0.0127
4	2	3	4	1	3	E	2731.3441	-0.0097
4	2	2	4	1	3	A	2777.3848	-0.0070
4	2	2	4	1	3	E	2777.3848	0.0007
3	2	2	3	1	2	A	2856.9783	-0.0016
3	2	2	3	1	2	E	2856.9481	-0.0075
3	2	1	3	1	2	A	2872.4367	0.0071
3	2	1	3	1	2	E	2872.4367	0.0068
11	2	9	11	1	10	A	2881.2324	-0.0030
11	2	9	11	1	10	E	2881.2324	0.0027
9	1	8	9	0	9	A	3055.7852	0.0026
9	1	8	9	0	9	E	3055.7852	0.0041
12	2	10	12	1	11	A	3137.7103	-0.0011
12	2	10	12	1	11	E	3137.7103	0.0031
3	2	2	3	1	3	A	3245.9401	0.0110
3	2	2	3	1	3	E	3245.8977	-0.0075
3	2	1	3	1	3	A	3261.3803	0.0016
3	2	1	3	1	3	E	3261.3803	0.0008
7	2	6	6	3	3	A	3267.3308	-0.0182
7	2	6	6	3	3	E	3267.3308	0.0181
7	2	6	6	3	4	A	3275.0742	0.0018
7	2	6	6	3	4	E	3275.1454	-0.0002
2	1	2	1	0	1	A	3329.8025	-0.0042
2	1	2	1	0	1	E	3329.8025	0.0001
6	1	6	5	2	3	A	3361.8998	0.0077
6	1	6	5	2	3	E	3361.8998	-0.0012
4	2	3	4	1	4	A	3379.1037	-0.0198
4	2	3	4	1	4	E	3379.1037	-0.0040
5	1	4	4	2	2	A	3396.5301	0.0058
5	1	4	4	2	2	E	3396.5301	-0.0017
4	2	2	4	1	4	A	3425.1368	-0.0086
4	2	2	4	1	4	E	3425.1368	-0.0013
5	1	4	4	2	3	A	3442.5354	-0.0109
5	1	4	4	2	3	E	3442.5678	0.0056
13	2	11	13	1	12	A	3473.5233	-0.0022

13	2	11	13	1	12	E	3473.5233	0.0003
2	1	1	1	0	1	A	3524.3183	-0.0096
2	1	1	1	0	1	E	3524.3183	-0.0059
5	2	4	5	1	5	A	3546.9571	0.0030
5	2	4	5	1	5	E	3546.9571	0.0163
4	0	4	3	1	2	A	3566.0319	-0.0108
4	0	4	3	1	2	E	3566.0319	-0.0141
10	1	9	10	0	10	A	3575.5153	-0.0017
10	1	9	10	0	10	E	3575.5153	-0.0005
7	2	5	6	3	3	A	3628.6744	-0.0123
7	2	5	6	3	3	E	3628.6744	0.0215
7	2	5	6	3	4	A	3636.4062	-0.0038
7	2	5	6	3	4	E	3636.4615	-0.0244
5	2	3	5	1	5	A	3652.9008	-0.0084
5	2	3	5	1	5	E	3652.9008	0.0009
6	2	5	6	1	6	A	3749.8563	-0.0048
6	2	5	6	1	6	E	3749.8563	0.0075
9	3	7	8	4	5	A	3786.5611	-0.0051
9	3	7	8	4	5	E	3787.0653	0.0040
14	2	12	14	1	13	A	3887.9492	0.0022
14	2	12	14	1	13	E	3887.9492	0.0031
4	0	4	3	1	3	A	3954.9941	0.0023
4	0	4	3	1	3	E	3954.9941	-0.0015
6	2	4	6	1	6	A	3957.1642	-0.0052
6	2	4	6	1	6	E	3957.1642	0.0044
7	2	6	7	1	7	A	3987.9834	0.0075
7	2	6	7	1	7	E	3987.9834	0.0193
11	1	10	11	0	11	A	4137.6497	0.0014
11	1	10	11	0	11	E	4137.6497	0.0025
7	1	7	6	2	4	A	4217.5961	0.0056
7	1	7	6	2	4	E	4217.5961	-0.0035
8	2	7	8	1	8	A	4260.9571	-0.0227
8	2	7	8	1	8	E	4260.9571	-0.0112
7	2	5	7	1	7	A	4349.3035	-0.0101
7	2	5	7	1	7	E	4349.3035	-0.0008
15	2	13	15	1	14	A	4375.6485	-0.0022
15	2	13	15	1	14	E	4375.6485	-0.0028
8	2	7	7	3	4	A	4403.3025	-0.0081
8	2	7	7	3	4	E	4403.3025	-0.0043
8	2	7	7	3	5	A	4422.5033	0.0193
8	2	7	7	3	5	E	4422.5033	-0.0212
7	1	7	6	2	5	A	4424.9048	0.0059
7	1	7	6	2	5	E	4424.9048	-0.0058
3	1	3	2	0	2	A	4439.0266	-0.0022
3	1	3	2	0	2	E	4439.0266	0.0020
9	3	7	9	2	7	A	4474.4467	0.0024
9	3	7	9	2	7	E	4474.4129	-0.0043
9	3	6	9	2	7	A	4556.6297	0.0067
9	3	6	9	2	7	E	4556.6297	0.0229
9	2	8	9	1	9	A	4568.0003	0.0023
9	2	8	9	1	9	E	4568.0003	0.0136
5	0	5	4	1	3	A	4588.1479	-0.0114
5	0	5	4	1	3	E	4588.1479	-0.0145
8	3	6	8	2	6	A	4669.2083	0.0007
8	3	6	8	2	6	E	4669.1739	-0.0021
8	3	5	8	2	6	A	4710.9369	-0.0043
8	3	5	8	2	6	E	4710.9369	0.0068
6	1	5	5	2	3	A	4715.8101	0.0072
6	1	5	5	2	3	E	4715.8101	-0.0023
12	1	11	12	0	12	A	4728.2047	-0.0048
12	1	11	12	0	12	E	4728.2047	-0.0036
7	3	5	7	2	5	A	4820.7068	-0.0050
7	3	5	7	2	5	E	4820.6711	0.0026
6	1	5	5	2	4	A	4821.7642	0.0061
6	1	5	5	2	4	E	4821.7642	-0.0074
3	1	2	2	0	2	A	4827.9753	-0.0027
3	1	2	2	0	2	E	4827.9753	0.0012
8	2	6	8	1	8	A	4837.8065	-0.0047
8	2	6	8	1	8	E	4837.8065	0.0040
7	3	4	7	2	5	A	4839.8793	-0.0059
7	3	4	7	2	5	E	4839.8793	-0.0069
10	2	9	10	1	10	A	4907.5373	-0.0108
10	2	9	10	1	10	E	4907.5373	0.0004
6	3	4	6	2	4	A	4930.4939	-0.0001
6	3	4	6	2	4	E	4930.4242	0.0062
6	3	3	6	2	4	A	4938.2396	0.0221
6	3	3	6	2	4	E	4938.2396	-0.0114

8	2	6	7	3	4	A	4980.1406	-0.0014
8	2	6	7	3	4	E	4980.1406	-0.0004
8	1	8	7	2	5	A	4982.2260	0.0100
8	1	8	7	2	5	E	4982.2576	0.0330
8	2	6	7	3	5	E	4999.3526	-0.0062
10	3	8	9	4	6	A	5000.6541	0.0060
10	3	8	9	4	6	E	5000.9189	0.0073
5	3	3	5	2	3	A	5003.3852	0.0047
5	3	3	5	2	3	E	5003.2101	0.0074
5	3	2	5	2	3	A	5005.9664	0.0002
5	3	2	5	2	3	E	5006.1019	0.0017
4	3	2	4	2	2	A	5046.7375	0.0088
4	3	2	4	2	2	E	5046.2979	-0.0006
4	3	1	4	2	2	A	5047.3750	-0.0017
4	3	1	4	2	2	E	5047.7614	0.0024
3	3	1	3	2	1	A	5068.9635	-0.0056
3	3	1	3	2	1	E	5068.3273	0.0003
3	3	0	3	2	1	A	5069.0620	0.0002
3	3	0	3	2	1	E	5069.6434	0.0036
3	3	1	3	2	2	A	5084.4143	-0.0045
3	3	1	3	2	2	E	5083.8031	0.0018
3	3	0	3	2	2	A	5084.5110	-0.0004
3	3	0	3	2	2	E	5085.1161	0.0020
4	3	2	4	2	3	A	5092.7476	-0.0031
4	3	2	4	2	3	E	5092.3268	-0.0021
4	3	1	4	2	3	A	5093.3988	0.0001
4	3	1	4	2	3	E	5093.7923	0.0030
5	3	3	5	2	4	A	5109.3356	0.0000
5	3	3	5	2	4	E	5109.1612	-0.0007
5	3	2	5	2	4	A	5111.9226	0.0012
5	3	2	5	2	4	E	5112.0612	0.0018
6	3	4	6	2	5	A	5137.8002	-0.0022
6	3	4	6	2	5	E	5137.7271	-0.0019
6	3	3	6	2	5	A	5145.5317	0.0059
6	3	3	6	2	5	E	5145.5640	0.0020
7	3	5	7	2	6	A	5182.0238	-0.0257
7	3	5	7	2	6	E	5182.0238	0.0152
7	3	4	7	2	6	A	5201.2230	0.0000
7	3	4	7	2	6	E	5201.2230	-0.0034
5	0	5	4	1	4	A	5235.9150	0.0022
5	0	5	4	1	4	E	5235.9150	-0.0013
8	3	6	8	2	7	A	5246.0400	0.0010
8	3	6	8	2	7	E	5246.0082	-0.0019
11	2	10	11	1	11	A	5277.5525	-0.0011
11	2	10	11	1	11	E	5277.5525	0.0102
8	3	5	8	2	7	A	5287.7711	-0.0015
8	3	5	8	2	7	E	5287.7711	0.0068
8	1	8	7	2	6	A	5343.5604	0.0068
8	1	8	7	2	6	E	5343.5604	-0.0044
9	3	6	9	2	8	A	5415.7683	-0.0029
9	3	6	9	2	8	E	5415.7683	0.0099
9	2	7	9	1	9	A	5427.1469	0.0007
9	2	7	9	1	9	E	5427.1469	0.0085
2	2	1	1	1	0	A	5427.6615	0.0027
2	2	1	1	1	0	E	5427.5887	0.0028
2	2	0	1	1	0	A	5430.7645	0.0064
2	2	0	1	1	0	E	5430.8079	0.0022
10	3	8	10	2	9	A	5448.2114	0.0078
10	3	8	10	2	9	E	5448.1626	-0.0201
2	2	1	1	1	1	A	5492.5072	0.0079
2	2	1	1	1	1	E	5492.4313	0.0035
9	2	8	8	3	5	A	5504.5055	-0.0039
9	2	8	8	3	5	E	5504.5055	-0.0116
4	1	4	3	0	3	A	5521.0384	-0.0030
4	1	4	3	0	3	E	5521.0384	0.0013
6	0	6	5	1	4	A	5544.4442	0.0094
6	0	6	5	1	4	E	5544.4442	0.0068
11	3	9	11	2	10	A	5592.8853	0.0096
11	3	9	11	2	10	E	5592.8421	-0.0144
10	3	7	10	2	9	A	5597.5171	0.0018
10	3	7	10	2	9	E	5597.5171	0.0159
14	1	13	14	0	14	A	5942.0081	-0.0001
14	1	13	14	0	14	E	5942.0081	0.0014
13	3	11	13	2	12	A	5981.1866	-0.0152
13	3	11	13	2	12	E	5981.1866	0.0019
15	4	12	15	3	12	A	6010.2819	-0.0145
15	4	12	15	3	12	E	6010.2819	0.0239

7	1	6	6	2	4	A	6013.9210	0.0015
7	1	6	6	2	4	E	6013.9210	-0.0082
10	2	8	10	1	10	A	6117.7449	0.0062
10	2	8	10	1	10	E	6117.7449	0.0133
4	1	3	3	0	3	A	6168.7965	0.0016
4	1	3	3	0	3	E	6168.7965	0.0055
7	1	6	6	2	5	A	6221.2409	0.0131
7	1	6	6	2	5	E	6221.2409	0.0007
9	2	7	8	3	5	A	6363.6659	0.0084
9	2	7	8	3	5	E	6363.6659	-0.0028
7	0	7	6	1	5	A	6428.3088	0.0041
7	0	7	6	1	5	E	6428.3088	0.0021
6	0	6	5	1	5	A	6514.4494	0.0008
6	0	6	5	1	5	E	6514.4494	-0.0023
13	4	10	13	3	10	A	6524.9225	-0.0164
3	2	2	2	1	1	A	6568.1113	0.0195
3	2	2	2	1	1	E	6568.0708	0.0036
5	1	5	4	0	4	A	6582.1601	-0.0035
5	1	5	4	0	4	E	6582.1601	0.0008
3	2	1	2	1	1	A	6583.5437	0.0022
3	2	1	2	1	1	E	6583.5437	0.0021
12	4	8	12	3	9	A	6734.9709	-0.0028
12	4	8	12	3	9	E	6734.9709	0.0020
3	2	2	2	1	2	A	6762.6243	0.0112
3	2	2	2	1	2	E	6762.5787	-0.0104
3	2	1	2	1	2	A	6778.0634	0.0007
3	2	1	2	1	2	E	6778.0634	0.0000
11	4	8	11	3	8	A	6842.8511	-0.0020
11	4	8	11	3	8	E	6842.7649	-0.0055
10	4	7	10	3	7	A	6940.5671	0.0096
10	4	7	10	3	7	E	6940.4262	0.0094
10	4	6	10	3	7	A	6947.3117	-0.0112
10	4	6	10	3	7	E	6947.3972	-0.0036
9	4	6	9	3	6	A	7007.5635	-0.0075
9	4	6	9	3	6	E	7007.2902	-0.0086
9	4	5	9	3	6	A	7010.4845	-0.0062
9	4	5	9	3	6	E	7010.6939	-0.0024
8	4	5	8	3	5	A	7051.5358	0.0003
8	4	5	8	3	5	E	7051.0223	-0.0023
8	4	4	8	3	5	A	7052.6640	-0.0001
8	4	4	8	3	5	E	7053.0990	0.0001
10	1	10	9	2	8	A	7068.2427	0.0039
10	1	10	9	2	8	E	7068.2427	-0.0066
7	4	4	7	3	4	A	7079.0777	-0.0029
7	4	4	7	3	4	E	7078.3318	0.0037
7	4	3	7	3	4	A	7079.4728	0.0146
7	4	3	7	3	4	E	7080.1098	-0.0012
9	4	5	9	3	7	A	7092.6711	0.0015
9	4	5	9	3	7	E	7092.8936	0.0077
8	4	5	8	3	6	A	7093.2713	0.0022
8	4	5	8	3	6	E	7092.7883	0.0096
8	4	4	8	3	6	A	7094.3979	0.0002
8	4	4	8	3	6	E	7094.8555	0.0025
6	4	3	6	3	3	A	7095.4898	0.0025
6	4	3	6	3	3	E	7094.5852	0.0021
6	4	2	6	3	3	A	7095.5898	-0.0007
6	4	2	6	3	3	E	7096.3320	0.0021
11	4	8	11	3	9	A	7096.4505	-0.0091
10	4	6	10	3	8	A	7096.6210	-0.0138
10	4	6	10	3	8	E	7096.7047	-0.0146
7	4	4	7	3	5	A	7098.2438	-0.0102
7	4	4	7	3	5	E	7097.5377	-0.0081
7	4	3	7	3	5	A	7098.6335	0.0019
7	4	3	7	3	5	E	7099.3280	-0.0006
6	4	3	6	3	4	A	7103.2147	0.0039
6	4	3	6	3	4	E	7102.4105	-0.0055
6	4	2	6	3	4	A	7103.3138	-0.0002
6	4	2	6	3	4	E	7104.1671	0.0042
5	4	1	5	3	2	A	7104.6830	-0.0292
5	4	1	5	3	2	E	7105.3922	0.0015
5	4	2	5	3	2	A	7104.6830	-0.0085
5	4	2	5	3	2	E	7103.6761	0.0303
5	4	1	5	3	3	A	7107.3001	0.0022
5	4	1	5	3	3	E	7108.2897	0.0014
5	4	2	5	3	3	A	7107.3001	0.0229
5	4	2	5	3	3	E	7106.5407	-0.0027
4	4	0	4	3	1	A	7109.4685	-0.0049

4	4	0	4	3	1	E	7109.9086	-0.0024
4	4	1	4	3	1	A	7109.4685	-0.0026
4	4	1	4	3	1	E	7108.1510	-0.0148
4	4	1	4	3	2	A	7110.1175	-0.0017
4	4	1	4	3	2	E	7109.6216	-0.0046
4	4	0	4	3	2	A	7110.1175	-0.0040
12	4	8	12	3	10	A	7141.3109	0.0165
12	4	8	12	3	10	E	7141.3109	0.0162
8	0	8	7	1	6	A	7236.9878	0.0017
8	0	8	7	1	6	E	7236.9878	0.0004
8	1	7	7	2	5	A	7274.6974	0.0187
8	1	7	7	2	5	E	7274.6974	0.0093
5	1	4	4	0	4	A	7552.1723	-0.0051
5	1	4	4	0	4	E	7552.1723	-0.0013
6	1	6	5	0	5	A	7630.5315	-0.0130
6	1	6	5	0	5	E	7630.5315	-0.0087
8	1	7	7	2	6	A	7636.0275	0.0111
8	1	7	7	2	6	E	7636.0275	-0.0007
4	2	3	3	1	2	A	7675.6660	-0.0079
4	2	3	3	1	2	E	7675.6660	0.0085
4	2	2	3	1	2	A	7721.6859	-0.0099
4	2	2	3	1	2	E	7721.6859	-0.0020
10	2	8	9	3	6	A	7770.2043	-0.0019
10	2	8	9	3	6	E	7770.2043	-0.0181
7	0	7	6	1	6	A	7782.2122	-0.0033
7	0	7	6	1	6	E	7782.2122	-0.0059
9	0	9	8	1	7	A	7972.5331	-0.0040
9	0	9	8	1	7	E	7972.5331	-0.0046