Electronic supplementary information for:

Tröger's Base Quasiracemates and Crystal Packing Tendencies

Jacob T. Cross,[a] Nicholas A. Rossi,[a] Mateusz Serafin[a] and Kraig A. Wheeler[a*]

Department of Chemistry, Eastern Illinois University, Charleston, IL 61920, USA. E-mail: kawheeler@eiu.ed; Tel: +1 217 581 3119

Electronic Supplementary Information

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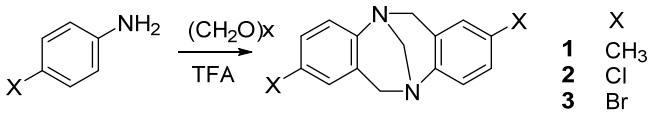
Supporting Information

S1. Experimental Details

General Considerations. All chemical reagents and solvents were purchased from the Aldrich Chemical Co. or Acros Chemicals and used as received without further purification unless stated otherwise. Compounds (*S,S*)-**1** and (*R,R*)-**1** were purchased from the Aldrich Chemical Co. Thin-layer chromatography (TLC) was performed on silica-gel plate w/UV254 (200 μm). Chromatograms were visualized by UV-light. ^{1}H NMR and ^{13}C NMR spectral data were recorded with a 400 MHz Bruker Avance spectrometer using TopSpin v.3.2. They were referenced using the solvent residual signal as internal standard. The chemical shift values are expressed as δ values (ppm) and the value of coupling constants (*J*) in Hertz (Hz). The following abbreviations were used for signal multiplicities: s, singlet; d, doublet; dd, doublet of doublets; t, triplet; q, quartet; m, multiplet; and br, broad. Specific optical rotations were measured on a Rudolph Autopol III polarimeter in a 10 cm cell at ambient temperature. Values of specific optical rotation . $[\alpha]_D$ are given in 10^{-1} cm^2g^{-1}; the concentrations *c* are in gdL^{-1}.

Synthetic Procedures

(*rac*)-2,8-Disubstituted-6H,12H-5,11-methanodibenzo[*b,f*][1,5]diazocine



Preparation of racemic **2-3** were carried out using a parallel procedure as described previously for 2,8-disubstituted Tröger's base adducts.[1]

To a 250 mL round-bottom flask was added paraformaldehyde (60.0 mmol) and the appropriate 4-substituted aniline (30.1 mmol). Upon cooling the flask to -8°C using a brine ice-bath, 50 mL of trifluoroacetic acid was added, with stirring, at a rate of ~one drop per second to give a tan colored heterogeneous mixture. The flask was removed from the ice-bath and stirred an additional 30 hours under ambient conditions. The homogeneous clear red solution was slowly poured over 100 g of ice. Concentrated NH_4OH (200 mL) was then added to the mixture followed by extraction with 3x25 mL CH_2Cl_2. The combined organic layers were dried using anhydrous $MgSO_4$, reduced *in vacuo* to give yellow oils, and recrystallized via slow evaporation from acetone to give colorless transparent crystals.

(*rac*)-2,8-Dichloro-6*H*,12*H*-5,11-methanodibenzo[*b,f*][1,5]diazocine. (*rac*)-**2**. 60.1% yield. Mp 130-132°C. ^{1}H NMR (400 MHz, $CDCl_3$): δ = 7.11 (dd, *J* = 8.6 and 2.3 Hz, 2H, Ar-H); 7.04 (d, *J*= 8.6 Hz, 2H, Ar-H); 6.88 (d, *J* = 2.3 Hz, 2H, Ar-H); 4.61 (d, *J* = 16.8 Hz, 2H, CH_2); 4.23 (s, 2H, CH_2); 4.07 (d, *J* = 16.8 Hz, 2H, CH_2). ^{13}C NMR ($CDCl_3$): δ 146.2, 129.1, 128.9, 127.6, 126.6, 126.3, 66.6, 58.3.

(*rac*)-2,8-Dibromo-6*H*,12*H*-5,11-methanodibenzo[*b,f*][1,5]diazocine. (*rac*)-**3**. 57.5% yield. Mp 163-165°C. ^{1}H NMR (400 MHz, $CDCl_3$) δ = 7.23 (dd, *J* = 8.5 and 2.3 Hz, 2H, Ar-H); 7.05(d, *J* = 8.5 Hz); 6.91 (d, *J* = 2.3 Hz, 2H, Ar-H); 4.60 (d, *J* = 16.8 Hz, 2H, Ar-H); 4.23 (s, 2H, CH_2); 4.06 (d, *J* = 16.8Hz, 2H, CH_2). ^{13}C NMR ($CDCl_3$): δ 146.9, 130.8, 129.7, 127.5, 126.8, 126.6, 66.5, 58.1.

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1. J. Jensen and K. Warnmark, *Synthesis,* 2001, **12,** 1873-1877. D. Didier, B. Tylleman, N. Lambert, C. M. L. Vande Velde, F. Blockhuys, A. Collas and S. Sergeyev, *Tetrahedron*, 2008, **64**, 6252-6262.

Diastereomeric Resolutions

Enantiopure compounds of **2** and **3** were isolated using the resolving agents (+)-dibenzoyl-L-tartaric and (-)-dibenzoyl-D-tartaric acid (DBTA) using previously described procedures.[2]

(*S,S*)-**2**. To a 50 mL round-bottom flask was added (*rac*)-**2** (0.7908 g, 2.716 mmol), (+)-dibenzoyl-D-tartaric acid (2.6675 g, 7.4447 mmol), and 6.95 mL of acetone. The stirred mixture immediately turned dark red and complete dissolution was accomplished by heating to < 60°C. The homogeneous red solution was stoppered and stirred for an additional 20 hours. The stopper was then removed and stirred for 2 hours. The white precipitate formed was filtered, dissolved in 20 mL of CH_2Cl_2, and extracted with 10 mL of 2M Na_2CO_3. The organic layer was filtered and allowed to recrystallize to give (+)-(*S,S*)-**2** as transparent colorless crystals: Mp = 114-117°C; $[\alpha]_D$ = +385° (*c* = 0.25 in hexanes. Lit. $[\alpha]_D$ = +393 [Ref. 2]).

(*S,S*)-**3** and (*R,R*)-**3** were prepared using parallel procedures as described for the isolation of (*S,S*)-**2**. Diastereomeric resolution using (+)-D-DTBA and (*rac*)-**3** gave (+)-(*S,S*)-**3** as a white solid: Mp 160−163 °C; $[\alpha]_D$ = +384° (*c* = 0.21 in hexanes. Lit. $[\alpha]_D$ = +379 [Ref. 2]). Diastereomeric resolution using (-)-L-DTBA and (*rac*)-**3** gave (-)-(*R,R*)-**3** as a white solid: Mp 161−164 °C; $[\alpha]_D$ = -383° (*c* = 0.15 in hexanes. Lit. $[\alpha]_D$ = -383 [Ref. 3]).

S2. Crystal Growth

Cocrystallizations

Quasiracemate (*R,R*)-1/(*S,S*)-2. Equimolar amounts of (*R,R*)-**1** and (*S,S*)-**2** were dissolved in acetone and and allowed to crystallized by slow evaporation to give quasiracemate (*R,R*)-**1**/(*S,S*)-**2** as colorless blocks.

Quasiracemate (*S,S*)-2/(*R,R*)-3. Equimolar amounts of (*S,S*)-**2** and (*R,R*)-**3** were dissolved in acetone and allowed to crystallized by slow evaporation to give quasiracemate (*S,S*)-**1**/(*R,R*)-**2** as colorless plates.

(*S,S*)-1/(*S,S*)-2. Equimolar amounts of (*S,S*)-**1** and (*S,S*)-**2** were dissolved in acetone and allowed to crystallized by slow evaporation to give the cocrystalline sample (*S,S*)-**1**/(*S,S*)-**2** as colorless blocks.

(*S,S*)-1/(*rac*)-3. Equimolar amounts of (*S,S*)-**1** and (*rac*)-**3** were dissolved in acetone and allowed to crystallized by slow evaporation to give the cocrystalline sample (*S,S*)-**1**/(*rac*)-**3** as light-yellow plates.

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2. S. Satishkumar and M. Periasamy, *Asymmetry*, 2007, **17**, 1116-1119. D. L. Jameson;, T. Field, M. R. Schmidt, A. K. DeStefano, C. J. Stiteler, V. J Venditto, B. Krovic, C. M. Hoffman, M. T. Ondisco, M. E. Belowich, *J. Org. Chem*., 2013, **78**, 11590-11596.
3. S. Sergeyev, D. Didier, V. Boitsov, A. Teshome, I. Asselberghs, K. Clays, C. M. L. Vande Velde, A. Plaquet and B. Champagne, *Chem. Eur. J*., 2010, **16**, 8181-8190

S3. X-ray Crystallography. Crystallographic details for compounds **1 – 4** and **8**-Cl are summarized in Table S1. X-ray data were collected on a Bruker APEX II and P4 CCD diffractometers using phi and omega scans with graphite monochromatic Cu $K\alpha$ (λ = 1.54178 Å) and Mo $K\alpha$ (λ = 0.71073 Å) radiation. Data sets were corrected for Lorentz and polarization effects as well as absorption - SADABS/multi-scan. The criterion for observed reflections is $I > 2\sigma(I)$. Lattice parameters were determined from least-squares analysis and reflection data. Empirical absorption corrections were applied using SADABS.[4] Structures solved by direct methods and refined by full-matrix least-squares analysis on F^2 using X-SEED[5] equipped with SHELX-2013-XS[6]. All non-hydrogen atoms for unreacted crystal phases were refined anisotropically by full-matrix least-squares on F^2 by the use of the SHELXL[4] program. In the case of disordered structures, the fragment occupancies were refined and constrained to sum to 1.0. H atoms for NH were located in difference Fourier synthesis and refined isotropically with restrained N-H distances of 0.85(2) Å and U_{iso}=1.2U_{eq} of the attached N atom. The remaining H atoms were included in idealized geometric positions with U_{iso}=1.2U_{eq} of the atom to which they were attached (U_{iso}=1.5U_{eq} for CH_3 groups). Where appropriate, molecular configurations were compared to both the known chirality of the Tröger's base components, experimentally determined optical rotation data, and estimated Flack parameters[7], and atomic coordinates were inverted to achieve correct structural configurations.

4. G. M. Sheldrick, SADABS —Program for Area Detector Absorption Corrections, University of Göttingen, Göttingen, Germany, 2013.

5. L. J. Barbour, *J. Supramol. Chem*., 2001, **1**, 189.

6. G. M. Sheldrick, *Acta Crystallogr., Sect. A: Fundam. Crystallogr.*, 2008, **64**, 112.

7. H. D. Flack, *Acta Crystallogr.,* 1983, **39**, 876.

Table S1. Crystallographic data for 1 – 4, 8

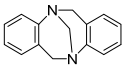
	(*R,R*)-**1**/(*S,S*)-**2**	(*S,S*)-**2**/(*R,R*)-**3**	(*S,S*)-**1**/(*S,S*)-**2**	(*S,S*)-**1**/(*rac*)-**3**
Crystal data				
CCDC deposit no.	CCDC-986733	CCDC-986734	CCDC-986735	CCDC-986736
Empirical formula	$C_{35}H_{36}Cl_2N_4O$	$C_{30}H_{24}Br_2Cl_2N_4$	$C_{16.36}H_{16.07}Cl_{0.64}N_2$	$C_{31.21}H_{27.68}Br_{2.74}N_4$
Crystal System, space group	Orthorhombic $P2_12_12$	Triclininc $P1$	Orthorhombic $P2_12_12_1$	Triclinic $P1$
M_r	599.58	671.25	263.48	677.57
a, Å	24.1816(6)	6.3103(2)	6.0409(2)	6.3568(4)
b, Å	10.4269(3)	10.2450(3)	8.0224(3)	10.4138(7)
c, Å	11.7456(3)	10.7089(3)	27.0534(10)	10.7105(7)
α, deg	90	83.053(1)	90	82.302(4)
β, deg	90	77.266(2)	90	75.969(3)
γ, deg	90	80.846(1)	90	82.058(3)
V, (Å^3)	2961.53(14)	688.8(3)	1311.08(8)	677.53(8)
Z, Z'	4, 1	1, 1	4, 1	1, 1
D_{calc} (g cm^{-3})	1.345	1.677	1.335	1.661
μ (mm^{-1}), rad. type	2.248, Cu $K\alpha$	5.941, Cu $K\alpha$	1.783, Cu $K\alpha$	4.105, Mo $K\alpha$
F_{000}	1264	336	556.6	338.8
temp (K)	100(2)	100(2)	100(2)	120(2)
Crystal form, color	block, colorless	block, colorless	block, colorless	plate, light-yellow
Crystal size, mm	0.33 x 0.27 x 0.10	0.32 x 0.19 x 0.18	0.38 x 0.28 x 0.25	0.31 x 0.20 x 0.18
Data collection				
Diffractometer	Bruker Apex II	Bruker Apex II	Bruker Apex II	Bruker Apex II
T_{min}/ T_{max}	0.524/0.803	0.251/0.411	0.551/0.664	0.280/0.477
No. of refls. (meas., uniq., and obs.)	40264/5329/4381	14612/4174/4123	17744/2351/2174	21743/7721/6901
R_{int}	0.0765	0.0178	0.0445	0.0575
θ_{max} (°)	67.551	68.212	67.401	30.183
Refinement				
R/R^2_ω (obs data)	0.0399/0.0911	0.0716/0.1832	0.0376/0.0898	0.0376/0.0935
R/R^2_ω (all data)	0.0553/0.0999	0.1008/0.2146	0.0418/0.0914	0.0434/0.0960
S	0.940	1.11	1.20	1.03
No. of refls.	5329	4174	2351	7721
No. of parameters	385	343	193	365
$\Delta\rho_{max/min}$ (e·Å^{-3})	0.354/-0.197	0.668/-0.395	0.184/-0.172	0.807/-0.823
flack	0.021(8)	0.044(7)	0.49(12)	0.067(8)

Table S1. Crystallographic data for 1 – 4, 8 (continued)

	(*rac*)-**2**-I	(*rac*)-**2**-II	(*S,S*)-**4**·Cl	**8**-Cl
Crystal data				
CCDC deposit no.	CCDC-986737	CCDC-986738	CCDC-986739	CCDC-986740
Empirical formula	$C_{15}H_{12}Cl_2N_2$	$C_{15}H_{12}Cl_2N_2$	$C_{16}H_{14}Br_2Cl_2N_2$	$C_{14}H_{10}Cl_2N_2$
Crystal System, space group	Triclinic *P*-1	Monoclinic $P2_1/n$	Orthorhombic $P2_12_12_1$	Monoclinic $P2_1/c$
M_r	291.17	291.17	535.91	277.14
a, Å	7.8192(2)	6.0853(5)	8.4113(1)	5.7702(1)
b, Å	9.8988(3)	13.6203(14)	9.0495(1)	15.3388(2)
c, Å	18.2061(5)	16.017(2)	25.1456(3)	13.9156(2)
α, deg	78.154(2)	90	90	90
β, deg	79.977(2)	92.009(9)	90	94.316(1)
γ, deg	72.633(1)	90	90	90
V, (Å^3)	1306.65(6)	1326.8(2)	1914.03(4)	1228.15(3)
Z, *Z'*	2, 2	4, 1	4, 1	4, 1
D_{calc} (g cm^{-3})	1.480	1.420	1.860	1.504
μ (mm^{-1}), rad. type	0.482, Mo $K\alpha$	0.475, Mo $K\alpha$	10.523, Cu $K\alpha$	4.589, Cu $K\alpha$
F_{000}	600	600	1048	568
temp (K)	100(2)	296(2)	100(2)	296(2)
Crystal form, color	needle, colorless	plate, colorless	block, colorless	rhomboid, colorless
Crystal size, mm	0.39 x 0.21 x 0.12	0.40 x 0.25 x 0.12	0.48 x 0.24 x 0.12	0.36 x 0.31 x 0.25
Data collection				
Diffractometer	Bruker Apex II	Bruker P4	Bruker Apex II	Bruker Apex II
T_{min}/ T_{max}	0.829/0.944	0.703/0.928	0.081/0.365	0.289/0.393
No. of refls. (meas., uniq., and obs.)	33398/4777/4288	3429/2423/1782	16667/3475/3460	16883/2218/1748
R_{int}	0.0255	0.0218	0.0334	0.0433
θ_{max} (°)	25.350	25.347	68.214	67.827
Refinement				
R/R^2_ω (obs data)	0.0243/0.0591	0.0406/0.0918	0.0278/0.0940	0.0382/0.0958
R/R^2_ω (all data)	0.0296/0.0623	0.0641/0.1026	0.0280/0.0940	0.0518/0.1035
S	1.05	1.05	1.22	1.05
No. of refls.	4777	2423	3475	2218
No. of parameters	343	236	220	163
$\Delta\rho_{max/min}$ (e·Å^{-3})	0.289/-0.224	0.182/-0235	0.754/-0.669	0.368/-0.400
flack	-	- H07	0.451(7)	-

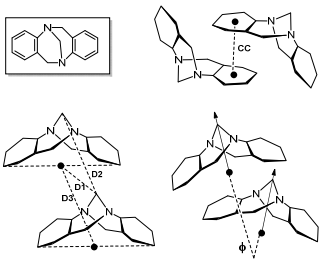
S4. CSD Search for Tröger's Base Dimeric Assemblies

CSD Search criteria:

- Organic chemical frameworks consisting of 

  Entries excluded that contain substituents attached to the central bridging methylene group and oligo TB compounds.

- D1 < 8Å and D2 < 12Å



Data tabulated:

D1, D2, D3, CC, and ϕ.

Search filters:

M1 $\phi < 40°$

M2-M4 $\phi > 40°$ and CC < 5.1Å

Crystal Structure Codes	D1	D2	D3	D2-D3	CC	ϕ	Motif	Space Group
(R,R)-1/(S,S)-2	6.944	9.793	4.657	5.136	3.942	145.58	M2	P21212
(R,R)-1/(S,S)-2	6.867	7.495	9.536	-2.041	7.023	90.199		
(R,R)-1/(S,S)-2	5.991	5.03	8.54	-3.51	5.165	178.433		
(R,R)-1/(S,S)-2	6.574	5.956	8.793	-2.837	6.146	89.751		
(R,R)-1/(S,S)-2	6.024	5.03	8.54	-3.51	5.165	178.433		
(R,R)-1/(S,S)-2	6.667	6.137	8.773	-2.636	6.192	89.751		
(R,R)-1/(S,S)-2	6.938	9.806	4.599	5.207	3.994	142.571	M2	
(R,R)-1/(S,S)-2	6.925	7.626	9.56	-1.934	7.013	90.343		
(S,S)-2/(R,R)-3	5.246	6.391	6.391	0	6.391	0	Long M1	P1
(S,S)-2/(R,R)-3	7.979	11.508	11.508	0	11.508	0	Long M1	
(S,S)-2/(R,R)-3	7.144	7.469	8.541	-1.072	6.489	179.347		
(S,S)-2/(R,R)-3	7.314	7.548	8.704	-1.156	4.711	179.347		
(S,S)-2/(R,R)-3	7.865	11.048	5.273	5.775	4.947	179.347	M2	
(S,S)-2/(R,R)-3	6.107	3.966	9.248	-5.282	6.761	179.347		
(S,S)-2/(R,R)-3	6.149	3.966	9.248	-5.282	6.761	179.346		
(S,S)-2/(R,R)-3	7.866	11.048	5.273	5.775	4.947	179.347	M2	
(S,S)-2/(R,R)-3	7.288	7.548	8.704	-1.156	4.711	179.347		
(S,S)-2/(R,R)-3	7.18	7.469	8.541	-1.072	6.489	179.347		
(S,S)-2/(R,R)-3	7.957	11.508	11.508	0	11.508	0	Long M1	
(S,S)-2/(R,R)-3	5.26	6.391	6.391	0	6.391	0	Long M1	
(S,S)-1/(S,S)-2	7.023	10.042	10.042	0	9.203	0	Long M1	P212121
(S,S)-1/(S,S)-2	4.405	6.041	6.041	0	6.041	0.02	Long M1	
(S,S)-1/(S,S)-2	6.505	8.022	8.022	0	7.438	0.02	Long M1	
(S,S)-1/(S,S)-2	7.247	7.161	9.176	-2.015	5.162	92.216		
(S,S)-1/(S,S)-2	6.901	8.682	7.787	0.895	4.931	104.842		
(S,S)-1/(S,S)-2	7.744	10.826	6.596	4.23	5.411	104.842		
(S,S)-1/(rac)-3	7.841	11.426	11.426	0	11.426	0	Long M1	P1
(S,S)-1/(rac)-3	5.249	6.357	6.357	0	6.357	0	Long M1	
(S,S)-1/(rac)-3	6.078	3.891	9.248	-5.357	6.717	179.548		
(S,S)-1/(rac)-3	7.804	11.025	5.223	5.802	4.898	179.548	M2	
(S,S)-1/(rac)-3	7.326	7.589	8.717	-1.128	4.778	179.548		
(S,S)-1/(rac)-3	7.111	7.416	8.54	-1.124	6.447	179.548		
(S,S)-1/(rac)-3	7.12	7.416	8.54	-1.124	6.447	179.548		
(S,S)-1/(rac)-3	7.297	7.589	8.717	-1.128	4.778	179.548		
(S,S)-1/(rac)-3	7.827	11.025	5.223	5.802	4.898	179.548	M2	
(S,S)-1/(rac)-3	6.087	3.891	9.248	-5.357	6.717	179.548		
(S,S)-1/(rac)-3	5.245	6.357	6.357	0	6.357	0	Long M1	
(S,S)-1/(rac)-3	7.853	11.426	11.426	0	11.426	0	Long M1	
(rac)-2-I	4.879	7.819	7.819	0	7.819	0.02	Long M1	P-1
(rac)-2-I	7.454	8.224	10.153	-1.929	7.145	61.56		
(rac)-2-I	3.749	6.768	4.495	2.273	4.259	61.56	M3	
(rac)-2-I	7.676	5.173	7.515	-2.342	5.494	61.56		
(rac)-2-I	7.976	7.152	4.449	2.703	3.732	61.56	M3	
(rac)-2-I	7.991	6.768	4.495	2.273	4.259	61.56	M3	
(rac)-2-I	6.017	5.173	7.515	-2.342	5.494	61.56		
(rac)-2-I	4.384	7.152	4.449	2.703	3.732	61.56	M3	
(rac)-2-I	7.832	10.626	10.626	0	9.114	0	Long M1	
(rac)-2-I	5.409	7.819	7.819	0	7.18	0	Long M1	
(rac)-2-I	7.726	8.475	8.5	-0.025	7.944	180		
(rac)-2-II	4.81	6.085	6.085	0	6.085	0	Long M1	P21/n
(rac)-2-II	7.818	10.815	5.434	5.381	5.038	180	M2	
(rac)-2-II	5.316	7.661	8.167	-0.506	7.129	75.931		
(rac)-2-II	7.511	10.623	8.297	2.326	8.297	75.931		
(S,S)-4	7.093	8.411	8.411	0	5.938	0.02	Long M1	P212121
(S,S)-4	7.676	10.461	7.254	3.207	6.537	113.269		
(S,S)-4	7.355	6.214	10.461	-4.247	8	150.608		
AFORUJ	5.569	8.989	8.989	0	8.989	0	Long M1	C2/c

AFOSAQ	6.012	3.735	9.209	-5.474	6.809	180		C2/c
AFOSEU	7.931	9.83	9.83	0	8.877	0	Long M1	P21/c
AFOSEU	4.939	5.862	8.137	-2.275	6.276	82.774		
AFOSEU	7.412	10.558	7.085	3.473	6.58	82.774		
APEMAK	2.137	5.935	5.935	0	5.935	0	Short M1	P2/n
AXAGEL	7.036	10.014	10.014	0	9.234	0	Long M1	P212121
AXAGEL	4.401	6.11	6.11	0	6.11	0.02		
AXAGEL	6.48	7.934	7.934	0	7.453	0	Long M1	
AXAGEL	7.073	8.73	7.955	0.775	4.955	106.191		
AXAGEL	7.878	10.865	6.745	4.12	5.401	106.191		
AZUTUL	5.279	8.149	8.149	0	7.631	0.02	Long M1	P21/c
AZUTUL	7.818	8.283	8.909	-0.626	3.909	179.98		
AZUTUL	3.93	6.821	4.6	2.221	4.075	55.4	M3	
CEJWIX	7.403	8.459	9.547	-1.088	6.955	105.476		P21/a
CEJWIX	5.861	4.588	8.462	-3.874	5.481	179.98		
CEJWIX	6.367	6.248	8.728	-2.48	6.098	74.524		
CUNQAE	6.392	9.667	7.869	1.798	5.85	65.691		P21
CUNQAE	7.65	8.598	10.805	-2.207	7.883	65.691		
DEFQAG	4.975	6.454	6.454	0	6.454	0	Long M1	P212121
DEFQAG	7.544	9.45	9.45	0	9.148	0.02	Long M1	
DEFQAG	7.917	8.465	9.348	-0.883	4.761	99.786		
DEFQAG	6.682	8.814	7.677	1.137	5.056	95.602		
DEFQAG01	7.493	9.411	9.411	0	9.115	0	Long M1	P212121
DEFQAG01	4.907	6.384	6.384	0	6.384	0	Long M1	
DEFQAG01	6.58	8.74	7.593	1.147	5.017	95.394		
DEFQAG01	7.852	8.426	9.266	-0.84	4.688	99.556		
DEGREM	7.107	8.29	8.29	0	6.574	0.02	Long M1	C2/C
DEGREM	6.178	8.573	3.918	4.655	4.873	117.321		
DEGREM	7.918	10.068	8.27	1.798	5.687	117.321		
DEGREM	7.176	7.641	8.479	-0.838	3.757	180		
DEGREM	7.025	5.265	9.913	-4.648	8.362	179.98		
DEGREM	5.713	9.225	7.887	1.338	6.151	62.679		
DEGREM	7.209	8.52	10.649	-2.129	8.507	62.679		
DEGRIQ	6.981	8.437	8.437	0	6.033	0	Long M1	P-1
DEGRIQ	7.714	9.485	9.485	0	9.234	0	Long M1	
DEGRIQ	7.944	11.438	5.002	6.436	5.138	180		
DEGRIQ	7.705	7.629	9.496	-1.867	7.628	180		
DEMBAZ	7.052	8.134	8.134	0	6.47	0	Long M1	P21/ c
DEMBAZ	7.974	8.487	9.865	-1.378	5.949	119.74		
DEMBAZ	5.934	7.325	7.678	-0.353	5.822	119.74		
DEMBAZ	5.017	7.639	8.602	-0.963	7.406	60.26		
DEMBAZ	7.488	10.891	8.691	2.2	7.92	60.26		
DICHIG	7.283	8.54	8.54	0	6.156	0	Long M1	P-1
DICHIG	6.281	5.45	8.739	-3.289	5.402	180		
DICHIG	6.398	4.543	9.403	-4.86	7.789	180		
DILLEP	6.737	10.386	10.386	0	10.386	0.02	Long M1	Pccn
DILLEP	1.532	5.21	5.207	0.003	5.224	12.661	Short M1	
DILLEP	7.369	9.305	7.011	2.294	6.717	179.98		
DILLEP	7.404	9.874	6.269	3.605	6.631	180		
DILLEP	6.534	6.854	8.675	-1.821	6.986	167.339		
DILLEP	7.285	6.854	8.675	-1.821	6.986	167.339		
DILLEP	6.827	10.386	10.386	0	10.386	0	Long M1	
DILLEP	1.634	5.193	5.193	0	5.338	0	Short M1	
DORJAW	5.257	7.529	7.414	0.115	5.54	117.452		P21/c
DORJAW	7.987	10.865	5.736	5.129	4.564	180	M2	
DORJAW	6.555	4.481	9.445	-4.964	8.012	180		
DORJAW	7.575	7.92	8.682	-0.762	3.87	180		
DORJAW	6.874	7.796	10.005	-2.209	8.352	62.548		
DORJEA	6.668	8.312	8.312	0	6.586	0	Long M1	P21/n
DORJEA	5.942	7.582	8.732	-1.15	7.227	122.895		
DORJEA	6.326	9.443	4.003	5.44	3.774	179.98		
DORJEA	6.943	7.043	8.483	-1.44	3.794	179.98		
DORJEA	7.541	8.442	10.665	-2.223	9.46	57.105		
DUWBON	5.85	4.738	8.432	-3.694	5.349	180		P-1
DUWBON	7.172	8.59	8.419	0.171	6.252	6.978	Long M1	
DUWBON	6.525	5.894	8.961	-3.067	7.704	173.022		
DUWBON	6.928	5.894	8.961	-3.067	7.704	173.022		
DUWBON	7.771	10.481	5.927	4.554	6.669	180		
DUWBON	5.933	4.76	8.486	-3.726	5.484	162.614		
DUWBON	6.972	8.059	8.624	-0.565	6.357	17.386	Long M1	
DUWBON	7.324	8.569	8.132	0.437	5.949	10.499	Long M1	
DUWBON	7.982	10.977	5.663	5.314	5.011	162.614	M2	
DUWBON	5.995	4.76	8.486	-3.726	5.484	162.614		
DUWBON	6.281	4.787	9.007	-4.22	7.564	180		
DUWBUT	6.747	5.832	9.137	-3.305	7.811	180		P-1
DUWBUT	5.916	4.88	8.522	-3.642	5.245	180		
DUWBUT	7.261	8.461	8.692	-0.231	6.277	4.732	Long M1	
DUWBUT	7.253	8.69	8.46	0.23	6.159	4.732	Long M1	
DUWBUT	6.8	5.622	9.356	-3.734	7.943	179.98		
DUWBUT	5.888	4.71	8.591	-3.881	5.475	179.98		
DUWBUT01	7.509	10.754	10.754	0	10.754	0	Long M1	P21/c
DUWBUT01	7.009	8.334	8.624	-0.29	6.163	136.088		
DUWBUT01	2.283	5.491	5.815	-0.324	5.339	43.912		
DUWBUT01	2.02	5.432	5.444	-0.012	5.41	43.912		
DUWBUT01	7.713	10.754	10.754	0	10.754	0.02	Long M1	
DUWBUT01	7.003	8.458	8.595	-0.137	5.974	132.434		

DUWBUT01	7.119	8.52	8.762	-0.242	6	137.205		
DUWBUT01	7.684	10.754	10.754	0	10.754	0	Long M1	
DUWBUT01	2.235	5.451	5.683	-0.232	5.378	46.443		
DUWBUT02	7.701	10.746	10.746	0	10.746	0.02	Long M1	P21/c
DUWBUT02	6.994	8.411	8.634	-0.223	6.099	132.536		
DUWBUT02	2.241	5.46	5.672	-0.212	5.373	47.464		
DUWCII	7.613	10.764	10.764	0	10.764	0.02	Long M1	P21/c
DUWCII	6.955	8.486	8.582	-0.096	6.45	137.544		
DUWCII	2.128	5.517	5.542	-0.025	5.4	42.456		
DUWCOO	5.696	6.684	6.684	0	6.684	0	Long M1	C2/C
DUWCOO	6.143	5.063	8.388	-3.325	5.156	151.435		
DUWCOO	6.088	5.063	8.388	-3.325	5.156	151.435		
DUWCOO	7.514	8.324	9.344	-1.02	7.035	151.435		
DUWCOO	7.371	6.684	6.684	0	6.684	0	Long M1	
DUWCOO	7.698	6.684	6.684	0	6.684	0	Long M1	
EDEWAM	6.729	10.169	10.169	0	10.169	0	Long M1	P-1
EDEWAM	7.863	8.69	8.631	0.059	8.015	180		
EDEWAM	7.736	8.343	8.743	-0.4	8.049	180		
EDEWAM	1.619	5.187	5.227	-0.04	5.131	29.61	Short M1	
EDEWAM	7.511	7.483	10.317	-2.834	8.65	150.39		
EDEWAM	1.546	5.112	5.153	-0.041	5.041	29.61	Short M1	
EDEWAM	7.624	10.306	7.725	2.581	7.285	150.39		
EDEWAM	6.724	10.169	10.169	0	10.169	0	Long M1	
EDEWAM	7.561	9.704	6.815	2.889	6.683	180		
EFAMEE	4.096	6.459	7.25	-0.791	5.111	60.653		P212121
EFAMEE01	4.197	6.544	7.339	-0.795	5.16	61.624		P212121
EFURAZ	7.168	10.392	10.392	0	10.392	0.02	Long M1	P212121
EFURAZ	2.149	5.367	5.487	-0.12	4.65	38.747	Short M1	
EFURAZ	6.986	8.33	8.613	-0.283	6.25	142.031		
EKOPOJ	7.284	10.483	10.483	0	10.483	0.02	Long M1	P212121
EKOPOJ	6.997	8.317	8.635	-0.318	6.267	141.654		
EKOPOJ	2.232	5.42	5.54	-0.12	4.681	39.102	Short M1	
EKOPOJ01	7.16	10.383	10.383	0	10.383	0.02	Long M1	P212121
EKOPOJ01	6.998	8.347	8.616	-0.269	6.246	142.094		
EKOPOJ01	2.143	5.359	5.483	-0.124	4.647	38.739	Short M1	
EKOPOJ02	7.169	10.392	10.392	0	10.392	0	Long M1	P212121
EKOPOJ02	2.147	5.366	5.488	-0.122	4.65	38.889	Short M1	
EKOPOJ02	6.985	8.337	8.61	-0.273	6.246	141.93		
FEYGOF	5.697	9.188	9.188	0	9.188	0	Long M1	I2/a
FUPKUW	5.876	8.303	8.303	0	6.99	0	Long M1	P21/c
FUPKUW	7.555	8.397	8.201	0.196	7.693	180		
FUPKUW	7.425	8.114	8.249	-0.135	7.655	180		
FUPKUW	6.787	6.226	9.594	-3.368	5.544	71.382		
FUPKUW	6.075	8.942	5.703	3.239	4.249	71.382	M3	
FUPLAD	6.764	9.38	9.38	0	9.242	0	Long M1	P21/n
FUPLAD	5.545	7.879	7.282	0.597	5.542	106.944		
FUPLAD	7.63	10.953	4.94	6.013	4.568	180	M2	
FUPLAD	7.093	8.161	7.872	0.289	7.261	179.98		
FUPLAD	7.803	4.579	11.346	-6.767	9.542	179.98		
FUPLEH	1.741	5.486	5.486	0	5.486	0	Short M1	C2/c
FUPLEH	7.227	10.972	10.972	0	10.972	0	Long M1	
FUPLEH	7.487	8.048	8.683	-0.635	6.87	180		
GIPQOM	6.259	8.184	8.184	0	7.562	0	Long M1	P212121
GIPQOM	7.168	7.421	9.926	-2.505	6.374	95.222		
GIPQUS	4.731	6.785	7.088	-0.303	5.266	94.252		P21
GIPRAZ	4.848	6.812	7.06	-0.248	5.306	94.646		P21
GITGOG	6.023	5.054	8.631	-3.577	5.168	180		P21/n
GITGOG	6.34	6.189	8.658	-2.469	6.322	89.507		
GITGOG	6.864	8.029	9.732	-1.703	7.232	90.493		
GITGOG	6.453	5.746	9.007	-3.261	5.984	89.507		
GITGOG	7.078	7.786	9.426	-1.64	6.755	90.493		
GITGOG	6.069	5.309	8.54	-3.231	4.936	180		
GUWRAS	6.746	10.019	10.019	0	10.019	0	Long M1	Pna21
GUWRAS	2.068	5.325	5.037	0.288	5.279	21.911	Short M1	
GUWREW	7.432	11.053	11.053	0	11.053	0	Long M1	P21/a
GUWREW	2.029	5.586	5.538	0.048	5.186	7.076	Short M1	
HIVCEV	6.24	8.075	8.075	0	7.375	0	Long M1	P21/c
HIVCEV	6.528	5.817	8.869	-3.052	5.74	176.383		
HIVCEV	6.705	5.817	8.869	-3.052	5.74	176.383		
HIVCEV	7.757	8.393	8.653	-0.26	3.715	179.98		
HIVCEV	7.824	8.592	8.578	0.014	8.019	180		
HIVCEV	7.442	10.217	5.597	4.62	4.882	180	M2	
HIVCEV	7.511	10.381	5.481	4.9	4.806	180	M2	
HIVCEV	5.506	8.83	8.828	0.002	8.447	3.616	Long M1	
HOFRUQ	5.374	7.91	7.91	0	7.026	0	Long M1	Pca21
HOFRUQ	7.827	8.438	7.866	0.572	7.41	118.279		
HOFRUQ	7.855	8.438	7.866	0.572	7.41	118.279		
HOFRUQ	7.119	6.653	9.558	-2.905	5.407	61.719		
HOFRUQ	5.693	8.259	5.554	2.705	3.981	61.719	M3	
HOPGAV	7.748	10.403	10.403	0	9.725	0	Long M1	P-1
HOPGAV	7.541	10.404	10.396	0.008	9.669	5.313		
HUHKEB	5.478	6.572	6.572	0	6.572	0	Long M1	P4nc
HUHKEB	7.262	9.738	5.994	3.744	4.658	72.225	M3	
HUHKEB	6.623	5.19	8.808	-3.618	4.73	68.399		

JAYXUD	6.687	10.133	10.133	0	10.133	0	Long M1	P-1
JAYXUD	1.651	5.229	5.053	0.176	4.673	25.539	Short M1	
JAYXUD	1.627	5.235	5.098	0.137	4.708	25.539	Short M1	
JAYXUD	6.65	10.133	10.133	0	10.133	0		
JEVYOZ	1.522	5.096	5.096	0	5.096	0	Short M1	C2/c
JEVYOZ	6.618	10.192	10.192	0	10.192	0		
JEVYOZ	7.485	7.992	8.588	-0.596	7.855	180		
JEVYUF	6.704	10.291	10.291	0	10.291	0	Long M1	P-1
JEVYUF	6.438	6.891	6.891	0	6.891	0	Long M1	
JEVYUF	7.662	10.037	10.037	0	10.037	0	Long M1	
JEVYUF	7.695	8.068	8.892	-0.824	3.982	180		
JEVYUF	5.787	4.157	8.686	-4.529	5.961	180		
JEVYUF	7.065	7.254	8.541	-1.287	6.649	180		
JEVYUF	7.605	10.745	5.095	5.65	4.508	180	M2	
KAWTUZ	7.804	10.873	5.368	5.505	5.659	180		P-1
KAWTUZ	5.795	4.759	8.351	-3.592	5.139	180		
KAWVAH	5.925	8.325	8.325	0	6.96	0	Long M1	P-1
KAWVAH	7.454	8.392	8.192	0.2	7.602	180		
KAWVAH	7.789	10.409	6.276	4.133	5.382	180		
KAXVEK	6.877	9.431	9.158	0.273	7.381	6.261	Long M1	Cc
KAXVEK	4.773	7.775	7.958	-0.183	7.108	6.261	Long M1	
KERPIH	6.173	8.476	8.476	0	6.959	0	Long M1	C2/c
LAPCAH	6.718	8.373	8.373	0	6.308	0	Long M1	P-1
LAPCAH	6.129	4.982	8.602	-3.62	5.384	180		
LAPCAH	6.531	9.512	4.303	5.209	4.807	180	M2	
LAPCIP	2	5.54	5.54	0	5.54	0	Short M1	C2/c
LAPCIP	7.54	11.08	11.08	0	11.08	0	Long M1	
LASQUT	7.624	8.664	8.664	0	5.735	0	Long M1	P-1
LASQUT	6.05	4.226	8.955	-4.729	6.619	180		
LASRAA	7.984	10.72	6.117	4.603	5.098	180	M2	P21/c
LEMBEL	4.965	7.375	7.375	0	7.077	0	Long M1	P21/n
LEMBEL	7.456	9.268	9.744	-0.476	8.889	129.117		
LEMBEL	6.968	7.014	8.533	-1.519	3.806	180		
LUDROS	7.313	7.902	7.902	0	7.902	0.028		P-1
LUDROS	6.904	10.413	10.413	0	10.413	0	Long M1	
LUDROS	7.937	9.623	7.635	1.988	6.924	180		
LUDROS	6.835	9.887	4.54	5.347	3.873	180	M2	
LUDROS	6.015	3.739	9.127	-5.388	6.943	180		
LUDROS	7.357	7.399	8.857	-1.458	4.169	179.98	M4	
LUYZEL	7.135	10.746	10.746	0	10.746	0	Long M1	I4
LUYZEL	1.762	5.373	5.373	0	6.38	0	Short M1	
MOHSAE	7.341	10.33	10.33	0	10.33	0	Long M1	P21/n
MOHSAE	6.38	7.307	8.939	-1.632	7.242	134.194		
MOKROU	5.563	9.251	9.251	0	9.251	0	Long M1	C2/c
MOKROU	7.214	8.518	8.518	0	5.189	0	Long M1	
MOKROU	7.785	9.379	7.776	1.603	6.826	180		
NIFFEO	7.997	10.203	10.203	0	10.203	0.02	Long M1	P-1
NIFFEO	7.534	11.052	11.052	0	11.052	0	Long M1	
NIFFEO	5.235	6.302	6.302	0	6.302	0	Long M1	
NIFFEO	7.077	7.402	8.439	-1.037	6.421	180		
NIFFEO	7.35	7.63	8.698	-1.068	4.795	180		
NIFFEO	7.68	10.805	5.2	5.605	4.684	179.98	M2	
NIFFEO	6.02	3.964	9.088	-5.124	6.553	180		
NIHMEW	1.563	5.132	5.132	0	5.132	0	Short M1	Pna21
NIHMEW	6.662	10.264	10.264	0	10.264	0	Long M1	
NIHMEW	7.961	9.781	6.868	2.913	6.085	168.599		
NIHMEW	7.433	7.105	8.724	-1.619	6.841	168.599		
NIHMEW	7.324	9.781	6.868	2.913	6.085	168.599		
NIHMEW	6.746	7.105	8.724	-1.619	6.841	168.599		
NUHGED	7.833	11.426	11.426	0	11.426	0	Long M1	P-1
NUHGED	5.257	6.377	6.377	0	6.377	0	Long M1	
NUHGED	7.142	7.443	8.574	-1.131	6.504	180		
NUHGED	7.323	7.597	8.743	-1.146	4.805	180		
NUHGED	7.759	10.989	5.154	5.835	4.851	180	M2	
NUHGED	6.098	3.884	9.283	-5.399	6.774	180		
NUHGIH	5.244	6.332	6.332	0	6.332	0	Long M1	P212121
NUHGIH	7.741	10.813	10.813	0	10.03	0	Long M1	
NUHGIH	6.677	8.764	8.764	0	7.83	0	Long M1	
NUHGON	5.355	6.288	6.288	0	6.288	0	Long M1	P21/c
NUHGON	7.669	8.016	8.941	-0.925	4.011	180	M4	
NUHGON	6.013	4.589	8.516	-3.927	4.673	77.706		
NUHGON	7.853	4.739	8.597	-3.858	4.861	77.706		
NUHGON	6.341	4.739	8.597	-3.858	4.861	77.706		
NUHGON	7.934	4.589	8.516	-3.927	4.673	77.706		
NUHGON	5.296	6.288	6.288	0	6.288	0	Long M1	
NUHGON	6.552	6.132	8.576	-2.444	4.583	180		
NUHGUT	5.913	8.074	8.074	0	7.948	0	Long M1	P21/c
NUHGUT	7.871	11.179	9.3	1.879	8.019	94.813		
NUHGUT	5.923	4.802	8.621	-3.819	5.37	179.98		
NUHGUT	7.819	7.6	4.288	3.312	4.156	85.187	M3	
NUHGUT	4.158	7.6	4.288	3.312	4.156	85.187	M3	
NUHHAA	5.667	8.12	8.12	0	7.82	0	Long M1	P-1
NUHHAA	6.738	4.808	8.164	-3.356	5.541	73.22		
NUHHAA	4.52	7.555	4.669	2.886	4.181	73.22	M3	
NUHHAA	4.384	7.585	4.542	3.043	4.173	73.22	M3	

NUHHAA	7.182	4.808	8.164	-3.356	5.541	73.22		
NUHHAA	5.711	8.12	8.12	0	7.927	0.02	Long M1	
PECDIM	7.832	11.517	11.517	0	11.585	0	Long M1	I41cd
PECDIM	1.94	5.505	5.625	-0.12	5.678	0	Short M1	
PECDIM	2.328	6.013	5.892	0.121	5.985	0	Short M1	
PECDIM	7.953	11.517	11.517	0	11.591	0	Long M1	
PIWYAV	7.973	8.873	8.873	0	5.635	0	Long M1	P-1
PIWYAV	7.104	7.383	8.296	-0.913	6.782	180		
PIWYAV	6.589	4.593	9.389	-4.796	7.425	180		
PIWYEZ	6.566	4.423	8.801	-4.378	5.775	127.023		P21/c
PIWYEZ	6.352	4.423	8.801	-4.378	5.775	127.023		
RELCUH	5.344	8.127	8.127	0	7.462	0	Long M1	P21
RENNEF	7.989	9.575	9.575	0	6.538	0	Long M1	P21/c
RETNIO	6.978	9.168	6.084	3.084	6.332	179.98		P21/c
RETNIO	6.651	5.358	9.135	-3.777	6.17	180		
RETNOU	7.944	11.615	11.615	0	11.615	0	Long M1	C2/c
RETNOU	2.137	5.807	5.807	0	5.807	0	Short M1	
SAFRAU	7.329	9.356	9.356	0	9.356	0	Long M1	P-1
SAFRAU	6.379	4.945	8.968	-4.023	5.879	180		
SIMXAO	5.942	8.629	8.629	0	8.629	0.02	Long M1	P212121
SIMXAO	7.723	7.926	9.818	-1.892	5.851	62.126		
SIMXAO	7.875	11.051	6.577	4.474	6.175	133.926		
SIMXAO	7.733	8.295	9.598	-1.303	6.427	133.926		
SIRWIZ	5.762	6.511	6.511	0	6.511	0	Long M1	Cc
SIRWIZ	2.493	6.185	6.185	0	6.185	0	Short M1	
SIRWIZ	7.998	10.902	10.902	0	10.902	0	Long M1	
SIRWIZ	5.758	6.509	6.509	0	6.509	0	Long M1	
SIRWIZ01	2.493	6.185	6.185	0	6.185	0	Short M1	Fdd2
SIRWIZ01	5.76	6.51	6.51	0	6.51	0	Long M1	
SOBGEW	6.158	9.171	3.797	5.374	4.29	180	M2	P-1
SOBGEW	7.877	9.087	11.157	-2.07	9.69	65.894		
SOBGEW	6.662	5.375	8.421	-3.046	3.876	114.106		
SOBGEW	5.891	7.057	8.658	-1.601	6.779	114.106		
SOBGEW	6.789	5.375	8.421	-3.046	3.876	114.106		
SOBGEW	6.249	3.602	9.392	-5.79	7.838	180		
SOBGEW	6.359	9.359	4.046	5.313	4.224	179.98	M2	
SUXWUD	4.727	7.986	7.986	0	7.986	0	Long M1	P21/c
SUXWUD	7.22	8.987	7.385	1.602	3.512	180		
SUXWUD	7.856	6.544	8.715	-2.171	6.352	144.924		
SUXWUD	5.627	6.544	8.715	-2.171	6.352	144.924		
SUXXAK	7.162	10.74	10.74	0	10.74	0	Long M1	C2/c
SUXXAK	1.792	5.37	5.37	0	5.37	0	Short M1	
SUXXAK	7.062	7.387	8.412	-1.025	6.619	180		
TATYEU	5.866	8.773	8.681	0.092	7.931	16.449	Long M1	P21/n
TATYEU	7.876	7.859	8.951	-1.092	4.001	163.86		
TATYEU	6.007	5.082	8.036	-2.954	4.967	163.86		
TATYEU	6.635	8.265	7.726	0.539	7.34	20.401	Long M1	
TATYEU	6.288	6.878	7.163	-0.285	6.866	20.401	Long M1	
TATYEU	6.148	5.082	8.036	-2.954	4.967	163.86		
TATYEU	7.958	7.859	8.951	-1.092	4.001	163.86		
TATYEU	5.31	6.745	7.303	-0.558	7.077	16.14	Long M1	
TATYEU	7.944	9.182	8.47	0.712	8.447	16.14	Long M1	
TATYEU	6.249	9.198	8.776	0.422	8.215	33.012	Long M1	
TATYEU	7.349	9.013	8.243	0.77	6.59	146.988		
TIJXAM	6.846	10.543	10.543	0	10.543	0	Long M1	C2/c
TIJXAM	1.596	5.293	5.294	-0.001	5.368	0	Short M1	
TIJXAM	1.553	5.25	5.249	0.001	5.335	0	Short M1	
TIJXAM	6.847	10.543	10.543	0	10.543	0	Long M1	
UXUHUR	7.261	8.297	8.297	0	5.715	0	Long M1	P-1
UXUHUR	6.5	8.655	8.655	0	7.938	0	Long M1	
UXUHUR	7.744	7.767	9.191	-1.424	4.769	180		
UXUHUR	7.819	10.892	5.339	5.553	4.631	180	M2	
UXUJAZ	7.63	8.789	8.789	0	5.674	0.02	Long M1	P-1
UXUJAZ	5.555	7.87	7.963	-0.093	7.404	84.87		
UXUJAZ	6.462	5.544	8.274	-2.73	5.119	79.869		
UXUJAZ	7.015	8.182	10.32	-2.138	9.841	79.869		
UXUJAZ	6.962	10.226	5.84	4.386	5.112	118.151		
UXUJAZ	7.324	5.209	8.426	-3.217	5.817	100.131		
UXUJAZ	7.845	5.544	8.274	-2.73	5.119	79.869		
UXUJAZ	6.631	9.996	5.255	4.741	4.675	118.151		
UXUJAZ	6.355	5.209	8.426	-3.217	5.817	100.131		
UXUJAZ	7.764	8.789	8.789	0	5.959	0	Long M1	
UXUJAZ	6.228	3.612	9.386	-5.774	7.878	180		
VEPQEN	1.943	5.284	5.284	0	5.284	0	Short M1	C2/c
VEPQEN	7.227	10.569	10.569	0	10.569	0	Long M1	
WAFLOF	5.88	6.699	8.181	-1.482	5.532	126.014		F2dd
WATNOV	7.112	10.703	10.703	0	10.703	0	Long M1	Pccn
WATNOV	1.761	5.352	5.352	0	5.621	0	Short M1	
WATNUB	1.596	5.361	5.361	0	5.361	0	Short M1	C2/c
WATNUB	6.957	10.722	10.722	0	10.722	0	Long M1	
WATNUB	7.962	9.705	7.807	1.898	7.396	180		
WAZSAT	7.982	8.818	8.818	0	4.74	0	Long M1	P1
WAZSAT	7.047	7.058	8.53	-1.472	4.029	177.635		
WAZSAT	6.189	3.539	9.297	-5.758	7.433	177.635		
WAZSAT	6.225	9.126	3.95	5.176	3.834	177.635	M2	

WAZSAT	6.175	9.126	3.95	5.176	3.834	177.635	M2	
WAZSAT	6.216	3.539	9.297	-5.758	7.433	177.635		
WAZSAT	7.134	7.058	8.53	-1.472	4.029	177.635		
WAZSAT	7.93	8.818	8.818	0	5.434	0.02	Long M1	
WAZSAT	7.925	7.489	10.292	-2.803	7.035	109.41		
WAZSAT	5.499	8.818	8.818	0	8.818	0	Long M1	
WAZSAT	6.275	9.241	3.989	5.252	3.825	178.575	M2	
WAZSAT	5.864	4.639	8.352	-3.713	5.4	178.575		
WAZSAT	6.949	6.863	8.497	-1.634	4.099	178.575		
WAZSAT	6.957	6.863	8.497	-1.634	4.099	178.575		
WAZSAT	5.854	4.639	8.352	-3.713	5.4	178.575		
WAZSAT	6.271	9.241	3.989	5.252	3.825	178.575	M2	
WAZSAT	5.496	8.818	8.818	0	8.818	0.02	Long M1	
WAZSIB	7.52	10.592	10.082	0.51	8.778	78.368		P65
WAZSIB	2.262	5.599	5.276	0.323	4.432	42.788		
WAZSOH	7.624	10.772	10.099	0.673	8.83	77.537		P65
WAZSOH	2.363	5.692	5.264	0.428	4.439	42.387		
WAZSUN	7.617	10.77	10.103	0.667	8.829	77.35		P61
WAZSUN	2.354	5.691	5.267	0.424	4.439	42.297		
WAZTEY	2.113	5.544	5.52	0.024	4.777	46.961		P1
WAZTEY	7.735	8.19	9.536	-1.346	7.131	77.152		
WAZTEY	7.641	7.27	4.183	3.087	4.884	77.152	M3	
WAZTEY	7.188	10.157	10.017	0.14	9.005	77.152		
WAZTEY	5.426	8.702	8.521	0.181	7.84	46.961		
WAZTEY	1.822	5.142	5.191	-0.049	4.603	37.673	Short M1	
WAZTEY	4.162	7.27	4.183	3.087	4.884	77.152	M3	
WAZTEY	7.255	6.983	10.252	-3.269	7.113	77.152		
WAZTEY	7.524	8.602	7.692	0.91	4.713	37.673	Long M1	
WAZTEY01	7.099	10.392	10.392	0	10.392	0.02	Long M1	P212121
WAZTEY01	2.107	5.36	5.479	-0.119	4.647	36.373	Short M1	
WAZTEY01	7.05	8.371	8.704	-0.333	6.199	144.376		
XENGIH	7.86	11.403	11.403	0	11.403	0	Long M1	P-1
XENGIH	5.258	6.364	6.364	0	6.364	0	Long M1	
XENGIH	7.129	7.448	8.505	-1.057	6.435	180		
XENGIH	7.461	7.78	8.773	-0.993	4.836	180		
XENGIH	7.898	11.064	5.339	5.725	4.924	180	M2	
XENGIH	6.045	3.905	9.166	-5.261	6.66	180		
XENGIH01	7.659	6.601	8.691	-2.09	5.966	64.05		P1
XENGIH01	4.372	7.275	4.393	2.882	3.705	64.05	M3	
XENGIH01	6.233	4.933	7.679	-2.746	5.393	64.05		
XENGIH01	5.453	7.868	7.818	0.05	6.838	10.035	Long M1	
XENGIH01	7.587	10.271	10.435	-0.164	8.899	10.035	Long M1	
XENGIH01	7.987	9.791	11.442	-1.651	10.979	65.598		
XENGIH01	7.46	4.933	7.679	-2.746	5.393	64.05		
XENGIH01	4.137	7.122	4.585	2.537	3.999	65.939	M3	
XENGIH01	7.279	7.882	10.285	-2.403	8.247	65.939		
XENGIH01	5.664	8.498	8.256	0.242	7.668	13.217	Long M1	
XENGIH01	5.962	8.406	8.409	-0.003	7.43	10.035		
XENGIH01	7.954	10.877	10.685	0.192	9.338	10.035	Long M1	
XENGIH01	7.752	7.551	9.414	-1.863	6.832	64.949		
XENGIH01	4.126	7.359	4.594	2.765	3.785	64.949	M3	
XENGIH01	6.407	4.645	7.802	-3.157	5.599	64.949		
XENGIH01	7.641	8.432	11.044	-2.612	8.199	65.598		
XENGIH01	3.738	6.828	4.579	2.249	5.155	65.598		
XENGIH01	4.964	7.973	8.025	-0.052	7.269	13.217	Long M1	
XENGIH01	7.245	4.645	7.802	-3.157	5.599	64.949		
XENGIH01	7.881	10.232	10.232	0	10.232	0	Long M1	
XENHUU	5.481	8.04	8.04	0	7.103	0	Long M1	Pca21
XENHUU	5.698	8.341	5.56	2.781	4.046	62.786	M3	
XENHUU	7.001	6.547	9.524	-2.977	5.389	62.786		
XENHUU	7.909	8.481	7.936	0.545	7.512	117.213		
XENHUU	7.888	8.481	7.936	0.545	7.512	117.213		
XIFTAI	5.3	7.362	7.362	0	7.099	0.02	Long M1	P21/c
XIFTAI	6.872	8.467	7.721	0.746	4.99	85.07		
XIFTAI	6.741	6.609	8.553	-1.944	4.496	179.98		
XIFTAI	6.268	9.484	3.816	5.668	3.937	179.98	M2	
XIFTAI	7.569	10.469	7.046	3.423	6.834	94.93		
XIFTAI	5.324	6.448	7.733	-1.285	6.492	94.93		
YEYNAS	7.829	7.526	7.526	0	7.526	0	Long M1	P-1
YEYNAS	5.085	8.057	8.057	0	7.526	0	Long M1	
YEYNAS	6.223	8.31	8.31	0	8.31	0	Long M1	
YEYNAS	7.681	10.888	5.116	5.772	4.66	180	M2	
YEYNAS	7.622	8.077	8.816	-0.739	3.826	180		
YUPMOM	6.615	10.276	10.276	0	10.276	0	Long M1	P21/c
YUPMOM	1.477	5.138	5.138	0	5.138	0	Short M1	
YUPMOM	7.517	8.006	8.701	-0.695	7.921	180		
YUPMOM	1.567	5.138	5.138	0	5.138	0	Short M1	
YUPMOM	6.705	10.276	10.276	0	10.276	0	Long M1	
YUPMOM	7.516	7.975	8.654	-0.679	7.913	180		
YUPMUS	7.624	8.858	8.858	0	6.571	0	Long M1	P21/n
YUPMUS	4.138	6.208	6.208	0	6.208	0.02		
YUPMUS	7.939	10.817	10.817	0	9.498	0.02		
YUPMUS	7.219	9.142	8.01	1.132	6.007	116.592		
YUPMUS	7.735	7.612	9.283	-1.671	6.564	180		
YUPNAZ	5.36	7.844	7.844	0	6.884	0	Long M1	P21/c
YUPNAZ	7.512	8.231	8.217	0.014	7.715	180		
YUPNAZ	5.908	8.566	5.588	2.978	3.989	65.751	M3	

YUPNAZ	6.829	6.29	9.409	-3.119	5.304	65.751		
YUPRIL	6.24	8.557	8.557	0	6.935	0	Long M1	P21
YUPRIL	6.939	9.701	6.623	3.078	4.766	78.361	M3	
YUPRIL	6.801	6.421	9.641	-3.22	5.523	78.361		
ZEHCEU	7.55	8.708	8.708	0	7.939	0	Long M1	P212121
ZEHCEU	7.982	11.34	6.771	4.569	5.69	119.583		