

Electronic Supplementary Information

1,2,4-Triazolato paddlewheel dibismuth complexes with very short Bi(II)-Bi(II) bonds: bismuth(III) oxidation of 1,2,4-triazolato anions into neutral N-1,2,4-triazolyl radicals

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General information

Experimental condition, reagents and materials.

All manipulations were carried out in a nitrogen atmosphere under anaerobic conditions using standard Schlenk, vacuum line and glove box techniques. The solvents were thoroughly dried, deoxygenated and distilled in a nitrogen atmosphere prior to use. THF-*d*₈ were dried with metallic potassium before the use. 3,5-diphenyl-1H-1,2,4-triazole [1, H(3,5-Ph₂tz)]^[1], 3,5-diisopropyl-1H-1,2,4-triazole [2, H(3,5-*i*Pr₂tz)]^[2], 3,5-Diphenyltriazolatopotassium [3, K(3,5-Ph₂tz)]^[3] and 3,5-diisopropyltriazolato potassium [4, K(3,5-*i*Pr₂tz)]^[2, 4] were prepared according to the literatures. BiCl₃ were purchased from Aldrich.

Spectroscopy Measurements.

The ¹H NMR and ¹³C{¹H} NMR spectra were recorded with a BrukerDRX-600 spectrometer. IR measurements were carried out on a NICOLET 360 FT-IR spectrometer from Nujol mulls prepared in a dry box. Melting points were measured in sealed argon-filled capillaries without temperature correction with an apparatus XT4-100A (Electronic and Optical Instruments, Beijing).

The EPR measurements were performed using a Bruker A300 apparatus (Germany), operating at the X-band. Typical spectrometer settings were microwave frequency (Ph₂tzK/*i*Pr₂tzK), 9.848/9.848 GHz; modulation amplitude, 1.0/1.0 G; modulation frequency, 100/100 kHz; microwave power, 6.43/6.43 mW; conversion time, 160/160 ms; time constant, 327.68/327.68 ms, and receiver gain, 1×10⁴/1×10⁴. The solutions of DMPO (200 mM), [K(3,5-Ph₂tz)]/[K(3,5-*i*Pr₂tz)] (2.59/1.91mg) and BiCl₃ (1.05 mg) were prepared using anhydrous THF. BiCl₃ solution (0.2 mL) was added into the mixture of DMPO (0.1 mL) and [K(3,5-Ph₂tz)]/[K(3,5-*i*Pr₂tz)] (0.2/0.2 mL). The mixture was loaded into a paramagnetic tube (NORELL S EPR 250S), and then cooled at -30 °C for 10 min. Subsequently, the EPR singal was detected by raising temperature slowly to room temperature in 40-50 min.

Cyclic voltammeries were performed on a CHI660E electrochemical workstation (CH Instrumental Co., China) with a conventional three-electrode system consisted of a glassy carbon electrode(GCE, 3 mm in diameter) as the working electrode, the Ag/AgNO₃ (a silver wire in a 0.1 M AgNO₃ acetonitrile solution) reference electrode and a platinum wire as the auxiliary electrode at room temperature under nitrogen. Cyclic voltammeries were carried out with a scan rate of 100 mv/s in a 0.04 M Bu₄NPF₆-CH₃CN solution. Ferrocene was added to the electrolyte solution at the end of a series of experiments. The Fc/Fc couple served as internal standard. Bu₄NPF₆ was recrystallized three times from 95% ethanol and dried at 125 °C in vacuo for 24 h prior to use.

Computational aspects.

All calculations were performed using Gaussian 09 package.^[5] Cartesian coordinates of the optimized geometries of complexes **3**, **4**, [Bi(Ph₂tz)₃](I⁻Ph), [Bi(iPr₂tz)₃](I⁻iPr), [Bi(Ph₂tz)₂][•](II⁻Ph), [Bi(iPr₂tz)₂][•](II⁻iPr), [3,5-Ph₂tz][•](III⁻Ph), [3,5-iPr₂tz][•](III⁻iPr), the dimer III(N1)⁻Ph -III(N1)⁻Ph, III(N1)⁻Ph -III(N4)⁻Ph, III(N4)⁻Ph -III(N4)⁻Ph, III(N1)⁻iPr -III(N1)⁻iPr, III(N1)⁻iPr -III(N4)⁻iPr, and III(N4)⁻iPr -III(N4)⁻iPr by B3LYP method with the combination of 6-311G(d) basis set for C, N, and H atoms and Lanl2dz basis set and pseudopotential for Bi atoms,^[6] SMD solvation model of THF, respectively.^[7] We also analyzed the orbital components of some key molecular orbitals that made the dominant contributions to the bonds between the (Bi₂)⁴⁺ unit (denoted by F1) and the four coordinating triazolato {4[3,5-iPr₂pz]}⁴⁻ (denoted by F2) by the charge decomposition analysis (CDA) method^[8] implemented in the Multiwfn 3.3.7 software packages,^[9] with the limited geometry of **4** in D4 symmetry. The relative energies were calculated from the Gibbs free energies in THF at standard state (298.15 K, 1atm).

Synthesis.

{η¹,η¹-3,5-Ph₂tz}₂(Bi-Bi){η¹,η¹-3,5-Ph₂tz}₂ (**3-toluene**):

To a mixture of BiCl₃ (0.315 g, 1.0 mmol) and K[3,5-Ph₂tz] (**1**, 0.778 g, 3.0 mmol) was added 30 mL tetrahydrofuran (THF) via a syringe. After the mixture was stirred for 3 days, the volatile components were removed under the reduced pressure. The resultant residue was extracted by toluene (3× 15 mL) and the solution was filtered through Celite. The solution was filtered through Celite and the filtrate was concentrated to about 25 mL to give a small amount of free ligand H[3,5-Ph₂tz]. The mother liquid was transferred to another Schlenk flask, further concentrated to about 15 mL, and then kept at about -10°C to afford **3-toluene** as orange crystals (0.21 g, 30.2%). The mother liquid was further concentrated to about 8 mL to afford the mixture of **3-toluene** and free ligand H[3,5-Ph₂tz] (**5**), which were difficultly separated. M.p.: 150°C, turn black, >250 °C decomp.. ¹H NMR (600 MHz, THF-*d*₈, 23 °C): δ = 8.13 (br. s., 16H, -CH for Ph ring), 7.32 (br. s., 16H, -CH for Ph ring), 7.23(br. s., 9H, -CH for Ph ring of **3** and trace toluene remained after vacuum drying), ppm, 2.31 (s, 0.6H, -CH₃ for trace toluene), ppm; ¹³C{¹H} NMR (150 MHz, THF-*d*₈, 23 °C): δ = 161.15 (s, -C for tz ring), 132.94-127.26 (s, -CH for Ph ring of **3** and trace toluene), 21.52 (s,-CH₃ for toluene) ppm; IR(Nujol mull, cm⁻¹): 2958(vs), 2923(vs), 2854(vs), 2373(vw), 1955(vw), 1671(vw), 1602(vw), 1544(vw), 1461(s), 1378(m), 1261(s), 1089(s), 1024(s), 919(vw), 800(s), 730(m), 696(m); Anal. calcd. for C₅₆H₄₀Bi₂N₁₂·0.2 toluene (about 0.8 toluene molecule lost after vacuum drying).

{η¹,η¹-3,5-iPr₂tz}₂(Bi-Bi){η¹,η¹-3,5-iPr₂tz}₂ (**4**):

To a mixture of BiCl₃ (0.315 g, 1.0 mmol) and K[3,5-iPr₂pz]·THF (**2**, 0.574 g, 3.0 mmol) was added THF (30 mL) via a syringe. After the mixture was stirred for 7 days, the volatile components were removed under the reduced pressure. The resultant residue was extracted by toluene (4 × 10 mL). The solution was filtered through Celite and the

filtrate was concentrated under the reduced pressure to about 20 mL to give **4** as orange crystals at room temperature. The mother liquid was further concentrated to afford another portion of **4** and a small amount of colorless free ligand H[3,5-*i*Pr₂tz] (**6**)at -20°C. The total yield of **4** is 0.29 g (56.5 %). M.p.: 190 °C, turn black, >260°C decomp.. ¹H NMR (600 MHz, THF-*d*₈, 23°C): δ = 3.06-3.04 (m, slightly overlapped, 8H, CH for -*i*Pr), 1.31,1.29 (d, 48H, CH₃ for -*i*Pr) ppm; ¹³C{¹H} NMR (150 MHz, C₆D₆, 23°C): δ = 178.86 (-C for tz ring), 28.62(-CH for -*i*Pr), 22.43, 22.42(-CH₃ for -*i*Pr) ppm; IR(Nujol mull, cm⁻¹): 2958(vs), 2923(vs), 2854(vs), 2599(vw), 2373(vw), 1606(vw), 1457(s), 1378(s), 1261(s), 1166(m), 892(w), 800(s), 690(w), 613(vw), 528(vw), 464(m); Anal. calcd for C₃₂H₅₆Bi₂N₁₂: C 37.43, H 5.50, N 16.37; Found: C 37.65, H 5.62, N 16.21.

References

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- (9) Lu, T.; Chen, F. *J. Comp. Chem.* 2012, **33**, 580–592.

Full citation for Gaussian:

Gaussian 09, Revision C.01., M. J. Frisch, G. W. Trucks, H. B. Schlegel, G. E. Scuseria, M. A. Robb, J. R. Cheeseman, G. Scalmani, V. Barone, B. Mennucci, G. A. Petersson, H. Nakatsuji, M. Caricato, X. Li, H. P. Hratchian, A. F. Izmaylov, J. Bloino, G. Zheng, J. L. Sonnenberg, M. Hada, M. Ehara, K. Toyota, R. Fukuda, J. Hasegawa, M. Ishida, T. Nakajima, Y. Honda, O. Kitao, H. Nakai, T. Vreven, J. A. Montgomery, Jr., J. E. Peralta, F. Ogliaro, M. Bearpark, J. J. Heyd, E. Brothers, K. N. Kudin, V. N. Staroverov, T. Keith, R. Kobayashi, J. Normand, K. Raghavachari, A. Rendell, J. C. Burant, S. S. Iyengar, J. Tomasi, M. Cossi, N. Rega, J. M. Millam, M. Klene, J. E. Knox, J. B. Cross, V. Bakken, C. Adamo, J. Jaramillo, R. Gomperts, R. E. Stratmann, O. Yazyev, A. J. Austin, R. Cammi, C. Pomelli, J. W. Ochterski, R. L. Martin, K. Morokuma, V. G. Zakrzewski, G. A. Voth, P. Salvador, J. J. Dannenberg, S. Dapprich, A. D. Daniels, O. Farkas, J. B. Foresman, J. V. Ortiz, J. Cioslowski, and D. J. Fox, Gaussian 09, Revision C.01, Gaussian, Inc., Wallingford CT, 2010

2. ^1H and $^{13}\text{C}\{^1\text{H}\}$ NMR data for **3 and **4****

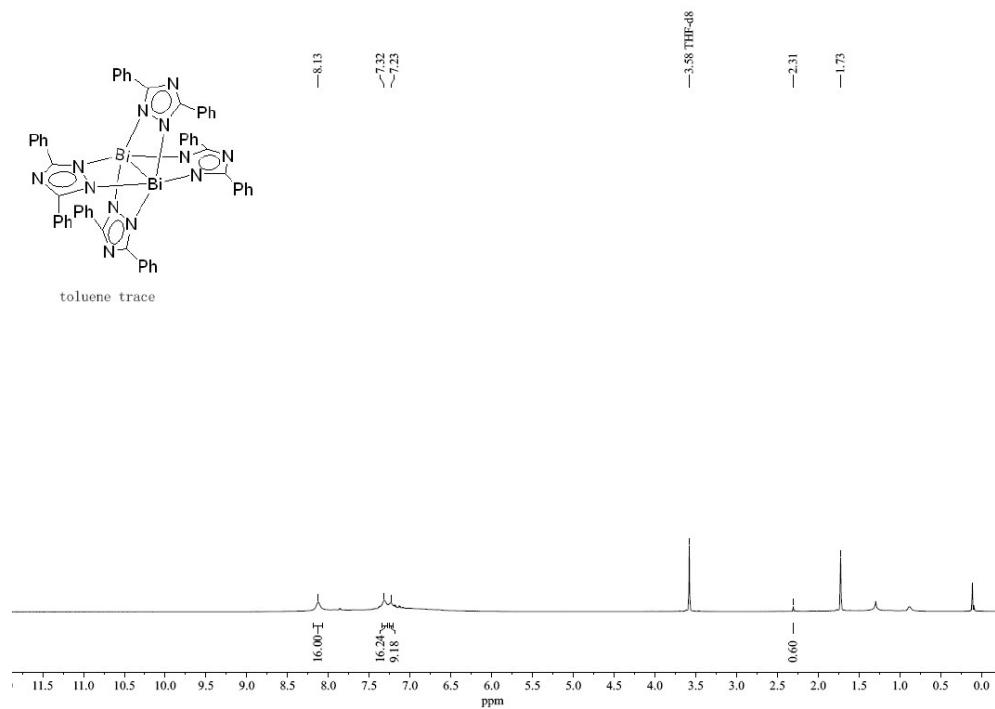


Figure S1. The ^1H NMR spectrum of **3** in $\text{THF}-d_8$

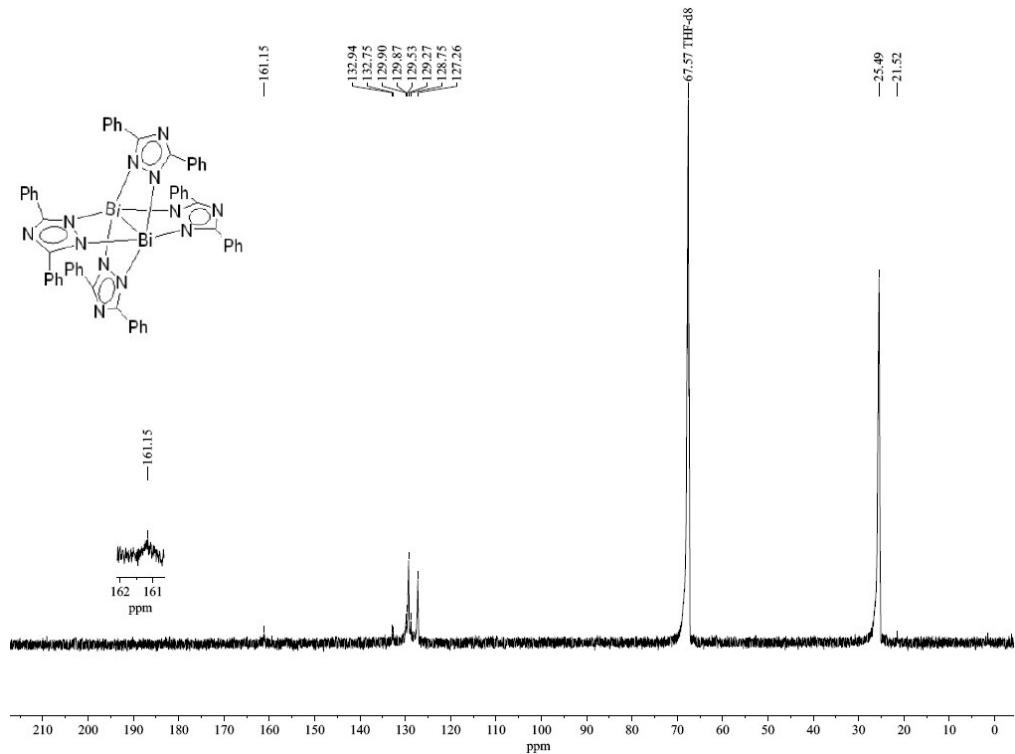


Figure S2. The $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of **3** in $\text{THF}-d_8$

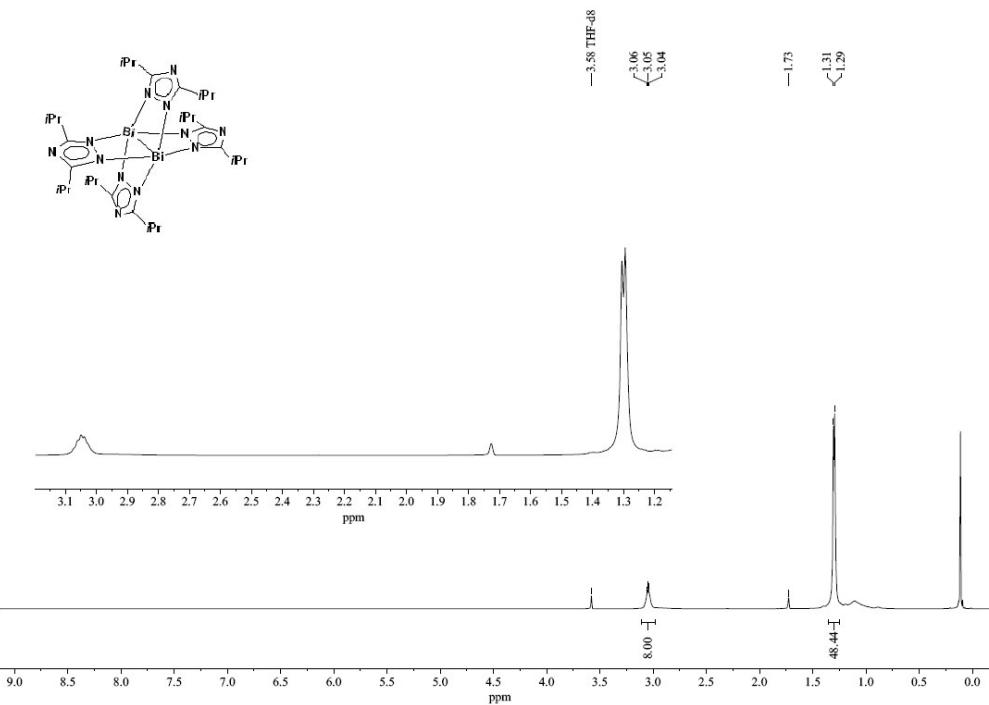


Figure S3. The ^1H NMR spectrum of **4** in $\text{THF}-d_8$.

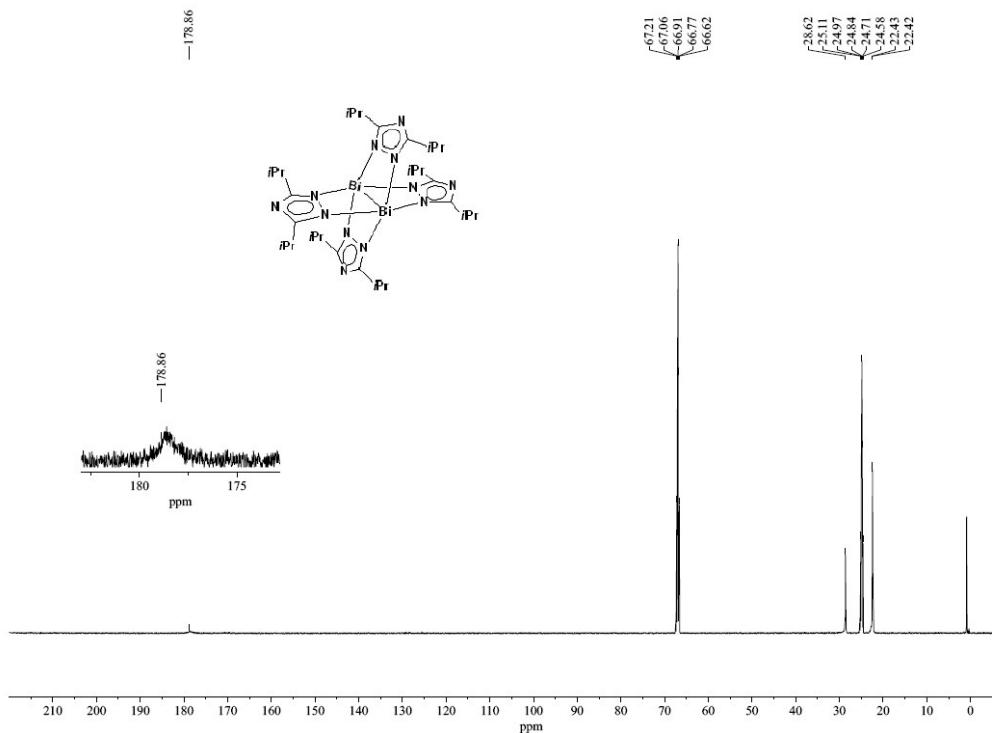


Figure S4. The $^{13}\text{C}\{^1\text{H}\}$ NMR spectrum of **4** in $\text{THF}-d_8$.

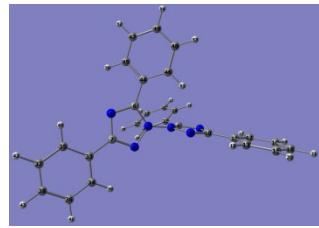


Figure S5. Molecular structure of the Dimer $\text{III}(\text{N1})^{\text{Ph}}-\text{III}(\text{N1})^{\text{Ph}}$

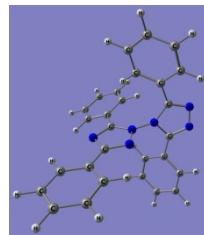


Figure S6. Molecular structure of the dimer $\text{III}(\text{N1})^{\text{Ph}}-\text{III}(\text{N4})^{\text{Ph}}$

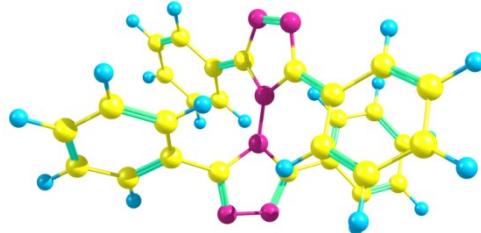


Figure S7. Molecular structure of the dimer $\text{III}(\text{N4})^{\text{Ph}}-\text{III}(\text{N4})^{\text{Ph}}$

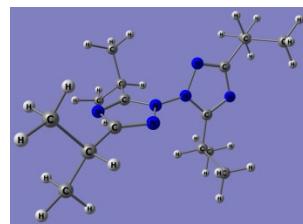


Figure S8. Molecular structure of the Dimer $\text{III}(\text{N1})^{\text{iPr}}-\text{III}(\text{N1})^{\text{iPr}}$

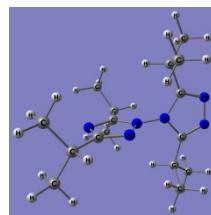


Figure S9. Molecular structure of the dimer $\text{III}(\text{N1})^{\text{iPr}}-\text{III}(\text{N4})^{\text{iPr}}$

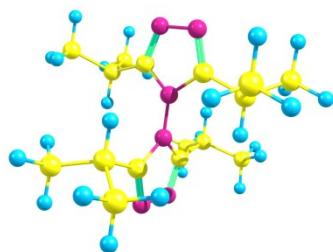


Figure S10. Molecular structure of the dimer $\text{III}(\text{N4})^{\text{iPr}}\text{-}\text{III}(\text{N4})^{\text{iPr}}$

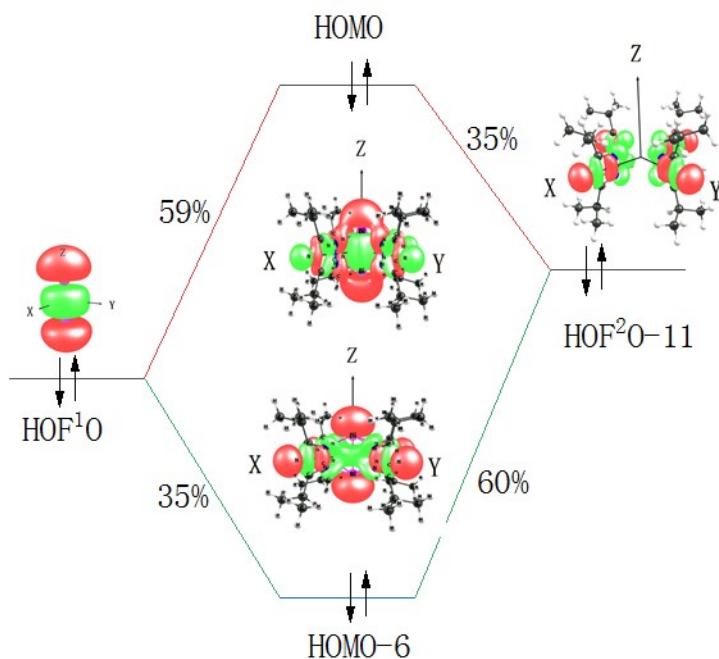


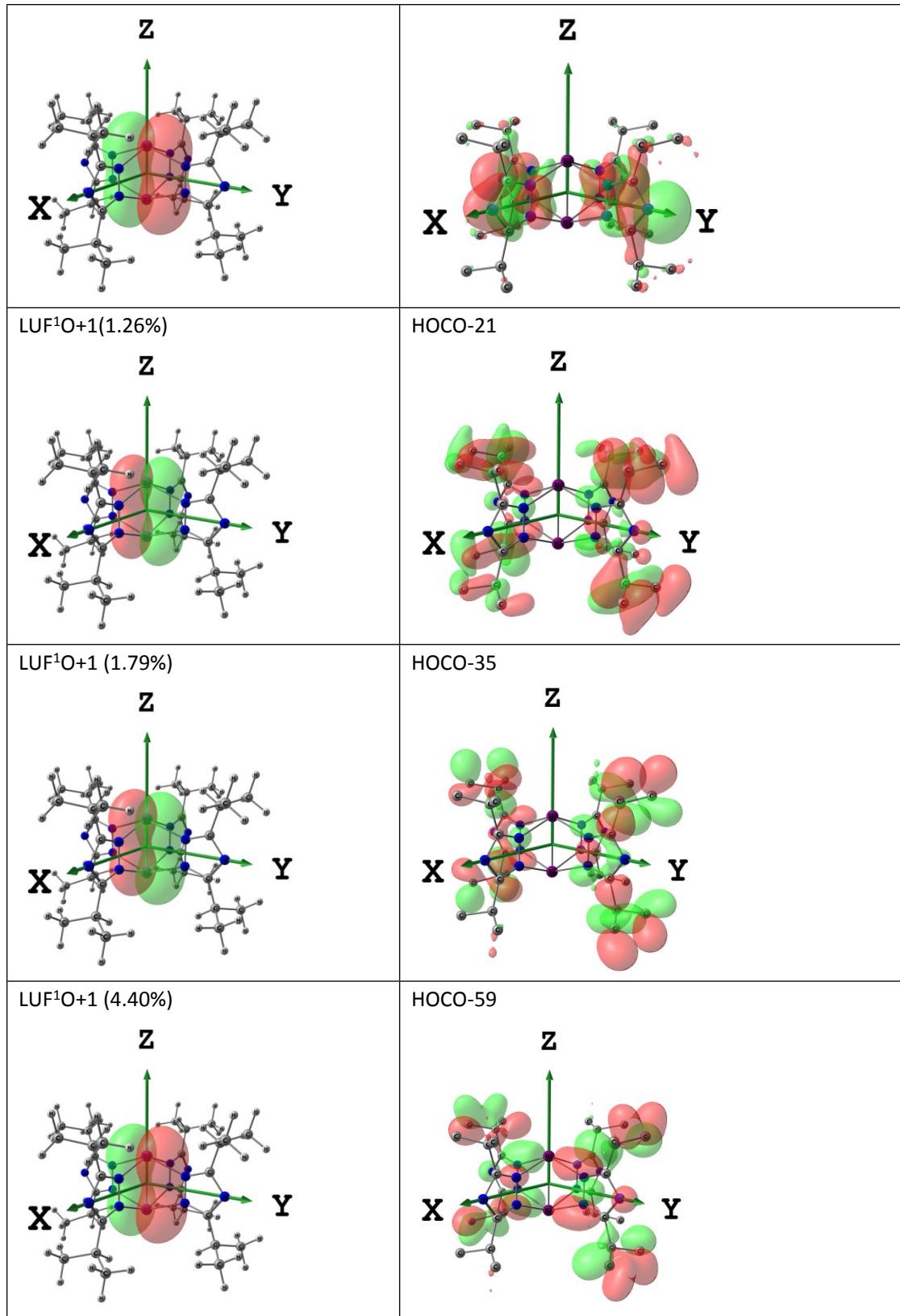
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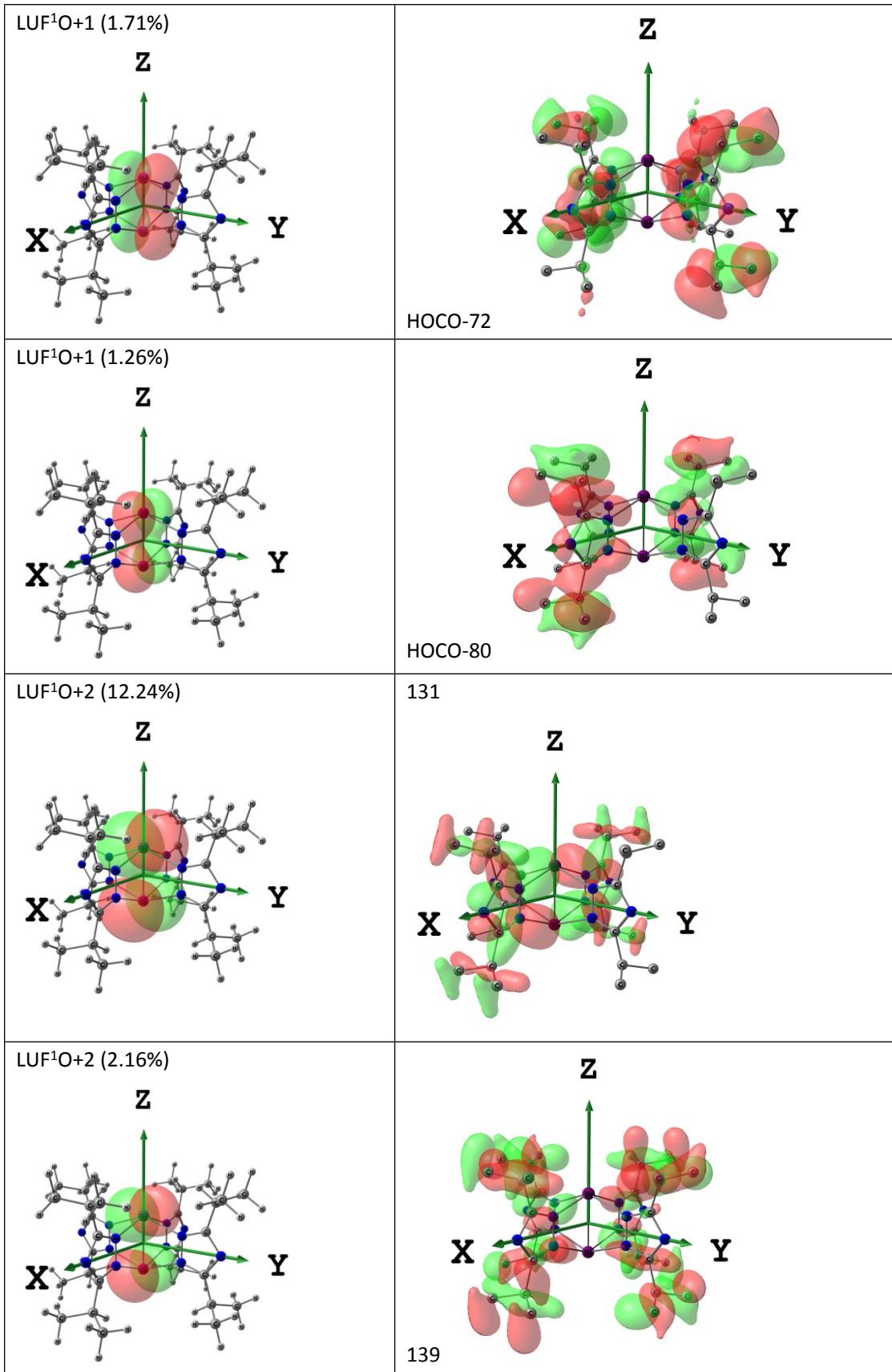
Supplementary description for Figure S11:

Contributions of lowest unoccupied F1 orbitals (LUF¹O) in highest occupied complex orbitals (HOCO).

*left column: lowest unoccupied F1 orbitals extracted from highest occupied complex orbitals; right column: highest occupied complex orbitals(HOCO); *Smaller contour value of 0.006 was used in drawing the orbitals of F1 due to the low contribution ratio in each HOCO.

Unoccupied Fragment-1 orbital (Contour =0.006)	Occupied Complex Orbital (Contour 0.02)
LUF ¹ O+1 (3.54%)	HOCO-13





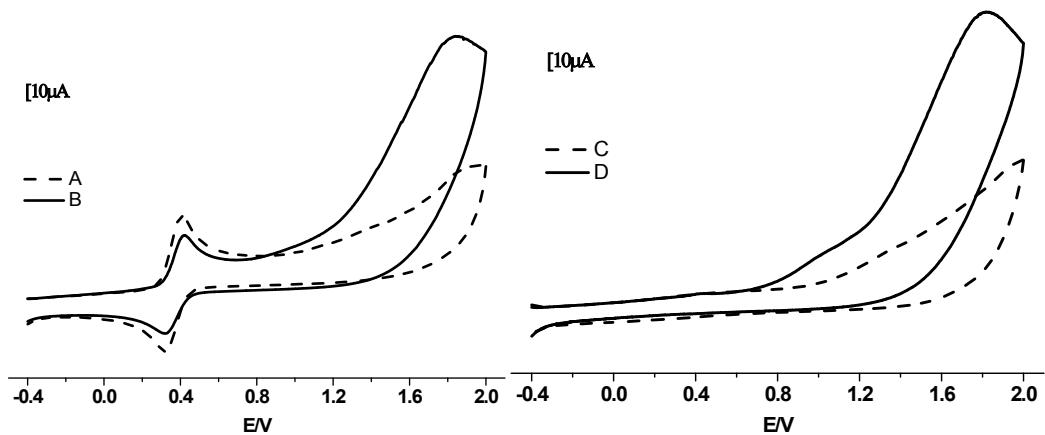
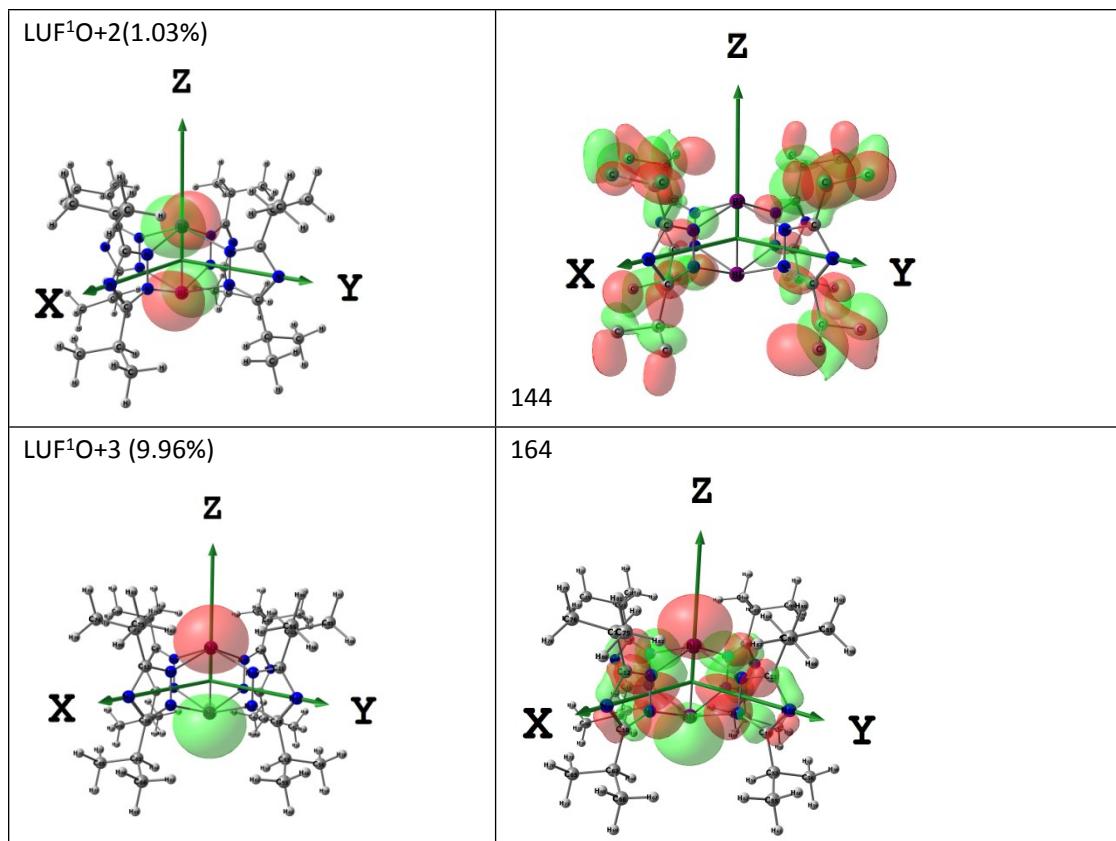


Figure S12. The cyclic voltammograms of Fc/Fc^+ (A), $\text{K}^+[\text{3,5-}i\text{Pr}_2\text{tz}]^-$ (**2**) plus Fc/Fc^+ (B), Bu_4NPF_6 (D, 0.04 M) in acetonitrile as blank(C) , and $\text{K}^+[\text{3,5-}i\text{Pr}_2\text{tz}]^-$ (**2**), 1.0×10^{-3} M in $\text{CH}_3\text{CN-Bu}_4\text{NPF}_6$ (0.04 M) (D), were measured at 100 mV s^{-1} at 23°C vs. AgNO_3/Ag .

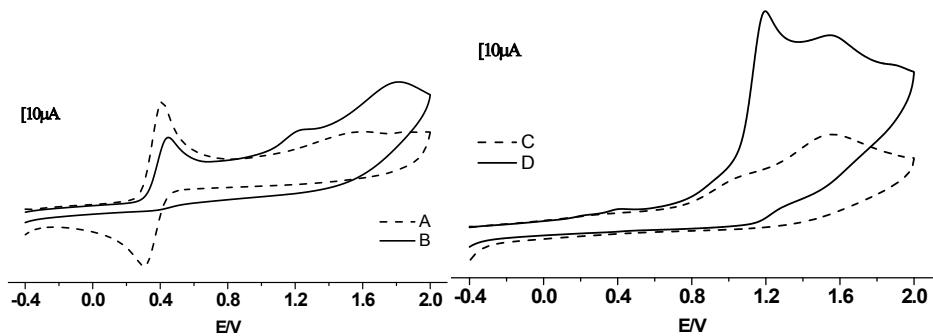


Figure S13. The cyclic voltammograms of Fc/Fc^+ (A), $\text{K}^+[\text{3,5-Ph}_2\text{tz}]^-$ (**1**) plus Fc/Fc^+ (B), Bu_4NPF_6 (D, 0.04 M) in acetonitrile as blank(C) , and $\text{K}^+[\text{3,5- Ph}_2\text{tz}]^-$ (**1**), 2.5×10^{-4} M in $\text{CH}_3\text{CN}-\text{Bu}_4\text{NPF}_6$ (0.04 M) (D), were measured at 100 mV s^{-1} at 23°C vs. AgNO_3/Ag .

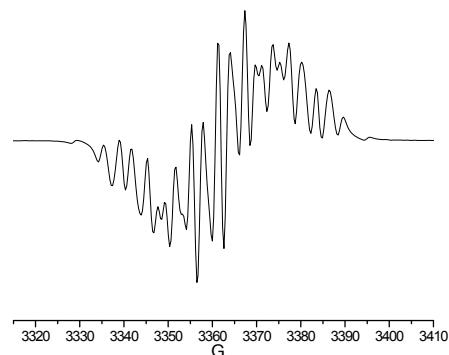


Figure S14. X-band EPR spectrum of DMPO[3,5-Ph₂tz][•] adduct (**7^{Ph}**) in anhydrous THF with Bi^{3+} , $g = 2.009$, $G = 3361.89$.

Table S1. Crystal Data Collection Parameters of Complexes 3 and 4

Complexes	3*	4
formula	C ₆₃ H ₄₈ N ₁₂ Bi ₂	C ₃₂ H ₅₆ N ₁₂ Bi ₂
fw	1391.09	1026.85
Cryst. size (mm)	0.27 × 0.15 × 0.05	0.27 × 0.22 × 0.08
Cryst. Syst.	Triclinic	Triclinic
Space group	P -1	P -1
a (Å)	8.8511(3)	10.1097(3)
b (Å)	11.8616(4)	10.1538(3)
c (Å)	14.2639(4)	10.1748(4)
α(deg)	97.805(3)	97.933(3)
β(deg)	104.276(3)	99.017(3)
γ(deg)	107.123(3)	96.358(3)
V (Å ³)	1351.40(7)	1012.28(6)
Z	1	1
D _c (g cm ⁻³)	1.709	1.684
Absorp. Coeffi. (mm ⁻¹)	6.395	8.717
F (000)	676.0	498.0
T (K)	293(2)	293(2)
range (deg)	2.8–25.68	3.09–25.68
reflns measured	30468	11744
unique reflns	5135	3835
R _{int}	0.0602	0.0326
R1, wR2 [<i>I</i> > 2σ(<i>I</i>)] ^a	0.0262, 0.0491	0.0334, 0.0697
R1, wR2 (all data) ^b	0.0350, 0.0510	0.0452, 0.0772
GOF	1.023	1.067
Δ□(max) (eÅ ⁻³)	0.79	1.55
Δ□(min) (eÅ ⁻³)	-0.76	-0.73

^a R1 = $\sum |F_O| - |F_C| / \sum |F_O|$. ^b wR2 = $[\sum w(F_O^2 - F_C^2)^2 / \sum w(F_O^2)^2]^{0.5}$.

Table S2. Selected Bond Distances [Å] and Angles (deg) of Complex 3

Complex 3			
Bi(1)-Bi(1A)	2.8721(3)	N(2)-Bi(1A)	2.411(3)
N(5)-Bi(1A)	2.473(3)	Bi(1)-N(1)	2.461(3)
Bi(1)-N(2A)	2.411(3)	Bi(1)-N(4)	2.422(3)
Bi1)-N(5A)	2.473(3)	N(1)-Bi(1)-N(5A)	88.41(11)

N(2A)-Bi(1)-N(1)	144.32(9)	N(2A)-Bi(1)-N(4)	89.14(11)
N(2A)-Bi(1)-N(5A)	80.21(11)	N(4)-Bi(1)-N(1)	80.72(11)
N(4)-Bi(1)-N(5A)	144.45(9)	N(1)-Bi(1)-Bi(1A)	71.47(7)
N(2A)-Bi(1)-Bi(1A)	72.85(7)	N(4)-Bi(1)-Bi(1A)	72.65(7)
N(5A)-Bi(1)-Bi(1A)	71.80(7)	N(2)-N(1)-Bi(1)	107.3(2)

Table S3. Selected Bond Distances [Å] and Angles (deg) of Complex 4

Complex 4			
Bi(1)-Bi(1A)	2.8650(4)	Bi(1)-N(1)	2.472(5)
Bi(1)-N(2A)	2.417(5)	Bi(1)-N(4)	2.402(5)
Bi(1)-N(5A)	2.484(6)	N(2)- Bi(1A)	2.417(5)
N(5)-Bi(1A)	2.484(6)	N(1)-Bi(1)-N(5A)	85.22(18)
N(2A)-Bi(1)-N(1)	144.81(15)	N(2A)-Bi(1)-N(5A)	84.11(18)
N(4)-Bi(1)-N(1)	84.23(18)	N(4)-Bi(1)-N(2A)	85.37(19)
N(4)-Bi(1)-N(5A)	144.62(16)	N(1)-Bi(1)-Bi(1A)	72.04(11)
N(2A)-Bi(1)-Bi(1A)	72.77(12)	N(4) -Bi(1)-Bi(1A)	72.89(11)
N(5A)-Bi(1)-Bi(1A)	71.73(12)	N(5) -N(4)-Bi(1)	109.7(4)

Table S4. Cartesian Coordinates of Complex 3

Bi	-1.440544000	-0.000049000	-0.000001000
Bi	1.440546000	0.000050000	-0.000001000
N	0.045960000	-3.407842000	2.857207000
N	0.045717000	3.407868000	-2.857187000
N	-0.045716000	-3.407761000	-2.857313000
N	0.681261000	-1.631546000	1.680554000
N	-0.685044000	-1.702640000	1.627962000
N	-0.685165000	1.702601000	-1.627959000
N	0.681146000	1.631604000	-1.680557000
N	0.685166000	-1.702540000	-1.628021000
N	-0.681145000	-1.631544000	-1.680613000
C	1.084317000	-2.668247000	2.430313000
C	-1.031860000	-2.781473000	2.347745000
C	-1.032060000	2.781414000	-2.347738000
C	1.084127000	2.668335000	-2.430312000
C	1.032061000	-2.781331000	-2.347833000
C	-1.084126000	-2.668253000	-2.430398000
C	-2.410850000	3.247409000	-2.570061000
C	-2.621671000	4.554157000	-3.034727000
C	-3.523292000	2.425156000	-2.343219000
C	-3.911227000	5.027619000	-3.253188000
C	-4.812568000	2.902821000	-2.560157000
C	-5.012269000	4.205837000	-3.013876000
H	-1.766083000	5.191055000	-3.220341000
H	-3.386867000	1.402552000	-2.013882000
H	-4.056532000	6.041449000	-3.609333000
H	-5.661994000	2.253053000	-2.381273000
H	-6.017163000	4.575900000	-3.183711000
C	2.487910000	2.967045000	-2.755087000
C	3.466081000	1.962982000	-2.779383000
C	2.858958000	4.283594000	-3.063415000
C	4.787993000	2.273475000	-3.086531000
C	4.180813000	4.589725000	-3.370513000
C	5.150718000	3.587373000	-3.379513000
H	3.188933000	0.932582000	-2.589933000
H	2.105024000	5.061024000	-3.054579000
H	5.532783000	1.485734000	-3.109858000
H	4.454502000	5.613110000	-3.601893000

H	6.180313000	3.827194000	-3.620550000
C	-2.487911000	-2.966959000	-2.755171000
C	-3.466092000	-1.962903000	-2.779405000
C	-2.858952000	-4.283497000	-3.063555000
C	-4.788004000	-2.273393000	-3.086550000
C	-4.180809000	-4.589624000	-3.370649000
C	-5.150722000	-3.587281000	-3.379588000
H	-3.188950000	-0.932510000	-2.589908000
H	-2.105011000	-5.060921000	-3.054765000
H	-5.532802000	-1.485658000	-3.109828000
H	-4.454492000	-5.613002000	-3.602073000
H	-6.180318000	-3.827100000	-3.620622000
C	2.410850000	-3.247321000	-2.570169000
C	2.621669000	-4.554042000	-3.034912000
C	3.523294000	-2.425089000	-2.343261000
C	3.911225000	-5.027498000	-3.253383000
C	4.812570000	-2.902749000	-2.560211000
C	5.012269000	-4.205738000	-3.014007000
H	1.766080000	-5.190923000	-3.220576000
H	3.386871000	-1.402506000	-2.013857000
H	4.056529000	-6.041308000	-3.609589000
H	5.661998000	-2.252997000	-2.381273000
H	6.017163000	-4.575797000	-3.183851000
C	-2.410619000	-3.247554000	2.570063000
C	-3.523110000	-2.425383000	2.343165000
C	-2.621362000	-4.554299000	3.034772000
C	-4.812359000	-2.903126000	2.560096000
C	-3.910891000	-5.027839000	3.253225000
C	-5.011983000	-4.206138000	3.013861000
H	-3.386745000	-1.402783000	2.013787000
H	-1.765735000	-5.191132000	3.220425000
H	-5.661824000	-2.253421000	2.381167000
H	-4.056136000	-6.041665000	3.609406000
H	-6.016856000	-4.576260000	3.183688000
C	2.488122000	-2.966862000	2.755083000
C	2.859256000	-4.283382000	3.063431000
C	3.466230000	-1.962737000	2.779353000
C	4.181132000	-4.589424000	3.370526000
C	4.788163000	-2.273141000	3.086498000
C	5.150973000	-3.587011000	3.379501000
H	2.105371000	-5.060861000	3.054615000

H	3.189015000	-0.932359000	2.589886000
H	4.454887000	-5.612788000	3.601922000
H	5.532903000	-1.485352000	3.109805000
H	6.180585000	-3.826763000	3.620534000
C	-2.488122000	2.966775000	2.755173000
C	-2.859251000	4.283285000	3.063570000
C	-3.466237000	1.962655000	2.779393000
C	-4.181129000	4.589322000	3.370664000
C	-4.788171000	2.273054000	3.086538000
C	-5.150976000	3.586915000	3.379589000
H	-2.105362000	5.060760000	3.054791000
H	-3.189026000	0.932282000	2.589888000
H	-4.454880000	5.612678000	3.602098000
H	-5.532916000	1.485269000	3.109806000
H	-6.180589000	3.826663000	3.620622000
C	2.410620000	3.247465000	2.570181000
C	3.523113000	2.425312000	2.343232000
C	2.621359000	4.554186000	3.034960000
C	4.812361000	2.903050000	2.560181000
C	3.910887000	5.027720000	3.253432000
C	5.011981000	4.206038000	3.014017000
H	3.386753000	1.402730000	2.013795000
H	1.765730000	5.191004000	3.220654000
H	5.661829000	2.253360000	2.381211000
H	4.056128000	6.041528000	3.609668000
H	6.016854000	4.576156000	3.183857000
N	-0.045959000	3.407742000	2.857329000
N	-0.681259000	1.631488000	1.680610000
N	0.685046000	1.702582000	1.628024000
C	-1.084317000	2.668165000	2.430402000
C	1.031861000	2.781391000	2.347845000

Table S5. Cartesian Coordinates of Complex 4

Bi	-0.002242000	-0.006964000	1.449350000
N	-3.271252000	3.015120000	-0.000245000
N	3.017195000	3.269353000	0.010360000
N	-1.712532000	1.588220000	-0.686999000
N	1.586336000	1.712782000	0.694920000
N	-1.718995000	1.581899000	0.689344000
C	-2.654376000	2.457722000	-1.060236000
N	1.584247000	1.718254000	-0.681348000

C	2.456105000	2.653719000	1.069413000
C	-2.664537000	2.448052000	1.060818000
C	2.452664000	2.662493000	-1.051665000
Bi	0.002187000	0.006789000	-1.449474000
N	3.269700000	-3.016944000	0.000290000
N	-3.017744000	-3.268672000	-0.010275000
N	1.712352000	-1.588298000	0.686414000
N	-1.587271000	-1.711722000	-0.694780000
N	1.718015000	-1.583439000	-0.690206000
C	2.654498000	-2.457040000	1.060081000
N	-1.584341000	-1.718004000	0.681448000
C	-2.457327000	-2.652338000	-1.069313000
C	2.662580000	-2.451139000	-1.060990000
C	-2.451929000	-2.663028000	1.051738000
C	-2.984283000	2.774046000	-2.493644000
H	-2.318904000	2.164887000	-3.114458000
C	-2.721019000	4.257253000	-2.805488000
C	-4.438995000	2.395511000	-2.820945000
H	-4.625585000	1.332722000	-2.644547000
H	-5.134743000	2.967729000	-2.201385000
H	-4.660674000	2.609050000	-3.870581000
H	-3.351846000	4.899276000	-2.184879000
H	-2.944281000	4.470184000	-3.854961000
H	-1.677913000	4.526789000	-2.619022000
C	-3.009129000	2.752885000	2.493291000
H	-2.354129000	2.135122000	3.116555000
C	-4.469481000	2.379096000	2.800270000
C	-2.742242000	4.231934000	2.821443000
H	-1.695988000	4.498311000	2.648457000
H	-3.363550000	4.882543000	2.200153000
H	-2.975617000	4.436407000	3.870383000
H	-5.154784000	2.960719000	2.177863000
H	-4.702305000	2.584286000	3.849158000
H	-4.659679000	1.318997000	2.611879000
C	-2.760946000	-3.005590000	2.483814000
H	-2.135082000	-2.359025000	3.107712000
C	-2.404750000	-4.470597000	2.788937000
C	-4.236601000	-2.720978000	2.812835000
H	-4.490353000	-1.671582000	2.640153000
H	-4.894910000	-3.334310000	2.191716000
H	-4.443428000	-2.952033000	3.861834000

H	-2.995566000	-5.148158000	2.166776000
H	-2.611281000	-4.701697000	3.837920000
H	-1.347326000	-4.673560000	2.598788000
C	2.986229000	-2.770965000	2.493643000
H	2.322952000	-2.159453000	3.114387000
C	4.442138000	-2.394319000	2.817743000
C	2.720936000	-4.253081000	2.809023000
H	1.677094000	-4.521264000	2.624722000
H	3.349738000	-4.897484000	2.188828000
H	2.945445000	-4.464196000	3.858600000
H	5.135856000	-2.969505000	2.198656000
H	4.665027000	-2.605519000	3.867595000
H	4.630501000	-1.332358000	2.638252000
C	2.767492000	2.986443000	2.503173000
H	2.166440000	2.313032000	3.123430000
C	2.370234000	4.436283000	2.830157000
C	4.253588000	2.742531000	2.816047000
H	4.537071000	1.703077000	2.629859000
H	4.887765000	3.381743000	2.195972000
H	4.462882000	2.968608000	3.865622000
H	2.933565000	5.139044000	2.210333000
H	2.581093000	4.660990000	3.879706000
H	1.305103000	4.609165000	2.653802000
C	2.762593000	3.004481000	-2.483684000
H	2.138799000	2.356171000	-3.107839000
C	4.239210000	2.722795000	-2.810785000
C	2.403666000	4.468547000	-2.790283000
H	1.345593000	4.669401000	-2.601530000
H	2.992283000	5.147784000	-2.167859000
H	2.610961000	4.699375000	-3.839178000
H	4.895465000	3.337966000	-2.189319000
H	4.446735000	2.953577000	-3.859702000
H	4.495044000	1.674069000	-2.637090000
C	3.006677000	-2.757782000	-2.493283000
H	2.346060000	-2.146513000	-3.117031000
C	2.749967000	-4.239478000	-2.816692000
C	4.463716000	-2.374181000	-2.804228000
H	4.646122000	-1.311926000	-2.620469000
H	5.154506000	-2.948241000	-2.180834000
H	4.696232000	-2.581868000	-3.852703000
H	3.377598000	-4.883848000	-2.195212000

H	2.982340000	-4.445179000	-3.865618000
H	1.706187000	-4.513269000	-2.640391000
C	-2.769591000	-2.984115000	-2.503060000
H	-2.171855000	-2.307651000	-3.123189000
C	-4.256966000	-2.745139000	-2.813451000
C	-2.367406000	-4.432005000	-2.832710000
H	-1.301371000	-4.601079000	-2.658137000
H	-2.927204000	-5.137791000	-2.213110000
H	-2.578951000	-4.655985000	-3.882276000
H	-4.887948000	-3.387425000	-2.193300000
H	-4.466962000	-2.970542000	-3.863028000
H	-4.543886000	-1.706957000	-2.625448000

Table S6. Cartesian Coordinates of Complex $[\text{Bi}(\text{Ph}_2\text{tz})_3](\text{I}^{\text{Ph}})$

C	3.664832000	-1.647521000	-0.360670000
N	3.759778000	-1.200990000	0.918800000
C	2.575999000	-0.645215000	1.172605000
C	-1.067516000	2.713470000	0.600287000
N	-0.490245000	3.907607000	0.462417000
C	0.626329000	3.674404000	-0.272116000
C	-3.582536000	-1.559293000	-1.044356000
N	-3.392506000	-2.576526000	-0.164216000
C	-2.108639000	-2.491373000	0.183607000
N	1.773039000	-0.756320000	0.082684000
N	2.479463000	-1.395327000	-0.906014000
N	-1.528412000	-1.438546000	-0.449288000
N	-2.477244000	-0.849359000	-1.246130000
N	0.766065000	2.391034000	-0.587009000
N	-0.314038000	1.766070000	-0.015846000
Bi	0.088119000	-0.083147000	-1.179887000
C	-4.864564000	-1.279107000	-1.707920000
C	-5.970474000	-2.108278000	-1.478216000
C	-4.998720000	-0.188108000	-2.578686000
C	-7.185046000	-1.851030000	-2.107814000
C	-6.213997000	0.064558000	-3.206016000
C	-7.311497000	-0.765428000	-2.973560000
H	-5.869106000	-2.952363000	-0.807343000
H	-4.149757000	0.460427000	-2.758461000
H	-8.033621000	-2.500156000	-1.922142000

H	-6.305878000	0.911684000	-3.876735000
H	-8.258094000	-0.566259000	-3.463619000
C	-1.442173000	-3.412723000	1.113539000
C	-0.060421000	-3.636795000	1.063531000
C	-2.213377000	-4.108824000	2.056288000
C	0.540342000	-4.525188000	1.951180000
C	-1.608957000	-4.995698000	2.940469000
C	-0.230292000	-5.204497000	2.893390000
H	0.543736000	-3.132164000	0.321074000
H	-3.283296000	-3.944764000	2.089364000
H	1.610482000	-4.690465000	1.900610000
H	-2.214339000	-5.523484000	3.668890000
H	0.239527000	-5.895800000	3.583978000
C	4.751981000	-2.344194000	-1.065543000
C	4.581917000	-2.793870000	-2.383008000
C	5.976339000	-2.567915000	-0.421895000
C	5.616442000	-3.451415000	-3.040150000
C	7.008933000	-3.226599000	-1.083545000
C	6.833653000	-3.670400000	-2.393629000
H	3.637452000	-2.627332000	-2.887047000
H	6.109429000	-2.223553000	0.596197000
H	5.473045000	-3.795040000	-4.058663000
H	7.951696000	-3.393825000	-0.574418000
H	7.638589000	-4.183935000	-2.907593000
C	2.203843000	-0.044390000	2.458569000
C	3.214896000	0.355539000	3.345074000
C	0.864706000	0.111604000	2.837156000
C	2.889057000	0.908285000	4.578440000
C	0.542910000	0.663892000	4.073551000
C	1.552613000	1.065193000	4.946793000
H	4.250958000	0.231815000	3.055922000
H	0.073177000	-0.210749000	2.173142000
H	3.679289000	1.218732000	5.252786000
H	-0.497507000	0.776168000	4.355942000
H	1.299738000	1.495810000	5.909207000
C	1.577935000	4.719367000	-0.677583000
C	1.327504000	6.060635000	-0.359290000
C	2.741486000	4.392048000	-1.388773000
C	2.221316000	7.054171000	-0.748774000
C	3.631484000	5.388177000	-1.775914000
C	3.374817000	6.722644000	-1.458470000

H	0.431321000	6.315404000	0.192782000
H	2.946496000	3.356331000	-1.631789000
H	2.016503000	8.088916000	-0.497234000
H	4.528533000	5.122908000	-2.324451000
H	4.070354000	7.497645000	-1.760813000
C	-2.315466000	2.483100000	1.337460000
C	-2.737964000	1.195952000	1.692910000
C	-3.100556000	3.584519000	1.710835000
C	-3.922237000	1.013262000	2.401197000
C	-4.282869000	3.397745000	2.418117000
C	-4.698872000	2.112191000	2.765403000
H	-2.138486000	0.337278000	1.422675000
H	-2.774996000	4.580973000	1.440448000
H	-4.236279000	0.010923000	2.669131000
H	-4.881610000	4.257345000	2.697855000
H	-5.621487000	1.967898000	3.316326000

Table S7. Cartesian Coordinates of Complex [Bi(*i*Pr₂tz)₃](I^{*i*Pr})

C	-4.256106000	4.437176000	-1.453398000
C	-2.825956000	5.461963000	0.371057000
C	-2.866954000	4.456722000	-0.791916000
C	-2.470510000	3.078678000	-0.337190000
N	-3.144709000	2.380816000	0.621247000
C	-2.497168000	1.223865000	0.710266000
C	-2.869875000	0.091501000	1.625973000
C	-2.915729000	0.560844000	3.089781000
C	-4.213257000	-0.527717000	1.200155000
C	0.993066000	-2.828624000	3.072487000
C	2.567770000	-3.404259000	1.167109000
C	1.367067000	-2.547492000	1.607476000
C	0.191988000	-2.780107000	0.699731000
N	-0.492520000	-3.915656000	0.611885000
C	-1.441759000	-3.671572000	-0.336603000
C	-2.448651000	-4.695879000	-0.784110000
C	-3.324909000	-5.166974000	0.388515000
C	-1.752630000	-5.888022000	-1.463858000

C	6.144716000	-0.289353000	0.378084000
C	5.974137000	1.450932000	-1.456976000
C	5.294746000	0.243421000	-0.787491000
C	3.903663000	0.594525000	-0.334609000
N	3.637928000	1.531921000	0.619768000
C	2.312182000	1.553046000	0.707620000
C	1.520100000	2.447142000	1.619733000
C	1.652380000	3.917604000	1.184261000
C	1.953141000	2.260934000	3.083644000
N	-1.449006000	1.218469000	-0.148702000
N	-1.440654000	2.416390000	-0.837244000
N	1.781725000	0.647684000	-0.150037000
N	2.814216000	0.035251000	-0.833900000
N	-1.381050000	-2.446718000	-0.832131000
N	-0.329910000	-1.863454000	-0.150999000
Bi	0.001171000	0.001833000	-1.246193000
H	-4.523718000	5.438067000	-1.804384000
H	-5.020059000	4.110009000	-0.742532000
H	-4.279983000	3.760478000	-2.312271000
H	-1.827619000	5.521816000	0.813189000
H	-3.528760000	5.174098000	1.157818000
H	-3.099624000	6.460706000	0.018711000
H	-1.951630000	0.963322000	3.412623000
H	-3.168300000	-0.278030000	3.744245000
H	-3.670341000	1.339890000	3.224390000
H	-5.015026000	0.213823000	1.251877000
H	-4.470737000	-1.358112000	1.863418000
H	-4.166648000	-0.912999000	0.178313000
H	0.171823000	-2.188679000	3.406941000
H	1.853263000	-2.641983000	3.721364000
H	0.685506000	-3.869389000	3.201206000
H	2.320162000	-4.468361000	1.208821000
H	3.419939000	-3.224068000	1.828278000
H	2.874961000	-3.162649000	0.146309000
H	-2.715367000	-5.643017000	1.161543000
H	-4.064113000	-5.894827000	0.041647000
H	-3.862670000	-4.332404000	0.846743000
H	-1.167589000	-5.567449000	-2.330525000
H	-2.494079000	-6.615450000	-1.806980000
H	-1.077800000	-6.392678000	-0.766750000
H	6.249637000	0.467665000	1.160195000

H	7.145479000	-0.556671000	0.026538000
H	5.695543000	-1.179981000	0.826029000
H	5.401343000	1.803827000	-2.319299000
H	6.975000000	1.179064000	-1.804667000
H	6.072416000	2.281449000	-0.752308000
H	2.695135000	4.243053000	1.230978000
H	1.062773000	4.559175000	1.844972000
H	1.292258000	4.062957000	0.162498000
H	1.819799000	1.226834000	3.413250000
H	1.354988000	2.903473000	3.735706000
H	3.005657000	2.524950000	3.213704000
H	-2.128891000	4.758142000	-1.541662000
H	-2.095096000	-0.672170000	1.528814000
H	0.471739000	2.156300000	1.526777000
H	5.185070000	-0.550754000	-1.532435000
H	-3.087009000	-4.199170000	-1.521299000
H	1.644501000	-1.495451000	1.514588000

Table S8. Cartesian Coordinates of Complex $[\text{Bi}(\text{Ph}_2\text{tz})_2]^*$ (II^{Ph})

C	3.605691000	0.193864000	-0.157043000
N	3.352263000	1.170286000	0.757745000
C	2.057115000	1.428302000	0.607628000
C	-3.711907000	-0.746987000	-0.011627000
N	-3.113811000	-1.656903000	0.802024000
C	-1.811474000	-1.520350000	0.555271000
N	1.531689000	0.629158000	-0.363826000
N	2.535966000	-0.158636000	-0.859306000
N	-1.619494000	-0.539821000	-0.368513000
N	-2.844361000	-0.052211000	-0.738046000
Bi	-0.245137000	0.604099000	-1.678053000
C	-5.168151000	-0.549800000	-0.083778000
C	-6.024872000	-1.331939000	0.702284000
C	-5.720028000	0.418934000	-0.934915000
C	-7.403410000	-1.148222000	0.638100000
C	-7.097817000	0.598971000	-0.995981000
C	-7.945283000	-0.183253000	-0.210020000
H	-5.601919000	-2.081586000	1.359602000
H	-5.064119000	1.028199000	-1.545147000
H	-8.055277000	-1.760287000	1.251721000
H	-7.512075000	1.351566000	-1.657933000
H	-9.019150000	-0.040729000	-0.258733000
C	-0.768866000	-2.316867000	1.221133000

C	0.467450000	-2.593866000	0.622697000
C	-1.040550000	-2.847058000	2.492414000
C	1.415032000	-3.366978000	1.288537000
C	-0.092204000	-3.620047000	3.152641000
C	1.140811000	-3.880850000	2.554404000
H	0.696441000	-2.225253000	-0.368360000
H	-1.997901000	-2.642462000	2.955125000
H	2.366821000	-3.571160000	0.811513000
H	-0.314714000	-4.017095000	4.136818000
H	1.881174000	-4.482097000	3.070201000
C	4.931532000	-0.416726000	-0.346134000
C	5.137993000	-1.396782000	-1.328377000
C	6.009349000	-0.022759000	0.458034000
C	6.394885000	-1.967343000	-1.499910000
C	7.265822000	-0.596411000	0.282734000
C	7.464011000	-1.569894000	-0.695571000
H	4.309690000	-1.705780000	-1.954569000
H	5.852646000	0.731638000	1.219142000
H	6.541256000	-2.724019000	-2.262969000
H	8.091231000	-0.282983000	0.912510000
H	8.442967000	-2.016384000	-0.830572000
C	1.326443000	2.450737000	1.372449000
C	2.031924000	3.562832000	1.857472000
C	-0.044106000	2.345676000	1.647280000
C	1.377347000	4.551899000	2.583099000
C	-0.696247000	3.340024000	2.372535000
C	0.009884000	4.446686000	2.839634000
H	3.092835000	3.643028000	1.655759000
H	-0.601700000	1.474611000	1.328692000
H	1.934899000	5.407535000	2.947420000
H	-1.755302000	3.240661000	2.582035000
H	-0.499440000	5.218541000	3.405704000

Table S9. Cartesian Coordinates of Complex $[\text{Bi}(i\text{Pr}_2\text{tz})_2]^*$ ($\text{II}^{i\text{Pr}}$)

C	-5.938479000	-0.608782000	0.175200000
C	-4.694077000	-2.352238000	1.529971000
C	-4.699627000	-0.893549000	1.041485000
C	-3.432116000	-0.564132000	0.300015000
N	-3.054494000	-1.188678000	-0.854344000
C	-1.899299000	-0.612442000	-1.168403000

C	-1.069712000	-0.928347000	-2.383391000
C	-0.740677000	-2.428221000	-2.452537000
C	-1.780199000	-0.457317000	-3.665325000
C	4.687002000	-2.379824000	-1.491107000
C	5.937580000	-0.617661000	-0.166206000
C	4.696931000	-0.913658000	-1.026068000
C	3.431079000	-0.569336000	-0.288774000
N	3.055082000	-1.170452000	0.878288000
C	1.900639000	-0.587601000	1.182941000
C	1.073738000	-0.878026000	2.406066000
C	1.788681000	-0.383115000	3.676462000
C	0.742183000	-2.375718000	2.505448000
N	1.579051000	0.328158000	0.237201000
N	2.575028000	0.344423000	-0.715173000
N	-1.578873000	0.321528000	-0.240597000
N	-2.576140000	0.357558000	0.709940000
Bi	-0.000344000	1.827878000	-0.018588000
H	-5.977717000	0.440083000	-0.132626000
H	-6.853203000	-0.831412000	0.732577000
H	-5.931307000	-1.226513000	-0.727215000
H	-4.631776000	-3.043920000	0.685153000
H	-5.611523000	-2.572843000	2.083707000
H	-3.845050000	-2.548306000	2.190881000
H	-0.184580000	-2.755927000	-1.570319000
H	-0.130205000	-2.639261000	-3.334969000
H	-1.655850000	-3.022243000	-2.517942000
H	-2.735770000	-0.974069000	-3.789054000
H	-1.159770000	-0.669615000	-4.540553000
H	-1.976441000	0.618395000	-3.642692000
H	4.624760000	-3.057774000	-0.635259000
H	5.602798000	-2.611478000	-2.043082000
H	3.836220000	-2.584183000	-2.147247000
H	5.979053000	0.435756000	0.125301000
H	6.851038000	-0.850509000	-0.721489000
H	5.930671000	-1.221258000	0.745757000
H	2.743569000	-0.899271000	3.807716000
H	1.170350000	-0.577146000	4.557421000
H	1.986792000	0.691580000	3.632357000
H	0.181514000	-2.719195000	1.632163000
H	0.135588000	-2.569065000	3.394553000
H	1.656734000	-2.969914000	2.577732000

H	0.133713000	-0.325663000	2.304274000
H	4.722595000	-0.268038000	-1.909533000
H	-0.128180000	-0.376518000	-2.290891000
H	-4.724963000	-0.233489000	1.914212000

Table S10. Cartesian Coordinates of Compound [3,5-Ph₂tz][•] (III^{Ph})

C	1.046570000	-0.439262000	0.000044000
N	0.000017000	0.394699000	-0.000299000
C	-1.046547000	-0.439183000	0.000004000
N	-0.645893000	-1.786037000	0.000683000
N	0.645898000	-1.786028000	0.000737000
C	-2.435279000	-0.054650000	-0.000065000
C	-2.797554000	1.309150000	0.000277000
C	-3.447168000	-1.038700000	-0.000461000
C	-4.134114000	1.673297000	0.000231000
C	-4.782040000	-0.662924000	-0.000450000
C	-5.129764000	0.690336000	-0.000130000
H	-2.018471000	2.060968000	0.000601000
H	-3.167795000	-2.084221000	-0.000734000
H	-4.408458000	2.721840000	0.000519000
H	-5.555946000	-1.421718000	-0.000706000
H	-6.174502000	0.980055000	-0.000126000
C	2.435279000	-0.054679000	-0.000006000
C	3.447207000	-1.038704000	-0.000209000
C	2.797519000	1.309135000	0.000136000
C	4.782063000	-0.662898000	-0.000319000
C	4.134067000	1.673309000	0.000030000
C	5.129747000	0.690376000	-0.000182000
H	3.167843000	-2.084229000	-0.000313000
H	2.018406000	2.060920000	0.000246000
H	5.555997000	-1.421664000	-0.000517000
H	4.408390000	2.721857000	0.000074000
H	6.174475000	0.980128000	-0.000293000

Table S11. Cartesian Coordinates of Compound [3,5-iPr₂tz][•] (III^{iPr})

C	-2.651267000	-1.581474000	-0.644226000
C	-3.322710000	0.418013000	0.794001000
C	-2.456508000	-0.086308000	-0.386018000
C	-1.033586000	0.284089000	-0.165236000

N	-0.000005000	-0.545680000	-0.000031000
C	1.033578000	0.284078000	0.165189000
C	2.456484000	-0.086339000	0.386037000
C	3.322798000	0.418014000	-0.793897000
C	2.651209000	-1.581504000	0.644197000
N	0.636015000	1.642008000	0.099854000
N	-0.636014000	1.642015000	-0.099907000
H	-2.061271000	-1.921315000	-1.498462000
H	-3.704129000	-1.787228000	-0.853178000
H	-2.354972000	-2.172932000	0.225938000
H	-3.066218000	-0.112448000	1.715261000
H	-4.377115000	0.235054000	0.572915000
H	-3.186032000	1.488291000	0.960074000
H	3.066349000	-0.112368000	-1.715215000
H	4.377179000	0.234992000	-0.572744000
H	3.186186000	1.488310000	-0.959905000
H	2.061122000	-1.921385000	1.498357000
H	3.704047000	-1.787290000	0.853235000
H	2.354969000	-2.172911000	-0.226022000
H	2.775908000	0.480692000	1.271898000
H	-2.775994000	0.480739000	-1.271846000

Table S12. Cartesian Coordinates of the dimer III(N1)^{Ph} -III(N1)^{Ph}

N	2.515414000	0.096615000	-1.257736000
N	-2.515434000	0.096582000	1.257747000
N	0.648472000	-0.271588000	-0.208902000
N	-0.648546000	-0.271576000	0.208799000
N	-1.531930000	-1.143958000	-0.351738000
C	1.251102000	0.466047000	-1.199836000
C	2.647000000	-0.883042000	-0.309545000
N	1.531805000	-1.144063000	0.351575000
C	-1.251115000	0.465982000	1.199823000
C	-2.647093000	-0.882964000	0.309449000
C	-3.913078000	-1.586500000	0.052378000
C	-5.060795000	-1.250536000	0.781437000
C	-3.986015000	-2.597345000	-0.916702000
C	-6.261400000	-1.913571000	0.542859000
C	-5.187877000	-3.256114000	-1.150915000
C	-6.329283000	-2.916697000	-0.422824000
H	-5.004248000	-0.472436000	1.532437000

H	-3.099873000	-2.863892000	-1.480105000
H	-7.144386000	-1.646477000	1.112683000
H	-5.234565000	-4.036926000	-1.901825000
H	-7.265084000	-3.432553000	-0.607212000
C	-0.632273000	1.512460000	2.023488000
C	0.700658000	1.448694000	2.452608000
C	-1.434184000	2.592772000	2.422655000
C	1.222774000	2.460366000	3.253791000
C	-0.904208000	3.599946000	3.220223000
C	0.426344000	3.538404000	3.635045000
H	1.319927000	0.600021000	2.193811000
H	-2.466485000	2.635280000	2.098620000
H	2.252368000	2.398953000	3.587023000
H	-1.529583000	4.434053000	3.517323000
H	0.838244000	4.324528000	4.257811000
C	3.912953000	-1.586644000	-0.052493000
C	3.985820000	-2.597587000	0.916491000
C	5.060710000	-1.250643000	-0.781472000
C	5.187652000	-3.256415000	1.150687000
C	6.261285000	-1.913739000	-0.542911000
C	6.329098000	-2.916962000	0.422676000
H	3.099647000	-2.864161000	1.479832000
H	5.004217000	-0.472466000	-1.532397000
H	5.234285000	-4.037303000	1.901523000
H	7.144302000	-1.646616000	-1.112673000
H	7.264875000	-3.432865000	0.607051000
C	0.632360000	1.512662000	-2.023405000
C	1.434252000	2.593182000	-2.422045000
C	-0.700432000	1.448838000	-2.452956000
C	0.904390000	3.600503000	-3.219503000
C	-1.222432000	2.460658000	-3.254028000
C	-0.426027000	3.538902000	-3.634747000
H	2.466449000	2.635736000	-2.097684000
H	-1.319668000	0.600010000	-2.194597000
H	1.529750000	4.434768000	-3.516190000
H	-2.251915000	2.399198000	-3.587596000
H	-0.837838000	4.325139000	-4.257429000

Table S13. Cartesian Coordinates of the dimer III(N1)^{Ph} -III(N4)^{Ph}

N	1.080577000	-0.435586000	-0.891589000
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N	-1.261889000	0.574131000	1.537204000
N	2.473218000	-0.299715000	-2.578558000
N	0.032319000	-0.062088000	-0.088741000
N	-1.190480000	0.102119000	-0.665189000
C	1.821374000	0.421789000	-1.706132000
C	1.290901000	-1.716234000	-1.405081000
N	2.144795000	-1.626565000	-2.391188000
C	-0.018476000	0.229042000	1.255862000
C	-1.940247000	0.484326000	0.354033000
C	1.078039000	0.201553000	2.233883000
C	0.876780000	0.882582000	3.446917000
C	2.291864000	-0.470572000	2.025123000
C	1.868266000	0.896211000	4.419352000
C	3.279945000	-0.453353000	3.005663000
C	3.074528000	0.229622000	4.202109000
H	-0.059251000	1.399904000	3.612110000
H	2.473192000	-1.018270000	1.111510000
H	1.699838000	1.429369000	5.348043000
H	4.211192000	-0.979690000	2.831030000
H	3.848171000	0.241618000	4.961528000
C	-3.375684000	0.778210000	0.224807000
C	-4.114880000	1.169259000	1.348221000
C	-4.018275000	0.669193000	-1.016571000
C	-5.473975000	1.446721000	1.230967000
C	-5.376021000	0.947465000	-1.127961000
C	-6.108405000	1.337008000	-0.005561000
H	-3.619800000	1.252224000	2.307692000
H	-3.450676000	0.366410000	-1.888200000
H	-6.037779000	1.748193000	2.106744000
H	-5.864460000	0.859859000	-2.091995000
H	-7.167224000	1.553047000	-0.095271000
C	0.650063000	-2.966263000	-0.977115000
C	0.235997000	-3.212096000	0.338736000
C	0.479553000	-3.970421000	-1.944847000
C	-0.344691000	-4.432085000	0.674872000
C	-0.096667000	-5.187031000	-1.601314000
C	-0.514926000	-5.421108000	-0.291120000
H	0.385143000	-2.473242000	1.112505000
H	0.798175000	-3.783156000	-2.962350000
H	-0.656987000	-4.609114000	1.697680000
H	-0.225420000	-5.951363000	-2.359227000

H	-0.969176000	-6.368981000	-0.025359000
C	1.846114000	1.889047000	-1.650960000
C	1.884925000	2.587681000	-2.867792000
C	1.877963000	2.605748000	-0.447799000
C	1.939956000	3.976617000	-2.876634000
C	1.929715000	3.996925000	-0.464318000
C	1.956869000	4.685498000	-1.675431000
H	1.866050000	2.033577000	-3.797897000
H	1.897344000	2.085200000	0.499839000
H	1.964232000	4.506207000	-3.822192000
H	1.958311000	4.541151000	0.472698000
H	1.995705000	5.768987000	-1.683903000

Table S14. Cartesian Coordinates of the dimer III(N4)^{Ph}-III(N4)^{Ph}

N	0.003637000	0.022463000	-0.688002000
N	0.003636000	-0.022464000	0.688001000
N	0.526378000	0.522615000	-2.752136000
N	0.526374000	-0.522618000	2.752135000
N	-0.545844000	0.339428000	2.774845000
C	0.863254000	0.750339000	-1.507060000
C	-0.865089000	-0.649563000	-1.543941000
N	-0.545839000	-0.339432000	-2.774846000
C	0.863253000	-0.750340000	1.507059000
C	-0.865092000	0.649560000	1.543939000
C	-1.986195000	1.522293000	1.168571000
C	-1.914053000	2.436510000	0.109034000
C	-3.152334000	1.464202000	1.947377000
C	-2.998856000	3.260647000	-0.178150000
C	-4.230088000	2.292478000	1.656815000
C	-4.159087000	3.188536000	0.590018000
H	-1.006433000	2.533618000	-0.471712000
H	-3.204919000	0.763161000	2.770936000
H	-2.930595000	3.966502000	-0.997929000
H	-5.128529000	2.234716000	2.260603000
H	-5.002389000	3.830549000	0.361832000
C	1.987058000	-1.602494000	1.095009000
C	3.080882000	-1.708755000	1.969678000
C	1.992632000	-2.341109000	-0.096160000
C	4.157564000	-2.527112000	1.651237000
C	3.076923000	-3.156542000	-0.410074000

C	4.161694000	-3.250794000	0.458567000
H	3.078264000	-1.142981000	2.892617000
H	1.151014000	-2.305134000	-0.773559000
H	4.997257000	-2.595930000	2.333352000
H	3.066693000	-3.723381000	-1.333848000
H	5.004633000	-3.885520000	0.209692000
C	-1.986193000	-1.522295000	-1.168572000
C	-3.152334000	-1.464199000	-1.947374000
C	-1.914048000	-2.436515000	-0.109039000
C	-4.230090000	-2.292473000	-1.656811000
C	-2.998853000	-3.260651000	0.178146000
C	-4.159087000	-3.188535000	-0.590017000
H	-3.204921000	-0.763154000	-2.770931000
H	-1.006427000	-2.533628000	0.471703000
H	-5.128533000	-2.234707000	-2.260595000
H	-2.930591000	-3.966509000	0.997922000
H	-5.002389000	-3.830547000	-0.361830000
C	1.987058000	1.602495000	-1.095008000
C	1.992633000	2.341105000	0.096163000
C	3.080880000	1.708762000	-1.969680000
C	3.076921000	3.156540000	0.410078000
C	4.157560000	2.527121000	-1.651237000
C	4.161691000	3.250798000	-0.458564000
H	1.151016000	2.305127000	0.773563000
H	3.078262000	1.142992000	-2.892620000
H	3.066692000	3.723376000	1.333854000
H	4.997252000	2.595943000	-2.333354000
H	5.004629000	3.885525000	-0.209689000

Table S15. Cartesian Coordinates of the dimer III(N1)^{iPr}-III(N1)^{iPr}

N	-2.713541000	-0.745447000	0.160720000
N	2.713512000	0.745476000	0.160804000
N	-0.678957000	-0.047088000	-0.122388000
N	0.678970000	0.047069000	-0.122421000
N	1.433733000	-0.766938000	-0.926333000
C	-1.464194000	-0.965997000	0.514675000
C	-2.652359000	0.314158000	-0.710788000
N	-1.433695000	0.767029000	-0.926222000
C	1.464148000	0.965922000	0.514765000
C	2.652385000	-0.314045000	-0.710795000

C	0.951142000	2.048970000	1.418504000
C	-3.869613000	0.906816000	-1.364398000
C	-0.951256000	-2.049133000	1.418354000
C	1.834975000	2.184833000	2.667033000
C	0.855363000	3.380680000	0.647772000
C	3.869673000	-0.906650000	-1.364397000
C	-4.582992000	-0.136409000	-2.241016000
C	-4.826293000	1.496679000	-0.314264000
C	-1.835439000	-2.185401000	2.666582000
C	4.826410000	-1.496418000	-0.314262000
C	-0.854960000	-3.380687000	0.647414000
C	4.582973000	0.136612000	-2.241039000
H	1.868131000	1.253842000	3.238935000
H	1.437417000	2.968717000	3.316725000
H	2.858003000	2.452350000	2.392857000
H	1.843404000	3.700216000	0.305570000
H	0.449731000	4.157249000	1.301617000
H	0.200879000	3.289856000	-0.222136000
H	-3.920271000	-0.522975000	-3.020117000
H	-5.452782000	0.312794000	-2.728523000
H	-4.928410000	-0.980924000	-1.638344000
H	-5.183001000	0.719814000	0.367681000
H	-5.695245000	1.943861000	-0.805119000
H	-4.337280000	2.273563000	0.280088000
H	-1.868945000	-1.254519000	3.238642000
H	-1.437902000	-2.969319000	3.316247000
H	-2.858337000	-2.453071000	2.392076000
H	5.183065000	-0.719509000	0.367660000
H	5.695392000	-1.943541000	-0.805117000
H	4.337469000	-2.273326000	0.280118000
H	-1.842837000	-3.700358000	0.304861000
H	-0.449381000	-4.157283000	1.301258000
H	-0.200226000	-3.289579000	-0.222272000
H	3.920216000	0.523135000	-3.020130000
H	5.452781000	-0.312546000	-2.728553000
H	4.928349000	0.981150000	-1.638376000
H	-3.510274000	1.716969000	-2.005722000
H	0.057984000	-1.766304000	1.731018000
H	3.510389000	-1.716839000	-2.005706000
H	-0.058245000	1.766286000	1.730795000

Table S16. Cartesian Coordinates of the dimer III(N1)^{iPr}-III(N4)^{iPr}

N	1.155688000	-0.040643000	-0.249714000
N	-2.187111000	0.080854000	0.807193000
N	3.210393000	0.601936000	-0.597033000
N	-0.199174000	-0.007758000	-0.063090000
N	-1.048727000	-0.085847000	-1.135481000
C	1.996529000	1.047739000	-0.442506000
C	1.955632000	-1.172528000	-0.328554000
N	3.184700000	-0.790008000	-0.526208000
C	-0.903102000	0.092958000	1.105019000
C	-2.233686000	-0.029583000	-0.558690000
C	-0.302810000	0.212668000	2.475872000
C	1.447292000	-2.583165000	-0.241471000
C	1.540074000	2.477928000	-0.490177000
C	-0.796519000	-0.927601000	3.382927000
C	-0.631369000	1.588836000	3.083558000
C	-3.520998000	-0.084907000	-1.333553000
C	2.510035000	-3.513507000	0.357941000
C	-4.341082000	-1.327248000	-0.945659000
C	0.985358000	-3.079585000	-1.626974000
C	2.672287000	3.429391000	-0.082408000
C	0.990301000	2.829895000	-1.887895000
C	-4.338222000	1.202770000	-1.134451000
H	-1.882793000	-0.890061000	3.494727000
H	-0.344858000	-0.833092000	4.373742000
H	-0.527953000	-1.907478000	2.980001000
H	-0.257732000	2.403977000	2.458466000
H	-0.168766000	1.677995000	4.069825000
H	-1.711324000	1.712409000	3.197053000
H	3.407478000	-3.532668000	-0.264356000
H	2.115364000	-4.530693000	0.422331000
H	2.802220000	-3.196003000	1.362021000
H	-3.783483000	-2.248931000	-1.133697000
H	-5.264584000	-1.365876000	-1.530024000
H	-4.609562000	-1.301431000	0.114065000
H	0.224700000	-2.423485000	-2.055441000
H	0.560769000	-4.083150000	-1.537601000
H	1.830726000	-3.124842000	-2.319244000
H	3.031581000	3.217725000	0.927638000
H	2.312332000	4.461042000	-0.108692000
H	3.519725000	3.344692000	-0.766331000

H	1.783762000	2.767922000	-2.638039000
H	0.600539000	3.851354000	-1.885188000
H	0.183381000	2.157296000	-2.186505000
H	-4.609219000	1.333482000	-0.083159000
H	-5.260280000	1.157710000	-1.720600000
H	-3.777542000	2.085522000	-1.454051000
H	-3.242595000	-0.164244000	-2.388485000
H	0.782183000	0.130223000	2.373305000
H	0.575171000	-2.577265000	0.420289000
H	0.722060000	2.583740000	0.230408000

Table S17. Cartesian Coordinates of the dimer III(N4)^{iPr} -III(N4)^{iPr}

N	0.000037000	-0.000052000	0.687726000
N	-0.000013000	0.000043000	-0.687726000
N	0.496631000	-0.486261000	2.757478000
N	-0.486159000	-0.496352000	-2.757540000
N	0.486009000	0.496688000	-2.757509000
C	0.793685000	-0.777863000	1.522577000
C	-0.793572000	0.777638000	1.522727000
N	-0.496405000	0.485912000	2.757571000
C	-0.777810000	-0.793514000	-1.522677000
C	0.777690000	0.793744000	-1.522628000
C	-1.787288000	-1.812787000	-1.073062000
C	-1.812846000	1.787142000	1.073175000
C	1.812920000	-1.787323000	1.072837000
C	-1.444826000	-3.202332000	-1.638875000
C	-3.209219000	-1.388290000	-1.484399000
C	1.787179000	1.812978000	-1.072951000
C	-1.388361000	3.209042000	1.484630000
C	3.209093000	1.388522000	-1.484389000
C	-3.202399000	1.444631000	1.638939000
C	3.202515000	-1.444879000	1.638540000
C	1.388462000	-3.209267000	1.484170000
C	1.444694000	3.202579000	-1.638615000
H	-1.473100000	-3.190438000	-2.731152000
H	-2.171691000	-3.937497000	-1.283592000
H	-0.449866000	-3.531195000	-1.328886000
H	-3.478664000	-0.414123000	-1.069362000
H	-3.935067000	-2.122314000	-1.124568000
H	-3.291096000	-1.328180000	-2.572594000
H	-1.328265000	3.290835000	2.572831000
H	-2.122382000	3.934916000	1.124845000

H	-0.414189000	3.478522000	1.069626000
H	3.478553000	0.414313000	-1.069461000
H	3.934956000	2.122509000	-1.124513000
H	3.290925000	1.328522000	-2.572593000
H	-3.531256000	0.449696000	1.328863000
H	-3.937561000	2.171524000	1.283706000
H	-3.190522000	1.472813000	2.731219000
H	3.531351000	-0.449908000	1.328556000
H	3.937649000	-2.171731000	1.283167000
H	3.190718000	-1.473189000	2.730816000
H	1.328453000	-3.291176000	2.572368000
H	2.122452000	-3.935104000	1.124250000
H	0.414256000	-3.478699000	1.069216000
H	1.472918000	3.190790000	-2.730894000
H	2.171577000	3.937708000	-1.283295000
H	0.449749000	3.531416000	-1.328550000
H	1.744543000	1.864293000	0.018161000
H	-1.744609000	-1.864208000	0.018043000
H	-1.864250000	1.744549000	-0.017934000
H	1.864245000	-1.744609000	-0.018271000

Table S18. Cartesian Coordinates of [Bi(3,5-iPr₂tz)₂]Cl

C	-5.157720000	-2.600335000	-0.686891000
C	-6.083594000	-0.346997000	0.017181000
C	-4.954529000	-1.076338000	-0.730988000
C	-3.608153000	-0.692915000	-0.181017000
N	-3.224862000	-0.938440000	1.107203000
C	-1.994530000	-0.449269000	1.188533000
C	-1.122469000	-0.473458000	2.411615000
C	-1.796649000	0.263739000	3.580936000
C	-0.768201000	-1.921056000	2.794683000
C	3.644266000	1.035574000	2.569656000
C	4.625223000	1.832381000	0.370834000
C	3.358237000	1.332261000	1.087255000
C	2.802089000	0.118077000	0.396487000
N	3.434511000	-1.042087000	0.261660000
C	2.568920000	-1.828810000	-0.440180000
C	2.873837000	-3.244717000	-0.845950000
C	3.137414000	-4.132367000	0.381762000
C	4.060059000	-3.292205000	-1.824884000

N	-1.634367000	0.073744000	-0.009204000
N	-2.681136000	-0.081492000	-0.896294000
N	1.433130000	-1.218206000	-0.734445000
N	1.575929000	0.037379000	-0.177977000
Bi	-0.080784000	1.128203000	-1.082847000
H	-6.130114000	-2.866180000	-1.111620000
H	-5.124406000	-2.967111000	0.342792000
H	-4.384961000	-3.122690000	-1.257862000
H	-5.973434000	0.738757000	-0.054331000
H	-6.085487000	-0.618177000	1.076560000
H	-7.055791000	-0.616915000	-0.405418000
H	-2.005255000	1.306800000	3.328495000
H	-1.143138000	0.251631000	4.457675000
H	-2.740316000	-0.217682000	3.850144000
H	-1.670348000	-2.486639000	3.042867000
H	-0.107792000	-1.928433000	3.666260000
H	-0.257347000	-2.434357000	1.976138000
H	2.738657000	0.726914000	3.098359000
H	4.034351000	1.930828000	3.061638000
H	4.385514000	0.238444000	2.669186000
H	5.407539000	1.069254000	0.389432000
H	5.007426000	2.728080000	0.868000000
H	4.423280000	2.086292000	-0.673669000
H	4.005759000	-3.773873000	0.941382000
H	3.334994000	-5.161805000	0.069247000
H	2.278863000	-4.144322000	1.058742000
H	3.858703000	-2.704932000	-2.725339000
H	4.257116000	-4.323468000	-2.131627000
H	4.966249000	-2.897263000	-1.357053000
H	-4.962623000	-0.753007000	-1.776492000
H	-0.198672000	0.052543000	2.157771000
H	1.982191000	-3.615316000	-1.360794000
H	2.599118000	2.116084000	1.034474000
Cl	-0.033099000	3.105177000	0.485324000

Table S19. Cartesian Coordinates of [Bi(3,5-Ph₂tz)₂]Cl

C	1.507852000	-0.805205000	1.514839000
N	2.794426000	-0.582782000	1.770349000
C	3.399167000	-0.589770000	0.552519000
C	-1.574672000	2.338070000	-0.439969000

N	-2.824913000	1.929920000	-0.110681000
C	-2.832074000	0.612708000	-0.319364000
N	-1.609653000	0.216253000	-0.756933000
N	-0.810196000	1.328115000	-0.844079000
N	2.547762000	-0.807073000	-0.443025000
N	1.331466000	-0.950586000	0.174722000
Bi	0.060768000	-0.962442000	-1.605223000
C	-1.114385000	3.731618000	-0.363991000
C	-2.010257000	4.748532000	-0.008732000
C	0.219700000	4.061415000	-0.642767000
C	-1.579080000	6.069945000	0.064183000
C	0.645622000	5.383237000	-0.568466000
C	-0.251542000	6.392034000	-0.215253000
H	-3.040698000	4.495124000	0.207598000
H	0.920561000	3.279506000	-0.909822000
H	-2.280917000	6.849082000	0.340114000
H	1.680262000	5.626633000	-0.783025000
H	0.083253000	7.421701000	-0.156502000
C	-4.000240000	-0.249870000	-0.104518000
C	-4.040855000	-1.572995000	-0.562602000
C	-5.117113000	0.273529000	0.564607000
C	-5.170847000	-2.357215000	-0.351079000
C	-6.244247000	-0.513301000	0.772975000
C	-6.275757000	-1.831373000	0.316851000
H	-3.195487000	-1.995811000	-1.088580000
H	-5.088625000	1.296034000	0.918929000
H	-5.187143000	-3.379258000	-0.712163000
H	-7.099592000	-0.097183000	1.293321000
H	-7.155652000	-2.443569000	0.479908000
C	4.842683000	-0.384037000	0.359277000
C	5.672090000	-0.153619000	1.464791000
C	5.407934000	-0.413005000	-0.923708000
C	7.038550000	0.045729000	1.289471000
C	6.773796000	-0.213360000	-1.094044000
C	7.594276000	0.017154000	0.011066000
H	5.237838000	-0.133225000	2.456632000
H	4.773816000	-0.593356000	-1.783468000
H	7.669878000	0.223366000	2.153068000
H	7.199773000	-0.238216000	-2.090983000
H	8.658908000	0.172464000	-0.124178000
C	0.461791000	-0.884653000	2.542214000

C	-0.725042000	-1.600662000	2.340602000
C	0.672226000	-0.245576000	3.773489000
C	-1.686878000	-1.664425000	3.344999000
C	-0.291344000	-0.311992000	4.773449000
C	-1.475199000	-1.019302000	4.562115000
H	-0.893375000	-2.130572000	1.412480000
H	1.591843000	0.303103000	3.933822000
H	-2.599019000	-2.225083000	3.175833000
H	-0.119219000	0.190902000	5.718474000
H	-2.226030000	-1.070379000	5.342715000
Cl	-0.767838000	-3.340421000	-1.235344000

Table S20. EPR Data of the DMPO[3,5-*i*Pr₂tz][•] Adduct (7ⁱPr)

File List Date: 6.06.2019 Time: 14:31

File Name: Spectrum send from WinEPR ACQUISITION --- picked at 14:30

Data Point	Value[G]	Intensity
0	3364.3694	1.6855e+003
1	3364.6626	6.9565e+003
2	3364.9558	1.1257e+004
3	3365.2490	1.0176e+004
4	3365.5422	4.4235e+003
5	3365.8353	-1.0652e+002
6	3366.1285	5.6748e+002
7	3366.4217	5.1155e+003
8	3366.7149	7.4825e+003
9	3367.0081	8.5575e+003
10	3367.3013	5.6735e+003
11	3367.5944	3.5845e+003
12	3367.8876	3.5695e+003

13	3368.1808	9.1215e+003
14	3368.4740	1.0410e+004
15	3368.7672	8.3805e+003
16	3369.0604	7.4755e+003
17	3369.3535	1.1739e+004
18	3369.6467	1.4851e+004
19	3369.9399	1.1325e+004
20	3370.2331	2.5405e+003
21	3370.5263	-1.5985e+003
22	3370.8195	-2.1765e+003
23	3371.1126	1.9148e+002
24	3371.4058	2.7575e+003
25	3371.6990	6.3035e+003
26	3371.9922	8.3095e+003
27	3372.2854	4.7595e+003
28	3372.5786	4.1955e+003
29	3372.8717	4.0755e+003
30	3373.1649	3.0845e+003
31	3373.4581	7.1148e+002
32	3373.7513	1.9445e+003
33	3374.0445	2.4285e+003
34	3374.3377	3.7955e+003
35	3374.6308	4.9225e+003
36	3374.9240	3.5215e+003
37	3375.2172	4.1885e+003
38	3375.5104	7.1845e+003
39	3375.8036	7.1985e+003

40	3376.0968	4.6875e+003
41	3376.3899	2.4075e+003
42	3376.6831	1.3155e+003
43	3376.9763	-1.9755e+003
44	3377.2695	-2.9005e+003
45	3377.5627	3.3525e+003
46	3377.8559	3.7655e+003
47	3378.1491	1.1035e+003
48	3378.4422	2.5305e+003
49	3378.7354	2.2175e+003
50	3379.0286	8.6348e+002
51	3379.3218	-3.2235e+003
52	3379.6150	1.3848e+002
53	3379.9082	6.6705e+003
54	3380.2013	3.6355e+003
55	3380.4945	-1.0635e+003
56	3380.7877	-3.5465e+003
57	3381.0809	-3.3675e+003
58	3381.3741	2.0905e+003
59	3381.6673	4.4525e+003
60	3381.9604	6.8748e+002
61	3382.2536	-1.3135e+003
62	3382.5468	1.5105e+003
63	3382.8400	-1.0815e+003
64	3383.1332	-6.1065e+003
65	3383.4264	-5.0025e+003
66	3383.7195	1.3495e+003

67	3384.0127	8.7605e+003
68	3384.3059	7.8695e+003
69	3384.5991	8.1395e+003
70	3384.8923	2.0535e+003
71	3385.1855	6.1048e+002
72	3385.4786	-8.6552e+002
73	3385.7718	2.5248e+002
74	3386.0650	1.1955e+003
75	3386.3582	6.3765e+003
76	3386.6514	7.1205e+003
77	3386.9446	1.1100e+004
78	3387.2377	6.7905e+003
79	3387.5309	8.4515e+003
80	3387.8241	5.0835e+003
81	3388.1173	6.4455e+003
82	3388.4105	1.1475e+003
83	3388.7037	5.0548e+002
84	3388.9968	3.4005e+003
85	3389.2900	8.1535e+003
86	3389.5832	1.2207e+004
87	3389.8764	1.4663e+004
88	3390.1696	1.2518e+004
89	3390.4628	9.0015e+003
90	3390.7559	3.2385e+003
91	3391.0491	3.2805e+003
92	3391.3423	1.9265e+003
93	3391.6355	-4.5652e+002

94	3391.9287	-4.9652e+002
95	3392.2219	-8.5052e+002
96	3392.5150	2.3205e+003
97	3392.8082	6.4605e+003
98	3393.1014	5.7825e+003
99	3393.3946	3.3635e+003
100	3393.6878	4.0275e+003
101	3393.9810	6.8848e+002
102	3394.2741	3.8665e+003
103	3394.5673	7.2085e+003
104	3394.8605	2.8235e+003
105	3395.1537	-2.0265e+003
106	3395.4469	2.4145e+003
107	3395.7401	8.7745e+003
108	3396.0332	9.1325e+003
109	3396.3264	3.2125e+003
110	3396.6196	-8.2152e+002
111	3396.9128	-3.3035e+003
112	3397.2060	-2.2885e+003
113	3397.4992	2.1248e+002
114	3397.7923	-2.5245e+003
115	3398.0855	-1.2775e+003
116	3398.3787	-1.4252e+002
117	3398.6719	2.9575e+003
118	3398.9651	4.0348e+002
119	3399.2583	-3.9285e+003
120	3399.5514	-4.9775e+003

121	3399.8446	-2.9465e+003
122	3400.1378	-3.3552e+002
123	3400.4310	-5.3135e+003
124	3400.7242	-4.4805e+003
125	3401.0174	6.8848e+002
126	3401.3105	1.7048e+002
127	3401.6037	-4.3965e+003
128	3401.8969	-2.8795e+003
129	3402.1901	-1.7265e+003
130	3402.4833	2.7295e+003
131	3402.7765	3.6025e+003
132	3403.0696	6.5645e+003
133	3403.3628	2.1285e+003
134	3403.6560	-7.3852e+002
135	3403.9492	8.2348e+002
136	3404.2424	2.8655e+003
137	3404.5356	8.7815e+003
138	3404.8288	9.7065e+003
139	3405.1219	7.2145e+003
140	3405.4151	5.5675e+003
141	3405.7083	5.7765e+003
142	3406.0015	1.0875e+003
143	3406.2947	2.4455e+003
144	3406.5879	6.4965e+003
145	3406.8810	7.2415e+003
146	3407.1742	5.4925e+003
147	3407.4674	1.0568e+004

148	3407.7606	5.3945e+003
149	3408.0538	2.7045e+003
150	3408.3470	2.2048e+002
151	3408.6401	-6.7615e+003
152	3408.9333	-1.1421e+004
153	3409.2265	-1.0360e+004
154	3409.5197	-5.9405e+003
155	3409.8129	-6.0675e+003
156	3410.1061	-4.5855e+003
157	3410.3992	-7.5186e+000
158	3410.6924	6.1525e+003
159	3410.9856	7.1275e+003
160	3411.2788	7.8415e+003
161	3411.5720	9.1845e+003
162	3411.8652	3.2635e+003
163	3412.1583	-1.5355e+003
164	3412.4515	-1.2585e+003
165	3412.7447	1.2115e+003
166	3413.0379	2.6675e+003
167	3413.3311	2.6895e+003
168	3413.6243	5.2648e+002
169	3413.9174	-2.0625e+003
170	3414.2106	-4.7655e+003
171	3414.5038	-2.3525e+003
172	3414.7970	1.2355e+003
173	3415.0902	1.9135e+003
174	3415.3834	1.5685e+003

175	3415.6765	2.2735e+003
176	3415.9697	1.0100e+004
177	3416.2629	1.4659e+004
178	3416.5561	1.0456e+004
179	3416.8493	8.5725e+003
180	3417.1425	4.6745e+003
181	3417.4356	-2.3815e+003
182	3417.7288	-5.2795e+003
183	3418.0220	-1.9725e+003
184	3418.3152	5.7575e+003
185	3418.6084	9.9805e+003
186	3418.9016	7.3795e+003
187	3419.1947	3.0535e+003
188	3419.4879	-1.7952e+002
189	3419.7811	1.6855e+003
190	3420.0743	5.1905e+003
191	3420.3675	5.1575e+003
192	3420.6607	2.3965e+003
193	3420.9538	8.3825e+003
194	3421.2470	4.4925e+003
195	3421.5402	2.7965e+003
196	3421.8334	9.7348e+002
197	3422.1266	-4.8765e+003
198	3422.4198	-9.7395e+003
199	3422.7129	-4.1625e+003
200	3423.0061	1.0105e+003
201	3423.2993	-1.3615e+003

202	3423.5925	1.6825e+003
203	3423.8857	3.7945e+003
204	3424.1789	6.7248e+002
205	3424.4720	-2.9552e+002
206	3424.7652	-5.0565e+003
207	3425.0584	-6.5215e+003
208	3425.3516	-5.8005e+003
209	3425.6448	-1.9935e+003
210	3425.9380	2.8745e+003
211	3426.2311	4.0135e+003
212	3426.5243	3.8215e+003
213	3426.8175	4.5245e+003
214	3427.1107	8.3835e+003
215	3427.4039	5.6095e+003
216	3427.6971	2.6275e+003
217	3427.9902	1.5125e+003
218	3428.2834	-1.8852e+002
219	3428.5766	3.1725e+003
220	3428.8698	4.0195e+003
221	3429.1630	7.8148e+002
222	3429.4562	8.7848e+002
223	3429.7493	2.4675e+003
224	3430.0425	2.1405e+003
225	3430.3357	1.9875e+003
226	3430.6289	-1.5052e+002
227	3430.9221	-2.9952e+002
228	3431.2153	-7.3352e+002

229	3431.5085	-3.4335e+003
230	3431.8016	-2.4125e+003
231	3432.0948	-7.3952e+002
232	3432.3880	1.8835e+003
233	3432.6812	1.4085e+003
234	3432.9744	2.7248e+002
235	3433.2676	-3.8505e+003
236	3433.5607	-5.5525e+003
237	3433.8539	-4.7675e+003
238	3434.1471	-2.4625e+003
239	3434.4403	1.8965e+003
240	3434.7335	4.5105e+003
241	3435.0267	5.7225e+003
242	3435.3198	6.4375e+003
243	3435.6130	4.7045e+003
244	3435.9062	1.3055e+003
245	3436.1994	-4.3425e+003
246	3436.4926	-4.2955e+003
247	3436.7858	-1.3325e+003
248	3437.0789	1.2255e+003
249	3437.3721	1.1575e+003
250	3437.6653	2.4925e+003
251	3437.9585	4.1445e+003
252	3438.2517	2.8485e+003
253	3438.5449	5.0075e+003
254	3438.8380	9.4065e+003
255	3439.1312	5.9525e+003

256	3439.4244	3.6648e+002
257	3439.7176	-2.8945e+003
258	3440.0108	-4.1705e+003
259	3440.3040	-2.3215e+003
260	3440.5971	5.9481e+001
261	3440.8903	-2.6475e+003
262	3441.1835	-5.4695e+003
263	3441.4767	-1.9735e+003
264	3441.7699	2.8495e+003
265	3442.0631	9.3348e+002
266	3442.3562	-7.9552e+002
267	3442.6494	3.2915e+003
268	3442.9426	4.5745e+003
269	3443.2358	3.4255e+003
270	3443.5290	4.3715e+003
271	3443.8222	6.7035e+003
272	3444.1153	5.9575e+003
273	3444.4085	6.7275e+003
274	3444.7017	2.5915e+003
275	3444.9949	2.8475e+003
276	3445.2881	2.5375e+003
277	3445.5813	3.8725e+003
278	3445.8744	8.6648e+002
279	3446.1676	-1.8352e+002
280	3446.4608	3.6495e+003
281	3446.7540	5.2705e+003
282	3447.0472	1.1165e+004

283	3447.3404	1.1337e+004
284	3447.6335	2.3455e+003
285	3447.9267	1.4481e+001
286	3448.2199	3.8755e+003
287	3448.5131	-1.6825e+003
288	3448.8063	-4.5152e+002
289	3449.0995	2.5855e+003
290	3449.3926	-1.2652e+002
291	3449.6858	6.5148e+002
292	3449.9790	5.3875e+003
293	3450.2722	8.0275e+003
294	3450.5654	3.2005e+003
295	3450.8586	5.3515e+003
296	3451.1517	3.0305e+003
297	3451.4449	-1.4755e+003
298	3451.7381	2.0825e+003
299	3452.0313	3.1155e+003
300	3452.3245	5.4265e+003
301	3452.6177	9.2365e+003
302	3452.9108	5.6005e+003
303	3453.2040	3.6135e+003
304	3453.4972	6.5048e+002
305	3453.7904	-1.6165e+003
306	3454.0836	-2.3255e+003
307	3454.3768	-1.5355e+003
308	3454.6699	-7.5186e+000
309	3454.9631	1.8305e+003

310	3455.2563	5.3305e+003
311	3455.5495	8.7395e+003
312	3455.8427	7.2815e+003
313	3456.1359	1.0810e+004
314	3456.4290	1.1751e+004
315	3456.7222	6.6335e+003
316	3457.0154	3.0325e+003
317	3457.3086	4.1048e+002
318	3457.6018	3.5685e+003
319	3457.8950	5.2125e+003
320	3458.1882	6.3925e+003
321	3458.4813	-2.9252e+002
322	3458.7745	-1.5605e+003
323	3459.0677	1.3825e+003
324	3459.3609	2.9635e+003
325	3459.6541	3.9955e+003
326	3459.9473	1.7755e+003
327	3460.2404	2.9115e+003
328	3460.5336	1.0990e+004
329	3460.8268	7.4055e+003
330	3461.1200	3.8595e+003
331	3461.4132	-1.3995e+003
332	3461.7064	-2.4535e+003
333	3461.9995	1.7248e+002
334	3462.2927	-4.8765e+003
335	3462.5859	-1.0593e+004
336	3462.8791	-7.4905e+003

337	3463.1723	-6.3805e+003
338	3463.4655	-4.3155e+003
339	3463.7586	-1.8705e+003
340	3464.0518	3.5648e+002
341	3464.3450	7.0348e+002
342	3464.6382	-2.5452e+002
343	3464.9314	7.0448e+002
344	3465.2246	3.9948e+002
345	3465.5177	-5.8252e+002
346	3465.8109	-8.8952e+002
347	3466.1041	-1.1615e+003
348	3466.3973	3.5025e+003
349	3466.6905	7.8555e+003
350	3466.9837	5.1985e+003
351	3467.2768	3.5365e+003
352	3467.5700	-3.8635e+003
353	3467.8632	3.8115e+003
354	3468.1564	5.8795e+003
355	3468.4496	3.8325e+003
356	3468.7428	1.6695e+003
357	3469.0359	2.3225e+003
358	3469.3291	-2.7855e+003
359	3469.6223	-3.8525e+003
360	3469.9155	5.2048e+002
361	3470.2087	-1.5085e+003
362	3470.5019	-1.8835e+003
363	3470.7950	9.8548e+002

364	3471.0882	2.9885e+003
365	3471.3814	6.4975e+003
366	3471.6746	6.4225e+003
367	3471.9678	6.1385e+003
368	3472.2610	6.3915e+003
369	3472.5541	1.9475e+003
370	3472.8473	-3.0815e+003
371	3473.1405	-8.8865e+003
372	3473.4337	-7.4655e+003
373	3473.7269	-7.2965e+003
374	3474.0201	-6.4335e+003
375	3474.3132	1.2975e+003
376	3474.6064	9.5125e+003
377	3474.8996	8.9085e+003
378	3475.1928	8.1325e+003
379	3475.4860	8.2265e+003
380	3475.7792	4.6755e+003
381	3476.0723	4.0195e+003
382	3476.3655	4.9655e+003
383	3476.6587	1.4955e+003
384	3476.9519	3.9295e+003
385	3477.2451	3.0095e+003
386	3477.5383	2.9855e+003
387	3477.8314	3.2085e+003
388	3478.1246	9.5455e+003
389	3478.4178	1.0685e+004
390	3478.7110	1.1277e+004

391	3479.0042	1.0629e+004
392	3479.2974	1.1909e+004
393	3479.5905	1.1975e+004
394	3479.8837	1.5499e+004
395	3480.1769	2.0767e+004
396	3480.4701	2.4403e+004
397	3480.7633	3.0769e+004
398	3481.0565	3.5270e+004
399	3481.3496	4.1612e+004
400	3481.6428	5.7732e+004
401	3481.9360	7.5266e+004
402	3482.2292	9.9162e+004
403	3482.5224	1.3620e+005
404	3482.8156	1.7042e+005
405	3483.1088	1.7330e+005
406	3483.4019	1.2737e+005
407	3483.6951	3.1517e+004
408	3483.9883	-7.8010e+004
409	3484.2815	-1.5820e+005
410	3484.5747	-1.8092e+005
411	3484.8679	-1.5483e+005
412	3485.1610	-1.0956e+005
413	3485.4542	-6.3195e+004
414	3485.7474	-1.4744e+004
415	3486.0406	3.8818e+004
416	3486.3338	9.0743e+004
417	3486.6270	1.3792e+005

418	3486.9201	1.5283e+005
419	3487.2133	1.1284e+005
420	3487.5065	2.2854e+004
421	3487.7997	-7.7365e+004
422	3488.0929	-1.4242e+005
423	3488.3861	-1.5510e+005
424	3488.6792	-1.2556e+005
425	3488.9724	-8.1064e+004
426	3489.2656	-3.7820e+004
427	3489.5588	3.9025e+003
428	3489.8520	4.6841e+004
429	3490.1452	1.0244e+005
430	3490.4383	1.4687e+005
431	3490.7315	1.6086e+005
432	3491.0247	1.1609e+005
433	3491.3179	2.0402e+004
434	3491.6111	-8.0720e+004
435	3491.9043	-1.4494e+005
436	3492.1974	-1.5398e+005
437	3492.4906	-1.2936e+005
438	3492.7838	-9.2033e+004
439	3493.0770	-5.3300e+004
440	3493.3702	-2.4272e+004
441	3493.6634	-2.0495e+003
442	3493.9565	1.3027e+004
443	3494.2497	2.9395e+004
444	3494.5429	4.2582e+004

445	3494.8361	5.5038e+004
446	3495.1293	7.3374e+004
447	3495.4225	1.0633e+005
448	3495.7156	1.6422e+005
449	3496.0088	2.3033e+005
450	3496.3020	2.8132e+005
451	3496.5952	2.9446e+005
452	3496.8884	2.4669e+005
453	3497.1816	1.3192e+005
454	3497.4747	-1.4565e+004
455	3497.7679	-1.4784e+005
456	3498.0611	-2.3965e+005
457	3498.3543	-2.5571e+005
458	3498.6475	-2.1123e+005
459	3498.9407	-1.3567e+005
460	3499.2338	-4.6360e+004
461	3499.5270	4.9860e+004
462	3499.8202	1.4626e+005
463	3500.1134	2.2152e+005
464	3500.4066	2.4669e+005
465	3500.6998	2.0711e+005
466	3500.9929	1.0067e+005
467	3501.2861	-2.9209e+004
468	3501.5793	-1.4948e+005
469	3501.8725	-2.1764e+005
470	3502.1657	-2.1751e+005
471	3502.4589	-1.7115e+005

472	3502.7520	-9.6680e+004
473	3503.0452	1.8585e+003
474	3503.3384	1.0468e+005
475	3503.6316	1.9012e+005
476	3503.9248	2.4270e+005
477	3504.2180	2.5447e+005
478	3504.5111	1.9493e+005
479	3504.8043	7.8728e+004
480	3505.0975	-6.6486e+004
481	3505.3907	-1.9616e+005
482	3505.6839	-2.7123e+005
483	3505.9771	-2.7603e+005
484	3506.2702	-2.3344e+005
485	3506.5634	-1.6342e+005
486	3506.8566	-1.0917e+005
487	3507.1498	-6.9046e+004
488	3507.4430	-3.5391e+004
489	3507.7362	-9.7495e+003
490	3508.0293	8.6505e+003
491	3508.3225	2.7860e+004
492	3508.6157	6.3853e+004
493	3508.9089	1.1804e+005
494	3509.2021	1.8436e+005
495	3509.4953	2.5187e+005
496	3509.7885	2.8707e+005
497	3510.0816	2.7126e+005
498	3510.3748	1.9077e+005

499	3510.6680	5.8915e+004
500	3510.9612	-8.6647e+004
501	3511.2544	-1.9089e+005
502	3511.5476	-2.2728e+005
503	3511.8407	-2.0160e+005
504	3512.1339	-1.4111e+005
505	3512.4271	-6.6362e+004
506	3512.7203	1.1548e+004
507	3513.0135	9.9241e+004
508	3513.3067	1.7668e+005
509	3513.5998	2.2635e+005
510	3513.8930	2.1790e+005
511	3514.1862	1.3398e+005
512	3514.4794	-1.7785e+003
513	3514.7726	-1.3463e+005
514	3515.0658	-2.2481e+005
515	3515.3589	-2.4830e+005
516	3515.6521	-2.0967e+005
517	3515.9453	-1.3739e+005
518	3516.2385	-5.4038e+004
519	3516.5317	4.2186e+004
520	3516.8249	1.3801e+005
521	3517.1180	2.1792e+005
522	3517.4112	2.5964e+005
523	3517.7044	2.3874e+005
524	3517.9976	1.4143e+005
525	3518.2908	-1.8765e+003

526	3518.5840	-1.4670e+005
527	3518.8771	-2.4826e+005
528	3519.1703	-2.8232e+005
529	3519.4635	-2.5787e+005
530	3519.7567	-2.0354e+005
531	3520.0499	-1.4723e+005
532	3520.3431	-1.0802e+005
533	3520.6362	-7.6808e+004
534	3520.9294	-5.5981e+004
535	3521.2226	-4.0497e+004
536	3521.5158	-2.6015e+004
537	3521.8090	-1.6274e+004
538	3522.1022	-5.1435e+003
539	3522.3953	1.4946e+004
540	3522.6885	3.8768e+004
541	3522.9817	7.6137e+004
542	3523.2749	1.2150e+005
543	3523.5681	1.4509e+005
544	3523.8613	1.2074e+005
545	3524.1544	5.3482e+004
546	3524.4476	-3.7967e+004
547	3524.7408	-1.1025e+005
548	3525.0340	-1.3881e+005
549	3525.3272	-1.3086e+005
550	3525.6204	-9.9434e+004
551	3525.9135	-5.7426e+004
552	3526.2067	-1.5885e+004

553	3526.4999	3.2060e+004
554	3526.7931	7.8602e+004
555	3527.0863	1.2515e+005
556	3527.3795	1.4745e+005
557	3527.6726	1.2320e+005
558	3527.9658	5.4038e+004
559	3528.2590	-4.0453e+004
560	3528.5522	-1.0994e+005
561	3528.8454	-1.3240e+005
562	3529.1386	-1.1671e+005
563	3529.4317	-8.0851e+004
564	3529.7249	-3.8756e+004
565	3530.0181	1.4765e+003
566	3530.3113	4.4691e+004
567	3530.6045	9.5036e+004
568	3530.8977	1.4440e+005
569	3531.1908	1.6201e+005
570	3531.4840	1.2670e+005
571	3531.7772	5.2035e+004
572	3532.0704	-3.9078e+004
573	3532.3636	-1.1353e+005
574	3532.6568	-1.4936e+005
575	3532.9499	-1.4277e+005
576	3533.2431	-1.2012e+005
577	3533.5363	-9.5458e+004
578	3533.8295	-7.7880e+004
579	3534.1227	-6.4803e+004

580	3534.4159	-5.1398e+004
581	3534.7090	-3.9722e+004
582	3535.0022	-3.6745e+004
583	3535.2954	-2.7783e+004
584	3535.5886	-2.2522e+004
585	3535.8818	-2.1068e+004
586	3536.1750	-1.7818e+004
587	3536.4682	-1.8092e+004
588	3536.7613	-1.7620e+004
589	3537.0545	-1.8013e+004
590	3537.3477	-1.4712e+004
591	3537.6409	-8.5475e+003
592	3537.9341	-2.0305e+003
593	3538.2273	2.4595e+003
594	3538.5204	-6.9652e+002
595	3538.8136	-1.9875e+003
596	3539.1068	-3.5295e+003
597	3539.4000	-6.5215e+003
598	3539.6932	-7.7925e+003
599	3539.9864	-6.6045e+003
600	3540.2795	-8.8252e+002
601	3540.5727	4.2185e+003
602	3540.8659	5.2605e+003
603	3541.1591	3.2525e+003
604	3541.4523	1.0440e+004
605	3541.7455	1.2744e+004
606	3542.0386	6.0355e+003

607	3542.3318	-1.6295e+003
608	3542.6250	-2.3715e+003
609	3542.9182	-2.1695e+003
610	3543.2114	7.1948e+002
611	3543.5046	1.8195e+003
612	3543.7977	-7.7152e+002
613	3544.0909	-2.1765e+003
614	3544.3841	-1.7355e+003
615	3544.6773	-1.9752e+002
616	3544.9705	-2.9252e+002
617	3545.2637	3.4805e+003
618	3545.5568	5.6395e+003
619	3545.8500	1.5335e+003
620	3546.1432	3.5481e+001
621	3546.4364	-1.4615e+003
622	3546.7296	5.1955e+003
623	3547.0228	8.8725e+003
624	3547.3159	2.3905e+003
625	3547.6091	-7.0425e+003
626	3547.9023	-7.4955e+003
627	3548.1955	-5.5615e+003
628	3548.4887	-5.8675e+003
629	3548.7819	-5.1585e+003
630	3549.0750	-2.5795e+003
631	3549.3682	-1.6295e+003
632	3549.6614	-1.5675e+003
633	3549.9546	2.0755e+003

634	3550.2478	4.4865e+003
635	3550.5410	3.5835e+003
636	3550.8341	-4.3365e+003
637	3551.1273	-8.0135e+003
638	3551.4205	-7.6465e+003
639	3551.7137	-4.1305e+003
640	3552.0069	1.3895e+003
641	3552.3001	-1.1945e+003
642	3552.5932	-8.2565e+003
643	3552.8864	-8.1855e+003
644	3553.1796	-7.9925e+003
645	3553.4728	-5.4855e+003
646	3553.7660	-6.4845e+003
647	3554.0592	-5.4325e+003
648	3554.3523	-3.7975e+003
649	3554.6455	-2.7045e+003
650	3554.9387	-2.4785e+003
651	3555.2319	4.1685e+003
652	3555.5251	3.1855e+003
653	3555.8183	-1.4165e+003
654	3556.1114	-1.3185e+003
655	3556.4046	-2.1895e+003
656	3556.6978	-2.6585e+003
657	3556.9910	1.0385e+003
658	3557.2842	5.5395e+003
659	3557.5774	6.9675e+003
660	3557.8705	6.3345e+003

661	3558.1637	9.7548e+002
662	3558.4569	-2.9605e+003
663	3558.7501	-1.5955e+003
664	3559.0433	2.3705e+003
665	3559.3365	1.5045e+003
666	3559.6296	-1.1555e+003
667	3559.9228	3.8145e+003
668	3560.2160	6.8595e+003
669	3560.5092	2.3925e+003
670	3560.8024	-1.1385e+003
671	3561.0956	-1.1395e+003
672	3561.3887	-6.1955e+003
673	3561.6819	-2.8255e+003
674	3561.9751	-5.1552e+002
675	3562.2683	-2.0055e+003
676	3562.5615	-2.7985e+003
677	3562.8547	-2.0535e+003
678	3563.1479	-4.3385e+003
679	3563.4410	-2.1305e+003
680	3563.7342	4.7335e+003
681	3564.0274	6.4745e+003
682	3564.3206	5.7735e+003
683	3564.6138	5.2945e+003
684	3564.9070	1.9365e+003
685	3565.2001	-2.6715e+003
686	3565.4933	-2.6055e+003
687	3565.7865	1.7925e+003

688	3566.0797	1.1481e+001
689	3566.3729	-2.7335e+003
690	3566.6661	5.4348e+002
691	3566.9592	2.2885e+003
692	3567.2524	-5.5186e+000
693	3567.5456	-3.2125e+003
694	3567.8388	-2.1225e+003
695	3568.1320	-3.2805e+003
696	3568.4252	-6.3125e+003
697	3568.7183	-7.0205e+003
698	3569.0115	-3.4505e+003
699	3569.3047	-3.0385e+003
700	3569.5979	-3.0345e+003
701	3569.8911	1.4948e+002
702	3570.1843	2.5481e+001
703	3570.4774	-3.2885e+003
704	3570.7706	-1.3295e+003
705	3571.0638	-3.5455e+003
706	3571.3570	-6.0855e+003
707	3571.6502	-2.8795e+003
708	3571.9434	-7.8252e+002
709	3572.2365	-1.2215e+003
710	3572.5297	-1.0152e+002
711	3572.8229	-3.1575e+003
712	3573.1161	-6.0435e+003
713	3573.4093	-1.0825e+004
714	3573.7025	-9.0715e+003

715	3573.9956	-8.1335e+003
716	3574.2888	-3.6525e+003
717	3574.5820	-1.0175e+003
718	3574.8752	-3.6555e+003
719	3575.1684	-7.3265e+003
720	3575.4616	-4.3635e+003
721	3575.7547	-2.3735e+003
722	3576.0479	-3.3605e+003
723	3576.3411	-1.4875e+003
724	3576.6343	3.4765e+003
725	3576.9275	5.4565e+003
726	3577.2207	6.3155e+003
727	3577.5138	5.1065e+003
728	3577.8070	-4.0519e+001
729	3578.1002	-4.4295e+003
730	3578.3934	-8.2225e+003
731	3578.6866	-6.8505e+003
732	3578.9798	-5.5665e+003
733	3579.2729	-5.5175e+003
734	3579.5661	-3.9115e+003
735	3579.8593	-2.5395e+003
736	3580.1525	-9.5352e+002
737	3580.4457	-4.8265e+003
738	3580.7389	-7.5495e+003
739	3581.0320	-3.6975e+003
740	3581.3252	-2.9665e+003
741	3581.6184	-1.9295e+003

742	3581.9116	3.2715e+003
743	3582.2048	3.6045e+003
744	3582.4980	1.3795e+003
745	3582.7911	-4.9555e+003
746	3583.0843	-7.9305e+003
747	3583.3775	-4.0375e+003
748	3583.6707	4.0155e+003
749	3583.9639	2.1625e+003
750	3584.2571	-1.0485e+003
751	3584.5502	-1.4725e+003
752	3584.8434	-4.0625e+003
753	3585.1366	-3.7375e+003
754	3585.4298	-7.4565e+003
755	3585.7230	-9.1255e+003
756	3586.0162	-1.0234e+004
757	3586.3093	-8.4005e+003
758	3586.6025	-1.3885e+003
759	3586.8957	3.7405e+003
760	3587.1889	7.6695e+003
761	3587.4821	4.2935e+003
762	3587.7753	3.5905e+003
763	3588.0685	7.5925e+003
764	3588.3616	6.3695e+003
765	3588.6548	5.0465e+003
766	3588.9480	3.5845e+003
767	3589.2412	4.0835e+003
768	3589.5344	2.0505e+003

769	3589.8276	2.8848e+002
770	3590.1207	-7.3052e+002
771	3590.4139	-4.9685e+003
772	3590.7071	-6.7035e+003
773	3591.0003	-3.9845e+003
774	3591.2935	1.5448e+002
775	3591.5867	2.7715e+003
776	3591.8798	3.2525e+003
777	3592.1730	2.3145e+003
778	3592.4662	2.1125e+003
779	3592.7594	-3.1175e+003
780	3593.0526	-5.1625e+003
781	3593.3458	-3.3175e+003
782	3593.6389	-1.0315e+003
783	3593.9321	3.5095e+003
784	3594.2253	1.6735e+003
785	3594.5185	-3.2005e+003
786	3594.8117	-4.2755e+003
787	3595.1049	5.7175e+003
788	3595.3980	9.8775e+003
789	3595.6912	6.9885e+003
790	3595.9844	5.9548e+002
791	3596.2776	-2.3705e+003
792	3596.5708	-3.9365e+003
793	3596.8640	-2.8325e+003
794	3597.1571	-1.2505e+003
795	3597.4503	2.1805e+003

796	3597.7435	5.8395e+003
797	3598.0367	3.8125e+003
798	3598.3299	-7.4052e+002
799	3598.6231	-5.0545e+003
800	3598.9162	-1.9705e+003
801	3599.2094	-7.1352e+002
802	3599.5026	-4.0415e+003
803	3599.7958	-9.9535e+003
804	3600.0890	-5.8355e+003
805	3600.3822	-1.4015e+003
806	3600.6753	2.5975e+003
807	3600.9685	1.9215e+003
808	3601.2617	-7.4519e+001
809	3601.5549	1.0575e+003
810	3601.8481	7.9848e+002
811	3602.1413	-6.8952e+002
812	3602.4344	1.7035e+003
813	3602.7276	2.2695e+003
814	3603.0208	4.2848e+002
815	3603.3140	4.7148e+002
816	3603.6072	2.8445e+003
817	3603.9004	2.9635e+003
818	3604.1935	-1.0945e+003
819	3604.4867	-3.6885e+003
820	3604.7799	-3.1405e+003
821	3605.0731	1.2915e+003
822	3605.3663	-9.6552e+002

823	3605.6595	-1.6352e+002
824	3605.9526	5.7848e+002
825	3606.2458	-2.3235e+003
826	3606.5390	-4.8825e+003
827	3606.8322	-2.3385e+003
828	3607.1254	3.0435e+003
829	3607.4186	4.3255e+003
830	3607.7117	9.2048e+002
831	3608.0049	7.9048e+002
832	3608.2981	3.5725e+003
833	3608.5913	3.4925e+003
834	3608.8845	2.2948e+002
835	3609.1777	-2.1305e+003
836	3609.4708	-5.6835e+003
837	3609.7640	-1.0026e+004
838	3610.0572	-1.4476e+004
839	3610.3504	-9.8265e+003
840	3610.6436	-6.4595e+003
841	3610.9368	-1.0085e+003
842	3611.2299	1.1325e+003
843	3611.5231	6.5348e+002
844	3611.8163	-2.1225e+003
845	3612.1095	-5.1985e+003
846	3612.4027	-2.0975e+003
847	3612.6959	2.4815e+003
848	3612.9890	-2.9355e+003
849	3613.2822	-5.3352e+002

850	3613.5754	4.9005e+003
851	3613.8686	7.9755e+003
852	3614.1618	2.1625e+003
853	3614.4550	-4.5935e+003
854	3614.7482	9.4548e+002
855	3615.0413	-1.0615e+003
856	3615.3345	-4.8755e+003
857	3615.6277	-1.1295e+003
858	3615.9209	1.8595e+003
859	3616.2141	7.3748e+002
860	3616.5073	-1.9255e+003
861	3616.8004	-7.6555e+003
862	3617.0936	-9.2815e+003
863	3617.3868	-5.2305e+003
864	3617.6800	-3.8875e+003
865	3617.9732	-2.7475e+003
866	3618.2664	-4.1085e+003
867	3618.5595	-7.1155e+003
868	3618.8527	-7.2445e+003
869	3619.1459	-5.4585e+003
870	3619.4391	-8.9305e+003
871	3619.7323	-1.2354e+004
872	3620.0255	-9.2085e+003
873	3620.3186	-4.6615e+003
874	3620.6118	-4.7852e+002
875	3620.9050	-5.6245e+003
876	3621.1982	-7.5425e+003

877	3621.4914	-7.5715e+003
878	3621.7846	-5.2545e+003
879	3622.0777	-4.2145e+003
880	3622.3709	-3.9785e+003
881	3622.6641	-4.0085e+003
882	3622.9573	-1.2656e+004
883	3623.2505	-1.4592e+004
884	3623.5437	-8.3785e+003
885	3623.8368	-3.0165e+003
886	3624.1300	-8.7052e+002
887	3624.4232	5.4405e+003
888	3624.7164	9.4335e+003
889	3625.0096	6.3445e+003
890	3625.3028	-1.8665e+003
891	3625.5959	-4.8585e+003
892	3625.8891	2.5545e+003
893	3626.1823	3.6255e+003
894	3626.4755	-5.2805e+003
895	3626.7687	-7.1425e+003
896	3627.0619	-6.6185e+003
897	3627.3550	-6.0695e+003
898	3627.6482	-4.4725e+003
899	3627.9414	-6.1015e+003
900	3628.2346	-1.8645e+003
901	3628.5278	5.7348e+002
902	3628.8210	4.9548e+002
903	3629.1141	-2.2685e+003

904	3629.4073	-3.6755e+003
905	3629.7005	-4.5825e+003
906	3629.9937	-2.1555e+003
907	3630.2869	-4.5852e+002
908	3630.5801	-3.6405e+003
909	3630.8732	-3.3675e+003
910	3631.1664	-1.1755e+003
911	3631.4596	-2.9852e+002
912	3631.7528	-1.0595e+003
913	3632.0460	-1.8555e+003
914	3632.3392	1.4365e+003
915	3632.6323	-8.9519e+001
916	3632.9255	-2.0415e+003
917	3633.2187	-1.5735e+003
918	3633.5119	-4.7705e+003
919	3633.8051	-3.3805e+003
920	3634.0983	4.6345e+003
921	3634.3914	7.5825e+003
922	3634.6846	3.9948e+002
923	3634.9778	3.1448e+002
924	3635.2710	1.4465e+003
925	3635.5642	-1.5765e+003
926	3635.8574	-5.2352e+002
927	3636.1505	-5.4352e+002
928	3636.4437	-2.1435e+003
929	3636.7369	1.6825e+003
930	3637.0301	6.6935e+003

931	3637.3233	5.5845e+003
932	3637.6165	3.4905e+003
933	3637.9096	-3.0395e+003
934	3638.2028	-8.2665e+003
935	3638.4960	-9.2425e+003
936	3638.7892	-1.2347e+004
937	3639.0824	-9.8275e+003
938	3639.3756	-6.8785e+003
939	3639.6687	-8.7175e+003
940	3639.9619	-6.4405e+003
941	3640.2551	-5.9275e+003
942	3640.5483	-6.4625e+003
943	3640.8415	-1.0425e+004
944	3641.1347	-9.2785e+003
945	3641.4279	-9.0545e+003
946	3641.7210	-7.2615e+003
947	3642.0142	-3.9565e+003
948	3642.3074	-4.8152e+002
949	3642.6006	4.9848e+002
950	3642.8938	1.1975e+003
951	3643.1870	5.1905e+003
952	3643.4801	5.8275e+003
953	3643.7733	3.1225e+003
954	3644.0665	-3.1645e+003
955	3644.3597	-6.6365e+003
956	3644.6529	-6.1485e+003
957	3644.9461	-3.2605e+003

958	3645.2392	-4.5065e+003
959	3645.5324	-8.6695e+003
960	3645.8256	-5.6905e+003
961	3646.1188	6.9848e+002
962	3646.4120	3.9248e+002
963	3646.7052	2.6855e+003
964	3646.9983	3.6015e+003
965	3647.2915	5.6665e+003
966	3647.5847	7.0775e+003
967	3647.8779	6.1248e+002
968	3648.1711	-3.8695e+003
969	3648.4643	-3.6935e+003
970	3648.7574	-4.5525e+003
971	3649.0506	-4.8305e+003
972	3649.3438	-2.7965e+003
973	3649.6370	-3.8635e+003
974	3649.9302	-7.2355e+003
975	3650.2234	-1.0147e+004
976	3650.5165	-7.9515e+003
977	3650.8097	-1.5015e+003
978	3651.1029	-2.4165e+003
979	3651.3961	-6.1955e+003
980	3651.6893	-2.6385e+003
981	3651.9825	-1.2045e+003
982	3652.2756	6.7448e+002
983	3652.5688	4.0285e+003
984	3652.8620	-1.9752e+002

985	3653.1552	-1.5285e+003
986	3653.4484	-6.7652e+002
987	3653.7416	-3.5815e+003
988	3654.0347	-9.7845e+003
989	3654.3279	-1.0053e+004
990	3654.6211	-4.4685e+003
991	3654.9143	-4.5885e+003
992	3655.2075	-4.8525e+003
993	3655.5007	-4.6055e+003
994	3655.7938	-6.6525e+003
995	3656.0870	-1.1260e+004
996	3656.3802	-7.4915e+003
997	3656.6734	-6.6015e+003
998	3656.9666	-6.0345e+003
999	3657.2598	-4.6865e+003
1000	3657.5529	-5.0185e+003
1001	3657.8461	-7.1555e+003
1002	3658.1393	-6.9295e+003
1003	3658.4325	-4.0405e+003
1004	3658.7257	-1.0436e+004
1005	3659.0189	-1.1742e+004
1006	3659.3120	-6.0235e+003
1007	3659.6052	-8.5025e+003
1008	3659.8984	-1.1545e+004
1009	3660.1916	-6.1195e+003
1010	3660.4848	-1.8395e+003
1011	3660.7780	-4.2575e+003

1012	3661.0711	-3.2245e+003
1013	3661.3643	-2.1495e+003
1014	3661.6575	-1.0015e+003
1015	3661.9507	-1.3725e+003
1016	3662.2439	2.0795e+003
1017	3662.5371	3.7165e+003
1018	3662.8302	1.8565e+003
1019	3663.1234	-9.4852e+002
1020	3663.4166	-3.7852e+002
1021	3663.7098	-1.1555e+003
1022	3664.0030	-2.1345e+003
1023	3664.2962	-4.5735e+003

Table S21. EPR Data of the DMPO[3,5-Ph₂pz][•] Adduct (7^{Ph})

File List Date: 3.05.2018 Time: 13:34

File Name: Spectrum send from WinEPR ACQUISITION --- picked at 13:34

Data Point	Value[G]	Intensity
0	3223.0667	-1.5727e+003
1	3223.3599	-2.8647e+003
2	3223.6531	-3.8617e+003
3	3223.9463	-2.7757e+003
4	3224.2395	-3.6147e+003
5	3224.5326	-3.6207e+003
6	3224.8258	-3.0087e+003
7	3225.1190	-2.6797e+003
8	3225.4122	-2.2857e+003
9	3225.7054	-5.1869e+002
10	3225.9986	5.2313e+001
11	3226.2917	-9.8869e+002
12	3226.5849	-4.7769e+002
13	3226.8781	-1.7967e+003

14	3227.1713	-2.7827e+003
15	3227.4645	-3.4397e+003
16	3227.7577	-2.4897e+003
17	3228.0508	-2.9807e+003
18	3228.3440	-3.2767e+003
19	3228.6372	-3.1947e+003
20	3228.9304	-1.4087e+003
21	3229.2236	-3.6687e+001
22	3229.5168	-1.3269e+002
23	3229.8099	-2.7757e+003
24	3230.1031	-1.9177e+003
25	3230.3963	-3.5017e+003
26	3230.6895	-4.2787e+003
27	3230.9827	-4.8727e+003
28	3231.2759	-2.0967e+003
29	3231.5690	-1.8369e+002
30	3231.8622	-1.3657e+003
31	3232.1554	-2.9527e+003
32	3232.4486	-2.5567e+003
33	3232.7418	-1.4637e+003
34	3233.0350	-6.1469e+002
35	3233.3281	-1.4897e+003
36	3233.6213	3.5313e+001
37	3233.9145	1.2123e+003
38	3234.2077	1.6383e+003
39	3234.5009	7.8931e+002
40	3234.7941	-1.1737e+003
41	3235.0872	-9.0769e+002
42	3235.3804	-6.9169e+002
43	3235.6736	-1.1477e+003
44	3235.9668	-7.2369e+002
45	3236.2600	-1.3117e+003
46	3236.5532	-2.1677e+003
47	3236.8464	-2.7667e+003
48	3237.1395	-1.0127e+003
49	3237.4327	-6.3369e+002
50	3237.7259	1.5783e+003
51	3238.0191	3.5653e+003
52	3238.3123	2.4863e+003
53	3238.6055	1.7473e+003
54	3238.8986	3.9663e+003

55	3239.1918	3.7883e+003
56	3239.4850	3.2431e+002
57	3239.7782	-2.7797e+003
58	3240.0714	-1.8637e+003
59	3240.3646	-1.2447e+003
60	3240.6577	-1.2569e+002
61	3240.9509	-5.0069e+002
62	3241.2441	-6.1969e+002
63	3241.5373	-1.8677e+003
64	3241.8305	-1.1497e+003
65	3242.1237	-1.6687e+003
66	3242.4168	-2.4467e+003
67	3242.7100	-2.6067e+003
68	3243.0032	-1.2697e+003
69	3243.2964	-8.1369e+002
70	3243.5896	-9.7869e+002
71	3243.8828	-7.1469e+002
72	3244.1759	4.2131e+002
73	3244.4691	-2.0687e+001
74	3244.7623	1.7033e+003
75	3245.0555	7.1631e+002
76	3245.3487	7.2331e+002
77	3245.6419	3.3931e+002
78	3245.9350	1.3135e+000
79	3246.2282	3.2013e+003
80	3246.5214	3.8083e+003
81	3246.8146	3.5613e+003
82	3247.1078	2.4903e+003
83	3247.4010	2.4173e+003
84	3247.6941	1.8313e+003
85	3247.9873	1.5513e+003
86	3248.2805	1.3403e+003
87	3248.5737	1.2143e+003
88	3248.8669	5.5231e+002
89	3249.1601	-4.1269e+002
90	3249.4532	-2.3997e+003
91	3249.7464	-2.5467e+003
92	3250.0396	-1.1497e+003
93	3250.3328	6.7731e+002
94	3250.6260	1.0563e+003
95	3250.9192	-3.8969e+002

96	3251.2123	-1.1807e+003
97	3251.5055	-3.9169e+002
98	3251.7987	1.0953e+003
99	3252.0919	2.2383e+003
100	3252.3851	1.7903e+003
101	3252.6783	1.5653e+003
102	3252.9714	2.0303e+003
103	3253.2646	-8.6869e+002
104	3253.5578	-3.8137e+003
105	3253.8510	-2.9197e+003
106	3254.1442	-2.9307e+003
107	3254.4374	-2.5997e+003
108	3254.7305	-2.0747e+003
109	3255.0237	-1.0757e+003
110	3255.3169	-1.4967e+003
111	3255.6101	-2.5197e+003
112	3255.9033	-2.0077e+003
113	3256.1965	-8.0069e+002
114	3256.4896	2.7531e+002
115	3256.7828	1.7903e+003
116	3257.0760	3.3533e+003
117	3257.3692	8.3531e+002
118	3257.6624	-8.5269e+002
119	3257.9556	-3.9869e+002
120	3258.2487	-2.1737e+003
121	3258.5419	-3.4937e+003
122	3258.8351	-3.8067e+003
123	3259.1283	-3.4007e+003
124	3259.4215	-3.5369e+002
125	3259.7147	1.1783e+003
126	3260.0078	-1.8569e+002
127	3260.3010	-3.7969e+002
128	3260.5942	-1.7187e+003
129	3260.8874	-2.8217e+003
130	3261.1806	-2.8997e+003
131	3261.4738	-1.3647e+003
132	3261.7669	-1.3369e+002
133	3262.0601	9.8931e+002
134	3262.3533	8.9831e+002
135	3262.6465	1.1531e+002
136	3262.9397	-4.0569e+002

137	3263.2329	-1.1847e+003
138	3263.5261	-1.5977e+003
139	3263.8192	-3.6897e+003
140	3264.1124	-3.9977e+003
141	3264.4056	-3.0067e+003
142	3264.6988	-3.0867e+003
143	3264.9920	-2.3687e+003
144	3265.2852	-1.1567e+003
145	3265.5783	-1.1569e+002
146	3265.8715	1.7813e+003
147	3266.1647	3.2953e+003
148	3266.4579	2.8983e+003
149	3266.7511	-2.9869e+002
150	3267.0443	-2.1417e+003
151	3267.3374	-7.1569e+002
152	3267.6306	1.4973e+003
153	3267.9238	-8.9687e+001
154	3268.2170	-1.6787e+003
155	3268.5102	2.2831e+002
156	3268.8034	1.4103e+003
157	3269.0965	-5.1569e+002
158	3269.3897	-8.2769e+002
159	3269.6829	-1.3587e+003
160	3269.9761	-4.0969e+002
161	3270.2693	-3.1737e+003
162	3270.5625	-3.7787e+003
163	3270.8556	-2.1427e+003
164	3271.1488	-2.0447e+003
165	3271.4420	-3.3317e+003
166	3271.7352	-2.7287e+003
167	3272.0284	1.0573e+003
168	3272.3216	1.5593e+003
169	3272.6147	1.2213e+003
170	3272.9079	-9.0469e+002
171	3273.2011	-3.2687e+003
172	3273.4943	-3.6617e+003
173	3273.7875	-2.9157e+003
174	3274.0807	-2.9697e+003
175	3274.3738	-2.6307e+003
176	3274.6670	-3.2067e+003
177	3274.9602	-1.7147e+003

178	3275.2534	-1.6707e+003
179	3275.5466	-7.3769e+002
180	3275.8398	-1.5227e+003
181	3276.1329	-2.4377e+003
182	3276.4261	-3.3687e+003
183	3276.7193	-3.3607e+003
184	3277.0125	-2.8467e+003
185	3277.3057	-2.6107e+003
186	3277.5989	-2.2107e+003
187	3277.8920	-1.5477e+003
188	3278.1852	-1.1937e+003
189	3278.4784	-2.3467e+003
190	3278.7716	-3.9617e+003
191	3279.0648	-2.6007e+003
192	3279.3580	-1.4877e+003
193	3279.6511	-2.0569e+002
194	3279.9443	1.0943e+003
195	3280.2375	-1.2569e+002
196	3280.5307	-6.4687e+001
197	3280.8239	-9.7569e+002
198	3281.1171	-7.3669e+002
199	3281.4102	-6.2069e+002
200	3281.7034	1.6531e+002
201	3281.9966	1.6233e+003
202	3282.2898	-2.6169e+002
203	3282.5830	-3.2369e+002
204	3282.8762	-5.4687e+001
205	3283.1693	2.2733e+003
206	3283.4625	1.7783e+003
207	3283.7557	-1.8469e+002
208	3284.0489	-9.4969e+002
209	3284.3421	-2.9577e+003
210	3284.6353	-3.5177e+003
211	3284.9284	-3.8477e+003
212	3285.2216	-1.6987e+003
213	3285.5148	1.6773e+003
214	3285.8080	1.7883e+003
215	3286.1012	7.3531e+002
216	3286.3944	-1.0517e+003
217	3286.6875	-1.1787e+003
218	3286.9807	7.7531e+002

219	3287.2739	1.3133e+003
220	3287.5671	-7.6069e+002
221	3287.8603	-2.9007e+003
222	3288.1535	-2.6517e+003
223	3288.4466	-6.9269e+002
224	3288.7398	1.1243e+003
225	3289.0330	-1.3869e+002
226	3289.3262	-1.7397e+003
227	3289.6194	-5.9569e+002
228	3289.9126	-1.9769e+002
229	3290.2058	-3.2277e+003
230	3290.4989	-2.9547e+003
231	3290.7921	-1.2597e+003
232	3291.0853	-1.8257e+003
233	3291.3785	-3.2827e+003
234	3291.6717	-4.0947e+003
235	3291.9649	-1.7257e+003
236	3292.2580	1.4523e+003
237	3292.5512	9.0431e+002
238	3292.8444	-3.2637e+003
239	3293.1376	-5.5527e+003
240	3293.4308	-5.1467e+003
241	3293.7240	-4.6947e+003
242	3294.0171	-3.4027e+003
243	3294.3103	-1.6887e+003
244	3294.6035	-1.6147e+003
245	3294.8967	8.7231e+002
246	3295.1899	4.8773e+003
247	3295.4831	4.5473e+003
248	3295.7762	2.7273e+003
249	3296.0694	9.0831e+002
250	3296.3626	1.3973e+003
251	3296.6558	1.3963e+003
252	3296.9490	-5.4369e+002
253	3297.2422	-2.8517e+003
254	3297.5353	-3.6547e+003
255	3297.8285	-2.1237e+003
256	3298.1217	-3.5269e+002
257	3298.4149	1.2943e+003
258	3298.7081	1.5333e+003
259	3299.0013	2.3431e+002

260	3299.2944	-1.6569e+002
261	3299.5876	-7.4069e+002
262	3299.8808	7.5313e+001
263	3300.1740	-1.3137e+003
264	3300.4672	-2.9847e+003
265	3300.7604	-4.1857e+003
266	3301.0535	-1.8507e+003
267	3301.3467	-2.1969e+002
268	3301.6399	1.0913e+003
269	3301.9331	-2.4769e+002
270	3302.2263	2.5393e+003
271	3302.5195	3.4803e+003
272	3302.8126	2.3073e+003
273	3303.1058	-2.4207e+003
274	3303.3990	-3.5737e+003
275	3303.6922	-2.7187e+003
276	3303.9854	-1.8757e+003
277	3304.2786	-2.5197e+003
278	3304.5717	-3.0417e+003
279	3304.8649	-3.9887e+003
280	3305.1581	-2.7537e+003
281	3305.4513	-2.9669e+002
282	3305.7445	-2.1177e+003
283	3306.0377	-3.4957e+003
284	3306.3308	-2.1857e+003
285	3306.6240	-4.2169e+002
286	3306.9172	6.5931e+002
287	3307.2104	1.6533e+003
288	3307.5036	1.2663e+003
289	3307.7968	-1.1357e+003
290	3308.0899	-3.0497e+003
291	3308.3831	-6.2269e+002
292	3308.6763	1.1653e+003
293	3308.9695	2.1763e+003
294	3309.2627	2.7093e+003
295	3309.5559	1.7533e+003
296	3309.8490	-1.0269e+002
297	3310.1422	-1.1817e+003
298	3310.4354	-2.6937e+003
299	3310.7286	-2.7497e+003
300	3311.0218	3.6731e+002

301	3311.3150	2.8313e+001
302	3311.6081	1.5203e+003
303	3311.9013	1.7283e+003
304	3312.1945	1.3663e+003
305	3312.4877	-4.2669e+002
306	3312.7809	-6.7569e+002
307	3313.0741	-7.7869e+002
308	3313.3672	-7.8869e+002
309	3313.6604	3.8831e+002
310	3313.9536	8.5331e+002
311	3314.2468	-1.7527e+003
312	3314.5400	-2.8007e+003
313	3314.8332	-3.1527e+003
314	3315.1263	-3.1767e+003
315	3315.4195	-2.3837e+003
316	3315.7127	-2.3957e+003
317	3316.0059	-2.8017e+003
318	3316.2991	-3.3697e+003
319	3316.5923	-2.9027e+003
320	3316.8855	-2.2377e+003
321	3317.1786	-1.0667e+003
322	3317.4718	-1.6769e+002
323	3317.7650	5.6631e+002
324	3318.0582	-6.0669e+002
325	3318.3514	-3.1507e+003
326	3318.6446	-5.0527e+003
327	3318.9377	-2.6047e+003
328	3319.2309	-8.0069e+002
329	3319.5241	-3.6887e+003
330	3319.8173	-6.0897e+003
331	3320.1105	-5.4347e+003
332	3320.4037	-2.6967e+003
333	3320.6968	-3.3417e+003
334	3320.9900	-2.7077e+003
335	3321.2832	-2.7957e+003
336	3321.5764	-2.3207e+003
337	3321.8696	-3.0957e+003
338	3322.1628	-4.4767e+003
339	3322.4559	-5.3617e+003
340	3322.7491	-4.1567e+003
341	3323.0423	-4.2887e+003

342	3323.3355	-5.2577e+003
343	3323.6287	-7.3897e+003
344	3323.9219	-9.5937e+003
345	3324.2150	-1.2587e+004
346	3324.5082	-1.4020e+004
347	3324.8014	-1.3328e+004
348	3325.0946	-1.4675e+004
349	3325.3878	-1.6997e+004
350	3325.6810	-2.0887e+004
351	3325.9741	-2.5378e+004
352	3326.2673	-2.6994e+004
353	3326.5605	-3.1040e+004
354	3326.8537	-3.8822e+004
355	3327.1469	-4.6247e+004
356	3327.4401	-5.3650e+004
357	3327.7332	-6.2437e+004
358	3328.0264	-6.6984e+004
359	3328.3196	-5.8955e+004
360	3328.6128	-3.5133e+004
361	3328.9060	-9.4567e+003
362	3329.1992	5.2713e+003
363	3329.4923	7.4863e+003
364	3329.7855	1.4513e+003
365	3330.0787	-8.2977e+003
366	3330.3719	-1.9239e+004
367	3330.6651	-3.1944e+004
368	3330.9583	-4.6843e+004
369	3331.2514	-6.3544e+004
370	3331.5446	-8.1568e+004
371	3331.8378	-1.0251e+005
372	3332.1310	-1.2721e+005
373	3332.4242	-1.5887e+005
374	3332.7174	-2.0151e+005
375	3333.0105	-2.5606e+005
376	3333.3037	-3.2647e+005
377	3333.5969	-4.1299e+005
378	3333.8901	-4.9609e+005
379	3334.1833	-5.3130e+005
380	3334.4765	-4.7554e+005
381	3334.7696	-3.3948e+005
382	3335.0628	-1.8803e+005

383	3335.3560	-1.1169e+005
384	3335.6492	-1.4640e+005
385	3335.9424	-2.8566e+005
386	3336.2356	-4.9964e+005
387	3336.5287	-7.5051e+005
388	3336.8219	-9.8257e+005
389	3337.1151	-1.1214e+006
390	3337.4083	-1.1224e+006
391	3337.7015	-9.8864e+005
392	3337.9947	-7.5642e+005
393	3338.2878	-4.6007e+005
394	3338.5810	-1.6716e+005
395	3338.8742	9.4833e+003
396	3339.1674	-3.4504e+004
397	3339.4606	-3.0455e+005
398	3339.7538	-7.0562e+005
399	3340.0469	-1.0701e+006
400	3340.3401	-1.2370e+006
401	3340.6333	-1.1328e+006
402	3340.9265	-8.2003e+005
403	3341.2197	-4.5720e+005
404	3341.5129	-2.1679e+005
405	3341.8061	-2.1130e+005
406	3342.0992	-4.2957e+005
407	3342.3924	-7.7868e+005
408	3342.6856	-1.1512e+006
409	3342.9788	-1.4661e+006
410	3343.2720	-1.6852e+006
411	3343.5652	-1.8153e+006
412	3343.8583	-1.8631e+006
413	3344.1515	-1.7652e+006
414	3344.4447	-1.4497e+006
415	3344.7379	-9.7458e+005
416	3345.0311	-5.5288e+005
417	3345.3243	-4.4413e+005
418	3345.6174	-7.5539e+005
419	3345.9106	-1.3486e+006
420	3346.2038	-1.9344e+006
421	3346.4970	-2.2778e+006
422	3346.7902	-2.3020e+006
423	3347.0834	-2.0729e+006

424	3347.3765	-1.7828e+006
425	3347.6697	-1.6533e+006
426	3347.9629	-1.7639e+006
427	3348.2561	-1.9514e+006
428	3348.5493	-1.9681e+006
429	3348.8425	-1.7625e+006
430	3349.1356	-1.5451e+006
431	3349.4288	-1.5739e+006
432	3349.7220	-1.9123e+006
433	3350.0152	-2.3756e+006
434	3350.3084	-2.6517e+006
435	3350.6016	-2.5066e+006
436	3350.8947	-1.9463e+006
437	3351.1879	-1.2306e+006
438	3351.4811	-7.1952e+005
439	3351.7743	-6.6280e+005
440	3352.0675	-9.9395e+005
441	3352.3607	-1.4310e+006
442	3352.6538	-1.7370e+006
443	3352.9470	-1.8442e+006
444	3353.2402	-1.8396e+006
445	3353.5334	-1.8984e+006
446	3353.8266	-2.1009e+006
447	3354.1198	-2.2275e+006
448	3354.4129	-1.8935e+006
449	3354.7061	-1.0060e+006
450	3354.9993	-1.7153e+004
451	3355.2925	4.0009e+005
452	3355.5857	-1.0956e+005
453	3355.8789	-1.3519e+006
454	3356.1720	-2.7286e+006
455	3356.4652	-3.5455e+006
456	3356.7584	-3.3775e+006
457	3357.0516	-2.2701e+006
458	3357.3448	-8.0785e+005
459	3357.6380	2.2954e+005
460	3357.9311	4.5422e+005
461	3358.2243	4.7946e+004
462	3358.5175	-5.6641e+005
463	3358.8107	-1.0984e+006
464	3359.1039	-1.5043e+006

465	3359.3971	-1.9108e+006
466	3359.6902	-2.3501e+006
467	3359.9834	-2.5132e+006
468	3360.2766	-1.9109e+006
469	3360.5698	-4.4810e+005
470	3360.8630	1.2985e+006
471	3361.1562	2.4381e+006
472	3361.4493	2.3910e+006
473	3361.7425	1.1788e+006
474	3362.0357	-6.3162e+005
475	3362.3289	-2.1866e+006
476	3362.6221	-2.6998e+006
477	3362.9153	-1.8943e+006
478	3363.2084	-2.4862e+005
479	3363.5016	1.3201e+006
480	3363.7948	2.1461e+006
481	3364.0880	2.2018e+006
482	3364.3812	1.8810e+006
483	3364.6744	1.5238e+006
484	3364.9675	1.2043e+006
485	3365.2607	8.0547e+005
486	3365.5539	2.4318e+005
487	3365.8471	-2.9235e+005
488	3366.1403	-3.5898e+005
489	3366.4335	3.3346e+005
490	3366.7266	1.5529e+006
491	3367.0198	2.7152e+006
492	3367.3130	3.2538e+006
493	3367.6062	2.9042e+006
494	3367.8994	1.8280e+006
495	3368.1926	5.9557e+005
496	3368.4858	-1.1873e+005
497	3368.7789	1.6992e+004
498	3369.0721	7.7173e+005
499	3369.3653	1.5477e+006
500	3369.6585	1.8959e+006
501	3369.9517	1.8297e+006
502	3370.2449	1.6555e+006
503	3370.5380	1.6206e+006
504	3370.8312	1.7494e+006
505	3371.1244	1.8833e+006

506	3371.4176	1.8057e+006
507	3371.7108	1.4447e+006
508	3372.0040	9.8279e+005
509	3372.2971	7.3068e+005
510	3372.5903	8.7098e+005
511	3372.8835	1.3522e+006
512	3373.1767	1.9447e+006
513	3373.4699	2.3526e+006
514	3373.7631	2.4007e+006
515	3374.0562	2.1527e+006
516	3374.3494	1.8629e+006
517	3374.6426	1.7601e+006
518	3374.9358	1.8606e+006
519	3375.2290	1.9607e+006
520	3375.5222	1.8814e+006
521	3375.8153	1.6666e+006
522	3376.1085	1.5209e+006
523	3376.4017	1.6087e+006
524	3376.6949	1.9120e+006
525	3376.9881	2.2640e+006
526	3377.2813	2.4444e+006
527	3377.5744	2.2751e+006
528	3377.8676	1.7431e+006
529	3378.1608	1.0586e+006
530	3378.4540	5.4249e+005
531	3378.7472	4.2476e+005
532	3379.0404	7.1387e+005
533	3379.3335	1.2106e+006
534	3379.6267	1.6560e+006
535	3379.9199	1.9039e+006
536	3380.2131	1.9665e+006
537	3380.5063	1.8882e+006
538	3380.7995	1.6818e+006
539	3381.0926	1.3587e+006
540	3381.3858	9.6235e+005
541	3381.6790	5.6614e+005
542	3381.9722	2.7061e+005
543	3382.2654	1.8227e+005
544	3382.5586	3.5453e+005
545	3382.8517	7.1702e+005
546	3383.1449	1.0963e+006

547	3383.4381	1.3019e+006
548	3383.7313	1.2021e+006
549	3384.0245	7.3995e+005
550	3384.3177	3.2452e+005
551	3384.6108	9.1938e+004
552	3384.9040	6.4329e+004
553	3385.1972	2.7302e+005
554	3385.4904	5.9436e+005
555	3385.7836	9.1085e+005
556	3386.0768	1.1504e+006
557	3386.3699	1.2629e+006
558	3386.6631	1.2222e+006
559	3386.9563	1.0514e+006
560	3387.2495	8.0524e+005
561	3387.5427	5.4460e+005
562	3387.8359	3.1734e+005
563	3388.1290	1.6675e+005
564	3388.4222	1.4190e+005
565	3388.7154	2.4771e+005
566	3389.0086	4.1451e+005
567	3389.3018	5.4839e+005
568	3389.5950	5.9141e+005
569	3389.8881	5.5282e+005
570	3390.1813	4.7053e+005
571	3390.4745	3.8183e+005
572	3390.7677	3.0824e+005
573	3391.0609	2.5175e+005
574	3391.3541	2.0662e+005
575	3391.6472	1.7142e+005
576	3391.9404	1.4341e+005
577	3392.2336	1.1857e+005
578	3392.5268	9.7720e+004
579	3392.8200	7.9184e+004
580	3393.1132	6.2750e+004
581	3393.4063	4.6556e+004
582	3393.6995	3.4398e+004
583	3393.9927	1.9388e+004
584	3394.2859	9.3973e+003
585	3394.5791	1.7173e+004
586	3394.8723	4.1457e+004
587	3395.1655	6.8821e+004

588	3395.4586	8.5367e+004
589	3395.7518	8.6069e+004
590	3396.0450	7.7457e+004
591	3396.3382	6.7103e+004
592	3396.6314	5.7699e+004
593	3396.9246	4.9552e+004
594	3397.2177	4.2272e+004
595	3397.5109	3.6847e+004
596	3397.8041	3.2606e+004
597	3398.0973	2.9694e+004
598	3398.3905	2.7100e+004
599	3398.6837	2.6035e+004
600	3398.9768	2.6456e+004
601	3399.2700	2.6386e+004
602	3399.5632	2.2957e+004
603	3399.8564	2.0002e+004
604	3400.1496	1.6159e+004
605	3400.4428	1.1577e+004
606	3400.7359	1.2757e+004
607	3401.0291	1.5450e+004
608	3401.3223	1.5340e+004
609	3401.6155	1.3507e+004
610	3401.9087	1.4199e+004
611	3402.2019	1.3854e+004
612	3402.4950	1.3762e+004
613	3402.7882	1.3457e+004
614	3403.0814	1.1056e+004
615	3403.3746	1.1388e+004
616	3403.6678	1.2342e+004
617	3403.9610	1.2698e+004
618	3404.2541	1.1008e+004
619	3404.5473	9.1853e+003
620	3404.8405	6.0873e+003
621	3405.1337	7.7563e+003
622	3405.4269	1.0992e+004
623	3405.7201	1.0437e+004
624	3406.0132	8.4953e+003
625	3406.3064	7.5593e+003
626	3406.5996	6.2373e+003
627	3406.8928	6.3473e+003
628	3407.1860	6.5783e+003

629	3407.4792	5.6763e+003
630	3407.7723	5.5523e+003
631	3408.0655	4.8133e+003
632	3408.3587	4.6443e+003
633	3408.6519	6.6843e+003
634	3408.9451	8.0433e+003
635	3409.2383	7.1863e+003
636	3409.5314	5.6073e+003
637	3409.8246	6.2823e+003
638	3410.1178	6.1793e+003
639	3410.4110	6.3553e+003
640	3410.7042	4.6283e+003
641	3410.9974	3.9223e+003
642	3411.2905	1.4243e+003
643	3411.5837	1.2263e+003
644	3411.8769	4.1953e+003
645	3412.1701	4.8993e+003
646	3412.4633	4.1973e+003
647	3412.7565	3.2333e+003
648	3413.0496	2.8013e+003
649	3413.3428	3.9103e+003
650	3413.6360	6.0163e+003
651	3413.9292	5.8733e+003
652	3414.2224	3.7573e+003
653	3414.5156	3.0143e+003
654	3414.8087	3.4303e+003
655	3415.1019	3.6483e+003
656	3415.3951	3.6513e+003
657	3415.6883	2.8973e+003
658	3415.9815	3.3733e+003
659	3416.2747	1.6533e+003
660	3416.5678	1.6223e+003
661	3416.8610	1.9723e+003
662	3417.1542	1.8883e+003
663	3417.4474	2.4823e+003
664	3417.7406	2.8413e+003
665	3418.0338	2.0153e+003
666	3418.3269	2.4231e+002
667	3418.6201	-1.3137e+003
668	3418.9133	-1.7007e+003
669	3419.2065	3.0313e+001

670	3419.4997	2.3343e+003
671	3419.7929	2.2463e+003
672	3420.0860	1.7763e+003
673	3420.3792	2.7973e+003
674	3420.6724	3.0143e+003
675	3420.9656	3.0173e+003
676	3421.2588	2.5813e+003
677	3421.5520	1.5953e+003
678	3421.8452	-1.7069e+002
679	3422.1383	3.1348e-001
680	3422.4315	1.6323e+003
681	3422.7247	1.6193e+003
682	3423.0179	-1.6047e+003
683	3423.3111	-3.2827e+003
684	3423.6043	-3.0169e+002
685	3423.8974	2.1283e+003
686	3424.1906	2.6443e+003
687	3424.4838	2.9053e+003
688	3424.7770	3.0473e+003
689	3425.0702	2.5103e+003
690	3425.3634	1.6463e+003
691	3425.6565	5.1631e+002
692	3425.9497	-8.1069e+002
693	3426.2429	-2.7317e+003
694	3426.5361	-2.3207e+003
695	3426.8293	-1.9447e+003
696	3427.1225	-1.4527e+003
697	3427.4156	-1.3777e+003
698	3427.7088	-1.6027e+003
699	3428.0020	-2.3117e+003
700	3428.2952	7.8313e+001
701	3428.5884	2.8493e+003
702	3428.8816	3.4653e+003
703	3429.1747	2.9883e+003
704	3429.4679	3.4423e+003
705	3429.7611	3.8063e+003
706	3430.0543	2.0903e+003
707	3430.3475	-5.8569e+002
708	3430.6407	-1.2577e+003
709	3430.9338	-3.0457e+003
710	3431.2270	-3.1637e+003

711	3431.5202	-7.4969e+002
712	3431.8134	6.0131e+002
713	3432.1066	1.0793e+003
714	3432.3998	1.5873e+003
715	3432.6929	2.9923e+003
716	3432.9861	2.8943e+003
717	3433.2793	3.1893e+003
718	3433.5725	4.4353e+003
719	3433.8657	4.4193e+003
720	3434.1589	3.4073e+003
721	3434.4520	1.2773e+003
722	3434.7452	-1.1137e+003
723	3435.0384	-1.4517e+003
724	3435.3316	-3.0687e+001
725	3435.6248	-1.4527e+003
726	3435.9180	-3.2547e+003
727	3436.2111	-3.8437e+003
728	3436.5043	-2.3327e+003
729	3436.7975	-1.0277e+003
730	3437.0907	-1.3907e+003
731	3437.3839	-1.4797e+003
732	3437.6771	-2.9569e+002
733	3437.9702	2.1053e+003
734	3438.2634	9.5331e+002
735	3438.5566	-1.0797e+003
736	3438.8498	-1.6087e+003
737	3439.1430	-1.8869e+002
738	3439.4362	4.3313e+001
739	3439.7293	1.4283e+003
740	3440.0225	3.4993e+003
741	3440.3157	4.2323e+003
742	3440.6089	1.1973e+003
743	3440.9021	1.5203e+003
744	3441.1953	1.7843e+003
745	3441.4884	2.1123e+003
746	3441.7816	1.7813e+003
747	3442.0748	4.0531e+002
748	3442.3680	2.1763e+003
749	3442.6612	2.8773e+003
750	3442.9544	2.1443e+003
751	3443.2475	1.3733e+003

752	3443.5407	3.3313e+001
753	3443.8339	-1.3087e+003
754	3444.1271	-2.3347e+003
755	3444.4203	-3.5447e+003
756	3444.7135	-3.7197e+003
757	3445.0066	-2.5497e+003
758	3445.2998	-1.1427e+003
759	3445.5930	-5.0869e+002
760	3445.8862	-4.6169e+002
761	3446.1794	-1.0177e+003
762	3446.4726	-1.4157e+003
763	3446.7658	-5.4687e+001
764	3447.0589	2.4553e+003
765	3447.3521	1.7973e+003
766	3447.6453	2.6433e+003
767	3447.9385	1.7823e+003
768	3448.2317	2.3463e+003
769	3448.5249	8.4131e+002
770	3448.8180	-3.9669e+002
771	3449.1112	6.4031e+002
772	3449.4044	2.4363e+003
773	3449.6976	1.4423e+003
774	3449.9908	7.9331e+002
775	3450.2840	3.1931e+002
776	3450.5771	-3.0669e+002
777	3450.8703	-2.2769e+002
778	3451.1635	-3.9869e+002
779	3451.4567	-5.9069e+002
780	3451.7499	-1.6687e+003
781	3452.0431	-2.2687e+001
782	3452.3362	7.8313e+001
783	3452.6294	-4.3569e+002
784	3452.9226	1.0131e+002
785	3453.2158	-1.3087e+003
786	3453.5090	-2.0357e+003
787	3453.8022	-3.0447e+003
788	3454.0953	-3.4727e+003
789	3454.3885	-3.1727e+003
790	3454.6817	-3.1297e+003
791	3454.9749	-9.1769e+002
792	3455.2681	-5.8769e+002

793	3455.5613	-1.2797e+003
794	3455.8544	-1.1537e+003
795	3456.1476	-1.3969e+002
796	3456.4408	-5.0769e+002
797	3456.7340	-6.4769e+002
798	3457.0272	-4.3269e+002
799	3457.3204	-1.8157e+003
800	3457.6135	-1.9797e+003
801	3457.9067	-2.2637e+003
802	3458.1999	-1.4757e+003
803	3458.4931	1.5831e+002
804	3458.7863	-4.6669e+002
805	3459.0795	-2.1987e+003
806	3459.3726	-2.1017e+003
807	3459.6658	-2.1727e+003
808	3459.9590	-1.5407e+003
809	3460.2522	-2.3387e+003
810	3460.5454	-5.1147e+003
811	3460.8386	-6.9657e+003
812	3461.1317	-6.0037e+003
813	3461.4249	-1.9287e+003
814	3461.7181	-1.0017e+003
815	3462.0113	-7.3269e+002
816	3462.3045	1.4753e+003
817	3462.5977	2.7183e+003
818	3462.8908	2.7543e+003
819	3463.1840	2.2623e+003
820	3463.4772	4.9731e+002
821	3463.7704	-9.3569e+002
822	3464.0636	-1.8837e+003
823	3464.3568	-7.7669e+002
824	3464.6499	9.8531e+002
825	3464.9431	1.0153e+003
826	3465.2363	-2.6747e+003
827	3465.5295	-2.7647e+003
828	3465.8227	-2.2457e+003
829	3466.1159	-2.3967e+003
830	3466.4090	-1.4769e+002
831	3466.7022	1.2331e+002
832	3466.9954	1.8431e+002
833	3467.2886	1.0833e+003

834	3467.5818	5.2231e+002
835	3467.8750	-1.0687e+001
836	3468.1681	-7.2869e+002
837	3468.4613	-1.6865e+000
838	3468.7545	7.0313e+001
839	3469.0477	-9.0269e+002
840	3469.3409	-1.3527e+003
841	3469.6341	-3.5137e+003
842	3469.9272	-3.0657e+003
843	3470.2204	-2.8607e+003
844	3470.5136	-2.0567e+003
845	3470.8068	7.4313e+001
846	3471.1000	3.0303e+003
847	3471.3932	2.2413e+003
848	3471.6863	1.0963e+003
849	3471.9795	-1.5247e+003
850	3472.2727	-3.3977e+003
851	3472.5659	-1.6577e+003
852	3472.8591	-8.1369e+002
853	3473.1523	5.1631e+002
854	3473.4455	2.4703e+003
855	3473.7386	1.5073e+003
856	3474.0318	6.6531e+002
857	3474.3250	1.0931e+002
858	3474.6182	-9.6069e+002
859	3474.9114	-1.2487e+003
860	3475.2046	-3.6057e+003
861	3475.4977	-4.9237e+003
862	3475.7909	-3.4857e+003
863	3476.0841	-4.7827e+003
864	3476.3773	-5.0577e+003
865	3476.6705	-3.3947e+003
866	3476.9637	-2.8127e+003
867	3477.2568	-2.5769e+002
868	3477.5500	3.7583e+003
869	3477.8432	3.0363e+003
870	3478.1364	-4.0269e+002
871	3478.4296	-3.0127e+003
872	3478.7228	-2.7827e+003
873	3479.0159	-1.7157e+003
874	3479.3091	-1.3669e+002

875	3479.6023	-2.4869e+002
876	3479.8955	-7.0687e+001
877	3480.1887	-1.9397e+003
878	3480.4819	-3.1357e+003
879	3480.7750	-2.2507e+003
880	3481.0682	-1.5357e+003
881	3481.3614	-1.4069e+002
882	3481.6546	9.7531e+002
883	3481.9478	-2.8269e+002
884	3482.2410	-9.3869e+002
885	3482.5341	-8.8869e+002
886	3482.8273	4.5831e+002
887	3483.1205	1.2603e+003
888	3483.4137	1.1631e+002
889	3483.7069	8.7313e+001
890	3484.0001	-6.7369e+002
891	3484.2932	-1.3547e+003
892	3484.5864	-3.3197e+003
893	3484.8796	-2.9707e+003
894	3485.1728	-1.7357e+003
895	3485.4660	5.8031e+002
896	3485.7592	1.7031e+002
897	3486.0523	-9.0469e+002
898	3486.3455	-1.1869e+002
899	3486.6387	-9.5369e+002
900	3486.9319	-2.0197e+003
901	3487.2251	-1.5637e+003
902	3487.5183	-1.1169e+002
903	3487.8114	2.1373e+003
904	3488.1046	1.3363e+003
905	3488.3978	1.4183e+003
906	3488.6910	-1.1769e+002
907	3488.9842	-1.7187e+003
908	3489.2774	-2.3047e+003
909	3489.5705	-1.3957e+003
910	3489.8637	-9.3069e+002
911	3490.1569	6.1313e+001
912	3490.4501	-4.9269e+002
913	3490.7433	-3.8069e+002
914	3491.0365	-1.2427e+003
915	3491.3296	-4.5869e+002

916	3491.6228	1.1273e+003
917	3491.9160	-4.9687e+001
918	3492.2092	-1.6107e+003
919	3492.5024	-2.1767e+003
920	3492.7956	-9.6569e+002
921	3493.0887	1.1333e+003
922	3493.3819	3.0633e+003
923	3493.6751	2.3283e+003
924	3493.9683	1.8163e+003
925	3494.2615	1.2063e+003
926	3494.5547	-2.5769e+002
927	3494.8478	-1.8877e+003
928	3495.1410	-7.5669e+002
929	3495.4342	-3.8569e+002
930	3495.7274	1.1343e+003
931	3496.0206	2.5573e+003
932	3496.3138	1.4933e+003
933	3496.6069	-1.9569e+002
934	3496.9001	-1.4617e+003
935	3497.1933	-4.8069e+002
936	3497.4865	1.7143e+003
937	3497.7797	1.0883e+003
938	3498.0729	-3.3769e+002
939	3498.3660	8.6831e+002
940	3498.6592	1.9573e+003
941	3498.9524	2.8303e+003
942	3499.2456	3.6813e+003
943	3499.5388	3.2953e+003
944	3499.8320	2.5313e+003
945	3500.1252	2.8633e+003
946	3500.4183	3.7931e+002
947	3500.7115	-2.5747e+003
948	3501.0047	-1.5027e+003
949	3501.2979	1.7123e+003
950	3501.5911	1.0653e+003
951	3501.8843	-3.0969e+002
952	3502.1774	-1.9337e+003
953	3502.4706	-3.3047e+003
954	3502.7638	-2.8457e+003
955	3503.0570	-1.9167e+003
956	3503.3502	-3.6077e+003

957	3503.6434	-4.7267e+003
958	3503.9365	-2.2707e+003
959	3504.2297	-1.6369e+002
960	3504.5229	5.9931e+002
961	3504.8161	-2.6469e+002
962	3505.1093	-5.8169e+002
963	3505.4025	-1.5307e+003
964	3505.6956	-1.9037e+003
965	3505.9888	-1.3187e+003
966	3506.2820	-1.2667e+003
967	3506.5752	-1.6487e+003
968	3506.8684	-3.7369e+002
969	3507.1616	5.2431e+002
970	3507.4547	4.3731e+002
971	3507.7479	-5.1869e+002
972	3508.0411	-2.0957e+003
973	3508.3343	-1.1597e+003
974	3508.6275	2.7231e+002
975	3508.9207	1.1153e+003
976	3509.2138	8.7731e+002
977	3509.5070	-4.6169e+002
978	3509.8002	-1.4257e+003
979	3510.0934	-7.0069e+002
980	3510.3866	1.1983e+003
981	3510.6798	1.1313e+001
982	3510.9729	-2.6977e+003
983	3511.2661	-1.4117e+003
984	3511.5593	2.0313e+003
985	3511.8525	-1.2257e+003
986	3512.1457	-2.7017e+003
987	3512.4389	-4.0457e+003
988	3512.7320	-4.4527e+003
989	3513.0252	-3.7237e+003
990	3513.3184	-2.2597e+003
991	3513.6116	-2.3507e+003
992	3513.9048	-2.3387e+003
993	3514.1980	-2.1897e+003
994	3514.4911	-2.9067e+003
995	3514.7843	-4.1907e+003
996	3515.0775	-1.6597e+003
997	3515.3707	-7.6169e+002

998	3515.6639	-1.7267e+003
999	3515.9571	-2.4797e+003
1000	3516.2502	-1.0687e+003
1001	3516.5434	2.3113e+003
1002	3516.8366	8.2031e+002
1003	3517.1298	-1.3297e+003
1004	3517.4230	-5.6669e+002
1005	3517.7162	-3.3569e+002
1006	3518.0093	6.4031e+002
1007	3518.3025	1.2693e+003
1008	3518.5957	2.0233e+003
1009	3518.8889	2.9203e+003
1010	3519.1821	9.3931e+002
1011	3519.4753	-1.1067e+003
1012	3519.7684	-1.7469e+002
1013	3520.0616	-1.4247e+003
1014	3520.3548	-1.7847e+003
1015	3520.6480	-3.2669e+002
1016	3520.9412	-7.0269e+002
1017	3521.2344	5.7131e+002
1018	3521.5275	1.0563e+003
1019	3521.8207	-6.0769e+002
1020	3522.1139	-1.2477e+003
1021	3522.4071	-2.0227e+003
1022	3522.7003	-2.3417e+003
1023	3522.9935	-2.3817e+003